



EP5151-0002 | Incremental encoder interface with single-ended inputs

The EP5151-0002 EtherCAT Box is an interface for the direct connection of incremental encoders with 24 V DC inputs. A 32/16 bit counter with a quadrature decoder and a 32/16 bit latch for the zero pulse can be read, set or enabled. Interval measurement with a resolution of up to 100 ns is possible.

Due to the optional interpolating microincrement function, the EP5151-0002 can supply even more precise axis positions for dynamic axes. In addition, it supports the synchronous reading of the encoder value together with other input data in the EtherCAT system via high-precision EtherCAT distributed clocks (DC). The encoder is connected via an 8-pin M12 socket.

Technical data	EP5151-0002
Connection technology	M12, 8-pin
Number of channels	1
Connection encoder/sensor	M12, screw type, 8-pin
Encoder connection	A, B, C, 24 V
Encoder operating voltage	24 V DC, single ended
Encoder output current	0.5 A
Nominal voltage	24 V DC (-15 %/+20 %)
Signal type	single-ended
Sensor supply	24 V DC/0.5 A, short-circuit proof
Counter	1 x 16/32 bit switchable
Limit frequency	4 million increments/s (with 4-fold evaluation)
Quadrature decoder	4-fold evaluation
Zero-pulse latch	1 x 16/32 bit switchable
Commands	read, set, enable
Distributed clocks	yes
Power supply connection	feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin
Current consumption from Us	typ. 130 mA + sensor supply
Bit width in the process image	1 x 32 bit input, 1 x 16 bit output, 8 bit control, 8 bit status
Electrical isolation	500 V
Operating/storage temperature	0...+55 °C/-25...+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

Accessories	
ZK1090-3xxx-xxxx	Cables for EtherCAT signal in- and -output
ZK2000-71xx-0xxx	Shielded cables for M12 I/O connection sockets
ZK2020-3xxx-xxxx	Cables for M8 power supply