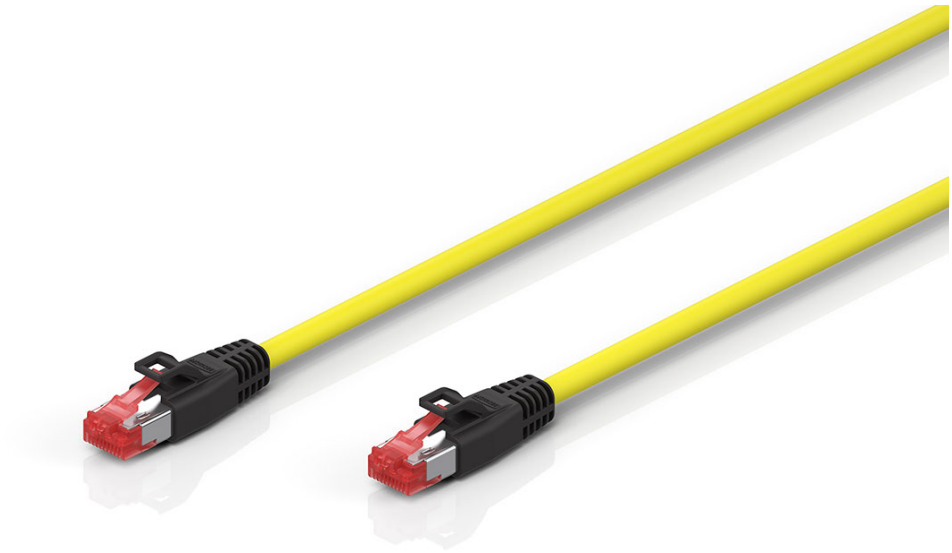
ZK1093-9191-Cxxx | EtherCAT cable, PUR, AWG26, fixed installation, comfortable installation at short distances

RJ45, plug, straight, male, 4-pin – RJ45, plug, straight, male, 4-pin



Plugs

Electrical data	Head A	Head B
Rated voltage	150 V	150 V
Rated current	1.5 A	1.5 A
Dielectric strength	1000 V AC/min.	1000 V AC/min.
Shielding	yes	yes
Insulation resistance	≥ 10 GΩ (according to IEC 60512-2)	≥ 10 GΩ (according to IEC 60512-2)
Mechanical data		
Installation size	RJ45	RJ45
Connector type	plug	plug
Configuration	straight	straight
Contact type	male	male
Number of positions (face)	4-pin	4-pin
Mating cycles	≥ 750	≥ 750
Body color	black	black

Body material	TPU, UL 94 HB	TPU, UL 94 HB
Contact carrier material	PC UL 94 V-0	PC UL 94 V-0
Contact plating	Ni, Au gal.	Ni, Au gal.
Contact material	CuZn	CuZn
Environmental data		
RoHS compliant	yes	yes
Ambient temperature (operation)	-40...+70°C, -40...+158°F	-40...+70°C, -40...+158°F
Protection rating	IP20	IP20

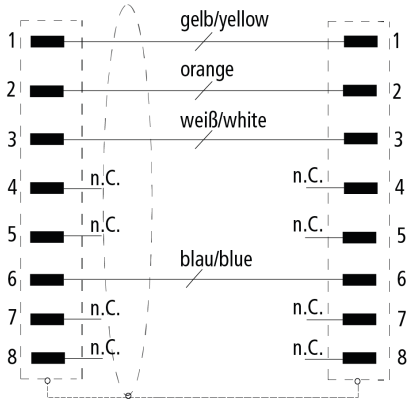
Cable

Electrical data	
Rated voltage	30 V (according to IEC 61076-2-101)
Attenuation of shielding	≥ 50 dB (30...100 MHz)
Insulation resistance	≥ 500 MΩ/km
Unbalanced capacitance to ground	≤ 2000 pF/km
Mutual capacitance	nom. 50 nF/km
Characteristic impedance (Ethernet)	100 Ω ±15 Ω
Loop resistance (Ethernet)	≤ 260 Ω/km
Unbalanced resistance (Ethernet)	2 %
Dielectric strength wire/wire (Ethernet)	1 kV AC (50 Hz, 1 min)/1 kV DC (50 Hz)
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	1000 V, 50 Hz, 1 min.
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (Ethernet)	7-strand
Cross-section (Ethernet)	1 x 4 x 0.14 mm² (AWG26)
Outer cable diameter	3.65 mm ± 0.15 mm (0.1496" ± 0.0059")
Min. bending radius, moved	15 x outer cable diameter
Min. bending radius, fixed installation	8 x outer cable diameter, 2.5 x outher cable diameter (fixed with single bend)
Weight	30 kg/km (20.16 lb/1000 ft)
Conductor material	copper bare
Shielding	braiding of tinned copper wires
Optical covering factor of shielding (Ethernet)	≥ 85 %

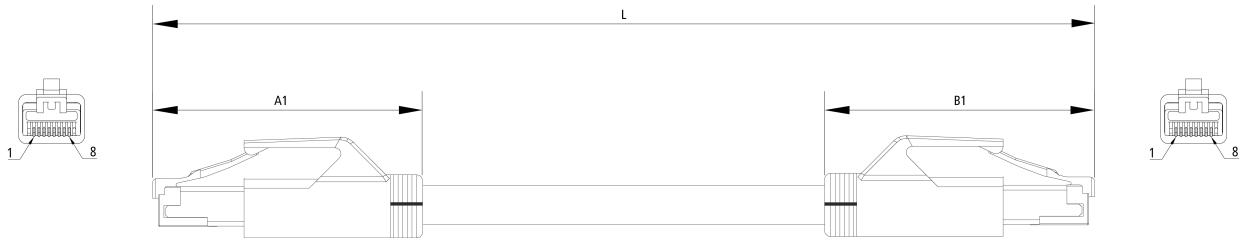
Use	fixed installation
Jacket color	yellow
Material jacket	PUR (polyurethane)
Wire color code	yellow, orange, white, blue
Wire insulation material	PO (Polyolefine)
Printing on the jacket	00000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx
Printing color	black
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 (7x24 h/90 °C)
Acid, lye and solvent resistance	depends on medium, concentration, temperature and duration
Flame-retardant	Horizontal flame test according to UL 1581 part 1090
CFC-free	yes
Halogen-free	according to IEC 60754 or DIN VDE 0472 part 815
Silicone-free	yes
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]	3.2	6.2	10.5	13.4	14.7	18.8	27.2	35.0
[db/100 ft]	1	1.9	3.2	4.1	4.5	5.7	8.3	10.7
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	43.80 mm
B1	43.80 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.

Ordering information	Length
ZK1093-9191-C001	0.17 m
ZK1093-9191-C002	0.20 m
ZK1093-9191-C003	0.30 m
ZK1093-9191-C004	0.40 m
ZK1093-9191-C005	0.50 m
ZK1093-9191-C006	0.60 m
ZK1093-9191-C010	1.00 m
ZK1093-9191-C013	1.30 m
ZK1093-9191-C015	1.50 m
ZK1093-9191-C018	1.80 m
ZK1093-9191-C020	2.00 m

ZK1093-9191-C030	3.00 m
ZK1093-9191-C050	5.00 m

Further length on request

Accessories	
ZK1096-9696-0000	RJ45, socket, straight, female, 8-pin – RJ45, socket, straight, female, 8-pin

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