



EL3142 | 2-channel analog input terminal 0...20 mA, single-ended, 16 bit

The job of the EL3142 analog input terminal is to supply power to measuring transducers located in the field, and to transmit analog measurement signals with electrical isolation to the automation device. The voltage for the sensors is supplied to the terminals via the power contacts. The power contacts can optionally be supplied with operating voltage in the standard way or via a supply terminal (EL9xxx) with electrical isolation. The input electronics is independent of the supply voltage of the power contacts. The 0 V power contact is the reference potential for the inputs. The EtherCAT Terminal indicates its signal state by means of light emitting diodes.

Technical data	EL3142 ES3142
Number of inputs	2 (single-ended)
Power supply	via the E-bus
Technology	single-ended
Signal current	0...20 mA
Oversampling factor	–
Distributed clocks	yes
Distributed clock precision	<< 1 µs
Internal resistance	85 Ω typ. + diode voltage
Input filter limit frequency	5 kHz
Resolution	16 bit (incl. sign)
Conversion time	~ 60 µs (fast mode ~ 40 µs)
Input signal bandwidth	see input filter
Measuring error	< ±0.3 % (relative to full scale value)
Electrical isolation	500 V (E-bus/signal voltage)
Current consumption power contacts	–
Current consumption E-bus	typ. 170 mA
Dielectric strength	max. 30 V
Bit width in the process image	inputs: 8 byte
Special features	standard and compact process image, switchable measuring data representation in the EL3142-0010, activatable FIR/IIR filters, limit value monitoring
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/variable
Pluggable wiring	for all ESxxxx terminals
Approvals	CE, UL, Ex

Special terminals	
EL3142-0010	signal current ± 10 mA