



EJ3318 | 8-channel input thermocouple

The EJ3318 analog input allows the direct connection of eight thermocouples and is therefore particularly well suited to compact applications on the signal distribution board. The EtherCAT plug-in module's circuit can operate thermocouple sensors using the 2-wire technique. A microprocessor handles linearisation across the whole temperature range, which is freely selectable. The error LEDs indicate a broken wire. The compensation for the cold junction is done by two RTDs (PT1000), which can be placed anywhere on the signal distribution board. The EJ3318 can also be used for mV measurements.

Technical data	EJ3318
Technology	temperature measurement
Sensor types	thermocouples type K, J, L, E, T, N, U, B, R, S, C (default setting type K), mV measurement
Number of inputs	8 x TC, 2 x PT1000 (compensation for the cold junction)
Connection method	2-wire
Measuring range	in the range defined in each case for the sensor (default setting: type K; -200...+1370 °C); mV measurement: ±30 mV...±75 mV
Resolution	0.1 °C per digit
Measuring error	< ±0.3 % (relative to full scale value)
Input filter limit frequency	typ. 1 kHz; depending on sensor length, conversion time, sensor type
Conversion time	approx. 5 s up to 40 ms, depending on configuration and filter setting, default: approx. 500 ms
Auxiliary power current	–
Distributed clocks	–
Power supply	via the E-bus
Wiring fail indication	yes
Current consumption E-bus	190 mA
Electrical isolation	500 V (E-bus/field potential)
Special features	open-circuit recognition, error recognition of the external cold junction compensation (CJC)
Dimensions (W x H x D)	approx. 12 mm x 66 mm x 55 mm
Operating/storage temperature	0...+55 °C/-25...+85 °C
Relative humidity	95 %, no condensation
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 20/variable
Approvals	CE