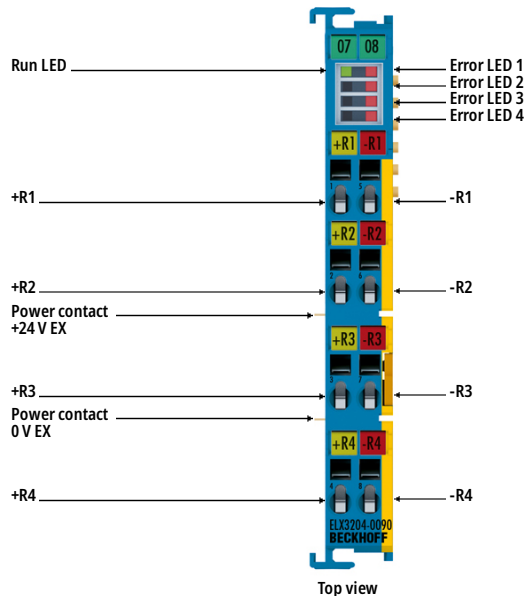
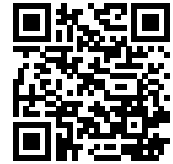


ELX3204-0090 | EtherCAT Terminal, 4-channel analog input, temperature, RTD (Pt100), 16 bit, Ex i, TwinSAFE SC



i Product status: Regular delivery

The ELX3204-0090 analog input terminal allows the direct connection of RTDs located in hazardous areas classified Zone 0/20 or 1/21. The circuitry of the ELX3204-0090 can operate sensors with 2-wire technology. Linearization is carried out over the entire freely selectable temperature range. By default the terminal is set to Pt100 sensors with 2-wire technology. The ELX3204-0090 terminal indicates signal state and sensor malfunctions (e.g. wire breakage) by means of LEDs.

With the aid of the TwinSAFE SC technology (TwinSAFE Single Channel) it is possible to make use of standard signals for safety tasks in any network or fieldbus. To do this, EtherCAT I/Os from the areas of analog input, position measurement or communication (4...20 mA, incremental encoder, IO-Link, etc.) are extended by the TwinSAFE SC function. The properties typical for the signals and the standard functions of the I/O components are retained. TwinSAFE SC I/Os differ optically from standard I/Os by a yellow stripe on the front of the housing.

The TwinSAFE SC technology enables communication via a TwinSAFE protocol. These connections can be distinguished from the usual secure communication via Safety over EtherCAT.

The data from the TwinSAFE SC components is fed via a TwinSAFE protocol to the TwinSAFE Logic, where it can be used in the context of safety-relevant applications. Detailed examples confirmed/calculated by the TÜV SÜD for the correct application of the TwinSAFE SC components and the respective normative classifications can be found in the TwinSAFE application manual.

Product information

Technical data

Technical data

ELX3204-0090

Number of inputs	4 (differential)
Power supply	via the E-bus
Connection method	2-wire
Temperature range	-200...+850 °C (Pt sensors); -60...+250 °C (Ni sensors), for further types and details see documentation
Resolution	up to 0.01 °C per digit (preset: 0.1 °C per digit)
Measuring current	< 1 mA (depending on sensor and measuring range)
Measuring error	< ±0.3 % (relative to full scale value)
Internal resistance	typ. ≥ 10 kΩ (differential)
Input filter limit frequency	typ. 1 kHz
Sensor types	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000, resistance measurement (10 Ω...4 kΩ), KT(Y) sensors
Conversion time	10...3300 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, connection method freely configurable, TwinSAFE SC
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
Ex marking	<p>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</p> <p>IECEx: Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I</p> <p>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</p>

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