



EP3632-0001 | 2-channel interface for Condition Monitoring (IEPE), 16 bit

The EP3632 EtherCAT Box is a 2-channel oversampling interface for up to two IEPE sensors with 2-wire connection. The current of the integrated constant current source can be set to 2, 4 or 8 mA separately for each channel depending on the sensor and cable length. The input signal is sampled according to the oversampling principle with up to 50 ksamples per second per channel. The measured values can be correlated to other parts of the system through distributed clocks. Except for filtering, the EP3632 does not pre-process the vibration amplitude values. This is done by the retrieving controller. The interface can be adapted to application-specific requirements by means of adjustable filters and supply currents. The TC3 Condition Monitoring library offers extensive algorithms for signal evaluation by the controller, enabling full utilisation of the performance and flexibility benefits of the PC platform.

| Technical data | EP3632-0001 |
|------------------------------------|---|
| Technology | Condition Monitoring/IEPE |
| Sensor types | IEPE |
| Connection method | M8, 4-pin, screw type, shielded |
| Number of inputs | 2 |
| Signal voltage | IEPE constant current supply and recording of modulated AC voltage |
| Sensor state monitoring | yes, through monitoring of the bias voltage |
| Measuring range | default ± 5 V up to 25 kHz, ± 250 mV up to 10 Hz |
| Input filter limit frequency | analog parameterisable 5th order low-pass filter up to 25 kHz, typically 0.05 Hz high-pass filter |
| Measuring error | $< \pm 0.5$ % (DC; relative to full scale value) |
| Resolution | 16 bit (incl. sign) |
| Nominal voltage | 24 V DC (-15 %/+20 %) |
| Conversion time | 20 μ s (max. 50 ksamples/s) |
| Supply current I _{EXCITE} | typ. 2/4/8 mA (separately configurable for both channels) |
| Sensor supply | from control voltage Us |
| Current consumption | typ. 120 mA |
| Distributed clocks | yes |
| Special features | automatic anti-aliasing function, wire breakage detection |
| Bus interface | 2 x M8 socket, shielded, screw type |
| Electrical isolation | 500 V |
| Weight | approx. 165 g |
| 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 |

| Accessories | |
|------------------|--|
| ZK1090-3xxx-xxxx | Cables for EtherCAT signal in- and -output |
| ZK2020-3xxx-xxxx | Cables for M8 power supply |
| TF3600 | TC3 Condition Monitoring Level 1 |