



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 – or up to 20 km for the EK1501-0010 with singlemode glass fibre connection.

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	EK1501-0010
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)	singlemode glass fibre 9/125 µm (SM)
Distance between stations	max. 2,000 m (100BASE-FX)	max. 20,000 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	4,096	
Protocol	EtherCAT	
Delay	approx. 1 µs	
Data transfer rates	100 Mbaud	
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	150 mA + (total E-bus current)/4
Current consumption E-bus	–	
Current consumption 24 V DC	typ. 70 mA	
Current supply E-bus	2000 mA	
Power contacts	24 V DC max./10 A max.	
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	CE, UL, Ex	

Accessories	
ZK1091-1001-xxxx	assembled fibre-optic cordsets
Cordsets	cordsets and connectors

Further fibre optic products	
EK1521	1-port EtherCAT multi-mode fibre optic junction
CU1521	EtherCAT media converter fibre optic, IP20
EP9521 EP9522	EtherCAT/Industrial Ethernet modules EP952x for Industrial Fast Ethernet/100 Mbaud