



EP1258-000x | 8-channel digital input with 2-channel timestamp



The EP1258 EtherCAT Box with digital inputs acquires the fast binary control signals from the process level and transmits them, in an electrically isolated form, to the controller. The signals are furnished with a timestamp that identifies the time of the last edge change with a resolution of 1 ns. This technology enables signals to be traced exactly over time and synchronised with the distributed clocks across the system. With this technology, machine-wide parallel hardware wiring of digital inputs or encoder signals for synchronisation purposes is often no longer required. In this way, the EP1258 enables responses with equidistant time intervals, largely independent of the bus cycle time.

Technical data	EP1258-0001	EP1258-0002
Specification	EN 61131-2, type 1/3	
Number of inputs	8 (2 with timestamp)	
Input connections	M8, screw type	M12, screw type
Protocol	EtherCAT	
Bus interface	2 x M8 socket, shielded, screw type	
Nominal input voltage	24 V DC (-15 %/+20 %)	
Input filter	10 µs	
"0" signal voltage	-3...+5 V (similar to EN 61131-2, type 3)	
"1" signal voltage	11...30 V (similar to EN 61131-2, type 3)	
Input current	typ. 3 mA (similar to EN 61131-2, type 3)	
Distributed clocks	yes	
Sensor supply	from control voltage, max. 0.5 A total, short-circuit-proof	
Power supply connection	feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin	
Resolution timestamp	1 ns (channel 0/1)	
Precision of timestamp	10 ns (+ input delay) (channel 0/1)	
Distributed clock precision	< 100 ns (channel 0/1)	
Bit width in the process image	8 inputs + 36 byte timestamp	
Current consumption from Us (without sensor current)	120 mA	
Electrical isolation	500 V	
Special features	timestamp, latch last edge	
Weight	approx. 165 g	
Operating/storage temperature	-25...+60 °C/-40...+85 °C	
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 65/66/67 (conforms to EN 60529)/variable	
Approvals	CE, UL, Ex	

Accessories	
ZK1090-3xxx-xxxx	Cables for EtherCAT signal in- and -output
ZK2020-3xxx-xxxx	Cables for M8 power supply

Further information

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