

ZK4501-8022-xxxx | Motor extension cable 1 mm² with itec® plug, drag-chain suitable



itec (Series 915), plug, straight, female, Power: 3+PE, Signal: 5 – itec (Series 915), socket, straight, male, Power: 3+PE, Signal: 5



Plugs

Electrical data	Head A	Head B
Rated voltage (power)	630 V AC/DC	630 V AC/DC
Rated voltage (signal/24V)	63 V AC/DC	63 V AC/DC
Rated current (power)	14 A	14 A
Rated current (signal/24V)	3.6 A	3.6 A
Rated impulse voltage (power)	6.0 kV	6.0 kV
Rated impulse voltage (signal/24V)	1.5 kV	1.5 kV
Contact resistance	< 5 mΩ	< 5 mΩ
Mechanical data		
Accessories type	Connector/cable	Connector/cable
Installation size	itec (Series 915)	itec (Series 915)
Connector type	plug	socket
Configuration	straight	straight
Contact type	female	male

Number of positions (face)	Power: 3+PE, Signal: 5	Power: 3+PE, Signal: 5
Wire termination	crimp connection	crimp connection
Mating cycles	500	500
Way of locking	bayonet	bayonet
Weight per piece	0.035 kg (0.0772 lb)	0.035 kg (0.0772 lb)
Body color	black, similar to RAL 9011	-
Body material	zinc diecast/plastic	zinc diecast/plastic
Seal	FKM	FKM
Clamp ring	brass/nickel plated	brass/nickel plated
Contact carrier material	PBT, PA, UL 94 V-0	PBT, PA, UL 94 V-0
Contact material	brass/gold plated	brass/gold plated
Max. wire cross-section	-	AWG16 (1.5 mm ²)
Max. cable outer diameter	-	10.5 - 12.0 mm
Environmental data		
Special features	Max. height for operation 2000 m	Max. height for operation 2000 m
Shock resistance	30 g (conforms to EN 60060-2-27), 11 ms; 18 shocks per direction, 3 axes	30 g (conforms to EN 60060-2-27), 11 ms; 18 shocks per direction, 3 axes
Vibration resistance	10 g (conforms to EN 60068-2-27), 50 Hz...2000 Hz; 1 Octave/min.; 10 cycles per axis	10 g (conforms to EN 60068-2-27), 50 Hz...2000 Hz; 1 Octave/min.; 10 cycles per axis
Ambient temperature (operation)	-20...+130 °C, -4...+266 °F	-20...+130 °C, -4...+266 °F
Protection class	IP66/67 in screwed condition	IP66/67 in screwed condition
Pollution level	3 (according to VDE 0110/EN61984 part 6.19.2.2)	3 (according to VDE 0110/EN61984 part 6.19.2.2)
Overvoltage category	3 (according to VDE 0110/EN61984 part 6.19.2.2)	3 (according to VDE 0110/EN61984 part 6.19.2.2)

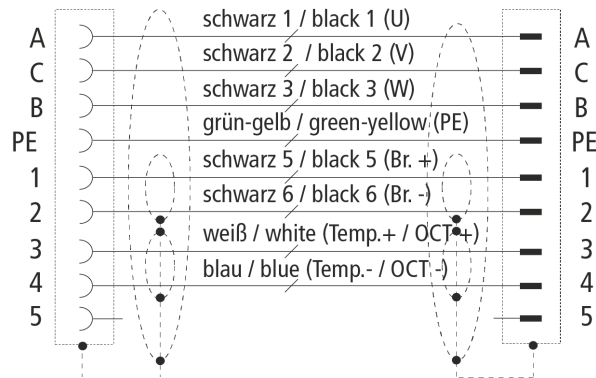
Cable

Electrical data		
Operating voltage	max. 1000 V AC (UL), U _o /U 600/1000 V (VDE)	
Insulation resistance	≥ 500 MΩ * km (DIN EN 50395)	
Mutual capacitance	Signal: 45 ± 15 pF/m, Power: 90 pF/m (at 800 Hz according to EN 50289-1-5)	
Wire resistance (power)	≤ 19.5 Ω/km (DIN EN 50395)	
Wire resistance (signal/24V)	≤ 55.0 Ω/km (DIN EN 50395)	
Wire resistance (brake)	≤ 26.0 Ω/km (DIN EN 50395)	
Characteristic impedance	Signal: 110 Ω ± 10 Ω (10 MHz) acc. to EN50289-1-11	
Dielectric strength wire/wire (power)	4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C)	
Dielectric strength wire/shield (power)	4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C)	

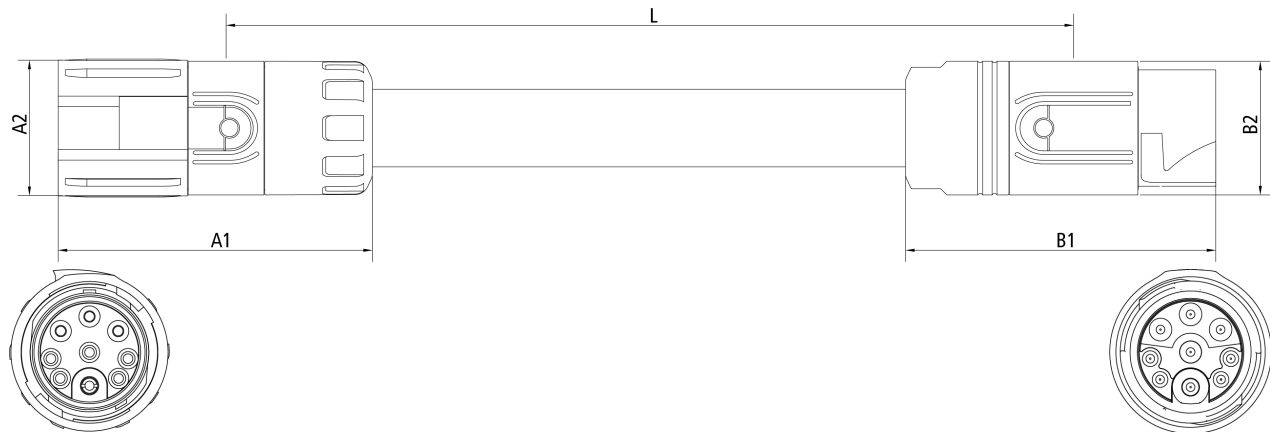
Dielectric strength wire/wire (signal/24V)	3 kV 50 Hz 1 min. (DIN VDE 0472 T.509C)
Dielectric strength wire/shield (signal/24V)	3 kV 50 Hz 1 min. (DIN VDE 0472 T.509C)
Mechanical data	
Cross-section (power)	1.00 mm ² (approx. AWG18)
Cross-section (signal)	AWG22 (approx. 0.34 mm ²)
Cross-section (brake)	0.75 mm ² (AWG 18)
Min. bending radius, moved in drag-chain	7 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	215 kg/km (144.459 lb/1000 ft)
Outer cable diameter	11.6 mm ± 0.4 mm (0.4567" ± 0.0157")
Conductor material	copper bare
Optical covering factor of shielding	≥ 85%
Use	drag-chain suitable
Max. acceleration	30 m/s ² by 5 m travel distance 15 m/s ² by 10 m travel distance 5 m/s ² by 20 m travel distance
Max. speed	4 m/s
Max. travel distance	20 m (horizontal) 5 m (vertical)
Max. number of cycles	5 million
Jacket color	orange
Material jacket	TPU (thermoplastic polyurethane)
Wire insulation material	PP (polypropylene)
Printing color	black
Torsion angle in °/m	max. ± 30 °/m
Max. tensile load, dynamic	20 N/mm ²
Max. tensile load, static	50 N/mm ²
Environmental data	
Operation temperature range, moved	-20...+80 °C, -4...+176 °F. In drag-chain with mechanical strain: -20...+60 °C, -4...+140 °F
Operation temperature range, fixed installation	-40...+80 °C, -40...+176 °F
UV resistance	UV resistance of the outer jacket referred to DIN EN ISO 4892-2
Oil resistance	according to DIN EN 60811-404, HD22.10 appendix A
Flame-retardant	according to IEC 60332-1-2 UL758 cable flame test
CFC-free	yes
Halogen-free	according to DIN VDE 0472 Teil 815
Silicone-free	yes

RoHS compliant	yes
Approvals	UL758 (AWM) Style 21223 (jacket) and Style 10492 (core)

Contact assembly



Dimensions



A1	44.00 mm
A2	19.00 mm
B1	44.00 mm
B2	19.00 mm

Notes

- Depending on the cable length (L), the following length tolerances apply: ± 2-3 %
- Illustrations similar
- The last three digits of the ordering information is the cable length in decimeters, e.g. ZK4xxx-xxxx-x020 = cable length 2.00 m

Ordering information Length

ZK4501-8022-xxxx

xxxx = cable length in decimeters

xxxx = 0050

example for 5 m length

sold by the meter, admissible total cable length see documentation of Servo Drive

Beckhoff®, TwinCAT®, TwinCAT/BSD®, TC/BSD®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, Safety over EtherCAT®, TwinSAFE®, XFC®, XTS® and XPlanar® are registered trademarks of and licensed by Beckhoff Automation GmbH. Other designations used in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owners.

© Beckhoff Automation GmbH & Co. KG 12/2021

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual application do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.