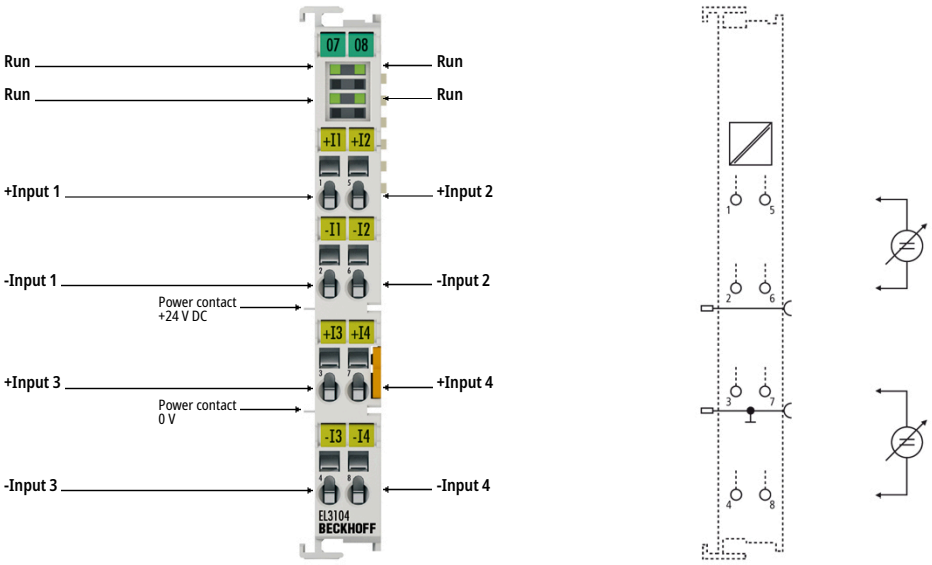
EL3104 | EtherCAT Terminal, 4-channel analog input, voltage, ±10 V, 16 bit, differential

Image similar, may contain optional accessories



EL3104 | EtherCAT Terminal, 4-channel analog input, voltage, ±10 V, 16 bit, differential

Product status: regular delivery

The EL3104 analog input terminal processes signals in the range between -10 and +10 V. The voltage is digitized to a resolution of 16 bits, and is transmitted, electrically isolated, to the higher-level automation device. The input channels of the EL3104 EtherCAT Terminal are differential inputs. The signal state of the EtherCAT Terminal is indicated by light emitting diodes.

Product information

Technical data

Technical data	EL3104
Number of inputs	4 (differential)
Power supply	via the E-bus
Signal voltage	-10...+10 V
Oversampling factor	–
Input signal bandwidth	–
Distributed clocks	yes
Distributed clock accuracy	<< 1 µs
Internal resistance	> 200 kΩ

Technical data	EL3104
Input filter cut-off frequency	5 kHz
Common mode voltage U_{CM}	max. 35 V (relative to GND power contact)
Conversion time	~ 100 µs
Resolution	16 bit (incl. sign)
Measurement error/uncertainty	< ±0.3% (relative to full scale value)
Electrical isolation	500 V (E-bus/signal voltage)
Current consumption E-bus	typ. 130 mA
Current consumption power contacts	–
Bit width in the process image	inputs: 16 byte
Configuration	no address or configuration setting
Special features	standard and compact process image, switchable measuring data representation, activatable FIR/IIR filters, limit value monitoring
Weight	approx. 65 g
Operating temperature	-25...+60°C
Storage temperature	-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
Pluggable wiring level	for all ESxxxx terminals
Protect. rating/installation pos.	IP20/variable
Approvals/markings	CE, CCC, UL, ATEX, IECEx, cFMus
Ex marking	ATEX: II 3G Ex ec IIC T4 Gc IECEx: Ex ec IIC T4 Gc cFMus: Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec 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	
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 BZxxxx series	
Wiring	solid conductor (s), flexible conductor (st) and ferrule (f): spring actuation by screwdriver	

Housing data	EL-12-8pin	ES-12-8pin
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*: AWG28...14, st*: AWG28...14, f*: AWG26...16	s*: AWG28...16, st*: AWG28...16, f*: AWG26...16
Stripping length	8...9 mm	9...10 mm
Current load power contacts	I_{max}: 10 A	
Dimensions (W x H x D)	12 mm x 100 mm x 68 mm	

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

Ordering information

Ordering information	
EL3104	EtherCAT Terminal, 4-channel analog input, voltage, ±10 V, 16 bit, differential
ES3104	EtherCAT Terminal, 4-channel analog input, voltage, ±10 V, 16 bit, differential, pluggable wiring level

Material Compliance

Material compliance	EL3104
REACH SVHC	no
POP	compliant
RoHS	compliant with exemption
RoHS exemption	7c-I: Lead-containing electrical and electronic components in glass and ceramic materials, excluding dielectric ceramics in capacitors
China-RoHS	www.beckhoff.com/china-rohs-io
CA Prop65	www.beckhoff.com/prop65
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