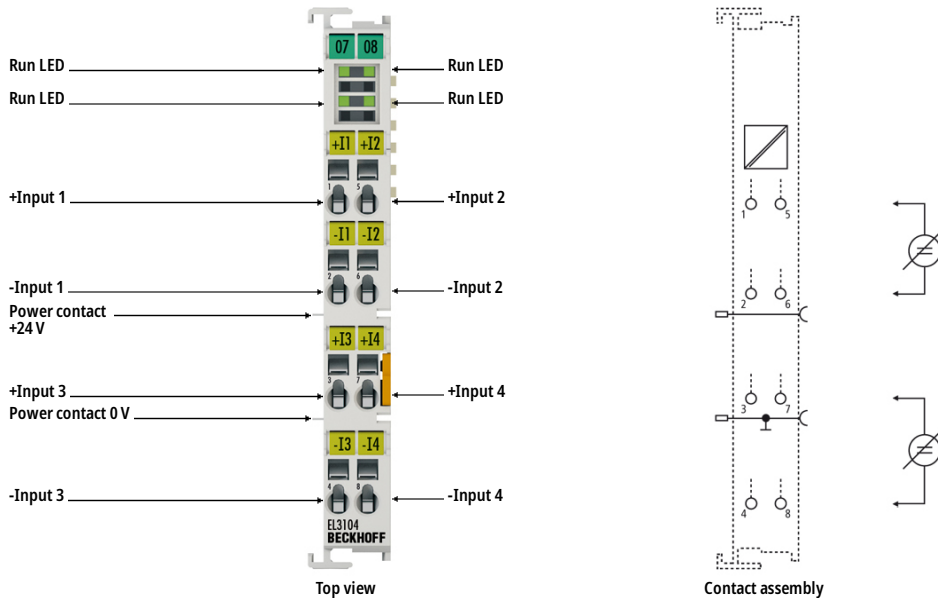
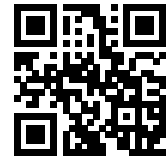


EL3104 | EtherCAT Terminal, 4-channel analog input, voltage, ± 10 V, 16 bit, differential



i **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, ES3104
Number of inputs	4 (differential)
Power supply	via the E-bus
Technology	differential input
Signal type	differential
Signal voltage	-10...+10 V
Oversampling factor	-
Input signal bandwidth	-
Distributed clocks	yes
Distributed clock precision	$\ll 1 \mu\text{s}$
Internal resistance	$> 200 \text{ k}\Omega$

Input filter limit frequency	5 kHz
Common-mode voltage UCM	max. 35 V (relative to GND power contact)
Conversion time	~ 100 µs
Resolution	16 bit (incl. sign)
Measuring error	< ±0.3 % (relative to full scale value)
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: 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/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, IECEx, cFMus
Ex marking	<p>ATEX: II 3 G Ex nA IIC T4 Gc</p> <p>IECEx: Ex nA IIC T4 Gc Ex tc IIIC T135 °C Dc</p> <p>cFMus: Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec IIC T4 Gc</p>

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	<p>s*: 0.08...2.5 mm²,</p> <p>st*: 0.08...2.5 mm²,</p> <p>f*: 0.14...1.5 mm²</p>	<p>s*: 0.08...1.5 mm²,</p> <p>st*: 0.08...1.5 mm²,</p> <p>f*: 0.14...1.5 mm²</p>

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	
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