

# ZK7425-AX00-Axxx | B40, ENP cable, PUR, 5 G 16.0 mm<sup>2</sup> + (1 x 4 x AWG22), drag-chain suitable, key 1 (2 x 24 V DC + PE)



B40, flange front assembly, straight, short, male+female, pins 4+PE+4,  
EtherCAT-coded – RJ45, plug, straight, male, 4-pin – open end, 5-wire

## Plugs

Electrical data	Head A	Head B	Head C
Rated voltage	-	150 V	-
Rated voltage (Ethernet)	60 V DC	-	-
Rated current (Ethernet)	4 A at 40°C	-	-
Rated voltage (power)	630 V AC / 850 V DC, 600V AC / DC (UL)	-	-
Rated current (power)	66 A at 50°C	-	-
Rated current	-	1.5 A	-
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	-	yes	-

Shielding (Ethernet)	yes	-	-
Contact resistance	< 10 mΩ (signal), < 5 mΩ (power)	-	-
Insulation resistance	≥ 100 MΩ (according to IEC 60512)	≥ 10 GΩ (according to IEC 60512-2)	-
<b>Mechanical data</b>			
Installation size	B40	RJ45	open end
Connector type	flange front assembly	plug	-
Configuration	straight, short	straight	-
Contact type	male+female	male	-
Number of positions (face)	pins 4+PE+4	4-pin	5-wire
Coding	EtherCAT-coded	-	-
Mechanical coding	key 1 (2 x 24 V DC + PE)	-	-
Wire termination	crimp connection	-	-
Mating cycles	≥ 100	≥ 750	-
Way of locking	bayonet	-	-
Weight	0.300 kg (0.6610 lb)	-	-
Body color	-	black	-
Body material	PA6, UL94 V0	TPU, UL 94 HB	-
Flange housing material	GD-Zn, Ni	-	-
Seal	NBR	-	-
Contact carrier material	PA, UL 94	PC UL 94 V-0	-
Contact carrier color (Ethernet)	yellow	-	-
Contact carrier color (power)	red	-	-
Contact plating	Au over Ni	Ni, Au gal.	-
Contact material	copper alloy	CuZn	-
<b>Environmental data</b>			
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	-	-
RoHS compliant	yes	yes	-
Ambient temperature (operation)	-30...+90°C, -22...+194°F	-40...+70°C, -40...+158°F	-
Protection rating	IP65/67 in screwed condition (according to IEC 60529)	IP20	-
Pollution level	3/2 (according to IEC 60664-1)	-	-

## Cable

Electrical data	
Rated voltage (Ethernet)	max. 300 V (peak value, not for high voltage purposes)
Rated voltage (power)	600 V
Attenuation of shielding	≥ 40 dB
Insulation resistance	≥ 500 MΩ/km
Unbalanced capacitance to ground	1600 pF/km
Mutual capacitance	52 nF/km (1 kHz)
Characteristic impedance (Ethernet)	100 Ω ±15 Ω (100 MHz)
Loop resistance (Ethernet)	≤ 115 Ω/km
Differential impedance (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)	5.3 ns/m
Electrical parameters (Ethernet)	based on Cat.5
Test voltage	≥ 2000 V
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (power)	19 x 0.30 mm
Conductor construction (Ethernet)	7 x 0.25 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> (AWG22)
Outer cable diameter	6.5 mm ± 0.2 mm (0.142" ± 0.0079")
Min. bending radius, moved	7.5 x outer cable diameter
Min. bending radius, fixed installation	5 x outer cable diameter
Weight	61.0 kg/km (41.0 lb/1000 ft)
Conductor material (Ethernet)	tinned copper
Shielding	aluminum-clad foil, braiding of tinned copper wires
Optical covering factor of shielding (Ethernet)	≥ 85 %
Use	drag-chain suitable
Max. acceleration	4 m/s <sup>2</sup>
Max. speed	4 m/s
Max. number of cycles	3 million

Wall thickness of wire insulation (Ethernet)	0.375 mm
Jacket color	green
Material jacket	PUR (polyurethane)
Wire color code	yellow, orange, white, blue (Ethernet) gray, green/yellow, black, blue, brown (Power)
Wire insulation material	PP polypropylene (Ethernet), PPE polyphenyl ether (Power)
Printing on the jacket	BECKHOFF ZB9020 Industrial Ethernet / EtherCAT Trailing Cable * CAT5PLUS * 22AWG (SHIELDED) (UL) E119100 CMX 75°C VERIFIED (UL) CAT 5E PATCH CABLE FRNC *"length in meters"
Printing color	black

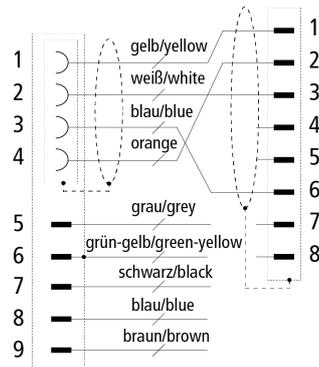
### Environmental data

Operation temperature range, moved	-40...+70°C, -40...+158°F
Operation temperature range, fixed installation	-20...+60°C, -4...+140°F
UV resistance	yes
Oil resistance	according to DIN EN 60811-2-1
Acid, lye and solvent resistance	depends on medium, concentration, temperature and duration
LABS-free	yes
Flame-retardant	yes
CFC-free	yes
Halogen-free	yes
Silicone-free	yes
Approvals	UL-Style AWM 20963

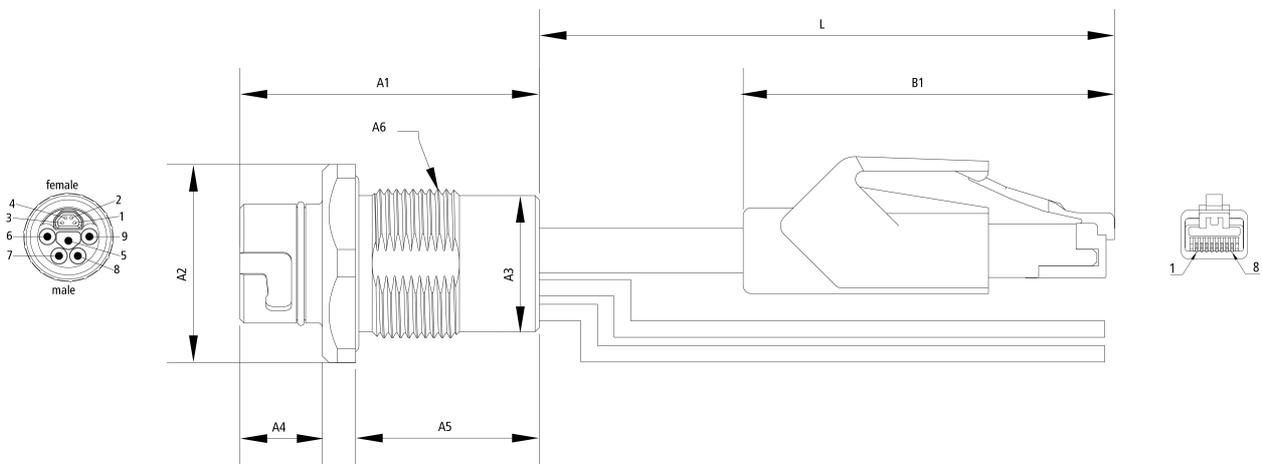
### Attenuation

Max. insertion loss								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	2.1	4.0	6.3	8.0	9.0	11.4	16.5	21.3
[db/100 ft]	0.6	1.2	1.9	2.4	2.7	3.5	5	6.5
Min. near-end crosstalk attenuation								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	80	76.0	70.0	65.0	63.0	60.0	55.0	50.0
[db/100 ft]	24.4	23.2	21.3	19.8	19.2	18.3	16.8	15.2

### Pin assignment



**Dimensions**



B1 43.80 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
- Delivery with counter nut
- 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
- The design of the pre-assembled cable shown here may differ from the products supplied, despite technically identical specifications.

**CE, UL**

CE yes

**Ordering information**

Ordering information	Length
ZK7425-AX00-A010	1.00 m
ZK7425-AX00-A030	3.00 m

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ZK7425-AX00-A050 5.00 m

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### Accessories

ZS7400-B009	B40 color coding flange for front/rear assembly, red, packaging unit = 10 pieces
ZS7400-B010	B40 color coding flange for front/rear assembly, yellow, packaging unit = 10 pieces
ZS7400-B011	B40 color coding flange for front/rear assembly, blue, packaging unit = 10 pieces
ZS7400-B012	B40 color coding flange for front/rear assembly, green, packaging unit = 10 pieces
ZS7400-B013	B40 color coding flange for front/rear assembly, orange, packaging unit = 10 pieces
ZS7400-B014	B40 color coding flange for front/rear assembly, gray, packaging unit = 10 pieces
ZS7400-B001	B40 protection cap, socket/flange, plastic, IP67, packaging unit = 10 pieces, including loss protection
ZS7400-B002	B40 protection cap, socket/flange, metal, IP67, packaging unit = 5 pieces, including loss protection

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