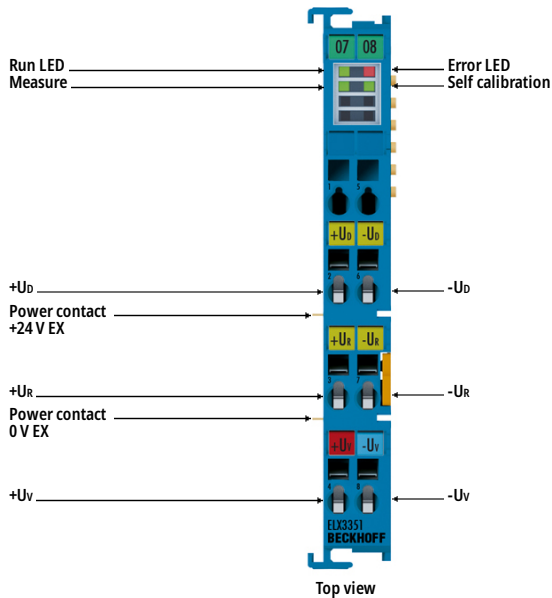
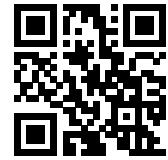


ELX3351 | EtherCAT Terminal, 1-channel analog input, measuring bridge, full bridge, 24 bit, Ex i



i **Product status:** Regular delivery

The analog ELX3351 input terminal enables direct connection of a resistor bridge or load cell from hazardous areas, Zone 0/20 and 1/21. The terminal can be connected in 4- or 6-wire technology. The ratio between the bridge voltage U_D and the supply voltage U_{REF} is determined in 24-bit resolution, and the load value is calculated as a process value. Apart from automatic self-calibration (can be deactivated), additional functions such as Tara and Freeze as well as dynamic filters are integrated. The ELX3351 is therefore functionally comparable to the EL3356.

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	ELX3351
Technology	resistor bridge, strain gauge
Sensor types	resistor bridge, strain gauge
Number of inputs	1, for 1 resistor bridge in full bridge technology
Bridge input resistance	300 Ω ...1.5 k Ω
Measuring range U_D	max. -18...+18 mV
Measuring range U_{REF}	max. -12...+12 V

Internal resistance	> 25 k Ω (U _R , differential), > 1 M Ω (U _D , differential)
Input filter limit frequency	typ. 3.6 kHz (-3 dB, low pass)
Conversion time	typ. 1.6 ms
Resolution	24 bit, 32 bit presentation
Filter	50 Hz, configurable
Measuring error	< ± 0.5 % (relative to full scale value), self-calibration activ
Power supply U _v	up to 10 V DC from power contacts, dependent on sensor
Supply voltage electronics	via E-bus
Current consumption power contacts	depends on sensor, min. 20 mA
Current consumption E-bus	typ. 85 mA
Supported nominal sensitivity	all, parameter resolution: 0.01 μ V/V; recommended: 0.5...3 mV/V
Special features	self-calibration, dynamic filters, Freeze
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>
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