



EL3174-0002 | 4-channel analog input, -10/0...+10 V, -20/0/+4...+20 mA, electrically isolated, 16 bit

The EL3174-0002 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. Each channel should be set by the controller to U or I mode via CoE. The input voltage or current is digitised with a resolution of 16 bits, and is transmitted, electrically isolated, to the higher-level automation device. With a technical measuring range of $\pm 107\%$ of the nominal range, the terminal also supports commissioning with sensor values in the limit range and diagnostics according to NAMUR NE43. The four differential inputs are electrically isolated against each other and against the fieldbus (2,500 V DC).

Technical data	EL3174-0002
Number of inputs	4
Power supply	via the E-bus
Technology	differential input, channels electrically isolated
Oversampling factor	–
Distributed clocks	yes
Distributed clock precision	$\ll 1 \mu\text{s}$
Internal resistance	$> 200 \text{ k}\Omega$ typ. 85Ω
Input filter limit frequency	5 kHz
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	$< \pm 0.2\%$ (at $25 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$, or else $< \pm 0.3\%$, relative to full scale value)
Electrical isolation	2500 V functional isolation (test voltage channel/channel and channel/fieldbus, production test)
Current consumption power contacts	–
Current consumption E-bus	typ. 150 mA
Bit width in the process image	inputs: 16 byte
Configuration	no address or configuration setting
Special features	U/I parameterisable, Extended Range, standard and compact process image, activatable FIR/IIR filters
Weight	approx. 65 g
Operating/storage temperature	0...+55 $^\circ\text{C}$ / -25...+85 $^\circ\text{C}$
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, UL