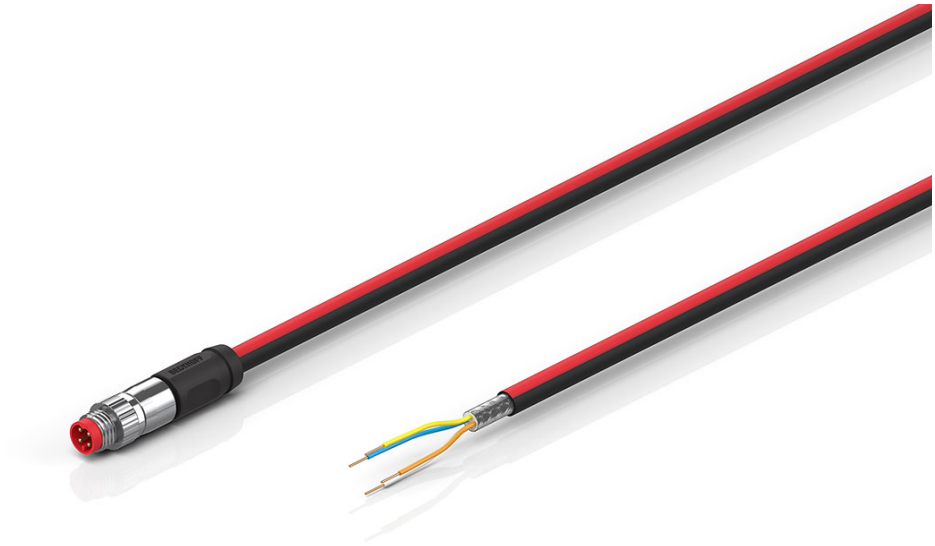
ZK7001-0100-0xxx | EtherCAT P cable, AWG24, PUR, drag-chain suitable

M8, plug, straight, male, 4-pin, EtherCAT P-coded – open end, 4-wire + strand and shielding



Plugs

Electrical data	Head A	Head B
Rated voltage	24 V DC (according to IEC 61076-2-104)	-
Rated current	3 A at 40°C (according to IEC 61076-2-104)	-
Shielding	yes	-
Insulation resistance	≥ 100 GΩ (according to IEC 60512)	-
Mechanical data		
Installation size	M8	open end
Connector type	plug	-
Configuration	straight	-
Contact type	male	-
Number of positions (face)	4-pin	4-wire + strand and shielding
Coding	EtherCAT P-coded	-
Recommended torque, nut	0.4 Nm	-
Mating cycles	≥ 100	-

Way of locking	screw	-
Body color	black	-
Body material	TPU, UL 94	-
Coupling nut material	CuZn, Ni	-
Seal	FPM	-
Contact carrier color	red	-
Contact carrier material	PA, UL 94	-
Contact plating	Ni, Au gal.	-
Contact material	CuZn	-
Environmental data		
UV resistance	yes	-
RoHS compliant	yes	-
Ambient temperature (operation)	-40...+85°C, -40...+185°F	-
Protection rating	IP65/67 in screwed condition (according to IEC 60529)	-
Pollution level	3/2 (according to IEC 60664-1)	-

Cable

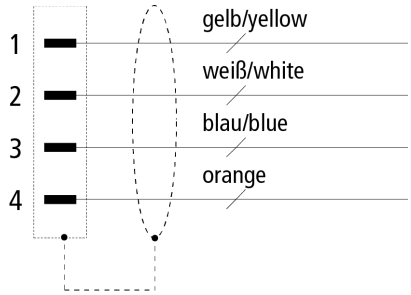
Electrical data	
Rated voltage	max. 300 V (not for high voltage purposes)
Operating voltage	≤ 125 V (peak value, not for high voltage purposes)
Attenuation of shielding	min. 80 dB between 30 MHz and 125 MHz (type test)
Insulation resistance	≥ 5GΩ * km
Unbalanced capacitance to ground	≤ 2000 pF/km
Mutual capacitance	nom. 50 nF/km
Characteristic impedance (Ethernet)	100 Ω ±15 Ω
Loop resistance	175.2 Ω/km
Dielectric strength wire/wire (Ethernet)	1 kV (50 Hz, 1 min)
Dielectric strength wire/shield (Ethernet)	1 kV AC (50 Hz, 1 min.)/1 kV DC (50 Hz)
Signal running time (Ethernet)	4.8 ns/m
Electrical parameters (Ethernet)	based on Cat.5
Test voltage	750 V, 50 Hz, 1 min.
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (Ethernet)	7-strand
Cross-section (Ethernet)	1 x 4 x 0.22 mm² (AWG24)

Outer cable diameter	5.2 mm ± 0.2 mm (0.2047" ± 0.0079")
Min. bending radius, moved	15 x outer cable diameter
Min. bending radius, moved in drag-chain	15 x outer cable diameter
Min. bending radius, fixed installation	8 x outer cable diameter
Weight	42 kg/km (28.22 lb/1000 ft)
Conductor material (Ethernet)	tinned copper
Shielding	aluminum-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	10 m
Max. number of cycles	3 million
Jacket color	black (similar to RAL 9005) with red stripe (similar to RAL 3020)
Material jacket	PUR (polyurethane)
Wire color code	yellow, orange, white, blue
Wire insulation material	PO (Polyolefine)
Printing on the jacket	Beckhoff Automation GmbH & Co. KG - Germany - EtherCATp Cat5e AWG24/7 E170315 AWM 21198 AWM I/II A/B 80°C 300 V MM/YY RoHS
Printing color	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 or DIN VDE 0472 part 815
UL	yes, UL E-file number: E170315

Attenuation								
Max. insertion loss								
Frequency [MHz]	**1**	**4**	**10**	**16**	**20**	**31.25**	**62.5**	**100**
[db/100 m]	3.0	6.0	9.5	12.1	13.5	17.1	24.8	32.0
[db/100 ft]	0.9	1.8	2.9	3.7	4.1	5.2	7.6	9.8
Min. near-end crosstalk attenuation								

Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	65	56.3	50.3	47.2	45.8	42.9	38.4	35.3
[db/100 ft]	19.8	17.2	15.3	14.4	14	13.1	11.7	10.8

Pin assignment



Dimensions



A1	41.00 mm
A2	Ø10.10 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: E480185

Ordering information	Length
ZK7001-0100-0010	1.00 m
ZK7001-0100-0030	3.00 m

ZK7001-0100-0050	5.00 m
ZK7001-0100-0100	10.00 m

Further length on request

Accessories	
ZB8801-0000	torque wrench for hexagonal plugs, adjustable
ZB8801-0001	torque cable key, M8/wrench size 9, for ZB8801-0000
ZB8803-0001	Flange/Panel feed-through for M8 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.

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