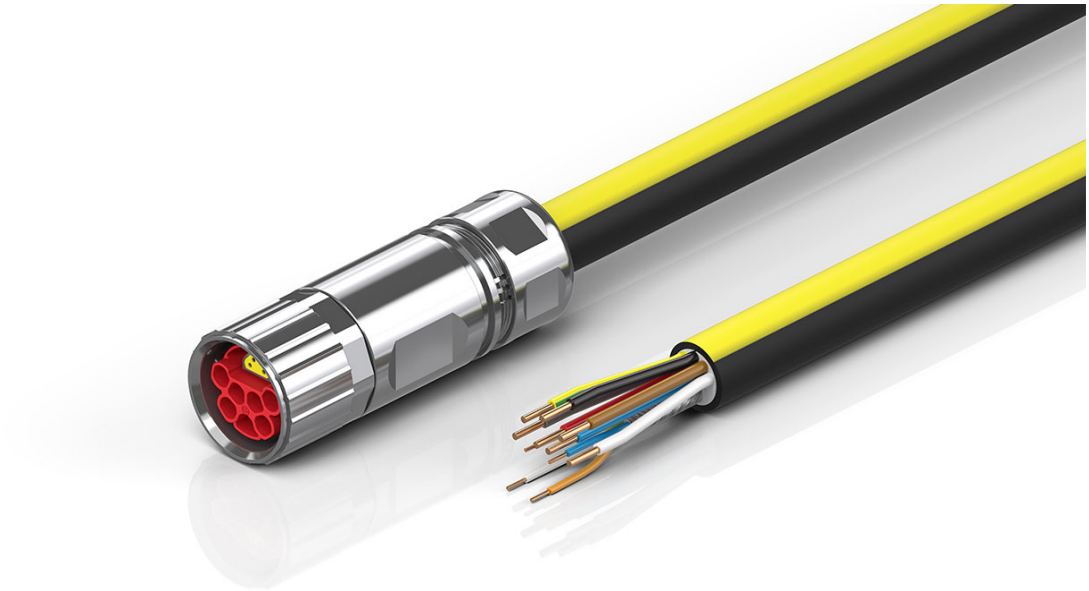
ZK7A55-6500-Axxx | B23, ENP cable, PUR, 7 G 2.5 mm² + (1 x 4 x AWG22), drag-chain suitable, key 3 (user-defined voltage)

B23, plug, straight, male+female, pins 6+PE+4, EtherCAT-coded – open end, pins 7+4



Plugs

Electrical data	Head A	Head B
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)	20 A at 30 °C	-
Rated impulse voltage (power)	6.0 kV	-
Rated impulse voltage (Ethernet)	1.0 kV	-
Shielding (Ethernet)	yes	-
Contact resistance	< 10 mΩ (signal), < 5 mΩ (power)	-
Insulation resistance	≥ 100 MΩ (according to IEC 60512)	-
Mechanical data		
Installation size	B23	open end
Connector type	plug	-

Configuration	straight	-
Contact type	male+female	-
Number of positions (face)	pins 6+PE+4	pins 7+4
Coding	EtherCAT-coded	-
Mechanical coding	key 3 (user-defined voltage)	-
Wire termination	crimp connection	-
Mating cycles	≥ 100	-
Way of locking	bayonet	-
Weight per piece	0.100 kg (0.220 lb)	-
Body color	black	-
Body material	TPU, UL 94 HB	-
Coupling nut material	GD-Zn, Ni	-
Seal	NBR, FPM	-
Contact carrier material	PA 6, UL 94 V0	-
Contact carrier color (Ethernet)	yellow	-
Contact carrier color (power)	red	-
Contact plating	Au over Ni	-
Contact material	copper alloy	-
Environmental data		
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	-
Ambient temperature (operation)	-30...+90°C, -22...+194°F	-
Protection rating	IP65/67 in screwed condition (according to IEC 60529)	-
Pollution level	3/2 (according to IEC 60664-1)	-

Cable

Electrical data	
Operating voltage	≤ 1000 V AC
Mutual capacitance wire/wire (Ethernet)	50 ±15 pF/m at 800 Hz (EN 50289-1-5)
Insulation resistance	≥ 500 MΩ * km (DIN EN 50289-1-4)
Mutual capacitance	AWG 22: 50 ± 15 pF/m at 800 Hz according to EN 50289-1-5
Wire resistance (power)	≤ 7.98 Ω/km (DIN EN 50395)
Wire resistance (Ethernet)	≤ 53,2 Ω/km (DIN EN 50289-1-2)
Characteristic impedance (Ethernet)	100 Ω ±15 Ω

Dielectric strength wire/wire (power)	4 kV x 5 min (EN 50289-1-3)
Dielectric strength wire/shield (power)	4 kV x 5 min (EN 50289-1-3)
Mechanical data	
Cable structure (Ethernet)	star quad
Conductor construction (Ethernet)	7-strand
Cross-section (power)	7 x 2.5 mm² (approx. AWG14)
Cross-section (Ethernet)	1 x 4 x 0.34 mm² (AWG22)
Outer cable diameter	14.3 mm ± 0.2 mm (0.563" ± 0.0079")
Min. bending radius, moved	7 x outer cable diameter
Min. bending radius, fixed installation	4 x outer cable diameter
Conductor material (power)	copper bare, Class 6 according to DIN EN 60228
Conductor material (signal/24V)	copper bare
Conductor material (Ethernet)	tinned copper
Shielding	aluminum-clad foil, braiding of tinned copper wires, coupling
Optical covering factor of shielding (Ethernet)	≥ 85 %
Optical covering factor of shielding (total)	yes
Use	drag-chain suitable
UL-Style	UL758 (AMW) Style 22381/11657 90°C 1000V
Max. acceleration	30 m/s² by 5 m travel distance 15 m/s² by 10 m travel distance 5 m/s² by 20 m travel distance
Max. speed	4 m/s
Max. number of cycles	10 million
Jacket color	black (similar to RAL 9005) with yellow stripe (similar to RAL 1003)
Material jacket	PUR (polyurethane)
Wire color code	Ethernet: white, yellow, blue, orange Power: black, brown, gray, red, blue, white, yellow/green
Wire insulation material	PP (polypropylene)
Printing on the jacket	XXXXM Beckhoff Automation GmbH & Co. KG-Germany - Industrial Ethernet / EtherCAT ZBxxx 7 G 2,5 + (4xAWG22)/C E356538 AWM I/II A/B 90°C 1000V FT2 RoHS MM/JJ
Printing color	white
Torsion angle in °/m	max. ± 30 °/m
Environmental data	
Operation temperature range, moved	-40...+90°C, -40...+194°F
Operation temperature range, fixed installation	-50...+90°C, -58...+194°F
UV resistance	yes
Oil resistance	according to EN 50363-10-2

Flame-retardant	acc. to IEC 60332-1-2, acc. to UL/CSA FT1, acc. to UL VW1, acc. to UL/CSA FT2
CFC-free	yes
Halogen-free	according to IEC 60754-1
Silicone-free	yes
Approvals	cRUus

Attenuation

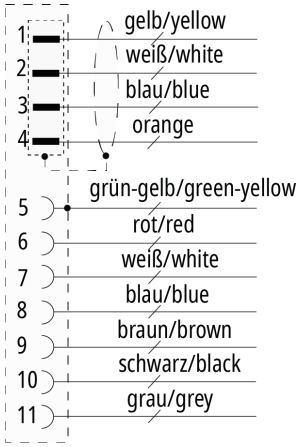
Max. insertion loss

Frequency [MHz]	**1**	**4**	**10**	**16**	**20**	**31.25**	**62.5**	**100**
[db/100 m]	2.1	4.1	6.5	8.3	9.3	11.7	17.0	22.0
[db/100 ft]	0.6	1.2	2	2.5	2.8	3.6	5.2	6.7

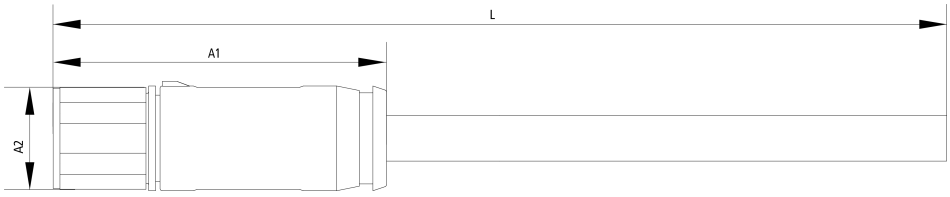
Min. near-end crosstalk attenuation

Frequency [MHz]	**1**	**4**	**10**	**16**	**20**	**31.25**	**62.5**	**100**
[db/100 m]	65.3	56.3	50.3	47.2	45.8	42.9	38.4	35.3
[db/100 ft]	19.9	17.2	15.3	14.4	14	13.1	11.7	10.8

Contact assembly



Dimensions



A1	93.60 mm
A2	28.50 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

CE, UL	
CE	yes

Ordering information	Length
ZK7A55-6500-A050	5.00 m
ZK7A55-6500-A100	10.00 m

Further length on request

Accessories	
ZB8805-0002	Flange/Panel feed-through for B23 pre-assembled, for fixing the connector, plastic, including screws, washers and lock nuts

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.