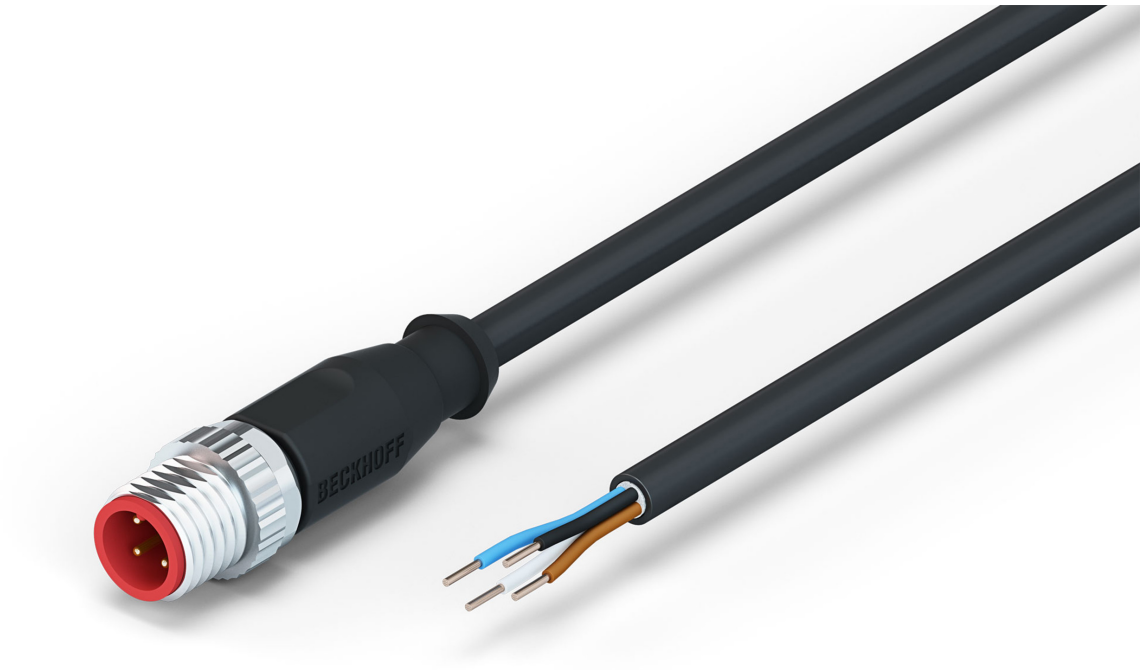


ZK2000-6100-6xxx | Sensor cable, PUR, 4 x 0.5 mm², torsion resistant

M12, plug, straight, male, 4-pin, A-coded – open end, 4-wire

Plugs

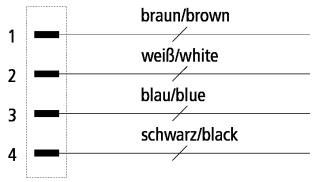
Electrical data	Head A	Head B
Rated voltage	250 V (according to IEC 61076-2-101)	-
Rated current	4 A at 40 °C (according to IEC 61076-2-101)	-
Rated impulse voltage	1.5 kV	-
Shielding	no	-
Contact resistance	< 10 mΩ	-
Insulation resistance	≥ 100 MΩ (according to IEC 60512)	-
Mechanical data		
Installation size	M12	open end
Connector type	plug	-
Configuration	straight	-
Contact type	male	-
Number of positions (face)	4-pin	4-wire
Coding	A-coded	-
Recommended torque, nut	0.6 Nm	-
Mating cycles	≥ 100 (according to IEC 60512-9a)	-
Way of locking	screw	-
Body colour	black	-
Body material	TPU, UL 94	-
Coupling nut material	GD-Zn, Ni	-
Seal	FPM	-
Contact carrier colour	red	-
Contact carrier material	PA, UL 94 V-0	-
Contact plating	Ni, Au gal.	-
Contact material	CuZn	-
Environmental data		
Special features	halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1	-
RoHS compliant	yes	-

Ambient temperature (operation)	-30...+85 °C, -22...+185 °F	-
Protection class	IP 65/67 in screwed condition (according to IEC 60529)	-
Pollution level	3/2 (according to IEC 60664-1)	-

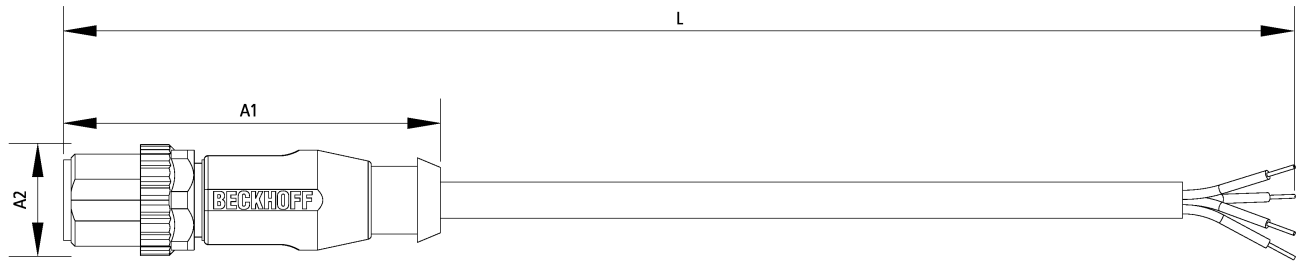
Cable

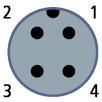
Electrical data	
Rated voltage	300 V
Insulation resistance	≥ 500 MΩ/km
Wire resistance (signal/24V)	ca. 39 Ω/km
Test voltage	≥ 2000 V
Mechanical data	
Conductor construction (signal/24V)	28 x 0.15 mm, conductor class 6 according to DIN VDE 0295
Cross section	4 x 0.5 mm² (AWG20)
Min. bending radius, moved	7.5 x outer cable diameter
Min. bending radius, fixed installation	4 x outer cable diameter
Weight	53.6 kg/km (36.02 lb/1000 ft)
Outer cable diameter	6.0 mm ± 0.2 mm ("0.23622 ± 0.0079")
Conductor material (signal/24V)	copper bare
Shielding	no
Use	robotic- and drag chain suitable
Max. acceleration	5 m/s²
Max. speed	3.3 m/s
Max. travel distance	100 m
Max. number of cycles	10 million
Jacket colour	black
Material jacket	PUR (polyurethane)
Material jacket, further characteristics of	weld-spatter resistant, low adhesion
Wire colour code	white, blue, black, brown
Wire insulation material	TPE (thermoplastic elastomer)
Printing on the jacket	XXXXm Beckhoff Automation GmbH & Co. KG -Germany-Sensor ZB9045-4x0,5mm² E170315 cRUus AWM STYLE 20233 AWM I/II A/B 80°C 300V FT1
Printing colour	white
Torsion angle in °/m	max. ± 360°/m
Torsion speed	15 cycle/min.
Number of torsion cycles	10 million
Claimed torsion length	2 m
Environmental data	
Operation temperature range, moved	-30 °C... +105 °C, -22 °F...+221 °F, UL: up to +80 °C (+176 °F)
Operation temperature range, fixed installation	-40...+105 °C, -40...+221 °F
Oil resistance	very good oil and chemical resistance
LABS-free	yes
Flame-retardant	according to IEC 60332-1
Halogen-free	yes
Silicone-free	yes

Contact assembly



Dimensions





A1	49.00 mm

Notes

- Depending on the cable length (L), the following length tolerances apply:
  0 m…<0.2 m: ± 10 mm | 0.2…4.0 m: + 40 mm | ≥ 4.0 m: + 1 %
- Illustrations similar
- Further cable length on request. The last three digits of the ordering information is the cable length in decimeters, e.g. ZKxxxx-xxxx-x020 = cable length 2.00 m

Ordering information	Length
ZK2000-6100-6020	2.00 m
ZK2000-6100-6050	5.00 m
ZK2000-6100-6100	10.00 m
ZK2000-6100-6400	40.00 m

Accessories	
ZB8801-0000	torque wrench for hexagonal plugs, adjustable
ZB8801-0002	torque cable key, M12/wrench size 13, for ZB8801-0000