

ZK4501-8023-xxxx | Motor extension cable 1.5 mm² with M23 speedtec® plug, drag-chain suitable



M23, plug, straight, female, Power: 3+PE, Signal: 5 – M23, 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)	250 V AC/DC	250 V AC/DC
Rated current (power)	30 A max.	30 A max.
Rated current (signal/24V)	7 A max.	7 A max.
Rated impulse voltage (power)	6.0 kV	6.0 kV
Rated impulse voltage (signal/24V)	2.5 kV	2.5 kV
Contact resistance	< 5 mΩ (signal), < 3 mΩ (power)	< 5 mΩ (signal), < 3 mΩ (power)
Mechanical data		
Accessories type	Connector/cable	Connector/cable
Installation size	M23	M23
Connector type	plug	socket
Configuration	straight	straight

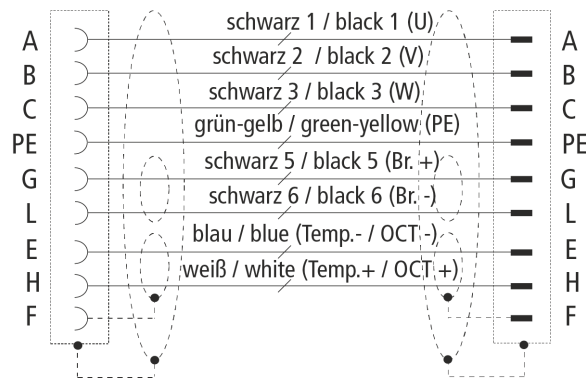
Contact type	female	male
Number of positions (face)	Power: 3+PE, Signal: 5	Power: 3+PE, Signal: 5
Wire termination	crimp connection	crimp connection
Mating cycles	500	500
Way of locking	Speedtec®	Speedtec®
Weight per piece	0.143 kg (0.3153 lb)	0.120 kg (0.2646 lb)
Body colour	metal	metal
Body material	zinc diecast/nickel plated	zinc diecast/nickel plated
Seal	FKM	FKM
Clamp ring	brass/nickel plated	brass/nickel plated
Contact carrier material	PA 6.6 mod., UL 94 V-0	PA 6.6 mod., UL 94 V-0
Contact material	brass/gold plated	brass/gold plated
Environmental data		
Special features	Max. height for operation 2000 m	Max. height for operation 2000 m
Ambient temperature (operation)	-20...+130 °C, -4...+266 °F	-20...+130 °C, -4...+266 °F
Protection class	IP 66/67 in screwed condition	IP 66/67 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

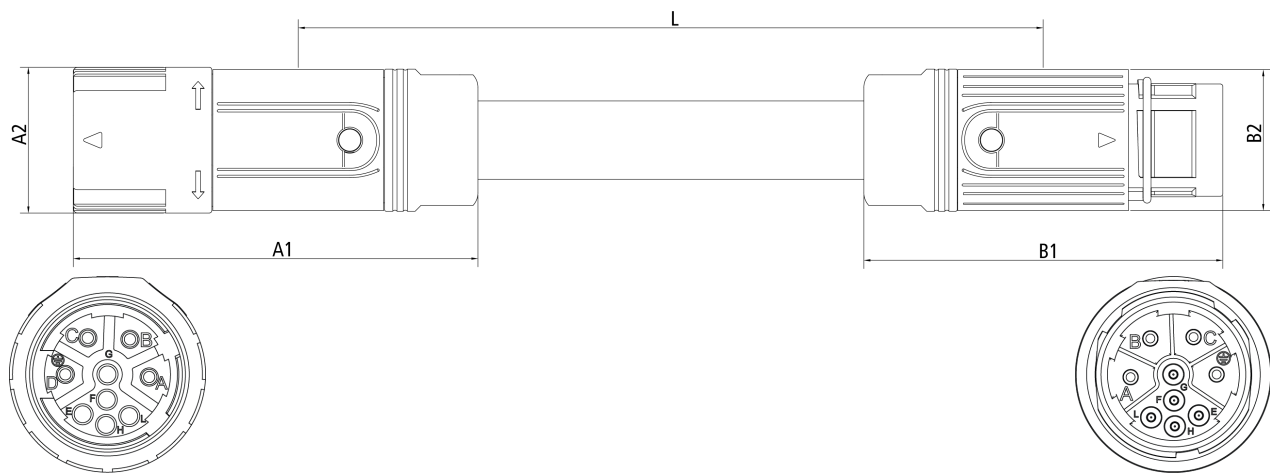
Electrical data		
Operating voltage	max. 1000 V AC (UL), U _o /U 600/1000 V (VDE)	
Insulation resistance	≥ 500 MΩ * km (DIN EN 50395)	
Mutual capacitance	Signal: 45 ± 15 pF/m, Power: 90 pF/m (at 800 Hz according to EN 50289-1-5)	
Wire resistance (power)	≤ 13.3 Ω/km (DIN EN 50395)	
Wire resistance (signal/24V)	≤ 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)	1.50 mm ² (approx. AWG16)	

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	250.0 kg/km (167.975 lb/1000 ft)
Outer cable diameter	12.7 mm ± 0.4 mm (0.5" ± 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 colour	orange
Material jacket	TPU (thermoplastic polyurethane)
Wire insulation material	PP (polypropylene)
Printing colour	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 Teil 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	70.00 mm
B2	20.00 mm

Notes

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

Ordering information	Length
ZK4501-8023-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

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