LoRaWAN Process Pressure Sensor

Smart Agriculture, Smart Building, Smart City, Smart Energy, Smart Facility, Smart Factory, Smart Farm, Smart Retail, Smart Utilities

SKU: WSLRW-PPS

Safe Zone

Hazardous Zones

The WSLRW-PPS is a LoRaWAN-based process pressure sensor designed for industrial use. It supports multiple measurement types: Gage, Absolute, and Sealed Gage, with a pressure range from -1 to 1000 bar. The sensor delivers high accuracy and long-term stability.

Thanks to its ultra-low-power design and smart firmware, it can operate for up to 10 years using just two AA batteries (depending on settings). It wirelessly transmits data over distances of several kilometers to any LoRaWAN gateway, regardless of brand.

Applications

Water Pressure Pipeline Monitor, Process Monitoring, Smart Irrigation, Fuel Monitoring, Level Monitoring, Safety Monitoring

Notes For Applications

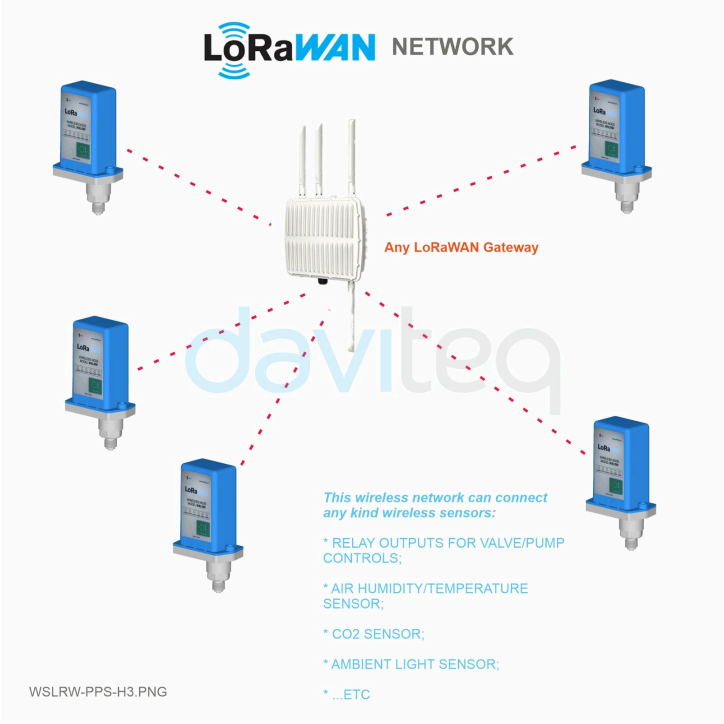
Sensor Materials Compatibility: Choose materials that won't react with the substances or degrade in corrosive media. Environmental Conditions: Consider the system environment (pipes, vibrations, temperature, etc.). Pressure Range: Choose sensors that function well within the process range. Precision and Sensitivity: Determine the required level of precision and sensitivity.

LoRaWAN communication
LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market.

10-Year battery
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 10 years with a 2 x AA Type battery.

High Accuracy & Stable
Advanced Piezo technology to deliver high accuracy and stable measurement

IP68
For both indoor and outdoor applications



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Created date: Dec-21-2022 | Updated date: Nov-08-2025

Specification

Sensor	Advanced Piezo technology
Measurement range	Select from -1~1000 bar Gage/ Absolute/ Sealed Gage
Over pressure protection	1.5 x span
Accuracy & Stability	0.25% or 0.5% of span, < 0.2% span/ year
Wetted parts	304SS/316SS
Measuring Fluids	Any fluid which is workable with materials 304SS/316SS
Working temperature	-20~80℃
Compensation temperature	-10~50℃
Process connection	Standard G 1/4 or Others (consult factory)
COMMUNICATION	
SF Factors	SF7~SF12
Antenna	Internal Antenna 2.0 dbi
Battery	02 x AA size 1.5VDC, battery not included
RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN, class A
Data sending modes	Interval time and when alarm occurred
Configuration	via Downlink messages or Off-line tool (Software is free)
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Working temperature	-40~60℃ (with AA L91 Energizer®)
Dimensions	H180xW50xD40
Net-weight	250g
Housing	Polycarbonate & POM plastic, IP68

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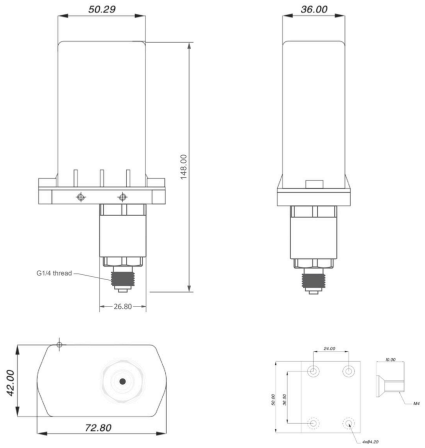
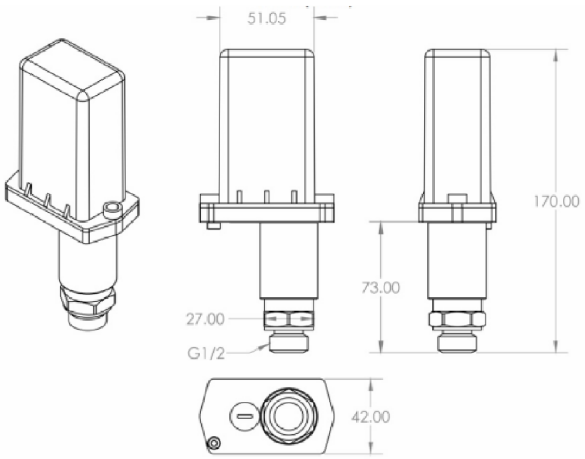
PRESSURE SENSOR INSTALLED ON THE WATER PIPE

WSLRW-PPS-H2.PNG

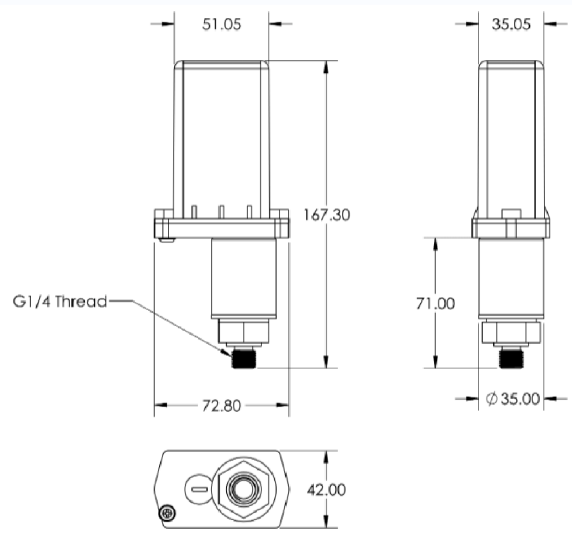
DIMENSION DRAWING OF WIRELESS SENSOR
Type 1(Unit: mm)



DIMENSION DRAWING OF WIRELESS SENSOR
Type 2(Unit: mm)



DIMENSION DRAWING OF WIRELESS SENSOR
Type 3(Unit: mm)



RECOMMENDED BATTERIES

E91 AA Alkaline battery

-18 .. + 60 oC working temperature

10-year shelf life

3000 mAH Capacity

Price: 1X

L91 AA Lithium battery

-40 .. + 60 oC working temperature

20-year shelf life

3500 mAH Capacity

Price: 3.5X

WSLRW-PPS-H5.PNG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-PPS-G10-02	LoRaWAN Process Pressure Sensor, 0-10 barg, 304SS/316L, G 1/4"
WSLRW-PPS-G20-02	LoRaWAN Process Pressure Sensor, 0-20 barg, 304SS/316L, G 1/4"
WSLRW-PPS-G40-03	LoRaWAN Process Pressure Sensor, 0-40 barg, 304SS/316L, 1/4" NPT
WSLRW-PPS-G70-03	LoRaWAN Process Pressure Sensor, 0-70 barg, 304SS/316L, 1/4" NPT
WSLRW-PPS-G100-04	LoRaWAN Process Pressure Sensor, 0-100 barg, 304SS/316L, 1/2" NPT
WSLRW-PPS-G250-04	LoRaWAN Process Pressure Sensor, 0-250 barg, 304SS/316L, 1/2" NPT
WSLRW-PPS-G400-04	LoRaWAN Process Pressure Sensor, 0-400 barg, 304SS/316L, 1/2" NPT
WSLRW-PPS-G700-04	LoRaWAN Process Pressure Sensor, 0-700 barg, 304SS/316L, 1/2" NPT
WSLRW-PPS-G1000-04	LoRaWAN Process Pressure Sensor, 0-1000 barg, 304SS/316L, 1/2" NPT