

ZK4810-0020-xxxx | Encoder cable with M12 plug at AX8000

D-sub, plug, angled, male, 15-pin – M12, socket, straight, female, 8-pin, A-coded

Plugs

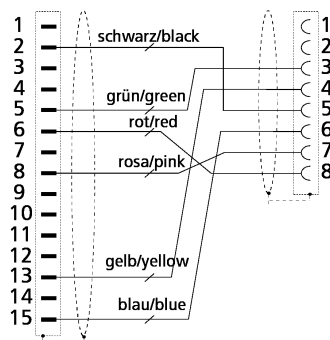
Electrical data	Head A	Head B
Rated voltage	-	30 V (according to IEC 61076-2-101)
Rated current	5 A	2 A at 40 °C (according to IEC 61076-2-101)
Shielding	yes	yes
Insulation resistance	-	≥ 100 MΩ (according to IEC 60512)
Mechanical data		
Installation size	D-sub	M12
Connector type	plug	socket
Configuration	angled	straight
Contact type	male	female
Number of positions (face)	15-pin	8-pin
Coding	-	A-coded
Wire termination	crimp connection	screw connection
Recommended torque, nut	-	0.6 Nm
Mating cycles	50	≥ 100 (according to IEC 60512-9a)
Way of locking	screw	screw
Weight per piece	0.046 kg (0.1014 lb)	0.046 kg (0.1014 lb)
Body colour	metal	metal
Body material	zinc diecast, nickel plated	GD-Zn, Ni
Coupling nut material	-	GD-Zn, Ni
Seal	-	elastomers
O-ring	-	NBR
Contact carrier colour	black	black
Contact carrier material	PA GF, UL 94 V-0	PA, UL 94
Contact plating	Ni, Au gal.	Ni, Au gal.
Contact material	-	CuZn
Max. wire cross section	AWG20 (0.5 mm ²)	AWG20 (0.5 mm ²)
Max. cable outer diameter	3 - 13 mm	4 - 8 mm
Environmental data		
RoHS compliant	yes	yes
Ambient temperature (operation)	-30...+85 °C, -22...+185 °F	-30...+85 °C, -22...+185 °F

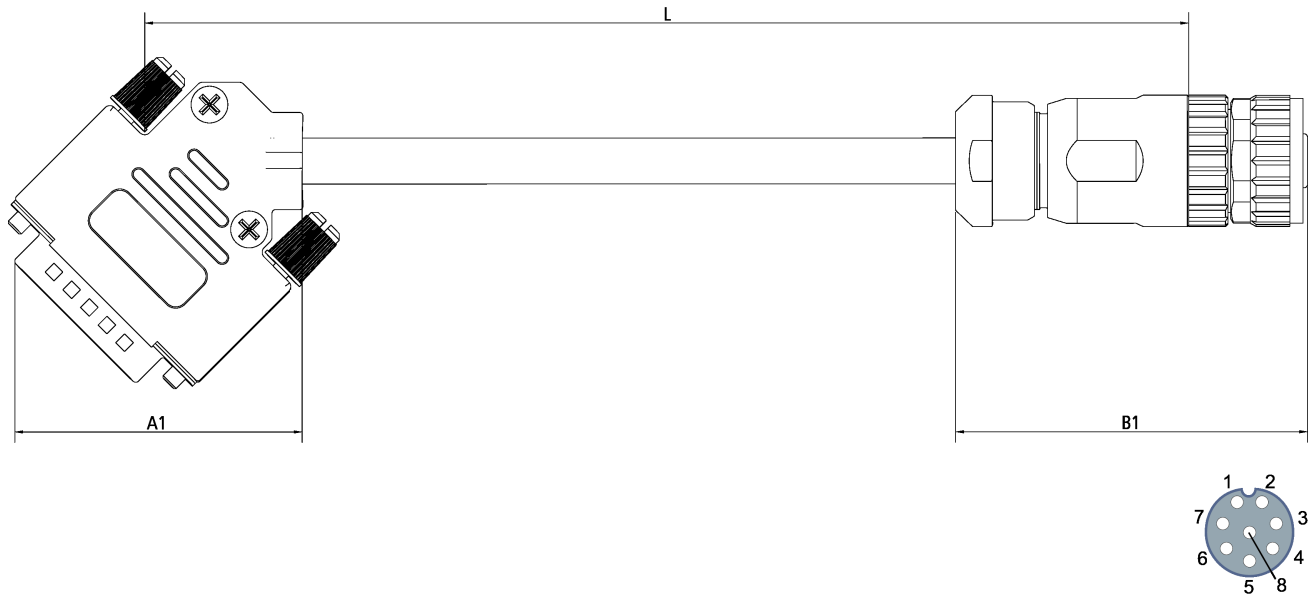
Protection class	IP 20	IP 65/67 in screwed condition (according to IEC 60529)
Pollution level	3/2 (according to IEC 60664-1)	3/2 (according to IEC 60664-1)

Cable

Electrical data	
Operating voltage	30 V
Insulation resistance	$\geq 1 \text{ G}\Omega \cdot \text{km}$
Wire resistance (power)	$\leq 55.0 \text{ }\Omega/\text{km}$
Wire resistance (signal/24V)	$\leq 95.0 \text{ }\Omega/\text{km}$
Test voltage	500 V
Mechanical data	
Cross section (power)	0.38 mm ²
Cross section (signal)	0.2 mm ²
Min. bending radius, moved	10 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	63 kg/km (42.330 lb/1000 ft)
Outer cable diameter	6.95 ± 0.15 mm
Conductor material	Copper bare
Optical covering factor of shielding	$\geq 85\%$
Max. acceleration	30 m/s ²
Max. speed	5 m/s
Max. number of cycles	10 million
Jacket colour	green
Material jacket	PUR (polyurethane)
Wire insulation material	PP (polypropylene)
Printing on the jacket	Motion Drive Ethernet 2x2x0,20+1x2x0,38 Shielded High Dynamic Performance PUR Oil Resistant - E356538 U AWM STYLE 20236 80°C 30 V – CSA AWM I/II A/B 80°C 30 V FT1 - DESINA (YYYY/WW) Meter Marking.
Printing colour	black
Torsion angle in °/m	max. ± 30 °/m
Max. tensile load, dynamic	20 N/mm ²
Environmental data	
Operation temperature range, moved	-40...+80 °C
Operation temperature range, fixed installation	-50...+80 °C, -58...+176 °F
Oil resistance	yes
Flame-retardant	IEC 60332-1-2, UL/CSA FT1, UL VW1
Halogen-free	yes
Silicone-free	yes
RoHS compliant	yes

Contact assembly





A1	approx. 44 mm
B1	approx. 54 mm
B2	Ø 20.00 mm

Notes

- Depending on the cable length (L), the following length tolerances apply: $\pm 2-3 \%$
- 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
ZK4810-0020-0010	1.00 m
ZK4810-0020-0030	3.00 m
ZK4810-0020-0050	5.00 m

Beckhoff®, TwinCAT®, 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 05/2020

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.