smartPREDICT Ethernet

1 Description

smartPREDICT Ethernet comprises a leading vibration and acoustic emission sensor with a vast bandwidth, ultra-high resolution and an extensive dynamic range. In combination with a temperature and acceleration sensor as well as a gyroscope smartPREDICT is the condition monitoring system for a broad range of applications in a variety of industries.

In general, smartPREDICT enables:

• Trending of Abnormalities
• Localization of Irregularities
• Root Cause Analysis

iNDTact's software allows a sophisticated real-time analysis of detected signals. Its Power-over-Ethernet (PoE) technology enables power supply and streaming of high volume data in real-time over a single interface. The device is designed to cover most applications. For special purposes customization concerning the interface or the case remains feasible.

For further information contact our customer service.

2 Application Examples

smartPREDICT Ethernet can be used in many szenarios, either for laboratory/testing purposes or for condition monitoring e.g. for machines.

• Acquisition of structure-born sound
• Predictive maintenance of bearings and gear boxes
• Process monitoring in production lines and machinery
• Supervision of lubrication conditions
• Monitoring of power tool wearout
• Record of vibration characteristics
• Operational modal analysis
• Unbalance test

3 Technical Data

Main HW Components			
Microcontroller Unit (MCU)	ARM Cortex M7, 2 MB Flash, 512 kB RAM		
Connector/Interface	RJ45/Ethernet		

Performance	Range	Accuracy	Data Rate
Acoustic Emission	6 Hz - 48.000 Hz; 24 bit	SNR 99 dB	96 kHz
Acceleration	+/- 2, 4, 8 g; 16 bit	+/- 40 mg	3.2 kHz
Angular Velocity	+/- 2000 °/s; 16 bit	+/- 1 °/s	3.2 kHz
Temperature	-40 °C ... 80 °C; 16 bit	+/- 0.25 °C	< 1 Hz
Magnetic Field	+/- 5000 µT; 16 bit	+/- 25 µT	< 1 Hz

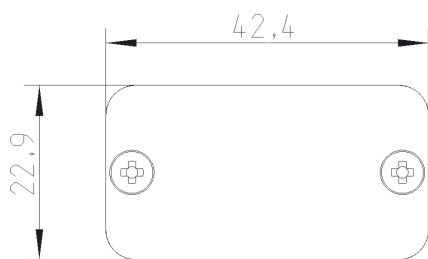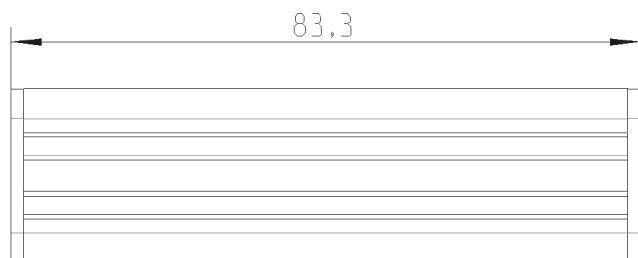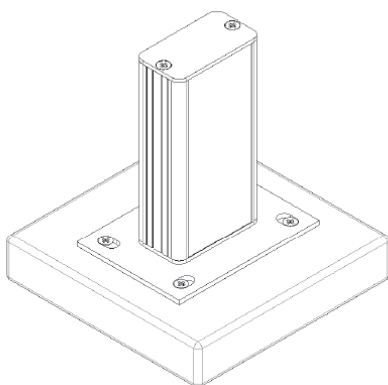| Mechanical Data			
IP Rating	Standard IP54, optional IP67		
Size	83 x 42 x 23 mm		
Cable	CAT 5+		
Mounting	Screw/Glue		

4 Dimensions

Figure 1: Front
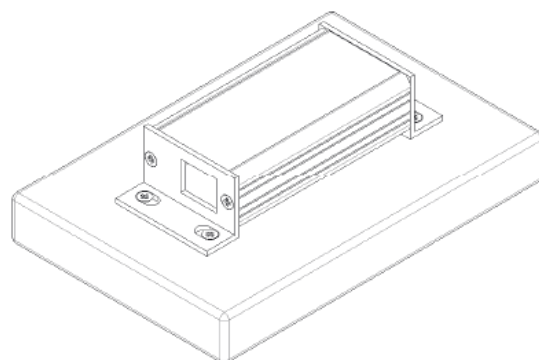

Figure 2: Back

5 Mounting Options

Figure 1: Front

Figure 2: Back