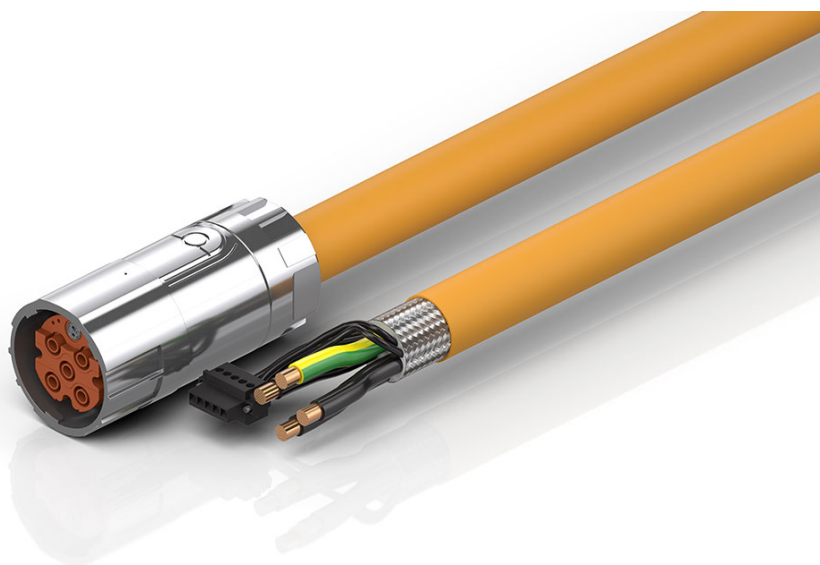


ZK4504-8027-xxxx | Motor connection cable 10 mm² with M40 speedtec[®] plug, drag-chain suitable



M40, plug, straight, female, Power: 4+PE, Signal: 4, Data: 2 – open end, 8-wire
+ shield – Pitch dimension 5.08 mm, plug, straight, female, 5-pin



Plugs

Electrical data	Head A	Head B	Head C
Rated voltage (power)	630 V AC / 850 V DC	-	-
Rated voltage (signal/24V)	150 V AC/DC	-	300 V (accordig to UL 1059)
Rated current (power)	70 A max.	-	-
Rated current (signal/24V)	7 A max.	-	16 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	-	-
Rated impulse voltage (signal/24V)	2.5 kV	-	4.0 kV
Contact resistance	< 5 mΩ (signal), < 1 mΩ (power)	-	< 5 mΩ
Insulation resistance	-	-	≥ 100 MΩ (according to IEC 60512)
Insulation group	-	-	IIIa

Mechanical data			
Accessories type	Connectors	-	Connectors
Installation size	M40	open end	Pitch dimension 5.08 mm
Connector type	plug	-	plug
Configuration	straight	-	straight
Contact type	female	-	female
Number of positions (face)	Power: 4+PE, Signal: 4, Data: 2	8-wire + shield	5-pin
Wire termination	crimp connection	-	Clamping yoke connection
Recommended torque, screw termination	-	-	0.4...0.5 Nm
Mating cycles	500	-	25
Way of locking	Speedtec®	-	-
Weight	0.450 kg (0.9921 lb)	-	0.008 kg (0.0176 lb)
Body color	metal	-	black, similar to RAL 9011
Body material	zinc diecast/nickel plated	-	PBT, UL 94 V-0
Seal	FKM	-	-
Clamp ring	zinc diecast/nickel plated	-	-
Contact carrier material	PA 6.6 mod., UL 94 V-0	-	PBT, UL 94 V-0
Contact material	brass/gold plated	-	copper alloy
Max. wire cross-section	-	-	AWG26...AWG12 (0.14 mm²...4 mm²)
Environmental data			
Special features	Max. height for operation 2000 m	-	-
Ambient temperature (operation)	-20...+130°C, -4...+266°F	-	-50...+100°C, -58...+212°F
Protection rating	IP66/67 in screwed condition	-	-
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

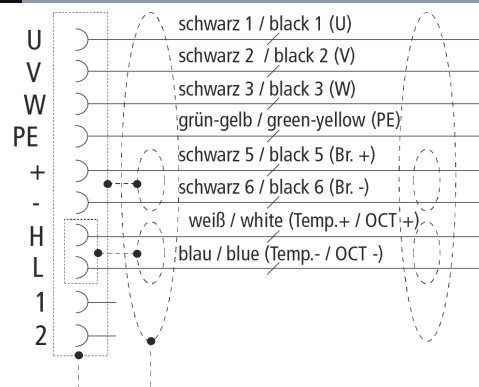
Cable

Electrical data	
Operating voltage	max. 1000 V AC (UL), U _o /U 600/1000 V (VDE)

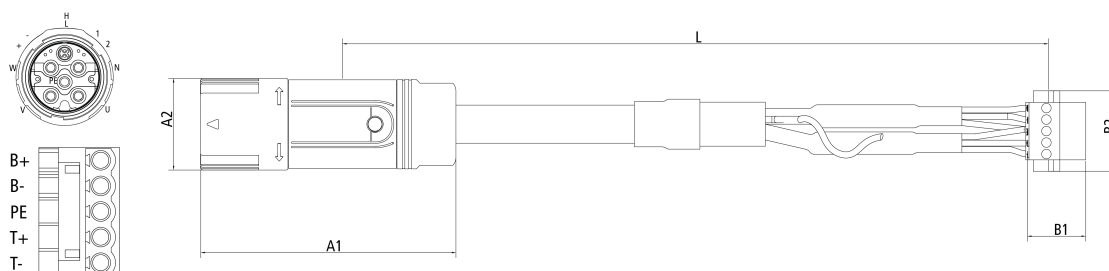
Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$ (DIN EN 50395)
Mutual capacitance	Signal: $45 \pm 15 \text{ pF/m}$, Power: 90 pF/m (at 800 Hz according to EN 50289-1-5)
Wire resistance (power)	$\leq 1.91 \text{ }\Omega/\text{km}$ (DIN EN 50395)
Wire resistance (signal/24V)	$\leq 55.0 \text{ }\Omega/\text{km}$ (DIN EN 50395)
Wire resistance (brake)	$\leq 13.3 \text{ }\Omega/\text{km}$ (DIN EN 50395)
Characteristic impedance	Signal: $110 \text{ }\Omega \pm 10 \text{ }\Omega$ (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)	10 mm^2 (approx. AWG8)
Cross-section (signal)	AWG22 (approx. 0.34 mm^2)
Cross-section (brake)	1.50 mm^2 (approx. AWG16)
Outer cable diameter	$20.9 \text{ mm} \pm 0.5 \text{ mm}$ ($0.8228'' \pm 0.0197''$)
Min. bending radius, moved in drag-chain	10 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	760 kg/km ($510.644 \text{ lb/1000 ft}$)
Conductor material	copper bare
Optical covering factor of shielding	$\geq 85\%$
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 $^\circ/\text{m}$	max. $\pm 30^\circ/\text{m}$
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)

Pin assignment



Dimensions



A1	100.00 mm
A2	46.00 mm
C1	20.00 mm
C2	27.00 mm

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
ZK4504-8027-0010	1.00 m
ZK4504-8027-0020	2.00 m
ZK4504-8027-0030	3.00 m
ZK4504-8027-0040	4.00 m
ZK4504-8027-0050	5.00 m
ZK4504-8027-0060	6.00 m
ZK4504-8027-0070	7.00 m
ZK4504-8027-0080	8.00 m
ZK4504-8027-0090	9.00 m
ZK4504-8027-0100	10.00 m
ZK4504-8027-0110	11.00 m
ZK4504-8027-0120	12.00 m
ZK4504-8027-0130	13.00 m
ZK4504-8027-0150	15.00 m
ZK4504-8027-0160	16.00 m
ZK4504-8027-0170	17.00 m
ZK4504-8027-0180	18.00 m
ZK4504-8027-0200	20.00 m
ZK4504-8027-0210	21.00 m
ZK4504-8027-0220	22.00 m
ZK4504-8027-0230	23.00 m
ZK4504-8027-0250	25.00 m
ZK4504-8027-0300	30.00 m
ZK4504-8027-0350	35.00 m
ZK4504-8027-0370	37.00 m
ZK4504-8027-0380	38.00 m
ZK4504-8027-0400	40.00 m
ZK4504-8027-0500	50.00 m
ZK4504-8027-0520	52.00 m

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