



EP3356-0022 | 1-channel precise load cell analysis (resistor bridge), 24 bit



The EP3356 EtherCAT Box enables direct connection of a resistor bridge or load cell in a 4-wire connection technology. The ratio between the bridge voltage U_D and the supply voltage U_{REF} is determined simultaneously in the input circuit and the final load value is calculated as a process value on the basis of the settings in the EP3356. With automatic self-calibration (can be deactivated), dynamic filters and distributed clock support, the EP3356 with measuring cycles of 100 μ s can be used for fast and precise monitoring of torque or vibration sensors.

All four M12 sockets are connected, so that parallel operation of several strain gauges is possible.

Technical data	EP3356-0022
Number of inputs	2, for 1 resistor bridge in full bridge technology
Input connections	M12, screw type
Protocol	EtherCAT, TwinCAT SC
Bus interface	2 x M8 socket, shielded, screw type
Signal type	resistor bridge, strain gauge
Internal resistance	> 200 k Ω (U_{REF}), > 1 M Ω (U_D)
Resolution	24 bit, 32 bit presentation
Measuring error	< ± 0.01 % for the calculated load value in relation to the final load value with a 12 V feed and 24 mV bridge voltage (hence nominal strain gauge characteristic value of 2 mV/V), self-calibration active, 50 Hz filter active
Input filter limit frequency	10 kHz low pass (-3 dB)
Conversion time	0.1...250 ms, configurable, max. 10,000 samples/s
Conversion rate	10,000...4 samples/s (0.1...250 ms conversion time)
Nominal voltage	24 V (-15 %/+20 %)
Distributed clocks	yes
Sensor supply	10 V (supplied by the EP3356)
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
Supported nominal sensitivity	all, parameter resolution: 0.01 μ V/V; recommended: 0.5...4 mV/V
Special features	self-calibration, quadruple averager, dynamic filters, fast data sampling, parallel connection
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 65/66/67 (conforms to EN 60529)/variable
Approvals	CE, UL

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

Further information	
XFC	eXtreme Fast Control Technology