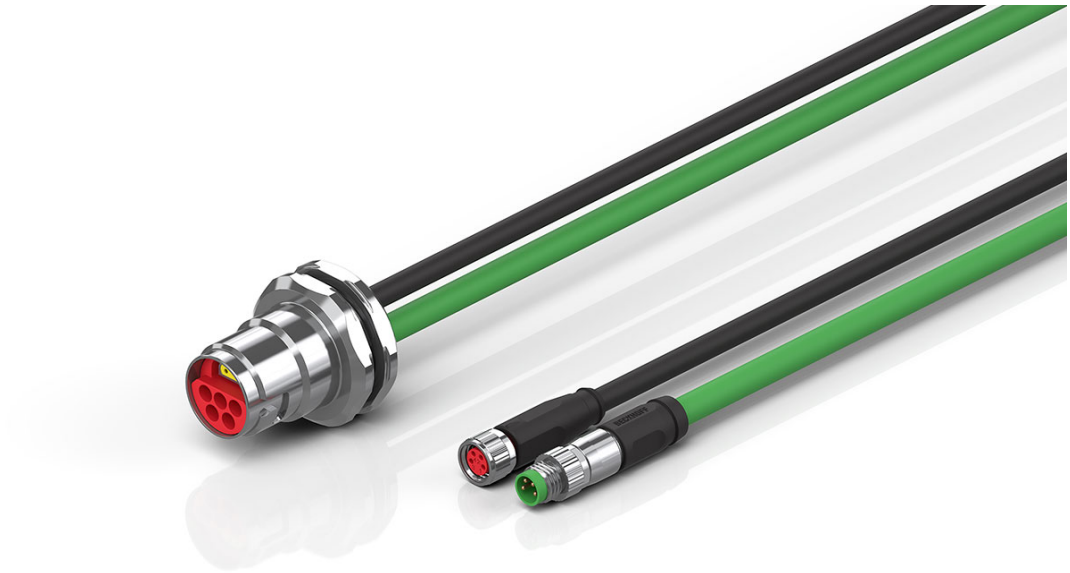
ZK7208-CB51-Axxx | B17, ENP cable, PUR, 5 G 1.5 mm² + (1 x 4 x AWG22), drag chain suitable, key 1 (2 x 24 V DC + PE)

B17, flange front assembly, straight, long, male+female, pins 4+PE+4, EtherCAT-coded – M8, plug, straight, male, 4-pin, A-coded – M8, socket, straight, female, 4-pin, A-coded



Plugs

Electrical data	Head A	Head B	Head D
Rated voltage	-	30 V (according to IEC 61076-2-104)	30 V (according to IEC 61076-2-104)
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)	15.5 A at 45 °C	-	-
Rated current	-	4 A at 40 °C (according to IEC 61076-2-104)	4 A at 40 °C (leaning on IEC 61076-2-104)
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	no
Shielding (Ethernet)	yes	-	-
Contact resistance	< 10 mΩ (signal), < 5 mΩ (power)	-	-
Insulation resistance	≥ 100 MΩ (according to IEC 60512)	≥ 100 GΩ (according to IEC 60512)	≥ 10 GΩ (according to IEC 60512-2)
Mechanical data			
Installation size	B17	M8	M8
Connector type	flange front assembly	plug	socket
Configuration	straight, long	straight	straight
Contact type	male+female	male	female
Number of positions (face)	pins 4+PE+4	4-pin	4-pin
Coding	EtherCAT-coded	A-coded	A-coded
Mechanical coding	key 1 (2 x 24 V DC + PE)	-	-
Wire termination	crimp connection	-	-
Recommended torque, nut	-	0.4 Nm	0.4 Nm
Mating cycles	≥ 100	≥ 100	≥ 100 (according to IEC 60512-9a)
Way of locking	bayonet	screw	screw
Weight per piece	0.170 kg (0.375 lb)	0.028 kg (0.0617 lb)	0.028 kg (0.0617 lb)
Body color	-	black	black
Body material	-	TPU, UL94	TPU, UL94
Flange housing material	GD-Zn, Ni	-	-
Coupling nut material	-	GD-Zn, Ni	CuZn, Ni
Seal	NBR, FPM	FPM	FPM
Contact carrier color	-	green	red
Contact carrier material	PA 6, UL 94 V0	PA 6, UL 94 V0	TPU GF, UL 94
Contact carrier color (Ethernet)	yellow	-	-
Contact carrier color (power)	red	-	-
Contact plating	Au over Ni	Ni, Au gal.	Ni, Au gal.
Contact material	copper alloy	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

Shock resistance	50 g (490 m/s²) conforms to IEC 60512-6c, 11 ms; 18 shocks per direction, 3 axes	-	-
Vibration resistance	5 g (50 m /s²) conforms to IEC 60512-6d, 10 Hz. ... 500 Hz.; 10 cycles per axis; 6 h full duration	-	-
RoHS compliant	yes	yes	yes
Ambient temperature (operation)	-30...+80 °C, -22...+176 °F	-30...+70 °C, -22...+158 °F	-30...+80 °C, -22...+176 °F
Protection rating	IP65/67 in screwed condition (according to IEC 60529)	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)	3/2 (according to IEC 60664-1)
Approvals	UL 2237: File E484763	-	-

Cable

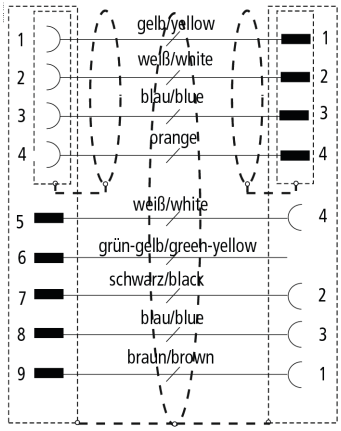
Electrical data	
Rated voltage (Ethernet)	max. 300 V (peak value, not for high voltage purposes)
Rated voltage (power)	600 V
Attenuation of shielding	≥ 40 dB
Insulation resistance	≥ 500 MΩ/km
Unbalanced capacitance to ground	1600 pF/km
Mutual capacitance	52 nF/km (1 kHz)
Characteristic impedance (Ethernet)	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 1.5 mm² (approx. AWG16)
Cross-section (Ethernet)	1 x 4 x 0.34 mm² (AWG 22)

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 kg/km (41.0 lb/1000 ft)
Conductor material (Ethernet)	copper, tinned
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^2
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

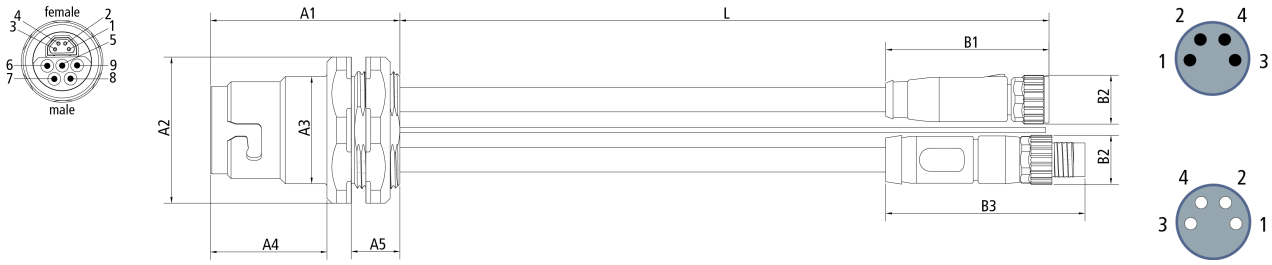
Attenuation								
Max. insertion loss								
Frequency [MHz]	**1**	**4**	**10**	**16**	**20**	**31.25**	**62.5**	**100**

[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

Contact assembly



Dimensions



A1	38.00 mm
A2	WAF30
A3	22.00 mm
A4	23.00 mm
A5	10.00 mm
A6	M24
B1	41.00 mm
B2	Ø 10.1 mm
D1	33.00 mm
D2	19.20 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
- Delivery with counter nut

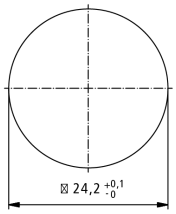
PE wire routed out separately with cable lug

CE, UL	
CE	yes

Installation dimensions

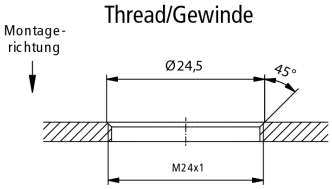
Hole/ Durchgangsloch

Panel cut out without twist protection/
Montageausschnitt ohne Verdrehsicherung

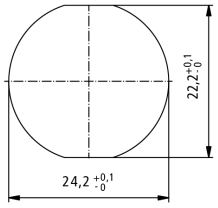


min. wall thickness 1.5 mm/
Min. Wandstärke 1,5 mm
max. wall thickness 5 mm/
Max. Wandtsärke 5 mm

Thread/Gewinde



Panel cut out with twist protection/
Montageausschnitt mit Verdrehsicherung



Ordering information	Length
ZK7208-CB51-A002	0.20 m
ZK7208-CB51-A005	0.50 m

Accessories	
ZS7200-B001	B17 protection cap, socket/flange, plastic, IP67, packaging unit = 10 pieces
ZS7200-B002	B17 protection cap, socket/flange, metal, IP67, packaging unit = 5 pieces
ZS7200-B009	B17 color coding flange for front/rear assembly, red, packaging unit = 10 pieces
ZS7200-B010	B17 color coding flange for front/rear assembly, yellow, packaging unit = 10 pieces
ZS7200-B011	B17 color coding flange for front/rear assembly, blue, packaging unit = 10 pieces
ZS7200-B012	B17 color coding flange for front/rear assembly, green, packaging unit = 10 pieces
ZS7200-B013	B17 color coding flange for front/rear assembly, orange, packaging unit = 10 pieces
ZS7200-B014	B17 color coding flange for front/rear assembly, gray, packaging unit = 10 pieces

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.