



EK1541 | EtherCAT Coupler with ID switch, plastic optical fibre

The EK1541 Coupler connects EtherCAT with the EtherCAT Terminals (ELxxxx). A station consists of an EK1541 coupler, any number of EtherCAT Terminals, an EL9011 bus end cap or an EK1110 EtherCAT extender. The coupler converts the passing telegrams from Ethernet 100BASE-FX to E-bus signal representation. Distances of up to 50 m between two couplers can be attained using the Plastic Optical Fibre (POF) connection. Unlike the glass fibre, the POF fibre is easily wireable in the field. The EK1541 has three hexadecimal ID switches for assigning an ID to a group of EtherCAT components. This group can be located at any position within the EtherCAT network. Variable topologies can therefore be easily implemented.

Technical data	EK1541
Task within EtherCAT system	coupling of EtherCAT Terminals (ELxxxx) to 100BASE-FX EtherCAT POF networks, with identity verification
Data transfer medium	plastic optical fibre (POF)
Distance between stations	max. 50 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 μ s
Data transfer rates	100 Mbaud
Configuration	not required
Bus interface	2 x ZS1090-0008 POF plug
Power supply	24 V DC (-15 %/+20 %)
Input current	130 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

Accessories	
Cordsets	cordsets and connectors
EtherCAT POF	POF cordsets and connectors for EtherCAT

Further POF products	
EK1561	1-port EtherCAT POF junction
CU1561	EtherCAT media converter plastic optical fibre, IP20