



ZB7210 | EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 3 G 2.5 mm² + (1 x 4 x AWG22), black with red stripe, OD = 11.1 mm (±0.2 mm)

Electrical data	
Mutual capacitance wire/wire (Ethernet)	nom. 55 nF/km
Attenuation of shielding	≥ 40 dB
Insulation resistance	≥ 200 MΩ*km
Wire resistance (power)	≤ 8.3 Ω/km
Wire resistance (Ethernet)	≤ 58.0 Ω/km (20 °C)
Characteristic impedance (Ethernet)	100 Ω ±10 Ω
Dielectric strength wire/wire (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
Cross section (Ethernet)	0.34 mm ² (AWG 22/7)
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)
Outer cable diameter	11.1 mm ± 0.2 mm (0.4370" ± 0.0079")
Conductor material (power)	copper bare
Conductor material (Ethernet)	bare copper
Optical covering factor of shielding (Ethernet)	≥ 85 %
Optical covering factor of shielding (total)	no
Use	drag-chain suitable
UL-Style Conductor	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
Wall thickness of wire insulation (power)	0.4 mm
Wall thickness of wire insulation (Ethernet)	0.4 mm
Jacket colour	black (RAL 9005) with red stripe (RAL 3020)
Material jacket	PUR (polyurethane)
Wire colour code	white, yellow, blue, orange power: brown, green/yellow, blue
Wire insulation material	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 colour	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...+80 °C, -40...+176 °F
UV resistance	yes
Flame-retardant	FT-1
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]	2.2	4.2	6.6	8.4	9.5	12.0	17.3	22.4
[db/100 ft]	0.7	1.3	2	2.6	2.9	3.7	5.3	6.8
Min. near-end crosstalk attenuation								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	65.3	56.3	50.3	47.2	45.8	42.9	38.4	35.3
[db/100 ft]	19.9	17.2	15.3	14.4	14	13.1	11.7	10.8

Notes

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

Ordering information	Length
ZB7210-0050	5.00 m
ZB7210-0100	10.00 m
ZB7210-0250	25.00 m
ZB7210-0500	50.00 m
ZB7210-1000	100.00 m
ZB7210-R001	250.00 m
ZB7210-R002	500.00 m
ZB7210-R003	1000.00 m

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