Link/Act In

Signal input EtherCAT

Link/Act Out

Signal output EtherCAT

Power LEDs

E-bus

Coupler supply

Input for power contacts

Power contacts

+60 °C
−25 °C

25 g

EK1100 | EtherCAT Coupler

The EK1100 coupler connects EtherCAT with the EtherCAT Terminals (ELxxxx). One station consists of an EK1100 coupler, any number of EtherCAT Terminals and a bus end terminal. The coupler converts the passing telegrams from Ethernet 100BASE-TX to E-bus signal representation.

The coupler is connected to the network via the upper Ethernet interface. The lower RJ45 socket may be used to connect further EtherCAT devices in the same strand. In the EtherCAT network, the EK1100 coupler can be installed anywhere in the Ethernet signal transfer section (100BASE-TX) – except directly at the switch. The couplers EK9000 and EK1000 are suitable for installation at the switch.

Technical data	EK1100
Task within EtherCAT system	coupling of EtherCAT Terminals (ELxxxx) to 100BASE-TX EtherCAT networks
Data transfer medium	Ethernet/EtherCAT cable (min. Cat. 5), shielded
Distance between stations	max. 100 m (100BASE-TX)
Number of EtherCAT Terminals	up to 65,534
Protocol	EtherCAT
Delay	approx. 1 µs
Data transfer rates	100 Mbit/s
Configuration	not required
Bus interface	2 x RJ45
Power supply	24 V DC (-15 %/+20 %)
Current consumption from U_S	70 mA + ($\sum$ E-bus current/4)
Current consumption from U_P	load
Current supply E-bus	2000 mA
Power contacts	max. 24 V DC/max. 10 A
Electrical isolation	500 V (power contact/supply voltage/Ethernet)
Operating/storage temperature	-25…+60 °C/-40…+85 °C
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 20/variable
Approvals/markings	CE, UL, ATEX, IECEx
Ex marking	II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Ex tc IIIC T135 °C Dc

Accessories	
ZK1090-9191-0xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin
ZK1093-9191-0xxx	RJ45, plug, straight, male, 8-pin – RJ45, plug, straight, male, 8-pin
ZS1090-0003	plug, field assembly, RJ45, IP 20, straight, male, 4-pin, AWG22…24, PU = 10 pieces, Ø 4,5 - 9,0 mm, shielded
ZS1090-0005	plug, field assembly, RJ45, IP 20, straight, male, 8-pin, AWG22…26, PU = 10 pieces, Ø 5.5…8.5 mm, shielded
ZB9010	Industrial Ethernet/EtherCAT cable, shielded, PVC, 1 x 4 x AWG22, fixed installation, CAT5, green
ZB9020	Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG22, drag-chain suitable, CAT5, green

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