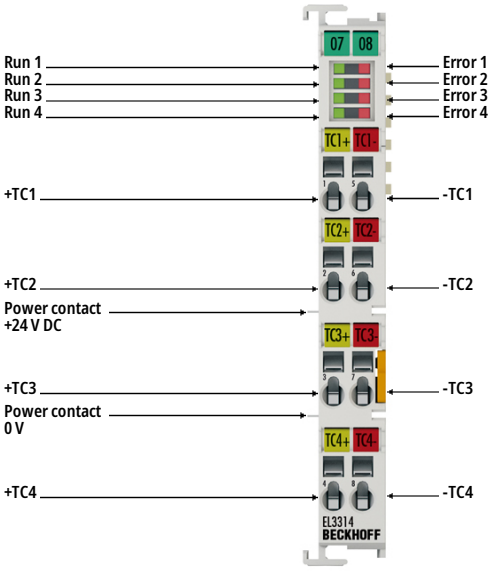
EL3314 | EtherCAT Terminal, 4-channel analog input, temperature, thermocouple, 16 bit



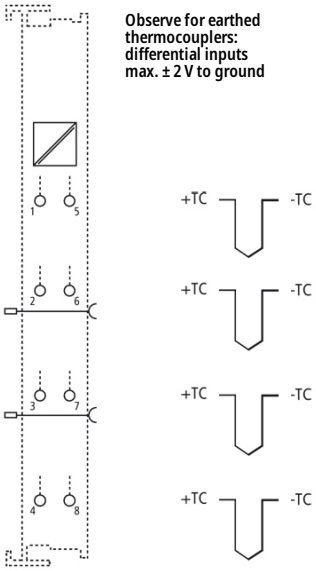


Image similar, may contain optional accessories

Product status: regular delivery

The EL3314 analog input terminal allows four thermocouples to be connected directly. The EtherCAT Terminal circuit can operate thermocouple sensors using the 2-wire technique. A microprocessor handles linearization across the whole temperature range, which is freely selectable. The error LEDs indicate a broken wire. Compensation for the cold junction is made through an internal temperature measurement at the terminal. The EL3314 can also be used for mV measurement.

Product information

Technical data

Technical data	EL3314
Number of inputs	4
Power supply	via the E-bus
Distributed clocks	–
Input filter limit frequency	typ. 1 kHz
Connection method	2-wire
Conversion time	approx. 2.5 s up to 10 ms, depending on configuration and filter setting, default: approx. 250 ms
Voltage measurement	±30/±60/±75 mV

Resolution	16 bit, representation adjustable: 0.1/0.01°C or 1/2/4 µV per digit
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: ±8.5°C; C: ±6.2°C; E: ±2.5°C; J: ±2.7°C; K: ±3°C; L: ±2.3°C; N: ±3°C; R: ±6.7°C; S: ±7.1°C; T: ±2.9°C; U: ±2.5°C; for further details see documentation
Measurement uncertainty (voltage measurement)	at ±75 mV, 23°C ambient temperature: < ±0.14% (relative to full scale value)
Electrical isolation	500 V (E-bus/signal voltage)
Current consumption E-bus	typ. 200 mA
Current consumption power contacts	–
Special features	channel by channel wire break detection, internal and external cold junction, firmware filter adjustable
Weight	approx. 60 g
Operating temperature	-25...+60°C
Storage temperature	-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. rating/installation pos.	IP20/variable
Approvals/markings	CE, CCC, UL, ATEX, IECEx, cFMus
Ex marking	ATEX: II 3 G Ex ec IIC T4 Gc IECEx: Ex ec IIC T4 Gc cFMus: Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec IIC T4 Gc

Housing data	**EL-12-8pin**
Design form	compact terminal housing with signal LEDs
Material	polycarbonate
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 BZxxxx series
Wiring	solid conductor (s), flexible conductor (st) and ferrule (f): 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*: AWG28...14, st*: AWG28...14, f*: AWG26...16
Stripping length	8...9 mm
Current load power contacts	I_{max}: 10 A
Dimensions (W x H x D)	12 mm x 100 mm x 68 mm

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