



## EK1828-0010 | EtherCAT Coupler with integrated digital outputs

The EtherCAT Couplers from the EK18xx series combine the functionalities of the EK1100 EtherCAT Coupler with standard digital I/Os in one housing. This results in a compact design that is especially suitable for applications with a low number of I/Os. Like the EK1100, the EK18xx coupler can be extended by all EL/ES terminals. The digital I/Os are implemented with a 1-wire technique. The wiring can be implemented without tools using a direct plug-in technique with solid wire conductors or ferrules.

The EK1828-0010 has eight digital outputs.

Technical data	EK1828-0010
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 $\mu$ s
Data transfer rates	100 Mbaud
Bus interface	2 x RJ45
Nominal voltage	24 V DC (-15 %/+20 %)
Current supply E-bus	1000 mA
Current consumption from Up	40 mA + load
Current consumption from Us	100 mA + ( $\Sigma$ E-bus current/4)
Number of inputs	–
Specification	–
"0" signal voltage	–
"1" signal voltage	–
Input filter	–
Input current	–
Number of outputs	8
Load type	ohmic, inductive, lamp load
Max. output current	0.5 A (short-circuit-proof) per channel
Short circuit current	typ. < 2 A
Reverse voltage protection	yes
Breaking energy	< 150 mJ/channel
Switching times	typ. T <sub>ON</sub> : 60 $\mu$ s, T <sub>OFF</sub> : 300 $\mu$ s
Electrical isolation	500 V (power contact/supply voltage/Ethernet), 500 V (E-bus/field potential)
Conductor types	solid wire, stranded wire and ferrule
Conductor connection	solid wire conductors: direct plug-in technique; stranded wire conductors and ferrules: spring actuation by screwdriver
Rated cross-section	solid wire: 0.08...1.5 mm <sup>2</sup> ; stranded wire: 0.25...1.5 mm <sup>2</sup> ; ferrule: 0.14...0.75 mm <sup>2</sup>
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

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

<b>Related products</b>	
<b>EK1814</b>	EtherCAT Coupler with 4 integrated digital inputs and 4 integrated digital outputs
<b>EK1818</b>	EtherCAT Coupler with 8 integrated digital inputs and 4 integrated digital outputs
<b>EK1828</b>	EtherCAT Coupler with 4 integrated digital inputs and 8 integrated digital outputs
<b>EK1914</b>	EtherCAT Coupler with integrated digital standard and safety I/Os

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