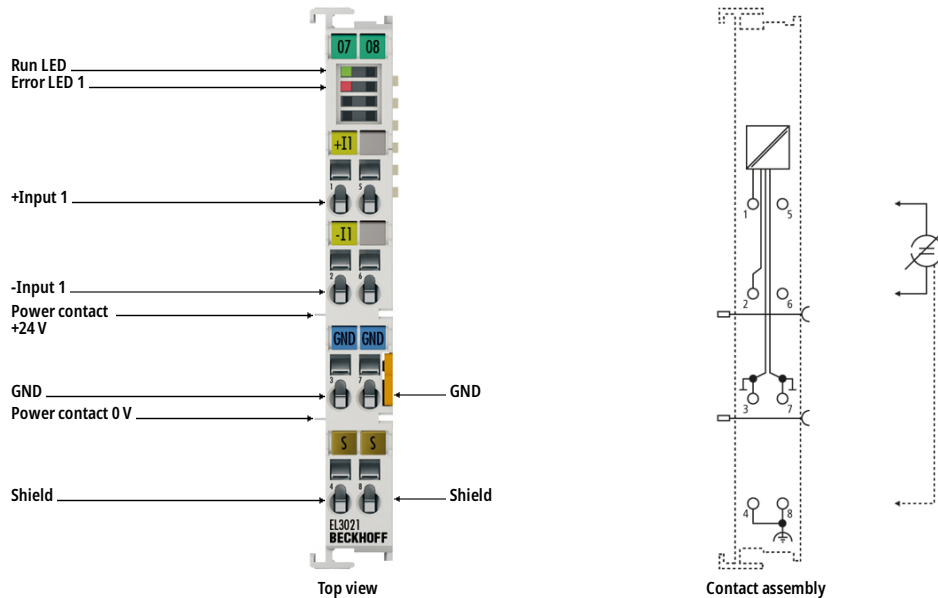


# EL3021 | EtherCAT Terminal, 1-channel analog input, current, 4...20 mA, 12 bit, differential



**i** **Product status:** Regular delivery

The EL3021 analog input terminal processes signals in the range between 4 and 20 mA. The current 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 have differential inputs and possess a common, internal ground potential. The EL3021 is the single-channel version and is characterized by its fine granularity and electrical isolation. An open lead or overload condition are detected. The terminal status is relayed to the controller via the E-bus. The EtherCAT Terminal indicates its signal state by means of light emitting diodes. The error LEDs indicate an overload condition and a broken wire.

## Product information

### Technical Data

Technical data	EL3021, ES3021
Number of inputs	1 (differential)
Power supply	via the E-bus
Technology	differential input
Signal type	differential
Signal current	4...20 mA
Distributed clocks	–
Internal resistance	typ. 85 $\Omega$ + diode voltage
Input filter limit frequency	1 kHz

Common-mode voltage UCM	max. 10 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)
Surge voltage resistance	max. 35 V
Electrical isolation	500 V (E-bus/signal voltage)
Current consumption power contacts	–
Current consumption E-bus	typ. 130 mA
Bit width in the process image	inputs: 4 byte
Special features	standard and compact process image, activatable FIR/IIR filters, limit value monitoring
Weight	approx. 55 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 ESxxx 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 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

Ordering information	
EL3021	EtherCAT Terminal, 1-channel analog input, current, 4...20 mA, 12 bit, differential
ES3021	EtherCAT Terminal, 1-channel analog input, current, 4...20 mA, 12 bit, differential, pluggable wiring

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