



Highlights

- I/O accessories from sensor to controller
- Extensive portfolio of pre-assembled cables, goods sold by the metre and connectors
- Optimised and tested for use with Beckhoff products

Accessories

Cables, connectors and further accessories

► www.beckhoff.com/io-accessories

- 636 System overviews
- 636 EtherCAT Box
- 638 EtherCAT P Box
- 640 EtherCAT Terminal

642 Cables

- 642 RJ45 | EtherCAT cable (copper-based)
- 643 SC | EtherCAT cable (fibre optic)
- 644 M8 | EtherCAT cable
- 646 M12 | Ethernet/EtherCAT cable
- 647 M8, M12 | Ethernet/EtherCAT connectors
- 648 M8 | EtherCAT P cable
- 649 M8 | EtherCAT P connectors for field assembly
- 650 M8 | EtherCAT P flanges
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- 653 M8 | Sensor cable
- 655 M12 | Sensor cable

658 Connectors

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- 659 7/8" | Connectors for field assembly
- 659 Special connectors

660 Power distribution box

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- 663 ECP B12 | ECP connector family in size B12, 2-pin
- 664 ENP B17 | ENP connector family in size B17, 3-pin
- 668 ECP B17 | ECP connector family in size B17, 3-pin
- 672 ENP B17 | ENP connector family in size B17, 4-/5-pin
- 675 ECP B17 | ECP connector family in size B17, 4-/5-pin
- 678 ENP B23 | ENP connector family in size B23
- 680 ECP B23 | ECP connector family in size B23
- 683 ENP/ECP | Accessories for ENP/ECP connector family

686 Fieldbus cables

- 686 Lightbus
- 686 PROFIBUS, Modbus, RS232, RS485

- 688 CANopen, DeviceNet
- 690 Interbus
- 690 SERCOS
- 690 K-bus, signal cables, IP-Link

692 Software and programming

- 692 Configuration software KS2000
- 692 USB cable
- 693 RS232 programming cable

694 Spare parts

694 Marking and colour coding

696 Housings and assembly

- 696 Shielding connection system
- 696 EMC accessories for ELM
- 697 Bus system housings
- 698 Tools

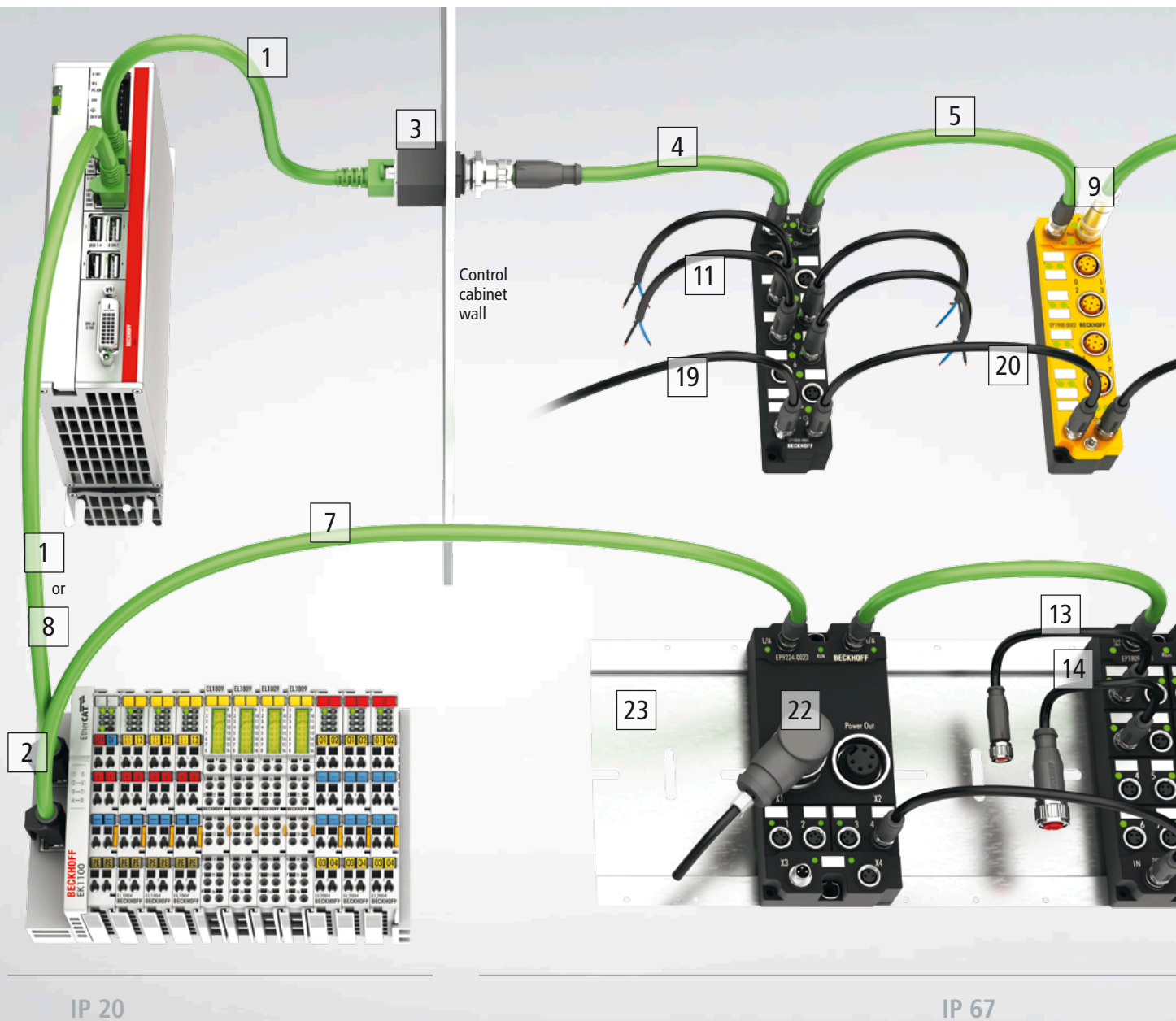
699 External braking resistor

700 Fan cartridge

701 Recalibration service

EtherCAT Box

► www.beckhoff.com/ethercat-box-accessories

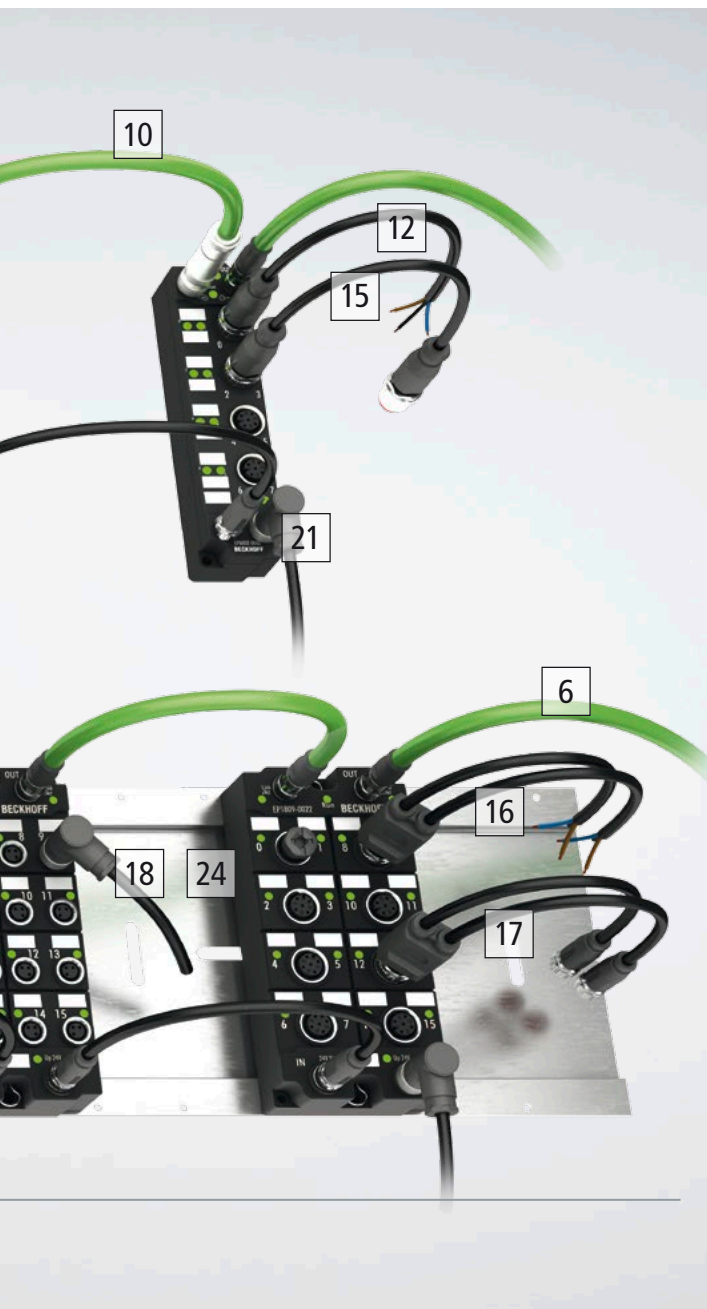


IP 20 | EtherCAT cable

- | | | |
|---|--|-----|
| 1 | ZK1090-9191-xxxx Industrial Ethernet/EtherCAT patch cable, Cat. 5, PUR, 4 x 2 x AWG26 | 642 |
| 2 | ZS1090-0003 RJ45, IP 20, plug, for field assembly, plastic, IDC, straight, male, 4-pin, AWG24-22 | 643 |

IP 67 | EtherCAT cable

- | | | |
|---|---|-----|
| 3 | ZK1090-6292-xxxx M12, flange, straight, 4-pin – RJ45, socket, straight, 8-pin | 646 |
| 4 | ZK1090-3161-xxxx M8, plug, straight, 4-pin – M12, plug, straight, 4-pin | 644 |
| 5 | ZK1090-3131-xxxx M8, plug, straight, 4-pin – M8, plug, straight, 4-pin | 644 |
| 6 | ZK1090-3100-xxxx M8, plug, straight, 4-pin – open end | 644 |
| 7 | ZK1090-3191-xxxx M8, plug, straight, 4-pin – RJ45, plug, straight, 8-pin | 644 |



8	ZB9010 Industrial Ethernet/EtherCAT cable, fixed installation, AWG22	642
	ZB9020 Industrial Ethernet/EtherCAT cable, PUR, AWG22, drag-chain suitable	
9	ZS1090-1006 M8, plug, metal, screw type, straight, male, 4-pin	647
10	ZB9030 Industrial Ethernet/EtherCAT cable, PVC, AWG26, fixed installation	642
	ZB9032 Industrial Ethernet/EtherCAT cable, PUR, AWG26, drag-chain suitable	

IP 67 | Sensor cable

11	ZK2000-2100-xxxx M8, plug, straight, 3-pin – open end	653
12	ZK2000-6100-xxxx M12, plug, straight, 4-pin – open end	655
13	ZK2000-2122-xxxx M8, plug, straight, 3-pin – M8, socket, straight, 3-pin	653
14	ZK2000-2162-xxxx M8, plug, straight, 3-pin – M12, socket, straight, 4-pin	653
15	ZK2000-6162-xxxx M12, plug, straight, 4-pin – M12, socket, straight, 4-pin	655
16	ZK2000-6500-xxxx M12, plug, straight, 4-pin – DUO: 2 x open end	655
17	ZK2000-6522-xxxx M12, plug, straight, 4-pin – DUO: 2 x M8, socket, straight, 2 x 3-pin	655
18	ZK2000-6300-xxxx M12, plug, angled, 4-pin – open end	655

IP 67 | Power cable

19	ZK2020-3200-xxxx M8, plug, straight, 4-pin – open end	651
20	ZK2020-3132-xxxx M8, plug, straight, 4-pin – M8, socket, straight, 4-pin	651
21	ZK2020-3334-xxxx M8, plug, angled, 4-pin – M8, socket, angled, 4-pin	651
22	ZK2030-1400-xxxx 7/8", socket, angled, 5-pin – open end	652

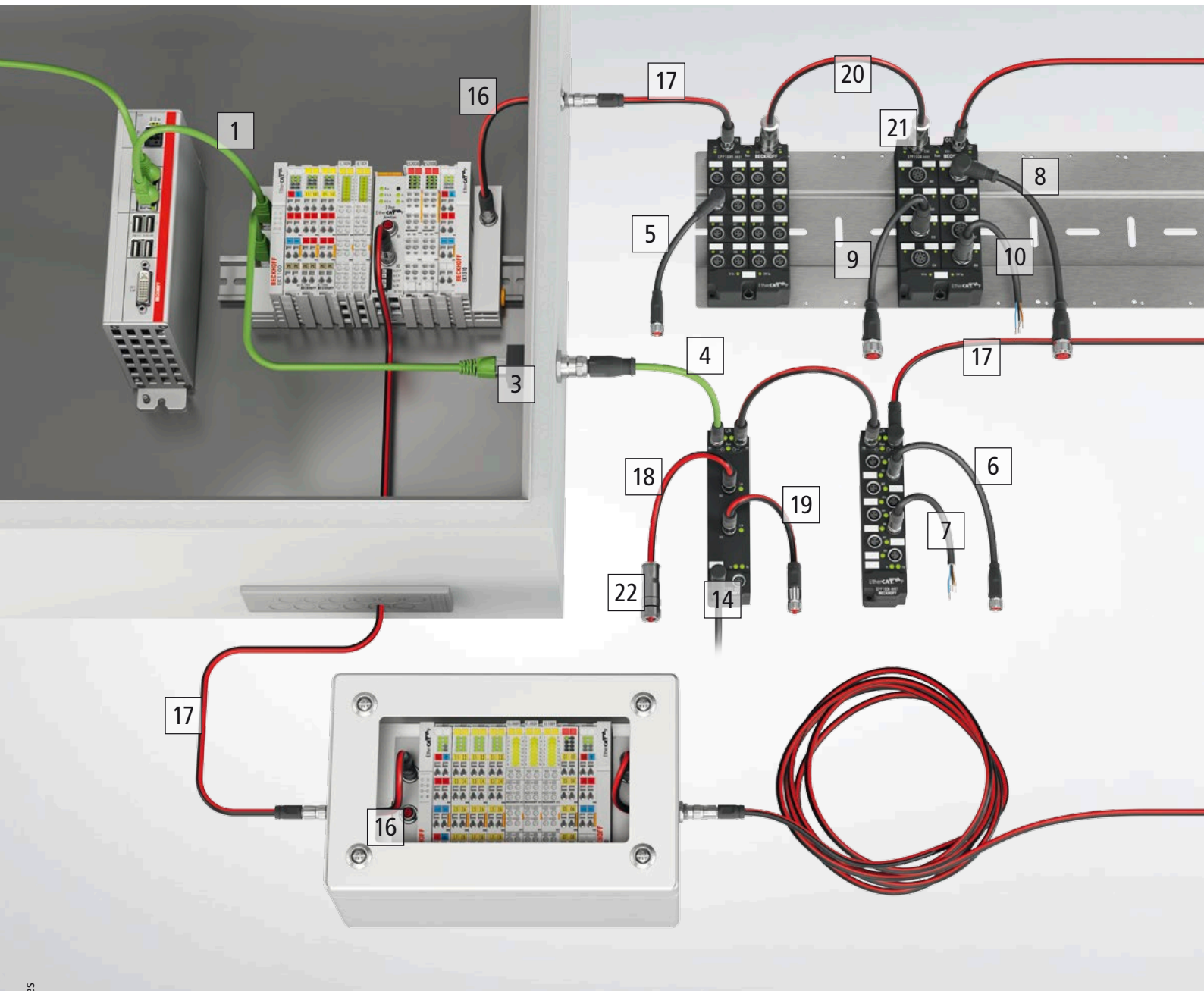
Assembly

23	ZS5300-0001 Mounting plate for 15 Extension Box or EtherCAT Box modules, stainless steel, 500 mm	698
24	ZS5000-0020 Blanking plug, plastic (IP 67) for M12 external thread	698

Note: The pictured products give examples of the wide range of EtherCAT Box accessories. For further variants and connection possibilities please see the respective catalog pages.

EtherCAT P Box

► www.beckhoff.com/ethercat-p-box-accessories

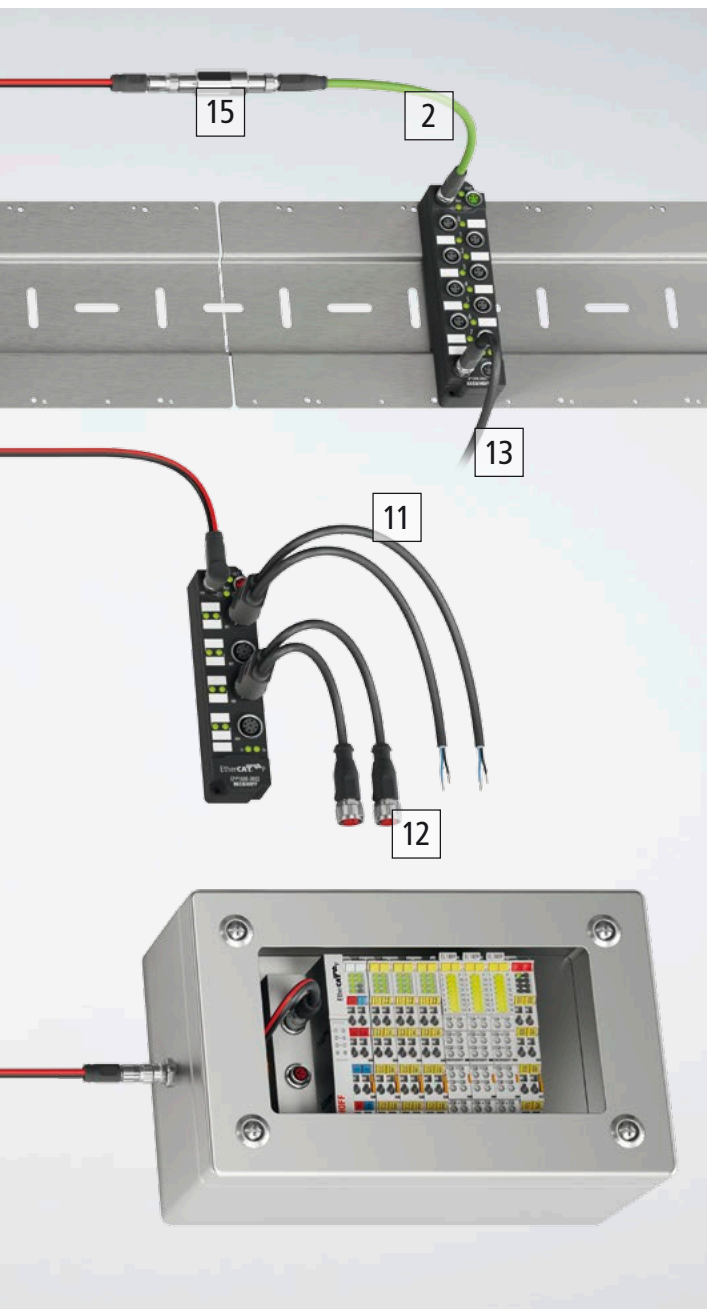


EtherCAT cable

1	ZK1090-9191-xxxx Industrial Ethernet/EtherCAT patch cable, Cat. 5, PUR, 4 x 2 x AWG26	642
2	ZK1090-3131-xxxx M8, plug, straight, 4-pin – M8, plug, straight, 4-pin	644
3	ZK1090-6292-0000 M12, flange, straight, 4-pin – RJ45, socket, straight, 8-pin	647
4	ZK1090-3161-xxxx M8, plug, straight, 4-pin – M12, plug, straight, 4-pin	644

M8 | Sensor cable

5	ZK2000-2322-xxxx M8, plug, angled, 3-pin – M8, socket, straight, 3-pin	653
6	ZK2000-2122-xxxx M8, plug, straight, 3-pin – M8, socket, straight, 3-pin	653
7	ZK2000-2100-xxxx M8, plug, straight, 3-pin – open end	653



M12 | Sensor cable

8	ZK2000-6362-xxxx M12, plug, angled, 4-pin – M12, socket, straight, 4-pin	655
9	ZK2000-6162-xxxx M12, plug, straight, 4-pin – M12, socket, straight, 4-pin	655
10	ZK2000-6100-xxxx M12, plug, straight, 4-pin – open end	655
11	ZK2000-6500-xxxx M12, plug, straight, 4-pin – DUO: 2 x open end	655
12	ZK2000-6562-xxxx M12, plug, straight, 4-pin – DUO: 2 x M12, socket, straight, female, 2 x 4-pin	655

M8 | Power cable

13	ZK2020-3200-xxxx M8, plug, straight, 4-pin – open end	651
14	ZK2020-3400-xxxx M8, socket, angled, 4-pin – open end	651

EtherCAT P to EtherCAT

15	ZS7000-0005 Cable adapter passive, EtherCAT P to EtherCAT: M8 socket, EtherCAT-P-coded – M8 socket, EtherCAT	649
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M8 | EtherCAT P cable

16	ZK700x-0105-0xxx M8, plug, straight, 4-pin – M8, flange, straight, 4-pin	648
17	ZK700x-0101-0xxx M8, plug, straight, 4-pin – M8, plug, straight, 4-pin	648
18	ZK700x-0100-0xxx M8, plug, straight, 4-pin – open end	648
19	ZK700x-0102-0xxx M8, plug, straight, 4-pin – M8, socket, straight, 4-pin	648

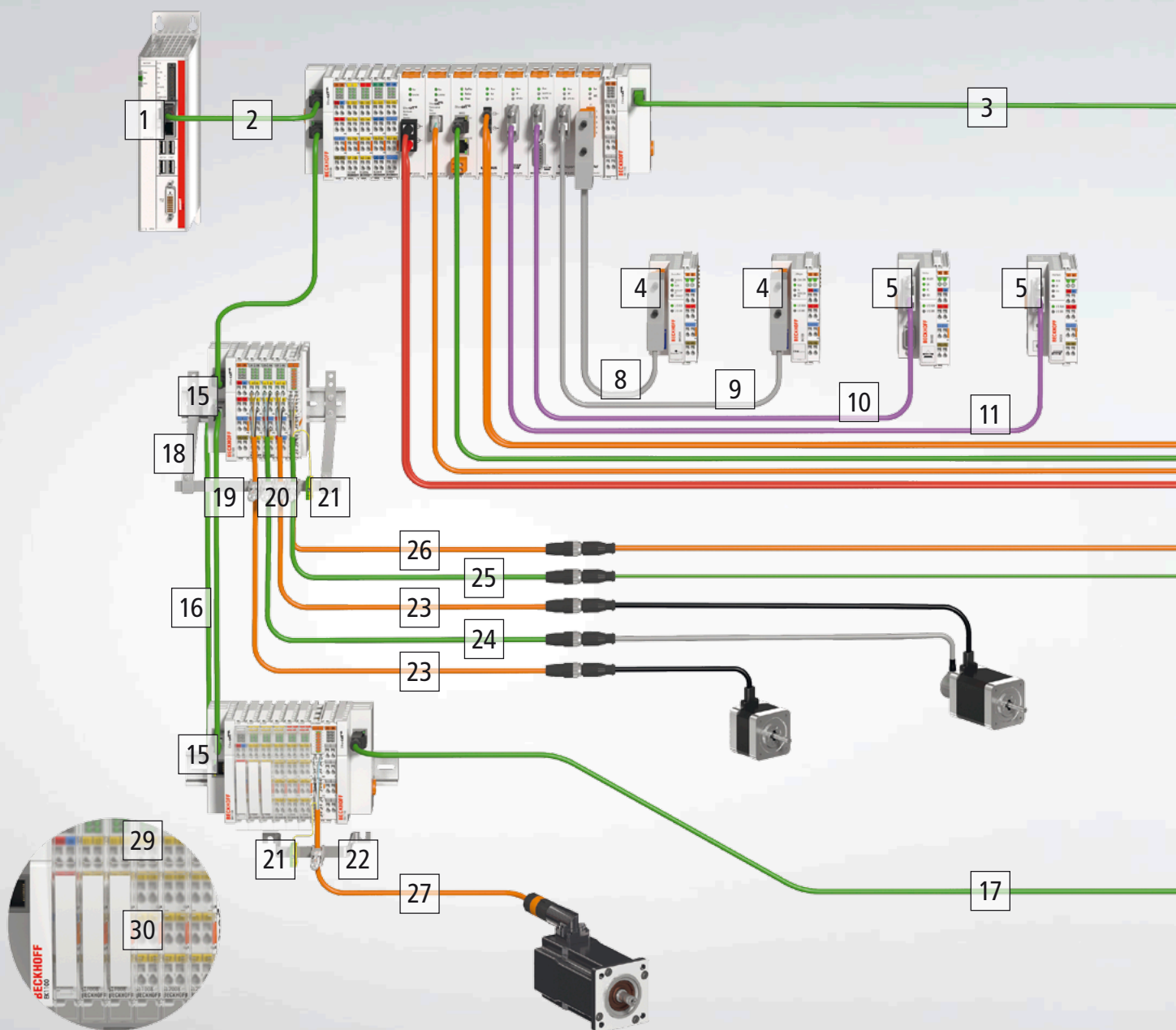
M8 | EtherCAT P, for field assembly

20	ZB700x EtherCAT P cable, shielded, PUR, drag-chain suitable	648
21	ZS7000-0001 M8, plug, 4-pin, straight, EtherCAT-P-coded, for field assembly, metal, crimping method	649
22	ZS7000-0004 M8, socket, 4-pin, straight, EtherCAT-P-coded, for field assembly, metal, screw type	649

Note: The pictured products give examples of the wide range of EtherCAT P Box accessories. For further variants and connection possibilities please see the respective catalog pages.

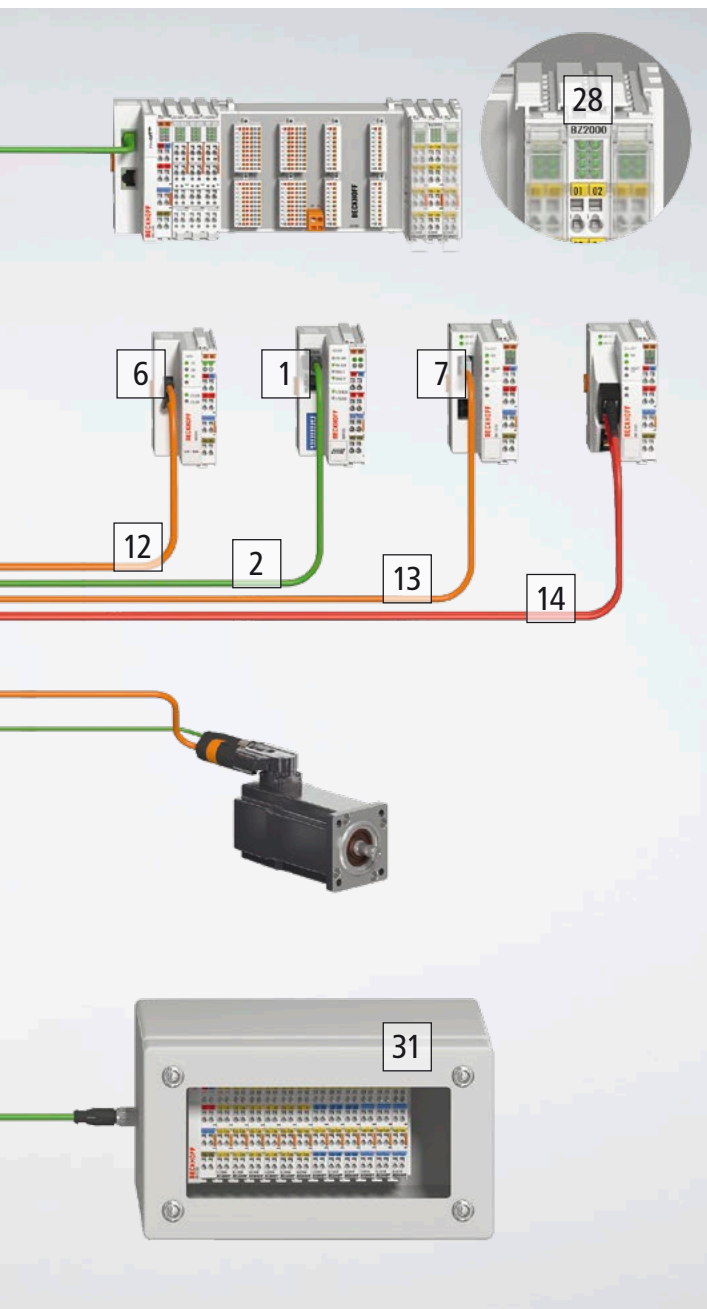
EtherCAT Terminal

► www.beckhoff.com/EtherCAT-accessories



Cables and connector

1	ZS1090-0003 EtherCAT/Ethernet, RJ45, IP 20, plug, for field assembly, plastic, IDC, straight, male, 4-pin, AWG24-22	643	5	ZS1031-3000 9-pin D-sub connector for PROFIBUS (12 Mbaud) with integrated termination resistor	687
2	ZB9010 Industrial Ethernet/EtherCAT cable, fixed installation, CAT5, 1 x 4 x AWG22	642	6	Z1000 Standard connector for 1000 µm plastic fibre	686
3	ZK1090-9191-xxxx Industrial Ethernet/EtherCAT patch cable, Cat. 5, PUR, 4 x 2 x AWG26	642	7	ZS1090-0008 Connector set for direct connector assembly of POF cables	643
4	ZS1052-3000 5-pin open style connector for CANopen/DeviceNet with integrated termination resistor	688	8	ZB5200 DeviceNet cable	688
			9	ZB5100 CAN cable	688



10	ZB4200 Interbus remote bus cable	690
11	ZB3200 PROFIBUS cable	686
12	Z1100 Plastic fibre optic	686
13	Z1190 POF fibre-optic duplex cable for direct connector assembly	643
14	ZK1091-1001-xxxx Fibre-optic multimode cable, SC duplex plug	643

15	ZS1090-0005 EtherCAT/Ethernet RJ45 plug, 8-pin, IP 20, for field assembly	643
16	ZB9020 Industrial Ethernet/EtherCAT cable, drag-chain suitable	642
17	ZK1090-6191-0xxx EtherCAT cable, M12, plug, straight, male, 4-pin, D-coded – RJ45, plug, straight, male, 8-pin	646

Shielding connection system

18	ZB8520 Mounting rail holder for shield busbar	696
19	ZB8510 Shield busbar 10 x 3 mm	696
20	ZB8500 Clamp strap for shield connection with knurled screw	696
21	ZB8530 U-clamp terminal up to 4 mm² for PE connection to the rail	696
22	ZB8511 Shield busbar clamp	696

Motor cable

23	ZK4000-6700-2xxx Motor cable, shielded, for AS1000 stepper motors	1 426
24	ZK4000-5100-2xxx Encoder cable for AS1000 stepper motors	1 426
25	ZK4724-0410 Resolver cable for AM8100 and AM3100 servomotors	1 417
26	ZK4704-0411 Motor cable for AM8100 and AM3100 servomotors	1 417
27	ZK4704-0421 Motor cable for AM8100 servomotors with OCT	1 417

Marking material and assembly

28	BZ1xxx, BZ200x Marking material, contact labels	694
29	BZ3200 Insertable label cover, transparent, pluggable	695
30	BZ5100 Push-in strip for labels	695
31	BG156x Bus system housing with mounting rails and holes	697

Note: The pictured products give examples of the wide range of EtherCAT Terminal accessories. For further variants and connection possibilities please see the respective catalog pages.

RJ45 | EtherCAT cable (copper-based)

Cables sold by the metre

Ordering information	Industrial Ethernet/EtherCAT cable
ZB9032	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, drag-chain suitable, CAT5, green
ZB9035	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, drag-chain suitable, CAT5, yellow
ZB9020	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, green
ZB9024	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, yellow
ZB9021	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, capable of torsion, CAT5, green
ZB9010	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG22, fixed installation, CAT5, green
ZB9013	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG22, fixed installation, CAT5, yellow
ZB9030	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG26, fixed installation, CAT5, green

Pre-assembled cable/patch cable

The pre-assembled Industrial Ethernet/EtherCAT cables with RJ45 plug enable fast, easy wiring inside the control cabinet and are suitable for short distances on the machine. The robust, industrial quality PUR cables distinguish themselves from office cables by both their mechanical and their EMC characteristics.

Ordering information	AWG26 cable, pre-assembled with RJ45 plug, green	Pict.
ZK1090-9191-0xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin	A

Ordering information	AWG26 cable, pre-assembled with RJ45 plug, yellow
ZK1093-9191-0xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin

For highly flexible applications

Ordering information	AWG26 cable, pre-assembled with RJ45 plug, green (ZB9032)	Pict.
ZK1090-9191-6xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin	B

Ordering information	AWG26 cable, pre-assembled with RJ45 plug, yellow (ZB9035)
ZK1093-9191-6xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin

For flexible applications

Ordering information	AWG22 cable, pre-assembled with RJ45 plug, green (ZB9020)	Pict.
ZK1090-9191-1xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin	B

Ordering information	AWG22 cable, pre-assembled with RJ45 plug, yellow (ZB9024)
ZK1093-9191-1xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin

For fixed installation

Ordering information	AWG26 cable, pre-assembled with RJ45 plug, green (ZB9030)	Pict.
ZK1090-9191-3xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin	B

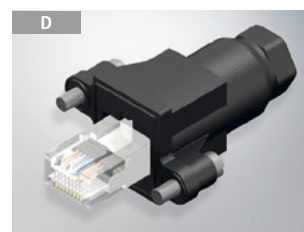
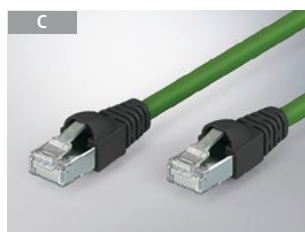
Ordering information	AWG22 cable, pre-assembled with RJ45 plug, yellow (ZB9013)
ZK1093-9191-3xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin

Industrial Ethernet patch cable, CAT6

Ordering information	AWG26 cable, CAT6, pre-assembled	Pict.
ZK1096-9191-0xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin	C

Connectors for field assembly

Ordering information	RJ45 Ethernet/EtherCAT connectors IP 20 and IP 65/67	Pict.
ZS1090-0002	RJ45, IP 67, plug, plastic, straight, male, 8-pin, 0.14...0.34 mm ² , Ø 4...5.4 mm	D
ZS1090-0003	RJ45, IP 20, plug, plastic, IDC, straight, male, 4-pin, AWG24-22, Ø 6...6.9 mm	E
ZS1090-0005	RJ45, IP 20, plug, plastic, IDC, straight, male, 8-pin, AWG26-22, Ø 5.5...8.5 mm	F



Illustrations similar

SC | EtherCAT cable (fibre-optic)

Pre-assembled cable

Ordering information	Fibre-optic cables for EK1501, EK1521, CU1521, CU1521-0010 (multimode 50/125 µm)
ZK1091-1001-0xxx	fibre-optic duplex cable, SC connector on both sides

Cables sold by the metre and connectors for field assembly

The POF (Polymeric Optical Fibre) can be easily assembled in the field. The combination of cable sold by metre and connectors is available for EK1541, EK1561 and CU1561.

Ordering information	POF fibre-optic for EK1541, EK1561 and CU1561
Z1190	POF fibre-optic duplex cable 980/1000 µm for direct connector assembly, sold by metre, PUR, 2-wire, drag-chain suitable, red
ZS1090-0008	connector set for direct connector assembly for POF cables, contains 10 connectors and 1 polishing set including sanding gauge and polishing paper

M8 | EtherCAT cable

For highly flexible applications

Ordering information	Sold by the metre	Pict.
ZB9032	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, drag-chain suitable, CAT5, green	A
ZB9035	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, drag-chain suitable, CAT5, yellow	B

Ordering information	AWG26 cable, green, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK1090-3100-0xxx	open end	C
ZK1090-3131-0xxx	M8 plug (4-pin/straight)	D
ZK1090-3132-0xxx	M8 socket (4-pin/straight)	E
ZK1090-3134-0xxx	M8 socket (4-pin/angled)	F
ZK1090-3138-0xxx	M8 socket (4-pin/straight), A-coded	G
ZK1090-3161-0xxx	M12 plug (4-pin/straight), D-coded	H
ZK1090-3163-0xxx	M12 plug (4-pin/angled), D-coded	I
ZK1090-3166-0xxx	M12 socket flange (4-pin/straight), D-coded	J
ZK1090-3191-0xxx	RJ45 plug (straight)	K

Ordering information	AWG26 cable, green, pre-assembled with M8 socket (4-pin/straight) to	Pict.
ZK1090-3200-0xxx	open end	L
ZK1090-3232-0xxx	M8 socket (4-pin/straight)	M
ZK1090-3291-0xxx	RJ45 plug (straight)	N

Ordering information	AWG26 cable, green, pre-assembled with M8 plug (4-pin/angled) to	Pict.
ZK1090-3333-0xxx	M8 plug (4-pin/angled)	O

Ordering information	AWG26 cable, yellow, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK1093-3100-0xxx	open end	
ZK1093-3131-0xxx	M8 plug (4-pin/straight)	
ZK1093-3132-0xxx	M8 socket (4-pin/straight)	
ZK1093-3161-0xxx	M12 plug (4-pin/straight), D-coded	
ZK1093-3191-0xxx	RJ45 plug (straight)	

For flexible applications

Ordering information	Sold by the metre	Pict.
ZB9020	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, green	A
ZB9024	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, yellow	B

Ordering information	AWG22 cable, green, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK1090-3100-1xxx	open end	C
ZK1090-3131-1xxx	M8 plug (4-pin/straight)	D
ZK1090-3132-1xxx	M8 socket (4-pin/straight)	E
ZK1090-3161-1xxx	M12 plug (4-pin/straight), D-coded	H
ZK1090-3191-1xxx	RJ45 plug (straight)	K

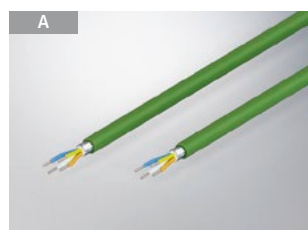
Ordering information	AWG22 cable, yellow, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK1093-3100-1xxx	open end	
ZK1093-3131-1xxx	M8 plug (4-pin/straight)	

For robot applications

Ordering information	Sold by the metre	Pict.
ZB9021	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, capable of torsion, CAT5, green	A
Ordering information	AWG22 cable, green, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK1090-3131-6xxx	M8 plug (4-pin/straight)	D
ZK1090-3161-6xxx	M12 plug (4-pin/straight), D-coded	H

For fixed installation

Ordering information	Sold by the metre	Pict.
ZB9030	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG26, fixed installation, CAT5, green	A
ZB9013	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG22, fixed installation, CAT5, yellow	B
Ordering information	Cable, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK1090-3100-3xxx	open end	C
ZK1090-3131-3xxx	M8 plug (4-pin/straight)	D
ZK1090-3132-3xxx	M8 socket (4-pin/straight)	E
ZK1090-3191-3xxx	RJ45 plug (straight)	K



M12 | Ethernet/EtherCAT cable

For highly flexible applications

Ordering information	Sold by the metre	Pict.
ZB9032	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, drag-chain suitable, CAT5, green	A
ZB9035	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, drag-chain suitable, CAT5, yellow	B

Ordering information	AWG26 cable, green, pre-assembled with M12 plug (4-pin/straight), D-coded, to	Pict.
ZK1090-6100-4xxx	open end	C
ZK1090-6161-4xxx	M12 plug (4-pin/straight), D-coded	D
ZK1090-6191-4xxx	RJ45 plug (straight)	E

Ordering information	AWG26 cable, green, pre-assembled with M12 socket flange (4-pin/straight), D-coded, to	Pict.
ZK1090-6292-4xxx	RJ45 plug (straight)	F
ZK1090-6600-4xxx	open end	G

Ordering information	AWG26 cable, yellow, pre-assembled with M12 plug (4-pin/straight) to	Pict.
ZK1093-6100-4xxx	open end	
ZK1093-6161-4xxx	M12 plug (4-pin/straight), D-coded	

For flexible applications

Ordering information	Sold by the metre	Pict.
ZB9020	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, green	A
ZB9024	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, yellow	B

Ordering information	AWG22 cable, green, pre-assembled with M12 plug (4-pin/straight), D-coded, to	Pict.
ZK1090-6100-0xxx	open end	C
ZK1090-6161-0xxx	M12 plug (4-pin/straight), D-coded	D
ZK1090-6162-0xxx	M12 socket (4-pin/straight), D-coded	H
ZK1090-6166-0xxx	M12 socket flange (4-pin/straight), D-coded	I
ZK1090-6191-0xxx	RJ45 plug (straight)	E

Ordering information	AWG22 cable, green, pre-assembled with M12 socket flange (4-pin/straight), D-coded, to	Pict.
ZK1090-6292-0xxx	RJ45 plug (straight)	F
ZK1090-6600-0xxx	open end	G

Ordering information	AWG22 cable, green, pre-assembled with M12 plug (4-pin/angled), D-coded, to	Pict.
ZK1090-6300-0xxx	open end	J
ZK1090-6363-0xxx	M12 plug (4-pin/angled), D-coded	

Ordering information	AWG22 cable, yellow, pre-assembled with M12 plug (4-pin/straight) to	Pict.
ZK1093-6100-0xxx	open end	
ZK1093-6161-0xxx	M12 plug (4-pin/straight), D-coded	
ZK1093-6191-0xxx	RJ45 plug (straight)	

For fixed installation

Ordering information	Sold by the metre	Pict.
ZB9030	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG26, fixed installation, CAT5, green	A
ZB9013	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG22, fixed installation, CAT5, yellow	B

Ordering information	AWG26 cable, green, pre-assembled with M12 plug (4-pin/straight), D-coded, to	Pict.
ZK1090-6191-3xxx	RJ45 plug (straight)	E



M8, M12 | Ethernet/EtherCAT connectors

Ordering information	M8 Ethernet/EtherCAT connectors IP 65/67	Pict.
ZS1090-1006	M8, plug, metal, screw type, straight, male, 4-pin, 0.14...0.5 mm ² , Ø 4.9...6.5 mm	A
ZS1090-1007	M8, socket, metal, screw type, straight, female, 4-pin, 0.14...0.5 mm ² , Ø 4.9...6.5 mm	B

Ordering information	M12 Ethernet/EtherCAT connectors IP 65/67	Pict.
ZS1090-0004	M12, plug, metal, screw type, straight, male, 4-pin, D-coded, 0.25...0.75 mm ² , Ø 5...8 mm	C
ZS1090-0010	M12, socket, metal, screw type, straight, female, 4-pin, D-coded, 0.25...0.75 mm ² , Ø 5...8 mm	D
ZK1090-6292-0000	M12, flange, straight, female, 4-pin, D-coded – RJ45, socket, straight, female, 8-pin	E

Illustrations see next page



Illustrations similar

M8 | EtherCAT P cable

For flexible applications, AWG24

Ordering information	Sold by the metre	Pict.
ZB7001	EtherCAT P cable, shielded, PUR, drag-chain suitable, (1 x 4 x AWG24/7), black with red stripe, OD = 5.2 mm (±0.2 mm)	A

Ordering information	AWG24 cable, pre-assembled	Pict.
ZK7001-0100-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – open end	B
ZK7001-0101-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, plug (4-pin/straight), EtherCAT-P-coded	C
ZK7001-0102-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, socket (4-pin/straight), EtherCAT-P-coded	D
ZK7001-0105-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, socket (4-pin/straight), EtherCAT-P-coded	E
ZK7001-0300-0xxx	M8, plug, angled, male, 4-pin, EtherCAT-P-coded – open end	F
ZK7001-0303-0xxx	M8, plug, angled, male, 4-pin, EtherCAT-P-coded – M8, plug, angled, male, 4-pin, EtherCAT-P-coded	G

For flexible applications, AWG22

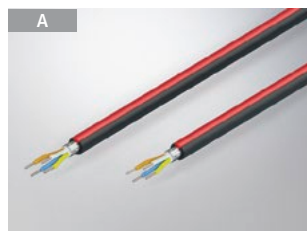
Ordering information	Sold by the metre	Pict.
ZB7000	EtherCAT P cable, shielded, PUR, drag-chain suitable, (1 x 4 x AWG22/7), black with red stripe, OD = 6.5 mm (±0.2 mm)	A

Ordering information	AWG22 cable, pre-assembled	Pict.
ZK7000-0100-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – open end	B
ZK7000-0101-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, plug (4-pin/straight), EtherCAT-P-coded	C
ZK7000-0102-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, socket (4-pin/straight), EtherCAT-P-coded	D
ZK7000-0105-0xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, socket (4-pin/straight), EtherCAT-P-coded	E
ZK7000-0300-0xxx	M8, plug, angled, male, 4-pin, EtherCAT-P-coded – open end	F
ZK7000-0303-0xxx	M8, plug, angled, male, 4-pin, EtherCAT-P-coded – M8, plug, angled, male, 4-pin, EtherCAT-P-coded	G

For robot applications, AWG22

Ordering information	Sold by the metre	Pict.
ZB7004	EtherCAT P cable, shielded, PUR, capable of torsion, (1 x 4 x AWG22/7), black with red stripe, OD = 6.5 mm (±0.2 mm)	A

Ordering information	AWG22 cable, pre-assembled	Pict.
ZK7000-0100-6xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – open end	B
ZK7000-0101-6xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, plug (4-pin/straight), EtherCAT-P-coded	C
ZK7000-0102-6xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, socket (4-pin/straight), EtherCAT-P-coded	D
ZK7000-0105-6xxx	M8, plug, straight, male, 4-pin, EtherCAT-P-coded – M8, socket (4-pin/straight), EtherCAT-P-coded	E
ZK7000-0300-6xxx	M8, plug, angled, male, 4-pin, EtherCAT-P-coded – open end	F
ZK7000-0303-6xxx	M8, plug, angled, male, 4-pin, EtherCAT-P-coded – M8, plug (4-pin/angled), EtherCAT-P-coded	G





















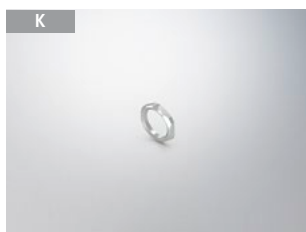
M8 | EtherCAT P connectors for field assembly

Ordering information	EtherCAT P connectors IP 65/67	Pict.
ZS7000-0001	M8, plug, metal, crimping method, straight, male, 4-pin, EtherCAT-P-coded, IP 65/67, Ø ≤ 6.5 mm	A
ZS7000-0002	M8, plug, metal, screw type, straight, male, 4-pin, EtherCAT-P-coded, IP 65/67, Ø ≤ 6.5 mm	A
ZS7000-0004	M8, socket, metal, screw type, straight, 4-pin, socket, EtherCAT-P-coded, IP 65/67, Ø ≤ 6.5 mm	B
ZS7000-0005	cable adapter, passive, EtherCAT P to EtherCAT: M8 socket, EtherCAT-P-coded – M8 socket, EtherCAT	C



M8 | EtherCAT P flanges

Ordering information		Pict.
ZS7002-0001	EtherCAT P flange, M8, female, straight, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 12.5 mm, with counter nut	
ZS7002-0002	EtherCAT P flange, M8, female, straight, 4-pin, rear assembly, print contact/contact carrier glued into housing, IP 67, EtherCAT-P-coded, 6.0 mm, with counter nut	
ZS7002-0003	EtherCAT P flange, M8, female, straight, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 6.0 mm, with counter nut	
ZS7002-0004	EtherCAT P flange, M8, female, straight, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 10.0 mm, with counter nut	
ZS7002-0005	EtherCAT P flange, M8, female, angled, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 8.2 mm, with counter nut	
ZS7002-0006	EtherCAT P flange, M8, female, angled, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 12.2 mm, with counter nut	
ZS7002-0007	EtherCAT P flange, M8, female, straight, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 9.0 mm	
ZS7002-0008	EtherCAT P flange, M8, female, straight, 4-pin, rear assembly, print contact, IP 67, EtherCAT-P-coded, 13.0 mm	
ZS7002-1001	M8 contact carrier, straight, EtherCAT-P-coded for ZS7002-0003, ZS7002-0004, ZS7002-0007 and ZS7002-0008	
ZS7002-1002	M8 contact carrier, angled, EtherCAT-P-coded for ZS7002-0005 and ZS7002-0006	
ZS7002-1003	M8 insulation body including contacts, straight, female, 4-pin, EtherCAT-P-coded	
ZS7002-2001	M10 counter nut, EtherCAT-P-coded, hexagonal	
ZS7002-2002	M12 counter nut, EtherCAT-P-coded, hexagonal	
ZS7002-2003	M8 housing, EtherCAT-P-coded for ZS7002-0003	
ZS7002-2004	M8 housing, EtherCAT-P-coded for ZS7002-0004	
ZS7002-2005	M8 housing, EtherCAT-P-coded for ZS7002-0005	
ZS7002-2006	M8 housing, EtherCAT-P-coded for ZS7002-0006	
ZS7002-2007	M8 housing, EtherCAT-P-coded for ZS7002-0007	
ZS7002-2008	M8 housing, EtherCAT-P-coded for ZS7002-0008	





M8 | Power cable

For flexible applications

Ordering information	Sold by the metre	Pict.
ZB9050	PUR, flex, 4-wire, 4 x 0.34 mm ² , drag-chain suitable, black	A
Ordering information	Cable, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK2020-3132-0xxx	M8 socket (4-pin/straight)	B
Ordering information	Cable, pre-assembled with M8 socket (4-pin/straight) to	Pict.
ZK2020-3200-0xxx	open end, 4-wire	C
ZK2020-3332-0xxx	M8 plug (4-pin/angled)	D
Ordering information	Cable, pre-assembled with M8 socket (4-pin/angled) to	Pict.
ZK2020-3334-0xxx	M8 plug (4-pin/angled)	E
ZK2020-3400-0xxx	open end, 4-wire	F

For fixed installation

Ordering information	Sold by the metre	
ZB9051	PVC, standard, 4-wire, 4 x 0.34 mm ² , grey	
Ordering information	Cable, pre-assembled with M8 socket (4-pin/straight) to	Pict.
ZK2020-3132-3xxx	M8 plug (4-pin/straight)	B
ZK2020-3200-3xxx	open end, 4-wire	C



7/8" | Power cable

For flexible applications 1.5 mm²

Ordering information	Material specification	Pict.
ZB9050-0007	TPE-U (PUR), flex, 5-wire, 5 x 1.5 mm ² , 5Li 9Y11Y, drag-chain suitable, black	A

Ordering information	Cable, pre-assembled with 7/8" socket (5-pin/straight) to	Pict.
ZK2030-1200-0xxx	open end	B
ZK2030-1112-0xxx	7/8" plug (5-pin/straight)	C

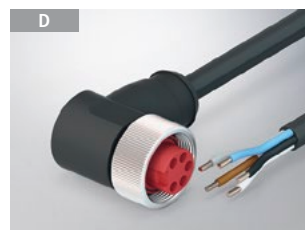
Ordering information	Cable, pre-assembled with 7/8" socket (5-pin/angled) to	Pict.
ZK2030-1400-0xxx	open end	D
ZK2030-1314-0xxx	7/8" plug (5-pin/angled)	E
ZK2030-1114-0xxx	7/8" plug (5-pin/straight)	F

For flexible applications 2.5 mm²

Ordering information	Material specification
ZK2031-xxxx-0xxx	TPE-U (PUR), flex, 5-wire, 5 x 2.5 mm ² , 5Li 9Y11Y, drag-chain suitable, black

Ordering information	Cable, pre-assembled with 7/8" socket (5-pin/straight) to	Pict.
ZK2031-1200-0xxx	open end	B

Ordering information	Cable, pre-assembled with 7/8" socket (5-pin/angled) to	Pict.
ZK2031-1400-0xxx	open end	D



M8 | Sensor cable

For flexible applications 3 x 0.25 mm²

Ordering information	Sold by the metre	Pict.
ZB9040	PUR, flex, 3-wire, 3 x 0.25 mm ² , drag-chain suitable, black	A

Ordering information	Cable, pre-assembled with M8 plug (3-pin/straight) to	Pict.
ZK2000-2100-0xxx	open end	B
ZK2000-2122-0xxx	M8 socket (3-pin/straight)	C
ZK2000-2124-0xxx	M8 socket (3-pin/angled)	D
ZK2000-2132-0xxx	M8 socket (4-pin/straight)	
ZK2000-2162-0xxx	M12 socket (4-pin/straight)	
ZK2000-2164-0xxx	M12 socket (4-pin/angled)	

Ordering information	Cable, pre-assembled with M8 socket (3-pin/straight) to	Pict.
ZK2000-2200-0xxx	open end	

Ordering information	Cable, pre-assembled with M8 plug (3-pin/angled) to	Pict.
ZK2000-2300-0xxx	open end	E
ZK2000-2322-0xxx	M8 socket (3-pin/straight)	F
ZK2000-2324-0xxx	M8 socket (3-pin/angled)	G
ZK2000-2362-0xxx	M12 socket (4-pin/straight)	
ZK2000-2364-0xxx	M12 socket (4-pin/angled)	

Ordering information	Cable, pre-assembled with M8 socket (3-pin/angled) to	Pict.
ZK2000-2400-0xxx	open end	H

For flexible applications 4 x 0.25 mm²

Ordering information	Sold by the metre	Pict.
ZB9041	PUR, flex, 4-wire, 4 x 0.25 mm ² , drag-chain suitable, black	I

Ordering information	Cable, pre-assembled with M8 plug (4-pin/straight) to	Pict.
ZK2000-3100-0xxx	open end	
ZK2000-3122-0xxx	M8 socket (3-pin/straight)	
ZK2000-3124-0xxx	M8 socket (3-pin/angled)	

Ordering information	Cable, pre-assembled with M8 plug (4-pin/angled) to	Pict.
ZK2000-3300-0xxx	open end	

Ordering information	Cable, pre-assembled with DUO M8 plug (4-pin/straight) to	Pict.
ZK2000-3500-0xxx	2 x open end, 3-wire	J
ZK2000-3522-0xxx	2 x M8 socket (3-pin/straight)	K
ZK2000-3532-0xxx	2 x M8 socket (4-pin/straight)	L

For robot applications

Ordering information	Sold by the metre	Pict.
ZB9044	PUR, TORSION, 3 x 0.34 mm ² , capable of torsion, black	

Ordering information	Cable, pre-assembled with M8 plug (3-pin/straight) to	Pict.
ZK2000-2100-6xxx	open end	
ZK2000-2122-6xxx	M8 socket (3-pin/straight)	

Illustrations see next page

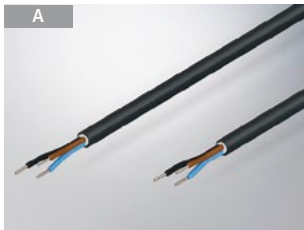
For fixed installation 3 x 0.25 mm²

Ordering information	Sold by the metre
ZB9042	PVC, standard, 3-wire, 3 x 0.25 mm², grey

For fixed installation 4 x 0.25 mm²

Ordering information	Sold by the metre
ZB9043	PVC, standard, 4-wire, 4 x 0.25 mm², grey

Ordering information	Cable, pre-assembled with M8 socket (4-pin/straight) to	Pict.
ZK2000-3132-3xxx	M8 plug (4-pin/straight)	M



M8 | Sensor cable with LED

For flexible applications 3 x 0.25 mm²

Ordering information	Sold by the metre
ZB9040	PUR, flex, 3-wire, 3 x 0.25 mm ² , drag-chain suitable, black
Ordering information	Cable, pre-assembled with M8 plug (3-pin/straight)
ZK2002-2122-0xxx	M8, plug, straight, male, 3-pin – M8, socket, straight, female, 3-pin, LED
ZK2002-2124-0xxx	M8, plug, straight, male, 3-pin – M8, socket, angled, female, 3-pin, LED
Ordering information	Cable, pre-assembled with M8 socket (3-pin/straight/LED)
ZK2002-2200-0xxx	M8, socket, straight, female, 3-pin, LED – open end
Ordering information	Cable, pre-assembled with M8 socket (3-pin/angled/LED)
ZK2002-2400-0xxx	M8, socket, angled, female, 3-pin, LED – open end

For flexible applications 4 x 0.25 mm²

Ordering information	Sold by the metre
ZB9041	PUR, flex, 4-wire, 4 x 0.25 mm ² , drag-chain suitable, black
Ordering information	Cable, pre-assembled with M8 socket (4-pin/angled/LED)
ZK2002-3400-0xxx	M8, socket, angled, female, 4-pin, LED – open end

M12 | Sensor cable

For flexible applications 4-pin

Ordering information	Sold by the metre	Pict.
ZB9041	PUR, flex, 4-wire, 4 x 0.25 mm ² , drag-chain suitable, black	A
Ordering information	Cable, pre-assembled with M12 plug (4-pin/straight) to	Pict.
ZK2000-6100-0xxx	open end	B
ZK2000-6162-0xxx	M12 socket (4-pin/straight)	
ZK2000-6164-0xxx	M12 socket (4-pin/angled)	
Ordering information	Cable, pre-assembled with M12 socket (4-pin/straight) to	Pict.
ZK2000-6200-0xxx	open end, 4-wire	C
Ordering information	Cable, pre-assembled with M12 plug (4-pin/angled) to	Pict.
ZK2000-6300-0xxx	open end	D
ZK2000-6362-0xxx	M12 socket (4-pin/straight)	
Ordering information	Cable, pre-assembled with M12 socket (4-pin/angled) to	Pict.
ZK2000-6400-0xxx	open end, 4-wire	E
Ordering information	Cable, pre-assembled with M12 plug DUO (4-pin/straight) to	Pict.
ZK2000-6500-0xxx	2 x open end, 4-wire	F
ZK2000-6522-0xxx	2 x M8 socket (3-pin/straight)	
ZK2000-6562-0xxx	2 x M12 socket (4-pin/straight)	

Illustrations see next page

For flexible applications 5-pin

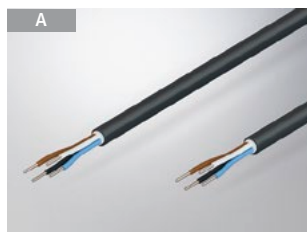
Ordering information	Sold by the metre
ZB2000-5xxx-0xxx	PUR, flex, 5-wire, 5 x 0.34 mm ² , drag-chain suitable, black
Ordering information	Cable, pre-assembled with M12 plug (5-pin/straight) to
ZK2000-5100-0xxx	open end
ZK2000-5151-0xxx	M12 plug (5-pin/straight), A-coded
ZK2000-5152-0xxx	M12 socket (5-pin/straight), A-coded
Ordering information	Cable, pre-assembled with M12 socket (5-pin/straight) to
ZK2000-5200-0xxx	open end
Ordering information	Cable, pre-assembled with M12 plug (5-pin/angled) to
ZK2000-5300-0xxx	open end
ZK2000-5353-0xxx	M12 plug (5-pin/angled), A-coded
ZK2000-5354-0xxx	M12 socket (5-pin/angled), A-coded
Ordering information	Cable, pre-assembled with M12 socket (5-pin/angled) to
ZK2000-5400-0xxx	open end

For robot applications

Ordering information	Sold by the metre
ZB9045	PUR, TORSION, 4 x 0.5 mm ² , capable of torsion, black
Ordering information	Cable, pre-assembled with M12 plug (4-pin/straight) to
ZK2000-6100-6xxx	open end
ZK2000-6162-6xxx	M12 socket (4-pin/straight)

For fixed installation

Ordering information	Sold by the metre
ZB9043	PVC, standard, 4-wire, 4 x 0.25 mm ² , grey



M12 | Sensor cable with LED

For flexible applications 4-pin

Ordering information	Sold by the metre
ZB9041	PUR, flex, 4-wire, 4 x 0.25 mm ² , drag-chain suitable, black
Ordering information	Cable, pre-assembled with M12 plug (4-pin/straight) to
ZK2002-6162-0xxx	M12, plug, straight, male, 4-pin, A-coded – M12, socket, straight, female, 4-pin, A-coded, LED
ZK2002-6164-0xxx	M12, plug, straight, male, 4-pin, A-coded – M12, socket, angled, female, 4-pin, A-coded, LED
Ordering information	Cable, pre-assembled with M12 socket (4-pin/straight/LED) to
ZK2002-6200-0xxx	M12, socket, straight, female, 4-pin, A-coded, LED – open end
Ordering information	Cable, pre-assembled with M12 socket (4-pin/angled/LED) to
ZK2002-6400-0xxx	M12, socket, angled, female, 4-pin, A-coded, LED – open end

M12 | Sensor cable, shielded

For flexible applications

Ordering information	Cable, pre-assembled with M12 plug (5-pin/straight) incl. shield to	Pict.
ZK2000-7100-0xxx	open end, 5-wire incl. shield	A
ZK2000-7122-0xxx	M8 socket (3-pin/angled), shielded	B
ZK2000-7171-0xxx	M12 plug (5-pin/straight), shielded	C
ZK2000-7172-0xxx	M12 socket (5-pin/straight), shielded	D



M8 | Connectors for field assembly

Ordering information	Plugs, 3-pin, for field assembly	Pict.
ZS2000-1213	M8, plug, metal, IDC, straight, male, 3-pin, A-coded, 0.14...0.34 mm ² , Ø 3.5...5 mm	A
ZS2000-2210	M8, plug, plastic, screw type, straight, male, 3-pin, A-coded, 0.14...0.5 mm ² , Ø 4...5.5 mm	B

Ordering information	Plugs, 4-pin, for field assembly	Pict.
ZS2000-1313	M8, plug, plastic, IDC, straight, male, 4-pin, A-coded, 0.14...0.34 mm ² , Ø 3.5...5 mm	
ZS2000-2310	M8, plug, plastic, screw type, straight, male, 4-pin, A-coded, 0.14...0.5 mm ² , Ø 4...5.5 mm	C
ZS2000-2311	M8, plug, plastic, soldered, straight, male, 4-pin, A-coded, 0.14...0.34 mm ² , Ø 4...5.5 mm	C
ZS2000-2331	M8, plug, plastic, soldered, angled, male, 4-pin, A-coded, 0.14...0.25 mm ² , Ø 3.5...5 mm	D

Ordering information	Sockets, 3-pin, for field assembly	Pict.
ZS2000-1223	M8, socket, metal, IDC, straight, female, 3-pin, A-coded, 0.14...0.34 mm ² , Ø 3.5...5 mm	E
ZS2000-2220	M8, socket, plastic, screw type, straight, female, 3-pin, A-coded, 0.14...0.5 mm ² , Ø 4...5.5 mm	F
ZS2000-2221	M8, socket, plastic, soldered, straight, female, 3-pin, A-coded, 0.14...0.25 mm ² , Ø 3.5...5 mm	F
ZS2000-2241	M8, socket, plastic, soldered, angled, female, 3-pin, A-coded, 0.14...0.25 mm ² , Ø 3.5...5 mm	G

Ordering information	Sockets, 4-pin, for field assembly
ZS2000-1323	M8, socket, plastic, IDC, straight, female, 4-pin, A-coded, 0.14...0.34 mm ² , Ø 3.5...5 mm
ZS2000-2320	M8, socket, plastic, screw type, straight, female, 4-pin, A-coded, 0.14...0.5 mm ² , Ø 4...5.5 mm
ZS2000-2321	M8, socket, plastic, soldered, straight, female, 4-pin, A-coded, 0.14...0.34 mm ² , Ø 4...5.5 mm
ZS2000-2341	M8, socket, plastic, soldered, angled, female, 4-pin, A-coded, 0.14...0.25 mm ² , Ø 3.5...5 mm



Illustrations similar

M12 | Connectors for field assembly

Ordering information	Plugs, 4-pin, for field assembly	Pict.
ZS2000-1613	M12, plug, metal, IDC, straight, male, 4-pin, A-coded, 0.14...0.34 mm ² , Ø 2.9...5.1 mm	
ZS2000-2610	M12, plug, plastic, screw type, straight, male, 4-pin, A-coded, 0.14...1.5 mm ² , Ø 4...8 mm	A
ZS2000-2630	M12, plug, plastic, screw type, angled, male, 4-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	B
ZS2000-6610	M12, plug, plastic, screw type, straight, male, 4-pin, A-coded, 0.14...0.75 mm ² , Ø 4...8 mm	

Ordering information	Plugs, 4/5-pin, for field assembly	Pict.
ZS2000-2710	M12, plug, plastic, screw type, straight, male, 5-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	A
ZS2000-2730	M12, plug, plastic, screw type, angled, male, 5-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	B
ZS2000-6710	M12, plug, metal, screw type, straight, male, 5-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	

Ordering information	Sockets, 4-pin, for field assembly	Pict.
ZS2000-2620	M12, socket, plastic, screw type, straight, female, 4-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	C
ZS2000-2640	M12, socket, plastic, screw type, angled, female, 4-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	D
ZS2000-6620	M12, socket, plastic, screw type, straight, female, 4-pin, A-coded, 0.25...0.75 mm ² , Ø 4...8 mm	C

Ordering information	Sockets, 4/5-pin, for field assembly	Pict.
ZS2000-2720	M12, socket, plastic, screw type, straight, female, 5-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	C
ZS2000-2740	M12, socket, plastic, screw type, angled, female, 5-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	D
ZS2000-6720	M12, socket, metal, screw type, straight, female, 5-pin, A-coded, 0.25...1.5 mm ² , Ø 4...8 mm	



Illustrations similar

7/8" | Connectors for field assembly

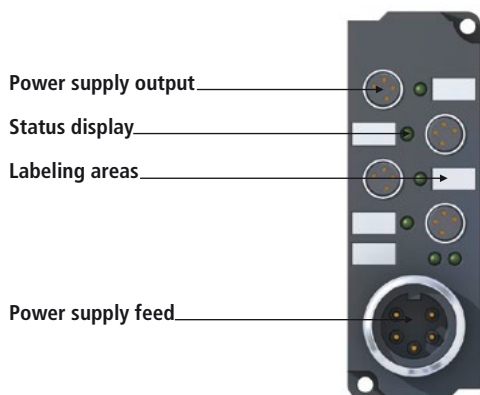
Ordering information	Plugs, 5-pin, for field assembly
ZS2020-2810	7/8", plug, plastic, screw type, straight, male, 5-pin, 0.5...1.5 mm ² , Ø 6...12 mm
ZS2020-2830	7/8", plug, plastic, screw type, angled, male, 5-pin, 0.5...1.5 mm ² , Ø 6...8 mm

Ordering information	Sockets, 5-pin, for field assembly
ZS2020-2820	7/8", socket, plastic, screw type, straight, female, 5-pin, 0.5...1.5 mm ² , Ø 6...12 mm
ZS2020-2840	7/8", socket, plastic, screw type, angled, female, 5-pin, 0.5...1.5 mm ² , Ø 6...8 mm

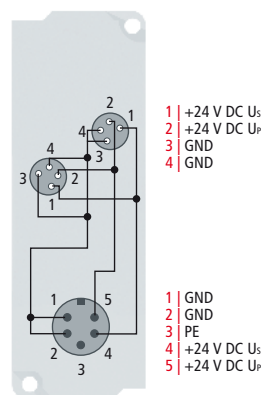
Special connectors

Ordering information	
ZS2000-3711	M12, plug, plastic, screw type, straight, male, 5-pin, 0.25...0.75 mm ² , Ø 3...6.5 mm
ZS2000-3712	M12, plug, plastic, screw type, straight, male, 5-pin, thermocouples with temperature compensation element
ZS2000-4722	splitter, 1 x M12 (plug) – 2 x M12 (socket), straight, 5-pin, unshielded
ZS2000-5911	M23, plug, metal, soldered, straight, male, 12-pin, 0.14...1.5 mm ² , Ø 4.5...8.5 mm
ZS2002-0111	D-sub, IP 67, plug, plastic, soldered, straight, male, 25-pin, up to 0.5 mm ² , Ø 6...12 mm

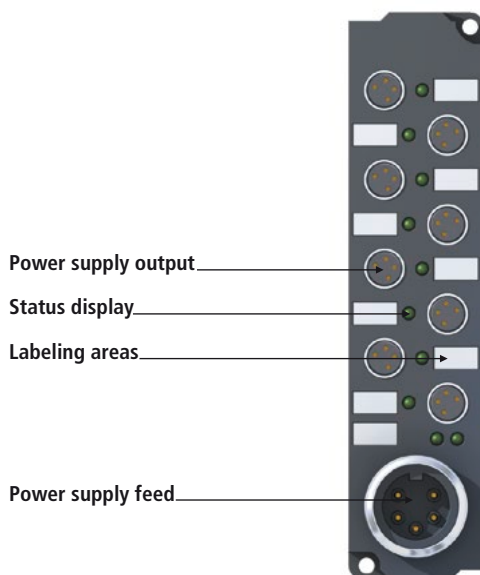
Power distribution box



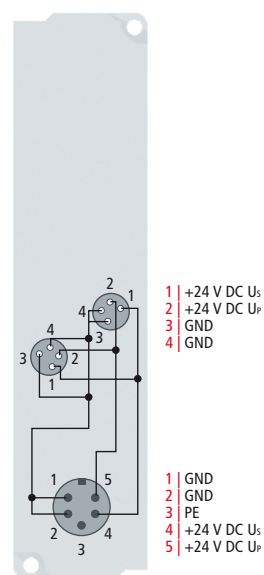
Power distribution box ZS2020-4304



Connector assignment



Power distribution box ZS2020-4308



Connector assignment

Technical data	ZS2020-4304	ZS2020-4308
Number of circuits	4	8
Power supply connection	7/8" plug, 5-pin	
Circuit connection	M8, screw type, 4-pin	
Current load	$I_{\Sigma} = 4 \text{ A}$	
Dimensions (W x H x D)	30 mm x 86 mm x 31 mm	30 mm x 126 mm x 31 mm
Operating temperature	-25...+60 °C	
Storage temperature	-40...+85 °C	
Protection class	IP 65/66/67 (according to EN 60529)	
Installation position	variable	



One Cable Automation: A matching connector for every performance class

The One Cable Automation (OCA) concept is based on a single EtherCAT P cable that integrates communication and power supply and enables end-to-end connection of components, terminal boxes and machine modules. With a uniform design across all sizes, the ECP and ENP connector families for OCA are available for all applications ranging from 24 V DC at the I/O level up to drives with 400 V AC or 630 V AC/850 V DC and 64 A.

The ECP connectors are designed to provide an integrated 24 V DC power supply in the trapezoidal core element according to the EtherCAT P specification, while ENP connectors are designed for EtherCAT/Ethernet applications without integrated 24 V DC power supply. The ENP family can

be distinguished from the ECP family through coloured product elements on the housing and the mechanically inverse design of the trapezoidal element.

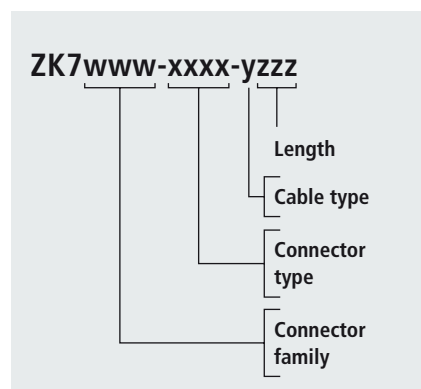
Sizes B12 to B40 with different numbers of power pins (2- to 6-pin) are available for diverse network configurations and current consumptions of the connected components.

All sizes include a Cat.5-enabled Ethernet element in trapezoidal form. The seamless and integrated 360° shielding of the Ethernet element enables the familiar high EtherCAT performance. The compact design provides installation space to accommodate the power pins and enables a high current carrying capacity and dielectric strength of the power pins. The bayonet fitting ensures fast cabling

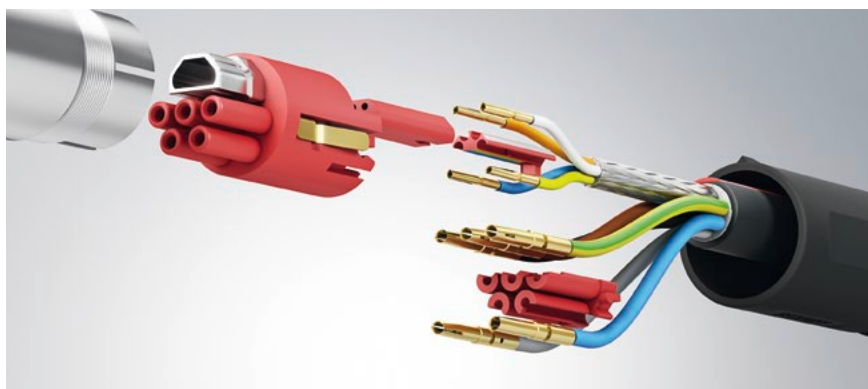
and installation. A two-stage coding system (visual coding with coloured rings, mechanical coding) prevents mismatching. Suitable flanges are available to match the standard housing types for rear, front or square flange assembly.

For applications where pre-assembled cables cannot be used, all connectors are also available as field-configurable versions. The poka-yoke principle ensures that the connector can only be assembled in the correct configuration and reliably prevents installation errors. The colour coding printed on the contact holder and optional pre-configuration of the cable makes connector assembly quick and reliable.

► www.beckhoff.com/ecp-enp












Consistent identification system for the ECP/ENP connector family



The integrated shielding of the Ethernet element enables high EtherCAT performance and at the same time high current carrying capacity and dielectric strength of the power pins.



ENP B12 | ENP connector family in size B12, 2-pin

B12 | EtherCAT/Ethernet cable for flexible applications, 2 x 0.75 mm², key 1 (24 V DC)*

Ordering information	Cable type/specification	Pict.
ZB7101-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 2 x 0.75 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 9.0 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B12 plug, straight, female+male, 2+4-pin, EtherCAT-coded to	Pict.
ZK7102-0607-Axxx	B12, plug, straight, male+female, 2+4-pin, EtherCAT-coded	
ZK7102-0700-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B12 flange	Pict.
ZK7102-AA00-Axxx	square flange straight, 2+4-pin, EtherCAT-coded short, female+male	
ZK7102-AB00-Axxx	square flange straight, 2+4-pin, EtherCAT-coded short, male+female	
ZK7102-BE00-Axxx	square flange straight, 2+4-pin, EtherCAT-coded long, female+male	
ZK7102-BF00-Axxx	square flange straight, 2+4-pin, EtherCAT-coded long, male+female	
ZK7102-AC00-Axxx	rear assembly straight, 2+4-pin, EtherCAT-coded short, female+male	
ZK7102-AD00-Axxx	rear assembly straight, 2+4-pin, EtherCAT-coded short, male+female	
ZK7102-BG00-Axxx	rear assembly straight, 2+4-pin, EtherCAT-coded long, female+male	
ZK7102-BH00-Axxx	rear assembly straight, 2+4-pin, EtherCAT-coded long, male+female	
ZK7102-AE00-Axxx	front assembly straight, 2+4-pin, EtherCAT-coded short, female+male	
ZK7102-AF00-Axxx	front assembly straight, 2+4-pin, EtherCAT-coded short, male+female	
ZK7102-BI00-Axxx	front assembly straight, 2+4-pin, EtherCAT-coded long, female+male	
ZK7102-BJ00-Axxx	front assembly straight, 2+4-pin, EtherCAT-coded long, male+female	

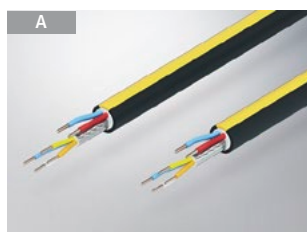
*key = mechanical coding, key for customer-specific applications optionally available

B12 | EtherCAT/Ethernet connectors for field assembly, 2 x 0.75 mm²**

Ordering information	B12 EtherCAT connectors, 2+4-pin	Pict.
ZS7100-A001	B12, plug, metal, shielded, crimp, straight, male+female, 2+4-pin, EtherCAT-coded, IP 65/67, Ø 9 mm	
ZS7100-A002	B12, plug, metal, shielded, crimp, straight, female+male, 2+4-pin, EtherCAT-coded, IP 65/67, Ø 9 mm	










**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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ECP B12 | ECP connector family in size B12, 2-pin

B12 | EtherCAT P cable for flexible applications, 2 x 0.75 mm², key 1 (24 V DC)*

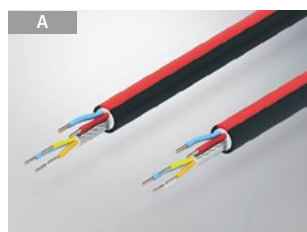
Ordering information	Cable type/specification	Pict.
ZB7100-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 2 x 0.75 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 9.0 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B12 plug, straight, female+female, 2+4-pin, EtherCAT-P-coded to	Pict.
ZK7102-0607-0xxx	B12, plug, straight, male+male, 2+4-pin, EtherCAT-P-coded	
ZK7102-0700-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B12 flange	Pict.
ZK7102-AA00-0xxx	square flange straight, 2+4-pin, EtherCAT-P-coded short, female+female	
ZK7102-AB00-0xxx	square flange straight, 2+4-pin, EtherCAT-P-coded short, male+male	
ZK7102-BE00-0xxx	square flange straight, 2+4-pin, EtherCAT-P-coded long, female+female	
ZK7102-BF00-0xxx	square flange straight, 2+4-pin, EtherCAT-P-coded long, male+male	
ZK7102-AC00-0xxx	rear assembly straight, 2+4-pin, EtherCAT-P-coded short, female+female	
ZK7102-AD00-0xxx	rear assembly straight, 2+4-pin, EtherCAT-P-coded short, male+male	
ZK7102-BG00-0xxx	rear assembly straight, 2+4-pin, EtherCAT-P-coded long, female+female	
ZK7102-BH00-0xxx	rear assembly straight, 2+4-pin, EtherCAT-P-coded long, male+male	
ZK7102-AE00-0xxx	front assembly straight, 2+4-pin, EtherCAT-P-coded short, female+female	
ZK7102-AF00-0xxx	front assembly straight, 2+4-pin, EtherCAT-P-coded short, male+male	
ZK7102-BI00-0xxx	front assembly straight, 2+4-pin, EtherCAT-P-coded long, female+female	
ZK7102-BJ00-0xxx	front assembly straight, 2+4-pin, EtherCAT-P-coded long, male+male	

*key = mechanical coding, key for customer-specific applications optionally available

B12 | EtherCAT P connectors for field assembly, 2 x 0.75 mm²**










Ordering information	B12 EtherCAT P connectors, 2+4-pin	Pict.
ZS7100-0001	B12, plug, metal, shielded, crimp, straight, male+male, 2+4-pin, EtherCAT-P-coded, IP 65/67, Ø 9 mm	
ZS7100-0002	B12, plug, metal, shielded, crimp, straight, female+female, 2+4-pin, EtherCAT-P-coded, IP 65/67, Ø 9 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 





ENP B17 | ENP connector family in size B17, 3-pin

B17 3+4 | EtherCAT/Ethernet cable for flexible applications, 3 G 1.5 mm², key 1 (24 V DC)*

Ordering information	Cable type/specification	Pict.
ZB7202-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 3 G 1.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 10.0 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 3+4-pin, EtherCAT-coded to	Pict.
ZK7206-1819-Axxx	B17, plug, straight, male+female, 3+4-pin, EtherCAT-coded	
ZK7206-1900-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7206-AG00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7206-AH00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7206-BK00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7206-BL00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7206-AI00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7206-AJ00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7206-BM00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7206-BN00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7206-AK00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7206-AL00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7206-BO00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7206-BP00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, male+female	

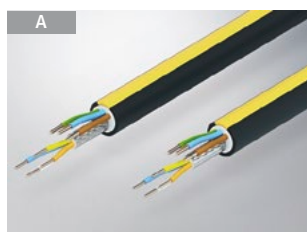
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 3 G 1.5 mm²**










Ordering information	B17 EtherCAT connectors, 3+4-pin	Pict.
ZS7200-A001	B17, plug, metal, shielded, crimp, straight, male+female, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 10 mm	
ZS7200-A002	B17, plug, metal, shielded, crimp, straight, female+male, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 10 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 3+4 | EtherCAT/Ethernet cable for flexible applications, 3 G 1.5 mm², key 2 (230 V AC)*

Ordering information	Cable type/specification	Pict.
ZB7202-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 3 G 1.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 10.0 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 3+4-pin, EtherCAT-coded to	Pict.
ZK7606-1819-Axxx	B17, plug, straight, male+female, 3+4-pin, EtherCAT-coded	
ZK7606-1900-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7606-AG00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7606-AH00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7606-BK00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7606-BL00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7606-AI00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7606-AJ00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7606-BM00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7606-BN00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7606-AK00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7606-AL00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7606-BO00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7606-BP00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, male+female	

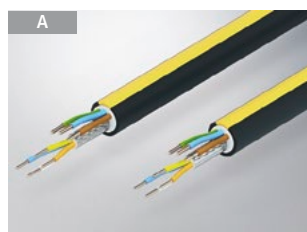
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 3 G 1.5 mm²**

Ordering information	B17 EtherCAT connectors, 3+4-pin	Pict.
ZS7200-A001	B17, plug, metal, shielded, crimp, straight, male+female, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 10 mm	
ZS7200-A002	B17, plug, metal, shielded, crimp, straight, female+male, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 10 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 3+4 | EtherCAT/Ethernet cable for flexible applications, 3 G 2.5 mm², key 1 (24 V DC)*

Ordering information	Cable type/specification	Pict.
ZB7211-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 3 G 2.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 11.1 mm (±0.2 mm)	A
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 3+4-pin, EtherCAT-coded to	Pict.
ZK7210-1819-Axxx	B17, plug, straight, male+female, 3+4-pin, EtherCAT-coded	B
ZK7210-1900-Axxx	open end	C
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7210-AG00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, female+male	D
ZK7210-AH00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, male+female	E
ZK7210-BK00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7210-BL00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7210-AI00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, female+male	F
ZK7210-AJ00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, male+female	G
ZK7210-BM00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7210-BN00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7210-AK00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, female+male	H
ZK7210-AL00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, male+female	I
ZK7210-BO00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7210-BP00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, male+female	

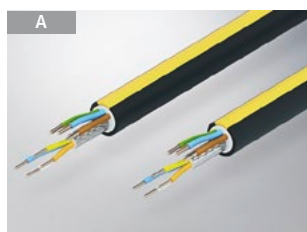
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 3 G 2.5 mm²**










Ordering information	B17 EtherCAT connectors, 3+4-pin	Pict.
ZS7200-A003	B17, plug, metal, shielded, crimp, straight, male+female, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 11.1 mm	J
ZS7200-A004	B17, plug, metal, shielded, crimp, straight, female+male, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 11.1 mm	K

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 3+4 | EtherCAT/Ethernet cable for flexible applications, 3 G 2.5 mm², key 2 (230 V AC)*

Ordering information	Cable type/specification	Pict.
ZB7211-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 3 G 2.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 11.1 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 3+4-pin, EtherCAT-coded to	Pict.
ZK7610-1819-Axxx	B17, plug, straight, male+female, 3+4-pin, EtherCAT-coded	
ZK7610-1900-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7610-AG00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7610-AH00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7610-BK00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7610-BL00-Axxx	square flange straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7610-AI00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7610-AJ00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7610-BM00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7610-BN00-Axxx	rear assembly straight, 3+4-pin, EtherCAT-coded long, male+female	
ZK7610-AK00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, female+male	
ZK7610-AL00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded short, male+female	
ZK7610-BO00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, female+male	
ZK7610-BP00-Axxx	front assembly straight, 3+4-pin, EtherCAT-coded long, male+female	

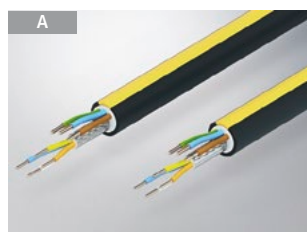
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 3 G 2.5 mm²**

Ordering information	B17 EtherCAT connectors, 3+4-pin	Pict.
ZS7200-A003	B17, plug, metal, shielded, crimp, straight, male+female, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 11.1 mm	
ZS7200-A004	B17, plug, metal, shielded, crimp, straight, female+male, 3+4-pin, EtherCAT-coded, IP 65/67, Ø 11.1 mm	










**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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ECP B17 | ECP connector family in size B17, 3-pin

B17 3+4 | EtherCAT P cable for flexible applications, 3 G 1.5 mm², key 1 (24 V DC)*

Ordering information	Cable type/specification	Pict.
ZB7200-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 3 G 1.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 10.0 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 3+4-pin, EtherCAT-P-coded to	Pict.
ZK7206-1819-0xxx	B17, plug, straight, male+male, 3+4-pin, EtherCAT-P-coded	
ZK7206-1900-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7206-AG00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7206-AH00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7206-BK00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7206-BL00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7206-AI00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7206-AJ00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7206-BM00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7206-BN00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7206-AK00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7206-AL00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7206-BO00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7206-BP00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	

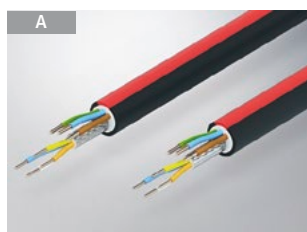
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 3 G 1.5 mm²**










Ordering information	B17 EtherCAT P connectors, 3+4-pin	Pict.
ZS7200-0001	B17, plug, metal, shielded, crimp, straight, male+male, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 10 mm	
ZS7200-0002	B17, plug, metal, shielded, crimp, straight, female+female, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 10 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 3+4 | EtherCAT P cable for flexible applications, 3 G 1.5 mm², key 2 (230 V AC)*

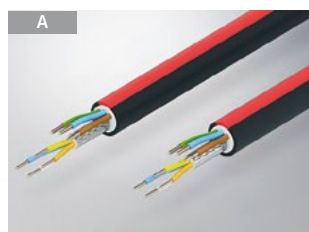
Ordering information	Cable type/specification	Pict.
ZB7200-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 3 G 1.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 10.0 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 3+4-pin, EtherCAT-P-coded to	Pict.
ZK7606-1819-0xxx	B17, plug, straight, male+male, 3+4-pin, EtherCAT-P-coded	
ZK7606-1900-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7606-AG00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7606-AH00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7606-BK00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7606-BL00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7606-AI00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7606-AJ00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7606-BM00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7606-BN00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7606-AK00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7606-AL00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7606-BO00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7606-BP00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	

*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 3 G 1.5 mm²**

Ordering information	B17 EtherCAT P connectors, 3+4-pin	Pict.
ZS7200-0001	B17, plug, metal, shielded, crimp, straight, male+male, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 10 mm	
ZS7200-0002	B17, plug, metal, shielded, crimp, straight, female+female, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 10 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 



B17 3+4 | EtherCAT P cable for flexible applications, 3 G 2.5 mm², key 1 (24 V DC)*

Ordering information	Cable type/specification	Pict.
ZB7210-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 3 G 2.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 11.1 mm (±0.2 mm)	A
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 3+4-pin, EtherCAT-P-coded to	Pict.
ZK7210-1819-0xxx	B17, plug, straight, male+male, 3+4-pin, EtherCAT-P-coded	B
ZK7210-1900-0xxx	open end	C
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7210-AG00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, female+female	D
ZK7210-AH00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, male+male	E
ZK7210-BK00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7210-BL00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7210-AI00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	F
ZK7210-AJ00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	G
ZK7210-BM00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7210-BN00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7210-AK00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	H
ZK7210-AL00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	I
ZK7210-BO00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7210-BP00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	

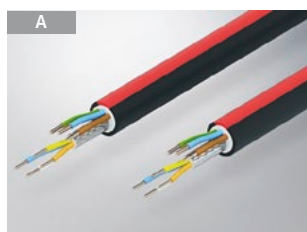
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 3 G 2.5 mm²**










Ordering information	B17 EtherCAT P connectors, 3+4-pin	Pict.
ZS7200-0003	B17, plug, metal, shielded, crimp, straight, male+male, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11.1 mm	J
ZS7200-0004	B17, plug, metal, shielded, crimp, straight, female+female, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11.1 mm	K

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 3+4 | EtherCAT P cable for flexible applications, 3 G 2.5 mm², key 2 (230 V AC)*

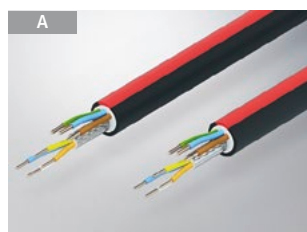
Ordering information	Cable type/specification	Pict.
ZB7210-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 3 G 2.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 11.1 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 3+4-pin, EtherCAT-P-coded to	Pict.
ZK7610-1819-0xxx	B17, plug, straight, male+male, 3+4-pin, EtherCAT-P-coded	
ZK7610-1900-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7610-AG00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7610-AH00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7610-BK00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7610-BL00-0xxx	square flange straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7610-AI00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7610-AJ00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7610-BM00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7610-BN00-0xxx	rear assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	
ZK7610-AK00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, female+female	
ZK7610-AL00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded short, male+male	
ZK7610-BO00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, female+female	
ZK7610-BP00-0xxx	front assembly straight, 3+4-pin, EtherCAT-P-coded long, male+male	

*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 3 G 2.5 mm²**










Ordering information	B17 EtherCAT P connectors, 3+4-pin	Pict.
ZS7200-0003	B17, plug, metal, shielded, crimp, straight, male+male, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11.1 mm	
ZS7200-0004	B17, plug, metal, shielded, crimp, straight, female+female, 3+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11.1 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 





ENP B17 | ENP connector family in size B17, 4-/5-pin

B17 4+4 | EtherCAT/Ethernet cable for flexible applications, 4 x 1.5 mm², key 1 (2 x 24 V DC)*

Ordering information	Cable type/specification	Pict.
ZB7213-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 4 x 1.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 10.8 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 4+4-pin, EtherCAT-coded to	Pict.
ZK7224-2425-Axxx	B17, plug, straight, male+female, 4+4-pin, EtherCAT-coded	
ZK7224-2500-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7224-AM00-Axxx	square flange straight, 4+4-pin, EtherCAT-coded short, female+male	
ZK7224-AN00-Axxx	square flange straight, 4+4-pin, EtherCAT-coded short, male+female	
ZK7224-BQ00-Axxx	square flange straight, 4+4-pin, EtherCAT-coded long, female+male	
ZK7224-BR00-Axxx	square flange straight, 4+4-pin, EtherCAT-coded long, male+female	
ZK7224-AO00-Axxx	rear assembly straight, 4+4-pin, EtherCAT-coded short, female+male	
ZK7224-AP00-Axxx	rear assembly straight, 4+4-pin, EtherCAT-coded short, male+female	
ZK7224-BS00-Axxx	rear assembly straight, 4+4-pin, EtherCAT-coded long, female+male	
ZK7224-BT00-Axxx	rear assembly straight, 4+4-pin, EtherCAT-coded long, male+female	
ZK7224-AQ00-Axxx	front assembly straight, 4+4-pin, EtherCAT-coded short, female+male	
ZK7224-AR00-Axxx	front assembly straight, 4+4-pin, EtherCAT-coded short, male+female	
ZK7224-BU00-Axxx	front assembly straight, 4+4-pin, EtherCAT-coded long, female+male	
ZK7224-BV00-Axxx	front assembly straight, 4+4-pin, EtherCAT-coded long, male+female	

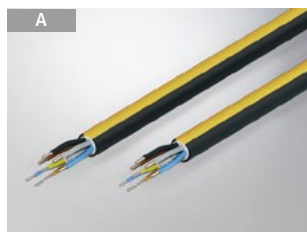
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 4 x 1.5 mm²**










Ordering information	B17 EtherCAT connectors, 4+4-pin	Pict.
ZS7200-A005	B17, plug, metal, shielded, crimp, straight, male+female, 4+4-pin, EtherCAT-coded, IP 65/67, Ø 10.8 mm	
ZS7200-A006	B17, plug, metal, shielded, crimp, straight, female+male, 4+4-pin, EtherCAT-coded, IP 65/67, Ø 10.8 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 5+4 | EtherCAT/Ethernet cable for flexible applications, 5 G 1.5 mm², key 1 (2 x 24 V DC + PE)*

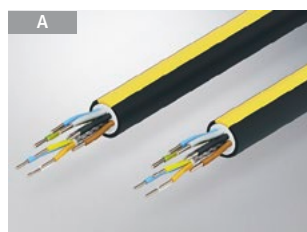
Ordering information	Cable type/specification	Pict.
ZB7203-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 5 G 1.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 11.0 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 5+4-pin, EtherCAT-coded to	Pict.
ZK7208-3031-Axxx	B17, plug, straight, male+female, 5+4-pin, EtherCAT-coded	
ZK7208-3100-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7208-AS00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7208-AT00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7208-BW00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7208-BX00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7208-AU00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7208-AV00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7208-BY00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7208-BZ00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7208-AW00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7208-AX00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7208-CA00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7208-CB00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, male+female	

*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 5 G 1.5 mm²**

Ordering information	B17 EtherCAT connectors, 5+4-pin	Pict.
ZS7200-A007	B17, plug, metal, shielded, crimp, straight, male+female, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 11 mm	
ZS7200-A008	B17, plug, metal, shielded, crimp, straight, female+male, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 11 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 



B17 5+4 | EtherCAT/Ethernet cable for flexible applications, 5 G 1.5 mm², key 2 (400 V AC)*

Ordering information	Cable type/specification	Pict.
ZB7203-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 5 G 1.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 11.0 mm (±0.2 mm)	A
Ordering information	ENP cable, pre-assembled with B17 plug, straight, female+male, 5+4-pin, EtherCAT-coded to	Pict.
ZK7608-3031-Axxx	B17, plug, straight, male+female, 5+4-pin, EtherCAT-coded	B
ZK7608-3100-Axxx	open end	C
Ordering information	ENP cable, pre-assembled with RJ45+open end to B17 flange	Pict.
ZK7608-AS00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, female+male	D
ZK7608-AT00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, male+female	E
ZK7608-BW00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7608-BX00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7608-AU00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, female+male	F
ZK7608-AV00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, male+female	G
ZK7608-BY00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7608-BZ00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7608-AW00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, female+male	H
ZK7608-AX00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, male+female	I
ZK7608-CA00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7608-CB00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, male+female	

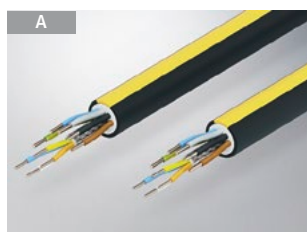
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT/Ethernet connectors for field assembly, 5 G 1.5 mm²**

Ordering information	B17 EtherCAT connectors, 5+4-pin	Pict.
ZS7200-A007	B17, plug, metal, shielded, crimp, straight, male+female, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 11 mm	J
ZS7200-A008	B17, plug, metal, shielded, crimp, straight, female+male, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 11 mm	K










**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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ECP B17 | ECP connector family in size B17, 4-/5-pin

B17 4+4 | EtherCAT P cable for flexible applications, 4 x 1.5 mm², key 1 (2 x 24 V DC)*

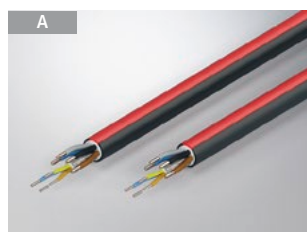
Ordering information	Cable type/specification	Pict.
ZB7215-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 4 x 1.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 10.8 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 4+4-pin, EtherCAT-P-coded to	Pict.
ZK7224-2425-0xxx	B17, plug, straight, male+male, 4+4-pin, EtherCAT-P-coded	
ZK7224-2500-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7224-AM00-0xxx	square flange straight, 4+4-pin, EtherCAT-P-coded short, female+female	
ZK7224-AN00-0xxx	square flange straight, 4+4-pin, EtherCAT-P-coded short, male+male	
ZK7224-BQ00-0xxx	square flange straight, 4+4-pin, EtherCAT-P-coded long, female+female	
ZK7224-BR00-0xxx	square flange straight, 4+4-pin, EtherCAT-P-coded long, male+male	
ZK7224-AO00-0xxx	rear assembly straight, 4+4-pin, EtherCAT-P-coded short, female+female	
ZK7224-AP00-0xxx	rear assembly straight, 4+4-pin, EtherCAT-P-coded short, male+male	
ZK7224-BS00-0xxx	rear assembly straight, 4+4-pin, EtherCAT-P-coded long, female+female	
ZK7224-BT00-0xxx	rear assembly straight, 4+4-pin, EtherCAT-P-coded long, male+male	
ZK7224-AQ00-0xxx	front assembly straight, 4+4-pin, EtherCAT-P-coded short, female+female	
ZK7224-AR00-0xxx	front assembly straight, 4+4-pin, EtherCAT-P-coded short, male+male	
ZK7224-BU00-0xxx	front assembly straight, 4+4-pin, EtherCAT-P-coded long, female+female	
ZK7224-BV00-0xxx	front assembly straight, 4+4-pin, EtherCAT-P-coded long, male+male	

*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 4 x 1.5 mm²**

Ordering information	B17 EtherCAT P connectors, 4+4-pin	Pict.
ZS7200-0005	B17, plug, metal, shielded, crimp, straight, male+male, 4+4-pin, EtherCAT-P-coded, IP 65/67, Ø 10.8 mm	
ZS7200-0006	B17, plug, metal, shielded, crimp, straight, female+female, 4+4-pin, EtherCAT-P-coded, IP 65/67, Ø 10.8 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 



B17 5+4 | EtherCAT P cable for flexible applications, 5 G 1.5 mm², key 1 (2 x 24 V DC + PE)*

Ordering information	Cable type/specification	Pict.
ZB7201-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 5 G 1.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 11.0 mm (±0.2 mm)	A
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 5+4-pin, EtherCAT-P-coded to	Pict.
ZK7208-3031-0xxx	B17, plug, straight, male+male, 5+4-pin, EtherCAT-P-coded	B
ZK7208-3100-0xxx	open end	C
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7208-AS00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, female+female	D
ZK7208-AT00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, male+male	E
ZK7208-BW00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7208-BX00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, male+male	
ZK7208-AU00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded short, female+female	F
ZK7208-AV00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded short, male+male	G
ZK7208-BY00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7208-BZ00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded long, male+male	
ZK7208-AW00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded short, female+female	H
ZK7208-AX00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded short, male+male	I
ZK7208-CA00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7208-CB00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded long, male+male	

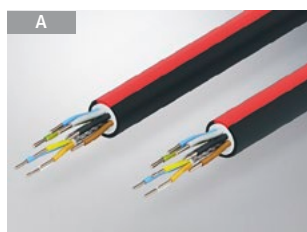
*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 5 G 1.5 mm²**










Ordering information	B17 EtherCAT P connectors, 5+4-pin	Pict.
ZS7200-0007	B17, plug, metal, shielded, crimp, straight, male+male, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11 mm	J
ZS7200-0008	B17, plug, metal, shielded, crimp, straight, female+female, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11 mm	K

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B17 5+4 | EtherCAT P cable for flexible applications, 5 G 1.5 mm², key 2 (400 V AC)*

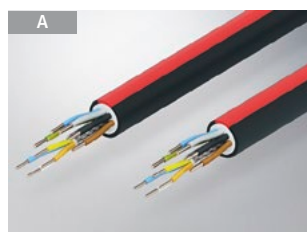
Ordering information	Cable type/specification	Pict.
ZB7201-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 5 G 1.5 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 11.0 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B17 plug, straight, female+female, 5+4-pin, EtherCAT-P-coded to	Pict.
ZK7608-3031-0xxx	B17, plug, straight, male+male, 5+4-pin, EtherCAT-P-coded	
ZK7608-3100-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B17 flange	Pict.
ZK7608-AS00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, female+female	
ZK7608-AT00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, male+male	
ZK7608-BW00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7608-BX00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, male+male	
ZK7608-AU00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded short, female+female	
ZK7608-AV00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded short, male+male	
ZK7608-BY00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7608-BZ00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-P-coded long, male+male	
ZK7608-AW00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded short, female+female	
ZK7608-AX00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded short, male+male	
ZK7608-CA00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7608-CB00-0xxx	front assembly straight, 5+4-pin, EtherCAT-P-coded long, male+male	

*key = mechanical coding, key for customer-specific applications optionally available

B17 | EtherCAT P connectors for field assembly, 5 G 1.5 mm²**










Ordering information	B17 EtherCAT P connectors, 5+4-pin	Pict.
ZS7200-0007	B17, plug, metal, shielded, crimp, straight, male+male, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11 mm	
ZS7200-0008	B17, plug, metal, shielded, crimp, straight, female+female, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 11 mm	

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 



ENP B23 | ENP connector family in size B23

B23 5+4 | EtherCAT/Ethernet cable for flexible applications, 5 G 4 mm², key 1 (2 x 24 V DC + PE)*

Ordering information	Cable type/specification	Pict.
ZB7305-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 5 G 4 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 15.0 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B23 plug, straight, female+male, 5+4-pin, EtherCAT-coded to	Pict.
ZK7314-3031-Axxx	B23, plug, straight, male+female, 5+4-pin, EtherCAT-coded	
ZK7314-3100-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B23 flange	Pict.
ZK7314-AS00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7314-AT00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7314-BW00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7314-BX00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7314-AU00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7314-AV00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7314-BY00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7314-BZ00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7314-AW00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7314-AX00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7314-CA00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7314-CB00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, male+female	

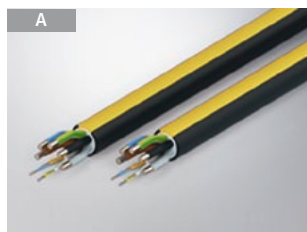
*key = mechanical coding, key for customer-specific applications optionally available

B23 | EtherCAT/Ethernet connectors for field assembly, 5 G 4 mm²**










Ordering information	B23 EtherCAT connectors, 5+4-pin
ZS7300-A001	B23, plug, metal, shielded, crimp, straight, male+female, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 15 mm
ZS7300-A002	B23, plug, metal, shielded, crimp, straight, female+male, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 15 mm

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B23 5+4 | EtherCAT/Ethernet cable for flexible applications, 5 G 4 mm², key 2 (400 V AC)*

Ordering information	Cable type/specification	Pict.
ZB7305-xxxx	EtherCAT/Ethernet cable, no overall shield, PUR, drag-chain suitable, 5 G 4 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 15.0 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B23 plug, straight, female+male, 5+4-pin, EtherCAT-coded to	Pict.
ZK7714-3031-Axxx	B23, plug, straight, male+female, 5+4-pin, EtherCAT-coded	
ZK7714-3100-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B23 flange	Pict.
ZK7714-AS00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7714-AT00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7714-BW00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7714-BX00-Axxx	square flange straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7714-AU00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7714-AV00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7714-BY00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7714-BZ00-Axxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7714-AW00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7714-AX00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7714-CA00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7714-CB00-Axxx	front assembly straight, 5+4-pin, EtherCAT-coded long, male+female	

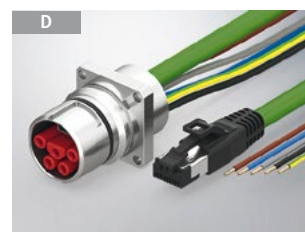
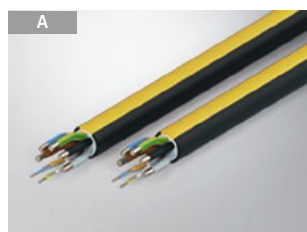
*key = mechanical coding, key for customer-specific applications optionally available

B23 | EtherCAT/Ethernet connectors for field assembly, 5 G 4 mm²**

Ordering information	B23 EtherCAT connectors, 5+4-pin
ZS7300-A001	B23, plug, metal, shielded, crimp, straight, male+female, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 15 mm
ZS7300-A002	B23, plug, metal, shielded, crimp, straight, female+male, 5+4-pin, EtherCAT-coded, IP 65/67, Ø 15 mm










**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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ECP B23 | ECP connector family in size B23

B23 5+4 | EtherCAT P cable for flexible applications, 5 G 4 mm², key 1 (2 x 24 V DC + PE)*

Ordering information	Cable type/specification	Pict.
ZB7304-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 5 G 4 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 15.0 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B23 plug, straight, female+female, 5+4-pin, EtherCAT-P-coded to	Pict.
ZK7314-3031-0xxx	B23, plug, straight, male+male, 5+4-pin, EtherCAT-P-coded	
ZK7314-3100-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B23 flange	Pict.
ZK7314-AS00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, female+female	
ZK7314-AT00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, male+male	
ZK7314-BW00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7314-BX00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, male+male	
ZK7314-AU00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7314-AV00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7314-BY00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7314-BZ00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7314-AW00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7314-AX00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7314-CA00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7314-CB00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded long, male+female	

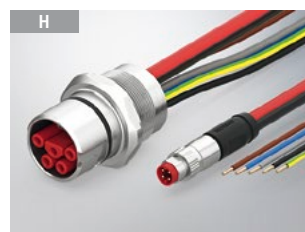
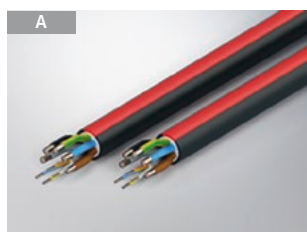
*key = mechanical coding, key for customer-specific applications optionally available

B23 | EtherCAT P connectors for field assembly, 5 G 4 mm²**










Ordering information	B23 EtherCAT P connectors, 5+4-pin
ZS7300-0001	B23, plug, metal, shielded, crimp, straight, male+male, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 15 mm
ZS7300-0002	B23, plug, metal, shielded, crimp, straight, female+female, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 15 mm

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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B23 5+4 | EtherCAT P cable for flexible applications, 5 G 4 mm², key 2 (400 V AC)*

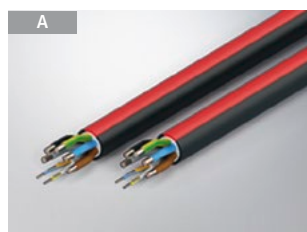
Ordering information	Cable type/specification	Pict.
ZB7304-xxxx	EtherCAT P cable, no overall shield, PUR, drag-chain suitable, 5 G 4 mm ² + (1 x 4 x AWG22), black with red stripe, OD = 15.0 mm (±0.2 mm)	
Ordering information	ECP cable, pre-assembled with B23 plug, straight, female+female, 5+4-pin, EtherCAT-P-coded to	Pict.
ZK7714-3031-0xxx	B23, plug, straight, male+male, 5+4-pin, EtherCAT-P-coded	
ZK7714-3100-0xxx	open end	
Ordering information	ECP cable, pre-assembled with M8+open end to B23 flange	Pict.
ZK7714-AS00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, female+female	
ZK7714-AT00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded short, male+male	
ZK7714-BW00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, female+female	
ZK7714-BX00-0xxx	square flange straight, 5+4-pin, EtherCAT-P-coded long, male+male	
ZK7714-AU00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7714-AV00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7714-BY00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7714-BZ00-0xxx	rear assembly straight, 5+4-pin, EtherCAT-coded long, male+female	
ZK7714-AW00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded short, female+male	
ZK7714-AX00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded short, male+female	
ZK7714-CA00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded long, female+male	
ZK7714-CB00-0xxx	front assembly straight, 5+4-pin, EtherCAT-coded long, male+female	

*key = mechanical coding, key for customer-specific applications optionally available










B23 | EtherCAT P connectors for field assembly, 5 G 4 mm²**

Ordering information	B23 EtherCAT P connectors, 5+4-pin
Z57300-0001	B23, plug, metal, shielded, crimp, straight, male+male, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 15 mm
Z57300-0002	B23, plug, metal, shielded, crimp, straight, female+female, 5+4-pin, EtherCAT-P-coded, IP 65/67, Ø 15 mm

**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page 



B23 6+4 | EtherCAT/Ethernet cable for flexible applications, 4 G 4 mm², key 1 (2 x 24 V DC + PE)*

Ordering information	Sold by the metre	Pict.
ZB7301-xxxx	EtherCAT cable, no complete shield, PUR, drag-chain suitable, 4 G 4 mm ² + 2 x 2.5 mm ² + (1 x 4 x AWG22), black with yellow stripe, OD = 14.1 mm (±0.2 mm)	
Ordering information	ENP cable, pre-assembled with B23 plug, straight, female+male, 6+4-pin, EtherCAT-coded to	Pict.
ZK7321-3637-Axxx	B23, plug, straight, male+female, 6+4-pin, EtherCAT-coded	
ZK7321-3700-Axxx	open end	
Ordering information	ENP cable, pre-assembled with RJ45+open end to B23 flange	Pict.
ZK7321-AY00-Axxx	square flange straight, 6+4-pin, EtherCAT-coded short, female+male	
ZK7321-AZ00-Axxx	square flange straight, 6+4-pin, EtherCAT-coded short, male+female	
ZK7321-CC00-Axxx	square flange straight, 6+4-pin, EtherCAT-coded long, female+male	
ZK7321-CD00-Axxx	square flange straight, 6+4-pin, EtherCAT-coded long, male+female	
ZK7321-BA00-Axxx	rear assembly straight, 6+4-pin, EtherCAT-coded short, female+male	
ZK7321-BB00-Axxx	rear assembly straight, 6+4-pin, EtherCAT-coded short, male+female	
ZK7321-CE00-Axxx	rear assembly straight, 6+4-pin, EtherCAT-coded long, female+male	
ZK7321-CF00-Axxx	rear assembly straight, 6+4-pin, EtherCAT-coded long, male+female	
ZK7321-BC00-Axxx	front assembly straight, 6+4-pin, EtherCAT-coded short, female+male	
ZK7321-BD00-Axxx	front assembly straight, 6+4-pin, EtherCAT-coded short, male+female	
ZK7321-CG00-Axxx	front assembly straight, 6+4-pin, EtherCAT-coded long, female+male	
ZK7321-CH00-Axxx	front assembly straight, 6+4-pin, EtherCAT-coded long, male+female	

*key = mechanical coding, key for customer-specific applications optionally available

B23 | EtherCAT P connectors for field assembly, 5 G 4 mm²**

Ordering information	B23 EtherCAT flange, 6+4-pin
ZS7300-A003	B23, plug, metal, shielded, crimp, straight, male+female, 6+4-pin, EtherCAT-coded, IP65/67, Ø 15 mm
ZS7300-A004	B23, plug, metal, shielded, crimp, straight, female+male, 6+4-pin, EtherCAT-coded, IP65/67, Ø 15 mm


**Connectors for field assembly are delivered without crimp contacts. Please order crimp contacts separately, see page

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ENP/ECP | Accessories for ENP/ECP connector family

Connectors for field assembly

Ordering information	Tools and inserts	Pict.
ZB8810-0000	crimping tool for Ethernet element, M8, B12, B17, B23 contacts	A
ZB8810-0001	crimping insert and locator for Ethernet element, M8, B12, B17 contacts	B
 ZB8810-0002	crimping insert and locator for Ethernet element, M8 and B23 contacts	

Ordering information	Crimp contacts for trapezoidal Ethernet element	Pict.
ZS7000-C001	crimp contacts Ethernet element, male, packaging unit = 50 pieces	C
ZS7000-C002	crimp contacts Ethernet element, female, packaging unit = 50 pieces	C

Ordering information	Crimp contacts for power pins	Pict.
ZS7000-C003	B12 crimp contact, male, 0.75 mm ² , packaging unit = 50 pieces	D
ZS7000-C004	B12 crimp contact, female, 0.75 mm ² , packaging unit = 50 pieces	D
ZS7000-C005	B17 crimp contact, male, 1.5 mm ² , packaging unit = 50 pieces	D
ZS7000-C006	B17 crimp contact, female, 1.5 mm ² , packaging unit = 50 pieces	D
ZS7000-C007	B17 crimp contact, male, 2.5 mm ² , packaging unit = 50 pieces	D
ZS7000-C008	B17 crimp contact, female, 2.5 mm ² , packaging unit = 50 pieces	D
 ZS7000-C009	B23 crimp contact, male, 4 mm ² , packaging unit = 50 pieces	D
 ZS7000-C010	B23 crimp contact, female, 4 mm ² , packaging unit = 50 pieces	D

Ordering information	Assembly tool for connector	Pict.
ZB8802-0001	assembly tool for B12 connector, AF17	E
ZB8802-0002	assembly tool for B17 connector, AF22	E
ZB8802-0003	assembly tool for B23 connector, AF27	E

For B12













Ordering information		Pict.
ZS7100-B001	B12 protection cap, socket/flange, plastic, black, IP 67, packaging unit = 10 pieces	F
ZS7100-B002	B12 protection cap, socket/flange, metal, IP 67, packaging unit = 5 pieces	G
ZS7100-B003	B12 protection cap, plug, plastic, black, IP 67, packaging unit = 10 pieces	H
ZS7100-B004	B12 protection cap, plug, metal, IP 67, packaging unit = 5 pieces	
ZS7100-B005	B12 colour coding connector/square flange, red, packaging unit = 10 pieces	I
ZS7100-B006	B12 colour coding connector/square flange, yellow, packaging unit = 10 pieces	I
ZS7100-B007	B12 colour coding connector/square flange, blue, packaging unit = 10 pieces	I
ZS7100-B008	B12 colour coding connector/square flange, green, packaging unit = 10 pieces	I
ZS7100-B015	B12 colour coding connector/square flange, orange, packaging unit = 10 pieces	I
ZS7100-B016	B12 colour coding connector/square flange, grey, packaging unit = 10 pieces	I
ZS7100-B009	B12 colour coding flange for front/rear assembly, red, packaging unit = 10 pieces	J
ZS7100-B010	B12 colour coding flange for front/rear assembly, yellow, packaging unit = 10 pieces	J
ZS7100-B011	B12 colour coding flange for front/rear assembly, blue, packaging unit = 10 pieces	J
ZS7100-B012	B12 colour coding flange for front/rear assembly, green, packaging unit = 10 pieces	J
ZS7100-B013	B12 colour coding flange for front/rear assembly, orange, packaging unit = 10 pieces	J
ZS7100-B014	B12 colour coding flange for front/rear assembly, grey, packaging unit = 10 pieces	J

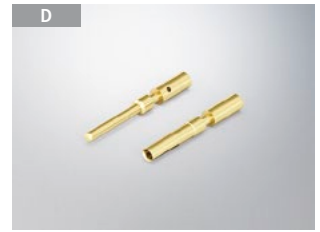
Illustrations see next page

For B17

Ordering information		Pict.
ZS7200-B001	B17 protection cap, socket/flange, plastic, black, IP 67, packaging unit = 10 pieces	F
ZS7200-B002	B17 protection cap, socket/flange, metal, IP 67, packaging unit = 5 pieces	G
ZS7200-B003	B17 protection cap, plug, plastic, black, IP 67, packaging unit = 10 pieces	H
ZS7200-B004	B17 protection cap, plug, metal, IP 67, packaging unit = 5 pieces	
ZS7200-B005	B17 colour coding connector/square flange, red, packaging unit = 10 pieces	I
ZS7200-B006	B17 colour coding connector/square flange, yellow, packaging unit = 10 pieces	I
ZS7200-B007	B17 colour coding connector/square flange, blue, packaging unit = 10 pieces	I
ZS7200-B008	B17 colour coding connector/square flange, green, packaging unit = 10 pieces	I
ZS7200-B015	B17 colour coding connector/square flange, orange, packaging unit = 10 pieces	I
ZS7200-B016	B17 colour coding connector/square flange, grey, packaging unit = 10 pieces	I
ZS7200-B009	B17 colour coding flange for front/rear assembly, red, packaging unit = 10 pieces	J
ZS7200-B010	B17 colour coding flange for front/rear assembly, yellow, packaging unit = 10 pieces	J
ZS7200-B011	B17 colour coding flange for front/rear assembly, blue, packaging unit = 10 pieces	J
ZS7200-B012	B17 colour coding flange for front/rear assembly, green, packaging unit = 10 pieces	J
ZS7200-B013	B17 colour coding flange for front/rear assembly, orange, packaging unit = 10 pieces	J
ZS7200-B014	B17 colour coding flange for front/rear assembly, grey, packaging unit = 10 pieces	J

For B23

Ordering information		Pict.
 ZS7300-B001	B23 protection cap, socket/flange, plastic, black, IP 67, packaging unit = 10 pieces	F
 ZS7300-B002	B23 protection cap, socket/flange, metal, IP 67, packaging unit = 5 pieces	G
 ZS7300-B003	B23 protection cap, plug, plastic, black, IP 67, packaging unit = 10 pieces	H
 ZS7300-B004	B23 protection cap, plug, metal, IP 67, packaging unit = 5 pieces	
 ZS7300-B005	B23 colour coding connector/square flange, red, packaging unit = 10 pieces	I
 ZS7300-B006	B23 colour coding connector/square flange, yellow, packaging unit = 10 pieces	I
 ZS7300-B007	B23 colour coding connector/square flange, blue, packaging unit = 10 pieces	I
 ZS7300-B008	B23 colour coding connector/square flange, green, packaging unit = 10 pieces	I
ZS7300-B015	B23 colour coding connector/square flange, orange, packaging unit = 10 pieces	I
ZS7300-B016	B23 colour coding connector/square flange, grey, packaging unit = 10 pieces	I
 ZS7300-B009	B23 colour coding flange for front/rear assembly, red, packaging unit = 10 pieces	J
 ZS7300-B010	B23 colour coding flange for front/rear assembly, yellow, packaging unit = 10 pieces	J
 ZS7300-B011	B23 colour coding flange for front/rear assembly, blue, packaging unit = 10 pieces	J
 ZS7300-B012	B23 colour coding flange for front/rear assembly, green, packaging unit = 10 pieces	J
ZS7300-B013	B23 colour coding flange for front/rear assembly, orange, packaging unit = 10 pieces	J
ZS7300-B014	B23 colour coding flange for front/rear assembly, grey, packaging unit = 10 pieces	J



i For availability status see Beckhoff website at: www.beckhoff.com

Fieldbus cables

Lightbus

Ordering information	Lightbus field-assembly components
Z1000	standard connector for 1000 µm plastic fibre
Z1010	standard connector for 200 µm PCS fibre
Z1020	coupling for Z1000
Z1100	plastic fibre optic, core Ø 1000 µm, single core, Ø 2.2 mm
Z1101	plastic fibre optic, core Ø 1000 µm, protective PUR sheath Ø 5.5 mm, Kevlar strain relief, drag-chain suitable

PROFIBUS, Modbus, RS232, RS485

Pre-assembled cables for fixed installations

Material characteristics	
ZB3200	PROFIBUS cable, PUR, 2-wire, (2 x 0.25 mm²), shielded, fixed installation, purple

Ordering information	Cable, pre-assembled with M12 socket (5-pin/straight) to	Pict.
ZK1031-6200-1xxx	open end	A
ZK1031-6251-1xxx	M12 plug (4-pin/straight)	B

Ordering information	Cable, pre-assembled with M12 socket (5-pin/angled) to	Pict.
ZK1031-6400-1xxx	open end	C
ZK1031-6451-1xxx	M12 plug (4-pin/straight), reverse-keyed	D

Ordering information	Cable, pre-assembled with M12 plug (5-pin/straight) to	Pict.
ZK1031-6100-1xxx	M12, plug, straight, male, 5-pin, B-coded – open end	E

Ordering information	Cable, pre-assembled with M12 plug (5-pin/angled) to	Pict.
ZK1031-6300-1xxx	open end	F
ZK1031-6354-1xxx	M12 plug (5-pin/angled)	G

Accessories

Ordering information	Connecting elements for pre-assembled cables	Pict.
ZS1031-2600	plug T splitter for PROFIBUS, Modbus, RS485, IP 67, M12, straight, male+female, 5-pin, B-coded	
ZS1031-2610	plug T splitter for PROFIBUS, Modbus, RS485, IP 67, without 5 V on the plug, M12, straight, male+female, 5-pin, B-coded	
ZS1000-2600	plug Y splitter for PROFIBUS, Modbus, RS485, IP 67, M12, straight, male+female, 5-pin, B-coded	
ZS1000-1610	plug termination resistor for PROFIBUS, Modbus, RS485, IP 67, M12, straight, male, 4-pin, B-coded	H
ZS1031-6610	plug control cabinet feedthrough, IP 67, M12, straight, male+female, 5-pin, B-coded	I

Ordering information	Connectors for field assembly	Pict.
ZS1000-0610	plug field assembly for PROFIBUS, Modbus, RS485, IP 67, M12, straight, male, 5-pin, B-coded	J
ZS1000-0620	socket field assembly for PROFIBUS, Modbus, RS485, IP 67, M12, straight, female, 5-pin, B-coded	K
ZS1000-0630	plug field assembly PROFIBUS, Modbus, RS485, IP 67, M12, angled, male, 5-pin, B-coded	L
ZS1000-0640	plug field assembly PROFIBUS, Modbus, RS485, IP 67, M12, angled, female, 5-pin, B-coded	M

Ordering information	PROFIBUS field-assembly components	Pict.
ZB3100	9-pin D-sub connector for PROFIBUS (12 Mbaud) with switchable termination resistor	N
ZB3101	9-pin D-sub connector for PROFIBUS (12 Mbaud) with switchable termination resistor and programming interface	O
ZB3102	9-pin D-sub connector for PROFIBUS (12 Mbaud) (180° orientation) with switchable termination resistor	P
ZS1031-3000	9-pin D-sub connector for PROFIBUS (12 Mbaud) with integrated termination resistor	Q
ZS1031-3500	fibre optic connector for Bus Couplers BK3500 and BK3520	
ZB3200	PROFIBUS cable, PUR, 2-wire, (2 x 0.25 mm ²), shielded, fixed installation, purple	
ZB3300	PROFIBUS cable, 12 Mbaud, 2 x 0.25 mm ² + 3 x 0.75 mm ² , 5-wire, suitable as trailing cable	
Z1100	plastic fibre optic, core Ø 1000 µm, single core, Ø 2.2 mm	
Z1101	plastic fibre optic, core Ø 1000 µm, protective PUR sheath Ø 5.5 mm, Kevlar strain relief, drag-chain suitable	

Ordering information	RS232/RS485 field-assembly components	Pict.
ZB3180	9-pin D-sub connector for CX8080 (RS232/RS485) with switchable termination resistor	N



Illustrations similar

CANopen, DeviceNet

Pre-assembled cables for fixed installation

Material characteristics		
ZK1052-6xxx-3xxx	PVC, 4-wire, (4 x 0.32 mm ²), shielded, fixed installation, grey	
Ordering information		
ZK1052-6200-3xxx	Cable, pre-assembled with M12 socket (5-pin/straight) to open end	Pict. A
Ordering information		
ZK1052-6400-3xxx	Cable, pre-assembled with M12 socket (5-pin/angled) to open end	Pict. B
Ordering information		
ZK1052-6100-3xxx	Cable, pre-assembled with M12 plug (5-pin/straight) to open end	Pict. C
ZK1052-6152-3xxx	M12 socket (5-pin/straight)	Pict. D
ZK1052-6154-3xxx	M12 socket (5-pin/angled)	Pict. E
Ordering information		
ZK1052-6300-3xxx	Cable, pre-assembled with M12 plug (5-pin/angled) to open end	Pict. F
ZK1052-6354-3xxx	M12 socket (5-pin/angled)	Pict. G

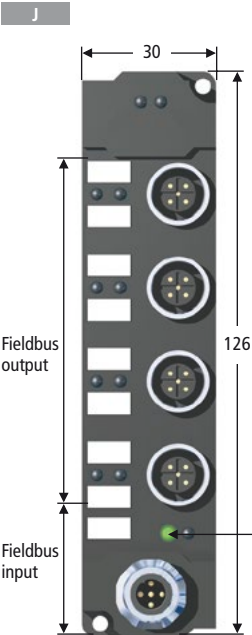
Accessories

Ordering information		
ZS1052-2600	Connecting elements for pre-assembled cables	Pict.
ZS1052-2602	Y-connector (plug, socket)	
ZS1052-2602	Y-connector with stub, 1 m (plug, socket)	
ZS1052-1610	termination resistor (plug, 120 Ω pin 4–5)	Pict. H
ZS1052-6610	control cabinet lead-in M12, plug-coupling	Pict. I
ZS5052-4500	distribution box: 1 x 5-pin plug, 4 x 5-pin socket	Pict. J
Ordering information		
ZS1052-0620	Connectors for field assembly	
ZS1052-0640	straight socket, screw type connection	
ZS1052-0640	angled socket, screw type connection	
ZS1052-0610	straight plug, screw type connection	
ZS1052-0630	angled plug, screw type connection	
Ordering information		
ZS1051-3000	CANopen/DeviceNet field-assembly components	Pict.
ZS1051-3000	9-pin D-sub connector for CANopen with integrated termination resistor	Pict. K
ZS1052-3000	5-pin open style connector for CANopen/DeviceNet with integrated termination resistor	Pict. L
ZS1052-5150	CAN diagnostic interface	
ZB5100	CAN cable, 4-wire, fixed laying 2 x 2 x 0.25 mm ²	
ZB5200	DeviceNet cable, 4-wire with shield, fixed laying 2 x 2 x AWG22	





Illustrations similar



Technical data	
Fieldbus	CANopen or DeviceNet
Bus plug	M12 plug, 5-pin, screw type
Data transfer rates	up to 1 Mbaud (CANopen) or 500 kbaud (DeviceNet)
Protection class	IP 67
Temperature range	0...+55 °C

The following stub lines are not to be exceeded:

Baud rates	Max. stub length (multidrop)	Max. bus length with multidrop technology (without stubs)
1000 kbaud	0.3 m	25 m
500 kbaud	1.2 m	60 m
250 kbaud	2.4 m	120 m
125 kbaud	4.8 m	310 m



Interbus

Ordering information	Interbus field-assembly components
Z1003	FSMA plug with knurled nut for 1000 µm plastic fibre
ZB4100	9-pin D-sub socket for incoming remote bus
ZB4101	9-pin D-sub plug for outgoing remote bus
ZB4200	Interbus remote bus cable, certified 3 x 2 x 0.22 mm ²
Z1120	Interbus plastic fibre optic, 2-wire, 1000 µm
Z1121	Interbus plastic fibre optic, 2-wire, 1000 µm with protective PUR sheath

SERCOS

Ordering information	SERCOS field-assembly components
Z1003	FSMA plug with knurled nut for 1000 µm plastic fibre
Z1100	plastic fibre optic, core Ø 1000 µm, single core, Ø 2.2 mm
Z1101	plastic fibre optic, core Ø 1000 µm, protective PUR sheath Ø 5.5 mm, Kevlar strain relief, drag-chain suitable

K-bus

Ordering information	K-bus extension cable, assembled at both ends with RJ45 plug, double-shielded, red					A
ZK1090-0101-1002	0.2 m	ZK1090-0101-1010	1.0 m	ZK1090-0101-1030	3.0 m	
ZK1090-0101-1005	0.5 m	ZK1090-0101-1020	2.0 m	ZK1090-0101-1050	5.0 m	

Ordering information	Ribbon cable
ZK1010-8080-3003	ribbon cable for bus connection between two power terminals KL8001, 0.03 m, included in the scope of supply of KL8001
ZK1010-8080-3005	ribbon cable for bus connection between two power terminals KL8001 for reversing contactor connection, 0.05 m
ZK1010-8080-3010	ribbon cable for bus connection between the KL9060 and the KL8001, 0.1 m, included in scope of supply of KL9060

Ordering information	Components for K-bus extension for field assembly
ZS1090-0005	RJ45, IP 20, plug, plastic, IDC, straight, male, 8-pin, AWG26-22, Ø 5.5...8.5 mm
ZK1090-0000-1xxx	cable for K-bus extension with open ends, Ethernet cable STP, xxx = length in dm



Signal cables

Ordering information	For manual operating modules of the KL85xx series, 20 x 0.14 mm ² , shielded, assembled at both ends with 20-pin plug, for terminals with ribbon cable connection				
ZK8500-8282-7030	3 m	ZK8500-8282-7040	4 m	ZK8500-8282-7050	5 m



IP-Link

Ordering information	Pre-assembled cable
ZK1020-0101-0xxx	pre-assembled IP-Link cable, drag-chain suitable

Ordering information	Sold by the metre for field assembly
Z1103	plastic fibre optics, 1000 µm, protective PUR sheath Ø 6 mm, heavy duty, drag-chain suitable
ZS5400-0001	sanding gauge for IP-Link connector
ZS5400-0010	abrasive paper P600, 10 sheets

Ordering information	Connectors for field assembly	Pict.
ZS1020-0010	plug, packaging unit = 1 piece	A
ZS1021-0010	plug, packaging unit = 10 pieces	A
ZS1022-0010	IP-Link plug, packaging unit = 10 pieces, clip type	B
ZK1020-0101-1000	IP-Link connector, for flush mounted extension modules	C
ZS1022-0000	locking device IP-Link, stainless steel	



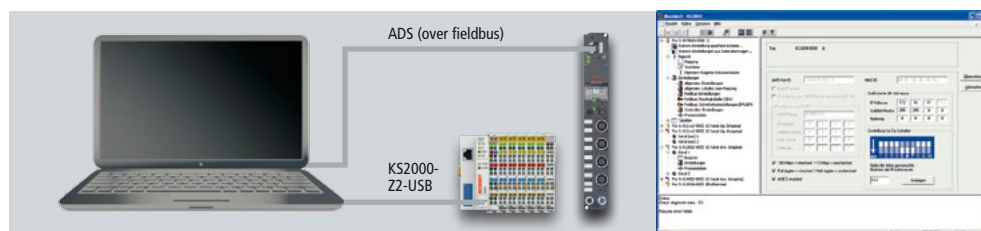
Illustrations similar

Software and programming

Configuration software KS2000

The KS2000 can be used for parameterising fieldbus components, local diagnostics, forcing data, monitoring values, updating firmware and programming Beckhoff mini PLCs via TwinCAT. The connection between the fieldbus components and the PC is established via the serial or USB connection cable provided, or via the network and TCP/IP. The KS2000 configuration software is available for different Windows operating systems and simplifies the configuration process with a user-friendly interface.

Ordering information	
KS2000(-0000)	KS2000 software for Bus Coupler/Bus Terminal Controller, RS232 interface
KS2000-0001	KS2000 software for Fieldbus Box, RS232 interface, matching KS2000-Z3 cable included in the scope of supply
KS2000-0010	KS2000 software for Bus Coupler/Bus Terminal Controller, USB interface, matching KS2000-Z2-USB cable included in the scope of supply
KS2000-0011	KS2000 software for Fieldbus Box, USB interface, matching KS2000-Z3-USB cable included in the scope of supply



USB cable for Bus Couplers or Bus Terminal Controllers at KS2000/TwinCAT

The KS2000 cable establishes a connection between the Bus Couplers or Bus Terminal Controllers and the PC. The USB cable features electrical isolation. Status LEDs indicate whether data are sent or received. On the connected PC the USB cable behaves like a COM port and can therefore be used for all Beckhoff tools using serial communication.

Ordering information	
KS2000-Z2-USB	connection cable for KS2000 or TwinCAT for serial conversion from USB for Bus Couplers or Bus Terminal Controllers of the BK, BC or LC series, 3 m

USB cable for Fieldbus Box modules at KS2000/TwinCAT

The KS2000 cable connects the Fieldbus Box modules with the PC. The USB cable features electrical isolation. Status LEDs indicate whether data are sent or received. On the connected PC the USB cable behaves like a COM port and can therefore be used for all Beckhoff tools using serial communication.

Ordering information	
KS2000-Z3-USB	connection cable for KS2000 or TwinCAT for serial conversion from USB for Fieldbus Box, 3 m

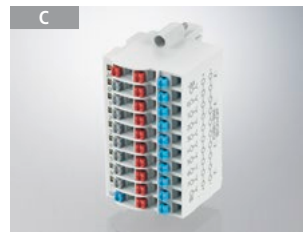
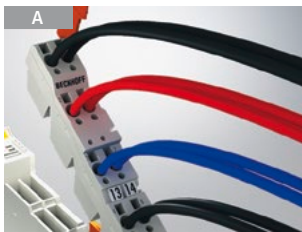


RS232 programming cable for BX controllers at KS2000/TwinCAT

Ordering information	
ZK1000-0030	connection cable for KS2000 or TwinCAT, RS232 for the BX controller series

Spare parts

Ordering information	For power terminal KL8001	
ZS1010-1610	plug for exposed bus connection of the KL8001, spare part, included in the scope of supply of KL9060	
Ordering information	For terminals with plug-in wiring level	A
ZS2010	10 connectors for KS and ES series, spare part (KS/ES terminals are supplied with connector.)	
Ordering information	Female header with spring connection as IP 20 plug-in connection level, for KM or EM modules, EP2316-0003, EPP2316-0003 and IE2403	Pict.
ZS2001-0001	1 x 10-pin, without LED	
ZS2001-0002	1 x 10-pin, with LED	B
ZS2001-0004	3 x 10-pin, with LED	C
ZS2001-0005	3 x 10-pin, without LED, labeling (1...10)	
Ordering information	Fuses and relays	Pict.
ZB2601	relay, 230 V AC, 16 A, coil 24 V, spare part KM2604	
ZB2602	relay, manual operation, 230 V AC, 16 A, coil 24 V, spare part KM2614	
ZB8000-0001	spare fuse, 1.25 A, 10 pieces, spare part KL3681/EL3681	D



Marking and colour coding

Standard contact signs

Bus and EtherCAT Terminals can be individually labeled with standard contact signs. The marking material is not included in the delivery.
Further versions ► www.beckhoff.com/labeling

Ordering information	For contact labels, unprinted (100 pieces)			A
BZ2000	white	BZ2006	blue	
BZ2002	yellow	BZ2007	orange	
BZ2005	red	BZ2008	light green	
Ordering information	For contact labels, printed (100 pieces)			A
BZ1100	0 V, blue	BZ1107	+, white	
BZ1102	–, blue	BZ1108	PE, light green	
BZ1104	24 V, red	BZ1300	ten of each: 0...7, 20 unprinted, white	
BZ1106	+, red	BZ1400	two of each: 00 01...48 49, white	
Ordering information	For equipment identification labels 12 x 7 mm with removable identification section (180 pieces)			
BZ3000	unprinted	BZ3010	printed according to customer specification (in Excel file)	

EtherCAT Box, Fieldbus Box and EtherCAT P Box modules can be individually labeled with standard contact signs. The marking material is not included in the delivery.

Ordering information	Box module labels
ZS5100-0000	marking labels, blank, 4 stripes à 10 pieces
ZS5100-xxxx	marking labels, customised printing



Slide-in label covers

The slide-in label covers BZ3200 enable clear labeling of the individual channels or text-based functional description of the terminals. The labels are inserted in the designated slots. For connecting the individual channels the label cover can be tilted upwards.

Ordering information	
BZ3200	insertable label cover, transparent, pluggable, 11.5 mm x 104.5 mm, packaging unit = 50 pieces
BZ5100	push-in strips for labels, A4 sheet, 160 pieces, pre-punched, packaging unit = 10 pieces



Coding pins

The coding pins and sockets for KS/ES terminals with pluggable wiring level enable coding between terminal and plug in order to prevent incorrect plug insertion.





Ordering information	Set contains 100 sockets and 100 pins
ZS2010-0010	coding pins and sockets for KS and ES terminals







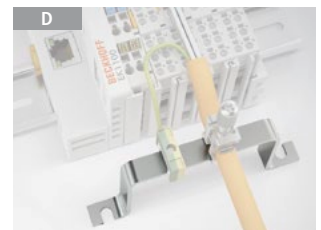
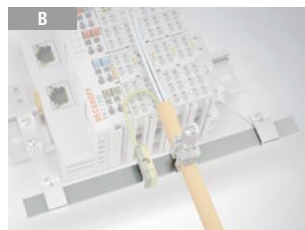
Housings and assembly

Shielding connection system

The shielding connection system enables the shielding to be located very close to the terminals of the shielded line, so that interference is reduced to a minimum. A shield busbar for attachment to a mounting rail or a bracket for separate mounting in the control cabinet are available.

Ordering information	Necessary components for mounting on a mounting rail	Pict.
ZB8500	clamp strap for shield connection with knurled screw, width 11 mm, shield diameter max. 8 mm, packaging unit = 10 pieces	
ZB8501	clamp strap for shield connection with knurled screw, width 19 mm, shield diameter 7...16 mm, packaging unit = 10 pieces	
ZB8510	shield busbar (10 x 3 mm), 1000 mm galvanised Cu, packaging unit = 1 piece	
ZB8520	mounting rail holder for shield busbar (10 x 3 mm), packaging unit = 2 pieces	
ZB8530	U-clamp terminal up to 4 mm² for PE connection to the rail (10 x 3 mm), packaging unit = 20 pieces	

Ordering information	Necessary components for separate mounting in a control cabinet	Pict.
ZB8500	clamp strap for shield connection with knurled screw, width 11 mm, shield diameter max. 8 mm, packaging unit = 10 pieces	
ZB8501	clamp strap for shield connection with knurled screw, width 19 mm, shield diameter 7...16 mm, packaging unit = 10 pieces	
ZB8511	shield busbar clamp (10 x 3 mm) for 5 Bus Terminals/EtherCAT Terminals 12 mm, packaging unit = 10 pieces	
ZB8512	shield busbar clamp (85 x 10 x 3 mm) for 5 Bus Terminals/EtherCAT Terminals 12 mm with and without fan cartridge ZB8610, packaging unit = 10 pieces	
ZB8530	U-clamp terminal up to 4 mm² for PE connection to the rail (10 x 3 mm), packaging unit = 20 pieces	



EMC accessories for ELM

ZS9100-0002 | Shield connection for ELM series

For the DIN-rail-mountable metal housings of the ELM series a separate shield clamp, ZS9100-0002, is available. The shield connection consists of a mounting bracket, a clamp strap and two screws. The connection cable fed to the module must be stripped to allow ideal contacting of the shield. Possible interference is reliably dissipated by the shield connection, and moreover the cable is securely fixed in position. The ELM modules are supplied without pre-mounted shield connection. See housing series instructions for mounting details.

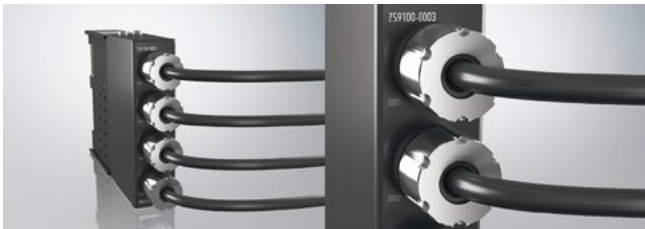
Ordering information	
ZS9100-0002	shield connection for ELM series, shield diameter 7...16 mm



ZS9100-0003 | Shielding hood with EMC gland for ELM3xxx-0000 (push-in connector)

The ZS9100-0003 shielding hood is an optional EMC accessory for ELM series EtherCAT Terminals. When the metal hood is pushed onto modules with appropriate push-in connector (ELM3xxx-0000) it forms a closed envelope together with the housing to shield against external interference. The four EMC cable glands ensure secure and conductive contact of incoming cables with the braided screen. The shielding hood enhances the reliability of temperature measurements (TC, RTD), because it stabilises the temperature at the terminal connection points and reduces the risk of measurement errors further still. The ZS9100-0003 is not necessary for modules with BNC or LEMO connection level, since with these connection techniques, continuous shielding is guaranteed from cable into terminal anyway.

Ordering information	
ZS9100-0003	shielding hood with EMC gland for EtherCAT measurement modules with push-in connector (ELM3xxx-0000), to provide shielding against external interference and temperature stabilisation at the measuring points when measuring temperature; black, scope of supply: shielding hood, screws



Bus system housings

The BG1568 and BG1569 bus system housings are designed for implementing compact I/O stations with an increased protection degree (IP 65). Mounting rails are included in the delivery content. The housing rear is provided with pre-punched holes. On request, the housings can be delivered with pre-assembled Bus Terminals or EtherCAT Terminals, customised flange plates and PG thread connections. Further dimensions available on request.

Ordering information	Bus system housings with inspection window, mounting rails and holes	Pict.
BG1568	bus system housing 400 mm x 250 mm x 125 mm (W x H x D) with mounting rails and holes	A
BG1569	bus system housing 600 mm x 250 mm x 125 mm (W x H x D) with mounting rails and holes	B



Blanking plugs for unused ports (Fieldbus Box/EtherCAT Box)

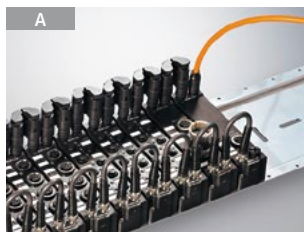
Ordering information	Blanking plugs
ZS5000-0010	blanking plug, plastic (IP 67), for M8 socket, packaging unit = 50 pieces
ZS5000-0020	blanking plug, plastic (IP 67), for M12 socket, packaging unit = 50 pieces
ZS5000-0011	blanking plug, plastic (IP 67), for M8 plug, packaging unit = 50 pieces
ZS5000-0040	blanking plug, plastic (IP 67), for 7/8" socket, packaging unit = 10 pieces
ZS5000-0041	blanking plug, plastic (IP 67), for 7/8" plug, packaging unit = 10 pieces
ZS5000-0050	blanking plug, stainless steel (IP 69K), for M8 socket, packaging unit = 2 pieces
ZS5000-0051	blanking plug, stainless steel (IP 69K), for M12 socket, packaging unit = 4 pieces
ZS5000-0012	protection cap M8, plastic, red, IP 65/67
ZS5000-0014	protection cap M8, plastic, green, IP 65/67

Sets for Fieldbus Box modules

Ordering information	Fieldbus Box sets
ZS5000-0000	Fieldbus Box set M8 (contact labels, blanking plugs)
ZS5000-0001	Fieldbus Box set 8 mm (contact labels, blanking plugs)
ZS5000-0002	Fieldbus Box set M12 (contact labels, blanking plugs)

Mounting elements (Fieldbus Box/EtherCAT Box)

Ordering information	Mounting	Pict.
ZS5300-0001	mounting plate for 15 Extension Box or EtherCAT Box modules, stainless steel, 500 mm x 130 mm	A
ZS5300-0003	mounting plate for Coupler Box, zinc-coated steel sheet, 270 mm x 30 mm, thickness: 1.5 mm	
ZS5300-0011	mounting plate for 14 small or 7 wide EtherCAT Box modules, stainless steel, 500 mm	
ZS5300-0004	universal mounting bracket for a single small EtherCAT Box or Extension Box, stainless steel, 146 mm x 46 mm x 76 mm	
BG2000-0000	ATEX protective housing	



Tools

Ordering information	
ZB8700	slot screwdriver, assembly tool for pressing the spring force clamps on the coupler and the terminals

Ordering information	Torque wrench
ZB8800	torque wrench for M8 cables with knurl, incl. ratchet
ZB8800-0001	M12 ratchet for ZB8800
ZB8800-0002	M8 ratchet (for field assembly) for ZB8800
ZB8801-0000	torque wrench for hexagonal plugs, adjustable
ZB8801-0001	torque cable key, M8/wrench size 9, for ZB8801-0000
ZB8801-0002	torque cable key, M12/wrench size 13, for ZB8801-0000
ZB8801-0003	torque cable key, M12F/wrench size 18, for ZB8801-0000



ZB8110 | External braking resistor

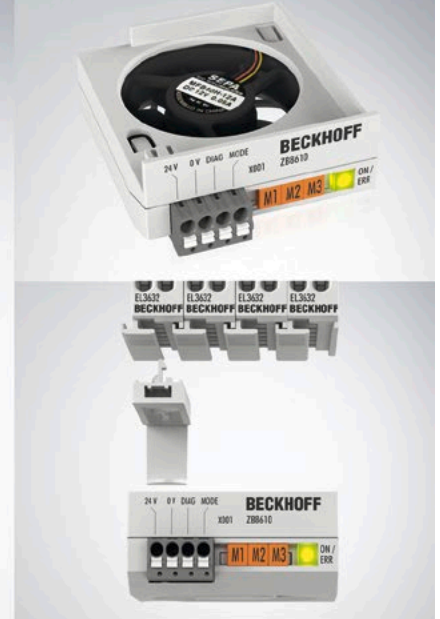
During the acceleration phase, a motor needs energy supply, whereas during braking a motor can be used as a generator, feeding energy back into the DC-Link, which raises the voltage in the DC-Link. If the voltage exceeds the adjustable threshold value, a braking resistor is activated.

The external ZB8110 braking resistor is available as an accessory to the EL9576 brake chop-

per terminal or the KL9570 buffer capacitor terminal. It regulates the DC-Link voltage as soon as more braking power is needed. It has a maximum continuous rating of 100 W. The ZB8110 is connected directly to the EL9576 or KL9570. A mounting plate is included in the scope of supply for each braking resistor.



Technical data	ZB8110
Rated output	100 W
Cable length	1000 mm
Wire cross section	AWG16/1.5 mm ²
Resistance value	10 Ω
Operating voltage	maximum: ≤ 700 V AC; ≤ 1000 V DC considering self protection ≤ 600 V AC; ≤ 850 V DC considering CSA and UL approvals
Insulation voltage	≥ 4000 V at 50 Hz/1 min
Energy consumption	4 kJ at 1.2 s (1 % ED) 8 kJ at 7.2 s (6 % ED)
Operating/storage temperature	0...+55 °C/-25...+85 °C
Dimensions (W x H x D)	110 mm x 80 mm x 15 mm
Weight	0.28 kg
Casing temperature	≤ 250 °C
Protect. class/installation pos.	IP 65/variable
Further information	www.beckhoff.com/ZB8110



ZB8610 | Fan cartridge for EtherCAT and Bus Terminals

The ZB8610 fan cartridge is used for forced ventilation within the terminal housing and ensures better heat dissipation from the housing. It extends the thermal operating range of EtherCAT Terminals (ELxxxx) and Bus Terminals (KLxxxx) and offers a wide range of new application options. The cartridge is installed on the underside of the terminal segment and covers a width of four standard terminals (4 x 12 mm). It consists of the fan, an installation plate, a terminal strip (24 V DC, 0 V DC, diag, mode) and a bracket for fixation on different terminal housings. The fan can be operated in three different modes:

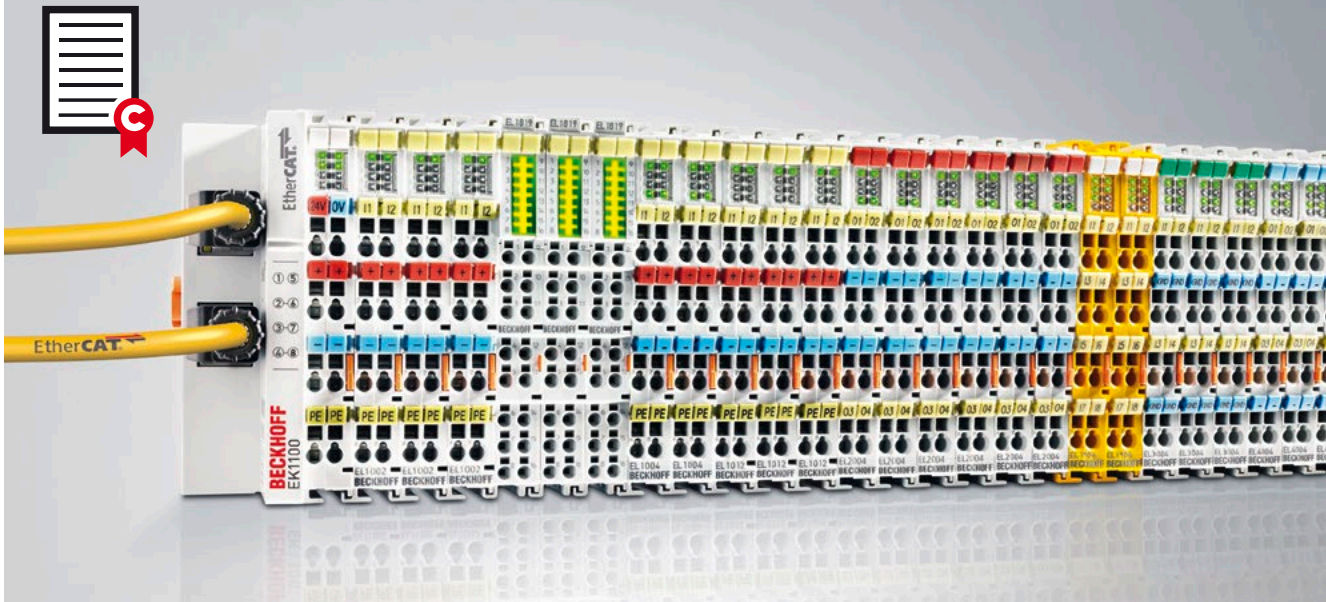
1. Demand-based control via an integrated temperature sensor (default, only power supply required)
 2. Continuous operation at full load (In addition to the power supply a high signal is applied at the mode pin.)
 3. Frequency controlled by an externally applied frequency (1 to 9 Hz) at the mode pin, which is converted internally in steps from 2700 rpm to max. ~5500 rpm. A digital output terminal can be used as external source. The measurement of the internal terminal temperature, which is integrated in TwinCAT, is used as reference for speed control of the fan via the frequency.
- A typical application of the fan cartridge is extension of the performance range of the terminals through forced cooling. This enables the EL7201 EtherCAT servo terminal to operate with higher output current, for example ($I_{rms} = 4.5$ A instead of 2.8 A), so that the performance is on a par with the EL7211, with the benefit of a 50 % smaller footprint. A further application is the extension of the operating temperature range of the terminals. Depending on the technical specification, the fan cartridge enables the terminals to operate

at temperatures of up to 70 °C. The exact terminal-specific information for this application can be found in the documentation for the respective terminals.

Ordering information

ZB8610

fan cartridge for EtherCAT and Bus Terminals



ZS9001 | Recalibration service

Beckhoff has offered analog input devices with a factory calibration certificate for a long time now. These are EtherCAT Terminals with a unique ID number, which are not only compensated/adjusted in production at Beckhoff like all other input devices, but are also delivered with a factory calibration certificate. This represents considerable added value, because it specifically states the compensation points that have been reached and the measurement uncertainty of the compensation. Using these values, it is possible, for example,

to increase the achievable accuracy in the individual application. The device can also be traced via the unique ID. Generally speaking, a calibration always represents a review; it confirms the suitability of the device examined according to the specification for the foregoing usage period.

Analog input devices that have already been in service can be recompensated and recalibrated by the Beckhoff recalibration service. The method used for this is the same proven method that is used in production. The devices must be

returned to Beckhoff Service, quoting the recalibration order data. The current price list or the website lists the analog devices for which recalibration is already available.

Like the first certificate, the newly issued factory calibration certificate can be downloaded from the Beckhoff website, quoting the ID number.

Beckhoff recommends a recalibration interval of one year; of course, it is necessary to comply with the operating conditions according to the specification of the device.

The analog measurement EtherCAT Terminals listed here are already available with Beckhoff factory calibration certificate:

► www.beckhoff.com/calibration-certificates

For the analog measurement EtherCAT Terminals listed here, a recalibration service is available:

► www.beckhoff.com/calibration

Ordering information	Recalibration service for analog input devices
ZS9001	recalibration of I/O components with calibration certificate, includes check, compensation, recalibration, package price depending on terminal series
ZS9001-EL3201-0020	recalibration service for EL3201-0020: check, compensation, recalibration
EL3201-0020	1-channel analog input terminal, PT100 (RTD), 16 bit, high-precision, with calibration certificate
ZS9001-EL3202-0020	recalibration service for EL3202-0020: check, compensation, recalibration
EL3202-0020	2-channel analog input terminal, PT100 (RTD), 16 bit, high-precision, with calibration certificate
ZS9001-EL3602-0020	recalibration service for EL3602-0020: check, compensation, recalibration
EL3602-0020	2-channel analog input terminal $\pm 10\text{ V}$, $\pm 5\text{ V}$, $\pm 2.5\text{ V}$, $\pm 1.25\text{ V}$, differential input, 24 bit, with calibration certificate
ZS9001-EL3621-0020	recalibration service for EL3621-0020: check, compensation, recalibration
EL3621-0020	1-channel analog input terminal 4...20 mA, differential input, 24 bit, with calibration certificate
ZS9001-EL3751-0020	recalibration service for EL3751-0020: check, compensation, recalibration
EL3751-0020	1-channel analog input, high-precision, parameterisable, 24 bit, 10 ksp/s, differential, oversampling, with calibration certificate