

## ZK7B25-BX00-0xxx | B40, ECP cable, PUR, 5 G 16.0 mm<sup>2</sup> + (1 x 4 x AWG22), drag chain suitable, key 3 (user-defined voltage)

B40, square flange, straight, long, male+male, pins 4+PE+4, P-coded

### Plugs

Electrical data	Head A	Head B
Rated voltage (Ethernet)	24 V DC	max. 300 V (peak value, not for high voltage purposes)
Rated current (Ethernet)	3 A at 40 °C	-
Rated voltage (power)	630 V AC / 850 V DC, 600V AC / DC (UL)	600 V
Rated current (power)	66 A at 50 °C	-
Rated current (power)	66 A	-
Test voltage	-	1000 V, 50 Hz, 1 min. (wire/wire and wire/screen)
Rated impulse voltage (power)	6.0 kV	-
Rated impulse voltage (Ethernet)	1.0 kV	-
Voltage proof (contact/contact)	1.5 kV (power - Ethernet), 3.31 kV AC (power), 1.0 kV AC (Ethernet)	-
Shielding	-	aluminium-clad foil, braiding of tinned copper wires, coupling
Shielding (Ethernet)	yes	-
Contact resistance	< 10 mΩ (signal), < 5 mΩ (power)	-
Insulation resistance	≥ 100 MΩ (according to IEC 60512)	≥ 5GΩ * km
Mechanical data		
Installation size	B40	-
Connector type	square flange	-
Configuration	straight, long	-
Contact type	male+male	-
Number of positions (face)	pins 4+PE+4	-
Coding	P-coded	-
Mechanical coding	key 3 (user-defined voltage)	-
Wire termination	crimp connection	-
Mating cycles	≥ 100	-
Way of locking	bayonet	-
Weight per piece	0.300 kg (0.6610 lb)	-

Body material	PA6, UL94 V0	-
Flange housing material	GD-Zn, Ni	-
Seal	NBR	-
Contact carrier material	PA, UL 94	-
Contact carrier colour (Ethernet)	red	-
Contact carrier colour (power)	red	-
Contact plating	Au over Ni	-
Contact material	copper alloy	-
<b>Environmental data</b>		
Use	-	drag-chain suitable
Shock resistance	50 g (490 m/s <sup>2</sup> ) conforms to IEC 60512-6c, 11 ms; 18 shocks per direction, 3 axes	-
Vibration resistance	5 g (50 m/s <sup>2</sup> ) conforms to IEC 60512-6d, 10 Hz. ... 500 Hz.; 10 cycles per axis; 6 h full duration	-
UV resistance	-	good
RoHS compliant	yes	-
Oil resistance	-	according to IEC 60811-2-1 respectively according to DIN VDE 0282 part 10
Ambient temperature (operation)	-30...+90 °C, -22...+194 °F	-
Protection class	IP 65/67 in screwed condition (according to IEC 60529)	-
Pollution level	3/2 (according to IEC 60664-1)	-

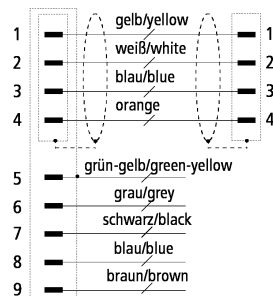
## Cable

<b>Electrical data</b>		
Rated voltage (Ethernet)	max. 300 V (peak value, not for high voltage purposes)	
Rated voltage (power)	600 V	
Operating voltage	≤ 125 V (peak value, not for high voltage purposes)	
Attenuation of shielding	≥ 65 dB (30...100 MHz)	
Insulation resistance	≥ 5GΩ * km	
Unbalanced capacitance to ground	≤ 2000 pF/km	
Mutual capacitance	48 nF/km	
Characteristic impedance (Ethernet)	100 Ω ±15 Ω	
Loop resistance	≤ 110.8 Ω/km	
Signal running time (Ethernet)	5.3 ns/m	
Electrical parameters (Ethernet)	CAT 5e, according to EN 50288-2-2	
Test voltage	1000 V, 50 Hz, 1 min. (wire/wire and wire/screen)	
<b>Mechanical data</b>		
Cable structure (Ethernet)	star quad	
Conductor construction (power)	19 x 0.30 mm	
Cross section (power)	5 x 16.0 mm <sup>2</sup> (approx. AWG5)	
Cross section (Ethernet)	1 x 4 x 0.34 mm <sup>2</sup> (AWG 22)	
Min. bending radius, moved	8 x outer cable diameter	
Min. bending radius, fixed installation	5 x outer cable diameter	
Weight	72 kg/km (48,38 lb/1000 ft)	
Outer cable diameter	6.5 mm ± 0.2 mm (0.2559" ± 0.0079")	
Conductor material (Ethernet)	copper, tinned	
Shielding	aluminium-clad foil, braiding of tinned copper wires, coupling	
Optical covering factor of shielding (Ethernet)	≥ 85 %	
Use	drag-chain suitable	
Max. acceleration	3 m/s <sup>2</sup>	
Max. speed	3 m/s	
Max. travel distance	4.5 m	
Max. number of cycles	3 million	
Jacket colour	black (similar to RAL 9005) with red stripe (similar to RAL 3020)	
Material jacket	PUR (polyurethane)	
Wire colour code	yellow, orange, white, blue (Ethernet) grey, green/yellow, black, blue, brown (Power)	
Wire insulation material	PP polypropylene (Ethernet), PPE polyphenyl ether (Power)	
Printing on the jacket	Beckhoff Automation GmbH & Co. KG - Germany - EtherCATp Cat5e AWG22/7 E170315 AWM 21198 AWM I/II A/B 80°C 300 V	
Printing colour	white	

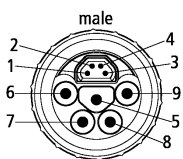
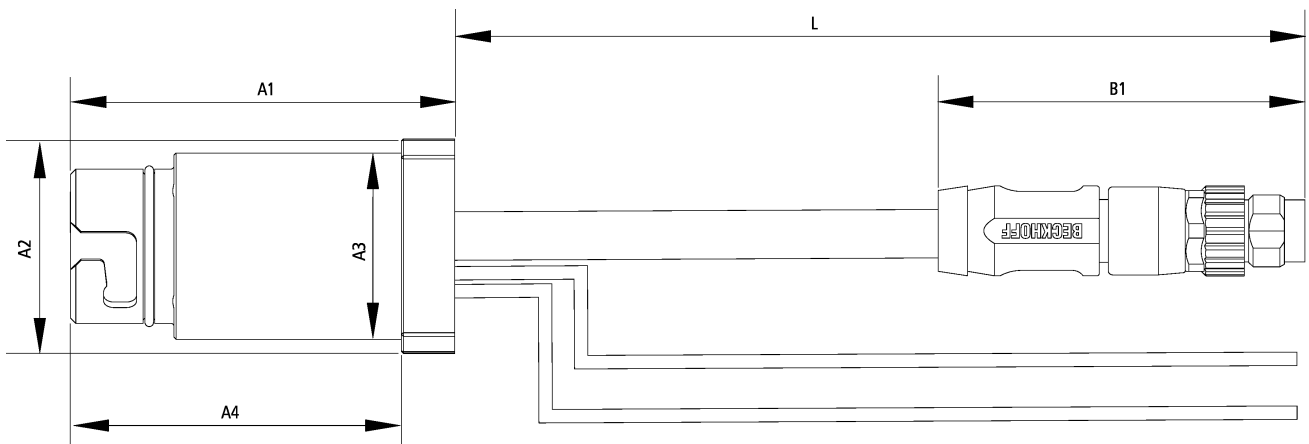
Environmental data	
Operation temperature range, moved	-30...+70 °C, -22...+158 °F
Operation temperature range, fixed installation	-40...+80 °C, -40...+176 °F
UV resistance	good
Oil resistance	according to IEC 60811-2-1 respectively according to DIN VDE 0282 part 10
Flame-retardant	Horizontal flame test according to UL 1581 part 1090
Halogen-free	according to IEC 60754 respectively DIN VDE 0472 part 815

Attenuation								
Max. insertion loss								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	-	4.9	7.8	9.9	11.1	14.1	20.4	26.4
[db/100 ft]	-	1.5	2.4	3	3.4	4.3	6.2	8
Min. near-end crosstalk attenuation								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	-	56.3	50.3	47.2	45.8	42.9	38.4	35.3
[db/100 ft]	-	17.2	15.3	14.4	14	13.1	11.7	10.8

### Contact assembly



### Dimensions

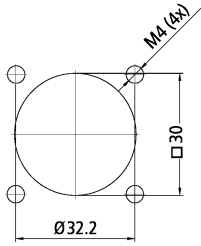


A1	64.00 mm
A2	40.00 mm
A3	44.00 mm
A4	59.00 mm

# Notes

- Depending on the cable length (L), the following length tolerances apply:  
 0 m...3.0 m: + 100 mm | 3.0...10.0 m: ± 100 mm | ≥ 10.0 m: ± 2 %
- 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

## Installation dimensions



Ordering information	Length
ZK7B25-BX00-0xxx	on request

Accessories	
ZS7400-B001	B40 protection cap, socket/flange, plastic, IP 67, packaging unit = 10 pieces
ZS7400-B002	B40 protection cap, socket/flange, metal, IP 67, packaging unit = 5 pieces
ZS7400-B005	B40 colour coding connector/square flange, red, packaging unit = 10 pieces
ZS7400-B006	B40 colour coding connector/square flange, yellow, packaging unit = 10 pieces
ZS7400-B007	B40 colour coding connector/square flange, blue, packaging unit = 10 pieces
ZS7400-B008	B40 colour coding connector/square flange, green, packaging unit = 10 pieces
ZS7400-B015	B40 colour coding connector/square flange, orange, packaging unit = 10 pieces
ZS7400-B016	B40 colour coding connector/square flange, grey, packaging unit = 10 pieces

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