



ZB7000 | EtherCAT P cable, shielded, PUR, drag-chain suitable, 1 x 4 x AWG22/7, black with red stripe, OD = 6.5 mm (± 0.2 mm)

Electrical data	
Rated voltage	max. 300 V (not for high voltage purposes)
Operating voltage	≤ 125 V (peak value, not for high voltage purposes)
Attenuation of shielding	≥ 65 dB (30...100 MHz)
Insulation resistance	$\geq 5G\Omega \cdot km$
Unbalanced capacitance to ground	≤ 2000 pF/km
Mutual capacitance	48 nF/km
Characteristic impedance (Ethernet)	$100 \Omega \pm 15 \Omega$
Loop resistance	$\leq 110.8 \Omega/km$
Signal running time (Ethernet)	5.3 ns/m
Electrical parameters (Ethernet)	based on CAT 5
Test voltage	1000 V, 50 Hz, 1 min. (wire/wire and wire/screen)
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (Ethernet)	7-strand
Cross section (Ethernet)	1 x 4 x 0.34 mm ² (AWG 22)
Min. bending radius, moved	8 x outer cable diameter
Min. bending radius, moved in drag chain	15 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	72 kg/km (48.38 lb/1000 ft)
Outer cable diameter	6.5 mm ± 0.2 mm (0.2559" ± 0.0079 ")
Conductor material (Ethernet)	copper, tinned
Shielding	aluminium-clad foil, braiding of tinned copper wires, coupling
Optical covering factor of shielding (Ethernet)	≥ 85 %
Use	drag-chain suitable
Max. acceleration	35 m/s ²
Max. speed	5 m/s
Max. travel distance	5 m

Max. number of cycles	3 million
Jacket colour	black (similar to RAL 9005) with red stripe (similar to RAL 3020)
Material jacket	PUR (polyurethane)
Wire colour code	yellow, orange, white, blue
Wire insulation material	PO (Polyolefine)
Printing on the jacket	Beckhoff Automation GmbH & Co. KG - Germany - EtherCATp Cat5e AWG22/7 E170315 AWM 21198 AWM I/II A/B 80°C 300 V
Printing colour	white
Environmental data	
Operation temperature range, moved	-30...+70 °C, -22...+158 °F
Operation temperature range, fixed installation	-40...+80 °C, -40...+176 °F
UV resistance	good
Oil resistance	according to DIN EN 60811-404
Flame-retardant	Horizontal flame test according to UL 1581 part 1090
Halogen-free	according to IEC 60754 respectively DIN VDE 0472 part 815

Attenuation								
Max. insertion loss								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	-	4.9	7.8	9.9	11.1	14.1	20.4	26.4
[db/100 ft]	-	1.5	2.4	3	3.4	4.3	6.2	8
Min. near-end crosstalk attenuation								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	-	56.3	50.3	47.2	45.8	42.9	38.4	35.3
[db/100 ft]	-	17.2	15.3	14.4	14	13.1	11.7	10.8

Ordering information	Length
ZB7000	sold by the metre

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