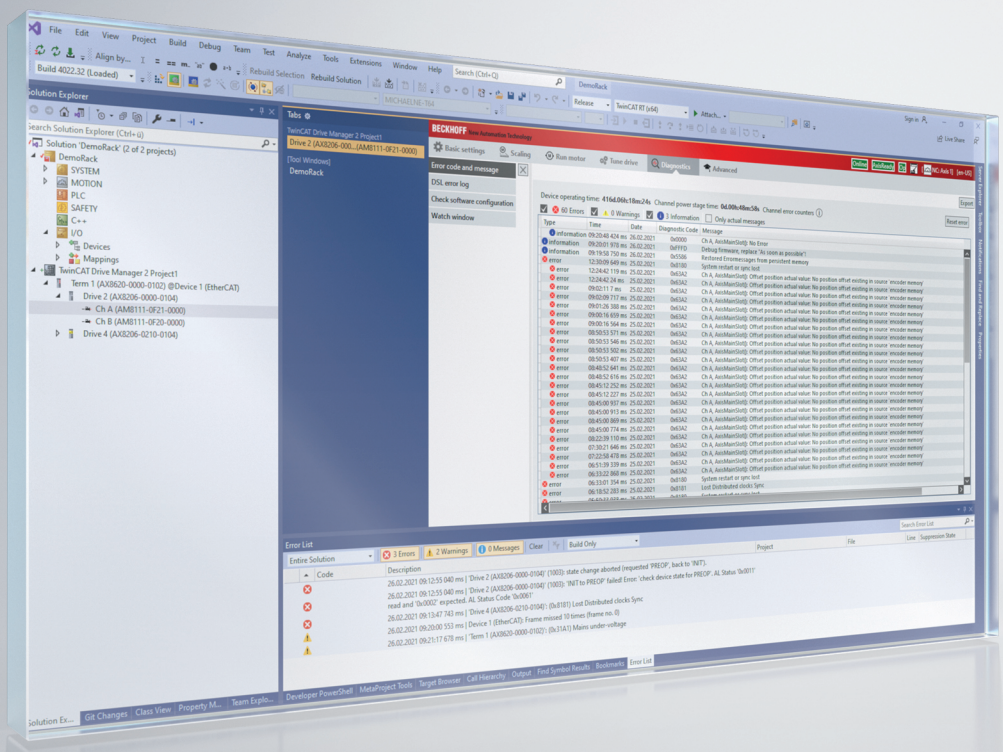
BECKHOFF New Automation Technology

Diagnostic Messages | EN

AX8xxx

Axis module



2024-01-31 | Version: 1.6

1 Standard-Messages

1.1 0000, No Error

This Message is thrown always, if the Device enters an error-free state.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0000	0

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
An Axis entered the error free state.	

Internal: *0x0000, No Error*

1.2 5190, Test 5V supply failed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5190	20880

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x5190, Test 5V supply failed*

1.3 5193, Need cold start

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5193	20883

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The actual configuration requires a cold start to be activated.	Please switch the 24V supply voltage of this device off and on.

Internal: *0x5193, Need cold start*

1.4 5194, Obsolete bootloader detected. Please update.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5194	20884

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The firmware detected an obsolete bootloader, which might be a debug version.	Please update to the latest release version.

Internal: *0x5194, Obsolete bootloader detected. Please update.*

1.5 5195, Something went wrong during the last firmware update. Please try again.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5195	20885

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The firmware detected some missing or invalid parts in the flash layout.	Please update to the latest release version.

Internal: *0x5195, Something went wrong during the last firmware update. Please try again.*

1.6 5196, The hardware isn't supported by this firmware.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5196	20886

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The firmware detected a not compatible hardware	Please update the firmware to an appropriate one.

Internal: *0x5196, The hardware isn't supported by this firmware.*

1.7 5580, Read failure EEPROM

Impossible to read Data from the Identity EEPROM of a Pcb. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5580	21888

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x5580, Read failure EEPROM. Pcb ID %u.*

1.8 5581, Checksum failure EEPROM

Checksum failure in read Data from the Identity EEPROM of a Pcb. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5581	21889

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x5581, Checksum failure EEPROM. Pcb ID %u.*

1.9 5582, EEPROM contains blank Data

The Identity EEPROM of a Pcb is blank. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5582	21890

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
This Message is generated instead of 0x5584, if you are using a debug Firmware or a special Prototype Hardware.	

Internal: *0x5582, EEPROM contains blank Data. Pcb ID %u.*

1.10 5583, Unexpected EEPROM

The Identity EEPROM of a Pcb is unexpected. This Device shouldn't contain this Pcb.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5583	21891

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
This Message is generated instead of 0x5585, if you are using a debug Firmware.	

Internal: *0x5583, Unexpected EEPROM Pcb ID %u.*

1.11 5584, EEPROM contains blank Data

The Identity EEPROM of a Pcb is blank. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5584	21892

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x5584, EEPROM contains blank Data. Pcb ID %u.*

1.12 5585, Unexpected EEPROM

The Identity EEPROM of a Pcb is unexpected. This Device shouldn't contain this Pcb.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5585	21893

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x5585, Unexpected EEPROM Pcb ID %u.*

1.13 5586, Restored Errormessages from persistent memory

The persistent Memory contains an errorlog. The messages are restored during power on phase.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5586	21894

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x5586, Restored Errormessages from persistent memory*

1.14 5587, The internal eeprom data synchronization (Id=0xXX) failed!

The internal eeprom data synchronization failed! Some additional information in the ESI eeprom (production date, version info, BIC, ...) may be wrong or outdated!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5587	21895

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x5587, The internal eeprom data synchronization (Id=0x%x) failed!*

1.15 5590, Detected incompatible Pcb

Detected incompatible Pcb for this Firmware.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5590	21904

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
This Hardware is unsupported of this Firmware.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.
The HardwareType is unknown.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.
The HardwareRevision is unsupported.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x5590, Detected incompatible Pcb at ID %u.*

1.16 5591, Identity incompatible to a Pcb

Detected incompatible Pcb for this ESC EEPROM.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5591	21905

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
You might have updated the ESC EEPROM with the wrong Identity.	Perform an EEPROM Update with the Systemmanager.

Internal: *0x5591, ESC EEPROM Identity is incompatible to Pcb ID %u.*

1.17 5592, FirmwareIndex is incompatible to this Firmware

Detected incompatible Pcb for this Firmware.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5592	21906

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
This Hardware needs a newer Firmware.	Ask the Beckhoff branch office that is responsible for you for the right Firmwareversion.

Internal: *0x5592, ESC EEPROM Pcb ID %u FirmwareIndex is incompatible to this Firmware.*

1.18 5593, Structure Version is incompatible to this Firmware

Detected incompatible Pcb for this Firmware.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5593	21907

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
This Hardware needs a newer Firmware.	Ask the Beckhoff branch office that is responsible for you for the right Firmwareversion.

Internal: *0x5593, ESC EEPROM Pcb ID %u Structure Version is incompatible to this Firmware.*

1.19 5594, Simulating persistent data features.

If you see this Message, all persistent Data will start with zero Values on PowerOn.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5594	21908

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
Persistent Memory is not supported in the early Hardware Versions.	

Internal: *0x5594, Simulating persistent data features.*

1.20 5596, Storing of persistent data failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5596	21910

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x5596, Storing of persistent data failed.*

1.21 5597, Unsupported prototype hardware.

The Firmware detected an unsupported prototype Hardware.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5597	21911

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The Hardware version (Object 0x1009) is below 01.00	Use a hardware version 01.00 or higher.

Internal: *0x5597, Unsupported prototype hardware.*

1.22 5598, Identity incompatible to Device

Detected incompatible device type for this ESC EEPROM.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5598	21912

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
You might have updated the ESC EEPROM with the wrong Identity.	Perform an EEPROM Update with the Systemmanager.

Internal: *0x5598, ESC EEPROM Identity is incompatible to Device.*

1.23 5599, Identity incompatible to a Device

Detected incompatible device type for this ESC EEPROM.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5599	21913

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
You might have updated the ESC EEPROM with the wrong Identity.	Perform an EEPROM Update with the Systemmanager.

Internal: *0x5599, ESC EEPROM Identity is incompatible to Device.*

1.24 559A, Read failure EEPROM

Impossible to read Data from the Identity EEPROM of a Pcb. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
559A	21914

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x559A, Read failure EEPROM. Pcb ID %u.*

1.25 559B, Unsupported Pcb type

Detected unsupported Pcb:
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
559B	21915

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The Pcb is not supported by this firmware.	Check the Beckhoff Homepage for a newer Firmware.

Internal: *0x559B, Unsupported Pcb type. Pcb ID %u.*

1.26 589C, Read failure EEPROM

The content of the persistent data memory seems to be corrupted.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
589C	22684

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x589C, Persistent data seems to be corrupted. (0x%x)*

1.27 589D, Prototype hardware might not be supported with actual safety firmware

Prototype hardware might not be supported with actual safety firmware.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
589D	22685

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x589D, Prototype hardware might not be supported with actual safety firmware*

1.28 6180, Internal Software Error Type A

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6180	24960

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Fatal Software Exception Error.	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

Internal: *0x6180, Internal Software Error Type A, Additional Errorcode 0x%x*

1.29 6181, Internal Software Error Type B

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6181	24961

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Fatal Software Exception Error.	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

Internal: *0x6181, Internal Software Error Type B, Additional Errorcode 0x%x*

1.30 6182, Internal Software Error Type C

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6182	24962

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Fatal Software Exception Error.	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

Internal: *0x6182, Internal Software Error Type C, Additional Errorcode 0x%x*

1.31 6190, Init Timeout

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6190	24976

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The initialization process of this slot was working for a very long time.	Please check the Parameters of this module and try again.

Internal: *0x6190, Init Timeout, Slotnumber %u*

1.32 6382, Illegal Slotconfiguration. Slot is empty.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6382	25474

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Slot which should contain a Module must be empty.	Please select a legal Module for this Slot.

Internal: *0x6382, Illegal Slotconfiguration. Slot %u is empty.*

1.33 6383, Illegal Slotconfiguration. Double Feedback Selection.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6383	25475

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Feedback Module, which is only possible one time per Axis was selected as primary and secondary Encoder.	Please select another Feedback as primary or secondary Encoder.

Internal: *0x6383, Illegal Slotconfiguration. Double Feedback Selection.*

1.34 6384, Illegal Slotconfiguration. Slot has to be empty.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6384	25476

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Slot which should be empty contains a Module.	Please remove the Module from this Slot.

Internal: *0x6384, Illegal Slotconfiguration. Slot %u has to be empty.*

1.35 6385, Illegal Slotconfiguration. Unsupported Module.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6385	25477

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Slot contains an unsupported ModuleIdent.	Please select a legal Module for this Slot.

Internal: *0x6385, Illegal Slotconfiguration. Slot %u contains unsupported ModuleIdent 0x%x.*

1.36 63B0, Module in slot II: Transition Pre-Op to Safe-Op (ECat) not successful (hr=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B0	25520

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The module in the mentioned slot reports during the ECat-Transition Safe-Op to Op an error.	

Internal: *0x63B0, Module in slot %d: Transition Pre-Op to Safe-Op (ECat) not successful (hr=0x%X)*

1.37 63B1, Module in slot II: Transition Safe-Op to Op (ECat) not successful (hr=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B1	25521

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The module in the mentioned slot reports during the ECat-Transition Safe-Op to Op an error.	

Internal: *0x63B1, Module in slot %d: Transition Safe-Op to Op (ECat) not successful (hr=0x%X)*

1.38 63B2, Module in slot II: Transition Op to Safe-Op (ECat) not successful (hr=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B2	25522

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The module in the mentioned slot reports during the ECat-Transition Safe-Op to Op an error.	

Internal: *0x63B2, Module in slot %d: Transition Op to Safe-Op (ECat) not successful (hr=0x%X)*

1.39 63B3, Module in slot II: Transition Safe-Op to Pre-Op (ECat) not successful (hr=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B3	25523

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The module in the mentioned slot reports during the ECat-Transition Safe-Op to Op an error.	

Internal: *0x63B3, Module in slot %d: Transition Safe-Op to Pre-Op (ECat) not successful (hr=0x%X)*

1.40 63B4, Illegal Slotconfiguration. The selected feedback combination is not supported.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B4	25524

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The some of the configured types of feedback are not supported at the same time.	Please check the feedback configuration of all axes of this device.

Internal: *0x63B4, Illegal Slotconfiguration. The selected feedback combination is not supported.*

1.41 8180, System restart or sync lost

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8180	33152

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Slave has received no ProcessData for more than one EtherCAT Cycle.	Check the realtime Tasks of your EtherCAT Master.

Internal: *0x8180, System restart or sync lost*

1.42 8181, Lost Distributed clocks Sync

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8181	33153

Class	Type
Error	Communication error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Software Sync PLL has left it's locked State.	Check your EtherCAT Sync0 configuration.

Internal: *0x8181, Lost Distributed clocks Sync*

1.43 8186, Invalid sync out unit configuration. Actual value is 0xXX and has to be 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8186	33158

Class	Type
Error	Communication error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Invalid sync out unit configuration	Check your EtherCAT Master configuration.

Internal: *0x8186, Invalid sync out unit configuration. Actual value is 0x%x and has to be 0x%x.*

1.44 A000, Transition Pre-Op to Safe-Op not successful. Sync Manager Length Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A000	40960

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA000, Transition Pre-Op to Safe-Op not successful. Sync Manager %u Length Error. Requested Length=0x%x is not between Min=0x%x and Max=0x%x*

1.45 A001, Transition Pre-Op to Safe-Op not successful. Sync Manager Address Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A001	40961

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA001, Transition Pre-Op to Safe-Op not successful. Sync Manager %u Address Error. Requested Address=0x%x is not between Min=0x%x and Max=0x%x*

1.46 A002, Transition Pre-Op to Safe-Op not successful. Sync Manager Settings Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A002	40962

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA002, Transition Pre-Op to Safe-Op not successful. Sync Manager %u Settings Error. 0x%x*

1.47 A003, Transition Pre-Op to Safe-Op not successful. Sync Manager Address Range overlap.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A003	40963

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA003, Transition Pre-Op to Safe-Op not successful. Sync Manager %u Address Range 0x%x..0x%x overlaps Sync Manager %u Address Range 0x%x..0x%x*

1.48 A004, Sync Manager is disabled and has a Size unequal zero.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A004	40964

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA004, Sync Manager %u is disabled. Sync Manager Size %u and the Calculated Size %u shall be zero.*

1.49 A005, Sync Manager Address is not multiple of 4.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A005	40965

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Sync Manager Startaddress is not a multiple of 4.	Configure the Startaddress to a multiple of 4. (32 Bit Alignment)

Internal: *0xA005, Sync Manager %u Address 0x%x is not multiple of 4.*

1.50 A00B, Dynamic Sync Manager Address is not multiple of 4.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00B	40971

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Sync Manager Startaddress is not a multiple of 4.	Configure the Startaddress to a multiple of 4. (32 Bit Alignment)

Internal: *0xA00B, Dynamic Sync Manager %u Address 0x%x is not multiple of 4.*

1.51 A00C, Dynamic Sync Manager Address Range overlap.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00C	40972

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA00C, Dynamic Sync Manager %u Address Range 0x%x..0x%x overlaps Sync Manager %u Address Range 0x%x..0x%x*

1.52 A00D, Dynamic Sync Manager Settings Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00D	40973

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA00D, Dynamic Sync Manager %u Settings Error. 0x%x*

1.53 A00E, Dynamic Sync Manager Address Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00E	40974

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA00E, Dynamic Sync Manager %u Address Error. Requested Address=0x%x is not between Min=0x%x and Max=0x%x*

1.54 A00F, Dynamic Sync Manager Length Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00F	40975

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

Internal: *0xA00F, Dynamic Sync Manager %u Length Error. Requested Length=0x%x is not between Min=0x%x and Max=0x%x*

1.55 A010, SDO Complete Access Error: Object 0xXX/XX, SDO Abortcode 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A010	40976

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The complete access write to this parameter failed.	Please write your values with single access.

Internal: *0xA010, SDO Complete Access Error: Object 0x%x/%x, SDO Abortcode 0x%x*

1.56 A011, Pdo Mapping Error: Unable to map Object (not possible).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A011	40977

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA011, Pdo Mapping Error: Unable to map Object 0x%x/%x.(not possible) (SyncManager %u)*

1.57 A013, Pdo Mapping Error: Double Mapping of Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A013	40979

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA013, Pdo Mapping Error: Double Mapping of Object 0x%x/%x (SyncManager %u)*

1.58 A015, Pdo Mapping Error: Unable to map Object (no Mappings left).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A015	40981

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA015, Pdo Mapping Error: Unable to map Object 0x%x/%x.(no Mappings left) (SyncManager %u)*

1.59 A017, Pdo Mapping Error: Object has to be mapped always.

The Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A017	40983

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An object, which must be in the mapping is not mapped.	Please add a mapping to the mentioned object.

Internal: *0xA017, Pdo Mapping Error: Object 0x%x/%x has to be mapped always.*

1.60 A019, Pdo Mapping Error: Object has to be mapped because of modes of operation.

Your actual requested Modes of Operation requires the mentioned Object in the Mapping.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A019	40985

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA019, Pdo Mapping Error: Object 0x%x/%x has to be mapped for modes of operation %d.*

1.61 A01B, Pdo BitMapping Error: Object A is not next to Object B.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01B	40987

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA01B, Pdo BitMapping Error: Object 0x%x/%x is not next to Object 0x%x/%x. (SyncManager %u)*

1.62 A01D, Pdo BitMapping Error: Can not Transform Bit-Mappings to Byte-Mappings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01D	40989

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA01D, Pdo BitMapping Error: Can not Transform Bit-Mappings to Byte-Mappings. (SyncManager %u)*

1.63 A01F, Pdo Mapping Error: Invalid Oversampling Factor.

The oversampling factor of the mentioned Object is not possible.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01F	40991

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Number of samples is higher than the Sync1/ Sync0 ratio.	Please check, your mapping Configuration.
Sync1/Sync0 ratio divided through the number of samples is not integer.	Please check, your mapping Configuration.

Internal: *0xA01F, Pdo Mapping Error: Invalid Oversampling Factor (%u) Object 0x%x/%x (SyncManager %u).*

1.64 A021, Pdo Mapping Error: Oversampling is not allowed.

Oversampling is not allowed for the mentioned Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A021	40993

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The mapping parameters contain oversampling for an object which doesn't support oversampling.	Please check, your mapping Configuration.

Internal: *0xA021, Pdo Mapping Error: Oversampling is not allowed for Object 0x%x/%x (SyncManager %u).*

1.65 A023, Pdo Assignment Error

The Pdo Assignment List contains a Pdo which doesn't exist.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A023	40995

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
You might have used a Debug XML-Description in your actual Project.	Please refresh your XML-Description and insert a new Instance of this Device in your Project.

Internal: *0xA023, Pdo Assignment Error: Assignment 0x%x%x contains a Pdo 0x%x which doesn't exist.*

1.66 A031, DynPdo Mapping Warning: Unable to map Object (not possible).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A031	41009

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA031, DynPdo Mapping Warning: Unable to map Object 0x%x/%x.(not possible) (SyncManager %u)*

1.67 A033, DynPdo Mapping Warning: Double Mapping of Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A033	41011

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA033, DynPdo Mapping Warning: Double Mapping of Object 0x%x/%x (SyncManager %u)*

1.68 A035, DynPdo Mapping Warning: Unable to map Object (no Mappings left).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A035	41013

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA035, DynPdo Mapping Warning: Unable to map Object 0x%x/%x.(no Mappings left) (SyncManager %u)*

1.69 A037, DynPdo Mapping Warning: Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A037	41015

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA037, DynPdo Mapping Warning: Object 0x%x/%x has to be mapped always.*

1.70 A039, DynPdo Mapping Warning: Object has to be mapped because of modes of operation.

Your actual requested Modes of Operation requires the mentioned Object in the Mapping.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A039	41017

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA039, DynPdo Mapping Warning: Object 0x%x/%x has to be mapped for modes of operation %d.*

1.71 A03B, DynPdo BitMapping Warning: Object A is not next to Object B.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A03B	41019

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA03B, DynPdo BitMapping Warning: Object 0x%x/%x is not next to Object 0x%x/%x. (SyncManager %u)*

1.72 A03D, DynPdo BitMapping Warning: Can not Transform Bit-Mappings to Byte-Mappings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A03D	41021

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0xA03D, DynPdo BitMapping Warning: Can not Transform Bit-Mappings to Byte-Mappings. (SyncManager %u)*

1.73 A03F, DynPdo Mapping Warning: Invalid Oversampling Factor.

The oversampling factor of the mentioned Object is not possible.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A03F	41023

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Number of samples is higher than the Sync1/ Sync0 ratio.	Please check, your mapping Configuration.
Sync1/Sync0 ratio divided through the number of samples is not integer.	Please check, your mapping Configuration.

Internal: *0xA03F, DynPdo Mapping Warning: Invalid Oversampling Factor (%u) Object 0x%x/%x (SyncManager %u).*

1.74 A041, DynPdo Mapping Warning: Oversampling is not allowed.

Oversampling is not allowed for the mentioned Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A041	41025

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The mapping parameters contain oversampling for an object which doesn't support oversampling.	Please check, your mapping Configuration.

Internal: *0xA041, DynPdo Mapping Warning: Oversampling is not allowed for Object 0x%x/%x (SyncManager %u).*

1.75 A043, DynPdo Assignment Warning

The Pdo Assignment List contains a Pdo which doesn't exist.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A043	41027

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
You might have used a Debug XML-Description in your actual Project.	Please refresh your XML-Description and insert a new Instance of this Device in your Project.

Internal: *0xA043, DynPdo Assignment Warning: Assignment 0x%x%x contains a Pdo 0x%x which doesn't exist.*

1.76 A080, Safe-Op is not possible because the local TwinCAT Runtime is in ConfigMode.

You should only see this Message, if you are a AX Developer.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A080	41088

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The internal TwinCAT Runtime is in ConfigMode.	

Internal: *0xA080, Safe-Op is not possible because the local TwinCAT Runtime is in ConfigMode.*

1.77 A081, Transition Pre-Op to Safe-Op not successful. Safetycard not detected.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A081	41089

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0xA081, Transition Pre-Op to Safe-Op not successful. Safetycard not detected.*

1.78 A082, EtherCAT Slave Stack Error:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A082	41090

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0xA082, EtherCAT Slave Stack Error: AI Status Code 0x%x*

1.79 FFFD, Debug firmware, replace "As soon as possible"!

Debug firmware: Replace ASAP!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFD	65533

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0xFFFD, Debug firmware, replace "As soon as possible"!*

1.80 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

1.81 559E, Unsupported Pcb type

Detected unsupported FPGA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
559E	21918

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The Fpga is not supported by this firmware.	Please contact the Beckhoff branch office that is responsible for you.

Internal: *0x559E, Unsupported FPGA configuration! Found ver=%u, patch=%u, Required ver=%u, patch=%u*

1.82 6183, FPU Exception, FPU status 0xXX

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6183	24963

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
FPU exception	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

Internal: *0x6183, FPU Exception, FPU status 0x%x*

2 Diagmessages of module DeviceMain

2.1 3210, DC link overvoltage

DC link overvoltage because the brake power of the power supply module is too low.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3210	12816

Class	Type
Error	Overvoltage error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Parameterization of the brake chopper from the power supply module is wrong.	Check the parameterization of the brake chopper from the power supply module.
Wrong selection of the brake resistor from the power supply module.	Check the resistance of the brake resistor. Check the power of the brake resistor.
The brake resistor from the power supply module is defective	Measure the current resistance of the brake resistor.

Internal: *0x3210, DC link overvoltage*

2.2 4380, Fan speed seems to be zero.

Fan speed seems to be zero.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4380	17280

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The velocity signal of the cooling fan is zero.	Please check the cooling fan.

Internal: *0x4380, Fan speed seems to be zero.*

2.3 5112, Supply undervoltage: supply +24V

Supply undervoltage: supply +24V

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5112	20754

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A fatal error occurred. A device reboot is required.

Possible Causes	Solutions
The 24V Supply Voltage went under 18V.	Check your power supply.

Internal: *0x5112, Supply undervoltage: supply +24V*

2.4 5181, Power supply controlword, torque off order

The power supply device is in an error state and sent a torque off order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5181	20865

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

Internal: *0x5181, Power supply controlword, torque off order*

2.5 5182, Power supply controlword, live counter inactive

The power supply device controlword contains a live counter which didn't increment for the maximum accepted timespan.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5182	20866

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Power supply status is not alive.	Please Check if the Power supply status is linked to the Supply Device and the Device is in EtherCAT OP state.

Internal: *0x5182, Power supply controlword, live counter inactive*

2.6 5183, Power supply controlword, NC handling order

The power supply device is in an error state and sent a NC handling order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5183	20867

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

Internal: *0x5183, Power supply controlword, NC handling order*

2.7 5185, Power supply controlword, non-regenerative brake order

The power supply device is in an error state and sent a non-regenerative brake order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5185	20869

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

Internal: *0x5185, Power supply controlword, non-regenerative brake order*

2.8 5186, Power supply controlword, regenerative brake order

The power supply device is in an error state and sent a regenerative brake order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5186	20870

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

Internal: *0x5186, Power supply controlword, regenerative brake order*

2.9 5192, Supply overvoltage: supply +24V

Supply overvoltage: supply +24V

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5192	20882

Class	Type
Error	Control voltage error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The 24V Supply Voltage went over 40V.	Check your 24V supply voltage.

Internal: *0x5192, Supply overvoltage: supply +24V*

2.10 6320, Parameter error in Object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in Object 0x%x/%x*

2.11 8780, Configured Sync1 Cycle Time is above Maximum

The configured Sync1 Cycle Time is above the maximum.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8780	34688

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Cycle Time of your NC-Task is above the supported maximum value of this drive.	Please set your Task to a shorter Cycle Time.

Internal: *0x8780, Sync Controller: Configured Sync1 Cycle Time (%u ns) is above Maximum (%u ns).*

2.12 8781, Configured Sync1 Cycle Time is below Minimum

The configured Sync1 Cycle Time is below the minimum.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8781	34689

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Cycle Time of your NC-Task is below the supported minimum value of this drive.	Please set your Task to a longer Cycle Time.

Internal: *0x8781, Sync Controller: Configured Sync1 Cycle Time (%u ns) is below Minimum (%u ns).*

2.13 8782, Configured Sync1 Cycle Time is not a multiple of the Sync0 Cycle Time

The configured Sync1 Cycle Time is not a multiple of the Sync0 Cycle Time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8782	34690

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Cycle Time of your NC-Task has to be a multiple of the drives Sync0 Cycle Time.	Please set your Task to a valid Cycle Time.

Internal: *0x8782, Sync Controller: Configured Sync1 Cycle Time (%u ns) is not a multiple of the Sync0 Cycle Time (%u ns).*

2.14 8783, Configured Sync0 Cycle Time is not legal

The configured Sync1 Cycle Time is not the default Cycle Time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8783	34691

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x8783, Sync Controller: Configured Sync0 Cycle Time (%u ns) is unequal %u ns.*

2.15 A017, Pdo Mapping Error: Object has to be mapped always.

The Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A017	40983

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An object, which must be in the mapping is not mapped.	Please add a mapping to the mentioned object.

Internal: *0xA017, Pdo Mapping Error: Object 0x%x/%x has to be mapped always.*

2.16 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

3 Diagmessages of module SafeMotion

3.1 0001, Primary MC: GLOBAL_Fault with Code 0xXX and Additional Code 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0001	1

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0001, Primary MC: GLOBAL_Fault with Code 0x%x and Additional Code 0x%x*

3.2 0002, Primary MC: GLOBAL_Shutdown with Code 0xXX and Additional Code 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0002	2

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0002, Primary MC: GLOBAL_Shutdown with Code 0x%x and Additional Code 0x%x*

3.3 0003, Secondary MC: GLOBAL_Fault with Code 0xXX and Additional Code 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0003	3

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0003, Secondary MC: GLOBAL_Fault with Code 0x%x and Additional Code 0x%x*

3.4 0004, Secondary MC: GLOBAL_Shutdown with Code 0xXX and Additional Code 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0004	4

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0004, Secondary MC: GLOBAL_Shutdown with Code 0x%x and Additional Code 0x%x*

3.5 0005, Primary MC: Stored GLOBAL_Fault with Code 0xXX and Additional Code 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0005	5

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0005, Primary MC: Stored GLOBAL_Fault with Code 0x%x and Additional Code 0x%x*

3.6 0006, Secondary MC: Stored GLOBAL_Fault with Code 0xXX and Additional Code 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0006	6

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0006, Secondary MC: Stored GLOBAL_Fault with Code 0x%x and Additional Code 0x%x*

3.7 0007, Diag-Message-Overflow: II messages got lost

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0007	7

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0007, Diag-Message-Overflow: %d messages got lost*

3.8 0008, Primary MC: the CRC of the FRAM Data was wrong (Diag-Code=II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0008	8

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0008, Primary MC: the CRC of the FRAM Data was wrong (Diag-Code=%d)*

3.9 0009, Secondary MC: the CRC of the FRAM Data was wrong (Diag-Code=II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0009	9

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0009, Secondary MC: the CRC of the FRAM Data was wrong (Diag-Code=%d)*

3.10 0010, Reserved CfgData has to be zero st offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0010	16

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0010, Reserved CfgData has to be zero st offset %d*

3.11 0011, The password is wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0011	17

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0011, The password is wrong*

3.12 0012, The user was not found

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0012	18

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0012, The user was not found*

3.13 0013, The CRC of the login data does not match

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0013	19

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0013, The CRC of the login data does not match*

3.14 0014, The serial number of the login data does not match

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0014	20

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0014, The serial number of the login data does not match*

3.15 0015, The login watchdog has been expired

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0015	21

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0015, The login watchdog has been expired*

3.16 0016, The user was logged out before

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0016	22

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0016, The user was logged out before*

3.17 0017, The user has not sufficient access rights

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0017	23

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0017, The user has not sufficient access rights*

3.18 0018, The reserved area of the CfgData was not 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0018	24

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0018, The reserved area of the CfgData was not 0*

3.19 0019, The CRC of the CfgData was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0019	25

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0019, The CRC of the CfgData was wrong*

3.20 001A, The user name is wrong at word offset 0xXX when changing the password

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
001A	26

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x001A, The user name is wrong at word offset 0x%x when changing the password*

3.21 001B, The requested number of users is too big

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
001B	27

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x001B, The requested number of users is too big*

3.22 001D, The user update flags are wrong at word offset 0xXX when changing the password

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
001D	29

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x001D, The user update flags are wrong at word offset 0x%x when changing the password*

3.23 001E, The wrong user (user II) is logged in when changing the password (user II found in the received data)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
001E	30

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x001E, The wrong user (user %d) is logged in when changing the password (user %d found in the received data)*

3.24 0021, the maximum Global-Shutdown counter was exceeded in the Vendor Data (maximum value: II, actual value: II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0021	33

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0021, the maximum Global-Shutdown counter was exceeded in the Vendor Data (maximum value: %d, actual value: %d)*

3.25 0080, Safety reports FSoE Group error on channel A

Safety reports FSoE Group error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0080	128

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0080, Safety reports FSoE Group error on channel A*

3.26 0081, Safety reports FSoE Group error on channel B

Safety reports FSoE Group error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0081	129

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0081, Safety reports FSoE Group error on channel B*

3.27 0082, Safety reports STO module error on channel A

Safety reports STO module error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0082	130

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0082, Safety reports STO module error on channel A*

3.28 0083, Safety reports STO module error on channel B

Safety reports STO module error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0083	131

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0083, Safety reports STO module error on channel B*

3.29 0084, Safety reports FSIN module (digital Inputs) error on channel A

Safety reports FSIN module (digital Inputs) error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0084	132

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0084, Safety reports FSIN module (digital Inputs) error on channel A*

3.30 0085, Safety reports FSIN module (digital Inputs) error on channel B

Safety reports FSIN module (digital Inputs) error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0085	133

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0085, Safety reports FSIN module (digital Inputs) error on channel B*

3.31 0086, Safety reports Brake module error on channel A

Safety reports Brake module error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0086	134

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0086, Safety reports Brake module error on channel A*

3.32 0087, Safety reports Brake module error on channel B

Safety reports Brake module error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0087	135

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0087, Safety reports Brake module error on channel B*

3.33 0088, Safety reports Encoder overrange error on channel A

Safety reports Encoder overrange error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0088	136

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0088, Safety reports Encoder overrange error on channel A*

3.34 0089, Safety reports Encoder overrange error on channel B

Safety reports Encoder overrange error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0089	137

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0089, Safety reports Encoder overrange error on channel B*

3.35 0090, Safety reports Encoder underrange error on channel A

Safety reports Encoder underrange error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0090	144

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0090, Safety reports Encoder underrange error on channel A*

3.36 0091, Safety reports Encoder underrange error on channel B

Safety reports Encoder underrange error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0091	145

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0091, Safety reports Encoder underrange error on channel B*

3.37 0092, Safety reports Primary Safety Feedback error on channel A

Safety reports Primary Safety Feedback error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0092	146

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0092, Safety reports Primary Safety Feedback error on channel A*

3.38 0093, Safety reports Primary Safety Feedback error on channel B

Safety reports Primary Safety Feedback error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0093	147

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0093, Safety reports Primary Safety Feedback error on channel B*

3.39 0094, Safety reports Secondary Safety Feedback error on channel A

Safety reports Secondary Safety Feedback error on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0094	148

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0094, Safety reports Secondary Safety Feedback error on channel A*

3.40 0095, Safety reports Secondary Safety Feedback error on channel B

Safety reports Secondary Safety Feedback error on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0095	149

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0095, Safety reports Secondary Safety Feedback error on channel B*

3.41 0096, Safety reports Encoder voltage statemachine fault on channel A

Safety reports Encoder voltage statemachine fault on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0096	150

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0096, Safety reports Encoder voltage statemachine fault on channel A*

3.42 0097, Safety reports Encoder voltage statemachine fault on channel B

Safety reports Encoder voltage statemachine fault on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0097	151

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0097, Safety reports Encoder voltage statemachine fault on channel B*

3.43 0098, Safety reports Emergency Stop on channel A

DriveCmd: Safety reports Emergency Stop on channel A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0098	152

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel A	Execute Reset-Command (Fault reset).

Internal: *0x0098, Safety reports Emergency Stop on channel A*

3.44 0099, Safety reports Emergency Stop on channel B

DriveCmd: Safety reports Emergency Stop on channel B

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0099	153

Class	Type
Error	Safety Module initiated drive reaction

Standard Reaction	Reset
Closed loop ramp channel B	Execute Reset-Command (Fault reset).

Internal: *0x0099, Safety reports Emergency Stop on channel B*

3.45 00AD, Safety reports not defined Drive Command on channel A SS

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
00AD	173

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x00AD, Safety reports not defined Drive Command on channel A %s*

3.46 00AE, Safety reports not defined Drive Command on channel B SS

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
00AE	174

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x00AE, Safety reports not defined Drive Command on channel B %s*

3.47 00B0, Safety Card is in Bootloader mode. Download of valid Firmware is required.

Safety Card is in Bootloader mode. Download of valid Firmware is required.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
00B0	176

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x00B0, Safety Card is in Bootloader mode. Download of valid Firmware is required.*

3.48 00FF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
00FF	255

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x00FF, Internal Error, Additional Errorcode 0x%x*

3.49 0101, Primary MC: Completed RAM TEST: Starttime: 0xXX and Stoptime: 0xXX . The calculated timediff is 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0101	257

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0101, Primary MC: Completed RAM TEST: Starttime: 0x%x and Stoptime: 0x%x . The calculated timediff is 0x%x.*

3.50 0102, Secondary MC: Completed RAM TEST: Starttime: 0xXX and Stoptime: 0xXX . The calculated timediff is 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0102	258

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0102, Secondary MC: Completed RAM TEST: Starttime: 0x%x and Stoptime: 0x%x . The calculated timediff is 0x%x.*

3.51 0103, C1 MCTEST Info: Arg1: 0xXX, Arg2: 0xXX, Arg3: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0103	259

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0103, C1 MCTEST Info: Arg1: 0x%x, Arg2: 0x%x, Arg3: 0x%x.*

3.52 0104, C2 MCTEST Info: Arg1: 0xXX, Arg2: 0xXX, Arg3: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0104	260

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0104, C2 MCTEST Info: Arg1: 0x%x, Arg2: 0x%x, Arg3: 0x%x.*

3.53 0115, Controller II: Maximum temperature exceeded. Temperature is 0xXX, should be <= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0115	277

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0115, Controller %d: Maximum temperature exceeded. Temperature is 0x%x, should be <= 0x%x.*

3.54 0116, Controller II: Minimum temperature alert. Temperature is 0xXX, should be >= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0116	278

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0116, Controller %d: Minimum temperature alert. Temperature is 0x%x, should be >= 0x%x.*

3.55 0117, Controller II: Temperature difference too high. Difference is II, should be <= II.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0117	279

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0117, Controller %d: Temperature difference too high. Difference is %d, should be <= %d.*

3.56 0118, Controller II: Maximum voltage alert (Partner_VCC). Voltage is 0xXX, should be <= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0118	280

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0118, Controller %d: Maximum voltage alert (Partner_VCC). Voltage is 0x%x, should be <= 0x%x.*

3.57 0119, Controller II: Minimum voltage alert (Partner_VCC). Voltage is 0xXX, should be >= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0119	281

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0119, Controller %d: Minimum voltage alert (Partner_VCC). Voltage is 0x%x, should be >= 0x%x.*

3.58 011A, Controller II: Maximum voltage alert (ECAT_VCC). Voltage is 0xXX, should be <= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
011A	282

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x011A, Controller %d: Maximum voltage alert (ECAT_VCC). Voltage is 0x%x, should be <= 0x%x.*

3.59 011B, Controller II: Minimum voltage alert (ECAT_VCC). Voltage is 0xXX, should be >= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
011B	283

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x011B, Controller %d: Minimum voltage alert (ECAT_VCC). Voltage is 0x%x, should be >= 0x%x.*

3.60 011E, Controller II: Timer Tick Difference is too high. Difference is 0xXX, should be >= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
011E	286

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x011E, Controller %d: Timer Tick Difference is too high. Difference is 0x%x, should be >= 0x%x.*

3.61 011F, Controller II: Minimum value alert (Individual ADC Check). Channel parameter = II. Actual value is 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
011F	287

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x011F, Controller %d: Minimum value alert (Individual ADC Check). Channel parameter = %d. Actual value is 0x%x.*

3.62 0120, Controller II: Maximum value alert (Individual ADC Check). Channel parameter = II. Actual value is 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0120	288

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0120, Controller %d: Maximum value alert (Individual ADC Check). Channel parameter = %d. Actual value is 0x%x.*

3.63 0121, Module Shutdown due to minimum value alert (Individual ADC Check). Channel parameter = II.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0121	289

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0121, Module Shutdown due to minimum value alert (Individual ADC Check). Channel parameter = %d.*

3.64 1000, The size of the safe User Parameter is too small (II), the expected size is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1000	4096

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1000, The size of the safe User Parameter is too small (%d), the expected size is %d*

3.65 1003, The reserved data of the SafeOut User Parameter of module II at byte offset 0xXX has to be 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1003	4099

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1003, The reserved data of the SafeOut User Parameter of module %d at byte offset 0x%x has to be 0*

3.66 1004, The reserved data of the SafeIn User Parameter of module II at byte offset 0xXX has to be 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1004	4100

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1004, The reserved data of the SafeIn User Parameter of module %d at byte offset 0x%x has to be 0*

3.67 100A, The version of the Product-Code (0xXX) is unequal the expected value of 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
100A	4106

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x100A, The version of the Product-Code (0x%x) is unequal the expected value of 0x%x*

3.68 100B, The feature bits 0xXX of axis A are not supported, the allowed feature bits are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
100B	4107

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x100B, The feature bits 0x%x of axis A are not supported, the allowed feature bits are 0x%x*

3.69 100C, The feature bits 0xXX of axis B are not supported, the allowed feature bits are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
100C	4108

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x100C, The feature bits 0x%x of axis B are not supported, the allowed feature bits are 0x%x*

3.70 100F, The version (II (VII.II)) of the safety card is not released, not certified and shall only be used for non-safety-critical tests

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
100F	4111

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x100F, The version (%d (V%d.%d)) of the safety card is not released, not certified and shall only be used for non-safety-critical tests*

3.71 1010, The default Project CRC is wrong, the received value is 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1010	4112

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1010, The default Project CRC is wrong, the received value is 0x%x*

3.72 102A, Unallowed Safe User Parameter Version, Received=0xXX Expected=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102A	4138

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102A, Unallowed Safe User Parameter Version, Received=0x%x Expected=0x%x*

3.73 102B, The Safe User Parameter Size (II) is unequal to the Safe User Parameter Size for the incremental download (SS)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102B	4139

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102B, The Safe User Parameter Size (%d) is unequal to the Safe User Parameter Size for the incremental download (%s)*

3.74 102C, Unallowed Safe User Parameter Size for the rqeuested features, Received=ll Expected=ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102C	4140

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102C, Unallowed Safe User Parameter Size for the rqeuested features, Received=%d Expected=%d*

3.75 102D, Unallowed Safe User Parameter Ident, Received=II Expected=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102D	4141

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102D, Unallowed Safe User Parameter Ident, Received=%d Expected=%d*

3.76 102E, Unallowed Safe User Parameter Size, Received=II Expected=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102E	4142

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102E, Unallowed Safe User Parameter Size, Received=%d Expected=%d*

3.77 102F, Unallowed Safe User Parameter Change in RUN, Offset=II Info=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102F	4143

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102F, Unallowed Safe User Parameter Change in RUN, Offset=%d Info=0x%x*

3.78 1030, The size of the safe User Parameter is too big (II), the expected size is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1030	4144

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1030, The size of the safe User Parameter is too big (%d), the expected size is %d*

3.79 1515, Wrong SafetyCard Firmware: Number of supported axis does not fit with current device

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1515	5397

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1515, Wrong SafetyCard Firmware: Number of supported axis does not fit with current device*

3.80 1516, SafetyCard: Invalid Current scaling shift value for calculation configured. SafetyCard VendorData: II DriveApplication: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
1516	5398

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x1516, SafetyCard: Invalid Current scaling shift value for calculation configured. SafetyCard VendorData: %d DriveApplication: %d*

3.81 2001, The II. connection has received an invalid FSoE-Cmd in state CONNECTION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2001	8193

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2001, The %d. connection has received an invalid FSoE-Cmd in state CONNECTION*

3.82 2002, The II. connection has received an unknown FSoE-Cmd in state CONNECTION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2002	8194

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2002, The %d. connection has received an unknown FSoE-Cmd in state CONNECTION*

3.83 2003, The II. connection has received an invalid FSoE-ConnID in state CONNECTION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2003	8195

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2003, The %d. connection has received an invalid FSoE-ConnID in state CONNECTION*

3.84 2004, The II. connection has received an invalid FSoE-CRC in state CONNECTION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2004	8196

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2004, The %d. connection has received an invalid FSoE-CRC in state CONNECTION*

3.85 2005, The FSoE-Watchdog of the II. connection has been expired in state CONNECTION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2005	8197

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2005, The FSoE-Watchdog of the %d. connection has been expired in state CONNECTION*

3.86 2006, On the II. connection the received FSoE-Address (0xXX) does not match with the expected FSoE-Address (0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2006	8198

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2006, On the %d. connection the received FSoE-Address (0x%x) does not match with the expected FSoE-Address (0x%x)*

3.87 2007, On the II. connection the received connection data do not match with the sent values

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2007	8199

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2007, On the %d. connection the received connection data do not match with the sent values*

3.88 200C, On the II. connection in state CONNECTION the Connection was restarted from the FSoE-Master

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
200C	8204

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x200C, On the %d. connection in state CONNECTION the Connection was restarted from the FSoE-Master*

3.89 200E, A Module fault was detected on the II. connection in state CONNECTION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
200E	8206

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x200E, A Module fault was detected on the %d. connection in state CONNECTION*

3.90 2011, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 1 was received which means that the communication partner has received an invalid FSoE-Cmd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2011	8209

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2011, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 1 was received which means that the communication partner has received an invalid FSoE-Cmd*

3.91 2012, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 2 was received which means that the communication partner has received an unknown FSoE-Cmd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2012	8210

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2012, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 2 was received which means that the communication partner has received an unknown FSoE-Cmd*

3.92 2013, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 3 was received which means that the communication partner has received an invalid FSoE-ConnID

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2013	8211

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2013, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 3 was received which means that the communication partner has received an invalid FSoE-ConnID*

3.93 2014, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 4 was received which means that the communication partner has received an invalid FSoE-CRC

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2014	8212

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2014, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 4 was received which means that the communication partner has received an invalid FSoE-CRC*

3.94 2015, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 5 was received which means that the FSoE-Watchdog has been expired in the communication partner

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2015	8213

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2015, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 5 was received which means that the FSoE-Watchdog has been expired in the communication partner*

3.95 2016, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 6 was received which means that the communication partner has received an invalid FSoE-Address

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2016	8214

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2016, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 6 was received which means that the communication partner has received an invalid FSoE-Address*

3.96 2017, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 7 was received which means that the communication partner has received connection data do not match with the sent values

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2017	8215

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2017, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 7 was received which means that the communication partner has received connection data do not match with the sent values*

3.97 2018, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 8 was received which means that the communication partner has received an invalid communication parameter length

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2018	8216

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2018, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 8 was received which means that the communication partner has received an invalid communication parameter length*

3.98 2019, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 9 was received which means that the communication partner has received an invalid FSoE Watchdog

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2019	8217

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2019, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 9 was received which means that the communication partner has received an invalid FSoE Watchdog*

3.99 201A, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 10 was received which means that the communication partner has received an invalid application parameter length

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
201A	8218

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x201A, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 10 was received which means that the communication partner has received an invalid application parameter length*

3.100 201B, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 11 was received which means that the communication partner has received invalid application parameter data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
201B	8219

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x201B, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 11 was received which means that the communication partner has received invalid application parameter data*

3.101 201C, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 12 was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
201C	8220

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x201C, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 12 was received*

3.102 201D, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 13 was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
201D	8221

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x201D, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 13 was received*

3.103 201E, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 14 was received which means that the communication partner has detected a module fault

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
201E	8222

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x201E, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 14 was received which means that the communication partner has detected a module fault*

3.104 201F, On the II. connection in state CONNECTION a FSoE-Reset with Error-Code 0xXX was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
201F	8223

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x201F, On the %d. connection in state CONNECTION a FSoE-Reset with Error-Code 0x%x was received*

3.105 2041, The II. connection has received an invalid FSoE-Cmd in state PARAMETER

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2041	8257

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2041, The %d. connection has received an invalid FSoE-Cmd in state PARAMETER*

3.106 2042, The II. connection has received an unknown FSoE-Cmd in state PARAMETER

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2042	8258

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2042, The %d. connection has received an unknown FSoE-Cmd in state PARAMETER*

3.107 2043, The II. connection has received an invalid FSoE-ConnID in state PARAMETER

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2043	8259

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2043, The %d. connection has received an invalid FSoE-ConnID in state PARAMETER*

3.108 2044, The II. connection has received an invalid FSoE-CRC in state PARAMETER

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2044	8260

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2044, The %d. connection has received an invalid FSoE-CRC in state PARAMETER*

3.109 2045, The FSoE-Watchdog of the II. connection has been expired in state PARAMETER

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2045	8261

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2045, The FSoE-Watchdog of the %d. connection has been expired in state PARAMETER*

3.110 2047, On the II. connection the received parameter data do not match with the sent values

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2047	8263

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2047, On the %d. connection the received parameter data do not match with the sent values*

3.111 2048, On the II. connection the received communication parameter length (II) does not match with the expected value of 2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2048	8264

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2048, On the %d. connection the received communication parameter length (%d) does not match with the expected value of 2*

3.112 2049, On the II. connection the received FSoE Watchdog (II) is outside the allowed area from 2 to 60000

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2049	8265

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2049, On the %d. connection the received FSoE Watchdog (%d) is outside the allowed area from 2 to 60000*

3.113 204A, On the II. connection the received application parameter length (II) is unequal the expected length of II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
204A	8266

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x204A, On the %d. connection the received application parameter length (%d) is unequal the expected length of %d*

3.114 204B, On the II. connection the received application parameter data are wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
204B	8267

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x204B, On the %d. connection the received application parameter data are wrong*

3.115 204C, On the II. connection in state PARAMETER the Connection was restarted from the FSoE-Master

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
204C	8268

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x204C, On the %d. connection in state PARAMETER the Connection was restarted from the FSoE-Master*

3.116 204E, A Module fault was detected on the II. connection in state PARAMETER

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
204E	8270

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x204E, A Module fault was detected on the %d. connection in state PARAMETER*

3.117 2051, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 1 was received which means that the communication partner has received an invalid FSoE-Cmd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2051	8273

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2051, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 1 was received which means that the communication partner has received an invalid FSoE-Cmd*

3.118 2052, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 2 was received which means that the communication partner has received an unknown FSoE-Cmd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2052	8274

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2052, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 2 was received which means that the communication partner has received an unknown FSoE-Cmd*

3.119 2053, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 3 was received which means that the communication partner has received an invalid FSoE-ConnID

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2053	8275

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2053, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 3 was received which means that the communication partner has received an invalid FSoE-ConnID*

3.120 2054, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 4 was received which means that the communication partner has received an invalid FSoE-CRC

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2054	8276

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2054, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 4 was received which means that the communication partner has received an invalid FSoE-CRC*

3.121 2055, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 5 was received which means that the FSoE-Watchdog has been expired in the communication partner

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2055	8277

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2055, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 5 was received which means that the FSoE-Watchdog has been expired in the communication partner*

3.122 2056, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 6 was received which means that the communication partner has received an invalid FSoE-Address

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2056	8278

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2056, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 6 was received which means that the communication partner has received an invalid FSoE-Address*

3.123 2057, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 7 was received which means that the communication partner has received connection data do not match with the sent values

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2057	8279

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2057, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 7 was received which means that the communication partner has received connection data do not match with the sent values*

3.124 2058, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 8 was received which means that the communication partner has received an invalid communication parameter length

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2058	8280

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2058, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 8 was received which means that the communication partner has received an invalid communication parameter length*

3.125 2059, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 9 was received which means that the communication partner has received an invalid FSoE Watchdog

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2059	8281

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2059, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 9 was received which means that the communication partner has received an invalid FSoE Watchdog*

3.126 205A, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 10 was received which means that the communication partner has received an invalid application parameter length

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
205A	8282

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x205A, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 10 was received which means that the communication partner has received an invalid application parameter length*

3.127 205B, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 11 was received which means that the communication partner has received invalid application parameter data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
205B	8283

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x205B, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 11 was received which means that the communication partner has received invalid application parameter data*

3.128 205C, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 12 was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
205C	8284

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x205C, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 12 was received*

3.129 205D, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 13 was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
205D	8285

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x205D, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 13 was received*

3.130 205E, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 14 was received which means that the communication partner has detected a module fault

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
205E	8286

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x205E, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 14 was received which means that the communication partner has detected a module fault*

3.131 205F, On the II. connection in state PARAMETER a FSoE-Reset with Error-Code 0xXX was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
205F	8287

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x205F, On the %d. connection in state PARAMETER a FSoE-Reset with Error-Code 0x%x was received*

3.132 2061, On the II. connection in state PARAMETER a wrong Command was received, which means that the Safe-Parameter size is wrong (Expected size: II, Received size: II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2061	8289

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2061, On the %d. connection in state PARAMETER a wrong Command was received, which means that the Safe-Parameter size is wrong (Expected size: %d, Received size: %d)*

3.133 2081, The II. connection has received an invalid FSoE-Cmd in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2081	8321

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2081, The %d. connection has received an invalid FSoE-Cmd in state DATA*

3.134 2082, The II. connection has received an unknown FSoE-Cmd in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2082	8322

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2082, The %d. connection has received an unknown FSoE-Cmd in state DATA*

3.135 2083, The II. connection has received an invalid FSoE-ConnID in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2083	8323

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2083, The %d. connection has received an invalid FSoE-ConnID in state DATA*

3.136 2084, The II. connection has received an invalid FSoE-CRC in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2084	8324

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2084, The %d. connection has received an invalid FSoE-CRC in state DATA*

3.137 2085, The FSoE-Watchdog of the II. connection has been expired in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2085	8325

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2085, The FSoE-Watchdog of the %d. connection has been expired in state DATA*

3.138 208C, On the II. connection in state DATA the Connection was restarted from the FSoE-Master

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
208C	8332

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x208C, On the %d. connection in state DATA the Connection was restarted from the FSoE-Master*

3.139 208D, The FailSafeData command was received on the II. connection in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
208D	8333

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x208D, The FailSafeData command was received on the %d. connection in state DATA*

3.140 208E, A Module fault was detected on the II. connection in state DATA

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
208E	8334

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x208E, A Module fault was detected on the %d. connection in state DATA*

3.141 2091, On the II. connection in state DATA a FSoE-Reset with Error-Code 1 was received which means that the communication partner has received an invalid FSoE-Cmd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2091	8337

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2091, On the %d. connection in state DATA a FSoE-Reset with Error-Code 1 was received which means that the communication partner has received an invalid FSoE-Cmd*

3.142 2092, On the II. connection in state DATA a FSoE-Reset with Error-Code 2 was received which means that the communication partner has received an unknown FSoE-Cmd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2092	8338

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2092, On the %d. connection in state DATA a FSoE-Reset with Error-Code 2 was received which means that the communication partner has received an unknown FSoE-Cmd*

3.143 2093, On the II. connection in state DATA a FSoE-Reset with Error-Code 3 was received which means that the communication partner has received an invalid FSoE-ConnID

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2093	8339

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2093, On the %d. connection in state DATA a FSoE-Reset with Error-Code 3 was received which means that the communication partner has received an invalid FSoE-ConnID*

3.144 2094, On the II. connection in state DATA a FSoE-Reset with Error-Code 4 was received which means that the communication partner has received an invalid FSoE-CRC

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2094	8340

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2094, On the %d. connection in state DATA a FSoE-Reset with Error-Code 4 was received which means that the communication partner has received an invalid FSoE-CRC*

3.145 2095, On the II. connection in state DATA a FSoE-Reset with Error-Code 5 was received which means that the FSoE-Watchdog has been expired in the communication partner

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2095	8341

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2095, On the %d. connection in state DATA a FSoE-Reset with Error-Code 5 was received which means that the FSoE-Watchdog has been expired in the communication partner*

3.146 2096, On the II. connection in state DATA a FSoE-Reset with Error-Code 6 was received which means that the communication partner has received an invalid FSoE-Address

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2096	8342

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2096, On the %d. connection in state DATA a FSoE-Reset with Error-Code 6 was received which means that the communication partner has received an invalid FSoE-Address*

3.147 2097, On the II. connection in state DATA a FSoE-Reset with Error-Code 7 was received which means that the communication partner has received connection data do not match with the sent values

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2097	8343

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2097, On the %d. connection in state DATA a FSoE-Reset with Error-Code 7 was received which means that the communication partner has received connection data do not match with the sent values*

3.148 2098, On the II. connection in state DATA a FSoE-Reset with Error-Code 8 was received which means that the communication partner has received an invalid communication parameter length

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2098	8344

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2098, On the %d. connection in state DATA a FSoE-Reset with Error-Code 8 was received which means that the communication partner has received an invalid communication parameter length*

3.149 2099, On the II. connection in state DATA a FSoE-Reset with Error-Code 9 was received which means that the communication partner has received an invalid FSoE Watchdog

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2099	8345

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x2099, On the %d. connection in state DATA a FSoE-Reset with Error-Code 9 was received which means that the communication partner has received an invalid FSoE Watchdog*

3.150 209A, On the II. connection in state DATA a FSoE-Reset with Error-Code 10 was received which means that the communication partner has received an invalid application parameter length

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
209A	8346

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x209A, On the %d. connection in state DATA a FSoE-Reset with Error-Code 10 was received which means that the communication partner has received an invalid application parameter length*

3.151 209B, On the II. connection in state DATA a FSoE-Reset with Error-Code 11 was received which means that the communication partner has received invalid application parameter data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
209B	8347

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x209B, On the %d. connection in state DATA a FSoE-Reset with Error-Code 11 was received which means that the communication partner has received invalid application parameter data*

3.152 209C, On the II. connection in state DATA a FSoE-Reset with Error-Code 12 was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
209C	8348

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x209C, On the %d. connection in state DATA a FSoE-Reset with Error-Code 12 was received*

3.153 209D, On the II. connection in state DATA a FSoE-Reset with Error-Code 13 was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
209D	8349

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x209D, On the %d. connection in state DATA a FSoE-Reset with Error-Code 13 was received*

3.154 209E, On the II. connection in state DATA a FSoE-Reset with Error-Code 14 was received which means that the communication partner has detected a module fault

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
209E	8350

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x209E, On the %d. connection in state DATA a FSoE-Reset with Error-Code 14 was received which means that the communication partner has detected a module fault*

3.155 209F, On the II. connection in state DATA a FSoE-Reset with Error-Code 0xXX was received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
209F	8351

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x209F, On the %d. connection in state DATA a FSoE-Reset with Error-Code 0x%x was received*

3.156 20C1, The II. connection has received an invalid FSoE-Cmd in state SHUTDOWN

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
20C1	8385

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x20C1, The %d. connection has received an invalid FSoE-Cmd in state SHUTDOWN*

3.157 20C2, The II. connection has received an unknown FSoE-Cmd in state SHUTDOWN

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
20C2	8386

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x20C2, The %d. connection has received an unknown FSoE-Cmd in state SHUTDOWN*

3.158 20C4, The II. connection has received an invalid FSoE-CRC in state SHUTDOWN

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
20C4	8388

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x20C4, The %d. connection has received an invalid FSoE-CRC in state SHUTDOWN*

3.159 20E3, The II. connection has received the invalid FSoE-ConnID 0 in state SESSION

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
20E3	8419

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x20E3, The %d. connection has received the invalid FSoE-ConnID 0 in state SESSION*

3.160 3100, No groups defined when trying to activate or deactivate groups

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3100	12544

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3100, No groups defined when trying to activate or deactivate groups*

3.161 3101, The reserved bits are set in value II at offset II when trying to activate or deactivate groups

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3101	12545

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3101, The reserved bits are set in value %d at offset %d when trying to activate or deactivate groups*

3.162 3102, The operation mode at offset II is not supported when trying to activate or deactivate groups

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3102	12546

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3102, The operation mode at offset %d is not supported when trying to activate or deactivate groups*

3.163 3103, The deactivation of groups is not enabled for any group so no replacement values should be downloaded

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3103	12547

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3103, The deactivation of groups is not enabled for any group so no replacement values should be downloaded*

3.164 3104, The maximum number (II) of Cfg Data pages was exceeded in the Replacement Values Cfg Data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3104	12548

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3104, The maximum number (%d) of Cfg Data pages was exceeded in the Replacement Values Cfg Data*

3.165 3105, Invalid FB output size size at offset II of the Replacement Values Cfg Data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3105	12549

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3105, Invalid FB output size size at offset %d of the Replacement Values Cfg Data*

3.166 3106, Unexpected groupindex in the Replacement values Cfg Data at offset 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3106	12550

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3106, Unexpected groupindex in the Replacement values Cfg Data at offset 0x%x*

3.167 3107, The download of the Activate Project Cfg Data was refused because II bytes of the Replacement Values Cfg Data were missing

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3107	12551

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3107, The download of the Activate Project Cfg Data was refused because %d bytes of the Replacement Values Cfg Data were missing*

3.168 3108, To activate the Group II the user has to logged in with access rights Bit 0-15 unequal 0 that the Safe Logic Program will be stopped when logging in

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3108	12552

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3108, To activate the Group %d the user has to logged in with access rights Bit 0-15 unequal 0 that the Safe Logic Program will be stopped when logging in*

3.169 3109, No more definitions of individual replace values for analog FB Outputs in case of Group State unequal RUN are expected at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3109	12553

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3109, No more definitions of individual replace values for analog FB Outputs in case of Group State unequal RUN are expected at offset %d*

3.170 310A, The offset in the definitions of individual replace values for analog FB Outputs in case of Group State unequal RUN was wrong at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
310A	12554

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x310A, The offset in the definitions of individual replace values for analog FB Outputs in case of Group State unequal RUN was wrong at offset %d*

3.171 310B, The source process image offset of the Cyclic FRAM Data is outside the FB analog input area at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
310B	12555

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x310B, The source process image offset of the Cyclic FRAM Data is outside the FB analog input area at offset %d*

3.172 310C, The source process image offset of the Cyclic FRAM Data has to even at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
310C	12556

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x310C, The source process image offset of the Cyclic FRAM Data has to even at offset %d*

3.173 310D, The size of the Cyclic FRAM Data was exceeding at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
310D	12557

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x310D, The size of the Cyclic FRAM Data was exceeding at offset %d*

3.174 310E, The received size of the Cyclic FRAM Data at word offset 24 of the Safe Logic Cfg Data (II) is unequal the calculated value of II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
310E	12558

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x310E, The received size of the Cyclic FRAM Data at word offset 24 of the Safe Logic Cfg Data (%d) is unequal the calculated value of %d*

3.175 310F, The size of the Cyclic FRAM CfgData in the GroupCfgData was not dividable by 4 at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
310F	12559

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x310F, The size of the Cyclic FRAM CfgData in the GroupCfgData was not dividable by 4 at offset %d*

3.176 3110, The offset of the Cyclic FRAM Data in the GroupCfgData was wrong at offset II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3110	12560

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3110, The offset of the Cyclic FRAM Data in the GroupCfgData was wrong at offset %d*

3.177 3111, The value of II at offset II is not allowed when trying to activate or deactivate groups

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3111	12561

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3111, The value of %d at offset %d is not allowed when trying to activate or deactivate groups*

3.178 3113, FB CAMMON (Word-Offset 0xXX of the CfgData): The TDC2UpperLimit (II) is lower or equal than the maximum position jitter (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3113	12563

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3113, FB CAMMON (Word-Offset 0x%x of the CfgData): The TDC2UpperLimit (%d) is lower or equal than the maximum position jitter (%d)*

3.179 3114, FB CAMMON (Word-Offset 0xXX of the CfgData): The TDCUpperLimit (II) is lower or equal than the maximum position jitter (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3114	12564

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3114, FB CAMMON (Word-Offset 0x%x of the CfgData): The TDCUpperLimit (%d) is lower or equal than the maximum position jitter (%d)*

3.180 3115, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDCLowerLimit (plus maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3115	12565

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3115, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDCLowerLimit (plus maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.181 3116, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of BDCUpperLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of TDCLowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3116	12566

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3116, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of BDCUpperLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of TDCLowerLimit (%d)*

3.182 3117, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of BDCUpperLimit (II) is smaller or equal the configured value of 180° (plus maximum position jitter) (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3117	12567

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3117, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of BDCUpperLimit (%d) is smaller or equal the configured value of 180° (plus maximum position jitter) (%d)*

3.183 3118, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of BDCLowerLimit (plus maximum position jitter) (II) is greater or equal the configured value of 180° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3118	12568

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3118, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of BDCLowerLimit (plus maximum position jitter) (%d) is greater or equal the configured value of 180° (%d)*

3.184 3119, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of OverrunMax (plus twice the maximum position jitter) (II) is bigger or equal the value of BDCLowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3119	12569

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3119, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of OverrunMax (plus twice the maximum position jitter) (%d) is bigger or equal the value of BDCLowerLimit (%d)*

3.185 311A, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDCUpperLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of OverrunMax (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311A	12570

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311A, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDCUpperLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of OverrunMax (%d)*

3.186 311B, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDC1UpperLimit (plus the maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311B	12571

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311B, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDC1UpperLimit (plus the maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.187 311C, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDC1LowerLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of TDC1UpperLimit (5d)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311C	12572

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311C, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDC1LowerLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of TDC1UpperLimit (5d)*

3.188 311D, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDC2LowerLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of BDCLowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311D	12573

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311D, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDC2LowerLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of BDCLowerLimit (%d)*

3.189 311E, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDC2UpperLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of TDC2LowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311E	12574

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311E, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDC2UpperLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of TDC2LowerLimit (%d)*

3.190 311F, The maximum size of the Replacement Values was exceeded at Word-Offset 0xXX of the Group Cfg Data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311F	12575

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311F, The maximum size of the Replacement Values was exceeded at Word-Offset 0x%x of the Group Cfg Data*

3.191 3120, If no deactivation mode is enabled the offset of the replacement values shall be zero at Word-Offset 0xXX of the Group Cfg Data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3120	12576

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3120, If no deactivation mode is enabled the offset of the replacement values shall be zero at Word-Offset 0x%x of the Group Cfg Data*

3.192 3121, No more replacement values expected at byte-offset 0xXX of the Replacement Values Cfg Data

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3121	12577

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3121, No more replacement values expected at byte-offset 0x%x of the Replacement Values Cfg Data*

3.193 3200, The PROFIsafe-protocol is not supported on this device

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3200	12800

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3200, The PROFIsafe-protocol is not supported on this device*

3.194 3201, The F_ParVersion in the F_Prm_Flag2 of the F-Parameter at Word-Offset 0xXX is unequal 1 (PROFIsafe V2)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3201	12801

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3201, The F_ParVersion in the F_Prm_Flag2 of the F-Parameter at Word-Offset 0x%x is unequal 1 (PROFIsafe V2)*

3.195 3202, The F_CRC1 of the F-Parameter at Word-Offset 0xXX is wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3202	12802

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3202, The F_CRC1 of the F-Parameter at Word-Offset 0x%x is wrong*

3.196 3203, The F_CRC_Length in the F_Prm_Flag1 of the F-Parameter is wrong at Word-Offset 0xXX, the expected value is 0 (3 Bytes CRC2)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3203	12803

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3203, The F_CRC_Length in the F_Prm_Flag1 of the F-Parameter is wrong at Word-Offset 0x%x, the expected value is 0 (3 Bytes CRC2)*

3.197 3206, The I-Parameter CRC in the F-Parameter is wrong at Word-Offset 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3206	12806

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3206, The I-Parameter CRC in the F-Parameter is wrong at Word-Offset 0x%x*

3.198 3207, The F_Block_ID in the F_Prm_Flag2 of the F-Parameter is wrong at Word-Offset 0xXX, the expected value is 0 (No F_iPar_CRC, no F_WD_Time 2) or 1 (F_iPar_CRC, no F_WD_Time 2)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3207	12807

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3207, The F_Block_ID in the F_Prm_Flag2 of the F-Parameter is wrong at Word-Offset 0x%x, the expected value is 0 (No F_iPar_CRC, no F_WD_Time 2) or 1 (F_iPar_CRC, no F_WD_Time 2)*

3.199 3208, The F_Source_Address in the F-Parameter at Word-Offset 0xXX is outside the allowed area of 1-0xFFFE

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3208	12808

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3208, The F_Source_Address in the F-Parameter at Word-Offset 0x%x is outside the allowed area of 1-0xFFFE*

3.200 3209, The F_Destination_Address in the F-Parameter at Word-Offset 0xXX is outside the allowed area of 1-0xFFFE

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3209	12809

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3209, The F_Destination_Address in the F-Parameter at Word-Offset 0x%x is outside the allowed area of 1-0xFFFE*

3.201 320A, The F_WD_Time in the F-parameter at Word-Offset 0xXX is outside the allowed range from 2-60000

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
320A	12810

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x320A, The F_WD_Time in the F-parameter at Word-Offset 0x%x is outside the allowed range from 2-60000*

3.202 320B, The F_Destination_Address in the F-Parameter at Word-Offset 0xXX is wrong, the expected value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
320B	12811

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x320B, The F_Destination_Address in the F-Parameter at Word-Offset 0x%x is wrong, the expected value is %d*

3.203 3300, The State OPERATIONAL was left in Restore Mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3300	13056

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3300, The State OPERATIONAL was left in Restore Mode*

3.204 3301, Only II CRCs were matching in Restore Mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3301	13057

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3301, Only %d CRCs were matching in Restore Mode*

3.205 3302, The CRC of the Activate Project Cfg Data in Restore Mode does not match, the expected value was 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3302	13058

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3302, The CRC of the Activate Project Cfg Data in Restore Mode does not match, the expected value was 0x%x*

3.206 3303, No RestoreMode Slaves configured when trying to start the Restore Mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3303	13059

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3303, No RestoreMode Slaves configured when trying to start the Restore Mode*

3.207 3304, The CRC of the User List Cfg Data was not matching in Restore Mode, the expected value was 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3304	13060

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3304, The CRC of the User List Cfg Data was not matching in Restore Mode, the expected value was 0x%x*

3.208 3305, The download of the User List Cfg Data is not activated in Restore Mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3305	13061

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3305, The download of the User List Cfg Data is not activated in Restore Mode*

3.209 3306, The download of the User List Cfg Data in Restore-Mode is not allowed in the state II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3306	13062

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3306, The download of the User List Cfg Data in Restore-Mode is not allowed in the state %d*

3.210 3307, The activation of the TwinSAFE Restore Project is not allowed in the state II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3307	13063

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3307, The activation of the TwinSAFE Restore Project is not allowed in the state %d*

3.211 3308, The Restore Mode is not supported in EtherCAT state 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3308	13064

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3308, The Restore Mode is not supported in EtherCAT state 0x%x*

3.212 3310, The FSoE-Slave on the II. connection is in Restore-Mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3310	13072

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3310, The FSoE-Slave on the %d. connection is in Restore-Mode*

3.213 3311, The FSoE-Master on the II. connection is in Restore-Mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3311	13073

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3311, The FSoE-Master on the %d. connection is in Restore-Mode*

3.214 3400, The II. group has no more errors

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3400	13312

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3400, The %d. group has no more errors*

3.215 3401, The Analog Input at word offset ll of the analog input process image has expired maximum allowed deviation to the last stored value, received value: ll, last stored value: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3401	13313

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3401, The Analog Input at word offset %d of the analog input process image has expired maximum allowed deviation to the last stored value, received value: %d, last stored value: %d*

3.216 3402, The Wait-Com-Error-Timeout has not been expired when the group II should be deactivated in passivate mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3402	13314

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3402, The Wait-Com-Error-Timeout has not been expired when the group %d should be deactivated in passivate mode*

3.217 3403, A module fault happened in group II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3403	13315

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3403, A module fault happened in group %d*

3.218 3404, The assigned connection reported an error when the group II was deactivated in passivate mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3404	13316

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3404, The assigned connection reported an error when the group %d was deactivated in passivate mode*

3.219 3405, The connection has been successfully restarted when the group II was deactivated in passivate mode

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3405	13317

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3405, The connection has been successfully restarted when the group %d was deactivated in passivate mode*

3.220 3410, All groups will enter the ERROR-state because the safe logic program has been restarted

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3410	13328

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3410, All groups will enter the ERROR-state because the safe logic program has been restarted*

3.221 3411, All groups will enter the ERROR-state because the CRC of the Change Group Activation Data was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3411	13329

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3411, All groups will enter the ERROR-state because the CRC of the Change Group Activation Data was wrong*

3.222 3412, All groups will enter the ERROR-state because the CRC of the Change FB Parameter Data was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3412	13330

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3412, All groups will enter the ERROR-state because the CRC of the Change FB Parameter Data was wrong*

3.223 3413, All groups will enter the ERROR-state because the CRC of the Project CRC Data was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3413	13331

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3413, All groups will enter the ERROR-state because the CRC of the Project CRC Data was wrong*

3.224 3414, All groups will enter the ERROR-state because the CRC of the Power-On Analog Value Check Data was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3414	13332

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3414, All groups will enter the ERROR-state because the CRC of the Power-On Analog Value Check Data was wrong*

3.225 3415, The TwinSAFE Logic Program was not loaded on C1 because of an inconsistency

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3415	13333

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3415, The TwinSAFE Logic Program was not loaded on C1 because of an inconsistency*

3.226 3416, The TwinSAFE Logic Program was not loaded on C2 because of an inconsistency

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3416	13334

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3416, The TwinSAFE Logic Program was not loaded on C2 because of an inconsistency*

3.227 3420, No more EtherCAT size error (EtherCAT Output Size=II, EtherCAT Input Size=II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3420	13344

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3420, No more EtherCAT size error (EtherCAT Output Size=%d, EtherCAT Input Size=%d)*

3.228 3421, The EtherCAT Output Data sizes of the Safety Logic Program (II) and the EtherCAT Configuration (II) are unequal

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3421	13345

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3421, The EtherCAT Output Data sizes of the Safety Logic Program (%d) and the EtherCAT Configuration (%d) are unequal*

3.229 3422, The EtherCAT Input Data sizes of the Safety Logic Program (II) and the EtherCAT Configuration (II) are unequal

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3422	13346

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3422, The EtherCAT Input Data sizes of the Safety Logic Program (%d) and the EtherCAT Configuration (%d) are unequal*

3.230 3423, The EtherCAT Output Data sizes for PROFIsafe of the Safety Logic Program (II) and the EtherCAT Configuration (II) are unequal

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3423	13347

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3423, The EtherCAT Output Data sizes for PROFIsafe of the Safety Logic Program (%d) and the EtherCAT Configuration (%d) are unequal*

3.231 3424, The EtherCAT Input Data sizes for PROFIsafe of the Safety Logic Program (II) and the EtherCAT Configuration (II) are unequal

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3424	13348

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3424, The EtherCAT Input Data sizes for PROFIsafe of the Safety Logic Program (%d) and the EtherCAT Configuration (%d) are unequal*

3.232 3425, The needed EtherCAT Process data buffer size (II) exceeded the maximum available size of II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3425	13349

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3425, The needed EtherCAT Process data buffer size (%d) exceeded the maximum available size of %d*

3.233 3501, On the II. connection the changeable FSoE Address of II already exists

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3501	13569

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3501, On the %d. connection the changeable FSoE Address of %d already exists*

3.234 3502, On the II. connection the changeable FSoE Address is zero

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3502	13570

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3502, On the %d. connection the changeable FSoE Address is zero*

3.235 3800, FB II (ESTOP): An EDM-fault (0xXX) was detected in state SAFE

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3800	14336

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3800, FB %d (ESTOP): An EDM-fault (0x%x) was detected in state SAFE*

3.236 3802, FB II (ESTOP): An EDM-fault (0xXX) was detected in state RESET

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3802	14338

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3802, FB %d (ESTOP): An EDM-fault (0x%x) was detected in state RESET*

3.237 3803, FB II (ESTOP): An EDM-fault (0xXX) was detected in state START

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3803	14339

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3803, FB %d (ESTOP): An EDM-fault (0x%x) was detected in state START*

3.238 3804, FB II (ESTOP): An DiscTime-Fault (0xXX) was detected in state SAFE, the actual EStopIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3804	14340

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3804, FB %d (ESTOP): An DiscTime-Fault (0x%x) was detected in state SAFE, the actual EStopIn-values are 0x%x*

3.239 3806, FB II (ESTOP): An DiscTime-Fault (0xXX) was detected in state RESET, the actual EStopIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3806	14342

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3806, FB %d (ESTOP): An DiscTime-Fault (0x%x) was detected in state RESET, the actual EStopIn-values are 0x%x*

3.240 3807, FB II (ESTOP): An DiscTime-Fault (0xXX) was detected in state START, the actual EStopIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3807	14343

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3807, FB %d (ESTOP): An DiscTime-Fault (0x%x) was detected in state START, the actual EStopIn-values are 0x%x*

3.241 3809, FB II (ESTOP): An DiscTime-Fault (0xXX) was detected in state DELAYOUT, the actual EStopIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3809	14345

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3809, FB %d (ESTOP): An DiscTime-Fault (0x%x) was detected in state DELAYOUT, the actual EStopIn-values are 0x%x*

3.242 380F, FB II (ESTOP): At least one activated EDM-Input was not reset in RUN when the EDM Reset time had been expired (Diag-Code=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
380F	14351

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x380F, FB %d (ESTOP): At least one activated EDM-Input was not reset in RUN when the EDM Reset time had been expired (Diag-Code=0x%x)*

3.243 3810, FB II (MON): An EDM-fault (0xXX) was detected in state SAFE

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3810	14352

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3810, FB %d (MON): An EDM-fault (0x%x) was detected in state SAFE*

3.244 3812, FB II (MON): An EDM-fault (0xXX) was detected in state RESET

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3812	14354

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3812, FB %d (MON): An EDM-fault (0x%x) was detected in state RESET*

3.245 3813, FB II (MON): An EDM-fault (0xXX) was detected in state START

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3813	14355

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3813, FB %d (MON): An EDM-fault (0x%x) was detected in state START*

3.246 3814, FB II (MON): An DiscTime-Fault (0xXX) was detected in state SAFE, the actual MonIn/Secure-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3814	14356

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3814, FB %d (MON): An DiscTime-Fault (0x%x) was detected in state SAFE, the actual MonIn/ Secure-values are 0x%x*

3.247 3816, FB II (MON): An DiscTime-Fault (0xXX) was detected in state RESET, the actual MonIn/Secure-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3816	14358

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3816, FB %d (MON): An DiscTime-Fault (0x%x) was detected in state RESET, the actual MonIn/Secure-values are 0x%x*

3.248 3817, FB II (MON): An DiscTime-Fault (0xXX) was detected in state START, the actual MonIn/Secure-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3817	14359

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3817, FB %d (MON): An DiscTime-Fault (0x%x) was detected in state START, the actual MonIn/Secure-values are 0x%x*

3.249 3818, FB II (MON): An DiscTime-Fault (0xXX) was detected in state RUN, the actual MonIn/Secure-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3818	14360

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3818, FB %d (MON): An DiscTime-Fault (0x%x) was detected in state RUN, the actual MonIn/Secure-values are 0x%x*

3.250 3819, FB II (MON): An DiscTime-Fault (0xXX) was detected in state DELAYOUT, the actual MonIn/Secure-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3819	14361

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3819, FB %d (MON): An DiscTime-Fault (0x%x) was detected in state DELAYOUT, the actual MonIn/Secure-values are 0x%x*

3.251 381A, FB II (MON): An DiscTime-Fault (0xXX) was detected in state FUNCTEST, the actual MonIn/Secure-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
381A	14362

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x381A, FB %d (MON): An DiscTime-Fault (0x%x) was detected in state FUNCTEST, the actual MonIn/Secure-values are 0x%x*

3.252 381F, FB II (MON): At least one activated EDM-Input was not reset in RUN when the EDM Reset time had been expired (Diag-Code=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
381F	14367

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x381F, FB %d (MON): At least one activated EDM-Input was not reset in RUN when the EDM Reset time had been expired (Diag-Code=0x%x)*

3.253 3820, FB II (TWOHAND): A Disc-Group-fault (0xXX) was detected in state 1BUTTON, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3820	14368

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3820, FB %d (TWOHAND): A Disc-Group-fault (0x%x) was detected in state 1BUTTON, the actual TwoHandIn-values are 0x%x*

3.254 3821, FB II (TWOHAND): A Disc-Group-fault (0xXX) was detected in state 2BUTTON, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3821	14369

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3821, FB %d (TWOHAND): A Disc-Group-fault (0x%x) was detected in state 2BUTTON, the actual TwoHandIn-values are 0x%x*

3.255 3823, FB II (TWOHAND): An DiscTime-Fault (0xXX) was detected in state SAFE, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3823	14371

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3823, FB %d (TWOHAND): An DiscTime-Fault (0x%x) was detected in state SAFE, the actual TwoHandIn-values are 0x%x*

3.256 3825, FB II (TWOHAND): An DiscTime-Fault (0xXX) was detected in state RESET, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3825	14373

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3825, FB %d (TWOHAND): An DiscTime-Fault (0x%x) was detected in state RESET, the actual TwoHandIn-values are 0x%x*

3.257 382B, FB II (TWOHAND): An DiscTime-Fault (0xXX) was detected in state 1BUTTON, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
382B	14379

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x382B, FB %d (TWOHAND): An DiscTime-Fault (0x%x) was detected in state 1BUTTON, the actual TwoHandIn-values are 0x%x*

3.258 382C, FB II (TWOHAND): An DiscTime-Fault (0xXX) was detected in state 2BUTTON, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
382C	14380

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x382C, FB %d (TWOHAND): An DiscTime-Fault (0x%x) was detected in state 2BUTTON, the actual TwoHandIn-values are 0x%x*

3.259 382D, FB II (TWOHAND): An DiscTime-Fault (0xXX) was detected in state RELEASE, the actual TwoHandIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
382D	14381

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x382D, FB %d (TWOHAND): An DiscTime-Fault (0x%x) was detected in state RELEASE, the actual TwoHandIn-values are 0x%x*

3.260 3830, FB II (OPMODE): An DiscTime-Fault (0xXX) was detected, the actual OpIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3830	14384

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3830, FB %d (OPMODE): An DiscTime-Fault (0x%x) was detected, the actual OpIn-values are 0x%x*

3.261 3831, FB II (OPMODE): An Input-Fault was detected in state RESET, the actual OpIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3831	14385

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3831, FB %d (OPMODE): An Input-Fault was detected in state RESET, the actual OpIn-values are 0x%x*

3.262 3840, FB II (EDM): The SwitchOn-Time had been expired

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3840	14400

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3840, FB %d (EDM): The SwitchOn-Time had been expired*

3.263 3841, FB II (EDM): The SwitchOff-Time had been expired

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3841	14401

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3841, FB %d (EDM): The SwitchOff-Time had been expired*

3.264 3853, FB II (CS): An DiscTime-Fault (0xXX) was detected in state SAFE, the actual Deactivate-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3853	14419

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3853, FB %d (CS): An DiscTime-Fault (0x%x) was detected in state SAFE, the actual Deactivate-values are 0x%x*

3.265 3855, FB II (CS): An DiscTime-Fault (0xXX) was detected in state RESET, the actual Deactivate-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3855	14421

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3855, FB %d (CS): An DiscTime-Fault (0x%x) was detected in state RESET, the actual Deactivate-values are 0x%x*

3.266 3881, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state RUN, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3881	14465

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3881, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state RUN, the actual MuteIn/OssdIn-values are 0x%x*

3.267 3883, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state SAFE, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3883	14467

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3883, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state SAFE, the actual MuteIn/OssdIn-values are 0x%x*

3.268 3885, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state RESET, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3885	14469

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3885, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state RESET, the actual MuteIn/OssdIn-values are 0x%x*

3.269 3888, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state DELAYOUT, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3888	14472

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3888, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state DELAYOUT, the actual MuteIn/OssdIn-values are 0x%x*

3.270 3889, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING1, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3889	14473

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3889, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING1, the actual MuteIn/OssdIn-values are 0x%x*

3.271 388A, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING2, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
388A	14474

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x388A, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING2, the actual MuteIn/OssdIn-values are 0x%x*

3.272 388B, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING3, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
388B	14475

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x388B, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING3, the actual MuteIn/OssdIn-values are 0x%x*

3.273 388C, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING4, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
388C	14476

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x388C, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING4, the actual MuteIn/OssdIn-values are 0x%x*

3.274 388D, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING5, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
388D	14477

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x388D, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING5, the actual MuteIn/OssdIn-values are 0x%x*

3.275 388E, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING6, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
388E	14478

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x388E, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING6, the actual MuteIn/OssdIn-values are 0x%x*

3.276 388F, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING7, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
388F	14479

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x388F, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING7, the actual MuteIn/OssdIn-values are 0x%x*

3.277 3890, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING8, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3890	14480

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3890, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING8, the actual MuteIn/OssdIn-values are 0x%x*

3.278 3891, FB II (MUTING): An DiscTime-Fault (0xXX) was detected in state MUTING9, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3891	14481

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3891, FB %d (MUTING): An DiscTime-Fault (0x%x) was detected in state MUTING9, the actual MuteIn/OssdIn-values are 0x%x*

3.279 3892, FB II (MUTING): State RUN, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3892	14482

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3892, FB %d (MUTING): State RUN, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.280 3893, FB II (MUTING): State RUN, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3893	14483

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3893, FB %d (MUTING): State RUN, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.281 3894, FB II (MUTING): State MUTING1, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3894	14484

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3894, FB %d (MUTING): State MUTING1, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.282 3895, FB II (MUTING): State MUTING1, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/ OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3895	14485

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3895, FB %d (MUTING): State MUTING1, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.283 3896, FB II (MUTING): State MUTING2, MutingEnable is set and the MuteIn-signals before the AOPD are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3896	14486

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3896, FB %d (MUTING): State MUTING2, MutingEnable is set and the MuteIn-signals before the AOPD are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.284 3897, FB II (MUTING): State MUTING2, MutingEnable is set and the MuteIn-signals after the AOPD are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3897	14487

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3897, FB %d (MUTING): State MUTING2, MutingEnable is set and the MuteIn-signals after the AOPD are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.285 3898, FB II (MUTING): State MUTING3, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3898	14488

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3898, FB %d (MUTING): State MUTING3, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.286 3899, FB II (MUTING): State MUTING3, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3899	14489

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3899, FB %d (MUTING): State MUTING3, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.287 389A, FB II (MUTING): State MUTING3, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
389A	14490

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x389A, FB %d (MUTING): State MUTING3, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.288 389B, FB II (MUTING): State MUTING4, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
389B	14491

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x389B, FB %d (MUTING): State MUTING4, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.289 389C, FB II (MUTING): State MUTING4, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/ OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
389C	14492

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x389C, FB %d (MUTING): State MUTING4, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.290 389D, FB II (MUTING): State MUTING5, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
389D	14493

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x389D, FB %d (MUTING): State MUTING5, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.291 389E, FB II (MUTING): State MUTING5, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
389E	14494

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x389E, FB %d (MUTING): State MUTING5, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.292 389F, FB II (MUTING): State MUTING5, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
389F	14495

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x389F, FB %d (MUTING): State MUTING5, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.293 38A0, FB II (MUTING): State MUTING6, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A0	14496

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A0, FB %d (MUTING): State MUTING6, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.294 38A1, FB II (MUTING): State MUTING6, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/ OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A1	14497

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A1, FB %d (MUTING): State MUTING6, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.295 38A2, FB II (MUTING): State MUTING7, MutingEnable is set and the MuteIn-signals before the AOPD are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A2	14498

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A2, FB %d (MUTING): State MUTING7, MutingEnable is set and the MuteIn-signals before the AOPD are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.296 38A3, FB II (MUTING): State MUTING7, MutingEnable is set and the MuteIn-signals after the AOPD are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A3	14499

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A3, FB %d (MUTING): State MUTING7, MutingEnable is set and the MuteIn-signals after the AOPD are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.297 38A4, FB II (MUTING): State MUTING8, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A4	14500

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A4, FB %d (MUTING): State MUTING8, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.298 38A5, FB II (MUTING): State MUTING8, Sequential Inputs=TRUE, CheckOssdOptional=TRUE: MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A5	14501

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A5, FB %d (MUTING): State MUTING8, Sequential Inputs=TRUE, CheckOssdOptional=TRUE: MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.299 38A6, FB II (MUTING): State MUTING8, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A6	14502

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A6, FB %d (MUTING): State MUTING8, Sequential Inputs=TRUE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.300 38A7, FB II (MUTING): State MUTING8, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A7	14503

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A7, FB %d (MUTING): State MUTING8, Sequential Inputs=FALSE: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.301 38A8, FB II (MUTING): State MUTING9, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A8	14504

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A8, FB %d (MUTING): State MUTING9, MutingEnable is set and the OssdIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.302 38A9, FB II (MUTING): State MUTING9, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/ OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38A9	14505

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38A9, FB %d (MUTING): State MUTING9, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.303 38AA, FB II (MUTING): State MUTING5, Sequential Inputs=TRUE, MuteIn3 and MuteIn4 are inactive: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38AA	14506

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38AA, FB %d (MUTING): State MUTING5, Sequential Inputs=TRUE, MuteIn3 and MuteIn4 are inactive: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.304 38AB, FB II (MUTING): State MUTING6, Sequential Inputs=TRUE, MuteIn3 and MuteIn4 are inactive: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38AB	14507

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38AB, FB %d (MUTING): State MUTING6, Sequential Inputs=TRUE, MuteIn3 and MuteIn4 are inactive: MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.305 38AC, FB II (MUTING): State MUTING1, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/ OssdIn-values are 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38AC	14508

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38AC, FB %d (MUTING): State MUTING1, MutingEnable is set and the MuteIn-signals are invalid, the actual MuteIn/OssdIn-values are 0x%x*

3.306 38B0, FB II (MUTING): At least one activated EDM-Input was not reset in RUN when the EDM Reset time had been expired (Diag-Code=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38B0	14512

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38B0, FB %d (MUTING): At least one activated EDM-Input was not reset in RUN when the EDM Reset time had been expired (Diag-Code=0x%x)*

3.307 38C1, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING1 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C1	14529

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C1, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING1 (Digital Inputs=0x%x)*

3.308 38C2, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING2 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C2	14530

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C2, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING2 (Digital Inputs=0x%x)*

3.309 38C3, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING3 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C3	14531

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C3, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING3 (Digital Inputs=0x%x)*

3.310 38C4, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING4 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C4	14532

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C4, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING4 (Digital Inputs=0x%x)*

3.311 38C5, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING5 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C5	14533

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C5, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING5 (Digital Inputs=0x%x)*

3.312 38C6, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING6 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C6	14534

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C6, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING6 (Digital Inputs=0x%x)*

3.313 38C7, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING7 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C7	14535

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C7, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING7 (Digital Inputs=0x%x)*

3.314 38C8, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING8 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C8	14536

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C8, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING8 (Digital Inputs=0x%x)*

3.315 38C9, FB II (MUTING): The Max-Muting-Time had been expired in state MUTING9 (Digital Inputs=0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38C9	14537

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38C9, FB %d (MUTING): The Max-Muting-Time had been expired in state MUTING9 (Digital Inputs=0x%x)*

3.316 4001, FB II (CAMMON): The TDC2UpperLimit (II) is lower or equal than the maximum position jitter (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4001	16385

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4001, FB %d (CAMMON): The TDC2UpperLimit (%d) is lower or equal than the maximum position jitter (%d)*

3.317 4002, FB II (CAMMON): The Position (II) is bigger than the maximum position (plus the maximum position jitter) (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4002	16386

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4002, FB %d (CAMMON): The Position (%d) is bigger than the maximum position (plus the maximum position jitter) (%d)*

3.318 4003, FB II (CAMMON): The input OverrunCAM was FALSE in the top dead center area, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4003	16387

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4003, FB %d (CAMMON): The input OverrunCAM was FALSE in the top dead center area, the actual position is %d*

3.319 4004, FB II (CAMMON): The input OverrunCAM changed from FALSE to TRUE outside the area between BDCUpperLimit and TDCLowerLimit, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4004	16388

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4004, FB %d (CAMMON): The input OverrunCAM changed from FALSE to TRUE outside the area between BDCUpperLimit and TDCLowerLimit, the actual position is %d*

3.320 4005, FB II (CAMMON): The input OverrunCAM was TRUE in the area between OverrunMax and BDCUpperLimit, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4005	16389

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4005, FB %d (CAMMON): The input OverrunCAM was TRUE in the area between OverrunMax and BDCUpperLimit, the actual position is %d*

3.321 4006, FB II (CAMMON): The input OverrunCAM changed from TRUE to FALSE outside the area between OverrunMax and BDCLowerLimit, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4006	16390

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4006, FB %d (CAMMON): The input OverrunCAM changed from TRUE to FALSE outside the area between OverrunMax and BDCLowerLimit, the actual position is %d*

3.322 4007, FB II (CAMMON): The input UpwardsCAM was FALSE in the area between BDCUpperLimit and TDCLowerLimit, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4007	16391

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4007, FB %d (CAMMON): The input UpwardsCAM was FALSE in the area between BDCUpperLimit and TDCLowerLimit, the actual position is %d*

3.323 4008, FB II (CAMMON): The input UpwardsCAM changed from FALSE to TRUE outside the area between BDCLowerLimit and TDCLowerLimit, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4008	16392

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4008, FB %d (CAMMON): The input UpwardsCAM changed from FALSE to TRUE outside the area between BDCLowerLimit and TDCLowerLimit, the actual position is %d*

3.324 4009, FB II (CAMMON): The input UpwardsCAM changed from TRUE to FALSE outside the area between TDCLowerLimit and OverrunMax, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4009	16393

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4009, FB %d (CAMMON): The input UpwardsCAM changed from TRUE to FALSE outside the area between TDCLowerLimit and OverrunMax, the actual position is %d*

3.325 400A, FB II (CAMMON): The Position was moving while waiting for a rising edge of the input Reset in the state MOVE-STOP

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
400A	16394

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x400A, FB %d (CAMMON): The Position was moving while waiting for a rising edge of the input Reset in the state MOVE-STOP*

3.326 400B, FB II (CAMMON): The Position was moving while waiting for a falling edge of the input Reset in the state MOVE-START

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
400B	16395

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x400B, FB %d (CAMMON): The Position was moving while waiting for a falling edge of the input Reset in the state MOVE-START*

3.327 400C, FB II (CAMMON): The Position II in the area between OverrunMax and BDCLowerLimit was detected in the state MOVE-UP

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
400C	16396

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x400C, FB %d (CAMMON): The Position %d in the area between OverrunMax and BDCLowerLimit was detected in the state MOVE-UP*

3.328 400D, FB II (CAMMON): The Position has left the top dead center while waiting for a stop, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
400D	16397

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x400D, FB %d (CAMMON): The Position has left the top dead center while waiting for a stop, the actual position is %d*

3.329 400E, FB II (CAMMON): The Position has been changed negative

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
400E	16398

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x400E, FB %d (CAMMON): The Position has been changed negative*

3.330 400F, FB II (CAMMON): The input UpwardsCAM was TRUE in the area between OverrunMax and BDCLowerLimit

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
400F	16399

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x400F, FB %d (CAMMON): The input UpwardsCAM was TRUE in the area between OverrunMax and BDCLowerLimit*

3.331 4010, FB II (CAMMON): The Position has a circle overflow in Pendulum Mode, actual position=II, last position=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4010	16400

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4010, FB %d (CAMMON): The Position has a circle overflow in Pendulum Mode, actual position=%d, last position=%d*

3.332 4011, FB II (CAMMON): The Position has moved while waiting for a rising edge of the input Reset in Pendulum Mode, actual position=II, compare position=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4011	16401

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4011, FB %d (CAMMON): The Position has moved while waiting for a rising edge of the input Reset in Pendulum Mode, actual position=%d, compare position=%d*

3.333 4012, FB II (CAMMON): The Input BackwardsMove is TRUE while the Position is between 180° and 360°, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4012	16402

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4012, FB %d (CAMMON): The Input BackwardsMove is TRUE while the Position is between 180° and 360°, the actual position is %d*

3.334 4013, FB II (CAMMON): The Input BackwardsMove is TRUE while the moving is clockwise

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4013	16403

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4013, FB %d (CAMMON): The Input BackwardsMove is TRUE while the moving is clockwise*

3.335 4014, FB II (CAMMON): The Position has moved while waiting for a falling edge of the input Reset in Pendulum Mode, actual position=II, last position=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4014	16404

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4014, FB %d (CAMMON): The Position has moved while waiting for a falling edge of the input Reset in Pendulum Mode, actual position=%d, last position=%d*

3.336 4015, FB II (CAMMON): The value of TDCLowerLimit (plus maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4015	16405

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4015, FB %d (CAMMON): The value of TDCLowerLimit (plus maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.337 4016, FB II (CAMMON): The value of BDCUpperLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of TDCLowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4016	16406

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4016, FB %d (CAMMON): The value of BDCUpperLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of TDCLowerLimit (%d)*

3.338 4017, FB II (CAMMON): The value of BDCUpperLimit (II) is smaller or equal the configured value of 180° (plus maximum position jitter) (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4017	16407

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4017, FB %d (CAMMON): The value of BDCUpperLimit (%d) is smaller or equal the configured value of 180° (plus maximum position jitter) (%d)*

3.339 4018, FB II (CAMMON): The value of BDCLowerLimit (plus maximum position jitter) (II) is greater or equal the configured value of 180° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4018	16408

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4018, FB %d (CAMMON): The value of BDCLowerLimit (plus maximum position jitter) (%d) is greater or equal the configured value of 180° (%d)*

3.340 4019, FB II (CAMMON): The value of OverrunMax (plus twice the maximum position jitter) (II) is bigger or equal the value of BDCLowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4019	16409

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4019, FB %d (CAMMON): The value of OverrunMax (plus twice the maximum position jitter) (%d) is bigger or equal the value of BDCLowerLimit (%d)*

3.341 401A, FB II (CAMMON): The value of TDCUpperLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of OverrunMax (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401A	16410

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401A, FB %d (CAMMON): The value of TDCUpperLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of OverrunMax (%d)*

3.342 401B, FB II (CAMMON): The value of TDC1UpperLimit (plus the maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401B	16411

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401B, FB %d (CAMMON): The value of TDC1UpperLimit (plus the maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.343 401C, FB II (CAMMON): The value of TDC1LowerLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of TDC1UpperLimit (5d)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401C	16412

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401C, FB %d (CAMMON): The value of TDC1LowerLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of TDC1UpperLimit (5d)*

3.344 401D, FB II (CAMMON): The value of TDC2LowerLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of BDCLowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401D	16413

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401D, FB %d (CAMMON): The value of TDC2LowerLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of BDCLowerLimit (%d)*

3.345 401E, FB II (CAMMON): The value of TDC2UpperLimit (plus twice the maximum position jitter) (II) is bigger or equal the value of TDC2LowerLimit (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401E	16414

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401E, FB %d (CAMMON): The value of TDC2UpperLimit (plus twice the maximum position jitter) (%d) is bigger or equal the value of TDC2LowerLimit (%d)*

3.346 401F, FB II (CAMMON): The input PressStarted is TRUE and the position did not move after the PressStartedDelayTime

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401F	16415

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401F, FB %d (CAMMON): The input PressStarted is TRUE and the position did not move after the PressStartedDelayTime*

3.347 4020, FB II (CAMMON): The input PressStarted is TRUE and the position has stopped after moving before

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4020	16416

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4020, FB %d (CAMMON): The input PressStarted is TRUE and the position has stopped after moving before*

3.348 4021, FB II (CAMMON): The input PressStarted is TRUE and the position has not moved enough, the actual position is II, the compare position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4021	16417

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4021, FB %d (CAMMON): The input PressStarted is TRUE and the position has not moved enough, the actual position is %d, the compare position is %d*

3.349 4022, FB II (CAMMON), Pendulum Mode: The Position has changed contra clockwise while moving up clockwise (actual Position=II, old Position=II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4022	16418

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4022, FB %d (CAMMON), Pendulum Mode: The Position has changed contra clockwise while moving up clockwise (actual Position=%d, old Position=%d)*

3.350 4023, FB II (CAMMON), Pendulum Mode: The Position has changed clockwise while moving up contra clockwise (actual Position=II, old Position=II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4023	16419

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4023, FB %d (CAMMON), Pendulum Mode: The Position has changed clockwise while moving up contra clockwise (actual Position=%d, old Position=%d)*

3.351 4024, FB II (CAMMON): The Position was moving while waiting for a falling edge of the input Reset in the state WAIT-FOR_RESET

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4024	16420

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4024, FB %d (CAMMON): The Position was moving while waiting for a falling edge of the input Reset in the state WAIT-FOR_RESET*

3.352 4025, FB II (CAMMON): The TDCUpperLimit (II) is lower or equal than the maximum position jitter (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4025	16421

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4025, FB %d (CAMMON): The TDCUpperLimit (%d) is lower or equal than the maximum position jitter (%d)*

3.353 4080, FB II (ADD/SUB): an underflow was detected, AnalogIn1=II, AnalogIn2=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4080	16512

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4080, FB %d (ADD/SUB): an underflow was detected, AnalogIn1=%d, AnalogIn2=%d*

3.354 4081, FB II (ADD/SUB): an overflow was detected, AnalogIn1=II, AnalogIn2=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4081	16513

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4081, FB %d (ADD/SUB): an overflow was detected, AnalogIn1=%d, AnalogIn2=%d*

3.355 4088, FB II (SPEED): an underflow was detected, actual Position=II, old Position=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4088	16520

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4088, FB %d (SPEED): an underflow was detected, actual Position=%d, old Position=%d*

3.356 4089, FB II (SPEED): an overflow was detected, actual Position=II, old Position=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4089	16521

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4089, FB %d (SPEED): an overflow was detected, actual Position=%d, old Position=%d*

3.357 4090, FB II (LIMIT): the minimum value (II) is bigger than the maximum value (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4090	16528

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4090, FB %d (LIMIT): the minimum value (%d) is bigger than the maximum value (%d)*

3.358 4098, FB II (COMPARE): an underflow was detected on CompOut (II), the minimum allowed value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4098	16536

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4098, FB %d (COMPARE): an underflow was detected on CompOut (%d), the minimum allowed value is %d*

3.359 4099, FB II (COMPARE): an overflow was detected on CompOut (II), the maximum allowed value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4099	16537

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4099, FB %d (COMPARE): an overflow was detected on CompOut (%d), the maximum allowed value is %d*

3.360 40A0, FB II (MUL): an underflow was detected, AnalogIn1=II, AnalogIn2=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40A0	16544

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40A0, FB %d (MUL): an underflow was detected, AnalogIn1=%d, AnalogIn2=%d*

3.361 40A1, FB II (MUL): an overflow was detected, AnalogIn1=II, AnalogIn2=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40A1	16545

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40A1, FB %d (MUL): an overflow was detected, AnalogIn1=%d, AnalogIn2=%d*

3.362 40A8, FB II (DIV): an underflow was detected, AnalogIn1=II, AnalogIn2=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40A8	16552

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40A8, FB %d (DIV): an underflow was detected, AnalogIn1=%d, AnalogIn2=%d*

3.363 40A9, FB II (DIV): an overflow was detected, AnalogIn1=II, AnalogIn2=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40A9	16553

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40A9, FB %d (DIV): an overflow was detected, AnalogIn1=%d, AnalogIn2=%d*

3.364 40B0, FB II (SCALE): an underflow was detected, AnalogIn=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40B0	16560

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40B0, FB %d (SCALE): an underflow was detected, AnalogIn=%d*

3.365 40B1, FB II (SCALE): an overflow was detected, AnalogIn=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40B1	16561

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40B1, FB %d (SCALE): an overflow was detected, AnalogIn=%d*

3.366 40B2, FB II (SCALE): an overflow was detected after multiplication, AnalogIn=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40B2	16562

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40B2, FB %d (SCALE): an overflow was detected after multiplication, AnalogIn=%d*

3.367 40B3, FB II (SCALE): an overflow was detected before division when rounding up the value, AnalogIn=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40B3	16563

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40B3, FB %d (SCALE): an overflow was detected before division when rounding up the value, AnalogIn=%d*

3.368 40B8, FB II (COUNT): an underflow was detected on ActValue (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40B8	16568

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40B8, FB %d (COUNT): an underflow was detected on ActValue (%d)*

3.369 40B9, FB II (COUNT): an overflow was detected on ActValue (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40B9	16569

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40B9, FB %d (COUNT): an overflow was detected on ActValue (%d)*

3.370 40C0, FB II (SLI): an underflow was detected on ActValue (II), the minimum allowed value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40C0	16576

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40C0, FB %d (SLI): an underflow was detected on ActValue (%d), the minimum allowed value is %d*

3.371 40C1, FB II (SLI): an overflow was detected on ActValue (II), the maximum allowed value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40C1	16577

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40C1, FB %d (SLI): an overflow was detected on ActValue (%d), the maximum allowed value is %d*

3.372 40C8, FB II (ENVELOPE): an underflow was detected on InValue (II), the minimum allowed value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40C8	16584

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40C8, FB %d (ENVELOPE): an underflow was detected on InValue (%d), the minimum allowed value is %d*

3.373 40C9, FB II (ENVELOPE): an overflow was detected on InValue (II), the maximum allowed value is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40C9	16585

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40C9, FB %d (ENVELOPE): an overflow was detected on InValue (%d), the maximum allowed value is %d*

3.374 40CA, FB II (ENVELOPE): an overflow error was detected on InValue (II), InValue+Offset is bigger than the maximum allowed value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40CA	16586

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40CA, FB %d (ENVELOPE): an overflow error was detected on InValue (%d), InValue+Offset is bigger than the maximum allowed value*

3.375 40CB, FB II (ENVELOPE): the MaxTime was expired (InValue=II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40CB	16587

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40CB, FB %d (ENVELOPE): the MaxTime was expired (InValue=%d)*

3.376 40D0, FB II (SLP): MultiturnPos_LL (II) is bigger than MultiturnPos_UL (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40D0	16592

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40D0, FB %d (SLP): MultiturnPos_LL (%d) is bigger than MultiturnPos_UL (%d)*

3.377 40D1, FB II (SLP): MultiturnPos_LL=MultiturnPos_UL and SingleturnPos_LL (II) is bigger than SingleturnPos_UL (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40D1	16593

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40D1, FB %d (SLP): MultiturnPos_LL=MultiturnPos_UL and SingleturnPos_LL (%d) is bigger than SingleturnPos_UL (%d)*

3.378 40D8, FB II (SBT): Brake-Test failed in state II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40D8	16600

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40D8, FB %d (SBT): Brake-Test failed in state %d*

3.379 40D9, FB II (SBT): Brake-Test Interval expired in state II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40D9	16601

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40D9, FB %d (SBT): Brake-Test Interval expired in state %d*

3.380 40DA, FB II (SBT): Brake-Test failed, Actual Position Deviation=II, Maximum Position Deviation=IIInterval expired in state II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
40DA	16602

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x40DA, FB %d (SBT): Brake-Test failed, Actual Position Deviation=%d, Maximum Position Deviation=%dInterval expired in state %d*

3.381 6009, SAFEOUT:Initial-Parameter: MultiplierDiagTestPulse has to be greater zero. ModuleNr:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6009	24585

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6009, SAFEOUT:Initial-Parameter: MultiplierDiagTestPulse has to be greater zero. ModuleNr:0x%x*

3.382 6010, SAFEOUT:Initial-Parameter: Number of Modules incorrect. ModuleNr:0xXX, Parameter:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6010	24592

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6010, SAFEOUT:Initial-Parameter: Number of Modules incorrect. ModuleNr:0x%x, Parameter:0x%x*

3.383 6011, SAFEOUT:Initial-Parameter: Number of Channels incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6011	24593

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6011, SAFEOUT:Initial-Parameter: Number of Channels incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.384 6012, SAFEOUT:Initial-Parameter: Number of Diagnosis active Module incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6012	24594

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6012, SAFEOUT:Initial-Parameter: Number of Diagnosis active Module incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.385 6013, SAFEOUT:Initial-Parameter: Number of Diagnosis inactive Module incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6013	24595

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6013, SAFEOUT:Initial-Parameter: Number of Diagnosis inactive Module incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.386 6014, SAFEOUT:Initial-Parameter: Number of Feedback active Module incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6014	24596

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6014, SAFEOUT:Initial-Parameter: Number of Feedback active Module incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.387 6015, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis active Module incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6015	24597

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6015, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis active Module incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.388 6016, SAFEOUT:Initial-Parameter: Number of Feedback inactive Module incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6016	24598

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6016, SAFEOUT:Initial-Parameter: Number of Feedback inactive Module incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.389 6017, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis inactive Module incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6017	24599

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6017, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis inactive Module incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.390 6018, SAFEOUT:Initial-Parameter: Number of Diagnosis active Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6018	24600

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6018, SAFEOUT:Initial-Parameter: Number of Diagnosis active Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.391 6019, SAFEOUT:Initial-Parameter: Number of Diagnosis inactive Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6019	24601

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6019, SAFEOUT:Initial-Parameter: Number of Diagnosis inactive Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.392 601A, SAFEOUT:Initial-Parameter: Number of Feedback active Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
601A	24602

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x601A, SAFEOUT:Initial-Parameter: Number of Feedback active Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.393 601B, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis active Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
601B	24603

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x601B, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis active Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.394 601C, SAFEOUT:Initial-Parameter: Number of Feedback inactive Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
601C	24604

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x601C, SAFEOUT:Initial-Parameter: Number of Feedback inactive Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.395 601D, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis inactive Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
601D	24605

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x601D, SAFEOUT:Initial-Parameter: Number of Feedback Diagnosis inactive Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.396 601E, SAFEOUT:Setup Hardware Fault: Module Switch. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
601E	24606

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x601E, SAFEOUT:Setup Hardware Fault: Module Switch. ReturnData:0x%x, ReturnState:0x%x*

3.397 601F, SAFEOUT:Setup Hardware Fault: Diagnosis active Module. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
601F	24607

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x601F, SAFEOUT:Setup Hardware Fault: Diagnosis active Module. ReturnData:0x%x, ReturnState:0x%x*

3.398 6020, SAFEOUT:Setup Hardware Fault: Diagnosis inactive Module. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6020	24608

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6020, SAFEOUT:Setup Hardware Fault: Diagnosis inactive Module. ReturnData:0x%x, ReturnState:0x%x*

3.399 6021, SAFEOUT:Setup Hardware Fault: Feedback active Module. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6021	24609

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6021, SAFEOUT:Setup Hardware Fault: Feedback active Module. ReturnData:0x%x, ReturnState:0x%x*

3.400 6022, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis active Module. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6022	24610

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6022, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis active Module. ReturnData:0x%x, ReturnState:0x%x*

3.401 6023, SAFEOUT:Setup Hardware Fault: Feedback inactive Module. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6023	24611

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6023, SAFEOUT:Setup Hardware Fault: Feedback inactive Module. ReturnData:0x%x, ReturnState:0x%x*

3.402 6024, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis inactive Module. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6024	24612

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6024, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis inactive Module. ReturnData:0x%x, ReturnState:0x%x*

3.403 6025, SAFEOUT:Setup Hardware Fault: Channel Switch. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6025	24613

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6025, SAFEOUT:Setup Hardware Fault: Channel Switch. ReturnData:0x%x, ReturnState:0x%x*

3.404 6026, SAFEOUT:Setup Hardware Fault: Diagnosis active Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6026	24614

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6026, SAFEOUT:Setup Hardware Fault: Diagnosis active Channel. ReturnData:0x%x, ReturnState:0x%x*

3.405 6027, SAFEOUT:Setup Hardware Fault: Diagnosis inactive Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6027	24615

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6027, SAFEOUT:Setup Hardware Fault: Diagnosis inactive Channel. ReturnData:0x%x, ReturnState:0x%x*

3.406 6028, SAFEOUT:Setup Hardware Fault: Feedback active Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6028	24616

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6028, SAFEOUT:Setup Hardware Fault: Feedback active Channel. ReturnData:0x%x, ReturnState:0x%x*

3.407 6029, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis active Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6029	24617

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6029, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis active Channel. ReturnData:0x%x, ReturnState:0x%x*

3.408 602A, SAFEOUT:Setup Hardware Fault: Feedback inactive Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
602A	24618

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x602A, SAFEOUT:Setup Hardware Fault: Feedback inactive Channel. ReturnData:0x%x, ReturnState:0x%x*

3.409 602B, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis inactive Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
602B	24619

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x602B, SAFEOUT:Setup Hardware Fault: Feedback Diagnosis inactive Channel. ReturnData:0x%x, ReturnState:0x%x*

3.410 6030, SAFEOUT:The Feedback of the active Module Switch is wrong. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6030	24624

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6030, SAFEOUT:The Feedback of the active Module Switch is wrong. Module:0x%x*

3.411 6031, SAFEOUT:The Feedback of the inactive Module Switch is wrong. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6031	24625

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6031, SAFEOUT:The Feedback of the inactive Module Switch is wrong. Module:0x%x*

3.412 6032, SAFEOUT:The Feedback of the active Channel Switch is wrong. Module:0xXX / Channel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6032	24626

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6032, SAFEOUT:The Feedback of the active Channel Switch is wrong. Module:0x%x / Channel:0x%x*

3.413 6033, SAFEOUT:The Feedback of the inactive Channel Switch is wrong. Module:0xXX / Channel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6033	24627

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6033, SAFEOUT:The Feedback of the inactive Channel Switch is wrong. Module:0x%x / Channel:0x%x*

3.414 6040, SAFEOUT:Diagnosis Test: Common Fault Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6040	24640

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6040, SAFEOUT:Diagnosis Test: Common Fault Module:0x%x / DiagChannel:0x%x*

3.415 6041, SAFEOUT:Diagnosis Test: Unknown State local ModuleState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6041	24641

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6041, SAFEOUT:Diagnosis Test: Unknown State local ModuleState:0x%x*

3.416 6042, SAFEOUT:Diagnosis Test: Unknown State other ModuleState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6042	24642

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6042, SAFEOUT:Diagnosis Test: Unknown State other ModuleState:0x%x*

3.417 6050, SAFEOUT:Diagnosis Test: Feedback active Module Switch is wrong (Step1 - check current state). Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6050	24656

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6050, SAFEOUT:Diagnosis Test: Feedback active Module Switch is wrong (Step1 - check current state). Module:0x%x*

3.418 6051, SAFEOUT:Diagnosis Test: Feedback inactive Module Switch is wrong (Step1 - check current state). Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6051	24657

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6051, SAFEOUT:Diagnosis Test: Feedback inactive Module Switch is wrong (Step1 - check current state). Module:0x%x*

3.419 6052, SAFEOUT:Diagnosis Test: Feedback active Channel Switch is wrong (Step1 - check current state). Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6052	24658

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6052, SAFEOUT:Diagnosis Test: Feedback active Channel Switch is wrong (Step1 - check current state). Module:0x%x / DiagChannel:0x%x*

3.420 6053, SAFEOUT:Diagnosis Test: Feedback inactive Channel Switch is wrong (Step1 - check current state). Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6053	24659

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6053, SAFEOUT:Diagnosis Test: Feedback inactive Channel Switch is wrong (Step1 - check current state). Module:0x%x / DiagChannel:0x%x*

3.421 6060, SAFEOUT:Diagnosis Test: Feedback active Module Switch is wrong (Step2 - check test pulse). Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6060	24672

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6060, SAFEOUT:Diagnosis Test: Feedback active Module Switch is wrong (Step2 - check test pulse). Module:0x%x*

3.422 6061, SAFEOUT:Diagnosis Test: Feedback inactive Module Switch is wrong (Step2 - check test pulse). Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6061	24673

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6061, SAFEOUT:Diagnosis Test: Feedback inactive Module Switch is wrong (Step2 - check test pulse). Module:0x%x*

3.423 6062, SAFEOUT:Diagnosis Test: Feedback active Channel Switch is wrong (Step2 - check test pulse). Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6062	24674

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6062, SAFEOUT:Diagnosis Test: Feedback active Channel Switch is wrong (Step2 - check test pulse). Module:0x%x / DiagChannel:0x%x*

3.424 6063, SAFEOUT:Diagnosis Test: Feedback inactive Channel Switch is wrong (Step2 - check test pulse). Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6063	24675

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6063, SAFEOUT:Diagnosis Test: Feedback inactive Channel Switch is wrong (Step2 - check test pulse). Module:0x%x / DiagChannel:0x%x*

3.425 6080, SAFEOUT:Diagnosis Test:VendorData. ID: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6080	24704

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6080, SAFEOUT:Diagnosis Test:VendorData. ID: 0x%x Module:0x%x*

3.426 6081, SAFEOUT:Diagnosis Test:VendorData. ID: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6081	24705

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6081, SAFEOUT:Diagnosis Test:VendorData. ID: 0x%x Module:0x%x*

3.427 6082, SAFEOUT:Diagnosis Test:VendorData. ID: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6082	24706

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6082, SAFEOUT:Diagnosis Test:VendorData. ID: 0x%x Module:0x%x*

3.428 6083, SAFEOUT:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6083	24707

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6083, SAFEOUT:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.429 6084, SAFEOUT:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6084	24708

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6084, SAFEOUT:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.430 6085, SAFEOUT:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6085	24709

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6085, SAFEOUT:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.431 6086, SAFEOUT:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6086	24710

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6086, SAFEOUT:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.432 6090, SAFEOUT:Module Switch FeedbackTest ViolationCounter incremented, Outputs active. Module:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6090	24720

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6090, SAFEOUT:Module Switch FeedbackTest ViolationCounter incremented, Outputs active. Module:0x%x, Info:0x%x.*

3.433 6091, SAFEOUT:Module Switch FeedbackTest ViolationCounter incremented, Outputs inactive. Module:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6091	24721

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6091, SAFEOUT:Module Switch FeedbackTest ViolationCounter incremented, Outputs inactive. Module:0x%x, Info:0x%x.*

3.434 6092, SAFEOUT:Channel Switch FeedbackTest ViolationCounter incremented, Outputs active. Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6092	24722

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6092, SAFEOUT:Channel Switch FeedbackTest ViolationCounter incremented, Outputs active. Module:0x%x, Channel:0x%x, Info:0x%x.*

3.435 6093, SAFEOUT:Channel Switch FeedbackTest ViolationCounter incremented, Outputs inactive. Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6093	24723

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6093, SAFEOUT:Channel Switch FeedbackTest ViolationCounter incremented, Outputs inactive. Module:0x%x, Channel:0x%x, Info:0x%x.*

3.436 6094, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step1 - check current state). Module:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6094	24724

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6094, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step1 - check current state). Module:0x%x, Info:0x%x.*

3.437 6095, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step1 - check current state). Module:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6095	24725

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6095, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step1 - check current state). Module:0x%x, Info:0x%x.*

3.438 6096, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step1 - check current state). Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6096	24726

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6096, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step1 - check current state). Module:0x%x, Channel:0x%x, Info:0x%x.*

3.439 6097, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step1 - check current state). Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6097	24727

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6097, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step1 - check current state). Module:0x%x, Channel:0x%x, Info:0x%x.*

3.440 6098, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step2 - check test pulse). Module:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6098	24728

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6098, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step2 - check test pulse). Module:0x%x, Info:0x%x.*

3.441 6099, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step2 - check test pulse). Module:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6099	24729

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x6099, SAFEOUT:Module Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step2 - check test pulse). Module:0x%x, Info:0x%x.*

3.442 609A, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step2 - check test pulse). Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
609A	24730

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x609A, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs active (Step2 - check test pulse). Module:0x%x, Channel:0x%x, Info:0x%x.*

3.443 609B, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step2 - check test pulse). Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
609B	24731

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x609B, SAFEOUT:Channel Switch DiagnosisTest ViolationCounter incremented, Outputs inactive (Step2 - check test pulse). Module:0x%x, Channel:0x%x, Info:0x%x.*

3.444 60A0, SAFEOUT:Sercom Fault 0. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60A0	24736

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60A0, SAFEOUT:Sercom Fault 0. Cmd/State:0x%x*

3.445 60A1, SAFEOUT:Sercom Fault 1. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60A1	24737

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60A1, SAFEOUT:Sercom Fault 1. Cmd/State:0x%x*

3.446 60B0, SAFEOUT:Unknown Sercom Command Request 1. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60B0	24752

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60B0, SAFEOUT:Unknown Sercom Command Request 1. Cmd/State:0x%x*

3.447 60B1, SAFEOUT:Unknown Sercom Command Answer 1. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60B1	24753

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60B1, SAFEOUT:Unknown Sercom Command Answer 1. Cmd/State:0x%x*

3.448 60B2, SAFEOUT:Unknown Sercom Command Request 2. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60B2	24754

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60B2, SAFEOUT:Unknown Sercom Command Request 2. Cmd/State:0x%x*

3.449 60B3, SAFEOUT:Unknown Sercom Command Answer 2. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60B3	24755

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60B3, SAFEOUT:Unknown Sercom Command Answer 2. Cmd/State:0x%x*

3.450 60C0, SAFEOUT:Module Switch too fast Switching OFF detected Fault (see technical data). Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60C0	24768

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60C0, SAFEOUT:Module Switch too fast Switching OFF detected Fault (see technical data). Module:0x%x*

3.451 60C1, SAFEOUT:Channel Switch too fast Switching OFF detected Fault (see technical data). Module:0xXX / Channel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60C1	24769

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60C1, SAFEOUT:Channel Switch too fast Switching OFF detected Fault (see technical data). Module:0x%x / Channel:0x%x*

3.452 60C2, SAFEOUT:Module Switch too fast Switching ON detected Fault (see technical data). Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60C2	24770

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60C2, SAFEOUT:Module Switch too fast Switching ON detected Fault (see technical data). Module:0x%x*

3.453 60C3, SAFEOUT:Channel Switch too fast Switching ON detected Fault (see technical data). Module:0xXX / Channel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60C3	24771

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60C3, SAFEOUT:Channel Switch too fast Switching ON detected Fault (see technical data). Module:0x%x / Channel:0x%x*

3.454 60C4, SAFEOUT:Module Error Acknowledge is not possible. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60C4	24772

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60C4, SAFEOUT:Module Error Acknowledge is not possible. Module:0x%x*

3.455 60E0, SAFEOUT:HAL Read Fault. ReturnData:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60E0	24800

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60E0, SAFEOUT:HAL Read Fault. ReturnData:0x%x*

3.456 60E1, SAFEOUT:Init Fault. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
60E1	24801

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x60E1, SAFEOUT:Init Fault. Module:0x%x*

3.457 8009, SAFEIN:Initial-Parameter: MultiplierDiagTestPulse has to be greater zero. ModuleNr:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8009	32777

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8009, SAFEIN:Initial-Parameter: MultiplierDiagTestPulse has to be greater zero. ModuleNr:0x%x*

3.458 8010, SAFEIN:Initial-Parameter: Number of Modules incorrect. ModuleNr:0xXX, Parameter:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8010	32784

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8010, SAFEIN:Initial-Parameter: Number of Modules incorrect. ModuleNr:0x%x, Parameter:0x%x*

3.459 8011, SAFEIN:Initial-Parameter: Number of Channels incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8011	32785

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8011, SAFEIN:Initial-Parameter: Number of Channels incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.460 8018, SAFEIN:Initial-Parameter: Number of Diagnosis active Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8018	32792

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8018, SAFEIN:Initial-Parameter: Number of Diagnosis active Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.461 801B, SAFEIN:Initial-Parameter: Number of Feedback Diagnosis active Channel incorrect. Parameter0:0xXX, Parameter1:0xXX, Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
801B	32795

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x801B, SAFEIN:Initial-Parameter: Number of Feedback Diagnosis active Channel incorrect. Parameter0:0x%x, Parameter1:0x%x, Parameter2:0x%x*

3.462 8025, SAFEIN:Setup Hardware Fault: Channel Switch. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8025	32805

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8025, SAFEIN:Setup Hardware Fault: Channel Switch. ReturnData:0x%x, ReturnState:0x%x*

3.463 8026, SAFEIN:Setup Hardware Fault: Diagnosis active Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8026	32806

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8026, SAFEIN:Setup Hardware Fault: Diagnosis active Channel. ReturnData:0x%x, ReturnState:0x%x*

3.464 8029, SAFEIN:Setup Hardware Fault: Feedback Diagnosis active Channel. ReturnData:0xXX, ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8029	32809

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8029, SAFEIN:Setup Hardware Fault: Feedback Diagnosis active Channel. ReturnData:0x%x, ReturnState:0x%x*

3.465 8040, SAFEIN:Diagnosis Test: Common Fault Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8040	32832

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8040, SAFEIN:Diagnosis Test: Common Fault Module:0x%x / DiagChannel:0x%x*

3.466 8041, SAFEIN:Diagnosis Test: Unknown State local ModuleState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8041	32833

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8041, SAFEIN:Diagnosis Test: Unknown State local ModuleState:0x%x*

3.467 8042, SAFEIN:Diagnosis Test: Unknown State Other ModuleState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8042	32834

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8042, SAFEIN:Diagnosis Test: Unknown State Other ModuleState:0x%x*

3.468 8043, SAFEIN Pulse Detection: Wrong pulse was detected at . Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8043	32835

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8043, SAFEIN Pulse Detection: Wrong pulse was detected at . Module:0x%x / DiagChannel:0x%x*

3.469 8044, SAFEIN Pulse Detection: Detected pulse from Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8044	32836

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8044, SAFEIN Pulse Detection: Detected pulse from Module:0x%x / DiagChannel:0x%x*

3.470 8052, SAFEIN:Diagnosis Test: Feedback in Step1 active Channel is wrong. Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8052	32850

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8052, SAFEIN:Diagnosis Test: Feedback in Step1 active Channel is wrong. Module:0x%x / DiagChannel:0x%x*

3.471 8062, SAFEIN:Diagnosis Test: Feedback in Step2 active Channel is wrong. Module:0xXX / DiagChannel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8062	32866

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8062, SAFEIN:Diagnosis Test: Feedback in Step2 active Channel is wrong. Module:0x%x / DiagChannel:0x%x*

3.472 8080, SAFEIN:Diagnosis Test:VendorData. ID: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8080	32896

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8080, SAFEIN:Diagnosis Test:VendorData. ID: 0x%x Module:0x%x*

3.473 8081, SAFEIN:Diagnosis Test:VendorData. ID: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8081	32897

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8081, SAFEIN:Diagnosis Test:VendorData. ID: 0x%x Module:0x%x*

3.474 8084, SAFEIN:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8084	32900

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8084, SAFEIN:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.475 8085, SAFEIN:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8085	32901

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8085, SAFEIN:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.476 8086, SAFEIN:Diagnosis Test:VendorData. Channel: 0xXX Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8086	32902

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8086, SAFEIN:Diagnosis Test:VendorData. Channel: 0x%x Module:0x%x*

3.477 8096, SAFEIN:DiagnosisTest ViolationCounter incremented, Inputs active (Step1 - check current state). Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8096	32918

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x8096, SAFEIN:DiagnosisTest ViolationCounter incremented, Inputs active (Step1 - check current state). Module:0x%x, Channel:0x%x, Info:0x%x.*

3.478 809A, SAFEIN:DiagnosisTest ViolationCounter incremented, Inputs active (Step2 - check test pulse). Module:0xXX, Channel:0xXX, Info:0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
809A	32922

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x809A, SAFEIN:DiagnosisTest ViolationCounter incremented, Inputs active (Step2 - check test pulse). Module:0x%x, Channel:0x%x, Info:0x%x.*

3.479 80A0, SAFEIN:Sercom Fault 0. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80A0	32928

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80A0, SAFEIN:Sercom Fault 0. Cmd/State:0x%x*

3.480 80A1, SAFEIN:Sercom Fault 1. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80A1	32929

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80A1, SAFEIN:Sercom Fault 1. Cmd/State:0x%x*

3.481 80B0, SAFEIN:Unknown Sercom Command Request 1. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80B0	32944

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80B0, SAFEIN:Unknown Sercom Command Request 1. Cmd/State:0x%x*

3.482 80B1, SAFEIN:Unknown Sercom Command Answer 1. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80B1	32945

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80B1, SAFEIN:Unknown Sercom Command Answer 1. Cmd/State:0x%x*

3.483 80B2, SAFEIN:Unknown Sercom Command Request 2. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80B2	32946

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80B2, SAFEIN:Unknown Sercom Command Request 2. Cmd/State:0x%x*

3.484 80B3, SAFEIN:Unknown Sercom Command Answer 2. Cmd/State:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80B3	32947

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80B3, SAFEIN:Unknown Sercom Command Answer 2. Cmd/State:0x%x*

3.485 80C0, SAFEIN:Error Acknowledge is not possible. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80C0	32960

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80C0, SAFEIN:Error Acknowledge is not possible. Module:0x%x*

3.486 80C1, SAFEIN:Diagnosis Test: Implausible Inputs detected. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80C1	32961

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80C1, SAFEIN:Diagnosis Test: Implausible Inputs detected. Module:0x%x*

3.487 80C2, SAFEIN:Diagnosis Test: Implausible Inputs detected (INFO). Parameter1:0xXX / Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80C2	32962

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80C2, SAFEIN:Diagnosis Test: Implausible Inputs detected (INFO). Parameter1:0x%x / Parameter2:0x%x*

3.488 80E0, SAFEIN:Init HAL Fault.ReturnState:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80E0	32992

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80E0, SAFEIN:Init HAL Fault.ReturnState:0x%x*

3.489 80E1, SAFEIN:Init Fault. Module:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80E1	32993

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80E1, SAFEIN:Init Fault. Module:0x%x*

3.490 80F0, SAFEIN: Testpulse is parametrized but not enabled (Diag Testpulse for Inputs active). Module:0xXX / Channel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80F0	33008

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80F0, SAFEIN: Testpulse is parametrized but not enabled (Diag Testpulse for Inputs active). Module:0x%x / Channel:0x%x*

3.491 80F1, SAFEIN: Testpulse is parametrized but not enabled (Diag TestPulse active). Module:0xXX / Channel:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80F1	33009

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80F1, SAFEIN: Testpulse is parametrized but not enabled (Diag TestPulse active). Module:0x%x / Channel:0x%x*

3.492 80F2, SAFEIN: Testfilter-Time too long. Parameter1:0xXX / Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80F2	33010

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80F2, SAFEIN: Testfilter-Time too long. Parameter1:0x%x / Parameter2:0x%x*

3.493 80F3, SAFEIN: Inputfilter-Time too short. Parameter1:0xXX / Parameter2:0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80F3	33011

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80F3, SAFEIN: Inputfilter-Time too short. Parameter1:0x%x / Parameter2:0x%x*

3.494 80F4, SAFEIN: Wrong parameters detected for Module:0xXX / Channel:0xXX. Please check parameters!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
80F4	33012

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x80F4, SAFEIN: Wrong parameters detected for Module:0x%x / Channel:0x%x. Please check parameters!*

3.495 A081, Transition Pre-Op to Safe-Op not successful. Safetycard not detected.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A081	41089

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the device to the Beckhoff branch office that is responsible for you.

Internal: *0xA081, Transition Pre-Op to Safe-Op not successful. Safetycard not detected.*

3.496 D000, ENCODER: Module: 0xXX. No Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D000	53248

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD000, ENCODER: Module: 0x%x. No Error*

3.497 D010, ENCODER: Module: 0xXX in State 0xXX. Microcontroller async detected. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D010	53264

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD010, ENCODER: Module: 0x%x in State 0x%x. Microcontroller async detected. Info: 0x%x.*

3.498 D020, ENCODER: Module: 0xXX in State 0xXX. Encoder is in State 'Enabled' and Voltage is too low. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D020	53280

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD020, ENCODER: Module: 0x%x in State 0x%x. Encoder is in State 'Enabled' and Voltage is too low. Info: 0x%x.*

3.499 D021, ENCODER: Module: 0xXX in State 0xXX. Encoder is in State 'To Enabled' and Voltage is too low. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D021	53281

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD021, ENCODER: Module: 0x%x in State 0x%x. Encoder is in State 'To Enabled' and Voltage is too low. Info: 0x%x.*

3.500 D070, ENCODER: Module: 0xXX in State 0xXX. Encoder is in State 'Disabled' and Voltage is too high. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D070	53360

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD070, ENCODER: Module: 0x%x in State 0x%x. Encoder is in State 'Disabled' and Voltage is too high. Info: 0x%x.*

3.501 D071, ENCODER: Module: 0xXX in State 0xXX. Encoder is in State 'To Disabled' and Voltage is too high. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D071	53361

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD071, ENCODER: Module: 0x%x in State 0x%x. Encoder is in State 'To Disabled' and Voltage is too high. Info: 0x%x.*

3.502 D072, ENCODER: Module: 0xXX in State 0xXX. Encoder is in State 'To Enable' and Voltage is too high. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D072	53362

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD072, ENCODER: Module: 0x%x in State 0x%x. Encoder is in State 'To Enable' and Voltage is too high. Info: 0x%x.*

3.503 D073, ENCODER: Module: 0xXX in State 0xXX. Encoder is in State 'Enabled' and Voltage is too high. Info: 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D073	53363

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD073, ENCODER: Module: 0x%x in State 0x%x. Encoder is in State 'Enabled' and Voltage is too high. Info: 0x%x.*

3.504 D180, Primary MC: SAFETY FEEDBACK Module: 0xXX in State 0xXX. No Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D180	53632

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD180, Primary MC: SAFETY FEEDBACK Module: 0x%x in State 0x%x. No Error*

3.505 D181, Primary MC: SAFETY FEEDBACK Module: 0xXX in State 0xXX. No new Position received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D181	53633

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD181, Primary MC: SAFETY FEEDBACK Module: 0x%x in State 0x%x. No new Position received*

3.506 D182, Primary MC: SAFETY FEEDBACK Module: 0xXX. Invalid Position. Errorcode: 0xXX Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D182	53634

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD182, Primary MC: SAFETY FEEDBACK Module: 0x%x. Invalid Position. Errorcode: 0x%x Info: 0x%x*

3.507 D183, Primary MC: SAFETY FEEDBACK Module: 0xXX in State 0xXX. DriveApplication reports Feedback Error 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D183	53635

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD183, Primary MC: SAFETY FEEDBACK Module: 0x%x in State 0x%x. DriveApplication reports Feedback Error 0x%x*

3.508 D184, Primary MC: SAFETY FEEDBACK Module: 0xXX. Safety OCT Feedback not supported by Hardware

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D184	53636

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD184, Primary MC: SAFETY FEEDBACK Module: 0x%x. Safety OCT Feedback not supported by Hardware*

3.509 D185, Primary MC: SAFETY FEEDBACK Module: 0xXX. EnDat2.2 Feedback not supported by Hardware

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D185	53637

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD185, Primary MC: SAFETY FEEDBACK Module: 0x%x. EnDat2.2 Feedback not supported by Hardware*

3.510 D186, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid CRC. Module Id: II Calculated CRC: 0xXX Received CRC: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D186	53638

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD186, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid CRC. Module Id: %d Calculated CRC: 0x%x Received CRC: 0x%x*

3.511 D187, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid Command: 0xXX Module Id: II type: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D187	53639

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD187, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid Command: 0x%x Module Id: %d type: 0x%x*

3.512 D188, Primary MC: SAFETY FEEDBACK Module: 0xXX. configured Safety User Parameter CRC (0xXX) did not match with Feedback Parameter CRC

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D188	53640

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD188, Primary MC: SAFETY FEEDBACK Module: 0x%x. configured Safety User Parameter CRC (0x%x) did not match with Feedback Parameter CRC*

3.513 D189, Primary MC: SAFETY FEEDBACK Module: 0xXX. Module state sync error. local: 0xXX other: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D189	53641

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD189, Primary MC: SAFETY FEEDBACK Module: 0x%x. Module state sync error. local: 0x%x other: 0x%x*

3.514 D18A, Primary MC: SAFETY FEEDBACK: FPGA is not validated with this firmware. Elapsed time: ll seconds

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D18A	53642

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD18A, Primary MC: SAFETY FEEDBACK: FPGA is not validated with this firmware. Elapsed time: %d seconds*

3.515 D18B, Primary MC: SAFETY FEEDBACK Module: 0xXX. Stored Feedback Parameter CRC (0xXX) and Safety User Parameter CRC (0xXX) did not match

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D18B	53643

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD18B, Primary MC: SAFETY FEEDBACK Module: 0x%x. Stored Feedback Parameter CRC (0x%x) and Safety User Parameter CRC (0x%x) did not match*

3.516 D18C, Primary MC: SAFETY FEEDBACK Module: 0xXX. Encoder Safety User Parameter CRC configured but Drive Application (Slot Configuration) not set

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D18C	53644

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD18C, Primary MC: SAFETY FEEDBACK Module: 0x%x. Encoder Safety User Parameter CRC configured but Drive Application (Slot Configuration) not set*

3.517 D18D, Primary MC: SAFETY FEEDBACK Module: 0xXX. Cannot enable because module is not configured. State: 0xXX DriveAppl: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D18D	53645

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD18D, Primary MC: SAFETY FEEDBACK Module: 0x%x. Cannot enable because module is not configured. State: 0x%x DriveAppl: 0x%x*

3.518 D18E, Primary MC: SAFETY FEEDBACK Module: 0xXX. Double used Parameter CRC (0xXX). Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D18E	53646

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD18E, Primary MC: SAFETY FEEDBACK Module: 0x%x. Double used Parameter CRC (0x%x). Info: 0x%x*

3.519 D18F, Primary MC: SAFETY FEEDBACK Module: 0xXX. Encoder Voltage not enabled. State: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D18F	53647

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD18F, Primary MC: SAFETY FEEDBACK Module: 0x%x. Encoder Voltage not enabled. State: 0x%x*

3.520 D190, Primary MC: SAFETY FEEDBACK Module: 0xXX. Encoder data buffer overrun. State: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D190	53648

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD190, Primary MC: SAFETY FEEDBACK Module: 0x%x. Encoder data buffer overrun. State: 0x%x*

3.521 D191, Primary MC: SAFETY FEEDBACK Module: 0xXX. Cannot read Encoder info block. Return Code: 0xXX Info: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D191	53649

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD191, Primary MC: SAFETY FEEDBACK Module: 0x%x. Cannot read Encoder info block. Return Code: 0x%x Info: %d*

3.522 D192, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Module Id exceeded: II Expected max: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D192	53650

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD192, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Module Id exceeded: %d Expected max: %d*

3.523 D193, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too long: ll Expected max: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D193	53651

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD193, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too long: %d Expected max: %d*

3.524 D194, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too short: II Expected min: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D194	53652

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD194, Primary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too short: %d Expected min: %d*

3.525 D195, Primary MC: SAFETY FEEDBACK Module: 0xXX. Invalid drive application data received. Not allowed in this state: II Command: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D195	53653

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD195, Primary MC: SAFETY FEEDBACK Module: 0x%x. Invalid drive application data received. Not allowed in this state: %d Command: %d*

3.526 D196, Primary MC: SAFETY FEEDBACK Module: 0xXX. Error during position calculation. Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D196	53654

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD196, Primary MC: SAFETY FEEDBACK Module: 0x%x. Error during position calculation. Info: 0x%x*

3.527 D197, Primary MC: SAFETY FEEDBACK Invalid Safety FPGA interface version. Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D197	53655

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD197, Primary MC: SAFETY FEEDBACK Invalid Safety FPGA interface version. Info: 0x%x*

3.528 D198, Primary MC: SAFETY FEEDBACK Module: 0xXX. Invalid Safedrive Settings Parameter II. value: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D198	53656

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD198, Primary MC: SAFETY FEEDBACK Module: 0x%x. Invalid Safedrive Settings Parameter %d. value: 0x%x*

3.529 D199, Primary MC: SAFETY FEEDBACK Module: 0xXX. Not supported by this firmware. CRC: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D199	53657

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD199, Primary MC: SAFETY FEEDBACK Module: 0x%x. Not supported by this firmware. CRC: 0x%x*

3.530 D19A, Primary MC: SAFETY FEEDBACK Module: 0xXX. Safe user parameter position shift value is too large. SingleturnPositionBits: II PositionShiftValue: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D19A	53658

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD19A, Primary MC: SAFETY FEEDBACK Module: 0x%x. Safe user parameter position shift value is too large. SingleturnPositionBits: %d PositionShiftValue: %d*

3.531 D19B, Primary MC: SAFETY FEEDBACK Module: 0xXX. Motor exchange cannot performed. Stored and current Encoder Parameter mismatch (Subidx: II). Current Encoder Index: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D19B	53659

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD19B, Primary MC: SAFETY FEEDBACK Module: 0x%x. Motor exchange cannot performed. Stored and current Encoder Parameter mismatch (Subidx: %d). Current Encoder Index: %d*

3.532 D19C, Primary MC: SAFETY FEEDBACK Module: 0xXX. Motor exchange cannot performed because other module II is in fault state with errorcode 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D19C	53660

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD19C, Primary MC: SAFETY FEEDBACK Module: 0x%x. Motor exchange cannot performed because other module %d is in fault state with errorcode 0x%x*

3.533 D19D, Primary MC: SAFETY FEEDBACK Module: 0xXX. Motor exchange detected and successfully done.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D19D	53661

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD19D, Primary MC: SAFETY FEEDBACK Module: 0x%x. Motor exchange detected and successfully done.*

3.534 D19E, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: EnableForSetReferencingPosition is disabled but reference position is not zero. Ref SingleturnPos: ll RefMultiturnPos: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D19E	53662

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD19E, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: EnableForSetReferencingPosition is disabled but reference position is not zero. Ref SingleturnPos: %d RefMultiturnPos: %d*

3.535 D19F, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: MinimumReferencePostion (Singleturn:0xXX Multiturn:II) is larger than MaximumReferencePosition

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D19F	53663

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD19F, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: MinimumReferencePostion (Singleturn:0x%x Multiturn:%d) is larger than MaximumReferencePosition*

3.536 D1A0, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: ReferenceSafePosition (Singleturn:0xXX Multiturn:II) is too small. Position exceeded minimum Range

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A0	53664

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A0, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: ReferenceSafePosition (Singleturn:0x%x Multiturn:%d) is too small. Position exceeded minimum Range*

3.537 D1A1, Primary MC: SAFETY FEEDBACK SafeUserParameter: Cyclic FRAM data size is not large enough. Allocated size: ll Requested size: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A1	53665

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A1, Primary MC: SAFETY FEEDBACK SafeUserParameter: Cyclic FRAM data size is not large enough. Allocated size: %d Requested size: %d*

3.538 D1A2, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Difference between minimal and maximal configured position is too large. Difference: Singleturn:0xXX Multiturn:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A2	53666

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A2, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Difference between minimal and maximal configured position is too large. Difference: Singleturn:0x%x Multiturn:%d*

3.539 D1A3, Primary MC: SAFETY FEEDBACK Module: 0xXX. Referencing of position in automatic mode is required. No stored position found.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A3	53667

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A3, Primary MC: SAFETY FEEDBACK Module: 0x%x. Referencing of position in automatic mode is required. No stored position found.*

3.540 D1A4, Primary MC: SAFETY FEEDBACK Module: 0xXX. Referencing of position cannot be achieved because motor speed is too high. current Speed: II configured limit: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A4	53668

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A4, Primary MC: SAFETY FEEDBACK Module: 0x%x. Referencing of position cannot be achieved because motor speed is too high. current Speed: %d configured limit: %d*

3.541 D1A5, Primary MC: SAFETY FEEDBACK Module: 0xXX. Position deviation on startup is too large. Difference: Singleturn:0xXX Multiturn:II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A5	53669

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A5, Primary MC: SAFETY FEEDBACK Module: 0x%x. Position deviation on startup is too large. Difference: Singleturn:0x%x Multiturn:%d*

3.542 D1A6, Primary MC: SAFETY FEEDBACK Module: 0xXX. Referenced position exceeded configured minimum range. Current position: Singleturn:0xXX Multiturn:II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A6	53670

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A6, Primary MC: SAFETY FEEDBACK Module: 0x%x. Referenced position exceeded configured minimum range. Current position: Singleturn:0x%x Multiturn:%d*

3.543 D1A7, Primary MC: SAFETY FEEDBACK Module: 0xXX. Referenced position exceeded configured maximum range. Current position: Singleturn:0xXX Multiturn:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A7	53671

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A7, Primary MC: SAFETY FEEDBACK Module: 0x%x. Referenced position exceeded configured maximum range. Current position: Singleturn:0x%x Multiturn:%d*

3.544 D1A8, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: ReferenceSafePosition (Singleturn:0xXX Multiturn:II) is too large. Position exceeded maximum Range

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A8	53672

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A8, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: ReferenceSafePosition (Singleturn:0x%x Multiturn:%d) is too large. Position exceeded maximum Range*

3.545 D1A9, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Referencing Optional Parameter size is invaild. Info: 0xXX. 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1A9	53673

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1A9, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Referencing Optional Parameter size is invaild. Info: 0x%x. 0x%x.*

3.546 D1AA, Primary MC: SAFETY FEEDBACK Module: 0xXX. Invalid feedback configuration. Same encoder type on primary and secondary feedback is not permitted. Other Module: ll type:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1AA	53674

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1AA, Primary MC: SAFETY FEEDBACK Module: 0x%x. Invalid feedback configuration. Same encoder type on primary and secondary feedback is not permitted. Other Module: %d type:%d*

3.547 D1AB, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Invalid referencing operation mode selected: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1AB	53675

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1AB, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Invalid referencing operation mode selected: %d*

3.548 D1AC, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: ManualReferencing option and SpeedatReferencePosition is not zero. value: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1AC	53676

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1AC, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: ManualReferencing option and SpeedatReferencePosition is not zero. value: %d*

3.549 D1AD, Primary MC: SAFETY FEEDBACK Module: 0xXX. Position Referencing is not supported because no Multiturn Feedback detected.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1AD	53677

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1AD, Primary MC: SAFETY FEEDBACK Module: 0x%x. Position Referencing is not supported because no Multiturn Feedback detected.*

3.550 D1AE, Primary MC: SAFETY FEEDBACK Module: 0xXX. Shifted Singleturn Position exceeds 32bit. SingleturnPosBits: ll PositionShiftBits: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1AE	53678

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1AE, Primary MC: SAFETY FEEDBACK Module: 0x%x. Shifted Singleturn Position exceeds 32bit. SingleturnPosBits: %d PositionShiftBits: %d*

3.551 D1AF, Primary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Online change of Referencing mode is not permitted. Current: II New: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1AF	53679

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1AF, Primary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Online change of Referencing mode is not permitted. Current: %d New: %d*

3.552 D1B0, Primary MC: SAFETY FEEDBACK Module: 0xXX. Manual Referencing requires download of new Safe User Parameter because position range exceeded.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1B0	53680

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1B0, Primary MC: SAFETY FEEDBACK Module: 0x%x. Manual Referencing requires download of new Safe User Parameter because position range exceeded.*

3.553 D280, Secondary MC: SAFETY FEEDBACK Module: 0xXX in State 0xXX. No Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D280	53888

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD280, Secondary MC: SAFETY FEEDBACK Module: 0x%x in State 0x%x. No Error*

3.554 D281, Secondary MC: SAFETY FEEDBACK Module: 0xXX in State 0xXX. No new Position received

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D281	53889

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD281, Secondary MC: SAFETY FEEDBACK Module: 0x%x in State 0x%x. No new Position received*

3.555 D282, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Invalid Position. Errorcode: 0xXX Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D282	53890

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD282, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Invalid Position. Errorcode: 0x%x Info: 0x%x*

3.556 D283, Secondary MC: SAFETY FEEDBACK Module: 0xXX in State 0xXX. DriveApplication reports Feedback Error 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D283	53891

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD283, Secondary MC: SAFETY FEEDBACK Module: 0x%x in State 0x%x. DriveApplication reports Feedback Error 0x%x*

3.557 D284, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Safety OCT Feedback not supported by Hardware

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D284	53892

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD284, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Safety OCT Feedback not supported by Hardware*

3.558 D285, Secondary MC: SAFETY FEEDBACK Module: 0xXX. EnDat2.2 Feedback not supported by Hardware

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D285	53893

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD285, Secondary MC: SAFETY FEEDBACK Module: 0x%x. EnDat2.2 Feedback not supported by Hardware*

3.559 D286, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid Command. Module Id: II type: 0xXX Command: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D286	53894

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD286, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid Command. Module Id: %d type: 0x%x Command: 0x%x*

3.560 D287, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid Command: 0xXX Module Id: II type: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D287	53895

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD287, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Invalid Command: 0x%x Module Id: %d type: 0x%x*

3.561 D288, Secondary MC: SAFETY FEEDBACK Module: 0xXX. configured Safety User Parameter CRC (0xXX) did not match with Feedback Parameter CRC

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D288	53896

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD288, Secondary MC: SAFETY FEEDBACK Module: 0x%x. configured Safety User Parameter CRC (0x%x) did not match with Feedback Parameter CRC*

3.562 D289, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Module state sync error. local: 0xXX other: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D289	53897

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD289, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Module state sync error. local: 0x%x other: 0x%x*

3.563 D28A, Secondary MC: SAFETY FEEDBACK: FPGA is not validated with this firmware. Elapsed time: ll seconds

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D28A	53898

Class	Type
Warning	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD28A, Secondary MC: SAFETY FEEDBACK: FPGA is not validated with this firmware. Elapsed time: %d seconds*

3.564 D28B, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Stored Feedback Parameter CRC (0xXX) and Safety User Parameter CRC (0xXX) did not match

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D28B	53899

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD28B, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Stored Feedback Parameter CRC (0x%x) and Safety User Parameter CRC (0x%x) did not match*

3.565 D28C, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Encoder Safety User Parameter CRC configured but Drive Application (Slot Configuration) not set

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D28C	53900

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD28C, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Encoder Safety User Parameter CRC configured but Drive Application (Slot Configuration) not set*

3.566 D28D, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Cannot enable because module is not configured. State: 0xXX DriveAppl: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D28D	53901

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD28D, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Cannot enable because module is not configured. State: 0x%x DriveAppl: 0x%x*

3.567 D28E, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Double used Parameter CRC (0xXX). Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D28E	53902

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD28E, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Double used Parameter CRC (0x%x). Info: 0x%x*

3.568 D28F, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Encoder Voltage not enabled. State: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D28F	53903

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD28F, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Encoder Voltage not enabled. State: 0x%x*

3.569 D290, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Encoder data buffer overrun. State: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D290	53904

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD290, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Encoder data buffer overrun. State: 0x%x*

3.570 D291, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Cannot read Encoder info block. Return Code: 0xXX Info: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D291	53905

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD291, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Cannot read Encoder info block. Return Code: 0x%x Info: %d*

3.571 D292, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Module Id exceeded: II Expected max: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D292	53906

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD292, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Module Id exceeded: %d Expected max: %d*

3.572 D293, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too long: ll Expected max: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D293	53907

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD293, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too long: %d Expected max: %d*

3.573 D294, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too short: II Expected min: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D294	53908

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD294, Secondary MC: SAFETY FEEDBACK Invalid drive application data received. Data length too short: %d Expected min: %d*

3.574 D295, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Invalid drive application data received. Not allowed in this state: II Command: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D295	53909

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD295, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Invalid drive application data received. Not allowed in this state: %d Command: %d*

3.575 D296, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Error during position calculation. Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D296	53910

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD296, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Error during position calculation. Info: 0x%x*

3.576 D297, Secondary MC: SAFETY FEEDBACK Invalid Safety FPGA interface version. Info: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D297	53911

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD297, Secondary MC: SAFETY FEEDBACK Invalid Safety FPGA interface version. Info: 0x%x*

3.577 D298, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Invalid Safedrive Settings Parameter II. value: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D298	53912

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD298, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Invalid Safedrive Settings Parameter %d. value: 0x%x*

3.578 D299, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Not supported by this firmware. CRC: 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D299	53913

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD299, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Not supported by this firmware. CRC: 0x%x*

3.579 D29A, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Safe user parameter position shift value is too large. SingleturnPositionBits: ll PositionShiftValue: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D29A	53914

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD29A, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Safe user parameter position shift value is too large. SingleturnPositionBits: %d PositionShiftValue: %d*

3.580 D29B, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Motor exchange cannot performed. Stored and current Encoder Parameter mismatch (Subidx: II). Current Encoder Index: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D29B	53915

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD29B, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Motor exchange cannot performed. Stored and current Encoder Parameter mismatch (Subidx: %d). Current Encoder Index: %d*

3.581 D29C, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Motor exchange cannot performed because other module II is in fault state with errorcode 0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D29C	53916

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD29C, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Motor exchange cannot performed because other module %d is in fault state with errorcode 0x%x*

3.582 D29D, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Motor exchange detected and successfully done.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D29D	53917

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD29D, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Motor exchange detected and successfully done.*

3.583 D29E, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: EnableForSetReferencingPosition is disabled but reference position is not zero. Ref SingleturnPos: II RefMultiturnPos: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D29E	53918

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD29E, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: EnableForSetReferencingPosition is disabled but reference position is not zero. Ref SingleturnPos: %d RefMultiturnPos: %d*

3.584 D29F, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: MinimumReferencePostion (Singleturn:0xXX Multiturn:II) is larger than MaximumReferencePosition

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D29F	53919

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD29F, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: MinimumReferencePostion (Singleturn:0x%x Multiturn:%d) is larger than MaximumReferencePosition*

3.585 D2A0, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: ReferenceSafePosition (Singleturn:0xXX Multiturn:II) is too small. Position exceeded minimum Range

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A0	53920

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A0, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: ReferenceSafePosition (Singleturn:0x%x Multiturn:%d) is too small. Position exceeded minimum Range*

3.586 D2A1, Secondary MC: SAFETY FEEDBACK SafeUserParameter: Cyclic FRAM data size is not large enough. Allocated size: ll Requested size: ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A1	53921

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A1, Secondary MC: SAFETY FEEDBACK SafeUserParameter: Cyclic FRAM data size is not large enough. Allocated size: %d Requested size: %d*

3.587 D2A2, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Difference between minimal and maximal configured position is too large. Difference: Singleturn:0xXX Multiturn:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A2	53922

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A2, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Difference between minimal and maximal configured position is too large. Difference: Singleturn:0x%x Multiturn:%d*

3.588 D2A3, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Referencing of position in automatic mode is required. No stored position found.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A3	53923

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A3, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Referencing of position in automatic mode is required. No stored position found.*

3.589 D2A4, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Referencing of position cannot be achieved because motor speed is too high. current Speed: II configured limit: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A4	53924

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A4, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Referencing of position cannot be achieved because motor speed is too high. current Speed: %d configured limit: %d*

3.590 D2A5, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Position deviation on startup is too large. Difference: Singleturn:0xXX Multiturn:II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A5	53925

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A5, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Position deviation on startup is too large. Difference: Singleturn:0x%x Multiturn:%d*

3.591 D2A6, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Referenced position exceeded configured minimum range. Current position: Singleturn:0xXX Multiturn:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A6	53926

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A6, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Referenced position exceeded configured minimum range. Current position: Singleturn:0x%x Multiturn:%d*

3.592 D2A7, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Referenced position exceeded configured maximum range. Current position: Singleturn:0xXX Multiturn:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A7	53927

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A7, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Referenced position exceeded configured maximum range. Current position: Singleturn:0x%x Multiturn:%d*

3.593 D2A8, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: ReferenceSafePosition (Singleturn:0xXX Multiturn:II) is too large. Position exceeded maximum Range

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A8	53928

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A8, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: ReferenceSafePosition (Singleturn:0x%x Multiturn:%d) is too large. Position exceeded maximum Range*

3.594 D2A9, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Referencing Optional Parameter size is invaild. Info: 0xXX. 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2A9	53929

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2A9, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Referencing Optional Parameter size is invaild. Info: 0x%x. 0x%x.*

3.595 D2AA, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Invalid feedback configuration. Same encoder type on primary and secondary feedback is not permitted. Other Module: ll type:ll

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2AA	53930

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2AA, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Invalid feedback configuration. Same encoder type on primary and secondary feedback is not permitted. Other Module: %d type:%d*

3.596 D2AB, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Invalid referencing operation mode selected: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2AB	53931

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2AB, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Invalid referencing operation mode selected: %d*

3.597 D2AC, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: ManualReferencing option and SpeedatReferencePosition is not zero. value: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2AC	53932

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2AC, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: ManualReferencing option and SpeedatReferencePosition is not zero. value: %d*

3.598 D2AD, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Position Referencing is not supported because no Multiturn Feedback detected.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2AD	53933

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2AD, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Position Referencing is not supported because no Multiturn Feedback detected.*

3.599 D2AE, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Shifted Singleturn Position exceeds 32bit. SingleturnPosBits: II PositionShiftBits: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2AE	53934

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2AE, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Shifted Singleturn Position exceeds 32bit. SingleturnPosBits: %d PositionShiftBits: %d*

3.600 D2AF, Secondary MC: SAFETY FEEDBACK Module: 0xXX. SafeUserParameter: Online change of Referencing mode is not permitted. Current: II New: II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2AF	53935

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2AF, Secondary MC: SAFETY FEEDBACK Module: 0x%x. SafeUserParameter: Online change of Referencing mode is not permitted. Current: %d New: %d*

3.601 D2B0, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Manual Referencing requires download of new Safe User Parameter because position range exceeded.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2B0	53936

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2B0, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Manual Referencing requires download of new Safe User Parameter because position range exceeded.*

3.602 D300, SafeMotion Axis A Diag Message 1

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D300	54016

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD300, SafeMotion Axis A Diag Message 1*

3.603 D301, SafeMotion Axis A Diag Message 2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D301	54017

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD301, SafeMotion Axis A Diag Message 2*

3.604 D302, SafeMotion Axis A Diag Message 3

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D302	54018

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD302, SafeMotion Axis A Diag Message 3*

3.605 D303, SafeMotion Axis A Diag Message 4

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D303	54019

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD303, SafeMotion Axis A Diag Message 4*

3.606 D304, SafeMotion Axis A Diag Message 5

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D304	54020

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD304, SafeMotion Axis A Diag Message 5*

3.607 D305, SafeMotion Axis A Diag Message 6

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D305	54021

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD305, SafeMotion Axis A Diag Message 6*

3.608 D306, SafeMotion Axis A Diag Message 7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D306	54022

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD306, SafeMotion Axis A Diag Message 7*

3.609 D307, SafeMotion Axis A Diag Message 8

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D307	54023

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD307, SafeMotion Axis A Diag Message 8*

3.610 D308, SafeMotion Axis A Diag Message 9

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D308	54024

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD308, SafeMotion Axis A Diag Message 9*

3.611 D309, SafeMotion Axis A Diag Message 10

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D309	54025

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD309, SafeMotion Axis A Diag Message 10*

3.612 D30A, SafeMotion Axis A Diag Message 11

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D30A	54026

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD30A, SafeMotion Axis A Diag Message 11*

3.613 D30B, SafeMotion Axis A Diag Message 12

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D30B	54027

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD30B, SafeMotion Axis A Diag Message 12*

3.614 D30C, SafeMotion Axis A Diag Message 13

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D30C	54028

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD30C, SafeMotion Axis A Diag Message 13*

3.615 D30D, SafeMotion Axis A Diag Message 14

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D30D	54029

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD30D, SafeMotion Axis A Diag Message 14*

3.616 D30E, SafeMotion Axis A Diag Message 15

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D30E	54030

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD30E, SafeMotion Axis A Diag Message 15*

3.617 D30F, SafeMotion Axis A Diag Message 16

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D30F	54031

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD30F, SafeMotion Axis A Diag Message 16*

3.618 D310, SafeMotion Axis B Diag Message 1

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D310	54032

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD310, SafeMotion Axis B Diag Message 1*

3.619 D311, SafeMotion Axis B Diag Message 2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D311	54033

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD311, SafeMotion Axis B Diag Message 2*

3.620 D312, SafeMotion Axis B Diag Message 3

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D312	54034

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD312, SafeMotion Axis B Diag Message 3*

3.621 D313, SafeMotion Axis B Diag Message 4

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D313	54035

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD313, SafeMotion Axis B Diag Message 4*

3.622 D314, SafeMotion Axis B Diag Message 5

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D314	54036

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD314, SafeMotion Axis B Diag Message 5*

3.623 D315, SafeMotion Axis B Diag Message 6

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D315	54037

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD315, SafeMotion Axis B Diag Message 6*

3.624 D316, SafeMotion Axis B Diag Message 7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D316	54038

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD316, SafeMotion Axis B Diag Message 7*

3.625 D317, SafeMotion Axis B Diag Message 8

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D317	54039

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD317, SafeMotion Axis B Diag Message 8*

3.626 D318, SafeMotion Axis B Diag Message 9

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D318	54040

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD318, SafeMotion Axis B Diag Message 9*

3.627 D319, SafeMotion Axis B Diag Message 10

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D319	54041

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD319, SafeMotion Axis B Diag Message 10*

3.628 D31A, SafeMotion Axis B Diag Message 11

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D31A	54042

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD31A, SafeMotion Axis B Diag Message 11*

3.629 D31B, SafeMotion Axis B Diag Message 12

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D31B	54043

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD31B, SafeMotion Axis B Diag Message 12*

3.630 D31C, SafeMotion Axis B Diag Message 13

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D31C	54044

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD31C, SafeMotion Axis B Diag Message 13*

3.631 D31D, SafeMotion Axis B Diag Message 14

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D31D	54045

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD31D, SafeMotion Axis B Diag Message 14*

3.632 D31E, SafeMotion Axis B Diag Message 15

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D31E	54046

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD31E, SafeMotion Axis B Diag Message 15*

3.633 D31F, SafeMotion Axis B Diag Message 16

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D31F	54047

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD31F, SafeMotion Axis B Diag Message 16*

3.634 D320, The Safety Control Task watchdog has bveen expired

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D320	54048

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD320, The Safety Control Task watchdog has bveen expired*

3.635 00B1, Safety reports a 'Global Shutdown Error'

The status flag 'Global Shutdown' is set.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
00B1	177

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x00B1, Safety reports a 'Global Shutdown Error'*

3.636 0115, Controller II: Maximum temperature exceeded. Temperature is 0xXX, should be <= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0115	277

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0115, Controller %d: Maximum temperature exceeded. Temperature is 0x%x, should be <= 0x%x.*

3.637 0117, Controller II: Temperature difference too high. Difference is II, should be <= II.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0117	279

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0117, Controller %d: Temperature difference too high. Difference is %d, should be <= %d.*

3.638 0118, Controller II: Maximum voltage alert (Partner_VCC). Voltage is 0xXX, should be <= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0118	280

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x0118, Controller %d: Maximum voltage alert (Partner_VCC). Voltage is 0x%x, should be <= 0x%x.*

3.639 011A, Controller II: Maximum voltage alert (ECAT_VCC). Voltage is 0xXX, should be <= 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
011A	282

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x011A, Controller %d: Maximum voltage alert (ECAT_VCC). Voltage is 0x%x, should be <= 0x%x.*

3.640 102C, Unallowed Safe User Parameter Size for the requested features, Received=II Expected=II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
102C	4140

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x102C, Unallowed Safe User Parameter Size for the requested features, Received=%d Expected=%d*

3.641 3112, The activating or deactivating of groups is not allowed in PREOP

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3112	12562

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3112, The activating or deactivating of groups is not allowed in PREOP*

3.642 3115, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDCLowerLimit (plus maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3115	12565

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3115, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDCLowerLimit (plus maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.643 3117, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of BDCUpperLimit (II) is smaller or equal the configured value of 180° (plus maximum position jitter) (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3117	12567

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3117, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of BDCUpperLimit (%d) is smaller or equal the configured value of 180° (plus maximum position jitter) (%d)*

3.644 3118, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of BDCLowerLimit (plus maximum position jitter) (II) is greater or equal the configured value of 180° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3118	12568

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3118, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of BDCLowerLimit (plus maximum position jitter) (%d) is greater or equal the configured value of 180° (%d)*

3.645 311B, FB CAMMON (Word-Offset 0xXX of the CfgData): The value of TDC1UpperLimit (plus the maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
311B	12571

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x311B, FB CAMMON (Word-Offset 0x%x of the CfgData): The value of TDC1UpperLimit (plus the maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.646 3122, The Download of the Project CRC is not allowed in PREOP

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3122	12578

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3122, The Download of the Project CRC is not allowed in PREOP*

3.647 3123, The Download of the Change Group Activation data is not allowed if customizing is not supported

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3123	12579

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3123, The Download of the Change Group Activation data is not allowed if customizing is not supported*

3.648 3414, All groups will enter the ERROR-state because the CRC of the Cyclic FRAM Data was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3414	13332

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3414, All groups will enter the ERROR-state because the CRC of the Cyclic FRAM Data was wrong*

3.649 3417, All groups will enter the ERROR-state because the initialization of Cyclic FRAM Data was wrong

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3417	13335

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3417, All groups will enter the ERROR-state because the initialization of Cyclic FRAM Data was wrong*

3.650 3418, Safe User Parameter from FRAM are not correct

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3418	13336

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x3418, Safe User Parameter from FRAM are not correct*

3.651 38D0, FB II (ADVPOSMON): The referenced SafeDriveFeedback module (II) is not configured or has no Position Referencing enabled.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38D0	14544

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38D0, FB %d (ADVPOSMON): The referenced SafeDriveFeedback module (%d) is not configured or has no Position Referencing enabled.*

3.652 38D1, FB II (ADVPOSMON): The referenced SafeDriveFeedback module (II) reports error 0xXX.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
38D1	14545

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x38D1, FB %d (ADVPOSMON): The referenced SafeDriveFeedback module (%d) reports error 0x%x.*

3.653 4012, FB II (CAMMON): The Input BackwardsMove is TRUE while the Position is between 180° and 360°, the actual position is II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4012	16402

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4012, FB %d (CAMMON): The Input BackwardsMove is TRUE while the Position is between 180° and 360°, the actual position is %d*

3.654 4015, FB II (CAMMON): The value of TDCLowerLimit (plus maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4015	16405

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4015, FB %d (CAMMON): The value of TDCLowerLimit (plus maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.655 4017, FB II (CAMMON): The value of BDCUpperLimit (II) is smaller or equal the configured value of 180° (plus maximum position jitter) (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4017	16407

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4017, FB %d (CAMMON): The value of BDCUpperLimit (%d) is smaller or equal the configured value of 180° (plus maximum position jitter) (%d)*

3.656 4018, FB II (CAMMON): The value of BDCLowerLimit (plus maximum position jitter) (II) is greater or equal the configured value of 180° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4018	16408

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x4018, FB %d (CAMMON): The value of BDCLowerLimit (plus maximum position jitter) (%d) is greater or equal the configured value of 180° (%d)*

3.657 401B, FB II (CAMMON): The value of TDC1UpperLimit (plus the maximum position jitter) (II) is bigger or equal the configured position of 360° (II)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
401B	16411

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0x401B, FB %d (CAMMON): The value of TDC1UpperLimit (plus the maximum position jitter) (%d) is bigger or equal the configured position of 360° (%d)*

3.658 D1B0, Primary MC: SAFETY FEEDBACK Module: 0xXX. Manual Referencing requires download of new Safe User Parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1B0	53680

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1B0, Primary MC: SAFETY FEEDBACK Module: 0x%x. Manual Referencing requires download of new Safe User Parameter.*

3.659 D1B1, Primary MC: SAFETY FEEDBACK Module: 0xXX. FPGA type is not supported by current Firmware. Protocol reported: II II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1B1	53681

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1B1, Primary MC: SAFETY FEEDBACK Module: 0x%x. FPGA type is not supported by current Firmware. Protocol reported: %d %d*

3.660 D1B2, Primary MC: SAFETY FEEDBACK Module: 0xXX. EnDat3 Feedback is not supported by Hardware.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1B2	53682

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1B2, Primary MC: SAFETY FEEDBACK Module: 0x%x. EnDat3 Feedback is not supported by Hardware.*

3.661 D1B3, Primary MC: SAFETY FEEDBACK Module: 0xXX. The stored encoder Id (II) did not match with the expected id (II). Maybe the axis is reversed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1B3	53683

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1B3, Primary MC: SAFETY FEEDBACK Module: 0x%x. The stored encoder Id (%d) did not match with the expected id (%d). Maybe the axis is reversed.*

3.662 D1B4, Primary MC: SAFETY FEEDBACK Module: 0xXX. 64bit calculation is needed for position verification and may result in long safety cycle execution time (Return Code: 0xXX).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D1B4	53684

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD1B4, Primary MC: SAFETY FEEDBACK Module: 0x%x. 64bit calculation is needed for position verification and may result in long safety cycle execution time (Return Code: 0x%x).*

3.663 D2B0, Secondary MC: SAFETY FEEDBACK Module: 0xXX. Manual Referencing requires download of new Safe User Parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2B0	53936

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2B0, Secondary MC: SAFETY FEEDBACK Module: 0x%x. Manual Referencing requires download of new Safe User Parameter.*

3.664 D2B1, Secondary MC: SAFETY FEEDBACK Module: 0xXX. FPGA type is not supported by current Firmware. Protocol reported: II II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2B1	53937

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2B1, Secondary MC: SAFETY FEEDBACK Module: 0x%x. FPGA type is not supported by current Firmware. Protocol reported: %d %d*

3.665 D2B2, Secondary MC: SAFETY FEEDBACK Module: 0xXX. EnDat3 Feedback is not supported by Hardware.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2B2	53938

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2B2, Secondary MC: SAFETY FEEDBACK Module: 0x%x. EnDat3 Feedback is not supported by Hardware.*

3.666 D2B3, Secondary MC: SAFETY FEEDBACK Module: 0xXX. The stored encoder Id (II) did not match with the expected id (II). Maybe the axis is reversed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2B3	53939

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2B3, Secondary MC: SAFETY FEEDBACK Module: 0x%x. The stored encoder Id (%d) did not match with the expected id (%d). Maybe the axis is reversed.*

3.667 D2B4, Secondary MC: SAFETY FEEDBACK Module: 0xXX. 64bit calculation is needed for position verification and may result in long safety cycle execution time (Return Code: 0xXX).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D2B4	53940

Class	Type
Info	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD2B4, Secondary MC: SAFETY FEEDBACK Module: 0x%x. 64bit calculation is needed for position verification and may result in long safety cycle execution time (Return Code: 0x%x).*

3.668 D320, The Safety Control Task watchdog has been expired

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
D320	54048

Class	Type
Error	Safety Module error

Standard Reaction	Reset
No	A reset is not possible. The drive detected a fatal hard- or software error.

Internal: *0xD320, The Safety Control Task watchdog has been expired*

4 Diagmessages of module DeviceDebug

4.1 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

5 Diagmessages of module AxisMain

5.1 0000, No Error

This Message is thrown always, if the Device enters an error-free state.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0000	0

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
An Axis entered the error free state.	

Internal: *0x0000, No Error*

5.2 2340, Short circuit (motor-side)

The drive hardware detected an over-current on the motor phases. The short circuit detection was triggered.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2340	9024

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	A fatal error occurred. A device reboot is required.

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

Internal: *0x2340, Short circuit (motor-side)*

5.3 2380, Continuous over current (device output side) Phase U

The drive software detected an overcurrent on the motor phases U.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2380	9088

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

Internal: *0x2380, Continuous over current (device output side) Phase U*

5.4 2381, Continuous over current (device output side) Phase V

The drive software detected an overcurrent on the motor phases V.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2381	9089

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

Internal: *0x2381, Continuous over current (device output side) Phase V*

5.5 2382, Continuous over current (device output side) Phase W

The drive software detected an overcurrent on the motor phases W.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2382	9090

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

Internal: *0x2382, Continuous over current (device output side) Phase W*

5.6 2383, Phase U current offset out of range

The measured current offset of Phase U is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2383	9091

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x2383, Phase U current offset out of range*

5.7 2384, Phase V current offset out of range

The measured current offset of Phase V is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2384	9092

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x2384, Phase V current offset out of range*

5.8 2385, Phase W current offset out of range

The measured current offset of Phase W is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2385	9093

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x2385, Phase W current offset out of range*

5.9 2386, Motor brake current offset out of range

The measured current offset of the motor brake is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2386	9094

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.
The device might be influenced by an external magnetic field.	Check the environment of this device for magnetic components.

Internal: *0x2386, Motor brake current offset out of range*

5.10 3180, Phase failure motor

The drive software detected an phase failure at the motor side. Please check wiring.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3180	12672

Class	Type
Error	Motor connection error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A power wire is not connected properly to the hybrid motor connector.	Check the power connections to the hybrid motor connector.
A power wire in the motor cable is broken.	Check the power wires in the motor cable.
The hybrid motor connector seems not to be plugged in properly.	Check if the hybrid motor connector is plugged in properly.

Internal: *0x3180, Phase failure motor*

5.11 3220, DC link under-voltage

An under-voltage occurred in the DC link circuit.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3220	12832

Class	Type
Error	Undervoltage error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The DC link voltage level was under the configured minimum.	Check the minimum DC link voltage parameter. (Object 0x2C02/1)

Internal: *0x3220, DC link under-voltage*

5.12 3280, DC link is not ready

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3280	12928

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis got an enable command before DC link was ready.	Check your power supply device.

Internal: *0x3280, DC link is not ready*

5.13 4310, Drive overtemperature shut down

The drive temperature has reached a critical value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4310	17168

Class	Type
Error	Drive overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The ambient temperature is too high	Cool down the ambient temperature
Internal brake power and power loss of axis are too high	Lower the brake power and power loss of axis
The fan is defective	Check the fan
The cooling slots or the measuring sensors are polluted	Clean the cooling slots and the measuring sensors

Internal: *0x4310, Drive overtemperature shut down*

5.14 5180, Output stage STO active.

The Axis is unable to operate, because the Amplifier is locked from the safety module. (Safe Torque Off / STO)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5180	20864

Class	Type
Error	Safety STO error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The amplifier is locked by the safety module.	Check the status of the safety module.

Internal: *0x5180, Output stage STO active.*

5.15 5184, Supply DC link circuit is not ready

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5184	20868

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Power supply device is not ready.	Please Check the Messages and the Status of the Supply Device.

Internal: *0x5184, Supply DC link circuit is not ready*

5.16 5187, Power supply communication is not established

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5187	20871

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Power supply status is not alive.	Please Check if the Power supply controlword of this Axis Device is linked to the Power Supply Device and the Device is in EtherCAT OP.
The Power supply SDO communications are not finished.	Please Check if the Power supply communication parameters and status of DeviceMain.

Internal: *0x5187, Power supply communication is not established*

5.17 5441, Positive limit switch active

Positive limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5441	21569

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The axis has been moved to the positive limit switch.	Please move the axis away from the positive limit switch.

Internal: *0x5441, Positive limit switch active*

5.18 5442, Negative limit switch active

Negative limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5442	21570

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The axis has been moved to the negative limit switch.	Please move the axis away from the negative limit switch.

Internal: *0x5442, Negative limit switch active*

5.19 5443, Loss of the hardware enable

The configured hardware enable input has been deactivated by an external event, even though the AX8000 was under control.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5443	21571

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Problems with the digital inputs	Check the digital inputs

Internal: *0x5443, Loss of the hardware enable*

5.20 5444, Loss of the hardware enable (Reaction TorqueOff)

The configured hardware enable input has been deactivated by an external event, even though the AX8000 was under control.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5444	21572

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Problems with the digital inputs	Check the digital inputs

Internal: *0x5444, Loss of the hardware enable (Reaction TorqueOff)*

5.21 54B1, Positive limit switch active

Positive limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
54B1	21681

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The axis has been moved to the positive limit switch.	Please move the axis away from the positive limit switch.

Internal: *0x54B1, Positive limit switch active*

5.22 54B2, Negative limit switch active

Negative limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
54B2	21682

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The axis has been moved to the negative limit switch.	Please move the axis away from the negative limit switch.

Internal: *0x54B2, Negative limit switch active*

5.23 5595, Modulo remainder will not be stored.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5595	21909

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
Persistent memory is not present.	

Internal: *0x5595, Modulo remainder will not be stored.*

5.24 589C, Read failure EEPROM

The content of the persistent data memory seems to be corrupted.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
589C	22684

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x589C, Persistent data seems to be corrupted. (0x%x)*

5.25 6183, Internal Watchdog Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6183	24963

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Too many objects in the PDO-mapping.	Check the number of objects in the PDO-mapping.
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x6183, Internal Watchdog Error*

5.26 638A, The Axis seems not to be parameterized.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'AxisMain parameters/Configured drive type' was not set.	Write your drive type into 'AxisMain parameters/ Configured drive type'.

Internal: *0x638A, The Axis seems not to be parameterized.*

5.27 6390, Factor Group Parameters: Feed constant illegal feed

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6390	25488

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feed constant - feed contains an illegal value (Object 0x6092/1 ChA or 0x6892/1 ChB).	Please use a 2^x value (x from 16 to 28) for rotary encoders and a 10^x value (x from 0 to 9) for linear encoders.

Internal: *0x6390, Factor Group Parameters: Feed constant illegal feed*

5.28 6391, Factor Group Parameters: Feed constant illegal shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6391	25489

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feed constant - shaft revolutions contains an illegal value (Object 0x6092/2 ChA or 0x6892/2 ChB).	Please set value to '1'.

Internal: *0x6391, Factor Group Parameters: Feed constant illegal shaft revolutions*

5.29 6392, Factor Group Parameters: Gear ratio illegal Motor shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6392	25490

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The gear ratio - motor shaft revolutions contains an illegal value (Object 0x6091/1 ChA or 0x6891/1 ChB).	You might add the default value here.

Internal: *0x6392, Factor Group Parameters: Gear ratio illegal Motor shaft revolutions*

5.30 6393, Factor Group Parameters: Gear ratio illegal Driving shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6393	25491

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The gear ratio - driving shaft revolutions contains an illegal value (Object 0x6091/2 ChA or 0x6891/2 ChB).	You might add the default value here.

Internal: *0x6393, Factor Group Parameters: Gear ratio illegal Driving shaft revolutions*

5.31 6394, Factor Group Parameters: Position encoder resolution illegal encoder increments

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6394	25492

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position encoder resolution - encoder increments contains an illegal value (Object 0x608F/1 ChA or 0x688F/1 ChB).	Please compare it to your encoder values.

Internal: *0x6394, Factor Group Parameters: Position encoder resolution illegal encoder increments*

5.32 6395, Factor Group Parameters: Position encoder resolution illegal motor revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6395	25493

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position encoder resolution - motor revolutions contains an illegal value (Object 0x608F/2 ChA or 0x688F/2 ChB).	Please compare it to your encoder values.

Internal: *0x6395, Factor Group Parameters: Position encoder resolution illegal motor revolutions*

5.33 6396, additional Factor Group Parameters: Feed constant illegal feed

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6396	25494

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional feed constant - feed contains an illegal value (Object 0x60E9/1 ChA or 0x68E9/1 ChB).	Please use a 2^x value (x from 16 to 28) for rotary encoders and a 10^x value (x from 0 to 9) for linear encoders.

Internal: *0x6396, additional Factor Group Parameters: Feed constant illegal feed*

5.34 6397, additional Factor Group Parameters: Feed constant illegal shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6397	25495

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional feed constant - shaft revolutions contains an illegal value (Object 0x60EE/1 ChA or 0x68EE/1 ChB).	Please set value to '1'.

Internal: *0x6397, additional Factor Group Parameters: Feed constant illegal shaft revolutions*

5.35 6398, additional Factor Group Parameters: Gear ratio illegal Motor shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6398	25496

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional gear ratio - motor shaft revolutions contains an illegal value (Object 0x60E8/1 ChA or 0x68E8/1 ChB).	You might add the default value here.

Internal: *0x6398, additional Factor Group Parameters: Gear ratio illegal Motor shaft revolutions*

5.36 6399, additional Factor Group Parameters: Gear ratio illegal Driving shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6399	25497

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional gear ratio - driving shaft revolutions contains an illegal value (Object 0x60ED/1 ChA or 0x68ED/1 ChB).	You might add the default value here.

Internal: *0x6399, additional Factor Group Parameters: Gear ratio illegal Driving shaft revolutions*

5.37 639A, additional Factor Group Parameters: Position encoder resolution illegal encoder increments

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639A	25498

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional position encoder resolution - encoder increments contains an illegal value (Object 0x60E6/1 ChA or 0x68E6/1 ChB).	Please compare it to your encoder values.

Internal: *0x639A, additional Factor Group Parameters: Position encoder resolution illegal encoder increments*

5.38 639B, additional Factor Group Parameters: Position encoder resolution illegal motor revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639B	25499

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional position encoder resolution - motor revolutions contains an illegal value (Object 0x60EB/ 1 ChA or 0x68EB/1 ChB).	Please compare it to your encoder values.

Internal: *0x639B, additional Factor Group Parameters: Position encoder resolution illegal motor revolutions*

5.39 639C, Velocity factor illegal. A possible Value would be UU/UU.

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639C	25500

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity factor (Object 0x6096 ChA or 0x6896 ChB) does not adjust the velocity scaling to 0.1 mRPM in case of rotary Motors and 0.1 um/s in case of linear encoder.	Please change your setting to the suggested value.

Internal: *0x639C, Velocity factor illegal. A possible Value would be %u/%u.*

5.40 639D, Acceleration factor illegal. A possible Value would be UU/UU.

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639D	25501

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The acceleration factor (Object 0x6097 ChA or 0x6897 ChB) does not adjust the velocity scaling to 1 degree/s^2 in case of rotary Motors and 1 um/s^2 in case of linear encoder.	Please change your setting to the suggested value.

Internal: *0x639D, Acceleration factor illegal. A possible Value would be %u/%u.*

5.41 639E, Scaling index object 0xXX does not fit the Factor group parameters for the first Encoder

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639E	25502

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The mentioned scaling index object doesn't represent the factor group settings of the first encoder.	Please compare the selected scaling to your factor group settings.

Internal: *0x639E, Scaling index object 0x%x does not fit the Factor group parameters for the first Encoder*

5.42 639F, Scaling index object 0xXX does not fit the Factor group parameters for the second Encoder

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639F	25503

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The mentioned scaling index object doesn't represent the factor group settings of the second encoder.	Please compare the selected scaling to your additional factor group settings.

Internal: *0x639F, Scaling index object 0x%x does not fit the Factor group parameters for the second Encoder*

5.43 63A0, Motor or Primary Feedback changed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A0	25504

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x63A0, Motor or Primary Feedback changed*

5.44 63A1, Secondary Feedback changed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A1	25505

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x63A1, Secondary Feedback changed*

5.45 63A2, Offset position actual value: No position offset existing in source 'encoder memory'

There is no primary position offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A2	25506

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

Internal: *0x63A2, Offset position actual value: No position offset existing in source 'encoder memory'*

5.46 63A3, Offset additional position actual value: No position offset existing in source 'encoder memory'

There is no secondary position offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A3	25507

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

Internal: *0x63A3, Offset additional position actual value: No position offset existing in source 'encoder memory'*

5.47 63A4, Offset position actual value: No position offset existing in source 'drive memory'

There is no primary position offset stored, for the selected source 'drive memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A4	25508

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

Internal: *0x63A4, Offset position actual value: No position offset existing in source 'drive memory'*

5.48 63A5, Offset additional position actual value: No position offset existing in source 'drive memory'

There is no secondary position offset stored, for the selected source 'drive memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A5	25509

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

Internal: *0x63A5, Offset additional position actual value: No position offset existing in source 'drive memory'*

5.49 63A6, Jerk factor illegal. A possible Value would be UU/UU.

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A6	25510

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The jerk factor (Object 0x60A2 ChA or 0x68A2 ChB) does not adjust the velocity scaling to 100 degree/s^2 in case of rotary Motors and 100 um/s^2 in case of linear encoder.	Please change your setting to the suggested value.

Internal: *0x63A6, Jerk factor illegal. A possible Value would be %u/%u.*

5.50 63A7, The range UU of the Position range limit is below the minimum accepted value of UU.

The range of the Position range limit (Object 0x6096 ChA or 0x6896 ChB) is below the minimum accepted value. The Range is calculated 'max limit' - 'min limit' + 1 and has to be positive.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A7	25511

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The range of the Position range limit (Object 0x6096 ChA or 0x6896 ChB) is below the minimum accepted value. The Range is calculated 'max limit' - 'min limit' + 1 and has to be positive.	Please check the min and max value of the position range limit.

Internal: *0x63A7, The range %u of the Position range limit is below the minimum accepted value of %u.*

5.51 63A8, Position range limit Inc with remainder is not supported for primary feedback.

The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the primary feedback.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A8	25512

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the primary feedback.	Please check the position range limit and the factor group parameters of this feedback.

Internal: *0x63A8, Position range limit Inc with remainder is not supported for primary feedback.*

5.52 63A9, Position range limit Inc with remainder is not supported for secondary feedback.

The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the secondary feedback.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A9	25513

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the secondary feedback.	Please check the position range limit and the factor group parameters of this feedback.

Internal: *0x63A9, Position range limit Inc with remainder is not supported for secondary feedback.*

5.53 63AA, Object 0xXX/XX changed in EtherCAT SafeOP or OP.

This errormessage was created, because this change during Runtime is potentially dangerous, if you don't know what you do.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AA	25514

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The value of the position range limit or a Factor group object was changed in EtherCAT SafeOP or OP.	Execute fault reset command.

Internal: *0x63AA, Object 0x%X/%X changed in EtherCAT SafeOP or OP.*

5.54 63AB, Offset position actual value: Found an internal encoder postion offset. No other offset can be selected.

In the electronic data sheet of the motor is an internal encoder offset stored. This offset prohibits using any other offset.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AB	25515

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
In the electronic data sheet of the motor is an internal encoder offset stored. This offset prohibits using any other offset.	Disable the selection of the position offset source.

Internal: *0x63AB, Offset position actual value: Found an internal encoder postion offset. No other offset can be selected.*

5.55 63AC, Offset addtional position actual value: Found an internal encoder postion offset. No other offset can be selected.

In the electronic data sheet of the motor is an internal encoder offset stored. This offset prohibits using any other offset.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AC	25516

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
In the electronic data sheet of the motor is an internal encoder offset stored. This offset prohibits using any other offset.	Disable the selection of the position offset source.

Internal: *0x63AC, Offset addtional position actual value: Found an internal encoder postion offset. No other offset can be selected.*

5.56 63AE, Modulo calculation primary feedback: No saved data could be loaded

Modulo calculation primary feedback: No saved data could be loaded

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AE	25518

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Possible Causes	Solutions
Modulo function might be enabled for the first time.	Execute the extended fault reset command.
Drive device service replacement.	Execute the extended fault reset command.

Internal: *0x63AE, Modulo calculation primary feedback: No saved data could be loaded*

5.57 7180, Motor brake: Current monitoring error.

The motor brake current monitoring detected an insufficient current.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7180	29056

Class	Type
Error	Motor Brake connection error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
You have configured a motor brake and the motor brake current fell below the motor brake current monitoring level.	Check your motor brake connection (wires and connectors). Check the parameter 'motor brake current monitoring level' Object 0x3000/5 (Ch A) or Object 0x3400/5 (Ch B).

Internal: *0x7180, Motor brake: Current monitoring error.*

5.58 7380, Current sensor motor phase U

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7380, Current sensor motor phase U*

5.59 7381, Current sensor motor phase V

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7381, Current sensor motor phase V*

5.60 7382, Current sensor motor phase W

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7382, Current sensor motor phase W*

5.61 7398, Physical position sensor required

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7398	29592

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Physical position sensor is required for selected motor control mode but no suitable sensor is configured.	Check position sensor and motor control mode configuration.

Internal: *0x7398, Physical position sensor required*

5.62 7399, Simulation feedback module required

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7399	29593

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Simulation feedback module required for selected motor control mode.	Check feedback slot and motor control mode configuration.

Internal: *0x7399, Simulation feedback module required*

5.63 8182, EtherCAT Statemachine shutdown with enabled Axis

The EtherCAT Statemachine received a shutdown command, while the Axis was enabled.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8182	33154

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The EtherCAT Statemachine received a shutdown command, while the Axis was enabled.	Please disable your Axes before Restart or Shutdown your EtherCAT Master.

Internal: *0x8182, EtherCAT Statemachine shutdown with enabled Axis*

5.64 8183, Controlword output cycle counter monitoring

The output cycle counter of the controlword didn't increment for at least two cycles and the monitoring function is activated.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8183	33155

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Output cycle counter monitoring is enabled and detected an error.	Check if the output cycle counter function is enabled in your NC. Check your EtherCAT realtime status.

Internal: *0x8183, Controlword output cycle counter monitoring*

5.65 8184, Dynoutput cycle counter monitoring

The dynoutput cycle counter of the controlword didn't increment for at least two cycles and the monitoring function is activated.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8184	33156

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Output cycle counter monitoring is enabled and detected an error.	Check if the output cycle counter function is enabled in your NC. Check your EtherCAT realtime status.

Internal: *0x8184, Dynoutput cycle counter monitoring*

5.66 8185, Axis needs an extended fault reset command

The Axis received a fault reset command but needs an extended fault reset command

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8185	33157

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis received a fault reset command but needs an extended fault reset command	To leave the fault state try an extended fault reset command

Internal: *0x8185, Axis needs an extended fault reset command*

5.67 8690, Autotuning command: Out of position range

Permissible movement exceeded.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8690	34448

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The system is unstable.	May adjust the control loop parameters manually until the system behaves stable
The "Base velocity amplitude" is too high for the permissibled movement.	May adjust "Base velocity amplitude" or the permissible movements.

Internal: *0x8690, Autotuning command: Out of position range*

5.68 8A80, Illegal Modes Of Operation

The modes of operation was set to an illegal value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8A80	35456

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The modes of operation was set to an illegal value.	Please check the value of Object 0x6060 (Ch A) or Object 0x6860 (Ch B).

Internal: *0x8A80, Illegal Modes Of Operation*

5.69 8A81, Illegal Modes Of Operation change

The modes of operation was changed in an illegal transition while the axis was enabled.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8A81	35457

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The modes of operation was changed in an illegal transition while the axis was enabled.	Please check the write operations to Object 0x6060 (Ch A) or Object 0x6860 (Ch B).

Internal: *0x8A81, Illegal Modes Of Operation change*

5.70 8A82, Error reaction "NC Handling" had a timeout

With NC error handling activated (Fault reaction option code), the Drive was not stopped by the NC within the parametrized time period (Error reaction delay time).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8A82	35458

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected time period is too short.	Increase the time period if your application allows this.
The movement is too complex for the parametrized time period.	Program a movement that is suitable for the time period.
The NC doesn't support this kind of error handling.	Ask support on which version the feature is supported.

Internal: *0x8A82, Error reaction "NC Handling" had a timeout*

5.71 A017, Pdo Mapping Error: Object has to be mapped always.

The Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A017	40983

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An object, which must be in the mapping is not mapped.	Please add a mapping to the mentioned object.

Internal: *0xA017, Pdo Mapping Error: Object 0x%x/%x has to be mapped always.*

5.72 FF01, Init Timeout

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF01	65281

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFF01, Init Timeout*

5.73 FF07, Error reaction forced: Torque Off

The error reaction "torque off" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF07	65287

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

Internal: *0xFF07, Error reaction forced: Torque Off*

5.74 FF08, Error reaction forced: Shorted Coils Brake

The error reaction "Shorted coils brake" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF08	65288

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

Internal: *0xFF08, Error reaction forced: Shorted Coils Brake*

5.75 FF09, Error reaction forced: Open Loop Ramp

The error reaction "Open loop ramp" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF09	65289

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

Internal: *0xFF09, Error reaction forced: Open Loop Ramp*

5.76 FF0A, Error reaction forced: Closed Loop Ramp

The error reaction "Closed loop ramp" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0A	65290

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

Internal: *0xFF0A, Error reaction forced: Closed Loop Ramp*

5.77 FF0B, Error reaction forced: NC handling

The error reaction "NC-Handling" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0B	65291

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

Internal: *0xFF0B, Error reaction forced: NC handling*

5.78 FF0C, Error reaction TorqueOff with emergency brake

The Axis performed a torque off Errorreaction with an emergency brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0C	65292

Class	Type
Info	TorqueOff with emergency brake

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0xFF0C, Error reaction TorqueOff with emergency brake*

5.79 FF0D, Propagated error received, react with Torque Off.

Propagated error received, react with Torque Off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0D	65293

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A propagated error was received.	Check the sending axis.

Internal: *0xFF0D, Propagated error received, react with Torque Off.*

5.80 FF0E, Propagated error received, react with Shorted Coils Brake.

Propagated error received, react with Shorted Coils Brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0E	65294

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A propagated error was received.	Check the sending axis.

Internal: *0xFF0E, Propagated error received, react with Shorted Coils Brake.*

5.81 FF0F, Propagated error received, react with Closed Loop Ramp.

Propagated error received, react with Shorted Coils Brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0F	65295

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A propagated error was received.	Check the sending axis.

Internal: *0xFF0F, Propagated error received, react with Closed Loop Ramp.*

5.82 FF10, Propagated error received, react with NC handling.

Propagated error received, react with Shorted Coils Brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF10	65296

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A propagated error was received.	Check the sending axis.

Internal: *0xFF10, Propagated error received, react with NC handling.*

5.83 FF11, Error reaction shorted coils brake with emergency brake

The Axis performed a "Shorted coils brake" Errorreaction with an emergency brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF11	65297

Class	Type
Info	TorqueOff with emergency brake

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0xFF11, Error reaction shorted coils brake with emergency brake*

5.84 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

5.85 5445, Fast stop switch active

Positive limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5445	21573

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The fast stop switch has been activated.	Please move the axis away from the fast stop switch.

Internal: *0x5445, Fast stop switch active*

5.86 54B3, Fast stop switch active

Positive limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
54B3	21683

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The fast stop switch has been activated.	Please move the axis away from the fast stop switch.

Internal: *0x54B3, Fast stop switch active*

5.87 589C, Persistent Data Error

The content of the persistent data memory seems to be corrupted.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
589C	22684

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x589C, Persistent data seems to be corrupted. (0x%x)*

5.88 589E, Persistent data memory error. Primary position offset.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
589E	22686

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x589E, Persistent data memory error. Primary position offset.*

5.89 589F, Persistent data memory error. Secondary position offset.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
589F	22687

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x589F, Persistent data memory error. Secondary position offset.*

5.90 58A0, Persistent data memory error. Modulo remainder.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
58A0	22688

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

Internal: *0x58A0, Persistent data memory error. Modulo remainder.*

5.91 63AF, Modulo calculation primary feedback: No saved data could be loaded. Remainder Changed.

Modulo calculation primary feedback: No saved data could be loaded. Remainder Changed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AF	25519

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Possible Causes	Solutions
Modulo function might be enabled for different parameters before.	Execute the extended fault reset command.
Drive device service replacement.	Execute the extended fault reset command.

Internal: *0x63AF, Modulo calculation primary feedback: No saved data could be loaded. Remainder Changed.*

5.92 8187, PWM carrier signal PLL not locked to EtherCAT DC SYNC0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8187	33159

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x8187, PWM carrier signal PLL not locked to EtherCAT DC SYNC0*

5.93 8190, Axis fault reset command is not possible - internal hardware error

The Axis received a fault reset command but a reset is not possible because an internal hardware error has occurred.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8190	33168

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Disconnect the servo drive from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call our support.

Internal: *0x8190, Axis fault reset command is not possible - internal hardware error*

5.94 8191, Axis fault reset command is not possible because at least one of the present errors cannot be reset.

The Axis received a fault reset command but a reset is not possible because at least one of the present errors cannot be reset.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8191	33169

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	A fatal error occurred. A device reboot is required.

Possible Causes	Solutions
This diagnostic message is just a hint that one of the present errors cannot be reset.	Rectify the present error.

Internal: *0x8191, Axis fault reset command is not possible because at least one of the present errors cannot be reset.*

5.95 8691, Advanced Tuning command: Excitation signal amplitude to high

The current controller limitation is active during the excitation signal.
So the excitation signal is not fully applied to the mech. system.
This means that the measured frequency response is influenced by the current controllert limitation and so does not exactly represent the mechanical system behaviour.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8691	34449

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The internal current controller output limitation is active	Either, the excitation signal amplitude has to be reduced (additive excitation amplitude), or the drive has to be operated with a higher DC-link voltage

Internal: *0x8691, Advanced Tuning command: Excitation signal amplitude to high*

5.96 FF12, Error reaction TorqueOff Timeout

The Axis performed a torque off Errorreaction with an emergency brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF12	65298

Class	Type
Error	TorqueOff with emergency brake

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Internal: *0xFF12, Error reaction TorqueOff Timeout*

6 Diagmessages of module Interpolator

6.1 6320, Parameter error in Object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in Object 0x%x/%x*

6.2 6386, Parameter Interpolator: Illegal NC-Task cycle time

Parameter Interpolator: To low NC-Task cycle time for this interpolation sub mode select. The feed forward control may not work as expected.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6386	25478

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
Parameter Interpolator: To low NC-Task cycle time for this interpolation sub mode select.	Adjust NC-Task cycle time.

Internal: *0x6386, Parameter Interpolator: Illegal NC-Task cycle time*

6.3 8680, Position Demand Value outside of the specified Position Range Limits

Position Demand Value outside of the specified Position Range Limits

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8680	34432

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Parameter Interpolator: To low NC-Task cycle time for this interpolation sub mode select.	Adjust NC-Task cycle time.

Internal: *0x8680, Position Demand Value outside of the specified Position Range Limits*

6.4 A01A, TxPdo Mapping Error: Object 0xXX/XX has to be mapped for modes of operation II.

TxPdo Mapping Error: Object 0x%x/%x has to be mapped for modes of operation %d.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01A	40986

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A necessary process data for this mode of operation is not mapped	Add the necessary process data for this mode of operation

Internal: *0xA01A, TxPdo Mapping Error: Object 0x%x/%x has to be mapped for modes of operation %d.*

6.5 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

6.6 8188, Process data synchronization lost

The process data synchronization is not available any more.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8188	33160

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The PC is sending invalid signals (jitter). Numerous causes are hardware problems and device drivers which mask the interrupts.	Check the PC.
Synchronization of the distributed clocks failed	Restart the EtherCAT-Master.
CRC-Error on the EtherCAT bus	Disconnect the servo drive from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff branch office that is responsible for you.
Several EtherCAT telegrams have been lost.	Start an "Emergency scan" in the "System Manager"
I/O update takes place at the end of the task.	In the System Manager parameterize the I/O update at the start of the task.
The prioritization of the individual tasks is unfavorable.	Please check the task prioritization.

Internal: *0x8188, Process data synchronization lost*

7 Diagmessages of module PositionControl

7.1 8611, Following error

The servo drive has detected a following error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8611	34321

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The following error has exceeded the maximum value.	Analyze your application and increase the maximum value of Object 6065 or 6066, if appropriate.
The mechanical system is too sluggish.	Analyze your application and try make the mechanical system smoother.
An error has occurred in the set value generation.	Analyze the cause (NC, internal set value generation, etc.). If no solution can be found, contact support.
The speed limit has been reached.	Analyze the motor parametrization or your calculation and check the maximum motor speed value used in the calculation.
The current limit has been reached.	Analyze the motor parametrization or your calculation and check whether the motor can theoretically follow the set values.
The set value dynamic characteristics are set too "hard".	Analyze your application and check whether it is theoretically possible to achieve the specified dynamics.

Internal: *0x8611, Following error*

7.2 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

8 Diagmessages of module VelocityControl

8.1 3183, The bipolar velocity limit is higher than 1/4 of position range limit per EtherCAT Sync1 cycle.

The maximum accepted position step per cycle is 1/4 of the position range limit range. This error occurs, if the resulting velocity is lower than the bipolar velocity limit.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3183	12675

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The maximum accepted position step per cycle is 1/4 of the position range limit range. This error occurs, if the resulting velocity is lower than the bipolar velocity limit.	Raise your position range limit or lower your bipolar velocity limit.

Internal: *0x3183, The bipolar velocity limit is higher than 1/4 of position range limit per EtherCAT Sync1 cycle.*

8.2 7186, Detected moving axis on enable transition.

The Axis was moving in the disabled State and was now stopped during the enable transition.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7186	29062

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis was moving in the disabled State and was now stopped during the enable transition.	Enable Axis only, if it is not moving.
	Increase Velocity threshold (0x3142:04/0x3542:04)

Internal: *0x7186, Detected moving axis on enable transition.*

8.3 8480, Overspeed error

The speed of the axis is higher than the parameterized maximum value in the Velocity error tolerance Object

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8480	33920

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The speed of the axis is higher than the parameterized maximum value in the Velocity error tolerance Object	Raise the velocity error tolerance or reduce your target velocity.

Internal: *0x8480, Overspeed error*

8.4 8481, Error reaction "Closed loop ramp" had a timeout

A closed loop error reaction was aborted because of a timeout.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8481	33921

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The control loop wasn't able to create enough torque for the deceleration.	Increase quick stop deceleration value.
The control loop wasn't able to create enough torque for the deceleration.	Check the torque limiting parameters.
The axis is humming and standstill wasn't detected.	Check control parameters to reduce humming.
The axis is humming and standstill wasn't detected.	Adjust standstill detection parameters, velocity threshold and velocity threshold time.

Internal: *0x8481, Error reaction "Closed loop ramp" had a timeout*

8.5 8482, The maximum accepted collision torque is exceeded.

The maximum accepted collision torque is exceeded.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8482	33922

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The maximum accepted collision torque is exceeded.	Check the 'Collision torque limit' and / or adjust the torque feedforward value.

Internal: *0x8482, The maximum accepted collision torque is exceeded.*

8.6 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

8.7 8483, Gain scheduling data invalid.

The gain scheduling data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8483	33923

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity values are not in increasing order.	Each velocity value has to be higher than the previous one.

Internal: *0x8483, Gain scheduling data invalid.*

9 Diagmessages of module VelocityControl2

9.1 3183, The bipolar velocity limit is higher than 1/4 of position range limit per EtherCAT Sync1 cycle.

The maximum accepted position step per cycle is 1/4 of the position range limit range. This error occurs, if the resulting velocity is lower than the bipolar velocity limit.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3183	12675

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The maximum accepted position step per cycle is 1/4 of the position range limit range. This error occurs, if the resulting velocity is lower than the bipolar velocity limit.	Raise your position range limit or lower your bipolar velocity limit.

Internal: *0x3183, The bipolar velocity limit is higher than 1/4 of position range limit per EtherCAT Sync1 cycle.*

9.2 7186, Detected moving axis on enable transition.

The Axis was moving in the disabled State and was now stopped during the enable transition.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7186	29062

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis was moving in the disabled State and was now stopped during the enable transition.	Enable Axis only, if it is not moving.
	Increase Velocity threshold (0x3142:04/0x3542:04)

Internal: *0x7186, Detected moving axis on enable transition.*

9.3 8480, Overspeed error

The speed of the axis is higher than the parameterized maximum value in the Velocity error tolerance Object

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8480	33920

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The speed of the axis is higher than the parameterized maximum value in the Velocity error tolerance Object	Raise the velocity error tolerance or reduce your target velocity.

Internal: *0x8480, Overspeed error*

9.4 8481, Error reaction "Closed loop ramp" had a timeout

A closed loop error reaction was aborted because of a timeout.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8481	33921

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The control loop wasn't able to create enough torque for the deceleration.	Increase quick stop deceleration value.
The control loop wasn't able to create enough torque for the deceleration.	Check the torque limiting parameters.
The axis is humming and standstill wasn't detected.	Check control parameters to reduce humming.
The axis is humming and standstill wasn't detected.	Adjust standstill detection parameters, velocity threshold and velocity threshold time.

Internal: *0x8481, Error reaction "Closed loop ramp" had a timeout*

9.5 8482, The maximum accepted collision torque is exceeded.

The maximum accepted collision torque is exceeded.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8482	33922

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The maximum accepted collision torque is exceeded.	Check the 'Collision torque limit' and / or adjust the torque feedforward value.

Internal: *0x8482, The maximum accepted collision torque is exceeded.*

9.6 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

9.7 8483, Gain scheduling data invalid.

The gain scheduling data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8483	33923

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity values are not in increasing order.	Each velocity value has to be higher than the previous one.

Internal: *0x8483, Gain scheduling data invalid.*

10 Diagmessages of module BiquadFilter

10.1 6320, Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in object 0x%x/%x*

10.2 63AB, The filter parameterization is not valid

The parameterization of the filter is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AB	25515

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The parameterization of the filter is not valid	Please check the parameters of the filter.

Internal: *0x63AB, The filter parameterization is not valid*

10.3 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

11 Diagmessages of module TorqueControl

11.1 2330, Earth leakage (motor-side)

The Iuvw sum Monitoring detected an Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2330	9008

Class	Type
Error	Motor connection error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Iuvw sum (0x3242/14) raised above the parameter Iuvw sum max (0x3243/07)	Please check the Motor connection and validate the parameter value.

Internal: *0x2330, Earth leakage (motor-side)*

11.2 2390, Amplifier overload utilization

The parametrized utilization limit has been reached.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2390	9104

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Amplifier operates in U/f control and has reached its utilization limit.	Check your motion profile and motor parameters.

Internal: *0x2390, Amplifier overload utilization*

11.3 3181, Phase frequency (motor-side) raised above 600 Hz

Phase frequency (motor-side) raised above 600 Hz and you have a dual use limited device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3181	12673

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Phase frequency (motor-side) raised above 600 Hz and you have a dual use limited device.	Reduce your target velocity.

Internal: *0x3181, Phase frequency (motor-side) raised above 600 Hz*

11.4 3182, Velocity actual Value raised above the max channel accepted velocity

Velocity actual Value raised above the max channel accepted velocity

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3182	12674

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Velocity actual Value raised above the max channel accepted velocity	Reduce your target velocity.

Internal: *0x3182, Velocity actual Value raised above the max channel accepted velocity*

11.5 6320, Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in object 0x%x/%x*

11.6 6388, Parameter Torque Control: The value in object 0xXX/XX is higher than the motor peak current (0xXX/XX).

The rated current is higher than the motor peak current.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6388	25480

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6388, Parameter Torque Control: The value in object 0x%x/%x is higher than the motor peak current (0x%x/%x).*

11.7 6389, Parameter Torque Control: The value in object 0xXX/XX is higher than the configured peak current (0xXX/XX).

The rated current is higher than the channel peak current.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6389	25481

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6389, Parameter Torque Control: The value in object 0x%x/%x is higher than the configured peak current (0x%x/%x).*

11.8 638F, Parameter Torque Control: The value in Object 0xXX/XX is higher than the Motor maximum voltage slope (0xXX/XX).

The voltage slope of the parametrized motor is not valid for this drive

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638F	25487

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x638F, Parameter Torque Control: The value in Object 0x%x/%x is higher than the Motor maximum voltage slope (0x%x/%x).*

11.9 63AD, Motor torque/ force characteristic is not valid for internal calculation.

Motor torque/ force characteristic is not valid for internal calculation.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AD	25517

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Motor torque/ force characteristic is not valid for internal calculation.	Please use latest Drive Manager 2 version.

Internal: *0x63AD, Motor torque/ force characteristic is not valid for internal calculation.*

11.10 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

11.11 63B6, Parameter Torque Control: Invalid device total output current sum

The device total output current sum is to high. (Sum of all axes.)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B6	25526

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The configured rated current sum is higher than accepted by the device.	Please check the configured rated current parameters of all axes.
The configured peak current sum is higher than accepted by the device.	Please check the configured peak current parameters of all axes.
The configured current sum is higher than accepted by the device because of a pwm mode considered derating.	Please check the configured pwm mode parameters of all axes.

Internal: *0x63B6, Parameter Torque Control: Invalid device total output current sum*

12 Diagmessages of module OCT rotary (Hiperface DSL)

12.1 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.2 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)
Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

12.3 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

12.4 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

12.5 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

12.6 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

12.7 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

12.8 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

12.9 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

12.10 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

12.11 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

12.12 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

12.13 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

12.14 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

12.15 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

12.16 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

12.17 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

12.18 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

12.19 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

12.20 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

12.21 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

12.22 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

12.23 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.24 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.25 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

12.26 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

12.27 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

12.28 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

12.29 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

12.30 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

12.31 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

12.32 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

12.33 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

12.34 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

12.35 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

12.36 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

12.37 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

12.38 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

12.39 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

12.40 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

12.41 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

12.42 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

12.43 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

12.44 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

12.45 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

12.46 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

12.47 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

12.48 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

12.49 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

12.50 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

12.51 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

12.52 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.53 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.54 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

12.55 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

12.56 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

12.57 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

12.58 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

12.59 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

12.60 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

12.61 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

12.62 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

12.63 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

12.64 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

12.65 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

12.66 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

12.67 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

12.68 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

12.69 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

12.70 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

12.71 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=II, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

12.72 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

12.73 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

12.74 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

12.75 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

12.76 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

12.77 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

12.78 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

12.79 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

12.80 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

12.81 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

12.82 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

12.83 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

12.84 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

12.85 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

12.86 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

12.87 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

12.88 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

12.89 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

12.90 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

12.91 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

12.92 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

12.93 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

12.94 78A1, EnDat3: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

12.95 78A2, EnDat3: Encoder start warning, Id=0xXX, Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

12.96 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

12.97 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.98 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

12.99 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

12.100 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

12.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 1

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

12.10 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 2 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

12.10 3 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

12.10 4 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

12.10 5 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

12.10.6 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

12.10.7 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

12.10.8 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

12.10 78CC, Inc Enc: Parameter error in object 0xXX/XX 9

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

12.11 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 0

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

12.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 1

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

13 Diagmessages of module EnDat 22 rotary

13.1 7320, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7320, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.2 7321, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7321	29473

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7321, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.3 7380, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7380, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

13.4 7381, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

13.5 7382, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

13.6 7383, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

13.7 7384, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

13.8 7385, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

13.9 7386, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7386, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

13.10 7387, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7387, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

13.11 7388, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7388, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

13.12 7389, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7389, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

13.13 738A, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x738A, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

13.14 738B, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x738B, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

13.15 738C, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x738C, EnDat22: Found no encoder (No link to an encoder)!*

13.16 738E, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x738E, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

13.17 738F, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x738F, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

13.18 7390, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7390, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

13.19 7391, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7391, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

13.20 7392, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x7392, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

13.21 7393, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7393, EnDat22: Found no verification code for the loaded fpga.*

13.22 7394, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7394	29588

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7394, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

13.23 7395, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7395	29589

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7395, EnDat22: Internal warning! The error incuder is available.*

13.24 7396, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7396	29590

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7396, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

13.25 7397, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7397	29591

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7397, EnDat22: The selected valuations could not be read.*

13.26 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

13.27 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.28 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)

Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

13.29 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

13.30 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

13.31 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

13.32 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

13.33 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

13.34 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

13.35 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

13.36 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

13.37 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

13.38 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

13.39 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

13.40 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

13.41 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

13.42 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

13.43 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

13.44 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

13.45 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

13.46 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

13.47 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

13.48 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.49 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.50 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

13.51 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

13.52 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

13.53 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

13.54 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

13.55 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

13.56 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

13.57 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

13.58 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

13.59 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

13.60 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

13.61 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

13.62 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

13.63 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

13.64 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

13.65 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

13.66 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

13.67 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

13.68 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

13.69 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

13.70 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

13.71 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

13.72 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

13.73 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

13.74 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

13.75 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

13.76 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

13.77 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.78 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.79 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

13.80 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

13.81 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

13.82 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

13.83 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

13.84 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

13.85 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

13.86 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

13.87 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

13.88 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

13.89 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

13.90 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

13.91 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

13.92 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

13.93 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

13.94 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

13.95 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

13.96 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

13.97 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

13.98 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

13.99 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

13.10 0 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

13.10 1 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

13.10 2 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

13.10 7891, EnDat3: Encoder policy check (measuring length) 3 failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

13.10 7892, EnDat3: Encoder interface resistance check failed. 4 Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

13.10 7893, EnDat3: Encoder power off (SafeCu global 5 shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

13.10 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

13.10 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

13.10 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

13.10 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

13.11 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

13.11 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

13.11 789A, EnDat3: Low priority frame error, SendListEntry 2 x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

13.113 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

13.114 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

13.115 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

13.11 6 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

13.11 7 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

13.11 8 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

13.11 78A1, EnDat3: Encoder seems to be offline for UU 9 cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

13.12 78A2, EnDat3: Encoder start warning, Id=0xXX, 0 Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

13.12 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX 1

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

13.12 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, 2 Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.12 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, 3 Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

13.12 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX 4

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

13.12 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, 5 Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

13.12 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 6

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

13.12 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 7 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

13.128 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

13.129 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

13.130 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

13.13 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

13.13 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

13.13 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

13.13 78CC, Inc Enc: Parameter error in object 0xXX/XX 4

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

13.13 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 5

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

13.13 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 6

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

14 Diagmessages of module EnDat 22 linear

14.1 7320, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7320, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.2 7321, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7321	29473

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7321, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.3 7380, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7380, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

14.4 7381, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

14.5 7382, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

14.6 7383, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

14.7 7384, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

14.8 7385, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

14.9 7386, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7386, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

14.10 7387, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7387, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

14.11 7388, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7388, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

14.12 7389, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7389, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

14.13 738A, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x738A, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

14.14 738B, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x738B, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

14.15 738C, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x738C, EnDat22: Found no encoder (No link to an encoder)!*

14.16 738E, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x738E, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

14.17 738F, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x738F, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

14.18 7390, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7390, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

14.19 7391, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7391, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

14.20 7392, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x7392, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

14.21 7393, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7393, EnDat22: Found no verification code for the loaded fpga.*

14.22 7394, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7394	29588

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7394, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

14.23 7395, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7395	29589

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7395, EnDat22: Internal warning! The error incuder is available.*

14.24 7396, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7396	29590

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7396, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

14.25 7397, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7397	29591

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7397, EnDat22: The selected valuations could not be read.*

14.26 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

14.27 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.28 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)

Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

14.29 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

14.30 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

14.31 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

14.32 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

14.33 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

14.34 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

14.35 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

14.36 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

14.37 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

14.38 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

14.39 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

14.40 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

14.41 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

14.42 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

14.43 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

14.44 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

14.45 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

14.46 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

14.47 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

14.48 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.49 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.50 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

14.51 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

14.52 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

14.53 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

14.54 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

14.55 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

14.56 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

14.57 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

14.58 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

14.59 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

14.60 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

14.61 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

14.62 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

14.63 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

14.64 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

14.65 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

14.66 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

14.67 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

14.68 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

14.69 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

14.70 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

14.71 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

14.72 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

14.73 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

14.74 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

14.75 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

14.76 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

14.77 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.78 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.79 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

14.80 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

14.81 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

14.82 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

14.83 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

14.84 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

14.85 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

14.86 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

14.87 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

14.88 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

14.89 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

14.90 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

14.91 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

14.92 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

14.93 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

14.94 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

14.95 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

14.96 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

14.97 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

14.98 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

14.99 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

14.10 0 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

14.10 1 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

14.10 2 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

14.10 7891, EnDat3: Encoder policy check (measuring length) 3 failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

14.10 7892, EnDat3: Encoder interface resistance check failed. 4 Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

14.10 7893, EnDat3: Encoder power off (SafeCu global 5 shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

14.10 6 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

14.10 7 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

14.10 8 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

14.10 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

14.11 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

14.11 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

14.11 789A, EnDat3: Low priority frame error, SendListEntry 2 x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

14.113 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

14.114 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

14.115 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

14.11 789E, EnDat3: Encoder status dump, 6 ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

14.11 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; 7 ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

14.11 78A0, EnDat3: Encoder status dump, FGstatus: 8 HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

14.11 78A1, EnDat3: Encoder seems to be offline for UU 9 cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

14.12 78A2, EnDat3: Encoder start warning, Id=0xXX, 0 Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

14.12 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX 1

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

14.12 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, 2 Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.12 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, 3 Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

14.12 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX 4

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

14.12 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, 5 Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

14.12 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 6

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

14.12 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 7 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

14.128 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

14.129 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

14.130 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

14.13 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

14.13 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

14.13 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

14.13 78CC, Inc Enc: Parameter error in object 0xXX/XX 4

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

14.13 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 5

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

14.13 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 6

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

15 Diagmessages of module BiSS-C rotary

15.1 6320, Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in object 0x%x/%x*

15.2 7320, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x7320, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.3 7321, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7321	29473

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x7321, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.4 7380, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x7380, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

15.5 7381, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7381, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

15.6 7383, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7383, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

15.7 7384, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7384, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

15.8 7385, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x7385, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

15.9 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

15.10 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.11 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)

Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

15.12 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

15.13 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

15.14 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

15.15 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

15.16 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

15.17 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

15.18 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

15.19 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

15.20 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

15.21 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

15.22 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

15.23 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

15.24 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

15.25 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

15.26 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

15.27 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

15.28 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

15.29 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

15.30 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

15.31 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.32 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.33 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

15.34 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

15.35 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

15.36 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

15.37 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

15.38 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

15.39 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

15.40 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

15.41 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

15.42 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

15.43 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

15.44 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

15.45 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

15.46 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

15.47 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

15.48 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

15.49 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

15.50 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

15.51 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

15.52 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

15.53 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

15.54 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

15.55 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

15.56 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

15.57 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

15.58 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

15.59 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

15.60 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.61 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.62 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

15.63 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

15.64 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

15.65 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

15.66 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

15.67 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

15.68 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

15.69 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

15.70 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

15.71 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

15.72 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

15.73 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

15.74 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

15.75 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

15.76 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

15.77 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

15.78 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

15.79 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

15.80 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

15.81 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

15.82 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

15.83 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

15.84 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

15.85 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

15.86 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

15.87 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

15.88 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

15.89 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

15.90 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

15.91 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

15.92 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

15.93 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

15.94 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

15.95 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

15.96 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

15.97 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

15.98 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

15.99 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

15.10 0 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

15.10 1 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

15.10 78A1, EnDat3: Encoder seems to be offline for UU 2 cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

15.10 78A2, EnDat3: Encoder start warning, Id=0xXX, 3 Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

15.10 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX 4

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

15.10 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, 5 Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.10 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, 6 Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

15.10 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX 7

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

15.10 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, 8 Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

15.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 9

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

15.11 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 0 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

15.11 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

15.11 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

15.11 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

15.11.4 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

15.11.5 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

15.11.6 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

15.11 78CC, Inc Enc: Parameter error in object 0xXX/XX 7

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

15.11 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 8

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

15.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 9

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

16 Diagmessages of module BiSS-C linear

16.1 6320, Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in object 0x%x/%x*

16.2 7320, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x7320, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.3 7321, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7321	29473

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x7321, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.4 7380, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x7380, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

16.5 7381, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7381, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

16.6 7383, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7383, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

16.7 7384, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x7384, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

16.8 7385, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x7385, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

16.9 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

16.10 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.11 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)

Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

16.12 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

16.13 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

16.14 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

16.15 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

16.16 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

16.17 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

16.18 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

16.19 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

16.20 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

16.21 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

16.22 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

16.23 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

16.24 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

16.25 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

16.26 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

16.27 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

16.28 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

16.29 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

16.30 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

16.31 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.32 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.33 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

16.34 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

16.35 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

16.36 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

16.37 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

16.38 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

16.39 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

16.40 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

16.41 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

16.42 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

16.43 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

16.44 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

16.45 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

16.46 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

16.47 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

16.48 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

16.49 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

16.50 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

16.51 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

16.52 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

16.53 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

16.54 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

16.55 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

16.56 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

16.57 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

16.58 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

16.59 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

16.60 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.61 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.62 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

16.63 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

16.64 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

16.65 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

16.66 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

16.67 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

16.68 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

16.69 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

16.70 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

16.71 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

16.72 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

16.73 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

16.74 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

16.75 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

16.76 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

16.77 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

16.78 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

16.79 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

16.80 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

16.81 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

16.82 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

16.83 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

16.84 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

16.85 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

16.86 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

16.87 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

16.88 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

16.89 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

16.90 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

16.91 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

16.92 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

16.93 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

16.94 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

16.95 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

16.96 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

16.97 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

16.98 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

16.99 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

16.10 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; 0 ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

16.10 78A0, EnDat3: Encoder status dump, FGstatus: 1 HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

16.10 78A1, EnDat3: Encoder seems to be offline for UU 2 cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

16.10 78A2, EnDat3: Encoder start warning, Id=0xXX, 3 Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

16.10 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX 4

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

16.10 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, 5 Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.10 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, 6 Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

16.10 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX 7

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

16.10 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, 8 Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

16.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 9

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

16.11 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 0 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

16.11 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

16.11 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

16.11 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

16.11.4 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

16.11.5 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

16.11.6 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

16.11 78CC, Inc Enc: Parameter error in object 0xXX/XX 7

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

16.11 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 8

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

16.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 9

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

17 Diagmessages of module SimulationRotary

17.1 63AC, Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AC	25516

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x63AC, Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

17.2 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

17.3 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.4 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)

Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

17.5 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

17.6 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

17.7 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

17.8 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

17.9 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

17.10 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

17.11 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

17.12 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

17.13 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

17.14 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

17.15 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

17.16 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

17.17 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

17.18 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

17.19 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

17.20 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

17.21 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

17.22 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

17.23 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

17.24 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.25 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.26 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

17.27 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

17.28 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

17.29 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

17.30 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

17.31 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

17.32 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

17.33 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

17.34 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

17.35 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

17.36 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

17.37 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

17.38 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

17.39 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

17.40 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

17.41 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

17.42 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

17.43 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

17.44 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

17.45 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

17.46 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

17.47 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

17.48 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

17.49 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

17.50 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

17.51 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

17.52 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

17.53 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.54 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.55 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

17.56 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

17.57 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

17.58 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

17.59 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

17.60 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

17.61 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

17.62 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

17.63 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

17.64 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

17.65 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

17.66 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

17.67 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

17.68 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

17.69 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

17.70 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

17.71 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

17.72 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

17.73 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

17.74 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

17.75 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

17.76 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

17.77 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

17.78 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

17.79 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

17.80 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

17.81 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

17.82 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

17.83 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

17.84 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

17.85 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

17.86 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

17.87 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

17.88 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

17.89 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

17.90 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

17.91 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

17.92 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

17.93 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

17.94 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

17.95 78A1, EnDat3: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

17.96 78A2, EnDat3: Encoder start warning, Id=0xXX, Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

17.97 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

17.98 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.99 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

17.10 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX 0

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

17.10 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, 1 Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

17.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 2

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

17.10 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 3 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

17.10.4 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

17.10.5 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

17.10.6 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

17.10.7 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

17.10.8 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

17.10.9 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

17.11 78CC, Inc Enc: Parameter error in object 0xXX/XX 0

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

17.11 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 1

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

17.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 2

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

18 Diagmessages of module SyncServoMotor

18.1 6320, Parameter error in Object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in Object 0x%x/%x*

18.2 6387, Parameter Motor. The configured DCLink Max Voltage is higher then the Motor Max Voltage.

The configured DCLink Max Voltage is higher then the Motor Max Voltage.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6387	25479

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6387, Parameter Motor. The configured DCLink Max Voltage is higher then the Motor Max Voltage.*

18.3 638A, The Axis seems not to be parameterized.

No motor was parameterized for this axis

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'Motor parameters/Configured motor type' was not set.	Write your motor type into 'Motor parameters/ Configured motor type'.

Internal: *0x638A, The Axis seems not to be parameterized.*

18.4 638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.

The characteristic is not monotonically increasing or not in the right working range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638B	25483

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The characteristic is not monotonically increasing or not in the right working range.	Check the configured motor and the torque current curve.

Internal: *0x638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.*

18.5 638C, Motor type does not match

The parameterized motor type is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638C	25484

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x638C, Motor type does not match*

18.6 638D, Connected Motor is compatible to the configured Motor

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638D	25485

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x638D, Connected Motor is compatible to the configured Motor*

18.7 638E, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638E	25486

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x638E, The Motor brake is automatically unlocked*

18.8 63B5, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B5	25525

Class	Type
Info	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Not all motor parameters required for field wekening operation have permissible values.	Check configured winding inductance, pole pair number, rated torque, standstill torque and standstill current values.

Internal: *0x63B5, The Motor brake is automatically unlocked*

18.9 7122, Motor error or commutation malfunction

Motor error or commutation malfunction

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7122	28962

Class	Type
Error	Commutation error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity actual value (0x606C) and the actual value of Uq (0x3242/0xF) have a different sign and raised above the configured thresholds.	Check the Motor commutation monitoring parameters (0x32C6)

Internal: *0x7122, Motor error or commutation malfunction*

18.10 7181, Motor thermal utilization has reached the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7181	29057

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7181, Motor thermal utilization has reached the warning level*

18.11 7182, Motor thermal utilization has left the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7182	29058

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x7182, Motor thermal utilization has left the warning level*

18.12 7183, Motor thermal utilization has reached the Error Level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7183	29059

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7183, Motor thermal utilization has reached the Error Level*

18.13 7184, Motor overload shut down

The thermal motor model has detected an overload and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7184	29060

Class	Type
Error	Motor overload shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal motor model has detected an overload and turned off	Reduced the motor load.

Internal: *0x7184, Motor overload shut down*

18.14 7185, Motor overtemperature shut down

The thermal sensor of the motor has detected an overtemperature and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7185	29061

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal sensor of the motor has detected an overtemperature and turned off	Reduced the motor temperature.

Internal: *0x7185, Motor overtemperature shut down*

18.15 7186, Commutation offset source: No commutation offset existing in source 'encoder memory'

There is no commutation offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7186	29062

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A commutation offset should used, but no position offset has been saved.	Calibrate the axis and save the new commutation offset.

Internal: *0x7186, Commutation offset source: No commutation offset existing in source 'encoder memory'*

18.16 7187, Cogging compensation init error, Additional Errorcode 0xXX

The initalization of the cogging compensation failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7187	29063

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7187, Cogging compensation init error, Additional Errorcode 0x%x*

18.17 7188, Motor overtemperature warning

The motor temperature has reached the warning level.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7188	29064

Class	Type
Warning	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
The motor temperature has reached the warning level.	Reduced the motor temperature.

Internal: *0x7188, Motor overtemperature warning*

18.18 7189, Invalid motor temperature sensor characteristic

The motor temperature sensor characteristic data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7189	29065

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The motor temperature sensor characteristic is not a rising or falling curve.	Check values of the motor temperature sensor characteristic object.

Internal: *0x7189, Invalid motor temperature sensor characteristic*

18.19 718A, Invalid motor temperature sensor data

The data of the motor temperature sensor is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718A	29066

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected motor temperature sensor has an invalid data state.	Check the configured motor temperature sensor connection.

Internal: *0x718A, Invalid motor temperature sensor data*

18.20 718B, Invalid motor inductance characteristic

The motor inductance characteristic data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718B	29067

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The current values of motor inductance characteristic are not rising.	Check values of the motor inductance characteristic object.

Internal: *0x718B, Invalid motor inductance characteristic*

18.21 718C, Sensorless control timeout error

The motor commutation position could not be estimated within the configured time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718C	29068

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selnsorless position estimation estimation failed.	Check sensorless control parameter settings.

Internal: *0x718C, Sensorless control timeout error*

18.22 718D, Sensorless control commutation poisiton lost

The commutation position deviation exceeds the configured threshold.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718D	29069

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The commutation position deviation exceeds the configured threshold.	Check sensorless control parameter settings.

Internal: *0x718D, Sensorless control commutation poisiton lost*

18.23 718E, Commutation offset not valid

The commutation offset is not valid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718E	29070

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No valid commutation offset value is available.	Check commutation offset source settings and feedbacl type. Calibrate commutation offset if required.

Internal: *0x718E, Commutation offset not valid*

18.24 718F, Commutation offset command parameter error

Commutation offset command method is not suitable for automatic commutation offset calibration.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718F	29071

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected commutation offset command method is not sufficient for automatic commutation offset calibration.	Check commutation offset command parameter settings and chose a suitable method.

Internal: *0x718F, Commutation offset command parameter error*

18.25 7190, Commutation offset command excessive current deviation

Excessive current deviation duruing commutation offset command execution.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7190	29072

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Excessive current deviation between current setpoint and actual value duruing commutation offset command execution.	Check commutation offset command parameter and current limitation settings .

Internal: *0x7190, Commutation offset command excessive current deviation*

18.26 7191, Commutation offset command feedback direction error

Commutation offset command feedback direction error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7191	29073

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feedback direction does not correspond to motor movement direction.	Check feedback wiring and parametrization.

Internal: *0x7191, Commutation offset command feedback direction error*

18.27 7192, Commutation offset command free movement check failed

Free movement check after commutation offset measurement failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7192	29074

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Free movement check after commutation offset measurement failed.	Please check whether the axis can move freely.

Internal: *0x7192, Commutation offset command free movement check failed*

18.28 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

18.29 7193, Field weakening not supported in selected motor control mode

Field weakening not supported in selected motor control mode.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7193	29075

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Field weakening not supported in selected motor control mode.	Check motor control mode and field weakening settings.

Internal: *0x7193, Field weakening not supported in selected motor control mode*

19 Diagmessages of module LinearMotor

19.1 6320, Parameter error in Object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in Object 0x%x/%x*

19.2 6387, Parameter Motor. The configured DCLink Max Voltage is higher then the Motor Max Voltage.

The configured DCLink Max Voltage is higher then the Motor Max Voltage.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6387	25479

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6387, Parameter Motor. The configured DCLink Max Voltage is higher then the Motor Max Voltage.*

19.3 638A, The Axis seems not to be parameterized.

No motor was parameterized for this axis

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'Motor parameters/Configured motor type' was not set.	Write your motor type into 'Motor parameters/ Configured motor type'.

Internal: *0x638A, The Axis seems not to be parameterized.*

19.4 638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.

The characteristic is not monotonically increasing or not in the right working range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638B	25483

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The characteristic is not monotonically increasing or not in the right working range.	Check the configured motor and the torque current curve.

Internal: *0x638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.*

19.5 638C, Motor type does not match

The parameterized motor type is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638C	25484

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x638C, Motor type does not match*

19.6 638D, Connected Motor is compatible to the configured Motor

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638D	25485

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x638D, Connected Motor is compatible to the configured Motor*

19.7 638E, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638E	25486

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x638E, The Motor brake is automatically unlocked*

19.8 63B5, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B5	25525

Class	Type
Info	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Not all motor parameters required for field wekening operation have permissible values.	Check configured winding inductance, rated torque, standstill torque and standstill current values.

Internal: *0x63B5, The Motor brake is automatically unlocked*

19.9 7122, Motor error or commutation malfunction

Motor error or commutation malfunction

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7122	28962

Class	Type
Error	Commutation error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity actual value (0x606C) and the actual value of Uq (0x3242/0xF) have a different sign and raised above the configured thresholds.	Check the Motor commutation monitoring parameters (0x32C6)

Internal: *0x7122, Motor error or commutation malfunction*

19.10 7181, Motor thermal utilization has reached the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7181	29057

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7181, Motor thermal utilization has reached the warning level*

19.11 7182, Motor thermal utilization has left the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7182	29058

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x7182, Motor thermal utilization has left the warning level*

19.12 7183, Motor thermal utilization has reached the Error Level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7183	29059

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7183, Motor thermal utilization has reached the Error Level*

19.13 7184, Motor overload shut down

The thermal motor model has detected an overload and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7184	29060

Class	Type
Error	Motor overload shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal motor model has detected an overload and turned off	Reduced the motor load.

Internal: *0x7184, Motor overload shut down*

19.14 7185, Motor overtemperature shut down

The thermal sensor of the motor has detected an overtemperature and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7185	29061

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal sensor of the motor has detected an overtemperature and turned off	Reduced the motor temperature.

Internal: *0x7185, Motor overtemperature shut down*

19.15 7186, Commutation offset source: No commutation offset existing in source 'encoder memory'

There is no commutation offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7186	29062

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A commutation offset should used, but no position offset has been saved.	Calibrate the axis and save the new commutation offset.

Internal: *0x7186, Commutation offset source: No commutation offset existing in source 'encoder memory'*

19.16 7188, Motor overtemperature warning

The motor temperature has reached the warning level.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7188	29064

Class	Type
Warning	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
The motor temperature has reached the warning level.	Reduced the motor temperature.

Internal: *0x7188, Motor overtemperature warning*

19.17 7189, Invalid motor temperature sensor characteristic

The motor temperature sensor characteristic data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7189	29065

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The motor temperature sensor characteristic is not a rising or falling curve.	Check values of the motor temperature sensor characteristic object.

Internal: *0x7189, Invalid motor temperature sensor characteristic*

19.18 718A, Invalid motor temperature sensor data

The data of the motor temperature sensor is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718A	29066

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected motor temperature sensor has an invalid data state.	Check the configured motor temperature sensor connection.

Internal: *0x718A, Invalid motor temperature sensor data*

19.19 718B, Invalid motor inductance characteristic

The motor inductance characteristic data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718B	29067

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The current values of motor inductance characteristic are not rising.	Check values of the motor inductance characteristic object.

Internal: *0x718B, Invalid motor inductance characteristic*

19.20 718E, Commutation offset not valid.

The commutation offset is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718E	29070

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No valid commutation offset value is available.	Check commutation offset source settings and feedbacl type. Calibrate commutation offset if required.

Internal: *0x718E, Commutation offset not valid.*

19.21 718F, Commutation offset command parameter error

Commutation offset command method is not suitable for automatic commutation offset calibration.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718F	29071

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected commutation offset command method is not sufficient for automatic commutation offset calibration.	Check commutation offset command parameter settings and chose a suitable method.

Internal: *0x718F, Commutation offset command parameter error*

19.22 7190, Commutation offset command excessive current deviation

Excessive current deviation duruing commutation offset command execution.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7190	29072

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Excessive current deviation between current setpoint and actual value duruing commutation offset command execution.	Check commutation offset command parameter and current limitation settings .

Internal: *0x7190, Commutation offset command excessive current deviation*

19.23 7191, Commutation offset command feedback direction error

Commutation offset command feedback direction error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7191	29073

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feedback direction does not correspond to motor movement direction.	Check feedback wiring and parametrization.

Internal: *0x7191, Commutation offset command feedback direction error*

19.24 7192, Commutation offset command free movement check failed

Free movement check after commutation offset measurement failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7192	29074

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Free movement check after commutation offset measurement failed.	Please check whether the axis can move freely.

Internal: *0x7192, Commutation offset command free movement check failed*

19.25 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

19.26 7187, Cogging compensation init error, Additional Errorcode 0xXX

The initalization of the cogging compensation failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7187	29063

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7187, Cogging compensation init error, Additional Errorcode 0x%x*

19.27 718C, Sensorless control timeout error

The motor commutation position could not be estimated within the configured time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718C	29068

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selnsorless position estimation estimation failed.	Check sensorless control parameter settings.

Internal: *0x718C, Sensorless control timeout error*

19.28 718D, Sensorless control commutation poisiton lost

The commutation position deviation exceeds the configured threshold.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718D	29069

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The commutation position deviation exceeds the configured threshold.	Check sensorless control parameter settings.

Internal: *0x718D, Sensorless control commutation poisiton lost*

19.29 718E, Commutation offset not valid

The commutation offset is not valid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718E	29070

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No valid commutation offset value is available.	Check commutation offset source settings and feedbacl type. Calibrate commutation offset if required.

Internal: *0x718E, Commutation offset not valid*

19.30 7193, Field weakening not supported in selected motor control mode

Field weakening not supported in selected motor control mode.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7193	29075

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Field weakening not supported in selected motor control mode.	Check motor control mode and field weakening settings.

Internal: *0x7193, Field weakening not supported in selected motor control mode*

20 Diagmessages of module AsynchronousMotor

20.1 6320, Parameter error in Object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6320, Parameter error in Object 0x%x/%x*

20.2 6387, Parameter Motor. The configured DCLink Max Voltage is higher then the Motor Max Voltage.

The configured DCLink Max Voltage is higher then the Motor Max Voltage.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6387	25479

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x6387, Parameter Motor. The configured DCLink Max Voltage is higher then the Motor Max Voltage.*

20.3 638A, The Axis seems not to be parameterized.

No motor was parameterized for this axis

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'Motor parameters/Configured motor type' was not set.	Write your motor type into 'Motor parameters/ Configured motor type'.

Internal: *0x638A, The Axis seems not to be parameterized.*

20.4 638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.

The characteristic is not monotonically increasing or not in the right working range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638B	25483

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The characteristic is not monotonically increasing or not in the right working range.	Check the configured motor and the torque current curve.

Internal: *0x638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.*

20.5 638C, Motor type does not match

The parameterized motor type is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638C	25484

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x638C, Motor type does not match*

20.6 638D, Connected Motor is compatible to the configured Motor

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638D	25485

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x638D, Connected Motor is compatible to the configured Motor*

20.7 638E, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638E	25486

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x638E, The Motor brake is automatically unlocked*

20.8 63B5, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63B5	25525

Class	Type
Info	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Not all motor parameters required for field wekening operation have permissible values.	Check configured nominal voltage and nominal speed values.

Internal: *0x63B5, The Motor brake is automatically unlocked*

20.9 7122, Motor error or commutation malfunction

Motor error or commutation malfunction

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7122	28962

Class	Type
Error	Commutation error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity actual value (0x606C) and the actual value of Uq (0x3242/0xF) have a different sign and raised above the configured thresholds.	Check the Motor commutation monitoring parameters (0x32C6)

Internal: *0x7122, Motor error or commutation malfunction*

20.10 7181, Motor thermal utilization has reached the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7181	29057

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7181, Motor thermal utilization has reached the warning level*

20.11 7182, Motor thermal utilization has left the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7182	29058

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Internal: *0x7182, Motor thermal utilization has left the warning level*

20.12 7183, Motor thermal utilization has reached the Error Level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7183	29059

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7183, Motor thermal utilization has reached the Error Level*

20.13 7184, Motor overload shut down

The thermal motor model has detected an overload and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7184	29060

Class	Type
Error	Motor overload shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal motor model has detected an overload and turned off	Reduced the motor load.

Internal: *0x7184, Motor overload shut down*

20.14 7185, Motor overtemperature shut down

The thermal sensor of the motor has detected an overtemperature and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7185	29061

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal sensor of the motor has detected an overtemperature and turned off	Reduced the motor temperature.

Internal: *0x7185, Motor overtemperature shut down*

20.15 7186, Commutation offset source: No commutation offset existing in source 'encoder memory'

There is no commutation offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7186	29062

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A commutation offset should used, but no position offset has been saved.	Calibrate the axis and save the new commutation offset.

Internal: *0x7186, Commutation offset source: No commutation offset existing in source 'encoder memory'*

20.16 7187, Cogging compensation init error, Additional Errorcode 0xXX

The initalization of the cogging compensation failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7187	29063

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7187, Cogging compensation init error, Additional Errorcode 0x%x*

20.17 7188, Motor overtemperature warning

The motor temperature has reached the warning level.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7188	29064

Class	Type
Warning	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
The motor temperature has reached the warning level.	Reduced the motor temperature.

Internal: *0x7188, Motor overtemperature warning*

20.18 7189, Invalid motor temperature sensor characteristic

The motor temperature sensor characteristic data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7189	29065

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The motor temperature sensor characteristic is not a rising or falling curve.	Check values of the motor temperature sensor characteristic object.

Internal: *0x7189, Invalid motor temperature sensor characteristic*

20.19 718A, Invalid motor temperature sensor data

The data of the motor temperature sensor is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718A	29066

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected motor temperature sensor has an invalid data state.	Check the configured motor temperature sensor connection.

Internal: *0x718A, Invalid motor temperature sensor data*

20.20 718B, Invalid motor inductance characteristic

The motor inductance characteristic data is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718B	29067

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The current values of motor inductance characteristic are not rising.	Check values of the motor inductance characteristic object.

Internal: *0x718B, Invalid motor inductance characteristic*

20.21 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

20.22 718C, Sensorless control timeout error

The motor commutation position could not be estimated within the configured time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718C	29068

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selnsorless position estimation estimation failed.	Check sensorless control parameter settings.

Internal: *0x718C, Sensorless control timeout error*

20.23 718D, Sensorless control commutation poisiton lost

The commutation position deviation exceeds the configured threshold.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718D	29069

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The commutation position deviation exceeds the configured threshold.	Check sensorless control parameter settings.

Internal: *0x718D, Sensorless control commutation poisiton lost*

20.24 718E, Commutation offset not valid

The commutation offset is not valid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718E	29070

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No valid commutation offset value is available.	Check commutation offset source settings and feedbacl type. Calibrate commutation offset if required.

Internal: *0x718E, Commutation offset not valid*

20.25 718F, Commutation offset command parameter error

Commutation offset command method is not suitable for automatic commutation offset calibration.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
718F	29071

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected commutation offset command method is not sufficient for automatic commutation offset calibration.	Check commutation offset command parameter settings and chose a suitable method.

Internal: *0x718F, Commutation offset command parameter error*

20.26 7190, Commutation offset command excessive current deviation

Excessive current deviation duruing commutation offset command execution.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7190	29072

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Excessive current deviation between current setpoint and actual value duruing commutation offset command execution.	Check commutation offset command parameter and current limitation settings .

Internal: *0x7190, Commutation offset command excessive current deviation*

20.27 7191, Commutation offset command feedback direction error

Commutation offset command feedback direction error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7191	29073

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feedback direction does not correspond to motor movement direction.	Check feedback wiring and parametrization.

Internal: *0x7191, Commutation offset command feedback direction error*

20.28 7192, Commutation offset command free movement check failed

Free movement check after commutation offset measurement failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7192	29074

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Free movement check after commutation offset measurement failed.	Please check whether the axis can move freely.

Internal: *0x7192, Commutation offset command free movement check failed*

20.29 7193, Field weakening not supported in selected motor control mode

Field weakening not supported in selected motor control mode.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7193	29075

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Field weakening not supported in selected motor control mode.	Check motor control mode and field weakening settings.

Internal: *0x7193, Field weakening not supported in selected motor control mode*

21 Diagmessages of module AxisDebug

21.1 FFFF, Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, Internal Error, Additional Errorcode 0x%x*

22 Diagmessages of module OCT linear (Hiperface DSL)

22.1 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.2 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)

Id=0x0C: Internal error (Arg=internal exit)
Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)
Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

22.3 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

22.4 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

22.5 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

22.6 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

22.7 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

22.8 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

22.9 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

22.10 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

22.11 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

22.12 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

22.13 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

22.14 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

22.15 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

22.16 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

22.17 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

22.18 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

22.19 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

22.20 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

22.21 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

22.22 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.23 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.24 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

22.25 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

22.26 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

22.27 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

22.28 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

22.29 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

22.30 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

22.31 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

22.32 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

22.33 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

22.34 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

22.35 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

22.36 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

22.37 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

22.38 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

22.39 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

22.40 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

22.41 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

22.42 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

22.43 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

22.44 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

22.45 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

22.46 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

22.47 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

22.48 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

22.49 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

22.50 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

22.51 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.52 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.53 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

22.54 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

22.55 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

22.56 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

22.57 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

22.58 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

22.59 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

22.60 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

22.61 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

22.62 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

22.63 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

22.64 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

22.65 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

22.66 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

22.67 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

22.68 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

22.69 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code'')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

22.70 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

22.71 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

22.72 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

22.73 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

22.74 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

22.75 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

22.76 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

22.77 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

22.78 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

22.79 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

22.80 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

22.81 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

22.82 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

22.83 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

22.84 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

22.85 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

22.86 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

22.87 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

22.88 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

22.89 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

22.90 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

22.91 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

22.92 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

22.93 78A1, EnDat3: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

22.94 78A2, EnDat3: Encoder start warning, Id=0xXX, Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

22.95 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

22.96 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.97 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

22.98 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

22.99 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

22.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 0

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

22.10 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 1 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

22.10 2 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

22.10 3 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

22.10 4 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

22.10 5 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

22.10 6 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

22.10 7 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

22.10 78CC, Inc Enc: Parameter error in object 0xXX/XX 8

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

22.10 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 9

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

22.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 0

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

23 Diagmessages of module EnDat 3 rotary

23.1 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.2 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)

Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)
Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

23.3 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

23.4 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

23.5 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

23.6 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

23.7 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

23.8 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

23.9 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

23.10 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

23.11 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

23.12 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

23.13 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

23.14 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

23.15 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

23.16 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

23.17 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

23.18 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

23.19 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

23.20 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

23.21 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

23.22 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.23 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.24 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

23.25 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

23.26 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

23.27 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

23.28 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

23.29 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

23.30 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

23.31 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

23.32 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

23.33 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

23.34 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

23.35 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

23.36 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

23.37 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

23.38 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

23.39 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

23.40 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

23.41 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

23.42 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

23.43 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

23.44 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

23.45 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

23.46 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

23.47 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

23.48 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

23.49 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

23.50 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

23.51 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.52 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.53 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

23.54 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

23.55 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

23.56 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

23.57 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

23.58 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

23.59 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

23.60 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

23.61 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

23.62 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

23.63 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

23.64 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

23.65 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

23.66 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

23.67 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

23.68 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

23.69 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code'')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

23.70 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

23.71 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

23.72 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

23.73 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

23.74 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

23.75 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

23.76 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

23.77 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

23.78 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

23.79 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

23.80 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

23.81 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

23.82 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

23.83 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

23.84 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

23.85 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

23.86 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

23.87 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

23.88 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

23.89 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

23.90 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

23.91 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

23.92 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

23.93 78A1, EnDat3: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

23.94 78A2, EnDat3: Encoder start warning, Id=0xXX, Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

23.95 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

23.96 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.97 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

23.98 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

23.99 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

23.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 0

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

23.10 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 1 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

23.10.2 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

23.10.3 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

23.10.4 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

23.10 5 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

23.10 6 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

23.10 7 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

23.10 78CC, Inc Enc: Parameter error in object 0xXX/XX 8

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

23.10 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 9

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

23.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 0

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

24 Diagmessages of module EnDat 3 linear

24.1 7320, HpfDsl: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position is invalid:

Id=1: Got no valid position from the HpfDsl-Ip-Core.
Arg = 'Internal status word'
Id=2: The position extrapolator error limit is reached.
Arg = 'Internal status word'
Id=3: The position extrapolator is too many cycles active.
Arg = value of the cycle counter

'Internal status word':
Bit 0: Enabled : IpCore enable
Bit 1: rsvd0
Bit 2: PosReady : Position ready to use
Bit 3: StartupDone : Internal startup done
Bit 4: PosErrorLimitExceeded : Extrapolator position limit exceeded
Bit 5: rsvd1
Bit 6: InterruptCorePin
Bit 7: SyncD : IpCore is synced.
Bit 8: PRST
Bit 9: QMLW
Bit 10: VPOSerror
Bit 11: POSerror
Bit 12: LastPosValid : Position from the previous cycle is valid.
Bit 13: VRTerror
Bit 14: SUM
Bit 15: InterruptOnlineStatus

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7320, HpfDsl: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.2 7380, HpfDsl: Encoder start sequence failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error (see 'Arg')
Id=0x0A: Check of the edge register failed (Arg=edge count)
Id=0x0B: Check of the summary register faild (Arg=summary register)
Id=0x0C: Internal error (Arg=internal exit)

Id=0x0D: File processing error (Arg=internal exit)
Id=0x0E: Invalid encoder resolution (Arg=enc resolution)
Id=0x0F: Invalid encoder range (Arg=enc range)
Id=0x10: Error in start sequence step (Arg=step number)
Id=0x11: Supply voltage could not enabled. The encoder resistance is too low. (Arg=restance in Ohm)
Id=0x12: Position processing init error.
Id=0x13: Encoder status register [3..0]. Arg=status reg [3..0]
Id=0x14: Encoder status register [7..4]. Arg=status reg [7..4]
Id=0x20: Invalid encoder status register 0..Arg= high word =mask, low word status reg 0
Id=0x21: Invalid encoder status register 1. Arg= high word =mask, low word status reg 1
Id=0x22: Invalid encoder status register 2..Arg= high word =mask, low word status reg 2
Id=0x23: Invalid encoder status register 3. Arg= high word =mask, low word status reg 3
Id=0x24: Invalid encoder status register 4. Arg= high word =mask, low word status reg 4
Id=0x25: Invalid encoder status register 5. Arg= high word =mask, low word status reg 5
Id=0x26: Invalid encoder status register 6. Arg= high word =mask, low word status reg 6
Id=0x27: Invalid encoder status register 7. Arg= high word =mask, low word status reg 7
Id=0x28: The encoder type signals an error (Arg=encoder type)
Id=0x29: The encoder type not supported (Arg=encoder type)
Id=0x2A: The encoder type is HF2DSL but no RID 0x90 (Arg=encoder type)
Id=0x2B: Init non binary encoder failed. The position isn't valid. (Arg=internal enc status)
Id=0x2C: Init non binary encoder failed. (Arg=internal id)
Id=0x2D: Init non binary encoder failed. Missing fpga support. (Arg=encoder type)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7380, HpfDsl: Encoder start sequence failed, Id=0x%X, Arg=0x%X*

24.3 7381, HpfDsl: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The stop sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error (see 'Arg')
Id=0x02: Encoder stop failed. The link isn't down. (Arg=internal status)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7381, HpfDsl: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

24.4 7382, HpfDsl: Parameter access error, Id=0xXX, Cmd=II, RID=0xXX, Offset=II, Len=II, LongMsgErrorCode=0xXX

Encoder paramteter access error:

Id=0x01..0x08: Internal error
Id=0x09: Error while accessing RID, see 'Long message error codes'

Long message error codes:
0x4010 Resource address not installed in the encoder
0x4011 Incorrect length for resource access given
0x4012 Incorrect length for direct resource access given
0x4013 Offset address too high
0x4014 Invalid offset address
0x4015 Invalid "long message" characteristic
0x4016 Missing offset address
0x4110 Write access not possible
0x4111 Read access not possible
0x4112 Write access denied
0x4113 Read access denied
0x4114 Write access for direct resource access denied
0x4210 Resource database entry damaged
0x4211 Time overrun during resource access
0x4212 Internal processing error during resource access
0x4311 File name was not found
0x4312 Invalid address for file access
0x4313 File size may not be altered
0x4314 Memory location for files full
0x4315 File allocation table damaged
0x4316 No file loaded for action
0x4317 File exists with the same name

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7382, HpfDsl: Parameter access error, Id=0x%X, Cmd=%d, RID=0x%X, Offset=%d, Len=%d, LongMsgErrorCode=0x%X*

24.5 7383, HpfDsl: Internal error, Id=0xXX, Arg=0xXX

Internal version check failed:

Id=0x1: Invalid IpCore register layout
Id=0x2: Invalid IpCore version
Id=0x3: No line error counter available.
Id=0x4: No Safety-IpCore

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7383, HpfDsl: Internal error, Id=0x%X, Arg=0x%X*

24.6 7384, HpfDsl: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Encoder status check:

Id=0x09: Too many errors on the parameter data channel . Arg='Error cnt'
Id=0x0A: Internal error
Id=0x10: Encoder status 0 check failed: Arg= HighWord='Mask', LowWord=EncST0
Id=0x11: Encoder status 1 check failed: Arg= HighWord='Mask', LowWord=EncST1
Id=0x12: Encoder status 2 check failed: Arg= HighWord='Mask', LowWord=EncST2
Id=0x13: Encoder status 3 check failed: Arg= HighWord='Mask', LowWord=EncST3
Id=0x14: Encoder status 4 check failed: Arg= HighWord='Mask', LowWord=EncST4
Id=0x15: Encoder status 5 check failed: Arg= HighWord='Mask', LowWord=EncST5
Id=0x16: Encoder status 6 check failed: Arg= HighWord='Mask', LowWord=EncST6
Id=0x17: Encoder status 7 check failed: Arg= HighWord='Mask', LowWord=EncST7

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x7384, HpfDsl: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

24.7 7385, HpfDsl: Encoder file processing, Id=0xXX, WarnArg=0xXX

File processing warning:
Id=0x1: Found no electronic data sheet
Id=0x2: The file item (Arg) isn't found
Id=0x3: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x7385, HpfDsl: Encoder file processing, Id=0x%X, WarnArg=0x%X*

24.8 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7386, HpfDsl: Found no encoder (No link to an encoder)!*

24.9 7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=II [Encoder=II, Requirement=II], Rangepolicy=II [Encoder=II, Requirement=II]

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7387, HpfDsl: The encoder doesn't meet the specified policies. Resolutionpolicy=%d [Encoder=%d, Requirement=%d], Rangepolicy=%d [Encoder=%d, Requirement=%d]*

24.10 7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7388, HpfDsl: Encoder power off (triggered from SafeCu), Id=0x%X, Arg=0x%X*

24.11 7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7389, HpfDsl: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

24.12 738A, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x738A, HpfDsl: Found no verification code for the loaded fpga.*

24.13 738B, HpfDsl: Internal warning! The error inducer is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738B	29579

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738B, HpfDsl: Internal warning! The error inducer is available.*

24.14 738C, HpfDsl: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738C	29580

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x738C, HpfDsl: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

24.15 738D, HpfDsl: Invalid encoder parameter, see SubIdx UU

The CoE encoder parameter (SubIdx xxx) is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738D	29581

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738D, HpfDsl: Invalid encoder parameter, see SubIdx %u*

24.16 738E, HpfDsl: Encoder file processing error, FileId=0xXX, Arg=0xXX

An error ocured during processing the encoder file.
FileId:
0x01 = Electronic Data Sheet File
0x02 = User Data File
0x03 = Position Offset File
0x04 = Commutation Offset File
0x05 = Cogging Compensation Coefficients File
Arg:
0x01 = No File Header Existing
0x02 = File Size Error
0x03 = File Size Not Aligned
0x04 = Invalid File Header Error 1
0x05 = Invalid File Header Error 2
0x06 = Invalid File Header Error 3
0x07 = Invalid File Header Crc1
0x08 = Invalid File Header Crc2
0x10 = Invalid Vendor Key

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738E	29582

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x738E, HpfDsl: Encoder file processing error, FileId=0x%X, Arg=0x%X*

24.17 738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0xXX, EncST3..0=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x738F, HpfDsl: SafeCU monitored encoder status flag is set! The next fault reset triggers an encoder restart. EncST7..4=0x%X, EncST3..0=0x%X*

24.18 7390, HpfDsl: Status dump, Encoder Status after Ilms: Summary=0xXX, Regs 7..4=0xXX, Regs 3..0=0xXX

Content of the encoder status regs 0x47...0x44 and 0x43..0x40.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7390	29584

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7390, HpfDsl: Status dump, Encoder Status after %dms: Summary=0x%X, Regs 7..4=0x%X, Regs 3..0=0x%X*

24.19 7391, HpfDsl: Status dump, Max occured position deviation=UU mdeg

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7391	29585

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7391, HpfDsl: Status dump, Max occured position deviation=%u mdeg*

24.20 7392, HpfDsl: Status dump, Error counter VPOS=UU, ACC=UU, VRT=UU, POS=UU, LINK=UU, Encoding=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7392	29586

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7392, HpfDsl: Status dump, Error counter VPOS=%u, ACC=%u, VRT=%u, POS=%u, LINK=%u, Encoding=%u*

24.21 7393, HpfDsl: A safety error condition is blocking the encoder voltage.

The HpfDsl encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7393	29587

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7393, HpfDsl: A safety error condition is blocking the encoder voltage.*

24.22 73C0, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (first feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
Bit 0: PositionReady : The position is ready to use.
Bit 1: PositionTimeout : Timeout exceeded.
Bit 2: EnDatSt_Error1 : The EnDat-IpCore signals Error 1
Bit 3: EnDatSt_Crc : The EnDat-IpCore signals an Crc-Error
Bit 4: EnDatSt_ErrorHandlerType1active
Bit 5: EnDatSt_ErrorHandlerType2active
Bit 6: EnDatSt_MrsAdrError
Bit 7: EnDatSt_NotError2 : The EnDat-IpCore signals NOT Error 2
Bit 8: EnDatSt_CrcErrorZ1 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 1'
Bit 9: EnDatSt_CrcErrorZ2 : The EnDat-IpCore signals an Crc-Error for the 'Additional Data 2'
Bit 10: EnDatSt_ReferenceLatched
Bit 11: EnDatSt_Warning
Bit 12: EnDatSt_ErrorHandlerType3active
Bit 13: rsvd
Bit 14: rsvd
Bit 15: rsvd

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C0	29632

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C0, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.23 73C1, EnDat22: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder position (second feedback) is invalid:

Id=1: Got no valid position from the EnDat-Ip-Core. Arg = 'Internal status word'

'Internal status word':
See error code description 0x7320

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C1	29633

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x73C1, EnDat22: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.24 73C2, EnDat22: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C2	29634

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x73C2, EnDat22: Encoder start failed, Id=0x%X, Arg=0x%X*

24.25 73C3, EnDat22: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C3	29635

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C3, EnDat22: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

24.26 73C4, EnDat22: Parameter access error, Id=0xXX, Cmd=II, Addr=0xXX, Len=II, Data=0xXX, FifoStatus=0xXX

Parameter access failed.

Id=1: Fifo reset timeout occured.
Id=6: Fifo error
Id=7: Fifo timeout
Id=8: Fifo not empty

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C4	29636

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C4, EnDat22: Parameter access error, Id=0x%X, Cmd=%d, Addr=0x%X, Len=%d, Data=0x%X, FifoStatus=0x%X*

24.27 73C5, EnDat22: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C5	29637

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C5, EnDat22: Internal error, Id=0x%X, Arg=0x%X*

24.28 73C6, EnDat22: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C6	29638

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73C6, EnDat22: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

24.29 73C7, EnDat22: Encoder file processing, Id=0xXX, WarnArg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C7	29639

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73C7, EnDat22: Encoder file processing, Id=0x%X, WarnArg=0x%X*

24.30 73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C8	29640

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C8, EnDat22: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

24.31 73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73C9	29641

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73C9, EnDat22: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

24.32 73CA, EnDat22: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CA	29642

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CA, EnDat22: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

24.33 73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CB	29643

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x73CB, EnDat22: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

24.34 73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0xXX, Arg=0xXX

Id=0x1: The 'operating status error sources' displays an multiturn error 1. Arg='OpStatErrSrc'

'OpStatErrSrc':
Bit 0: LightSource
Bit 1: SignalAmplitude
Bit 2: SPos1
Bit 3: Overvoltage
Bit 4: Undervoltage
Bit 5: Overcurrent
Bit 6: TemperatureExceeded
Bit 7: SPos2
Bit 8: SSystem
Bit 9: SAllPowerDown
Bit 10: MPos1 : An M Pos 1 error message signals that the multiturn scanning or processing of the multiturn position has failed during encoder operation. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The consistency of the revolution counter value must be checked. If this is not possible, the axis must be referenced.
Bit 11: MPos2
Bit 12: MSystem : An M System error message signals that a multiturn-related internal error during the initialization phase of the encoder has occurred. The multiturn part of the transferred position value is not reliable under these conditions. Corrective measure: The power-on cycle should be repeated. If this also fails, a hardware problem of the encoder is probable. The consistency of the revolution counter value must also be checked.
Bit 13: MPowerFailure : The M Power failure error message signalizes that both the voltage of the buffer battery (UBAT) and the main supply voltage (UP) have fallen below the defined limit values. The subsequent electronics can only read out this error message when the main voltage supply has been restored. The multiturn part of the transferred position value is not defined and therefore faulty. During the M Power failure state there is no revolution counting. The possibly simultaneously occurring error messages M Pos 1, M System and M Overflow are to be ignored. Corrective measure: The axis must be referenced again.
Bit 14: MOverflow : The M Overflow error message signals that the specified (multiturn) counting range of the encoder has been exceeded. The encoder remains fully functional. M Overflow error messages can only be cleared when the multiturn value is again in the specified counting range. Corrective measure: Bring the axis into the specified counting range of the encoder again and clear error messages according to the EnDat specification.
Bit 15: MBattery

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CC	29644

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

Internal: *0x73CC, EnDat22: The multiturn part of the transferred position value is not reliable, Id=0x%X, Arg=0x%X*

24.35 73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CD	29645

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x73CD, EnDat22: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

24.36 73CE, EnDat22: Found no encoder (No link to an encoder)!

The EnDat22 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CE	29646

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x73CE, EnDat22: Found no encoder (No link to an encoder)!*

24.37 73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by IIns.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73CF	29647

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The encoder calculation time seems to be longer as stated in the 'Maximum calculation time' register.	Please contact the encoder manufacturer

Internal: *0x73CF, EnDat22: The encoder position is received later as expected! Increase the wait time by %dns.*

24.38 73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0xXX, Arg=0xXX

Id=0x1: The multiturn error was cleared. Arg='OpStatErrSrc' See 0x738A

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D0	29648

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

Internal: *0x73D0, EnDat22: An 'extended reset' has triggered the reinitialization of the multiturn part of the transferred position, Id=0x%X, Arg=0x%X*

24.39 73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange II, Word II]

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D1	29649

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D1, EnDat22: User setting forces ignoring of incompatible encoder parameter. [MemRange %d, Word %d]*

24.40 73D2, EnDat22: Incompatible encoder parameter [MemRange II, Word II] ignored or modified!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D2	29650

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D2, EnDat22: Incompatible encoder parameter [MemRange %d, Word %d] ignored or modified!*

24.41 73D3, EnDat22: The encoder is icompatible. See MemRange II, Word II

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D3	29651

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The connected encoder isn't compatible to the EnDat2.2 mode with 8MHz.	Use a different encoder model.

Internal: *0x73D3, EnDat22: The encoder is icompatible. See MemRange %d, Word %d*

24.42 73D4, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D4	29652

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x73D4, EnDat22: Found no verification code for the loaded fpga.*

24.43 73D5, EnDat22: Select safety cycle content failed, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Too many errors while selecting the safety cycle content. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D5	29653

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D5, EnDat22: Select safety cycle content failed, Id=0x%X, Arg=0x%X*

24.44 73D6, EnDat22: Internal warning! The error incuder is available.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D6	29654

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D6, EnDat22: Internal warning! The error incuder is available.*

24.45 73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0xXX, Configured=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D7	29655

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x73D7, EnDat22: The encoder don't support the selected valuation addresses, Supported=0x%X, Configured=0x%X*

24.46 73D8, EnDat22: The selected valuations could not be read.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D8	29656

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D8, EnDat22: The selected valuations could not be read.*

24.47 73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73D9	29657

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x73D9, EnDat22: User setting forces a encoder start in the EnDat21 mode only! The 'position actual value' isn't available!*

24.48 73FF, EnDat22: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
73FF	29695

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x73FF, EnDat22: Internal Error, Additional Errorcode 0x%x*

24.49 7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0xXX)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7780	30592

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The selected module in the motor slot is not supported for encoder simulation.	Select another encoder type or no encoder.

Internal: *0x7780, SimulationEnc: Encoder simulation is not supported for the selected motor type. (ModuleIdent 0x%X)*

24.50 77BF, SimulationEnc: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77BF	30655

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77BF, SimulationEnc: Internal Error, Additional Errorcode 0x%x*

24.51 77C0, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid, Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6: REGEND, Register Communication, not used
Bit 7: nREGERR, Register Communication, not used
Bit 8: nSCDERR , An error in the single cycle data detected by checksum verification (CRC) is shown with nSCDERR. If a sensor data error is signaled, the faulty sensor can be verified by reading SVALIDx. The nSCDERR flag is set after power on and after executing INIT.
Bit 9: nAGSERR, An AGS watchdog error nAGSERR is set during the automatic transmission of sensor data enabled by the instruction bit AGS if no new cycle could be initiated. If the last BiSS frame has not been finished in time, the next BiSS frame will be omitted. The following BiSS frame will be executed if possible. The nAGSERR flag is set when resetting the instruction bit AGS (typically by writing BREAK into the instruction register. (We do not use AGS, but the signal is misbehaving sometimes)
Bit 10: EOT, End Of Transmission, no encoder communication currently active
Bit 11: SLO_line_state, Current Status of SL, directly measured at the line, no core required.
Bit 12: SVALID1, The CRC verification result of the received single cycle sensor data of every BiSS frame is written to the validity message register SVALID for each slave separately. If the CRC is disabled in the slave configuration the correspondent SVALID flag is set after the reading of the sensor data is complete. After reading the sensor data, it is recommended to reset the validity flags by writing to the SVALID register. This way, it is possible to recognize updated sensor data.
Bit 13: rsvd : 1;
Bit 14: SenseData0, Bit 0 of received data, should be ENCODER WARNING in all BiSS-C encoders.
Bit 15: SenseData1, Bit 1 of received data, should be ENCODER ERROR in all BiSS-C encoders.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C0	30656

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C0, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.52 77C1, BiSS-C: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C1	30657

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C1, BiSS-C: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.53 77C2, BiSS-C: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Id=0x1: Internal error code.
Id=0x2: The sum of single- and multiturn-bits is greater 40. Arg='SumOfBits'
Id=0x3: Sum of data bits is greater than 64. Arg='SumOfBits'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C2	30658

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Singleturn bit count plus Multiturn bit count is greater than 40	This combination is not supported yet.
Sum of Position bit count, Fill bit left and Fill bit right is out of permissible range.	Max data bitcount of 64 is allowed.
Sum of Singleturn bit, Multiturn bit, Fill bit left and Fill bit is right out of permissible range.	Max data bitcount of 64 is allowed.
A previous error causes this error.	Fix all previous errors.

Internal: *0x77C2, BiSS-C: Encoder start failed, Id=0x%X, Arg=0x%X*

24.54 77C3, BiSS-C: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C3	30659

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C3, BiSS-C: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

24.55 77C4, BiSS-C: Internal error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C4	30660

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C4, BiSS-C: Internal error, Id=0x%X, Arg=0x%X*

24.56 77C5, BiSS-C: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C5	30661

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77C5, BiSS-C: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

24.57 77C6, BiSS-C: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C6	30662

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x77C6, BiSS-C: Encoder warning active, Id=0x%X, Arg=0x%X*

24.58 77C7, BiSS-C: Parameter error in object 0xXX/XX

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77C7	30663

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x77C7, BiSS-C: Parameter error in object 0x%x/%x*

24.59 77FF, BiSS-C: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
77FF	30719

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x77FF, BiSS-C: Internal Error, Additional Errorcode 0x%x*

24.60 7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7880	30848

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7880, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

24.61 7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7881	30849

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7881, EnDat3: Encoder error (position invalid), HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

24.62 7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7882	30850

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7882, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

24.63 7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0xXX

The encoder position (second feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7883	30851

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7883, EnDat3: Encoder error (position invalid), ForegroundErrorCode=0x%X*

24.64 7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7884	30852

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7884, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

24.65 7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7885	30853

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7885, EnDat3: Encoder error (position invalid), HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

24.66 7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7886	30854

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7886, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

24.67 7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7887	30855

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7887, EnDat3: Encoder error (position invalid), FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

24.68 7888, EnDat3: Encoder start failed, Id=0xXX, Arg=0xXX

The start sequence of the encoder processing failed:

Id=0x01: Enocder start failed with internal error code (Arg='Internal error code")
Id=0x08: Encoder file processing error. Arg=Internal Id
Id=0x0C: Encoder start failed. Start sequence aborted in step = 'Arg'
Id=0x0D: Encoder start failed. Arg=1: Pointer not allocated, Arg=2: Invalid Fpga, Arg=3: Internal error, Arg=4: MeasuringStepsPerRev or MeasuringStepLength == 0, Arg=5: Internal error, Arg=6: Init position processing failed, Arg=7: MeasuringStepsPerRev or MeasuringStepLength == 0

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7888	30856

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x7888, EnDat3: Encoder start failed, Id=0x%X, Arg=0x%X*

24.69 7889, EnDat3: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The shtudown sequence of the encoder failed:

Id=0x01: Enocder stop failed with internal error code (Arg='Internal error code")

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7889	30857

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7889, EnDat3: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

24.70 788A, EnDat3: Parameter access error, hr=0xXX, BGreq=ll, ErrorCode=0xXX, Data=0xXX, 0xXX

Parameter access failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788A	30858

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788A, EnDat3: Parameter access error, hr=0x%X, BGreq=%d, ErrorCode=0x%X, Data=0x%X, 0x%X*

24.71 788B, EnDat3: Internal error, Id=0xXX, Arg=0xXX

Internal error!

Id=2: Ivalid value (Arg=value)
Id=3: Ivalid value (Arg=value)
Id=6: Resource allocation failed (Arg= 'Internal state')

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788B	30859

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788B, EnDat3: Internal error, Id=0x%X, Arg=0x%X*

24.72 788C, EnDat3: Cyclic monitoring error, Id=0xXX, Arg=0xXX

Cyclic encoder status check:

Id=0x01: Internal error
Id=0x05: Too many errors while reading the status data. Arg='Error cnt'

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788C	30860

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Internal: *0x788C, EnDat3: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

24.73 788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, II <> II

The motor temperatue sensor id is ambiguous. The id from the electronic data sheet is different to the id from the motor parameter.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788D	30861

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions

Internal: *0x788D, EnDat3: Encoder start failed, ambiguous motor temperature sensor id, %d <> %d*

24.74 788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788E	30862

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788E, EnDat3: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u*

24.75 788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=UU, PolicyValue=UU

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
788F	30863

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x788F, EnDat3: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u*

24.76 7890, EnDat3: Encoder policy check (step length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7890	30864

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7890, EnDat3: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

24.77 7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0xXXXX, PolicyValue=0xXXXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7891	30865

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7891, EnDat3: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X*

24.78 7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=ll Ohm

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7892	30866

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Internal: *0x7892, EnDat3: Encoder interface resistance check failed. Measured resistance is too low! R=%d Ohm*

24.79 7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7893	30867

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Internal: *0x7893, EnDat3: Encoder power off (SafeCu global shutdown), Id=0x%X, Arg=0x%X*

24.80 7894, EnDat3: Found no encoder (No link to an encoder)!

The EnDat3 master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7894	30868

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

Internal: *0x7894, EnDat3: Found no encoder (No link to an encoder)!*

24.81 7895, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7895	30869

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7895, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

24.82 7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0xXX).

The modified settings become active after a encoder restart.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7896	30870

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x7896, EnDat3: An encoder restart is required because the non-volatile encoder settings are modified (addr=0x%X).*

24.83 7897, EnDat3: A safety error condition is blocking the encoder voltage.

The EnDat3 encoder couldn't be started because the encoder voltage is forced off by the safety logic.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7897	30871

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A safety error is present.	Check and clear the safety error.

Internal: *0x7897, EnDat3: A safety error condition is blocking the encoder voltage.*

24.84 7898, Electronic data sheet: No motor temperature sensor id

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7898	30872

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The electronic data sheet contains no motor temperature sensor id.	Contact support.

Internal: *0x7898, EnDat3: Found no motor temperature sensor id in the electronic data sheet.*

24.85 7899, Loaded fpga is not verified.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7899	30873

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The loaded fpga is not 'Safe-Motion' verified.	Use a release firmware version.

Internal: *0x7899, EnDat3: Found no verification code for the loaded fpga.*

24.86 789A, EnDat3: Low priority frame error, SendListEntry x=UU, y=UU, z=UU, LPFstatus=0xXX, FGerrCode=0xXX

'FGerrCode' description:
0x0000 ERR_UNKNOWN The cause of the error is unknown; this code is used if the encoder cannot classify the error
0x0001 FGERR_RECONFIGURE Device is in configuration as a result of RECONFIGURE
0x0002 FGERR_ECHO An ECHO is being responded to
0x0100 FGERR_INVALID_FID An invalid FID was configured Correct the application
0x0101 FGERR_DUPLICATE_FID FID was selected more than once during the cycle
0x0200 FGERR_INVALID_DATA LPF is supported, but invalid data were delivered internally
0x0201 FGERR_INT_TRM LPF is supported but is currently not available (value could not be formed in time)
0x0300 FGERR_NO_SENSOR_DATA Sensor box data not available
0x1100 BGERR_USAGE Generic operator error
0x1101 BGERR_USAGE_OPCODE Operator error: invalid or unsupported command code
0x1102 BGERR_USAGE_ARGUMENTS Operator error: invalid arguments
0x1103 BGERR_USAGE_SEQUENCE Operator error: invalid command sequence
0x1104 BGERR_USAGE_ACCESS_DENIED Operator error: access denied;
0x1105 BGERR_USAGE_MEM_ADDRESS Operator error: access to invalid address
0x1106 BGERR_USAGE_NO_BG Encoder fundamentally does not support background processing
0x1200 BGERR_INTERNAL Generic exception error in the encoder
0x1201 BGERR_INTERNAL_MEMORY Exception error in encoder when accessing memory
0x1202 BGERR_INTERNAL_CONFIG Exception error in encoder: configuration invalid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789A	30874

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789A, EnDat3: Low priority frame error, SendListEntry x=%u, y=%u, z=%u, LPFstatus=0x%X, FGerrCode=0x%X*

24.87 789B, EnDat3: Invalid memory area crc (memory base addr=0xXX).

The EnDat3 memory area crc value is invalid.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789B	30875

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789B, EnDat3: Invalid memory area crc (memory base addr=0x%X).*

24.88 789C, EnDat3: Encoder warning, Status=0xXX, LatchedStatus=0xXX

The encoder warning flag is active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789C	30876

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x789C, EnDat3: Encoder warning, Status=0x%X, LatchedStatus=0x%X*

24.89 789D, EnDat3: Encoder status dump, HPFstatus: F(0)=UU, HPFV(1)=UU, ERR_REQ(0)=UU, valid(1)=UU; ShortStatus: TrmErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789D	30877

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789D, EnDat3: Encoder status dump, HPFstatus: F(0)=%u, HPFV(1)=%u, ERR_REQ(0)=%u, valid(1)=%u; ShortStatus: TrmErr(0)=%u (0x%X)*

24.90 789E, EnDat3: Encoder status dump, ForegroundErrorCode=0xXX

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789E	30878

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789E, EnDat3: Encoder status dump, ForegroundErrorCode=0x%X*

24.91 789F, EnDat3: Encoder status dump, HPFvalid(1)=UU; ShortStatus: TrmError(0)=UU, HPFF(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
789F	30879

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x789F, EnDat3: Encoder status dump, HPFvalid(1)=%u; ShortStatus: TrmError(0)=%u, HPFF(0)=%u (0x%X)*

24.92 78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=UU, CSerr(0)=UU, PhyErr(0)=UU, WDerr(0)=UU, StrobeErr(0)=UU (0xXX)

The encoder position (first feedback) is invalid!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A0	30880

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A0, EnDat3: Encoder status dump, FGstatus: HPFF(0)=%u, CSerr(0)=%u, PhyErr(0)=%u, WDerr(0)=%u, StrobeErr(0)=%u (0x%X)*

24.93 78A1, EnDat3: Encoder seems to be offline for UU cycles. (InternalDbg: UU)

The drive received no data bits from the encoder for N cycles.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A1	30881

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78A1, EnDat3: Encoder seems to be offline for %u cycles. (InternalDbg: %u)*

24.94 78A2, EnDat3: Encoder start warning, Id=0xXX, Arg=0xXXXX

The start sequence of the encoder processing generates a warning:
Id=0x01: Irrelevant bits are influenced by a datum shift in an unpredictable manner (Arg: XSET.offset_Pos)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78A2	30882

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78A2, EnDat3: Encoder start warning, Id=0x%X, Arg=0x%X%X*

24.95 78BF, EnDat3: Internal Error, Additional Errorcode 0xXX

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78BF	30911

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78BF, EnDat3: Internal Error, Additional Errorcode 0x%x*

24.96 78C0, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The encoder could not transmit a valid position.
Id=0x%01: Position status signals an error. Arg='Position Status'

'Position Status'
Bit 0: ChannelEnable
Bit 1: Error, Internal error occured, reported by ic-haus IPCore.
Bit 2: PosReady, Position received and shifted, ready to be read by drive.
Bit 3: EncReady, Set once the ic-haus IPCore has been set up and is running. No evaluation of encoder's answers or correctnes of configuration.
Bit 4: LastPosValid, Position in last communication cycle was valid.
Bit 5: PosValid , Combinated evaluation of Bits -Error (Bit 1 of this status) -nAGSError (Bit 9 of this status) -Position valid from ic-haus core (position received, CRC validated, Bit 12 of this status) -nSCDError (Bit 8 of this status)
Bit 6:
Bit 7:
Bit 8:
Bit 9:
Bit 10:
Bit 11:
Bit 12:
Bit 13:
Bit 14:
Bit 15:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C0	30912

Class	Type
Error	Feedback error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C0, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.97 78C1, Inc Enc: Encoder error (position invalid), Id=0xXX, Arg=0xXX

The secondary encoder could not transmit a valid position.
Description see error 0x7320!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C1	30913

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Several causes, such as incorrect parameters or incorrect encoder connection to device.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C1, Inc Enc: Encoder error (position invalid), Id=0x%X, Arg=0x%X*

24.98 78C2, Inc Enc: Encoder start failed, Id=0xXX, Arg=0xXX

The Encoder could not start because of wrong parameter settings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C2	30914

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A previous error causes this error.	Fix all previous errors.

Internal: *0x78C2, Inc Enc: Encoder start failed, Id=0x%X, Arg=0x%X*

24.99 78C3, Inc Enc: Encoder shutdown failed, Id=0xXX, Arg=0xXX

The encoder shutdown failed with an internal error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C3	30915

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C3, Inc Enc: Encoder shutdown failed, Id=0x%X, Arg=0x%X*

24.10 78C4, Inc Enc: Internal error, Id=0xXX, Arg=0xXX 0

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C4	30916

Class	Type
Error	Feedback error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C4, Inc Enc: Internal error, Id=0x%X, Arg=0x%X*

24.10 78C5, Inc Enc: Cyclic monitoring error, Id=0xXX, 1 Arg=0xXX

Internal Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C5	30917

Class	Type
Error	Feedback error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78C5, Inc Enc: Cyclic monitoring error, Id=0x%X, Arg=0x%X*

24.10 2 78C6, Inc Enc: Encoder warning active, Id=0xXX, Arg=0xXX

Encoder warning active.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C6	30918

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
There can be several reasons for this warning.	Check encoder status in the parameter list (Encoder actual values)

Internal: *0x78C6, Inc Enc: Encoder warning active, Id=0x%X, Arg=0x%X*

24.10 3 78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C7	30919

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C7, Inc Enc: SinCos Encoder error (Vector length to long), Vector length = %fV*

24.10 4 78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = FFV

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C8	30920

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C8, Inc Enc: SinCos Encoder error (Vector length to short), Vector length = %fV*

24.10.5 78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)

The crosscheck of the periods counted with the SinCos encoder interface and the periods counted with the additional TTL counter exceeded the tolerance value

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78C9	30921

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78C9, Inc Enc: SinCos Encoder error (SinCos period counting error)*

24.10.6 78CA, Inc Enc: TTL Encoder error (Broken wire detected)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CA	30922

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Internal: *0x78CA, Inc Enc: TTL Encoder error (Broken wire detected)*

24.10.7 78CB, Inc Enc: TTL Encoder warning active, Id=0xXX, Arg=0xXX

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CB	30923

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Internal: *0x78CB, Inc Enc: TTL Encoder warning active, Id=0x%X, Arg=0x%X*

24.10 78CC, Inc Enc: Parameter error in object 0xXX/XX 8

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78CC	30924

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

Internal: *0x78CC, Inc Enc: Parameter error in object 0x%x/%x*

24.10 78FF, Inc Enc: Internal Error, Additional Errorcode 0xXX 9

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
78FF	30975

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0x78FF, Inc Enc: Internal Error, Additional Errorcode 0x%x*

24.11 FFFF, HpfDsl: Internal Error, Additional Errorcode 0xXX 0

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

Internal: *0xFFFF, HpfDsl: Internal Error, Additional Errorcode 0x%x*

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