

WE HEAR, WHAT YOU CANNOT PERCEIVE.

Ultrasonic Sensor for Predictive Maintenance

Acoustic Intelligence Solutions

A Truma Gerätetechnik Solution

MADE IN
GERMANY

THE PROBLEMS

- Unplanned Downtime: Costs thousands Euro per hour
- Reactive Monitoring: Outages always occur at the worst time
- Tied up Capital: Due to oversized spare parts inventories
- Monitoring Blind Spots: Critical failures happen without warning
- Reduced Efficiency: Caused by worn out bearings and drives






Traditional maintenance schedules only account for the present moment – Problems can arise unnoticed between inspections.

YOUR ADVANTAGES

- **Proactive Maintenance**
Identify critical failures days or weeks before they occur.
- **Reduced Monitoring Costs**
Condition based monitoring instead of fixed interval maintenance
- **Small Spare Inventory**
Procurement based on actual needs instead of costly stockpiling
- **Scalable Solution**
From A Single Sensor to a Complete Cloud Enterprise Solution
- **Multiple Functions**
Guarding three characteristics simultaneously

HOW IT WORKS

-  **SENSOR LISTENS**
Continuous monitoring of the complete Frequency spectrum - 20 kHz to 180 kHz
-  **AI ANALYSES**
ML Algorithm learns the acoustic signature of your machine and detects deviations in real time.
-  **YOU RECEIVE NOTIFICATION**
Automatic notifications when anomalies detected - before they turn into costly failures

TECHNICAL DETAILS

Frequency spectrum	20 kHz to 180 kHz
Size	Almost the size of a matchbox
Connectivity (for e.g.)	WLAN, LTE, CAN, LIN, LoRaWAN
Power Supply	5V or 12V from USB, Battery Backup
Monitoring	Simultaneous Multi-Parameter Analysis
Spectrum	Independent – No Frequency Clipping
Integration	One Product Simple and Easy Integration

APPLICATION AREAS

- R-A CHP
- Infrastructure
- Production Technology
- Energy Technology
- Electronics
- Automotive Industry

REQUEST A DEMO

Experience the technology live – tailored specifically to your application!

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ULTRASONIC-SENSOR

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Technical Deep Dive

TECHNICAL FEATURES

Size (mm) (L x w x h)	64 x 36 x 26
Weight (gm)	65
Power	5V/12V DC, 0.3W Consumption
Battery (mAh)	600
LEDs	Info LEDs for updates and working
Processor	Dual Cortex @ 150MHz
Microphone	Adaptable MEMS microphone (one fitted internally/additionally external connection possible) upto 180 kHz
Additional Sensors	MEMS, Temperature, Humidity
Self Test	Self Test for Sensor Liveliness
Operating Condition	Temperature: -30°C to 70°C Humidity: Upto 95% RH
Ingress Protection	PCB: IP67 and MEMS Mic: IPx4



Complete End-to-End Solution

Simulation tool to determine sensor location for optimal placement

24/7 365 Monitoring & Reporting

Sensor and system 24/7 monitoring from all the location and all the data available at one click

Audio Database

As the database keeps growing, that keeps the training data growing. Making the sensor more robust after each training

Online Sensor AI Training

Access to AI Training Platform for the sensor alongwith a wide variety of audio database for the sensor for higher accuracy and long-term support

COMPLETE PLATFORM: SMART. INTELLIGENT. INTEGRATED.



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