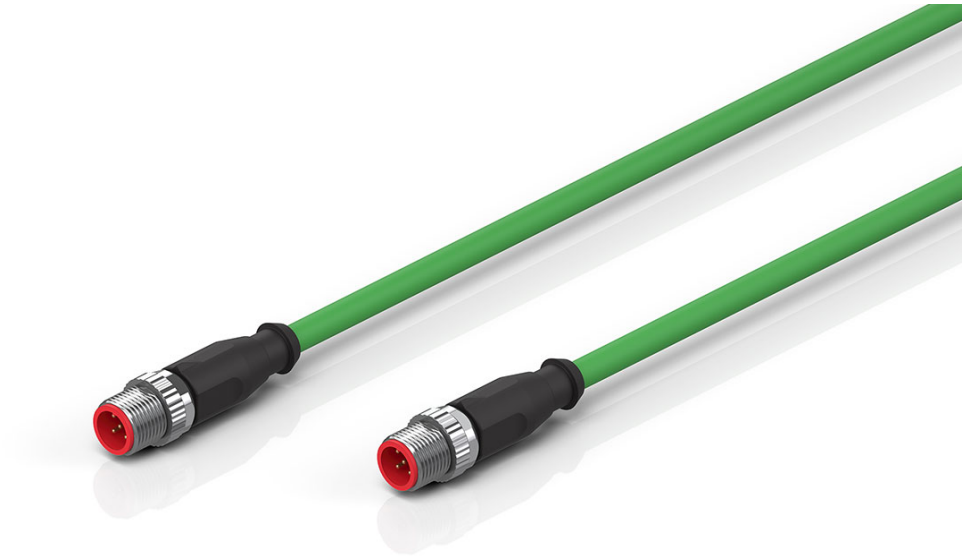
ZK4000-5151-0xxx | Encoder connection cable 0.25 mm² with M12 plug, drag-chain suitable

M12, plug, straight, male, 5-pin, A-coded – M12, plug, straight, male, 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	yes	yes
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	plug
Configuration	straight	straight
Contact type	male	male
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	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.
Environmental data		
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)

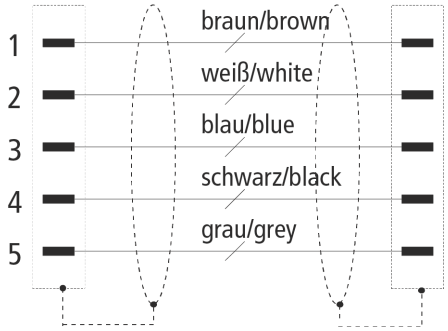
Cable

Electrical data	
Operating voltage	≤ 300 V
Insulation resistance	≥ 1 GΩ * km
Wire resistance	≤ 78 Ω/km (20°C)
Test voltage	≥ 3000 V
Mechanical data	
Conductor construction	32 x 0.10 mm
Cross-section	5 x 0.25 mm²
Outer cable diameter	5.65 mm ± 0.2 mm (0.2224" ± 0.0079")
Min. bending radius, moved	10 x outer cable diameter
Weight	45 kg/km (30.24 lb/1000 ft)
Conductor material	copper bare
Use	drag-chain suitable
Max. acceleration	10 m/s²
Max. speed	3 m/s
Max. number of cycles	2 million

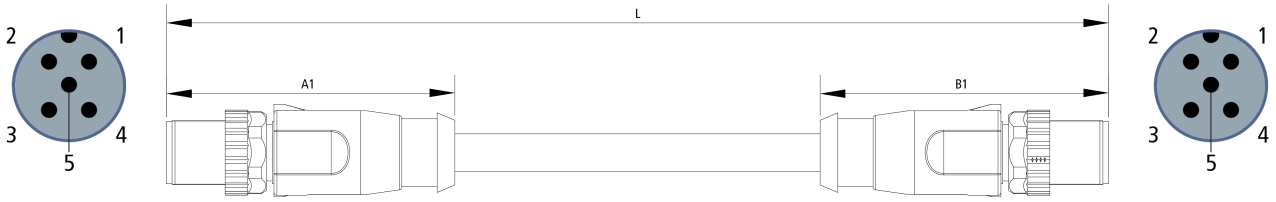
Jacket color	green
Material jacket	PUR (polyurethane)
Wire color code	brown, white, blue, black, green
Wire insulation material	PP (polypropylene)
Printing color	black

Environmental data	
Operation temperature range, moved	-15...+80°C, +5...+176°F
Operation temperature range, fixed installation	-30...+80°C, -22...+176°F
Flame-retardant	according to AWM Style 20549 UL 758/1581 FT2
Halogen-free	according to IEC 60754 or DIN VDE 0472 part 815
Approvals	UL, CSA

Pin assignment



Dimensions



A1	49.0 mm
A2	Ø 14.5 mm
B1	49.0 mm
B2	Ø 14.5 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.

CE, UL	
CE	yes
UL	yes, UL E-file number: E499669

Ordering information	Length
ZK4000-5151-0001	0.15 m
ZK4000-5151-0005	0.50 m
ZK4000-5151-0010	1.00 m
ZK4000-5151-0020	2.00 m
ZK4000-5151-0030	3.00 m
ZK4000-5151-0040	4.00 m
ZK4000-5151-0050	5.00 m
ZK4000-5151-0060	6.00 m
ZK4000-5151-0100	10.00 m

Further length on request

Accessories	
ZB8801-0000	torque wrench for hexagonal plugs, adjustable
ZB8801-0002	torque cable key, M12/wrench size 13, for ZB8801-0000
ZB8803-0003	Flange/Panel feed-through for M12 pre-assembled, for fixing the connector, plastic, including screws, washers and lock nuts



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®, ATRO®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, MX-System®, Safety over EtherCAT®, TC/BSD®, TwinCAT®, TwinCAT/BSD®, TwinSAFE®, XFC®, XPlanar® and XTS® 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 04/2026

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 expressively agreed in the terms of contract.