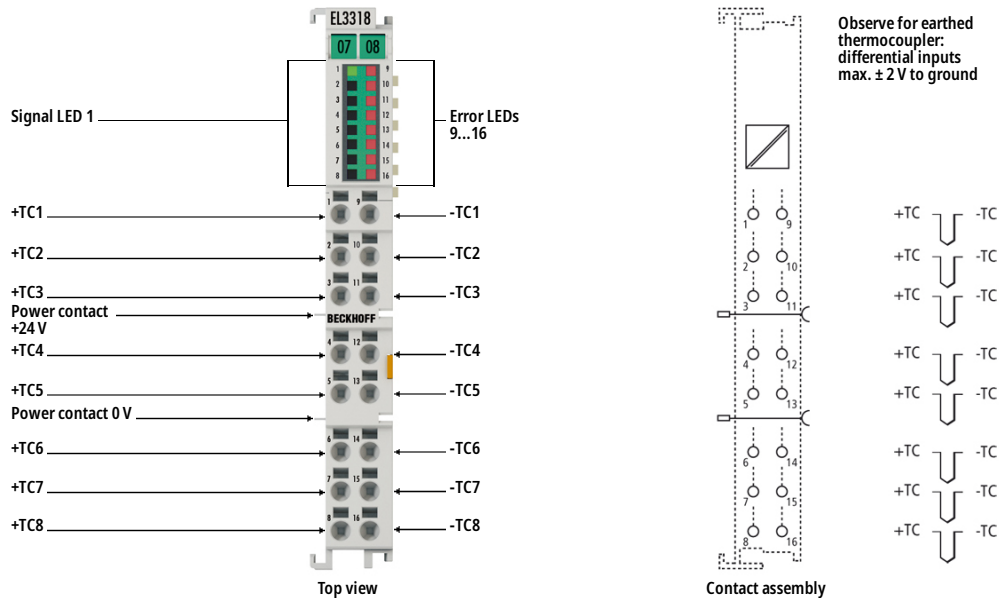


# EL3318 | EtherCAT Terminal, 8-channel analog input, temperature, thermocouple, 16 bit



**i** **Product status:** Regular delivery

The EL3318 analog input terminal allows eight thermocouples to be connected directly and is thus particularly suitable for space-saving use in control cabinets. 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 EL3318 can also be used for mV measurement.

The HD EtherCAT Terminals (High Density) with increased packing density feature 16 connection points in the housing of a 12 mm terminal block.

## Product information

### Technical Data

Technical data	EL3318
Number of inputs	8
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: ±6.3 °C; C: ±4.9 °C; E: ±3.1 °C; J: ±3.2 °C; K: ±3.4 °C; L: ±3.1 °C; N: ±3.4 °C; R: ±5.2 °C; S: ±5.4 °C; T: ±3.3 °C; U: ±3.2 °C; for further details see documentation
Voltage measurement	±30/±60/±75 mV
Measurement uncertainty (voltage measurement)	at ±75 mV, 23 °C ambient temperature: < ±0.096 % (relative to full scale value)
Resolution	16 bit, representation adjustable: 0.1/0.01 °C or 1/2/4 µV per digit
Input filter limit frequency	typ. 1 kHz
Conversion time	approx. 2.5 s up to 20 ms, depending on configuration and filter setting, default: approx. 250 ms
Distributed clocks	–
Power supply	via the E-bus
Current consumption E-bus	typ. 210 mA
Current consumption power contacts	–
Electrical isolation	500 V (E-bus/signal voltage)
Special features	channel by channel wire break detection, internal and external cold junction, firmware filter adjustable
Weight	approx. 70 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. rating/installation pos.	IP20/variable
Approvals/markings	CE, UL, ATEX, IECEx, cFMus
Ex marking	ATEX: II 3 G Ex nA IIC T4 Gc cFMus: Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec IIC T4 Gc

<b>Housing data</b>	<b>EL-12-16pin</b>
Design form	HD (High Density) 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 conductors (e): direct plug-in technique; fine-stranded conductors (f) and ferrule (a): spring actuation by screwdriver

Connection cross-section	s*: 0.08...1.5 mm <sup>2</sup> , st*: 0.25...1.5 mm <sup>2</sup> , f*: 0.14...0.75 mm <sup>2</sup>
Connection cross-section AWG	s*: AWG 28...16, st*: AWG 22...16, f*: AWG 26...19
Stripping length	8...9 mm
Current load power contacts	I <sub>max</sub> : 10 A

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