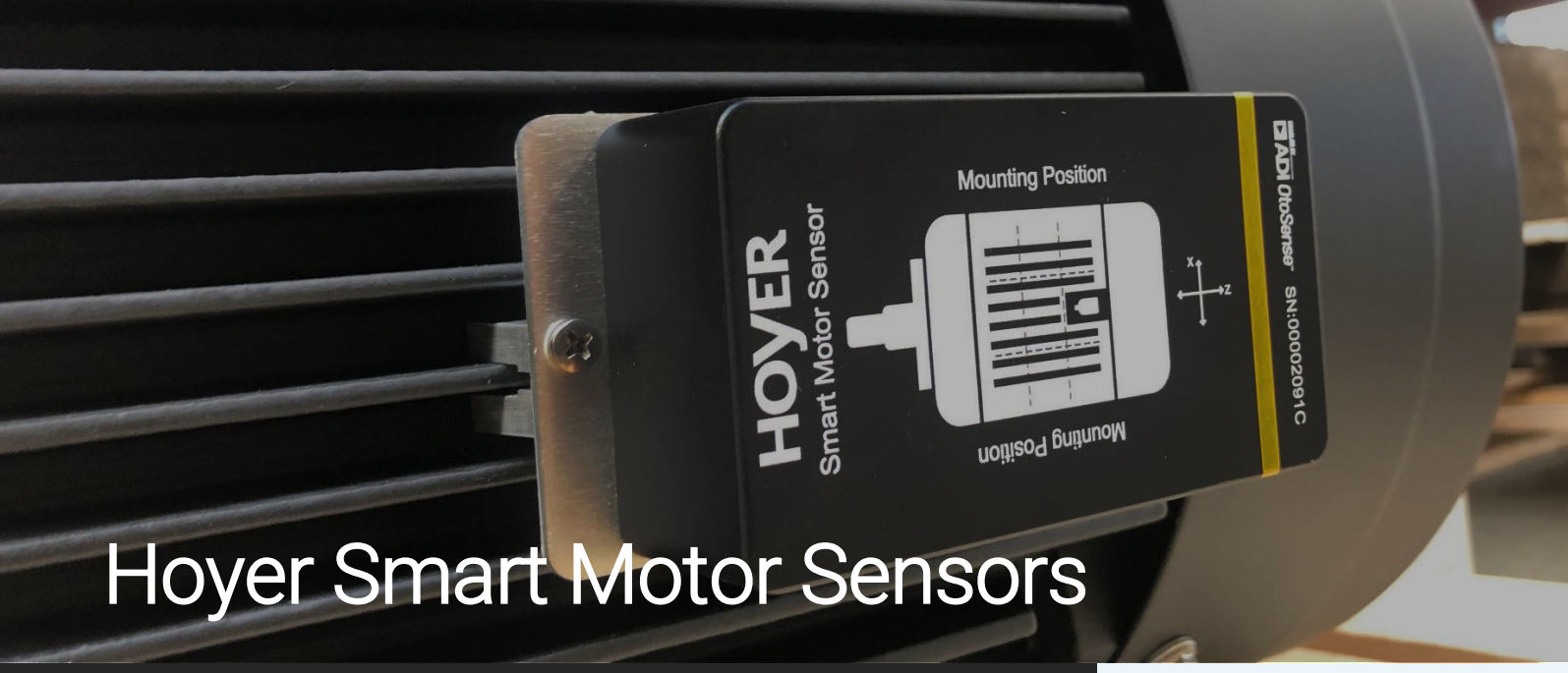


Hoyer Smart Motor Sensors

Monitor the condition of your electric motor by combining sensing technologies with data analysis. In cooperation with ADI OtoSense, Hoyer Motors now offers a Hoyer Smart Motor Sensor.

With a smart motor sensor, you can monitor the motor health in real time.

Actionable diagnostics

Diagnose nine mechanical and electrical motor faults

- Includes fault severity and recommended actions to address specific faults
- Performance indicator identifies potential issues with the load or a change in the process that might require additional action

Automated

Automatically generated diagnostics and alarms customised to your motor

- No need to manually set alarms or thresholds
- No manual device training required
- No expertise required for initial analysis

Scalable

Quick to set up, easy to use

- Works with all low voltage asynchronous motors
- No wires, no additional gateways required
- Easy to use interface reduces training and device maintenance

Detectable Motor Faults

Power System
Asymmetry in motor currents

Stator winding
Stator resistance variation

Rotor
Rotor resistance variation

Motor shaft
Gravity center displacement

Eccentricity
Stator/rotor concentricity issue

Alignment
Motor/load misaligned

Cooling System
Motor cooling system problem

Soft/loose foot
Fixing system problem

Bearing
Failures/defects in bearing

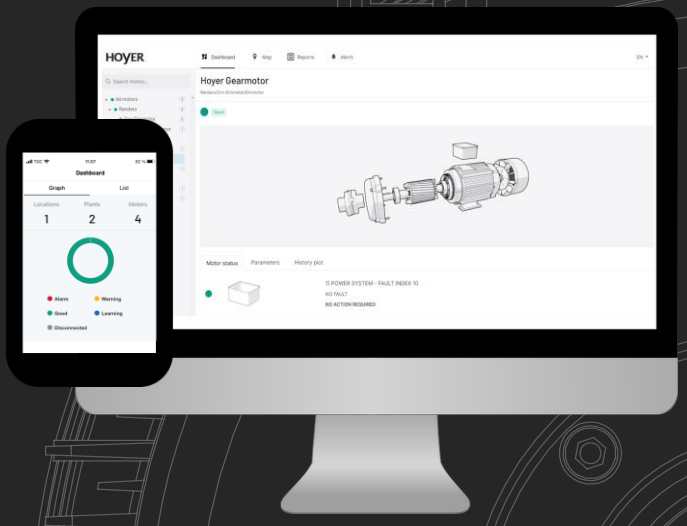
Performance
Motor application and environment

Optimise your resources

Hoyer Smart Motor Sensor is a full turnkey hardware and software solution that helps avoid downtime and optimise maintenance cost.

With Hoyer Smart Motor Sensor, you can monitor/manage your critical assets from all locations through a single organizationally shared dashboard.

The device sends sensing data to a cloud where AI provides diagnostics and delivers prescriptive maintenance actions via a web platform and mobile app.



HOYER MOTORS ADI OtoSense™

Motor compatibility

- 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

Requirements

Network

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

Environment

Operation	-40 °C to +60 °C
Storage	Max. 50 °C to avoid energy leakage from lithium batteries

App

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

Specifications

Physical characteristics

Weight	0.5 kg
Size	70x146x42 mm
Case material	ABS
Mounting	Cooling fins
Battery type	4 x replaceable AA lithium batteries

Vibration measurement

Amplitude range	±40 g
Frequency range	1 Hz to 3.1 kHz
Data format	Waveform, FFT, rms
2-axis vibration	Axial and radial

Wireless communication

Network standard	Wi-Fi b/g/n
Radio standard	IEEE 802.11 b/g/n
Frequency	2.4 GHz
Range (nominal)	>50 m

Certifications and standards

CE IP55

For more information, contact Hoyer Motors at:
smartmotorsensor@hoyermotors.com