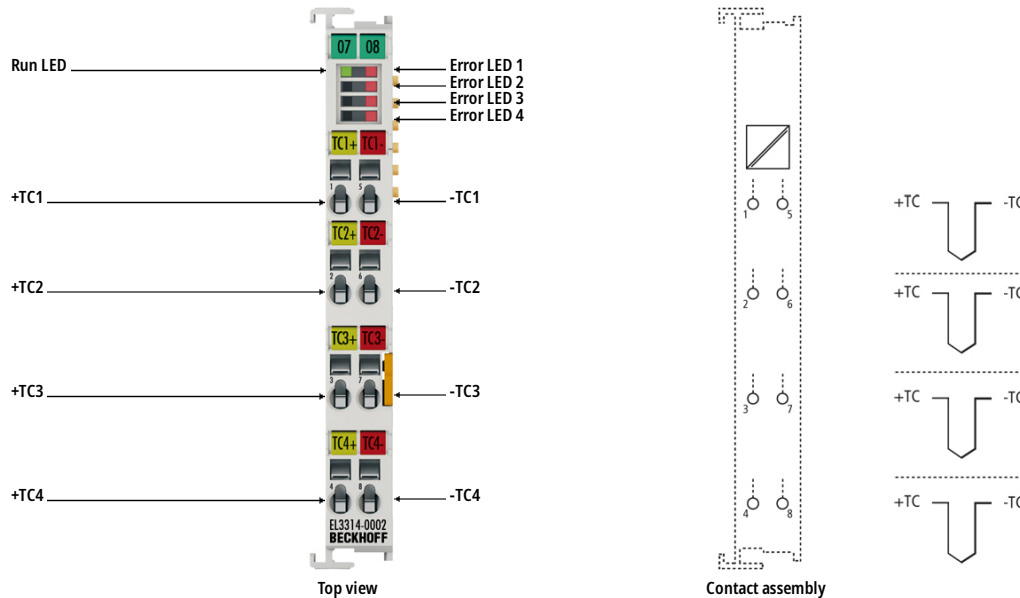
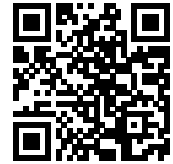


EL3314-0002 | EtherCAT Terminal, 4-channel analog input, temperature, thermocouple, 24 bit, electrically isolated



i Product status: Regular delivery

The EL3314-0002 analog input terminal allows the direct 2-wire connection of four thermocouples. The channels are electrically isolated from one another and from the E-bus, thus preventing interference and damage due to cross-currents. Various types of thermocouple are supported; the voltage is calculated in temperature directly in the terminal. The terminal can also be used for mV measurements. A broken wire is signaled by the error LEDs and on the fieldbus. Cold junction compensation takes place by means of precise internal temperature measurement at the connecting terminals, but operation with an external cold junction is also possible.

Product information

Technical Data

Technical data	EL3314-0002
Number of inputs	4
Technology	Temperature measurement (TC)
Connection method	2-wire
Signal type	differential
Temperature measurement (thermocouple)	type B, C, E, J, K, L, N, R, S, T, U (default setting: type K)
Measurement uncertainty (temperature measurement)	at 23 °C ambient temperature, with internal cold junction, according type: B: ±2.2 °C; C: ±2.4 °C; E: ±1.8 °C; J: ±1.9 °C; K: ±1.9 °C; L: ±1.8 °C; N: ±1.9 °C; R: ±2.1 °C; S: ±2.1 °C; T: ±1.8 °C; U: ±1.8 °C; for further details see documentation

Voltage measurement	± 78 mV, $\pm 2,5$ V
Measurement uncertainty (voltage measurement)	at ± 78 mV, 23 °C ambient temperature: $< \pm 0.06$ % (relative to full scale value)
Resolution	24 bit, presentation adjustable: 0.1/0.01/0.001 °C or 1 μ V per digit
Input filter limit frequency	typ. 1 kHz
Conversion time	approx. 1.6 s up to 5 ms, depending on configuration and filter setting, default: approx. 110 ms
Distributed clocks	–
Power supply	via the E-bus
Current consumption E-bus	typ. 200 mA
Current consumption power contacts	–
Electrical isolation	2500 V functional isolation (test voltage channel/channel and channel/fieldbus, production test)
Special features	channel by channel wire break detection, internal and external cold junction, firmware filter adjustable, simultaneous measurement of the channels
Weight	approx. 60 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 61000-6-2/EN 61000-6-4
EMC immunity/emission	conforms to EN 60068-2-6/EN 60068-2-27
Protect. rating/installation pos.	IP20/variable
Approvals/markings	CE

Housing data	EL-12-8pin
Design form	compact terminal housing with signal LEDs
Material	polycarbonate
Dimensions (W x H x D)	12 mm x 100 mm x 68 mm
Installation	on 35 mm DIN rail, conforming to EN 60715 with lock
Side by side mounting by means of	double slot and key connection
Marking	labeling of the BZxxx series
Wiring	solid conductor (e), flexible conductor (f) and ferrule (a): spring actuation by screwdriver
Connection cross-section	s*: 0.08...2.5 mm ² , st*: 0.08...2.5 mm ² , f*: 0.14...1.5 mm ²
Connection cross-section AWG	s*: AWG 28...14, st*: AWG 28...14, f*: AWG 26...16
Stripping length	8...9 mm
Current load power contacts	I _{max} : 10 A

*s: solid wire; st: stranded wire; f: with ferrule