Top view   **Contact assembly**

ℹ EL3174 | 4-channel analog input, -10/0…+10 V, -20/0/+4…+20 mA, 16 bit

The EL3174 analog input terminal has four individually parameterisable inputs. Signals in the range from -10/0 to +10 V or -20/0/+4 to +20 mA can be processed via each channel. Physically, the voltage and current signals should be connected to different terminal points. Each channel should then be set by the controller/TwinCAT to U or I mode via CoE. The voltage inputs operate differentially; the current inputs are single-ended. All inputs are digitised with a resolution of 16 bits and transmitted, electrically isolated, to the higher-level automation device. With a technical measuring range of ±107 % of the nominal range, the terminal also supports commissioning with sensor values in the limit range and diagnostics according to NAMUR NE43.

Technical data	EL3174
Number of inputs	4
Power supply	via the E-bus
Technology	U differential, I single-ended
Oversampling factor	–
Distributed clocks	yes
Distributed clock precision	<< 1 µs
Internal resistance	> 200 kΩ	85 Ω typ
Input filter limit frequency	5 kHz
Common-mode voltage U_{CM}	35 V max. (voltage measurement)
Dielectric strength	max. 30 V (current measurement)
Conversion time	minimum 150 µs
Measuring range, nominal	-10/0…+10 V	-20/0/+4…+20 mA
Measuring range, technical	-10.73…+10.73 V	-21.47…+21.47 mA
Resolution	16 bit (incl. sign)
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. 200 mA
Bit width in the process image	inputs: 16 byte
Configuration	no address or configuration setting
Special features	U/I parameterisable, ExtendedRange,standard and compact process image, activatable FIR/IIR filters
Weight	approx. 65 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
Approvals	CE