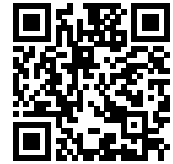


# ZK4500-0017-xxxx | Motor connection cable 10 mm<sup>2</sup> with M40 plug, drag-chain suitable



M40, plug, straight, female, 8-pin – plug, angled, female, 4-pin – plug, straight, female, 5-pin



## Plugs

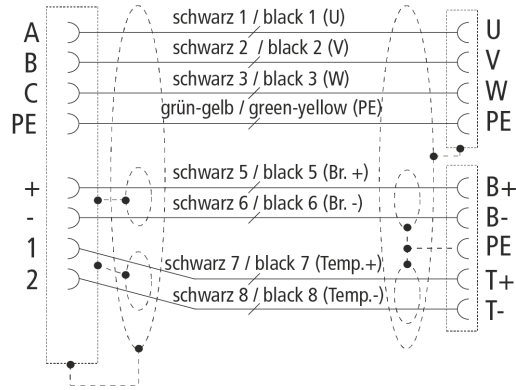
Electrical data	Head A	Head B	Head C
Rated voltage (power)	630 V AC/DC	1000 V AC/DC (according to IEC 60664-1, IEC 61984), 600 V (accordig to UL 1059)	-
Rated voltage (signal/24V)	250 V AC/DC	-	320 V (according to IEC 60664-1, IEC 61984), 300 V (accordig to UL 1059)
Rated current (power)	75 A max.	70,6 A at 40 °C (according to IEC 60664-1, IEC 61984), 60 A at 40 °C (according to UL 1059)	-
Rated current (signal/24V)	30 A max.	-	14.5 A at 40 °C (according to IEC 60664-1, IEC 61984), 10 A at 40 °C (according to UL 1059)
Rated impulse voltage (power)	6.0 kV	8.0 kV	-
Rated impulse voltage (signal/24V)	4.0 kV	-	2.5 kV

Contact resistance	< 3 mΩ (signal), < 1 mΩ (power)	4.5 mΩ	< 5 mΩ
Insulation resistance	-	≥ 100 MΩ (according to IEC 60512)	≥ 100 MΩ (according to IEC 60512)
Insulation group	-	I	IIIa
<b>Mechanical data</b>			
Accessories type	Connector/cable	Connector/cable	Connector/cable
Installation size	M40	-	-
Connector type	plug	plug	plug
Configuration	straight	angled	straight
Contact type	female	female	female
Number of positions (face)	8-pin	4-pin	5-pin
Wire termination	crimp connection	Clamping yoke connection	Clamping yoke connection
Recommended torque, screw termination	-	1.2...1.5 Nm	0.2...0.25 Nm
Recommended torque, screw flange	-	0.6 Nm	0.15...0.2 Nm
Mating cycles	500	25	25
Way of locking	Speedtec®	flange and screw	screw
Weight per piece	0.417 kg (0.9193 lb)	0.057 kg (0.1257 lb)	0.004 kg (0.0088 lb)
Body colour	metal	black, similar to RAL 9011	black, similar to RAL 9011
Body material	zinc diecast/nickel plated	PA GF, UL 94 V-0	PBT, UL 94 V-0
Seal	FKM	-	-
Clamp ring	zinc diecast/nickel plated	-	-
Contact carrier material	PA 6.6 mod., UL 94 V-0	PA GF, UL 94 V-0	PBT, UL 94 V-0
Contact material	brass/gold plated	copper alloy	copper alloy
Max. wire cross section	-	AWG22...AWG4	AWG28...AWG14
<b>Environmental data</b>			
Special features	Max. height for operation 2000 m	-	-
Ambient temperature (operation)	-20...+130 °C, -4...+266 °F	-50...+130 °C, -58...+266 °F	-50...+100 °C, -58...+212 °F
Protection class	IP 66/67 in screwed condition	IP 20	IP 20
Pollution level	3 (according to VDE 0110/EN61984 part 6.19.2.2)	3	3
Overvoltage category	3 (according to VDE 0110/EN61984 part 6.19.2.2)	3	3

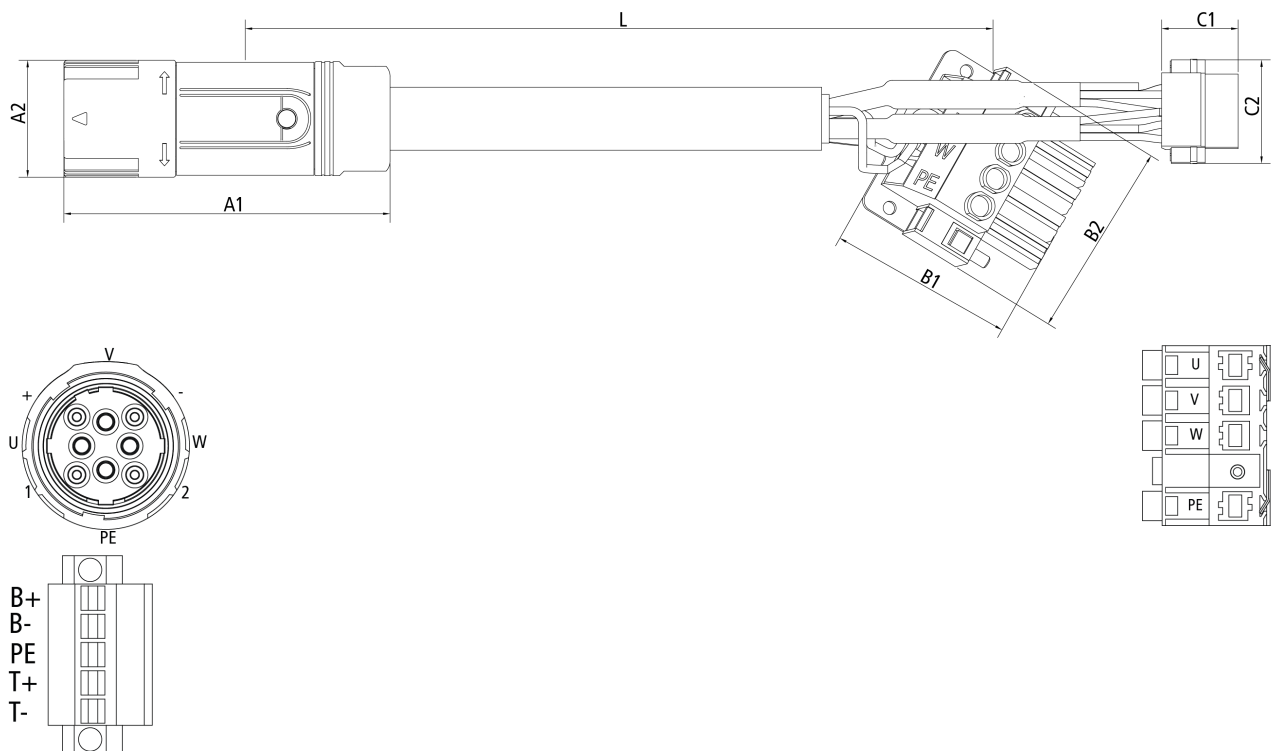
## Cable

Electrical data	
Operating voltage	max. 1000 V AC (UL)
Insulation resistance	≥ 500 MΩ * km (DIN EN 50395)
Wire resistance (power)	≤ 1.91 Ω/km (DIN EN 50395)
Wire resistance (signal/24V)	≤ 19.5 Ω/km (DIN EN 50395)
Wire resistance (brake)	≤ 13.3 Ω/km (DIN EN 50395)
Test voltage	4000 V, 50 Hz, 5 min. (wire/wire and wire/screen)
Mechanical data	
Cross section (power)	10 mm <sup>2</sup> (approx. AWG8)
Cross section (signal)	1 mm <sup>2</sup> (approx. AWG18)
Cross section (brake)	1.50 mm <sup>2</sup> (approx. AWG16)
Min. bending radius, moved in drag chain	7.5 x outer cable diameter
Min. bending radius, fixed installation	4 x outer cable diameter
Outer cable diameter	20.3 mm ± 0.4 mm (0.7992" ± 0.0157")
Conductor material	Copper bare
Optical covering factor of shielding	≥ 85%
Use	drag-chain suitable
Max. acceleration	50 m/s <sup>2</sup> (depending on travel distance)
Max. speed	5 m/s
Max. number of cycles	10 million
Jacket colour	orange
Material jacket	TPU (thermoplastic polyurethane)
Wire insulation material	PP (polypropylene)
Printing colour	black
Torsion angle in °/m	max. ± 30 °/m
Environmental data	
Operation temperature range, moved	-30...+80 °C, -22...+176 °F, in drag-chain applications: -20...+60 °C, -4...+140 °F
Operation temperature range, fixed installation	-50...+80 °C, -58...+176 °F
Oil resistance	according to DIN EN 60811-2-1, HD22.10 appendix A
Flame-retardant	according to IEC 60332-1-2 UL758 cable flame test
Halogen-free	DIN VDE 0472 part 815
Silicone-free	yes
RoHS compliant	yes
Approvals	UL758 (AWM) Style 21223 (jacket) and Style 10492 (core)

Contact assembly



Dimensions



A1	100.00 mm
A2	46.00 mm
B1	137.00 mm
B2	52.00 mm
C1	19.00 mm
C2	25.00 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
ZK4500-0017-xxxx	xxxx = cable length in decimetres
xxxx = 0050	example for 5 m length
	sold by the metre, 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 09/2021

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.