



EL3121 | 1-channel analog input terminal 4...20 mA, differential input, 16 bit

The EL3121 analog input terminal processes signals in the range between 4 and 20 mA. The current is digitised to a resolution of 16 bits and is transmitted, electrically isolated, to the higher-level automation device. The input channels of the EtherCAT Terminal have differential inputs and possess a common, internal ground potential. The EL3121 is the single-channel version and is characterised by its fine granularity and electrical isolation. An open lead or overload condition are detected. The terminal status is relayed to the controller via the E-bus. The EtherCAT Terminal indicates its signal state by means of light emitting diodes. The error LEDs indicate an overload condition and a broken wire.

Technical data	EL3121 ES3121
Number of inputs	1 (differential)
Power supply	via the E-bus
Technology	differential input
Signal current	4...20 mA
Distributed clocks	yes
Internal resistance	85 Ω typ. + diode voltage
Input filter limit frequency	5 kHz
Common-mode voltage U_{CM}	10 V max.
Conversion time	~ 40 μ s
Resolution	16 bit (incl. sign)
Measuring error	< ± 0.3 % (relative to full scale value)
Surge voltage resistance	35 V max.
Electrical isolation	500 V (E-bus/signal voltage)
Current consumption power contacts	–
Current consumption E-bus	typ. 130 mA
Bit width in the process image	inputs: 4 byte
Special features	standard and compact process image, activatable FIR/IIR filters, limit value monitoring
Weight	approx. 55 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