



## EQ3314-0002 | 4-channel analog input thermocouple

The EQ3314 EtherCAT Box with analog inputs permits four thermocouples to be directly connected. The module's circuit can operate thermocouple sensors using the 2-wire technique. Linearisation over the full temperature range is realised with the aid of a microprocessor. The temperature range can be selected freely. The error LEDs indicate a broken wire. Compensation for the cold junction is made through a temperature measurement in the connecting plugs. This means that standard extension leads can be connected. The EP3314 can also be used for mV measurement.

The module is quite versatile, but the default values are selected in such a way that in most cases it is not necessary to perform configuration. The input filter and associated conversion times can be set within a wide range; several data output formats may be chosen. If required, the inputs can be scaled differently. Automatic limit monitoring is also available. Parameterisation is carried out via EtherCAT. The parameters are stored in the module. For the temperature compensation a PT1000 element is needed.

The modules of the EQxxxx series are made of stainless steel and feature the "Hygienic Design" completely. Therefore they are ideal for applications in the food, chemical or pharmaceutical industries, which require protection class IP 69K.

Technical data	EQ3314-0002
Number of inputs	4
Housing width in mm	39
Connection method	screw type M12, 2-wire connection for thermocouple
Protocol	EtherCAT
Bus interface	2 x M8 socket, shielded, screw type
Sensor types	types J, K, L, B, E, N, R, S, T, U (default setting type K), mV measurement
Signal type	thermocouple
Measuring range	depending on sensor type; preset value is type K, -100...+1,370 °C
Resolution	0.1 °C per digit
Measuring error	< ±0.3 % for type K (relative to full scale value), further types see documentation
Conversion time	2.5 s up to 20 ms, see documentation, default: approx. 250 ms
Distributed clocks	–
Input filter	5 variations, configurable
Current consumption from Us (without sensor current)	120 mA
Power supply connection	feed: 1 x M8 male socket, 4-pin; downstream connection: 1 x M8 female socket, 4-pin
Bit width in the process image	4 x 32 bit TC input, 4 x 16 bit TC output
Electrical isolation	500 V
Special features	V2A stainless steel, Hygienic Design
Dimensions (W x H x D)	39 mm x 160 mm x 43 mm
Operating/storage temperature	-25...+60 °C/-40...+85 °C
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 69K (according to EN 60529)/variable
Approvals	CE, UL

Accessories	
ZK1090-3xxx-xxxx	Cables for EtherCAT signal in- and -output
ZK2000-71xx-0xxx	Shielded cables for M12 I/O connection sockets
ZK2000-6xxx-xxxx	Cables for M12 I/O connection sockets
ZK2020-xxxx-xxxx	Cables for M8 power supply

#### Stainless steel products

For further information on the stainless steel control solution please see [here](#).