

ZK4501-8062-xxxx | Motor extension cable 1 mm² with itec[®] plug, torsionable



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	Connectors	Connectors
Installation size	itec [®] (Series 915)	itec [®] (Series 915)
Connector type	plug	socket
Configuration	straight	straight
Contact type	female	male

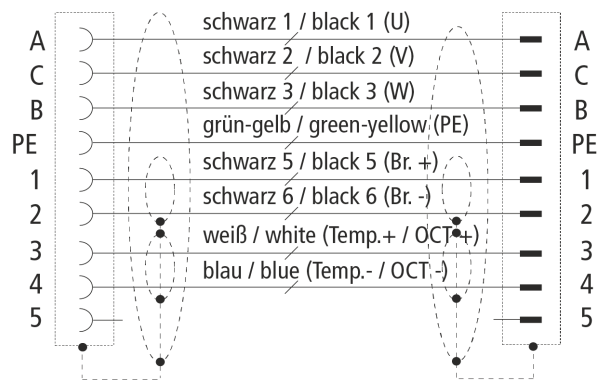
Number of positions (face)	Power: 3+PE, Signal: 5	Power: 3+PE, Signal: 5
Wire termination	crimp connection	crimp connection
Mating cycles	500	500
Way of locking	bayonet	bayonet
Weight	0.035 kg (0.0772 lb)	0.035 kg (0.0772 lb)
Body color	black, similar to RAL 9011	-
Body material	zinc diecast/plastic	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 rating	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)
UL	yes, UL E-file number: E247738	-
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

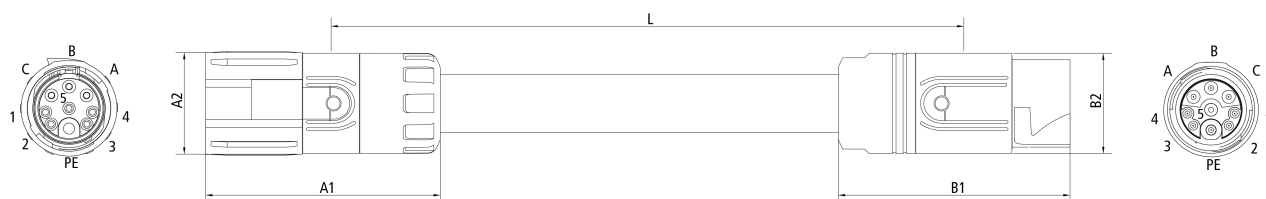
Electrical data		
Operating voltage	max. 1000 V AC (UL), U ₀ /U 600/1000 V (VDE)	
Insulation resistance	≥ 500 MΩ * km (DIN EN 50395)	
Mutual capacitance	Signal: 45 ± 15 pF/m (at 800 Hz according to EN 50289-1-5)	
Wire resistance (power)	≤ 19.5 Ω/km (DIN EN 50395)	
Wire resistance (signal/24V)	≤ 55.0 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)
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 (AWG18)
Outer cable diameter	12.0 mm ± 0.2 mm (0.472" ± 0.0079")
Min. bending radius, moved in drag-chain	12 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	215 kg/km (144.459 lb/1000 ft)
Conductor material	copper bare
Optical covering factor of shielding	≥ 90%
Use	suitable for torsion/robotic application
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	2 million
Jacket color	orange
Material jacket	TPU (thermoplastic polyurethane)
Wire insulation material	PP (polypropylene)
Printing color	black
Torsion angle in °/m	max. ± 180°/m
Max. tensile load, dynamic	20 N/mm ²
Max. tensile load, static	50 N/mm ²
Environmental data	
Operation temperature range, moved	-30...+80°C, -22...+176°F; in drag-chain with mechanical strain: -20...+60°C, -4...+140°F
Operation temperature range, fixed installation	-40...+80°C, -40...+185°F
Oil resistance	according to DIN EN 60811-404
Flame-retardant	according to IEC 60332-1-2
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)

Pin assignment



Dimensions



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

- Depending on the cable length (L), the following length tolerances apply: $\pm 2\text{-}3\%$
- 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

ZK4501-8062-0010	1.00 m
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ZK4501-8062-0012	1.20 m
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ZK4501-8062-0020	2.00 m
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ZK4501-8062-0030	3.00 m
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ZK4501-8062-0035	3.50 m
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ZK4501-8062-0040	4.00 m
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ZK4501-8062-0050	5.00 m
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ZK4501-8062-0055	5.50 m
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ZK4501-8062-0060	6.00 m
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ZK4501-8062-0070	7.00 m
ZK4501-8062-0080	8.00 m
ZK4501-8062-0085	8.50 m
ZK4501-8062-0090	9.00 m
ZK4501-8062-0100	10.00 m
ZK4501-8062-0120	12.00 m
ZK4501-8062-0150	15.00 m
ZK4501-8062-0160	16.00 m
ZK4501-8062-0180	18.00 m
ZK4501-8062-0200	20.00 m
ZK4501-8062-0300	30.00 m

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