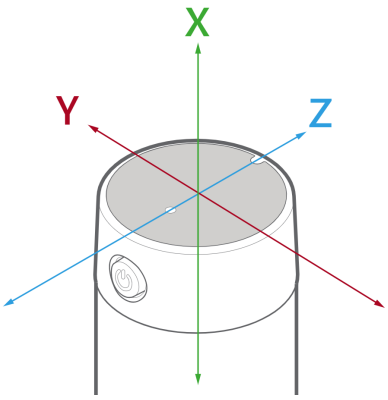
INDUSTRIAL NODE 6

Vibration & Temperature Sensor

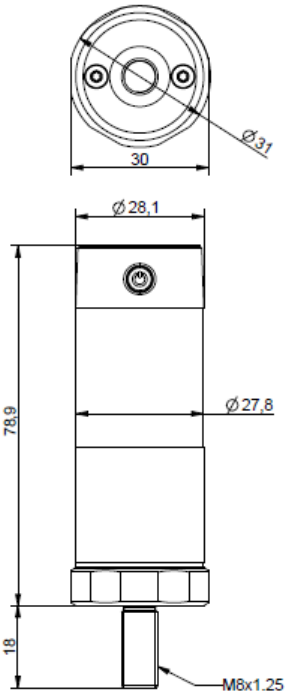
Industrial Node measures vibration up to 6kHz, identifying abnormal vibrations, which are early signs of machine failure due to component imbalance, misalignment, wear, or improper use of equipment.

Industrial Node 6 provides the needed high resolution data to not only identify emerging issues but also do root-cause analysis.



FEATURES

- Triaxial measurement over ultra-wide bandwidth
  - Frequency range up to 6.3kHz (+/-3dB) with 26667Hz sampling rate
- 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.
- Configurable data acquisition and advanced data processing Configurable measurement sample amount, filtering and decimation.
- Battery operated sensor - no wiring needed.
- Wide operating temperature -40°C to +85°C
- Pre-calculated key parameters for fast assessment
  - Based both on velocity and acceleration.
  - Fully configurable FFT
  - Calculation on the edge
- High resolution measurement data
  - For advanced backend diagnostics.
  - High frequency, high resolution waveform up to over 100000 measurement samples



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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	-40°C to +85°C	
Temperature		
Storage	+10°C to +30°C	
Temperature		
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 2-6300Hz (+/-3dB) *
- Sampling rate 26.7kHz
- Resolution 16bit
- FFT resolution 1Hz/bin

* Mounting dependent

Certifications
- CE, FCC, ISED, BIS (India)

Temperature
- Measurement range -40°C to +105°C
- Resolution 0.1°C
- Accuracy +/- 0.3°C
- 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

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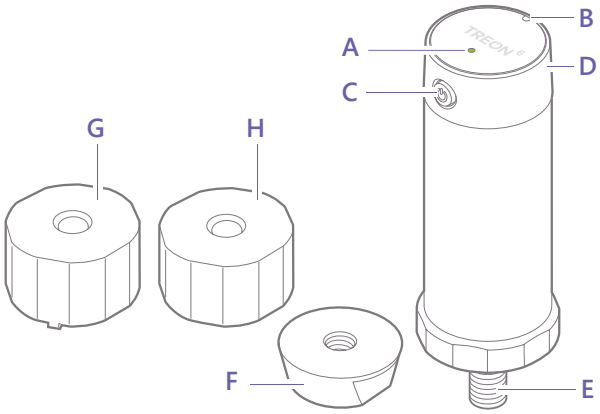
PARTS AND KEYS OF THE NODES

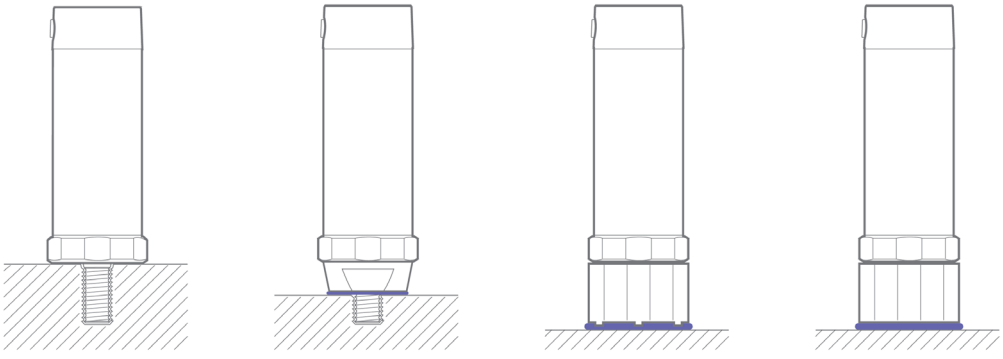
- A. Status light
- B. Orientation notch
- C. Power button
- D. NFC tag
- E. M8 bolt
- F. Nut adapter*
- G. Magnetic epoxy mount adapter*
- H. Glue mount adapter*



* Note that adapters F, G, and H are notincluded 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.



Without Adapter | Nut Adapter | Magnetic Epoxy Mount Adapter | Glue Mount Adapter

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.

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The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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