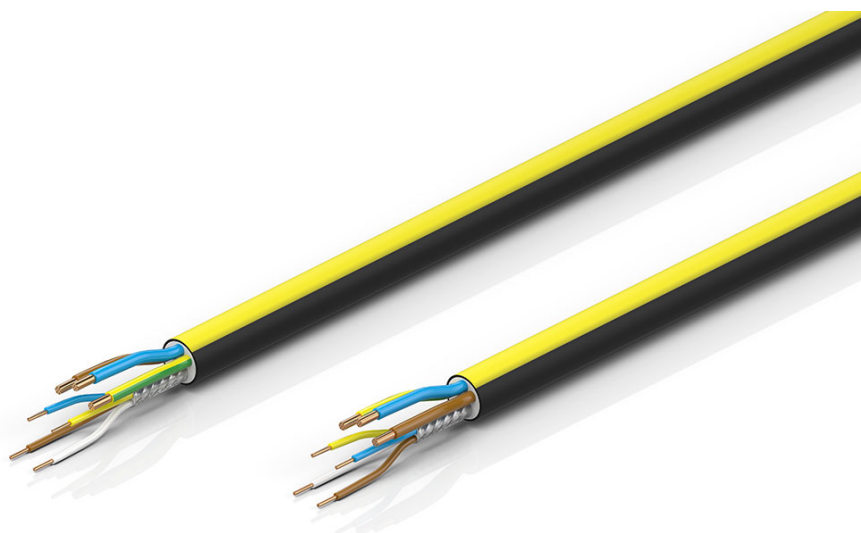


ZB7211-xxxx | EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 3 G 2.5 mm² + (1 x 4 x AWG22), black with yellow stripe, OD = 11.1 mm (±0.2 mm)



Electrical data	
Operating voltage	≤ 600 V
Mutual capacitance wire/wire (Ethernet)	nom. 55 nF/km
Attenuation of shielding	≥ 40 dB
Insulation resistance	≥ 200 MΩ*km
Mutual capacitance	AWG 22: nom. 55 nF/km
Wire resistance (power)	≤ 8.3 Ω/km
Wire resistance (Ethernet)	≤ 58.0 Ω/km (20°C)
Characteristic impedance (Ethernet)	100 Ω ±5 Ω (100 MHz) (EN 50289-1-11)
Dielectric strength wire/wire (power)	4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C)
Dielectric strength wire/shield (power)	4 kV 50 Hz 5 min. (DIN VDE 0472 T.509C)
Dielectric strength wire/wire (Ethernet)	2 kV (50 Hz, 1 min)
Dielectric strength wire/shield (Ethernet)	2 kV (50 Hz, 1 min)
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (Ethernet)	7-strand

Cross-section (power)	3 x 2.5 mm ² (approx. AWG14)
Cross-section (Ethernet)	1 x 4 x 0.34 mm ² (AWG22)
Outer cable diameter	11.1 mm ± 0.2 mm (0.4370" ± 0.0079")
Min. bending radius, moved	7 x outer cable diameter
Min. bending radius, fixed installation	4 x outer cable diameter
Weight	135 kg/km (90.716 lb/1000 ft)
Conductor material (power)	copper bare
Conductor material (Ethernet)	bare copper
Shielding	braiding of tinned copper wires, metallized plastic fleece, aluminum-clad foil
Optical covering factor of shielding (Ethernet)	≥ 85 %
Optical covering factor of shielding (total)	no
Use	drag-chain suitable
UL-Style	UL758 (AWM) Style 21223 (jacket) and Style 10492 (core)
Max. acceleration	30 m/s ²
Max. speed	4 m/s
Max. travel distance	20 m (horizontal)
Max. number of cycles	3 million
Jacket color	black (similar to RAL 9005) with yellow stripe (similar to RAL 1003)
Material jacket	PUR (polyurethane)
Wire color code	white, yellow, blue, orange power: brown, green/yellow, blue
Wire insulation material	PO (Polyolefine)
Printing on the jacket	XXXX Beckhoff Automation GmbH & Co. KG-Germany-EtherCAT P- 3G2,5 + (4xAWG22)/C E63216 AWM 21223 AWM I/II A/B 80°C 600V FT1 RoHS MM/JJ
Printing color	white
Torsion angle in °/m	max. ± 30 °/m
Environmental data	
Operation temperature range, moved	-20...+60°C, -4...+140°F
Operation temperature range, fixed installation	-40...+90°C, -40...+194°F
UV resistance	yes
Oil resistance	according to DIN EN 60811-404
CFC-free	yes
Halogen-free	yes
Silicone-free	yes
Approvals	cRUus

Attenuation

Max. insertion loss

Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	2.3	4.2	6.8	8.6	9.7	12.3	18.0	23.6
[db/100 ft]	0.7	1.3	2.1	2.6	3	3.7	5.5	7.2

Min. near-end crosstalk attenuation

Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	80	76.0	70.0	65.0	63.0	60.0	55.0	50.0
[db/100 ft]	24.4	23.2	21.3	19.8	19.2	18.3	16.8	15.2

Notes

- The following length tolerances apply: 2-3%
- Illustrations similar

Ordering information**Length**

ZB7211-0050	5.00 m
ZB7211-0100	10.00 m
ZB7211-0250	25.00 m
ZB7211-0500	50.00 m
ZB7211-1000	100 m
ZB7211-R001	250 m
ZB7211-R002	500 m
ZB7211-R003	1000 m



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 04/2024

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.