

LoRaWAN Ex d Acoustic Sensor



Smart Factory, Smart Energy

SKU: WSLRWEX-ACS

Safe Zone

Hazardous Zones

The WSLRWEX-ACS is an Ex d explosion-proof LoRaWAN sensor designed for monitoring Pressure Relief Valves (PRVs) in hazardous environments. Equipped with vibration, acoustic, and temperature sensors, it offers comprehensive equipment status and leak detection capabilities. With a battery life of up to 10 years, seamless LoRaWAN connectivity, and compatibility with any LoRaWAN Gateway, the WSLRWEX-ACS provides reliable and long-lasting PRV monitoring for enhanced safety and maintenance optimization.

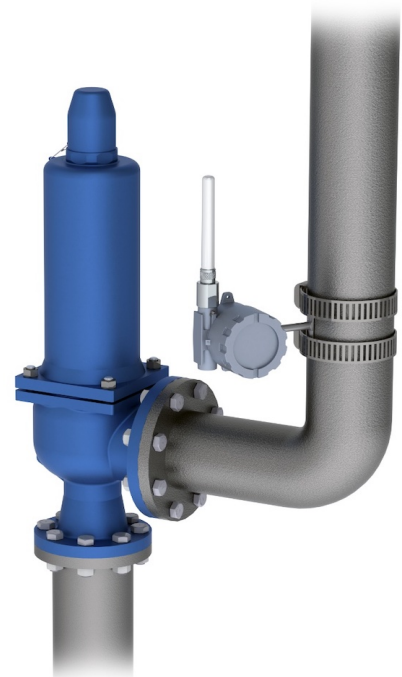
Applications

Gas Leakage Detection, Valve Monitoring, PRV Monitoring

Notes For Applications



- LoRaWAN communication**
Support LoRaWAN Class A, connect to any LoRaWAN gateway on the market
- Multi-parameter measurement**
High Performance Vibration, Acoustic Sensor, and Temperature Sensor
- Plug and Play**
The sensor is tested and pre-configured in factory before shipping.
- Easy Installation**
Direct mounting on process piping without cutting or changing piping system for flexible, simple installation.



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Specification

Measurement technology	Daviteq vibration and acoustic measurement technology
Measured Parameters	Acoustic level (0~255), Temperature (°C)
Measured Temperature Range	-40~260°C
Ambient humidity range	0~100% RH
Ambient temperature range	-40~85°C
Process Temperature Range	-40~260°C
COMMUNICATION	
SF factors	SF7~SF12
Antenna	2 dBi external antenna N-type
RF power and frequency	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Protocol	LoRaWAN® Class A V1.0.3
Data sending mode	cyclically, or when an alarm occurs or activated by a magnetic key.
RF module compliant	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (USA), ARIB STD-T108 (Japan)
Device certification	CE or FCC on demand
Configuration	via Downlink or via USB cable (PC software provided free of charge)
Power supply	1 x D size battery 3.6V LiSOCl ₂ (recommend Saft LS33600)
Equipment housing	Aluminum alloy, powder coated, IP66, Wall mount installation
Certified Ex d	IMQ 14 ATEX 005 X, TÜV CY 18 ATEX 0206158 X and IECEx DEK 15.0048X
Hazard Protection Label	ATEX II 2G Ex db IIC T5/T6 Gb and ATEX II 2D Ex tb IIIC T100/T85°C Db
Compatible	ATEX 2014/34/EU/ Standard IEC-EN60079-0 IEC-EN60079-1 IEC-EN60079-31
Areas of application	Zones 1 & 2 gas hazardous areas, Zones 21 & 22 hazardous areas containing flammable dust
Size Net weight	H220xW100xD80 (not including antenna)/ ≈1500g
Mounting type	Clamping on pipe

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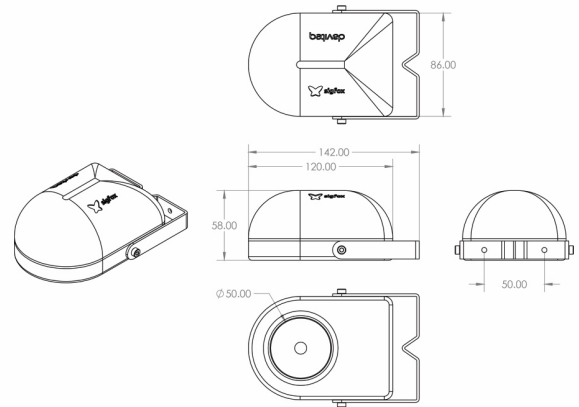
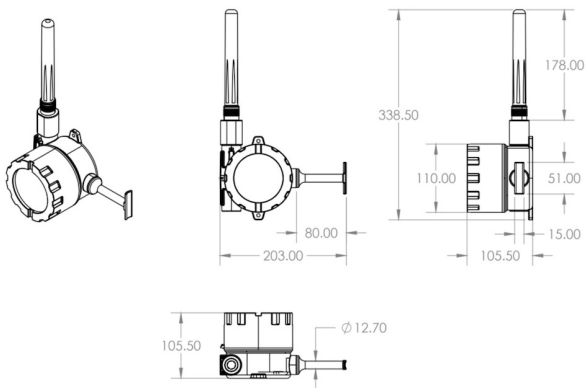
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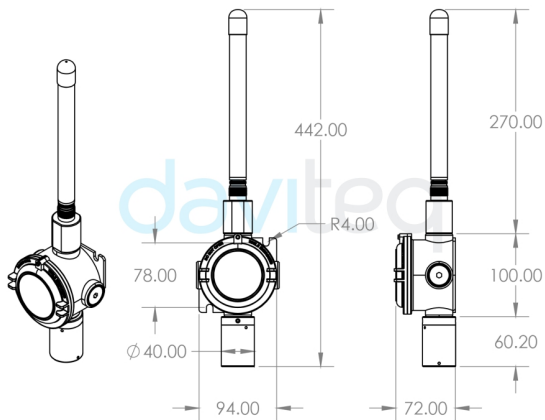
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DIMENSION DRAWING OF SENSOR NODE
(Unit: mm)



RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

LS 26500 Lithium battery



-60°C..+85°C working temperature
Low self-discharge rate
7.7 Ah Capacity


WSLRWEX-ATH-H5.JPG

WSLRWEX-ATH-H6.JPG


Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRWEX-ACS-01	LoRaWAN Acoustic Sensor, 10KHz max, Ex d approved Zone 1-2-21-22 ,D-size battery holder, IP66, for EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
WSLRWEX-ACS-02	LoRaWAN Acoustic Sensor, 80KHz max, Ex d approved Zone 1-2-21-22 ,D-size battery holder, IP66, for EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915

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