LoRaWAN Ex d Process Pressure Sensor

Smart Energy, Smart Utilities, Smart Facility, Smart Factory

SKU: WSLRWEX-PPS

daviteq

○ Safe Zone   ✓ Hazardous Zones

Ex D APPROVED LoRaWAN PROCESS PRESSURE SENSOR WSLRWEX-PPS

LoRaWAN

10-Year

IP66 WEATHERPROOF

WSLRWEX-PPS-H1.JPG

WSLRWEX-PPS is an integrated LoRaWAN process pressure sensor with Ex d approval, suitable for installation in Zone 1, Zone 2, or safe zones. It offers various types of pressure measurements, including Gauge, Absolute, and Sealed Gauge, with a range of -1 to 1000 bar. The sensor boasts high accuracy and stability. Its ultra-low-power design and intelligent firmware enable it to operate for up to 10 years on a single battery, depending on the configuration. The WSLRWEX-PPS supports all global LoRaWAN frequency bands and can also be configured to operate in P2P-LoRa mode, allowing direct data transmission to a P2P-LoRa mode end device. This versatile sensor is ideal for monitoring pressure in applications such as oil pipelines, gas pipelines, LPG tanks, and CNG tanks.

Applications

Oil & Gas Pipeline Monitor, Process 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.

✓ **Supports LoRaWAN and P2P-Lora mode**
LoRaWAN Specification V1.0.3 and Peer-to-Peer mode for Direct data transmission to other device

✓ **10-Year battery**
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allows the sensor can last up to 10 years with a single battery C

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

✓ **Ex d Zones 1-2-21-22**
Ex d approval for installation in Zone 1, Zone 2 or Safe Zone

LoRaWAN NETWORK

Any LoRaWAN Gateway

This wireless network can connect any kind wireless sensors:

* RELAY OUTPUTS FOR VALVE/PUMP CONTROLS;

* AIR HUMIDITY/TEMPERATURE SENSOR;

* CO2 SENSOR;

* AMBIENT LIGHT SENSOR;

* ...ETC

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Specification

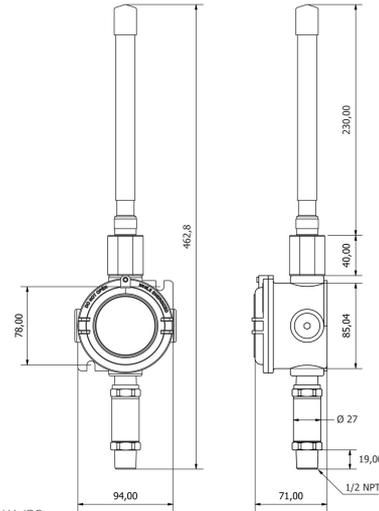|	
Sensor	Advanced Piezo technology
Measurement range	Select from -1~1000 bar Gage/ Absolute/ Sealed Gage (Over pressure protection: 2 x span)
Accuracy & Stability	0.2% of span, < 0.1% span/ year
Wetted parts & Measuring Fluids	316SS, Any fluid which is workable with materials 316SS
Process Working temperature	-40~130℃ (compensation in -10~80℃)
Process connection	1/2" NPT-male as standard, others please consult factory
COMMUNICATION	
Protocol	LoRaWAN® Class A, V1.0.3 and P2P-LoRa Mode
SF Factors	SF7~SF12
Antenna	External Antenna 2.0 dbi
RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Data sending modes	interval time, or when status changes, or manually triggered by a magnetic key.
Configuration	via Downlink or offline USB cable (PC software is supplied for free)
Battery	01 x C type LiSOCl$_2$ 3.6V battery, not included (recommend SAFT LS26500)
Housing	Cast aluminum, IP66
Ex Certification	IMQ 14 ATEX 005 X, TÜV CY 18 ATEX 0206158 X and IECEx DEK 15.0048X
Hazardous Protection Marking	ATEX II 2G Ex db IIC T4 Gb and ATEX II 2D Ex tb IIIC T135℃ Db
Standards	IEC EN 60079-0, IEC EN 60079-7 and IEC EN 60079-31
Applicable Zones	Zone 1 & 2 gas hazardous areas
	Zone 21 & 22 hazardous areas which contain conductive combustible dust
Ambient working temperature	-40~85℃ (use with SAFT LS26500)
Dimensions	H470xW100xD80 (included antenna) for hardware version 2 and H520xW100xD80 (included antenna) for hardware version 3
Net-weight	≈1500g (without battery)

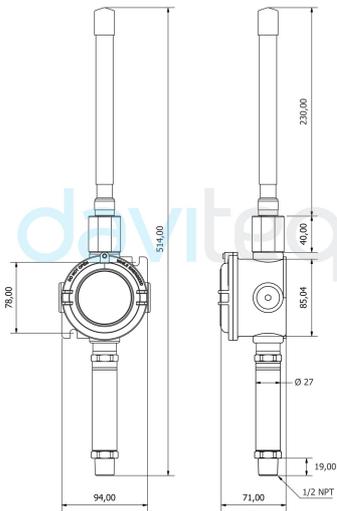## PRESSURE SENSOR INSTALLED ON THE WATER PIPE

WSLRWEX-PPS-H2.JPG

DIMENSION DRAWING OF WIRELESS SENSOR FOR HARDWARE VERSION OF 2

WSLRWEX-PPS-H4.JPG

(Unit: mm)

DIMENSION DRAWING OF WIRELESS SENSOR HARDWARE VERSION OF 3

WSLRWEX-PPS-H4.JPG

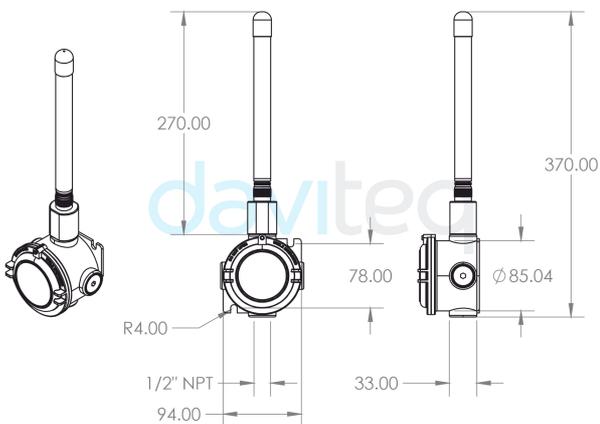(Unit: mm)

RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

LS 26500 Lithium battery

-60°C..+85°C working temperature

Low self-discharge rate

7.7 Ah Capacity

WSLRWEX-PPS-H5.JPG

DIMENSION DRAWING OF WSLRWEX-DI
(Unit: mm)

WSLRWEX-DI-H7.JPG

RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

LS 26500 Lithium battery

-60°C..+85°C working temperature

Low self-discharge rate

7.7 Ah Capacity

WSLRWEX-DI-H8.JPG

Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRWEX-PPS-X-01	LoRaWAN Process Pressure Sensor, Ex d, IP66, 0-X barg range, 316SS 1/2"NPT
Where	
X	Pressure range, please select X = 1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600, 1000 BARG.