ZK4800-8024-xxxx | Motor connection cable 2.5 mm² with M23 speedtec® plug, drag-chain suitable

M23, plug, straight, female, Power: 3+PE, Signal: 5 – Pitch dimension 7.62 mm, plug, 30°, female, 4-pin



Plugs

Electrical data	Head A	Head B
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	-
Rated current (power)	30 A max.	34 A at 40°C (according to IEC 60664–1, IEC 61984), 33 A at 40°C (according to UL 1059)
Rated current (signal/24V)	7 A max.	-
Rated impulse voltage (power)	6.0 kV	8.0 kV
Rated impulse voltage (signal/24V)	2.5 kV	-
Contact resistance	< 5 mΩ (signal), < 3 mΩ (power)	4.5 mΩ
Insulation resistance	-	≥ 100 MΩ (according to IEC 60512)
Insulation group	-	II
Mechanical data		

Accessories type	Connectors	Connectors
Installation size	M23	Pitch dimension 7.62 mm
Connector type	plug	plug
Configuration	straight	30°
Contact type	female	female
Number of positions (face)	Power: 3+PE, Signal: 5	4-pin
Wire termination	crimp connection	Push-in
Mating cycles	500	25
Way of locking	Speedtec®	flange and screw
Weight per piece	0.143 kg (0.3153 lb)	0.029 kg (0.0640 lb)
Body color	metal	black, similar to RAL 9011
Body material	zinc diecast/nickel plated	PA GF, UL 94 V-0
Seal	FKM	-
Clamp ring	brass/nickel plated	-
Contact carrier material	PA 6.6 mod., UL 94 V-0	PA GF, UL 94 V-0
Contact material	brass/gold plated	copper alloy
Max. wire cross-section	-	AWG24...AWG8 (0.5 mm^2...10 mm^2)
Environmental data		
Special features	Max. height for operation 2000 m	-
Ambient temperature (operation)	-20...+130°C, -4...+266°F	-50...+125°C, -58...+257°F
Protection rating	IP66/67 in screwed condition	IP20
Pollution level	3 (according to VDE 0110/EN61984 part 6.19.2.2)	3
UL	yes, UL E-file number: E247738	-
Overvoltage category	3 (according to VDE 0110/EN61984 part 6.19.2.2)	3

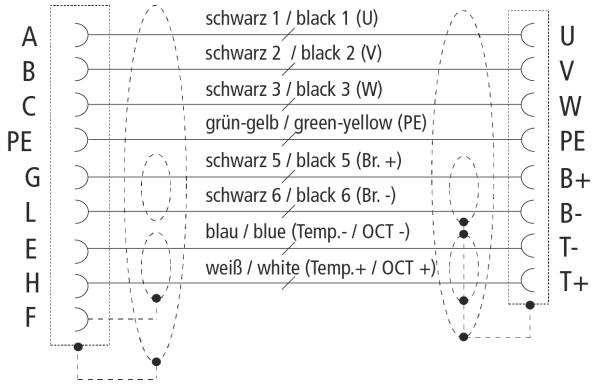
Cable

Electrical data	
Operating voltage	max. 1000 V AC (UL), Uo/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)	≤ 7.98 Ω/km (DIN EN 50395)
Wire resistance (signal/24V)	≤ 55.0 Ω/km (DIN EN 50395)
Wire resistance (brake)	≤ 20.0 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)

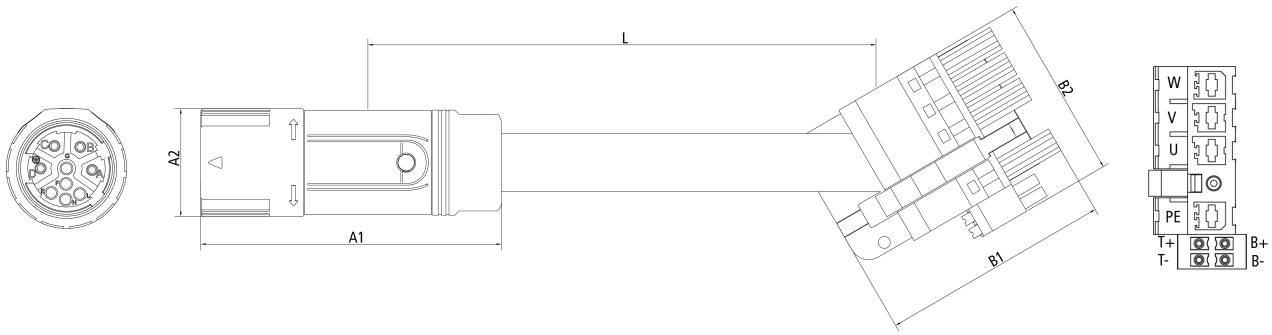
Dielectric strength wire/shield (power)	4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C)
Dielectric strength wire/wire (signal/24V)	3 kV 50 Hz 1 min. (DIN VDE 0472 T.509C)
Dielectric strength wire/shield (signal/24V)	3 kV 50 Hz 1 min. (DIN VDE 0472 T.509C)
Mechanical data	
Cross-section (power)	2.50 mm^2 (approx. AWG14)
Cross-section (signal)	AWG22 (approx. 0.34 mm^2)
Cross-section (brake)	1.00 mm^2 (approx. AWG18)
Outer cable diameter	13.9 mm ± 0.4 mm (0.5472" ± 0.0157")
Min. bending radius, moved in drag-chain	7 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	310 kg/km (208.289 lb/1000 ft)
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
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 part 815
Silicone-free	yes

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

Contact assembly



Dimensions



A1	79.00 mm
A2	28.00 mm
B1	60.00 mm
B2	47.00 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

Attention: Not suitable for operation with TwinSAFE SBC/SBT. For TwinSAFE functions SBC/SBT, the cable -2xxx must be used.

Ordering information	Length
ZK4800-8024-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®, ATRO®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, MX-System®, Safety over EtherCAT®, TC/BSD®, TwinCAT®, TwinCAT/BSD®, TwinSAFE®, XFC®, XPlanar® and XTS® 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 08/2025

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 expressively agreed in the terms of contract.