Wireless sensor input module for industrial asset and process monitoring



Petasense

800.215.1485 | sales@petasense.com | petasense.com

Overview + Features

A wireless sensor input module for asset reliability and optimization. Plug in up to three multi-channel sensors and easily send data through WiFi. The Transmitter supports Petasense sensors - including ultrasound, current, pressure, vibration and temperature - in addition to most other industrial sensors.



Supports hundreds of types of sensors

Connect sensors (4-20 mA or 0-30 V) using three M8 ports or PLC-connected sensors using the Ethernet port

Battery or External Power Power the Transmitter with 4 AA batteries or using

Power over Ethernet (PoE) for real-time data collection



WiFi + Bluetooth Enabled

Collect continuous sensor data at fixed intervals via WiFi and take on-demand measurements using Bluetooth on your mobile device

Certified for various industrial environments

Class I Division II* for hazardous environments, IP67* waterproof and food-safe enclosure **Pre-approved, certification pending*

Petasense

4

Architecture + Applications



One device to monitor all industrial machines

- Rotating machines
 Motors, pumps, fans, compressors, gearboxes
- HVAC equipment
- Electric panels

Petasense

- Valves + Steam traps
- Any application imaginable





Actionable insights with machine learning analytics

Automated machine Health Scores based on multi-parametric sensor data

Receive actionable insights without the need for analysis expertise

Device Specifications

FRONT

BOTTOM

MOUNT



Physical

Dimensions	<i>Device:</i> 100mm x 100mm x 32mm (3.9" x 1.2") <i>Mount:</i> 150mm x 63mm (5.9" x 2.5")
Weight	Device: 170 g Mount: 47 g
Mounting (Epoxy or screw or DIN rail)	<i>Screw:</i> M3 button-head <i>DIN rail:</i> 35mm top hat <i>Adhesive:</i> industrial grade adhesive

Ports

Anti-aliasing Filter Range	Configurable from 4 to 55kHz
Sensors supported	4-20 mA sensors, 0-30 V sensors, <i>Port-1 only:</i> i2c digital sensors
Other Ports	1 x Ethernet
Sensor Ports	3 x 5-pin M8 ports (3 channels/port)

Computing

Processor	ARM Microcontroller
Flash Memory	16 MB
AD Conversion	12 Bit

Power

Source	<i>Battery:</i> 4 × AA
(Battery or	(Lithium recommended)
External)	External: 5 to 48V using PoE
	(adapter available)

Connectivity

Wireless	802.11 b/g/n WiFi 2.4 GHz,
Protocol	Dual-Mode Bluetooth 2.4 GHz
Integrated Antenna	2.5 dBi max gain

Environment

Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Temperature	< 85°C (185°F)
Certifications	Class I Division II*, IP67*, F1-rated UV resistance *Pre-assessment completed, results available Q4 of 2018



Sensor Specifications

Vibration

₩

VS1 (Single Axis)

Accelerometer	Piezoelectric Single-Axis
Frequency Response	0.3 to 10000 Hz
Measurement Range	± 25 g
Sensitivity	100 mV/g
Operating Temperature Range	-50 to 125°C (-58 to 257°F)

VS2 (Three Axis)

Accelerometer	Piezoelectric Tri-axial
Frequency Response	1 to 6500 Hz
Measurement Range	± 50 g
Sensitivity	100 mV/g
Operating Temperature Range	-50 to 121°C (-58 to 250°F)

Temperature

TS1 (Surface)

Sensor Type	RTD (Surface)
Measurement Range	-50 to 155°C (-58 to 311°F)
Operating Temperature	
Range	-50 to 260°C (-58 to 500°F)

TS2 (Probe)

Petasense

Sensor Type	RTD (Probe)
Measurement Range	-50 to 120°C (-58 to 248°F)
Process Connection	1/8 NPT
Maximum Pressure	580 psi (40 bar)

Ultrasound

1164

USI	
Sensor Type	Surface Mounted
Detection Frequency	40 kHz (± 2 kHz)
Operating Temperature	
Range	0 to 50°C (32° to 122°F)

) Pressure

PS1

Measurement Range	0 to 1000 psi
Process Connection	7/16" UNF (Male)
Operating Temperature	-40 to 125°C
Range	$(-40 \text{ to } 257^{\circ}\text{F})$

Current

200A
25mm (0.98 in)
-30 to 70°C (-22 to 158°F)

CS2 (High Amp)

Amperage	400A
Inside Diameter	32 mm (1.26 in)
Operating Temperature Range	-30 to 70°C (-22 to 158°F)

The Petasense Transmitter also supports most other sensors (with 4-20mA or 0-30V outputs)

Petasense is constantly adding new sensors and can support specific sensor types by request. Contact <u>sales@petasense.com</u> for more information.

