



EK1914 | EtherCAT Coupler with integrated digital standard and safety I/Os

The EK1914 EtherCAT Coupler combines the functionalities of the EK1100 EtherCAT Coupler with standard and safe digital I/Os. This results in a compact design that is especially suitable for applications with a low number of I/Os. Like the EK1100, the EK1914 can be extended by all EL/ES terminals.

The EK1914 has four digital inputs and four digital outputs as well as two fail-safe inputs and two fail-safe outputs. The EK1914 meets the requirements of DIN EN ISO 13849-1:2008 (Cat 4, PL e).

Technical data	EK1914
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
Delay	approx. 1 μ s
Data transfer rates	100 Mbaud
Bus interface	2 x RJ45
Safety standard	DIN EN ISO 13849-1:2008 (Cat 4, PL e)
Protocol	EtherCAT
Safety protocol	TwinSAFE/Safety over EtherCAT
Nominal voltage	24 V DC (-15 %/+20 %) (PELV)
Status display	16 LEDs
Number of digital inputs	4 standard and 2 safe inputs
"0" signal voltage	-3...+5 V (EN 61131-2, type 1/3) (standard input)
"1" signal voltage	11...30 V (EN 61131-2, type 3) (standard input)
Input filter	500 μ s (standard input)
Input current	typ. 3 mA (EN 61131-2, type 3) (standard input)
Number of digital outputs	4 standard and 2 safe outputs
Load type	ohmic, inductive, lamp load
Max. output current	per standard input: 0.5 A, per safe input: 500 mA, min. 20 mA
Output current of clock outputs	typ. 10 mA, max. 15 mA
Current supply E-bus	max. 500 mA (for higher current consumption use EL9410 power supply terminal)
Power contacts	max. 24 V DC, max. 4 A (PELV)
Current consumption	typ. 72 mA (excluding current consumption of the sensors/actuators and further terminals on the E-bus)
Power loss	typ. 1.8 W without connected sensors/actuators
Electrical isolation	between channels: no, between channels and E-bus: no, between EtherCAT connections and channels/E-bus: yes
Insulation voltage	insulation tested with 500 V DC (between EtherCAT connections and channels/E-bus, under common operating conditions)
Operating/storage temperature	0...+55 °C/-25...+70 °C
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4

Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
Protect. class/installation pos.	IP 20/see documentation
Approvals	CE, UL, TÜV SÜD

Accessories	
EL9410	Power supply terminals for E-bus
Cordsets	cordsets and connectors