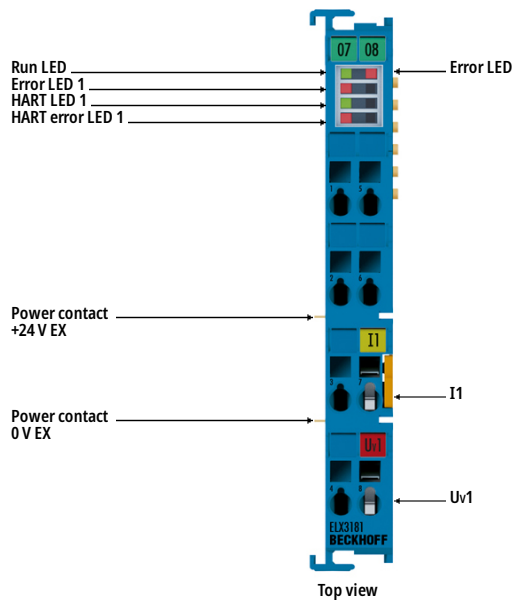
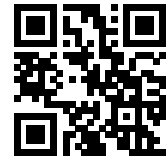


# ELX3181 | EtherCAT Terminal, 1-channel analog input, current, 4...20 mA, 16 bit, single-ended, HART, Ex i



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

The ELX318x analog input terminal allows the direct connection of intrinsically safe HART-capable field devices located in hazardous areas classified Zone 0/20 or 1/21. It supplies measuring transducers located in the field and transmits their analog measuring signals electrically isolated to the automation device. Overload and open-circuit detection are signaled by the error LEDs, furthermore LEDs inform about the status of the HART communication and signal any communication errors. The EtherCAT Terminal indicates the signal state by means of light emitting diodes.

The HART protocol (Highway Addressable Remote Transducer) enables two-way communication through digital data transfer via the analog 4...20 mA wiring. In this way, in addition to the analog current signal, further data can be exchanged with the field device via the superimposed digital signal.

The HART communication can also be used for the FDT/DTM concept. The TwinCAT FDT container enables the integration of field device DTMs into TwinCAT Engineering, so that the device configuration and diagnostic functions are available directly within the development environment.

## Product information

### Technical data

Technical data	ELX3181
Technology	current input
Signal current	4...20 mA
Number of inputs	1 (single-ended)

Connection method	2-wire
Resolution	16 bit (incl. sign)
Measuring error	< ±0.3 % (relative to full scale value)
Internal resistance	typ. 250 Ω
Input filter limit frequency	25 Hz
Conversion time	typ. 1 ms
Supply voltage electronics	24 V DC (via power contacts), ELX9560 power supply
Current consumption power contacts	typ. 15 mA + load
Current consumption E-bus	typ. 85 mA
Distributed clocks	yes
Special features	standard and compact process image, activatable FIR/IIR filters, limit value monitoring, NE43 NAMUR
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	<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>

<b>Housing data</b>	<b>ELX-12-8pin</b>
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 <sup>2</sup> , st*: 0.08...2.5 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
Stripping length	8...9 mm
Power contacts	2 blade/spring contacts

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