



EP3174-0002 | 4-channel analog input ± 10 V or 0/4...20 mA, parameterisable, differential input, 16 bit

The EP3174 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.

Technical data	EP3174-0002
Number of inputs	4 (differential)
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 typ. 85 Ω + diode voltage
Common-mode voltage U_{CM}	max. 35 V
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	current or voltage parameterisable
Weight	approx. 165 g
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 65/66/67 (conforms to EN 60529)/variable
Approvals	CE, UL, Ex

Accessories	
ZK1090-3xxx-xxxx	Cables for EtherCAT signal in- and -output
ZK2000-6xxx-xxxx	Cables for M12 I/O connection sockets
ZK2000-5xxx/71xx-xxxx	Sensor cable 5-wire unshielded/shielded
ZK2020-3xxx-xxxx	Cables for M8 power supply

Related products	
EQ3174-0002	EtherCAT Box, stainless steel housing, 4-channel analog differential input -10...+10 V or 0/4...20 mA, parameterisable, 16 bit
EP3174-0092	EtherCAT Box, industrial housing, 4 analog differential inputs -10...+10 V or 0/4...20 mA, parameterisable, 16 bit, TwinSAFE SC