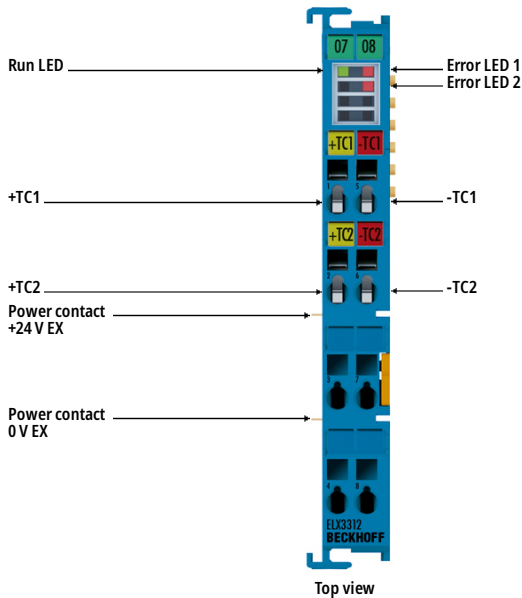
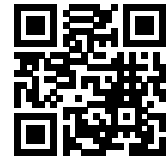


ELX3312 | EtherCAT Terminal, 2-channel analog input, temperature, thermocouple, 16 bit, Ex i



i Product status: Regular delivery

The ELX3312 analog input terminals allow the direct connection of thermocouples located in hazardous areas classified Zone 0/20 or 1/21. The circuitry of the ELX3312 can operate sensors with 2-wire technology. Linearization is possible over the entire freely selectable temperature range. The error LEDs indicate a broken wire. Compensation for the cold junction is achieved through internal temperature measurement. Voltage measurement in the mV range is also possible with the ELX3312.

EtherCAT terminals of the ELX series must always be operated in conjunction with the ELX9560 power supply terminal. This terminal generates an electrically isolated output voltage (24 V EX) from the input voltage (24 V DC) for supplying the subsequent ELX terminals. If a new power supply is required, the combination of an ELX9410 and an ELX9560 can be used so that further ELX terminals can be added. The ELX terminal string must be terminated with one ELX9012 or two ELX9410.

Product information

Technical data

Technical data	ELX3312
Technology	Temperature measurement
Sensor types	thermocouples type K, J, L, E, T, N, U, B, R, S, C (default: type K)
Number of inputs	2 (differential)
Connection method	2-wire
Measuring range	depending on sensor type, type K -270...+1370 °C, voltage measurement: ±30...±75 mV, for further types and details see documentation
Resolution	0.1 °C per digit

Measuring error	< ±0.3 % (relative to full scale value)
Internal resistance	typ. ≥ 10 kΩ (differential)
Input filter limit frequency	typ. 1 kHz; depending on sensor length, conversion time, sensor type
Conversion time	10...5000 ms (adjustable, default: 270 ms)
Supply voltage electronics	24 V DC (via power contacts), ELX9560 power supply
Current consumption power contacts	typ. 10 mA
Current consumption E-bus	typ. 70 mA
Special features	limit value monitoring, digital filter and characteristic curve linearization integrated
Weight	approx. 60 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/see documentation
Approvals/markings	CE, UL, ATEX, IECEx, cFMus, CCC

Ex marking	ATEX:
	II 3(1)G Ex ec [ia Ga] IIC T4 Gc II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I
	IECEx:
	Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I
	cFMus:
	AIS Class I, II, III, Division 1, Groups A thru G Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec [ia Ga] IIC T4 Gc [AEx ia Da] IIIC T4

Housing data	ELX-12-8pin
Design form	compact terminal housing with signal LEDs
Material	polycarbonate, blue
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 ² , st*: 0.08...2.5 mm ² , f*: 0.14...1.5 mm ²
Connection cross-section AWG	s*: AWG 28...14, st*: AWG 28...14, f*: AWG 26...16

Stripping length	8...9 mm
Power contacts	2 blade/spring contacts

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