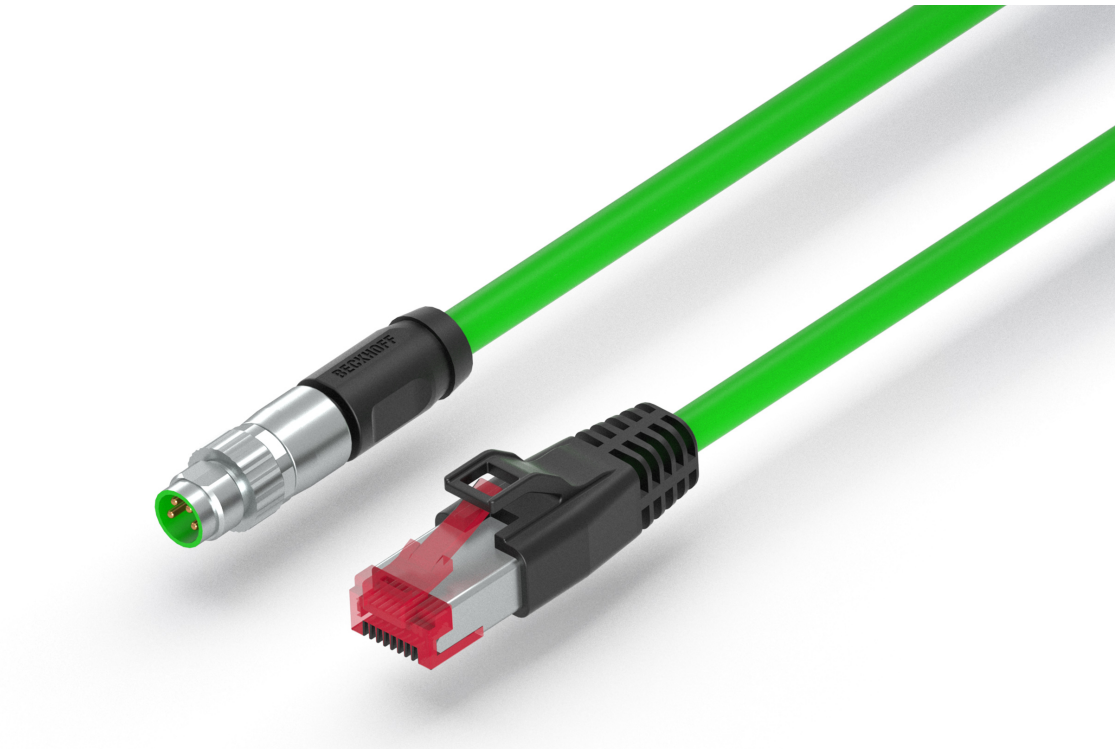

ZK1090-3191-0xxx | EtherCAT cable, PUR, AWG 26, drag-chain suitable

M8, plug, straight, male, 4-pin, A-coded – RJ45, plug, straight, male, 8-pin

Plugs

Electrical data	Head A	Head B
Rated voltage	30 V (according to IEC 61076-2-101)	125 V (according to IEC 61076-2-101)
Rated current	4 A at 40 °C (according to IEC 61076-2-101)	1 A at 50 °C
Shielding	yes	yes
Insulation resistance	≥ 100 GΩ (according to IEC 60512)	≥ 10 GΩ (according to IEC 60512-2)
Mechanical data		
Installation size	M8	RJ45
Connector type	plug	plug
Configuration	straight	straight
Contact type	male	male
Number of positions (face)	4-pin	8-pin
Coding	A-coded	-
Recommended torque, nut	0.4 Nm	-
Mating cycles	≥ 100	≥ 750
Way of locking	screw	-
Weight per piece	0.028 kg (0.0617 lb)	-
Body colour	black	black
Body material	TPU, UL94	PC UL 94-V-2
Coupling nut material	GD-Zn, Ni	-
Seal	FPM	-
Contact carrier colour	green	-
Contact carrier material	PA 6, UL 94 V-0	-
Contact material	CuZn	CuZn
Contact plating	Ni, Au gal.	Ni, Au gal.
Environmental data		
Special features	halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1	-
RoHS compliant	yes	yes
Ambient temperature, operation	-30…+70 °C, -22…+158 °F	-40...+85 °C, -40...+185 °F

We reserve the right to make technical changes.

Protection class	IP 67 in screwed condition (according to IEC 60529)	IP 20
Pollution level	3/2 (according to IEC 60664-1)	-

Cable

Electrical data	
Rated voltage	30 V (according to IEC 61076-2-101)
Attenuation of shielding	≥ 43 dB
Insulation resistance	≥ 150 MΩ/km
Unbalanced capacitance to ground	3400 pF/km
Mutual capacitance	51 pF/m at 1 kHz
Characteristic impedance (Ethernet)	100 Ω ±15 Ω (100 MHz)
Loop resistance (Ethernet)	250 Ω/km
Unbalanced resistance (Ethernet)	2 %
Dielectric strength wire/wire (Ethernet)	1000 V DC/700 V AC
Dielectric strength wire/shield (Ethernet)	1000 V DC/700 V AC
Signal running time (Ethernet)	5.55 ns/m
Electrical parameters (Ethernet)	based on CAT 5
Test voltage	700 V
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (Ethernet)	19 x 0.1 mm
Cross section (Ethernet)	0.14 mm² (AWG26)
Min. bending radius, moved	20 x outer cable diameter
Min. bending radius, fixed installation	4 x outer cable diameter
Weight	40 kg/km (26.9 lb/1000 ft)
Outer cable diameter	5.4 mm ± 0.3 mm (0.213" ±0.0118")
Conductor material (Ethernet)	copper, tinned
Optical covering factor of shielding (Ethernet)	90 %
Use	drag-chain suitable
Max. acceleration	10 m/s²
Max. speed	15 m/s
Max. number of cycles	20 million (5 million with 14 x D, v = 5 m/s and a = 15 m/s²)
Wall thickness of wire insulation (Ethernet)	0.25 mm
Jacket colour	green
Material jacket	PUR (polyurethane)
Wire colour code	yellow, orange, white, blue
Wire insulation material	PP (polypropylene)
Printing on the jacket	"sequential length in meters" Industrial Ethernet Cat5 trailing * E130266 "UL Recognized" UL AWM 20963 80 °C 30V * ZB9032 "month/year" " internal order number"
Printing colour	black
Environmental data	
Operation temperature range, moved	-40…+80 °C, -40…+176 °F
Oil resistance	according to DIN EN 60811-404 (7x24 h/90 °C)
Acid, lye and solvent resistance	depends on medium, concentration, temperature and duration
Approvals	UL-Style AWM 20963

Attenuation								
Max. insertion loss								
Frequency [MHz]	**1**	**4**	**10**	**16**	**20**	**31.25**	**62.5**	**100**
[db/100 m]	3.1	6.5	9.9	12.3	13.8	17.7	25.6	33.0
[db/100 ft]	0.9	2	3	3.7	4.2	5.4	7.8	10.1
Min. near-end crosstalk attenuation								
Frequency [MHz]	**1**	**4**	**10**	**16**	**20**	**31.25**	**62.5**	**100**
[db/100 m]	62	53.0	47.0	44.0	42.0	40.0	35.0	32.0
[db/100 ft]	18.9	16.2	14.3	13.4	12.8	12.2	10.7	9.8

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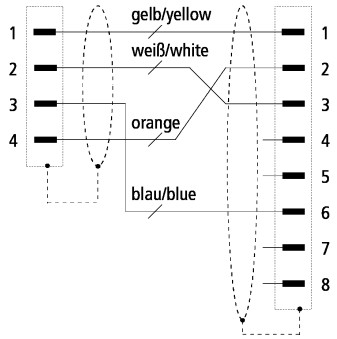
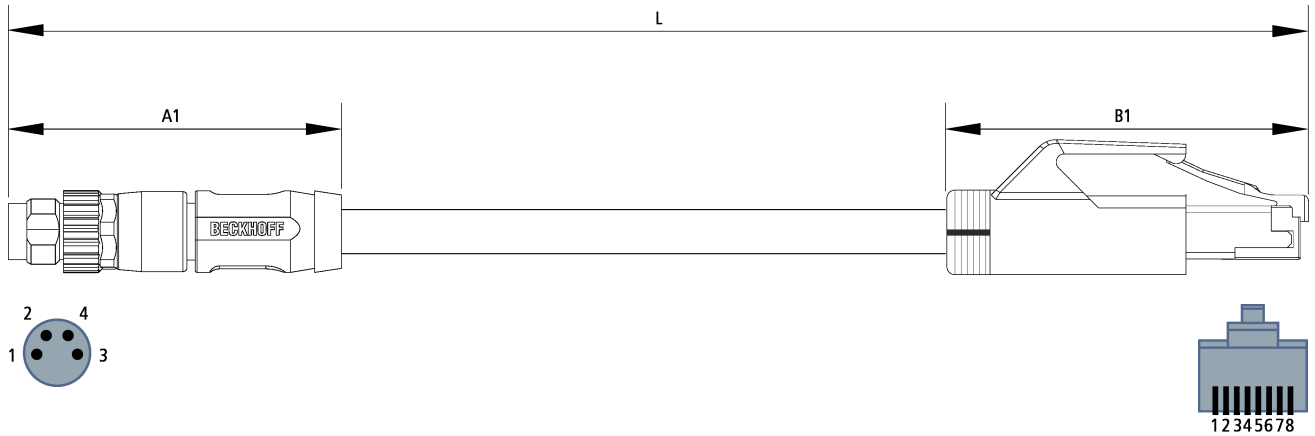
Contact assembly



Dimensions



A1	41.00 mm
B1	44.00 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. The last three digits of the ordering information is the cable length in decimeters, e.g.ZKxxxx-xxxx-x020 = cable length 2.00 m

Ordering information	Length
ZK1090-3191-0002	0.20 m
ZK1090-3191-0004	0.40 m
ZK1090-3191-0005	0.50 m
ZK1090-3191-0006	0.60 m
ZK1090-3191-0010	1.00 m
ZK1090-3191-0015	1.50 m
ZK1090-3191-0020	2.00 m
ZK1090-3191-0025	2.50 m
ZK1090-3191-0030	3.00 m
ZK1090-3191-0035	3.50 m
ZK1090-3191-0050	5.00 m
ZK1090-3191-0055	5.50 m
ZK1090-3191-0060	6.00 m
ZK1090-3191-0070	7.00 m
ZK1090-3191-0075	7.50 m
ZK1090-3191-0080	8.00 m
ZK1090-3191-0090	9.00 m
ZK1090-3191-0100	10.00 m
ZK1090-3191-0120	12.00 m
ZK1090-3191-0125	12.50 m

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ZK1090-3191-0140	14.00 m
ZK1090-3191-0150	15.00 m
ZK1090-3191-0160	16.00 m
ZK1090-3191-0165	16.50 m
ZK1090-3191-0170	17.00 m
ZK1090-3191-0200	20.00 m
ZK1090-3191-0205	20.50 m
ZK1090-3191-0250	25.00 m
ZK1090-3191-0285	28.50 m
ZK1090-3191-0300	30.00 m
ZK1090-3191-0400	40.00 m
ZK1090-3191-0500	50.00 m

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