



## EK1501 | EtherCAT Coupler with ID switch, fibre optic

The EK1501 coupler connects EtherCAT with the EtherCAT Terminals (ELxxxx). A station consists of an EK1501 coupler, any number of EtherCAT Terminals, an EL9011 bus end cap or an EK1110 EtherCAT extension. The coupler converts the passing telegrams from Ethernet 100BASE-FX to E-bus signal representation. The multimode glass fibre connection enables distances of up to 2 km between two couplers.

The EK1501 has three hexadecimal ID switches for assigning an ID to a group of EtherCAT components. This group can then be located at any position within the EtherCAT network. Variable topologies are therefore easily implementable.

Technical data	EK1501
Task within EtherCAT system	coupling of EtherCAT Terminals (ELxxxx) to 100BASE-FX EtherCAT networks, with identity verification
Data transfer medium	multimode glass fibre 50/125 µm (MM)
Distance between stations	max. 2000 m (100BASE-FX)
Number of EtherCAT Terminals	up to 65,534
Type/number of peripheral signals	max. 4.2 GB addressable I/O points
Number of configurable IDs	4096
Protocol	EtherCAT
Delay	approx. 1 µs
Data transfer rates	100 Mbit/s
Configuration	not required
Bus interface	2 x SC Duplex
Power supply	24 V DC (-15 %/+20 %)
Input current	130 mA + (total E-bus current)/4
Current supply E-bus	2000 mA
Current consumption 24 V DC	typ. 70 mA
Current consumption E-bus	–
Power contacts	max. 24 V DC/max. 10 A
Weight	approx. 190 g
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
Ex-Marking	II 3 G Ex nA IIC T4 Gc

Accessories	
<b>Cordsets</b>	cordsets and connectors

Further fibre optic products	
<b>EK1501-0010</b>	EtherCAT Coupler with ID switch, singlemode fibre optic for E-bus terminals (ELxxxx), distance between stations up to 20 km
<b>EK1501-0100</b>	EtherCAT Coupler, media converter (multimode fibre optic to RJ45) with ID switch
<b>EK1521</b>	1-port EtherCAT multi-mode fibre optic junction
<b>EK1521-0010</b>	1-port EtherCAT singlemode fibre optic junction, distance between stations up to 20 km
<b>CU1521</b>	EtherCAT media converter fibre optic, IP20
<b>EP9521</b>	EtherCAT/Industrial Ethernet module EP9521 for Industrial Fast Ethernet/100 Mbaud

System	
<b>EtherCAT</b>	For further EtherCAT products please see the <a href="#">system overview</a>