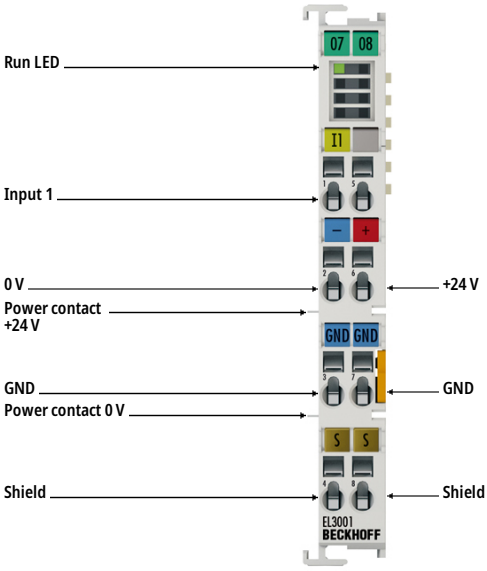
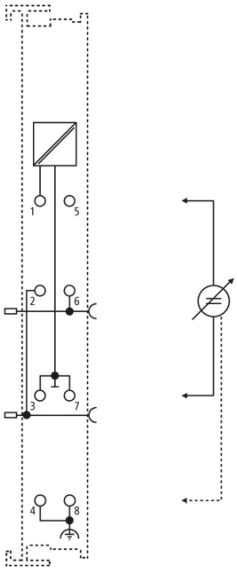
EL3001 | EtherCAT Terminal, 1-channel analog input, voltage, ±10 V, 12 bit, single-ended



Top view



Contact assembly

Product status: Regular delivery

The EL3001 analog input terminal processes signals in the range between -10 and +10 V. The voltage is digitized to a resolution of 12 bits, and is transmitted, electrically isolated, to the higher-level automation device. The input channels of the EtherCAT Terminal are single-ended inputs with a common, internal ground potential. The EL3001 is characterized by its fine granularity and electrical isolation. The signal state of the EtherCAT Terminals is indicated by light emitting diodes.

Product information

Technical Data

Technical data	EL3001, ES3001
Number of inputs	1 (single-ended)
Power supply	via the E-bus
Technology	single-ended
Signal type	single-ended
Signal voltage	-10...+10 V
Distributed clocks	–
Internal resistance	> 130 kΩ
Input filter limit frequency	1 kHz
Dielectric strength	max. 30 V
Conversion time	0.625 ms default setting, configurable, multiplex

Resolution	12 bit (16 bit presentation incl. sign)
Measuring error	< ±0.3 % (relative to full scale value)
Electrical isolation	500 V (E-bus/field potential)
Current consumption power contacts	–
Current consumption E-bus	typ. 130 mA
Bit width in the process image	inputs: 4 byte
Configuration	no address or configuration setting required
Special features	standard and compact process image, switchable measuring data representation, activatable FIR/IIR filters, limit value monitoring, overload display in the process data
Weight	approx. 70 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. rating/installation pos.	IP20/variable
Pluggable wiring	for all ESxxxx terminals
Approvals/markings	CE, UL, ATEX
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 mm², st*: 0.08...2.5 mm², f*: 0.14...1.5 mm²	s*: 0.08...1.5 mm², st*: 0.08...1.5 mm², f*: 0.14...1.5 mm²
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_{max}: 10 A	

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

Ordering Information

Ordering information	
EL3001	EtherCAT Terminal, 1-channel analog input, voltage, ±10 V, 12 bit, single-ended
ES3001	EtherCAT Terminal, 1-channel analog input, voltage, ±10 V, 12 bit, single-ended, pluggable wiring