

# ZK2020-3162-6xxx | Power cable, PUR, 4 x 0.5 mm<sup>2</sup>, torsion suitable



M8, plug, straight, male, 4-pin, A-coded – M12, socket, straight, female, 4-pin, A-coded



## Plugs

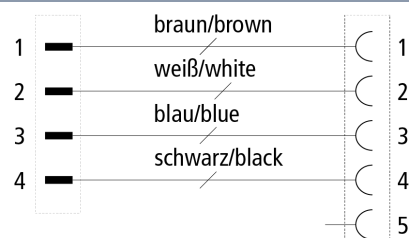
Electrical data	Head A	Head B
Rated voltage	30 V (according to IEC 61076-2-104)	250 V (according to IEC 61076-2-101)
Rated current	4 A at 40°C (leaning on IEC 61076-2-104)	4 A at 40°C (according to IEC 61076-2-101)
Rated impulse voltage	-	1.5 kV
Shielding	no	no
Contact resistance	-	< 10 mΩ
Insulation resistance	≥ 10 GΩ (according to IEC 60512-2)	≥ 100 MΩ (according to IEC 60512)
Mechanical data		
Installation size	M8	M12
Connector type	plug	socket
Configuration	straight	straight
Contact type	male	female
Number of positions (face)	4-pin	4-pin
Coding	A-coded	A-coded

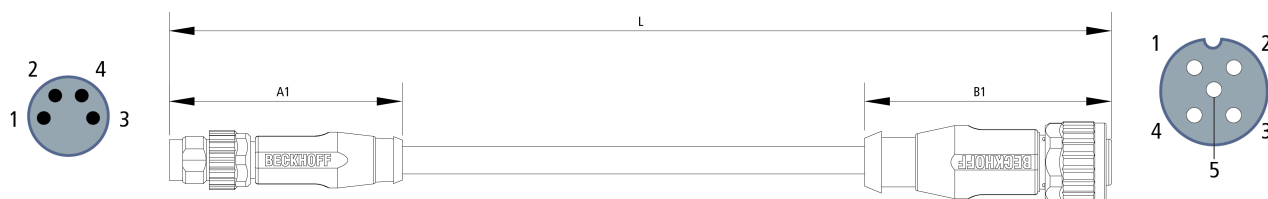
Recommended torque, nut	0.4 Nm	0.6 Nm
Mating cycles	≥ 100 (according to IEC 60512-9a)	≥ 100 (according to IEC 60512-9a)
Way of locking	screw	screw
Weight per piece	0.028 kg (0.0617 lb)	-
Body color	black	black
Body material	TPU, UL94	TPU, UL 94
Coupling nut material	CuZn, Ni	GD-Zn, Ni
Seal	FPM	FPM
Contact carrier color	red	red
Contact carrier material	TPU GF, UL 94	PA 6, UL 94 V0
Contact plating	Ni, Au gal.	Ni, Au gal.
Contact material	CuZn	CuZn
<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...+80°C, -22...+176°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	≥ 500 MΩ/km	
Wire resistance (signal/24V)	ca. 39 Ω/km	
Test voltage	≥ 2000 V	
<b>Mechanical data</b>		
Conductor construction (signal/24V)	28 x 0.15 mm, conductor class 6 according to DIN VDE 0295	
Cross-section	4 x 0.5 mm <sup>2</sup> (AWG20)	
Outer cable diameter	6.0 mm ± 0.2 mm ("0.23622 ± 0.0079")	
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)	
Conductor material (signal/24V)	copper bare	
Shielding	no	

Use	capable of torsion and drag-chain suitable
Max. acceleration	5 m/s <sup>2</sup>
Max. speed	3.3 m/s
Max. travel distance	100 m
Max. number of cycles	10 million
Jacket color	black
Material jacket	PUR (polyurethane)
Material jacket, further characteristics of	weld-spatter resistant, low adhesion
Wire color code	white, blue, black, brown
Wire insulation material	TPE (thermoplastic elastomer)
Printing on the jacket	XXXm Beckhoff Automation GmbH & Co. KG -Germany-Sensor ZB9052 - 4x0,5mm <sup>2</sup> E170315 cRUus AWM STYLE 20233 AWM I/II A/B 80°C 300V FT1 MM/YY CE RoHS
Printing color	white
Torsion angle in °/m	max. ± 360°/m
Torsion speed	15 cycle/min.
Number of torsion cycles	10 million
Claimed torsion length	2 m
<b>Environmental data</b>	
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
UL	yes, UL E-file number: E170315

**Contact assembly****Dimensions**



A1	39.60 mm
A2	Ø 10.1 mm
B1	44.00 mm
B2	Ø 14.50 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.

Ordering information	Length
ZK2020-3162-6050	5.00 m
ZK2020-3162-6100	10.00 m

Accessories	
ZB8801-0000	torque wrench for hexagonal plugs, adjustable
ZB8801-0001	torque cable key, M8/wrench size 9, for ZB8801-0000
ZB8801-0002	torque cable key, M12/wrench size 13, for ZB8801-0000



Products marked with a crossed-out wheeled bin shall not be discarded with the normal waste stream. The device is considered as waste electrical and electronic equipment. The national regulations for the disposal of waste electrical and electronic equipment must be observed.

Beckhoff®, TwinCAT®, TwinCAT/BSD®, TC/BSD®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, Safety over EtherCAT®, TwinSAFE®, XFC®, XTS® and XPlanar® are registered trademarks of and licensed by Beckhoff Automation GmbH. Other designations used in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owners.

© Beckhoff Automation GmbH & Co. KG 02/2024

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual application do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.