



EQ3174-0002 | 4-channel analog input ± 10 V or 0/4...20 mA, parameterisable, differential input, 16 bit

The EQ3174 EtherCAT Box has four analog inputs which can be individually parameterised, so that they process signals either in the $-10 \dots +10$ V or the 0/4...20 mA range. The voltage or input current is digitised with a resolution of 16 bits, and is transmitted (electrically isolated) to the higher-level automation device. The four input channels have differential inputs and possess a common, internal ground potential. The input filter and therefore the conversion times are configurable in a wide range. If required, the inputs can be scaled differently, and automatic limit monitoring is also available. EtherCAT is used for parameterisation purposes. The parameters are stored in the module.

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	EQ3174-0002
Number of inputs	4
Housing width in mm	39
Input connections	M12, screw type
Protocol	EtherCAT
Bus interface	2 x M8 socket, shielded, screw type
Signal type	$-10/0 \dots +10$ V 0/4...20 mA
Internal resistance	> 200 k Ω 85 Ω typ. + diode voltage
Common-mode voltage U_{cm}	35 V max.
Resolution	16 bit (incl. sign)
Measuring error	$< \pm 0.3$ % (relative to full scale value)
Input filter limit frequency	5 kHz
Conversion time	~ 100 μ s
Nominal voltage	24 V DC (-15 %/ $+20$ %)
Distributed clocks	yes
Input filter	configurable
Sensor supply	from load supply voltage U_p
Current consumption from U_s	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 16 bit input, 4 x 8 bit status
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	$-25 \dots +60$ °C/ $-40 \dots +85$ °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
ZK2020-3xxx-xxxx	Cables for M8 power supply

Stainless steel products

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