TMASMS ◀
SMART MOTOR SENSOR

▶ OVERVIEW

TMAS Smart Motor Sensor (TMASMS) monitors the condition of your electric motors by combining best-in-class sensing technologies with leading-edge data analysis. TMASMS detects anomalies and defects in equipment, enabling you to forecast maintenance cycles and avoid unplanned downtime. Connected to the IOT, very easy to install and start up, parameter monitoring and failure prediction.

▶ INSTALATION

TMASMS can be installed on any motors, even with the motor running. The sensor work with WIFI communication for connet to the IOT. TMASMS The Smart Motor Sensor allows for 24/7 condition-based monitoring of all your low voltage electric motors trough the mobile or web application. It presents information in a clear way, telling you both what `the problem is and how to fix it.
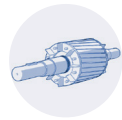
▶ THE DETECTED FAILURES ARE

POWER SYSTEM
Asymetry in motor currents

MOTOR SHAFT/BALANCE
Gravity center displacement

ALIGNMENT
Motor/load misaligned

STATOR WINDING
Stator resistance variation

ECCENTRICITY
Stator/rotor concentricity issue

COOLING SYSTEM
Motor cooling system problem

ROTOR
Rotor resistance variation

BEARING
Failures/defects in bearing

SOFT/LOOSE FOOT
Fixing system problems

TECHNICAL INFORMATION

Motor compatibility

The Smart Motor Sensor (SMS) works with:

▶ 3-phase squirrel cage induction motor.

▶ Standard low voltage IEC and NEMA motors.

▶ Frames up to 450 (IEC 60034) or 500 (NEMA MG1) whose power range varies from 0.37 kW to 500 kW or from 0.5 hp to 700 hp.

▶ Motors driven by any type of device (directly on line (DOL)), by variable frequency drive (VFD), soft starter, and star-delta.

Specification

Physical caracteristic

Weight	0.5kg
Case material	ABS
Mounting	Cooling fins
Battery type	4X Repleaceable AA Lithium Batteries

Vibration measurement

Amplitude range	± 40g
Frequency range	1 Hz ~ 3.1kHz
Data format	Wave form, FFT, RMS
2-axis vibration	Axial and radial

Wireless communication

Network standard	WIFI b/g/n
Radio standard	IEEE 802.11 b/g/n
Frequency	2.4 GHz
Range	> 50m

Certifications and standards
CE
IP Class IP55

Requirements

Network

Network	Dedicated 2.4GHz network (5GHz networks not supported)
Security	WEP, WPA, or WPA2
Signal strength	Greater than -60dB
Ports	Port 8883 and HTTPS port (port 443) must be open.

Environment

Operation	−40 C to +60 C
Storage	50 C maximum to avoid energy leakage from lithium batteries

App

iPhone	iOS 13 or later
iPad	iPadOS 13 or later
Android phone	Android 6.0 (Marshmallow) or later
Name	TMASMS

Dimension

70 mm
122 mm
146 mm

42 mm
3 mm