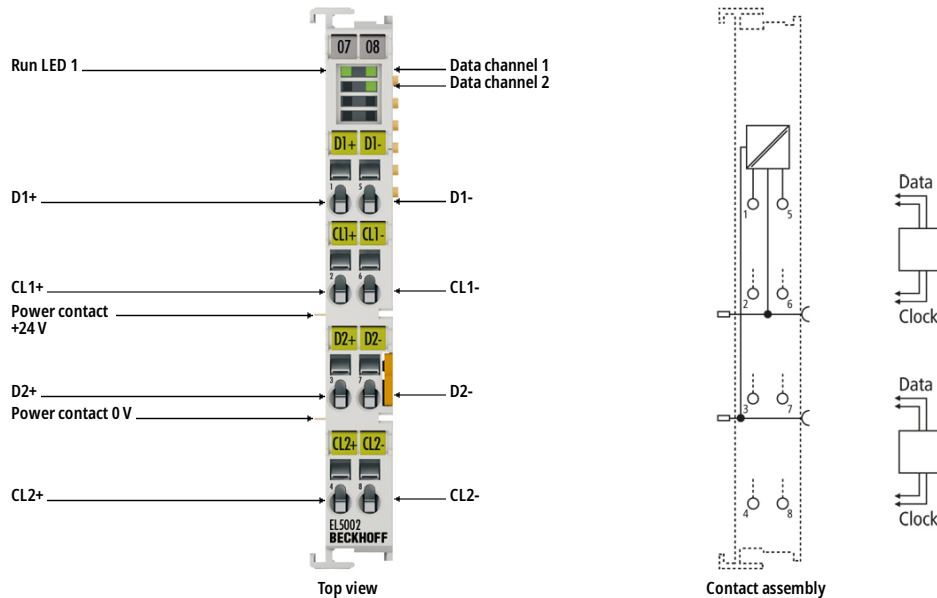
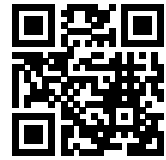


# EL5002 | EtherCAT Terminal, 2-channel encoder interface, SSI



**i Product status:** Regular delivery

The EL5002 EtherCAT Terminal is an SSI master and enables the direct connection of two absolute encoders with SSI (synchronous serial interface). Both singleturn and multiturn encoders are supported. An EL91xx power supply terminal can be used for a 24 V supply to the encoder, and the EL9505 for the optional 5 V encoder operating voltage.

Extensive parameterizations allow optimum adaptation to different encoder types.

## Special features:

- parameterization per channel possible
- baud rate up to max. 1 MHz
- coding: gray and binary
- data length up to 32 bit, flexibly adjustable.
- separate evaluation of a status error bit (power fail bit) in the process data

In addition, the EL5002 offers a multiple transmission mode for clock pulses to check data integrity. Via the distributed clocks function, the position value is read out exactly synchronously with other processes. If the distributed clocks function is deactivated, the EL5002 clocks synchronize with the EtherCAT cycle. The encoder profile enables simple and fast linking of the process data for motion control applications.

## Product information

### Technical data

Technical data	EL5002, ES5002
Technology	SSI encoder interface

Number of channels	2
Encoder connection	D+, D-, Cl+, Cl-
Encoder operating voltage	external e.g. EL91xx
Signal output (pulse)	difference signal (RS422)
Signal input (data)	difference signal (RS422)
Power supply	24 V via power contacts
Data transfer rates	variable up to 1 MHz, 250 kHz default
Serial input	variable up to 32 bit, 24 bit default
Data direction	read
Current consumption power contacts	typ. 20 mA + load
Current consumption E-bus	typ. 130 mA
Distributed clocks	yes
Special features	adjustable baud rate, coding and data length, power fail bit activatable
Weight	approx. 55 g
Electrical isolation	500 V (E-bus/field potential)
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
Protect. rating/installation pos.	IP20/variable
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Approvals/markings	CE, UL, ATEX
Pluggable wiring	for all ESxxx terminals
Ex marking	II 3 G Ex nA IIC T4 Gc

Housing data	EL-12-8pin	ES-12-8pin
Design form	compact terminal housing with signal LEDs	terminal housing with pluggable wiring level
Material	polycarbonate	
Dimensions (W x H x D)	12 mm x 100 mm x 68 mm	
Installation	on 35 mm DIN rail, conforming to EN 60715 with lock	
Side by side mounting by means of	double slot and key connection	
Marking	labeling of the BZxxx series	
Wiring	solid conductor (e), flexible conductor (f) and ferrule (a): spring actuation by screwdriver	
Connection cross-section	s*: 0.08...2.5 mm <sup>2</sup> , st*: 0.08...2.5 mm <sup>2</sup> , f*: 0.14...1.5 mm <sup>2</sup>	s*: 0.08...1.5 mm <sup>2</sup> , st*: 0.08...1.5 mm <sup>2</sup> , f*: 0.14...1.5 mm <sup>2</sup>
Connection cross-section AWG	s*: AWG 28...14, st*: AWG 28...14, f*: AWG 26...16	s*: AWG 28...16, st*: AWG 28...16, f*: AWG 26...16

Stripping length	8...9 mm	9...10 mm
Current load power contacts	I <sub>max</sub> : 10 A	

\*s: solid wire; st: stranded wire; f: with ferrule

## Ordering information

Special terminals	
EL5002	EtherCAT Terminal, 2-channel encoder interface, SSI
ES5002	EtherCAT Terminal, 2-channel encoder interface, SSI, pluggable wiring