



## ELX3351 | 1-channel analog input terminal strain gauge, 16 bit, Ex i



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  $U_b$  and the supply voltage  $U_r$  is determined in 16-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.

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 $\Omega$ ...1.5 k $\Omega$
Measuring range $U_b$	max. -20...+20 mV
Measuring range $U_{REF}$	max. -12...+12 V
Internal resistance	> 25 k $\Omega$ ( $U_r$ , differential), > 1 M $\Omega$ ( $U_b$ , differential)
Input filter limit frequency	typ. 9.5 kHz (-3 dB, low pass)
Conversion time	1.5...800 ms, configurable
Resolution	16 bit, 32 bit presentation
Filter	50 Hz, configurable
Measuring error	< $\pm 0.5$ % (relative to full scale value), self-calibration activ
Power supply $U_v$	up to 12 V DC from power contacts, dependent on sensor
Supply voltage electronics	24 V DC (via power contacts), ELX9560 power supply
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 $\mu$ V/V; recommended: 0.5...3 mV/V
Special features	self-calibration, dynamic filters
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	CE, Ex, IECEx

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