

ZK1093-3131-3xxx | EtherCAT cable, PVC, AWG22, fixed installation



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



Plugs

Electrical data	Head A	Head B
Rated voltage	63 V (according to IEC 61076-2-111)	63 V (according to IEC 61076-2-111)
Rated current	4 A at 40°C (according to IEC 61076-2-104)	4 A at 40°C (according to IEC 61076-2-104)
Shielding	yes	yes
Insulation resistance	≥ 100 GΩ (according to IEC 60512)	≥ 100 GΩ (according to IEC 60512)
Mechanical data		
Installation size	M8	M8
Connector type	plug	plug
Configuration	straight	straight
Contact type	male	male
Number of positions (face)	4-pin	4-pin
Coding	A-coded	A-coded
Recommended torque, nut	0.4 Nm	0.4 Nm
Mating cycles	≥ 100	≥ 100

Way of locking	screw	screw
Weight per piece	0.028 kg (0.0617 lb)	0.028 kg (0.0617 lb)
Body color	black	black
Body material	TPU, UL94	TPU, UL94
Coupling nut material	GD-Zn, Ni	GD-Zn, Ni
Seal	FPM	FPM
Contact carrier color	green	green
Contact carrier material	PA 6, UL 94 V0	PA 6, UL 94 V0
Contact plating	Ni, Au gal.	Ni, Au gal.
Contact material	CuZn	CuZn
Environmental data		
Special features	halogen-free, flame-resistant as per IEC 60332-1-2, oil-resistant as per DIN EN 60811-2-1	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	-30...+70°C, -22...+158°F
Protection rating	IP65/67 in screwed condition (according to IEC 60529)	IP65/67 in screwed condition (according to IEC 60529)
Pollution level	3/2 (according to IEC 60664-1)	3/2 (according to IEC 60664-1)

Cable

Electrical data		
Rated voltage	600 V	
Insulation resistance	≥ 500 MΩ/km	
Characteristic impedance (Ethernet)	100 Ω ±15 Ω (100 MHz)	
Loop resistance (Ethernet)	≤ 115 Ω/km	
Signal running time (Ethernet)	5.3 ns/m	
Electrical parameters (Ethernet)	based on Cat.5	
Test voltage	≥ 2000 V	
Mechanical data		
Cable structure (Ethernet)	twisted pair	
Conductor construction (Ethernet)	solid	
Cross-section (Ethernet)	1 x 4 x 0.34 mm ² (AWG22)	
Outer cable diameter	6.5 mm ± 0.2 mm (0.2559" ± 0.0079")	
Min. bending radius, moved	7.5 x outer cable diameter	
Min. bending radius, fixed installation	3 x outer cable diameter	
Weight	67 kg/km (45.0 lb/1000 ft)	

Shielding aluminum-clad foil, braiding of tinned copper wires

Optical covering factor of shielding (Ethernet) 90 %

Use fixed installation

Jacket color yellow

Material jacket PVC (polyvinyl chloride)

Wire color code yellow, orange, white, blue

Printing color black

Environmental data

Operation temperature range, moved -40...+75°C, -40...+167°F

Operation temperature range, fixed installation -20...+60°C, -4...+140°F

Ambient temperature, transport/storage -40...+75°C, -40...+167°F

Flame-retardant according to IEC 60332-1-2, according to UL 1685 (CSA FT 4)

UL yes, UL E-file number: E119100

Attenuation

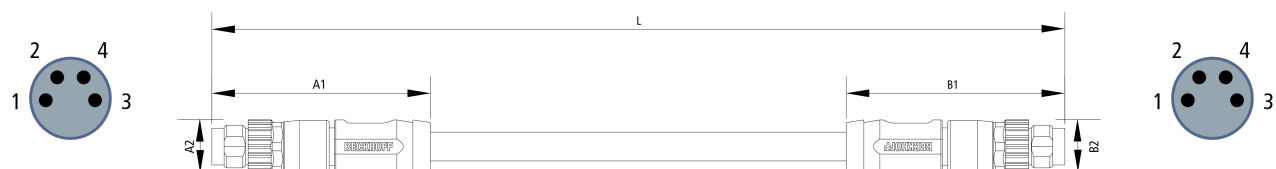
Max. insertion loss

Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	1.6	3.2	5.2	6.9	7.8	10.5	15.0	19.5
[db/100 ft]	0.5	1	1.6	2.1	2.4	3.2	4.6	5.9

Min. near-end crosstalk attenuation

Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	80	75.0	70.0	65.0	63.0	60.0	55.0	50.0
[db/100 ft]	24.4	22.9	21.3	19.8	19.2	18.3	16.8	15.2

Dimensions



A1 41.00 mm

A2 Ø 10.1 mm

B1	41.00 mm
B2	Ø 10.1 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
ZK1093-3131-3050	5.00 m

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



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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