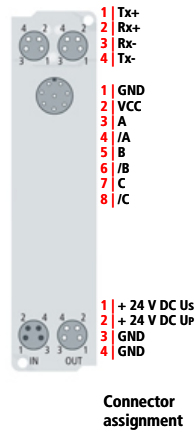


ER5101-0002



Connector assignment

## ER5101-x002 | Incremental encoder interface with differential inputs

The ER5101 EtherCAT Box is an interface for the direct connection of incremental encoders with differential inputs (RS485). 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. Incremental encoders with alarm outputs can be connected at the interface's status input. Interval measurement with a resolution of up to 100 ns is possible. The gate input allows the counter to be halted. The counter state is taken over with a rising edge at the latch input.

Due to the optional interpolating microincrement function, the ER5101 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.

The EtherCAT Box modules with zinc die-cast housing are ready for use in harsh industrial and process environments. With the fully sealed design and metal surfaces the ER series is ideal for applications requiring enhanced load capacity and protection against weld spatter, for example.

Technical data	ER5101-0002	ER5101-1002
Number of channels	1	
Nominal voltage	24 V DC (-15 %/+20 %)	
Signal type	differential	
Sensor supply	+5 V DC, 150 mA each (VCC)	24 V DC, 500 mA (VCC)
Counter	32 or 16 bit, binary	
Limit frequency	4 million increments/s (with 4-fold evaluation)	
Quadrature decoder	4-fold evaluation	
Zero-pulse latch	16/32 bit	
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 (without sensor current)	typ. 130 mA + load	
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 in preparation	

Related products	
<b>EP5101</b>	EtherCAT Box (industrial housing), incremental encoder interface