

OpenSense

Datasheet





















penSense

A smart device built to monitor; environmental parameters, energy usage, waste, costs and productivity.



Parameters



Electricity Usage



Water Usage



Gas Usage



Temperature



Air Quality



Humidity





Sound



Light Levels







Connectivity



CAN bus

RS232

RS485



1-wire

Benefits



Remote Monitoring



Data, Net Zero, & Sustainability



Resource & Cost Efficiency



Wellbeing & Compliance



Productivity & Quality Control



Machine & Process Control



Overall Equipment Effectiveness

Technical Specification

Built-in measurements:

- Air Quality
- Temperature
- Relative Humidity
- Sound Level Meter
- Light Level Meter

Air Quality

(PM1.0, PM2.5, PM4, PM10, VOC Index, *NOX Index)

Range: 0 - 1000ug/m3 Resolution: 1.25ug/m3

Accuracy: (0 μg/m3 to 100 μg/m3 range ±10 μg/m3), (100μg/m3 to 1000 μg/m3 range ±25 %)

Temperature:

Range: -10 to +50°C Accuracy: ±0.45°C

Humidity:

Range: 0 - 90%RH Accuracy: ±4.5%RH

Sound Level Meter:

Range: 35.1 - 122.5dB Resolution: 0.1dB Accuracy: ±2dB

Light Level Meter:

Range: 0 - 3500 Lux Resolution: 1 Lux

Accuracy: ±5.0% (RDG)

External measurements/inputs:

- 15A/30A/50A/100A/200A/300A/400A Current Clamp (1ph/3ph)

- Pulse Input x 2 (3.3V to 24V DC Levels)
- RS485 Modbus (e.g. Utility Meters, BMS, Sensors)
- CAN Bus (e.g. Control modules, Sensors)
- 1-Wire DS18B20 Temperature Probe

Current Clamps:

Channels: 1-3 Range: 0 - 400A Resolution: 0.081A Accuracy: ±1.0% (RDG)

(Suitable for cable size up to 13mm

diameter - 14-100A Up to 24mm - 200-400A)

Digital Inputs (Pulse/I-Wire Functions):

Channels: 2 Range: 0 - 100kHz

Modbus RTU RS485:

Supports 8 devices & 16 registers/device

Data rate: 1Mbps ESD Protection:

±15 kV IEC 61000-4-2 air discharge ±8 kV IEC 61000-4-2 contact discharge

CAN Bus:

Data rate: 1Mbps

Compliant with ISO 11898-2

ESD Protection Exceeds ±16 kV HBM

Licenses: Hardware: CERN OHL-W v2

Software: LGPLv3

*Special Order





Power: USB Type C 5V 1A adaptor

(supplied), Weight: 350g

Dimensions: 110mm x 90mm x 48mm

Comms: WiFi or LoRaWAN

Certifications



Use Cases

Case Studies







Machine Monitoring

Predictive Maintenance

Energy Monitoring







Productivity Insights

Green Energy

Remote Monitoring







Clean Room Monitoring

Smart Farming

Smart Cities

Ordering & Contact

OSM-OSx-CT3-COM

OpenSense = OSM-OS-CT3-COM OpenSense Air = OSM-OSA-CT3-COM OpenSense Flame = OSM-OSF-CT3-COM

COM = WIFI / LORA / POE



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