



INDUSTRIAL NODE 6 EX

Vibration & Temperature Sensor /
for potentially explosive atmospheres

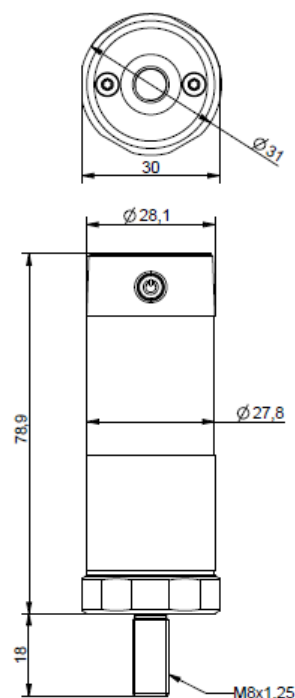
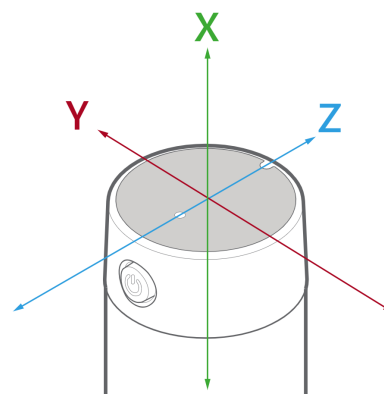
Industrial Node 6 Ex measures vibration up to 6kHz, delivering data to identify abnormal vibrations. These vibrations indicate possible future machine failure because of various possible reasons like: wear, component imbalance, misalignment, or potential improper use of the machine.

ATEX certification allows measuring vibration in potentially explosive atmospheres. Industrial Node 6 Ex provides the needed high-resolution wide bandwidth data to identify emerging issues.



FEATURES

- ATEX Certified: Certified for the use in potentially hazardous areas. ATEX certificate for explosive atmospheres.
- Triaxial measurement over ultra-wide bandwidth: Frequency range up to 6.3kHz (+/-3dB) with 26667Hz sampling rate.
- High resolution measurement data: High frequency, high resolution waveform up to over 100000 measurement samples.
- Configurable data acquisition and advanced data processing: Configurable measurement, sample amount, filtering and decimation.
- Frequency range up to 6.3kHz
- 3-axis accelerometer and temperature sensor.
- Advanced signal processing on the edge calculating key vibration KPIs such as RMS, PEAK, kurtosis, and crest factor - from acceleration and velocity or root-cause analysis through FFTs.
- Battery operated sensor - no wiring needed.
- Operating temperature in hazardous environment -40°C to +60°C.





COMMON SPECIFICATIONS

DIMENSIONS	WEIGHT	MOUNTING
78.5 x 28mm	129g	M8 x 1.25 thread
Materials		
Cover material	316ss	
Top cap material	PA	
Environment		
Operating Temperature	-40°C to +60°C (hazardous environment); -40°C to +85°C (non-hazardous environment)	+60°C (hazardous environment), +85°C (non-hazardous environment)
Storage Temperature	+10°C to +30°C	
IP rating	IP68	

TECHNICAL SPECIFICATIONS

Wireless communication

- 2.4GHz / Wirepas Mesh

Battery

- 3.6V lithium thionyl chloride
- Battery lifetime up to 3 years

Software

- Fully configurable data delivery and integration to major clouds
- Customer cloud application
- Device management

Vibration

- Acceleration measurement on 3-axis Axial, Horizontal and Radial.
- Dynamic range +/- 4G (configurable to 2, 4, 8 or 16)
- Frequency range 10-1000Hz
- Sampling rate 6600Hz
- Resolution 16-bit
- FFT resolution 1Hz/bin

Temperature

- Measurement range -40°C to +150°C
- Resolution 0.1°C
- Accuracy +/- 0.3°C (mounting dependent)
- Repeatability +/- 0.1°C

Key performance indicators

- Velocity: RMS, PEAK, P2P
- Acceleration: RMS, PEAK, P2P, kurtosis, crest factor

Sample amounts

- Single axis, max. 110592 samples
- Triaxial, max. 36864 samples per axis

Signal processing

- Butterworth high, low and band pass filter
- Configurable low and high cut-off
- Decimation configurable, max. ratio 1:9

FFT Calculation

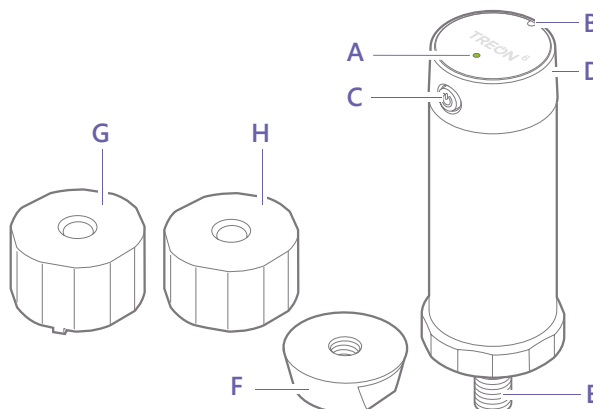
- Sample amount 4096
- Lines of resolution 1600
- Averages, max. 9
- Overlap, 0 to 100%
- Hanning windowing

Certifications

- CE, FCC, ISSED, BIS (India)
- ATEX II 2 G Ex ib IIC T4 Zone 1 & 2
-40°C ≤ Ta ≤ +60°C

■ PARTS AND KEYS OF THE NODES

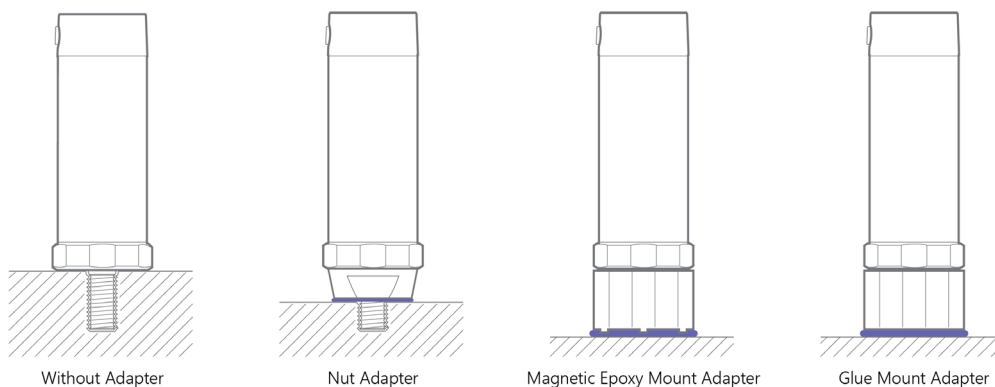
- A. Status light
- B. Orientation notch
- C. Power button
- D. NFC tag
- E. M8 bolt
- F. Nut adapter*
- G. Magnetic epoxy mount adapter*
- H. Glue mount adapter*



* Note that adapters F, G, and H are not included in standard sales box.

■ MOUNTING OPTIONS

There are four possible installation methods for the nodes: without adapter, with nut adapter, with magnetic adapter and with glue mount adapter. The best place to mount the sensor depends on the machine and the source of vibration being monitored. Ideally, the contact surface on the machine should be completely flat, smooth, and larger than the base of the sensor.



In case you would also like to measure the temperature of the machine, the optimal installation method is without an adapter. Only with this way the measurement point of the Industrial Node or Industrial Node 6 is deep enough below the machine surface to measure the temperature accurately. For detailed information about the different types of installation, please check the quickstart guide.

