



Top view

ELX3152-0090 | 2-channel analog input terminal 0/4...20 mA, single-ended, 16 bit, Ex i, TwinSAFE SC



The ELX3152-0090 analog input terminal allows the direct connection of intrinsically safe 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. The error LEDs indicate an overload condition and wire breakage.

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.

Technical data	ELX3152-0090
Technology	intrinsically safe sensors
Signal current	0/4...20 mA
Number of inputs	2 (single-ended)
Connection method	2- or 3-wire (default: 3-wire)
Resolution	16 bit (incl. sign)
Measuring error	< ±0.3 % (relative to full scale value)
Measuring resistance	typ. 100 Ω
Input filter limit frequency	5 kHz
Conversion time	typ. 1 ms
Supply voltage electronics	24 V DC (via power contacts), ELX9560 power supply
Current consumption power contacts	typ. 10 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, 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. class/installation pos.	IP 20/see documentation
Approvals/markings	CE, ATEX, IECEx

Ex-Marking	II 3(1)G Ex ec [ia Ga] IIC T4 Gc II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I
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further Ex components	
ELXxxxx	EtherCAT Terminals with intrinsic safe in- and output
ELXxxxx-0090	EtherCAT Terminals with intrinsic safe in- and output and TwinSAFE SC
CPXxxxx	Multi-touch Panel PCs and multi-touch Control Panels for use in hazardous areas, Zone 2/22