



EL5101-0010 | Incremental encoder interface

The EL5101-0010 EtherCAT Terminal is an interface for the direct connection of incremental encoders with differential inputs (RS422). 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.

EL5101-0010 supports the synchronous reading of the encoder value together with other input data in the EtherCAT system via high-precision EtherCAT distributed clocks (DC).

Technical data	EL5101-0010
Technology	incremental encoder interface RS422
Encoder type	Incremental, differential (RS422)
Number of channels	1
Encoder connection	A, A (inv), B, B (inv), C, C (inv), differential inputs (RS422); status input 5 V DC; gate/latch input 24 V DC
Encoder operating voltage	5 V DC/max. 0.5 A
Encoder output current	0.5 A
Counter	1 x 16/32 bit switchable
Input frequency	max. 20 million increments/s (with 4-fold evaluation)
Quadrature decoder	4-fold evaluation
Zero-pulse latch	32 or 16 bits
Commands	read, set, enable
Oversampling factor	–
Input signal	difference signal (RS422)
Supply voltage	24 V DC (-15 %/+20 %)
Nominal voltage	24 V DC at power contact
Conversion time	–
Current consumption power contacts	typ. 100 mA + load
Current consumption E-bus	typ. 130 mA
Distributed clocks	yes
Special features	wire breakage detection, latch and gate function, period duration and frequency measurement, timestamping of edges, filters, no single-ended operation
Weight	approx. 100 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, Ex

Related products	
EL5101	Incremental encoder interface with differential input, 16/32 bit
EL5101-0011	Incremental encoder interface with oversampling
EL5101-0090	incremental encoder interface with differential input, 16 bit, TwinSAFE SC