

# ZK2000-5152-6xxx | Sensor cable, PUR, 5 x 0.34 mm<sup>2</sup>, robot suitable, resistant to welding pearls



M12, plug, straight, male, 5-pin, A-coded – M12, socket, straight, female, 5-pin, A-coded



## Plugs

Electrical data	Head A	Head B
Rated voltage	60 V (according to IEC 61076-2-101)	60 V (according to IEC 61076-2-101)
Rated current	4 A at 40 °C (according to IEC 61076-2-101)	4 A at 40 °C (according to IEC 61076-2-101)
Shielding	no	no
Contact resistance	< 10 mΩ	< 10 mΩ
Insulation resistance	≥ 100 MΩ (according to IEC 60512)	≥ 100 MΩ (according to IEC 60512)
Mechanical data		
Installation size	M12	M12
Connector type	plug	socket
Configuration	straight	straight
Contact type	male	female
Number of positions (face)	5-pin	5-pin
Coding	A-coded	A-coded

Recommended torque, nut	0.6 Nm	0.6 Nm
Mating cycles	≥ 100 (according to IEC 60512-9a)	≥ 100 (according to IEC 60512-9a)
Way of locking	screw	screw
Weight per piece	0.023 kg (0.0507 lb)	0.023 kg (0.0507 lb)
Body color	black	black
Body material	TPU, UL 94 HB	TPU, UL 94 HB
Coupling nut material	GD-Zn, Ni	GD-Zn, Ni
Seal	FPM	FPM
Contact carrier color	red	red
Contact carrier material	PA, UL 94 V-0	PA, UL 94 V-0
Contact material	CuZn, Ni b/Au 0.2 gal.	CuZn, Ni b/Au 0.2 gal.
<b>Environmental data</b>		
Special features	halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1	halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1
RoHS compliant	yes	yes
Ambient temperature (operation)	-30...+85 °C, -22...+185 °F	-30...+85 °C, -22...+185 °F
Protection rating	IP65/67 in screwed condition (according to IEC 60529)	IP65/67 in screwed condition (according to IEC 60529)
Pollution level	3/2 (according to IEC 60664-1)	3/2 (according to IEC 60664-1)

## Cable

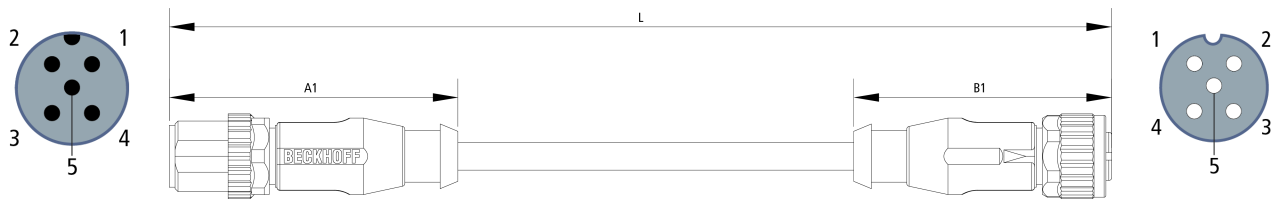
<b>Electrical data</b>		
Rated voltage	300 V	
Insulation resistance	≥ 20 MΩ/km	
Wire resistance (signal/24V)	≤ 53.0 Ω/km (20 °C)	
Test voltage	≥ 2000 V	
<b>Mechanical data</b>		
Conductor construction (signal/24V)	42 x 0.10 mm	
Cross-section (signal)	5 x 0.34 mm <sup>2</sup> (AWG22)	
Outer cable diameter	5.1 mm ± 0.20 mm (0.200787" ± 0.0079")	
Min. bending radius, moved	7.5 x outer cable diameter	
Weight	54 kg/km (37.2 lb/1000 ft)	
Shielding	no	
Use	suitable for torsion/robotic application	
Max. acceleration	5 m/s <sup>2</sup>	

Max. speed	3.3 m/s
Max. travel distance	5 m
Max. number of cycles	10 million
Wall thickness of wire insulation (signal/24V)	≥ 0.21 mm
Jacket color	black
Material jacket	PUR (polyurethane)
Material jacket, further characteristics of	welding pearl resistant, recyclable, not crosslinked
Wire color code	brown, white, blue, black, gray
Wire insulation material	polyester
Printing on the jacket	xxxxM Beckhoff Automation GmbH - D - Verl - 5X0,34QMM ZB9047 RU AWM STYLE 20233 E170315 CRU AWM I/II A/B 80C 300V FT1 XX/YY CE
Printing color	black
Torsion angle in °/m	max. ± 360°/m
Number of torsion cycles	10 million
<b>Environmental data</b>	
Operation temperature range, moved	-25...+105 °C, -13...+221 °F
Operation temperature range, fixed installation	-40...+105 °C, -40...+221 °F
UV resistance	yes
Oil resistance	According to DIN VDE 0473-811-404/DIN EN 60811-404
Acid, lye and solvent resistance	good resistance to acids, alkalis and solvents
Flame-retardant	according to DIN EN 60332-2-2
Halogen-free	yes
Silicone-free	yes
RoHS compliant	yes
UL	yes, UL E-file number: E170315
Approvals	cULus AWM Style 20233

**Contact assembly**

1	braun/brown	⌋
2	weiß/white	⌋
3	blau/blue	⌋
4	schwarz/black	⌋
5	grau/grey	⌋

**Dimensions**



A1	49.00 mm
A2	20.00 mm
B1	44.00 mm
B2	20.00 mm

## Notes

- Depending on the cable length (L), the following length tolerances apply:  
0 m...<0.2 m:  $\pm 10$  mm | 0.2...4.0 m:  $+ 40$  mm |  $\geq 4.0$  m:  $+ 1$  %
- Illustrations similar
- Further cable length on request.

### CE, UL

CE	yes
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### Ordering information

Ordering information	Length
ZK2000-5152-6005	0.50 m
ZK2000-5152-6010	1.00 m
ZK2000-5152-6020	2.00 m
ZK2000-5152-6030	3.00 m
ZK2000-5152-6050	5.00 m
ZK2000-5152-6075	7.50 m
ZK2000-5152-6100	10.00 m
ZK2000-5152-6200	20.00 m
ZK2000-5152-6400	40.00 m

### Accessories

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

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