

The easy-to-install MachineSense® Vibration Analyzer continuously tracks the operating conditions of industrial machinery through vibration and ambient temperature.

Easy-to-read gauges provide updated values representing current operating conditions, and offer access to historical trends displaying up to six months of operating history. Customizable threshold values allow users to identify preferred maintenance conditions, unhealthy operating conditions, or set indicators for deteriorated component health.

Patented time-domain data sampling methods enable continuous trend monitoring to spot anomalies and repeatable events that occur under changing process or operating conditions, allowing early detection of developing operating health issues, and the operational activities that may be causing them.

Use the MachineSense Vibration Analyzer to perform continuous vibration screening through a remote monitoring solution. Users can analyze tri-axial vibration and local temperature data over time to determine when assets' operating conditions warrant detailed investigation and diagnosis before the equipment is severely impacted by the developing issue.

Visualization of critical operating and analytic results are conveniently delivered 24/7 via a web browser or mobile app in easy-to-understand dashboard gauges, and via email and text alerts.



### Measures and Trends:

- Machine utilization
- Tri-axial vibration data in RMS and amplitude for:
  - Linear acceleration
  - Linear velocity
- Ambient operating temperature

- Tracks operating conditions of rotating machinery components 24/7 using tri-axial vibration temperature data.
- Local Edge analytics enable continuous and high speed data monitoring, reduce data transfer volume and bandwidth requirements, and increase data integrity.
- Continuous monitoring enables early detection of symptoms that appear under varying operating conditions.
- Cloud-based dashboard gauges summarize current conditions, and link to historical trend data with settable thresholds for receiving alerts of changing operating metrics.

## How it WORKS

MachineSense sensors are placed directly on your machines or components to automatically monitor condition. The sensor data transmits to an easy-to-install gateway and is then sent to cloud-based servers running powerful analytic software. Results are transmitted from the server to a user-friendly app where you will view machine condition and historical trends.



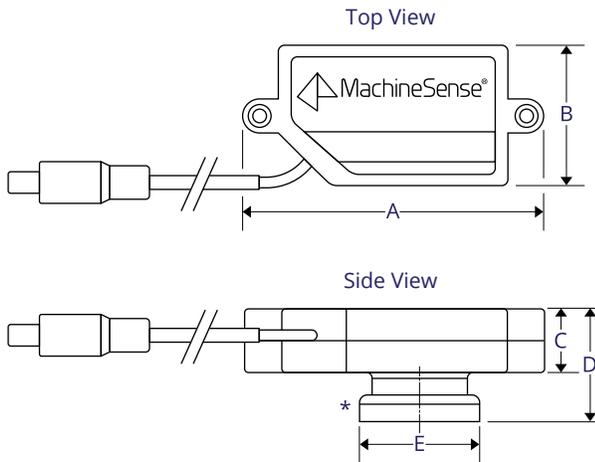
# Vibration Analyzer™ SPECIFICATIONS

MACHINESENSE SENSOR	
<b>Mechanical</b>	
Weight	7.0 oz (0.2 kg)
Dimensions length x width x depth	2.6 in x 1.7 in x 1.1 in (66.7 mm x 42.7 mm x 27.6 mm)
Sensor housing material	Metal plastic hybrid
Enclosure rating	IP64, IP65 optional
<b>Environmental</b>	
<b>Operating temperature</b>	
Ambient temperature	14°F (-10°C) to 149°F (65°C)
Surface temperature	up to 185°F (85° C)
Hazardous condition	Class-1 Div-2
<b>Acceleration</b>	
Range	- 16g to + 16g
Resolution	2%
Accuracy	10 mg
Sampling rate (configurable)	40-250 per second
<b>Power</b>	
Power supply (built in)	3.3 volt DC adapter
<b>Bluetooth Communication</b>	
Bluetooth Low Energy (BLE) Range	15 ft
Bluetooth Low Energy (BLE) Tx power	-5.8 dBm
Bluetooth Low Energy (BLE) Standard	4.1

DATA HUB	
<b>Functional</b>	
Connect to machine sensor, pump sensor and electro-sensor via Bluetooth Low Energy (BLE)	
Data buffering up to 4 hours	
Smart-phone/tablet-based WiFi connect app (WiFigurator)	
Auto-upgrade over Internet	
<b>Mechanical</b>	
Mounting	Rail/wall mount
Enclosure rating	IP50
Dimensions length x width x depth	4.8 in x 3.0 in x 1.3 in (121 mm x 76 mm x 33 mm)
Weight	2.3 oz (0.06 kg)
Environmental	23°F (-5°C) to 150°F (65°C)
Power	5 volt DC adapter from 110 - 270V AC

ELECTRONICS	
Processor	Quad core 1.2G Hz broadcom BCM2837 64-bit CPU
Memory	Micro SD card
Storage	16 GB
RAM	1 GB
I/O	40-pin extended GPIO and 4 USB Ports, full size HDMI, LAN
Radio	BCM43438 WiFi and Bluetooth Low Energy (BLE) on board
OS	Linux
Certification	CE/IEC/FCC

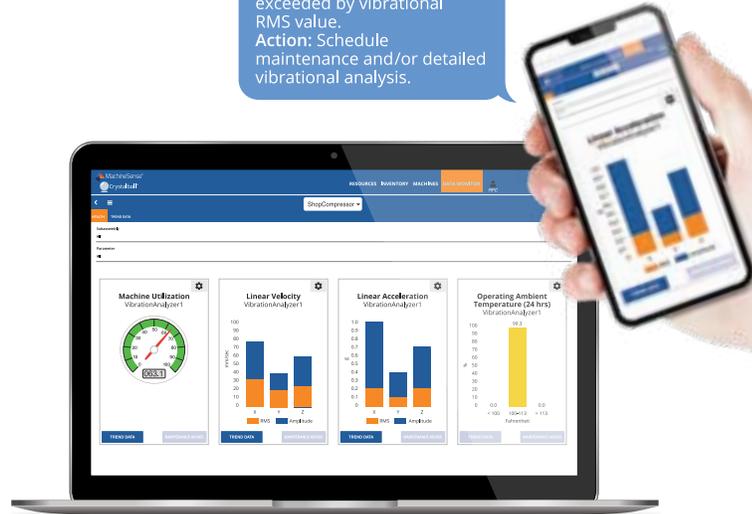
## MachineSense™ Sensor



\*Note: Mounts on a flat surface.

A	3.10 in. (78.7 mm)
B	1.55 in. (39.4 mm)
C	0.67 in. (17.0 mm)
D	1.18 in. (30.0 mm)
E	Ø1.26 in. (Ø32.0 mm)

Gauge: Linear Acceleration (vibrational force)  
Issue: Yellow threshold exceeded by vibrational RMS value.  
Action: Schedule maintenance and/or detailed vibrational analysis.



Dashboard gauges summarize advanced analytics into easy-to-understand results that require no advanced training or expertise.

