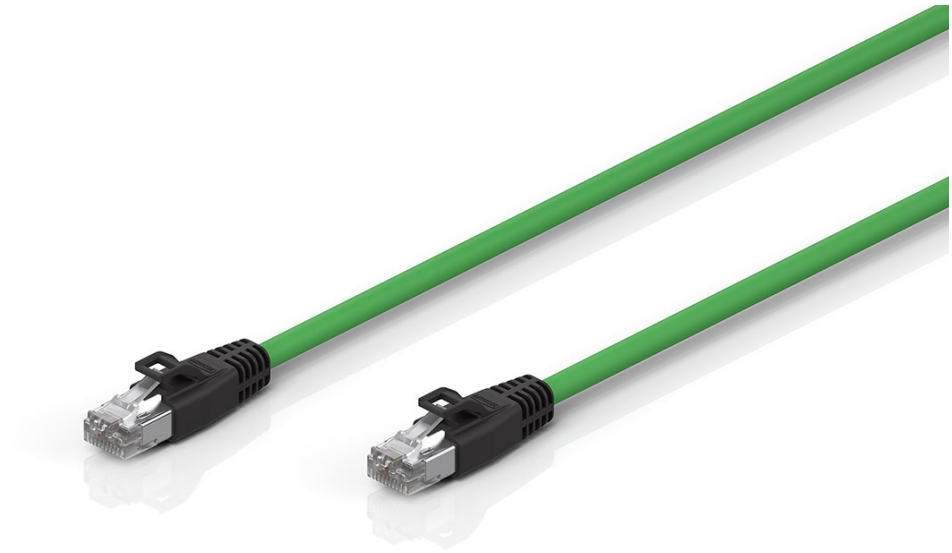
ZK1090-9191-Bxxx | Industrial-Ethernet/EtherCAT patch cable, Cat.5, PVC, 1 x 4 x AWG22, fixed installation

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
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	600 V
Operating voltage	≤ 125 V (peak value, not for high voltage purposes)
Insulation resistance	≥ 5 GΩ/km
Mutual capacitance	48 nF/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 shielded pair
Conductor construction (Ethernet)	solid
Cross-section (Ethernet)	1 x 4 x 0.34 mm² (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	braiding of tinned copper wires
Optical covering factor of shielding (Ethernet)	90 %
Use	fixed installation
Jacket color	green
Material jacket	PVC (polyvinyl chloride)
Wire color code	yellow, orange, white, blue

Printing on the jacket	BECKHOFF ZB9010 Industrial Ethernet / EtherCAT Standard Cable * CAT5 PLUS * 2x2x22AWG (SHIELDED) (UL) E119100 CMG FT4 75°C VERIFIED (UL) CAT 5E or PLTC SUN RES or AWM 21694 600V * "sequential length in metres"
Printing color	black
Environmental data	
Operation temperature range, moved	-20...+60°C, -4...+140°F
Operation temperature range, fixed installation	-40...+75 °C, -40...+167 °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)
Halogen-free	no
UL	yes, UL E-file number: E119100

Attenuation

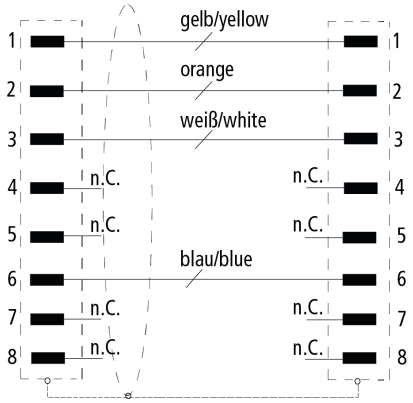
Max. insertion loss

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

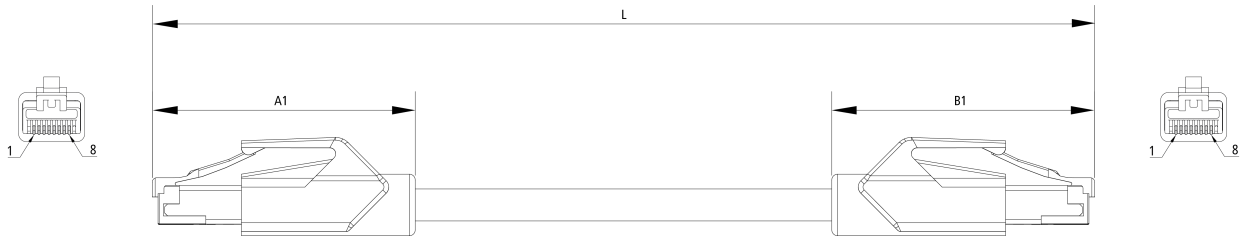
Min. near-end crosstalk attenuation

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

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.

CE, UL	
CE	yes
UL	yes, UL E-file number: E499669

Ordering information	Length
ZK1090-9191-B005	0.50 m
ZK1090-9191-B010	1.00 m
ZK1090-9191-B015	1.50 m
ZK1090-9191-B020	2.00 m
ZK1090-9191-B030	3.00 m
ZK1090-9191-B050	5.00 m
ZK1090-9191-B100	10.00 m
ZK1090-9191-B330	33.00 m
ZK1090-9191-B500	50.00 m
ZK1090-9191-B600	60.00 m
ZK1090-9191-B650	65.00 m
ZK1090-9191-B700	70.00 m
ZK1090-9191-B850	85.00 m
ZK1090-9191-D125	125 m
ZK1090-9191-D140	140 m
ZK1090-9191-D250	250 m
ZK1090-9191-D270	270 m

ZK1090-9191-D290	290 m

Further length on request

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



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.

Beckhoff®, ATRO®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, MX-System®, Safety over EtherCAT®, TC/BSD®, TwinCAT®, TwinCAT/BSD®, TwinSAFE®, XFC®, XPlanar® and XTS® are registered trademarks of and licensed by Beckhoff Automation GmbH. Other designations used in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owners.

© Beckhoff Automation GmbH & Co. KG 02/2026

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual application do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressively agreed in the terms of contract.