

# SENSORS CATALOGUE

Expertise Meets Innovation

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## CONNECTIVITY



## SECTOR



More catalogues

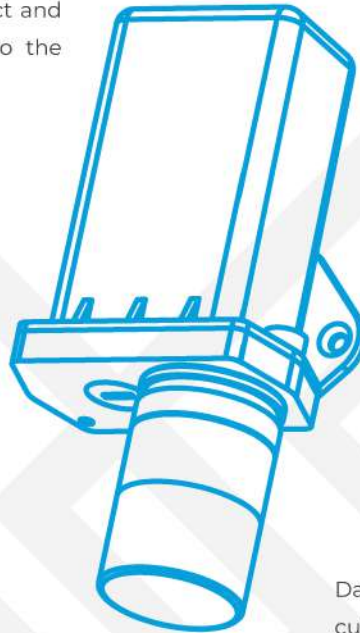


# HELLO THE WORLD

Established in 2004, Daviteq is a leading company specializing in Process Automation. In 2009, recognizing the importance of innovation, Daviteq established the Research and Development Department to enhance its product and solution offerings to better meet customer needs. This initiative led to the introduction of the Daviteq sensor line and the IoT Platform Globiots.

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## STAND BY YOUR SIDES

- Smart Energy
- Smart Facility
- Smart Health
- Smart Factory
- Smart Building
- Smart Retail
- Smart Transport
- Smart City
- Smart Agri

SMOKE DETECTOR	MOTION DETECTOR	RAIN GAUGE	TEMPERATURE	HUMIDITY	SPDT RELAYS	SPST RELAYS	LASER	AIR QUALITY
ROTATING DETECTOR	LIQUID LEVEL	PT100	THERMOCOUPLES	MOISTURE	VIBRATION	AC CURRENT	FLOW METER	SOLAR RADIATION
TILT	LIGHT	DIGITAL INPUT	PULSE COUNTER	PRESSURE	LEAKAGE	0-3V DC	SOUND	PARTICULATE MATTER
0-30MA DC	ULTRASONIC	PEOPLE COUNTER	TOWER VIBRATION	GAS DETECTOR	FLAMABLE GAS DETECTOR	OIL TANK LEVEL	TRASH BIN LEVEL	WIND SPEED & DIRECTION

# 60<sup>+</sup>

**countries**  
International friendship!

**Scale up**  
easily

## FIT WITH YOUR CONNECTIVITIES

Daviteq's product range includes cutting-edge solutions such as Fuel level sensors, wireless sensors, temperature sensors, wireless humidity sensors, differential pressure sensors, and more. These products seamlessly integrate with the Globiots platform, providing customers with a comprehensive solution that encompasses both hardware and software. Notably, Daviteq's products have gained widespread acclaim in Vietnam and have successfully penetrated international markets with stringent technical requirements, earning positive feedback.

- Sub-1GHz
- LoRaWAN
- NB-IoT
- sigfox
- Satellite IoT
- LTE-M

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## LoRaWAN

**LoRaWAN** is a Low Power Wide Area Network (LPWAN) protocol designed for wireless communication between IoT devices. It is based on LoRa technology, which is a proprietary modulation technique used for long-range wireless communication.

The LoRa Alliance® is a non-profit association of companies that promote the development and adoption of LoRaWAN. It was founded in 2015 and has since grown to include over 500 member companies from around the world.

LoRaWAN has many applications in the IoT industry, including Smart City, Agriculture, Logistics, and Industrial Automation. Its long-range capabilities and low power consumption make it ideal for remote monitoring and control of devices.



# LoRaWAN

LoRaWAN Radar Level Sensor	<a href="#">WSLRW-RDW</a>
LoRaWAN Heavy-duty Tilt Sensor	<a href="#">WSLRWAL-AG</a>
LoRaWAN Ex d Tilt Sensor	<a href="#">WSLRWEX-AG</a>
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LoRaWAN Oxygen Sensor	<a href="#">WSLRW-O2</a>
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LoRaWAN PT100 Temperature Sensor	<a href="#">WSLRW-PT100</a>
LoRaWAN Sound Level Sensor	<a href="#">WSLRW-SL</a>
LoRaWAN Thermocouple Temperature Sensor	<a href="#">WSLRW-TCK</a>
LoRaWAN Ultrasonic Level Sensor for Trash bin	<a href="#">WSLRW-ULA</a>
LoRaWAN Ultrasonic Level Sensor for Trash Bin	<a href="#">WSLRW-ULB</a>
LoRaWAN Ultrasonic Liquid Level Sensor	<a href="#">WSLRW-ULC</a>
LoRaWAN Piezo-Electric 10kHz Vibration Sensor	<a href="#">WSLRW-V1A</a>
LoRaWAN Heavy Duty Digital Input Node	<a href="#">WSLRWAL-DI</a>
LoRaWAN Ex d Digital Input Node	<a href="#">WSLRWEX-DI</a>
LoRaWAN Ex d NDIR Flammable Gas Sensor	<a href="#">WSLRWEX-GHC</a>
LoRaWAN Ex d Process Pressure Sensor	<a href="#">WSLRWEX-PPS</a>
LoRaWAN Tilt Sensor	<a href="#">WSLRW-AG</a>
LoRaWAN Precision Fuel Level Sensor	<a href="#">WSLRW-CAP10</a>
LoRaWAN Carbon Dioxide Sensor	<a href="#">WSLRW-CO2</a>
LoRaWAN Gas Detecting Sensor	<a href="#">WSLRW-G4</a>
LoRaWAN Toilet Odor Sensor	<a href="#">WSLRW-G4F-NH3</a>



WSLRW-RDW

## LoRaWAN Radar Level Sensor

### Applications

Level Monitoring, Process Monitoring, Flood Monitoring, Safety Monitoring, Smart Irrigation, Infrastructure Monitoring

LoRaWAN communication

Maintenance free

Powered by Solar

Long life design

## SPECIFICATION

SENSOR		SF Factor	SF7~SF12
Technology	Frequency Modulated Continuous Wave (FMCW) radar	Antenna	External Antenna 2.0 dbi
Frequency	26GHz $\pm$ 250MHz, PULSE radar emission pulse time <3ns	Power	Solar Panel 18V/9W with Rechargeable batteries x 4 battery cell Li-on 3200mAh, 3.7 V
Range of level measuring	0.40 ~ 30m/ 0.60 ~ 70m	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Resolution	1 mm	Protocol	LoRaWAN, class A
Level Measuring Accuracy	$\pm$ 5mm for 30m range / $\pm$ 10mm for 70m range	Data sending modes	Interval time or when alarm occurred or magnetic key touch
Beam Width	6°~18° (with antenna)	RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Dielectric constant range	2.5~100, Medium viscosity<1000cp	Operating temperature of device	-20~50°C (limited by Batteries)
Process Temperature	-40 ~ 100 °C / -40 ~ 320°C (Distribution pipe flange)	Housing/Protection	Aluminum & PC plastic

[PRODUCT PAGE](#)
HEAVY-DUTY LoRaWAN TILT SENSOR  
WSLRWAL-AG

WSLRWAL-AG



WSLRWEX-AG-H1.JPG

## LoRaWAN Heavy-duty Tilt Sensor

### Applications

Facility Monitoring, Flood Monitoring, Infrastructure Monitoring, Level Monitoring, Machine Health Monitoring, Safety Monitoring, Tilt Monitoring

LoRaWAN Communication

10-Year battery

High Precision Tilt Measurement

Heavy-duty design

## SPECIFICATION

SENSOR		SF Factors	SF7~SF12
Tilt Sensor	Built-in advanced accelerometer to deliver tilt angle measurement of XYZ for AG-01 version, XY for AG-03 version	Antenna	External antenna
Tilt Measurement range	$\pm$ 90° for AG-01 version   $\pm$ 30° for AG-03 version	Power Supply	Primary batteries 01 x C size 3.6VDC (battery not included) or Solar Panel with Rechargeable batteries 1 x C size (not included)
Tilt Resolution	$\pm$ 0.01° for AG-01 version   $\pm$ 0.001° for AG-03 version	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Tilt Repeatability	$\pm$ 0.075° for AG-01 version   $\pm$ 0.010° for AG-03 version	Protocol	LoRaWAN Class A V1.0.3
Tilt Temperature Drift	$\pm$ 0.2° per 10°C for AG-01 version (when installation X~0° and Y~0°)	Data sending modes	interval time, alarm and manually triggering by magnetic key
Sensor sampling rate	1Hz max (recommend for Solar powered version)	Alarm function	for X-axis and Y-axis only
		Housing	Cast aluminum, IP66
		Ambient working temperature	-40~85°C (use with SAFT LS26500)

[PRODUCT PAGE](#)




LoRaWAN Ex d TILT SENSOR  
WSLRWEX-AG

WSLRWEX-AG

LoRaWAN



daviteq



WSLRWEX-AG-H1.JPG

## LoRaWAN Ex d Tilt Sensor

[ATEX](#) [IECEX](#)

### Applications

Facility Monitoring, Flood Monitoring, Infrastructure Monitoring, Level Monitoring, Machine Health Monitoring, Safety Monitoring, Tilt Monitoring

LoRaWAN Communication	10-Year battery
High Precision Tilt Measurement	Ex d Zones 1-2-21-22

LoRaWAN Ex d OXYGEN SENSOR  
WSLRWEX-G-O2

WSLRWEX-O2

LoRaWAN



daviteq



WSLRWEX-O2-H1.JPG

## LoRaWAN Ex d Electro-chemical Oxygen Sensor

[ATEX](#) [IECEX](#)

### Applications

Ambient Air Quality Monitor, Indoor Air Quality Monitor

LoRaWAN communication	High Performance Sensor
5-10 years Battery life	Ex d Zones 1-2-21-22

## SPECIFICATION

Tilt Sensor	Built-in advanced accelerometer to deliver tilt angle measurement of XYZ for AG-01 version, XY for AG-03 version	SF Factors	SF7~SF12
Tilt Measurement range	±90° for AG-01 version   ±30° for AG-03 version	Antenna	External antenna
Tilt Resolution	±0.01° for AG-01 version   ±0.001° for AG-03 version	Power Supply	Primary batteries 01 x C size 3.6VDC (battery not included) or Solar Panel with Rechargeable batteries 1 x C size (not included)
Tilt Repeatability	±0.075° for AG-01 version   ±0.010° for AG-03 version	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Tilt Temperature Drift	±0.2° per 10°C for AG-01 version (when installation X~0° and Y~0°)	Protocol	LoRaWAN Class A V1.0.3
Sensor sampling rate	1Hz max (recommend for Solar powered version)	Data sending modes	interval time, alarm and manually triggering by magnetic key
		Alarm function	for X-axis and Y-axis only
		Housing	Cast aluminum, IP66
		Ex Certification	IMQ 14 ATEX 005 X, TÜV CY 18 ATEX 0206158 X

## SPECIFICATION

Measurement technology	Daviteq High-performance Ultra-low power Electro-chemical Gas Sensor	SF Factors	SF7~SF12
Gas sensor type and specification	List of compatible O2 sensors and specification	Antenna	External Antenna 2.0dbi
		RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
		Protocol	LoRaWAN® Class A
		Data sending modes	interval time, an alarm occurred and manually triggered by a magnetic key. Recommend max 24 messages per day
		Configuration	via Downlink or offline USB cable (PC software is supplied for free)
		Battery	01 type D 3.6V LiSOCl <sub>2</sub> battery (recommended 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



LoRaWAN Mini Control Valve  
WSLRW-BV

WSLRW-BV

LoRaWAN



## LoRaWAN Mini Control Valve

### Applications

Smart Irrigation, Water Supply System,  
Water Level Control, Oil Level Control

WSLRW-BV-H1-LPG

LoRaWAN communication	5-Year battery
Remote Control via Class A or Class C	Valve Health Diagnostic

## SPECIFICATION

Valve Body	Ball valve, low torque design	SF Factors	SF7~SF12
Body materials	Brass (standard), 304SS, 316SS	Antenna	Internal Antenna 2 dbi
Sealing	EPDM (standard), NBR, Silicone Rubber	Power Supply	Primary batteries 02 x D size 3.6VDC (battery not included)
Seat	PTFE		860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Ball	304SS (standard), 316SS	RF Frequency and Power	
Size	DN8, DN15, DN20, DN25	Protocol	LoRaWAN Class A or Class C V1.0.3
Process connection	BSPP female threads	Data sending modes	interval time, alarm and manually triggering by magnetic key
Cable	2m molded M12 connector cable	Alarm function	Yes
Working temperature	0~100°C	Remote control via downlink	Class A or Class C mode
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)

PRODUCT PAGE



WSLRWEX-ACS

## LoRaWAN Ex d Acoustic Sensor

[ATEX](#) [IECEX](#)

### Applications

Gas Leakage Detection, Valve Monitoring,  
PRV Monitoring



LoRaWAN communication	Multi-parameter measurement
Plug and Play	Easy Installation

## SPECIFICATION

Measurement technology	Daviteq vibration and acoustic measurement technology	SF factors	SF7~SF12
Measured Parameters	Acoustic level (0~255), Temperature (°C)	Antenna	2 dbi external antenna N-type
Measured Temperature Range	-40~260°C	RF power and frequency	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Ambient humidity range	0~100% RH	Protocol	LoRaWAN® Class A V1.0.3
Ambient temperature range	-40~85°C	Data sending mode	cyclically, or when an alarm occurs or activated by a magnetic key.
Process Temperature Range	-40~260°C	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 LiSOC12 (recommend Saft LS33600)

PRODUCT PAGE



LoRaWAN INDOOR CO2 SENSOR  
WSLRW-I-CO2

WSLRW-I-CO2



## LoRaWAN Indoor Carbon Dioxide Sensor

### Applications

Indoor Air Quality Monitor, Warehouse Monitoring

WSLRW-I-CO2-H1.JPG

LoRaWAN communication	5-10 years battery
High Accuracy & Stable	Measure other parameters

## SPECIFICATION

CO <sub>2</sub> Sensor technology	Advanced NDIR sensor	SF Factor	SF7~SF12
CO <sub>2</sub> range/resolution/accuracy	0~5000ppm or 10000/ 1ppm/ (±30ppm + 3% reading)	Antenna	Internal Antenna 2.0 dbi
Repeatability	±30ppm + 3% reading (in 0~50°C, after zeroing at 25°C)	Battery	02 x AA size 1.5VDC, battery not included
Temperature range/resolution/accuracy	-40~80°C/ 0.1°C/ ±0.3°C in range 0-50°C	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Humidity range/resolution/accuracy	0-100% RH/ 0.1% RH/ ±1.5% RH (in range 0-80% RH)	Protocol	LoRaWAN, class A
		Data sending modes	Interval time and when alarm occurred
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	TBA soon
		Working temperature	-40~60°C (with AA L91 Energizer®)

PRODUCT PAGE

SMART VALVE POSITIONING SENSOR  
SVP

SVP



## Smart Valve Positioning Sensor

### Applications

Valve Positioning Monitoring, Vibration Monitoring

SVP-H1.PNG



LoRaWAN class A compliant device	Internal sensors for 3-axis acceleration, tilt, rotation, magnetic field, vibrations, temperature
Easy to install with multiple mounting options	Robust IP69K industrial housing

## SPECIFICATION

SENSOR SPECIFICATION	Radio/ Wireless	868MHz/ 915MHz
Accelerometer	Wireless technology	LoRaWAN 1.0.3
Range	LoRaWAN Device type	Class A
Resolution	Supported LoRaWAN features	OTAA, ADR, Adaptive Channel Setup
Accuracy (typ.)	Sensitivity	-137dB (SF12)
Magnetic sensor	RF transmission power	14dBm/ 22dBm (depending on region)
Detection threshold		
Magnetic response		
Reset activation (typ.)		

PRODUCT PAGE







GWLRW

## LoRaWAN Outdoor Gateway

### Applications

Condition Based Monitoring, Energy Monitoring, Facility Monitoring, Fuel Monitoring, Gas Leakage Detection, Machine Health Monitoring, Production Monitoring, Temperature Monitoring, Vibration...

GWLRW-H1.JPG

Connect to any LoRaWAN sensors

Various Internet connections

Support all Network Server Software

For Outdoor Installation

## SPECIFICATION

LoRaWAN Specification	LoRaWAN 1.0.3	4G LTE	LTE Cat 4 or Cat M1/NB2
Frequency Band	Select 863~870MHz/ 902~928MHz	GPS	GPS + GLONASS, L1C/A band
Number of Channels	Up to 8 concurrent channels for LoRa transmission	Interfaces	1 WAN RJ45 10/100Mbps (w/ passive PoE capability), 1 SIM card slot (2FF), 1 DC jack in/ 1 terminal block
LoRa Transmit Power	0.5W (up to 27 dBm)	Antenna Type	1 x external LoRa antenna, 1 x External antenna for LTE, 1 x external Wi-Fi antenna, 1 x external GPS antenna
LoRa Receive Sensitivity	Down to -142 dBm (conducted)	Housing	Cast Aluminum, IP66, can withstand Wind speeds up to 120 Km/h
LoRa Software	Standard and LRR Activity	Dimensions	L:220 x W:300 x H:55mm
Operating Temperature	-10~55°C	Weight	< 2.0kg
Storage Temperature	-20~60°C		
Power Supply	DC 12 V/1.5 A-Power Adaptor/ DC 10~30 V 3-Pin Connector Power supply/ Passive PoE 10~30 V		

PRODUCT PAGE



LoRaWAN



WSLRWEX-G

## LoRaWAN Ex d Electro-chemical Gas Sensor

[ATEX](#) [IECEX](#)

### Applications

Gas Leakage Detection, Ambient Air Quality Monitor, Indoor Air Quality Monitor

LoRaWAN communication

High Performance Sensor

5-10 years Battery life

Ex d Zones 1-2-21-22

## SPECIFICATION

Measurement technology	Daviteq High-performance Ultra-low power Electro-chemical Gas Sensor	SF Factors	SF7~SF12
Select Gas Sensor type	CO, NO, NO <sub>2</sub> , H <sub>2</sub> S, NH <sub>3</sub> , O <sub>2</sub> , O <sub>3</sub> , SO <sub>2</sub> , Cl <sub>2</sub> , HCHO etc.	Antenna	External Antenna 2.0dbi
Gas sensor type and specification	List of compatible gas sensors and specification	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
		Protocol	LoRaWAN® Class A
		Data sending modes	interval time, an alarm occurred and manually triggered by a magnetic key. Recommend max 24 messages per day
		Configuration	via Downlink or offline USB cable (PC software is supplied for free)
		Battery	01 type C 3.6V LiSOC <sub>2</sub> battery (recommended SAFT LS26500)
		Housing	Aluminum alloy, powder coated, IP66, Wall mount installation
		Certified Ex d	IMQ 14 ATEX 005 X, TÜV CY 18 ATEX 0206158 X and SIRA 10ATEX1358X

PRODUCT PAGE



LoRaWAN Ex APPROVED PID GAS SENSOR  
WSLRWEX-PID

WSLRWEX-PID

LoRaWAN



## LoRaWAN Ex d PID Gas Sensor

[ATEX](#) [IECEX](#)

### Applications

Gas Leakage Detection, Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring

WSLRWEX-PID-H1.JPG

LoRaWAN communication	High Performance PID Gas Sensor
Easy operation at Field by LCD	Ex Solar Powered

## SPECIFICATION

Measurement technology	Daviteq high-performance PID gas sensor	SF factors	SF7~SF12
Measured Gases	VOCs and Hydrocarbons (1000+ types of VOC and gas)	Antenna	2 dBi external antenna N-type
Principle and Sensor Specification	please follow this link	RF power and frequency	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Relative humidity range	0~99% RH, non-condensing	Protocol	LoRaWAN® Class A V1.0.3
Operating Temp Range	-40~55°C (except 0~40°C for Range 3ppm sensor)	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 Local LCD, or Downlink or via USB cable (PC software provided free of charge)
		Power supply	12~35VDC, max 200mA by external DC supply or Ex approved Solar Power Skid (as below ordering information)

PRODUCT PAGE

LoRaWAN INDUSTRIAL AMBIENT TEMPERATURE SENSOR  
WSLRW-S-ATE

WSLRW-S-ATE

LoRaWAN



## LoRaWAN Industrial Ambient Temperature Sensor

### Applications

Facility Monitoring, Warehouse Monitoring, Indoor Air Quality Monitor

WSLRW-S-ATE-H1.PNG

LoRaWAN communication	10-Year battery
High Accuracy & Stable	IP68 Sensor Probe

## SPECIFICATION

Sensor	Digital type, factory calibrated, IP68, immersible to ice-water for quick validation	SF Factor	SF7~SF12
Measuring range	-35~70°C	Antenna	Internal Antenna 2.0dBi
Accuracy & Resolution	± 0.5°C, 0.125°C	Power Supply	Primary batteries 1 x AA size 3.6VDC (battery not included)
Sensor Material	PA plastic with PVC cable	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Cable length	select 200mm, 500mm, 1000mm	Protocol	LoRaWAN Class A V1.0.3
Sensor Probe rating	IP68	Data sending modes	interval time, and alarm
		Alarm function	Low Alarm and High Alarm
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	

PRODUCT PAGE



LoRaWAN AMBIENT LIGHT SENSOR  
WSLRW-AL

WSLRW-AL



## LoRaWAN Ambient Light Sensor

[CE](#) [FCC](#)

### Applications

Facility Monitoring, Safety Monitoring

WSLRW-AL-H1.JPG

LoRaWAN communication	Visible light measurement
10-Year battery	IP68

## SPECIFICATION

Sensor technology	Light sensor with Precision Optical Filtering to Match Human Eye, Rejects > 99% (typ) of IR	SF Factors	SF7~SF12
Measurements range	0.01 Lux to 83 k lux 23-Bit Effective resolution	Antenna	Internal Antenna 2 dbi
Linearity	2% of Reading value for > 40 Lux, 5% of Reading value when the light is less than 40 lux	Power Supply	Primary batteries 02 x AA size 1.5VDC (battery not included)
Temperature drift	0.01%/°C when light intensity is about 2000 lux	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Operating Temperature Range	-40~85°C	Protocol	LoRaWAN Class A V1.0.3
		Data sending modes	interval time, alarm and manually triggering by magnetic key
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Working temperature	-40~60°C (with AA L91 Energizer®)
		Dimensions	H106xW73xD42

PRODUCT PAGE

LoRaWAN NODE WITH DIGITAL INPUTS  
WSLRW-DI

WSLRW-DI



## LoRaWAN Digital Input Node

[CE](#) [FCC](#)

### Applications

Electric Meter Reading, Gas Meter Reading, Water Meter Reading, Production Monitoring, Facility Monitoring, Flood Monitoring, Level Monitoring, Machine Health Monitoring, Safety Monitoring

WSLRW-DI-H1.JPG

LoRaWAN communication	Logic detecting or Pulse counting
10-Year battery	IP68

## SPECIFICATION

Digital Inputs	2-channel dry contact or low voltage ( $\leq 3.3V$ )	SF Factors	SF7~SF12
Operation	Detecting status or Pulse counting (max 1 kHz)	Antenna	Internal Antenna 2.0 dbi
VERSION	DI-12 (Low-speed digital input)	Electrical connection	Shielded cable 2m length with PG9 cable gland
Input	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)	Power Supply	Primary batteries 02 x AA size 1.5VDC (battery not included)
Functions	Logic Detecting or Pulse Counting	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
	Logic Detecting: 2 channels, recommended minimum interval time between 02 statuses is 5 seconds.	Protocol	LoRaWAN Class A V1.0.3
	Pulse Counting: 1 channel only, max frequency 2Hz, minimum Pulse width (low or high) is 200mS, counter is uint32 type.	Data sending modes	interval time, alarm and manually triggering by magnetic key
VERSION	DI-12H (High-speed digital input)	RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Input	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)	Working temperature	-40~60°C (with AA L91 Energizer®)

PRODUCT PAGE





GWIND

## LoRaWAN Indoor Gateway

### Applications

Automatic Ventilation System, Condition Based Monitoring, Energy Monitoring, Facility Monitoring, Fuel Monitoring, Gas Leakage Detection, Indoor Air Quality Monitor, Machine Health Monitoring, Odor Monitorin...

Connect to any LoRaWAN sensors	Various Internet connections
Support all Network Server Software	POE Feature

## SPECIFICATION

LoRaWAN Specification	LoRaWAN 1.0.3	Standard Interfaces	1 WAN RJ45 10/ 100Mbps (w/ passive PoE capability), 1 SIM card slot (2FF), 1 DC jack in/ 1 terminal block
Frequency Band	Select 863~870MHz/ 902~928MHz	Optional Wi-Fi	802.11b/g/n, 1x1, 2.4GHz
Number of Channels	Up to 8 concurrent channels for LoRa transmission	Optional 4G LTE	LTE Cat 4 or Cat M1/NB2
LoRa Transmit Power	0.5W (up to 27 dBm)	Antenna Type	1 x external LoRa antenna, and option antennas are 1 x External antenna for LTE, 1 x external Wi-Fi antenna
LoRa Receive Sensitivity	Down to -142 dBm (conducted)	Operating Temperature	-10~55°C
LoRa Software	Standard and LRR Actlity	Storage Temperature	-20~60°C
		Power Supply	DC 12 V/1.5 A-Power Adaptor/ DC 10~30V 3-Pin Connector Power supply/ Passive PoE 10~30V
		Housing	Profile Aluminum, IP20
		Dimensions	L:122 x W:135 x H:36mm

[PRODUCT PAGE](#)
LoRaWAN 0-20mA CURRENT INPUT SENSOR  
WSLRW-MA

WSLRW-MA



## LoRaWAN Current Input Node

[CE](#) [FCC](#)

### Applications

Process Monitoring, Safety Monitoring

WSLRW-MA-H1 PMD

LoRaWAN communication	10-Year battery
Pre-calibrated	IP67/IP68

## SPECIFICATION

Measuring range	0~20mA	SF Factors	SF7~SF12
Accuracy	0.05% of span	Antenna	Internal Antenna 2.0 dbi
Resolution	1/3000	Battery	02 x AA size 1.5VDC (battery not included)
Permissible input current	Max 60 mA	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Permissible voltage	Max 2.5V (between AI+ and AI-)	Protocol	LoRaWAN, class A
Temperature drift	< 50ppm	Configuration	via Downlink or Offline tool (free software)
Sensor port connector	M12-Male, 4-pin A-coding (IP67 version) or 2m cable (IP68 version)	Data sending modes	Interval time and when alarm occurred
		Certification	CE mark, FCC
		Working temperature	-40~60°C (with AA L91 Energizer®)

[PRODUCT PAGE](#)


LoRaWAN OXYGEN SENSOR  
WSLRW-O2

WSLRW-O2



## LoRaWAN Oxygen Sensor

[CE](#) [FCC](#)

### Applications

Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring

WSLRW-O2-H1.JPG

LoRaWAN communication	5-10 years battery
Not affected by other gases	Not affected by temperature changes

## SPECIFICATION

Measuring range/ Max overload	0~25% O <sub>2</sub> / 30% O <sub>2</sub>	SF Factors	SF7~SF12
Accuracy/ Resolution	±0.25% O <sub>2</sub> / 0.01	Antenna	Internal Antenna 2.0 dbi
Long term output drift	< 5% of reading per year	Battery	02 x AA size 1.5VDC, battery not included
Interference gases for version O2-01	CO <sub>2</sub> , not used in the environment with CO <sub>2</sub> > 25% (1% of CO <sub>2</sub> will increase 0.3% of O <sub>2</sub> output)	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Interference gases for version O2-02	Virtually no influence from CO <sub>2</sub> , CO, H <sub>2</sub> S, NO, H <sub>2</sub> . Only influenced by NO <sub>2</sub> (1% NO <sub>2</sub> will increase 0.6% of O <sub>2</sub> output)	Protocol	LoRaWAN, class A
Working Pressure	1013hPa ±20%	Data sending modes	Interval time and when alarm occurred
Working Temperature	-10~50°C for O2-02 and -30~50°C for O2-01	RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Storage Temperature	0~20°C	Vietnam Type Approval	TBA soon
Working Humidity	0-99% RH non-condensation for O2-02 and 5~95%, non-condensation for O2-01	Working temperature	-40~60°C (with AA L91 Energizer®)

[PRODUCT PAGE](#)

LoRaWAN PROCESS PRESSURE SENSOR  
WSLRW-PPS

WSLRW-PPS



## LoRaWAN Process Pressure Sensor

[CE](#) [FCC](#)

### Applications

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

WSLRW-PPS-H1.PNG

LoRaWAN communication	10-Year battery
High Accuracy & Stable	IP68

## SPECIFICATION

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

[PRODUCT PAGE](#)





LoRaWAN PT100 TEMPERATURE SENSOR  
WSLRW-PT100

WSLRW-PT100



## LoRaWAN PT100 Temperature Sensor

[CE](#) [FCC](#)

### Applications

Temperature Monitoring, Process Monitoring, Safety Monitoring

WSLRW-PT100-H1.PNG

LoRaWAN communication	10-Year battery
Pre-calibrated	Outdoor IP67

## SPECIFICATION

Input	PT100 Temperature Sensor	SF Factors	SF7~SF12
Accuracy	0.05%	Antenna	Internal Antenna 2.0 dbi
Sensor port connector	PG9 Connector	Battery	02 x AA size 1.5, battery not included
		RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
		Protocol	LoRaWAN, class A
		Data sending modes	Interval time and when alarm occurred
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	
		Working temperature	-15~60°C (using L91 Energizer® battery)

[PRODUCT PAGE](#)



LoRaWAN SOUND LEVEL SENSOR  
WSLRW-SL

WSLRW-SL



## LoRaWAN Sound Level Sensor

[CE](#) [FCC](#)

### Applications

Ambient Air Quality Monitor, Facility Monitoring, Machine Health Monitoring, Safety Monitoring

WSLRW-SL-H1.JPG

Wide frequency range	LoRaWAN Communication
10-Year battery	For Outdoor

## SPECIFICATION

Measuring range	30~130dB(A)	SF Factors	SF7~SF12
Frequency range	20~12,500Hz	Antenna	Internal Antenna 2.0dbi
Resolution	0.1dB(A)	Battery	02 x AA size 1.5VDC, battery not included OR solar panel (buy separately) with 2 x Panasonic® Eneloop™ standard batteries (customer to supply)
Accuracy	±0.5dB(A) at 94dB(A) and 1kHz	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Working temperature	-20~60°C	Protocol	LoRaWAN Class A V1.0.3
Working humidity	0~80% RH	Data sending modes	interval time, and manually triggering by magnetic key
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	
		Working temperature	-40~60°C (with AA L91 Energizer®)

[PRODUCT PAGE](#)



LoRaWAN THERMOCOUPLE TYPE K TEMPERATURE SENSOR  
WSLRW-TCK

WSLRW-TCK



## LoRaWAN Thermocouple Temperature Sensor

[CE](#) [FCC](#)

### Applications

Temperature Monitoring, Process Monitoring, Safety Monitoring

WSLRW-TCK-H1.PNG

LoRaWAN communication	10-Year battery
Pre-calibrated	Outdoor IP67

## SPECIFICATION

Input	Thermocouple Temperature Sensor Type K, T, B etc.	SF Factors	SF7~SF12
Accuracy	0.05%	Antenna	Internal Antenna 2.0 dbi
Sensor port connector	PG9 Connector	Battery	02 x AA size 1.5, 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
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	
		Working temperature	-15~60°C (using L91 Energizer® battery)

[PRODUCT PAGE](#)

LoRaWAN ULTRASONIC LEVEL SENSOR FOR TRASH BIN  
WSLRW-ULA

WSLRW-ULA



## LoRaWAN Ultrasonic Level Sensor for Trash bin

### Applications

Waste Management, Process Monitoring, Safety Monitoring, Infrastructure Monitoring

WSLRW-ULA-H1.PNG

LoRaWAN communication	5-10 years battery
High Accuracy & Stable	IP68 Outdoor

## SPECIFICATION

Sensor	Ultrasonic sensor 40kHz	SF Factors	SF7~SF12
Measurement range	3~450cm	Antenna	Internal Antenna 2.0 dbi
Accuracy	±(1cm + 0.5% reading)	Battery	02 x AA size 1.5, battery not included
Resolutions	1mm OR 1‰	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Alarm setting	setting the alarm threshold for calculated value	Protocol	LoRaWAN, class A
Working temperature/humidity	-15~60°C/ 0~99% RH (non-condensing)	Data sending modes	Interval time and when alarm occurred
Storage temperature/humidity	-25~80°C/ 0~99% RH (non-condensing)	RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Transducer material	Ceramic	Electronics working temperature	-40~60°C (using L91 Energizer® battery)
		Housing	H154xW68xD43, Polycarbonate, IP68

[PRODUCT PAGE](#)



LoRaWAN ULTRASONIC LEVEL SENSOR FOR TRASH BIN  
WSLRW-ULB

WSLRW-ULB



## LoRaWAN Ultrasonic Level Sensor for Trash Bin

[CE](#) [FCC](#)

### Applications

Waste Management, Process Monitoring, Safety Monitoring, Infrastructure Monitoring

WSLRW-ULB.H1.PNG

LoRaWAN communication	5-10 years battery
High Accuracy & Stable	Angle-adjustable mounting bracket

### SPECIFICATION

Sensor	Ultrasonic sensor	SF Factors	SF7~SF12
Measurement range	300~4500mm	Antenna	Internal Antenna 2.0 dbi
Resolution & accuracy	1.0mm, ±10mm	Battery	02 x AA size 1.5, battery not included
Sensor sampling rate	configurable from 10s up to 3600s	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Alarm setting	setting the alarm threshold for calculated value	Protocol	LoRaWAN® Class A
		Data sending modes	Interval time and when alarm occurred
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	
		Working temperature	-15~60°C (using L91 Energizer® battery)

[PRODUCT PAGE](#)



LoRaWAN ULTRASONIC LEVEL SENSOR  
WSLRW-ULC

WSLRW-ULC



## LoRaWAN Ultrasonic Liquid Level Sensor

[CE](#) [FCC](#)

### Applications

Flood Monitoring, Level Monitoring, Process Monitoring, Safety Monitoring, Smart Irrigation, Infrastructure Monitoring

WSLRW-ULC.H1.PNG

LoRaWAN communication	10-Year battery
High Accuracy & Stable	IP68 Outdoor

### SPECIFICATION

Sensor	Ultrasonic sensor	SF factors	SF7~SF12
Measurement range	250~5500mm (Non-flat surface will give shorter range in actual condition)	Antenna	Internal Antenna 2.0dbi
Resolution	±5.0mm	Battery	02 x AA size 1.5VDC, battery not included
Accuracy	±10mm + S*0.3% (with S is the measured value)	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Sensor sampling rate	configurable from 10s up to 3600s	Protocol	LoRaWAN® Class A
Alarm setting	setting the alarm threshold for calculated value	Data sending modes	Interval time and when alarm occurred
		Configuration	via downlink or offline cable (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	-15~60°C (with AA L91 Energizer®)

[PRODUCT PAGE](#)



LoRaWAN PIEZO-ELECTRIC 10KHZ VIBRATION SENSOR  
WLSLRW-V1A

WLSLRW-V1A



## LoRaWAN Piezo-Electric 10kHz Vibration Sensor

[CE](#) [FCC](#)

### Applications

Condition Based Monitoring, Machine Health Monitoring, Safety Monitoring, Vibration Monitoring

WLSLRW-V1A-HT.PNG

LoRaWAN communication	10-Year battery
10kHz Bandwidth	High Performance Piezo-electric sensor

## SPECIFICATION

	(* Note: All below values are typical at +24°C, 80Hz)	SF Factors	SF7~SF12
Sensor technology	Hermetically Sealed, Piezo-Ceramic Crystal, Shear Mode	Antenna	Internal Antenna 2.0dbi
8-Parameter Measurement	Acceleration Peak, Velocity RMS & Peak, Displacement RMS & Peak, Frequency, Temperature, and Crest Factor	Battery	02 x AA size 1.5, battery not included
Acceleration Range & Shock Limit (g)	±25, 10000	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Acceleration resolution	6.1mg	Protocol	LoRaWAN® Class A V1.0.3
Velocity range and resolution	0~50mm/s, 0.1mm/s	Data sending modes	Interval time and when alarm occurred
Displacement range and resolution	±5000µm, 1µm	RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Frequency Response and Resonant (Hz)	2~10000, > 30000	Working temperature	-40~60°C (using Energizer® Lithium Ultimate AA battery)
Frequency resolution	2~10000Hz, 1Hz	Dimensions & Net-weight	H106xW73xD42, 190g

PRODUCT PAGE



HEAVY DUTY LoRaWAN NODE WITH DIGITAL INPUT  
WLSLRWAL-DI

WLSLRWAL-DI



## LoRaWAN Heavy Duty Digital Input Node

### Applications

Process Monitoring, Safety Monitoring, Energy Monitoring, Electric Meter Reading, Gas Meter Reading, Water Meter Reading, Production Monitoring

WLSLRWAL-DI-HT.JPG

LoRaWAN communication	Heavy Duty Design
5-10 years battery	Plug & Play

## SPECIFICATION

Digital Inputs	2-channel dry contact or low voltage (≤3.3V)	Protocol	LoRaWAN® Class A, V1.0.3
Operation	Detecting status or Pulse counting (max 1kHz)	SF Factors	SF7~SF12
VERSION	DI-12 (Low-speed digital input)	Antenna	External Antenna
Input	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Functions	Logic Detecting or Pulse Counting	Data sending modes	interval time, or when status changes, or manually triggered by a magnetic key.
	Logic Detecting: 2 channels, recommended minimum interval time between 02 statuses is 5 seconds.	Configuration	via Downlink or offline USB cable (PC software is supplied for free)
	Pulse Counting: 1 channel only, max frequency 2Hz, minimum Pulse width (low or high) is 200mS, counter is uint32 type.	Battery	01 x C type LiSOCl <sub>2</sub> 3.6V battery, not included (recommend SAFT LS26500)
VERSION	DI-12H (High-speed digital input)	Housing	Cast aluminum, IP66
Input	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)	Applicable Zones	Safe areas

PRODUCT PAGE



LoRaWAN NODE WITH DIGITAL INPUTS  
WSLRWEX-DI

WSLRWEX-DI

LoRaWAN



## LoRaWAN Ex d Digital Input Node

[ATEX](#) [IECEX](#)

### Applications

Process Monitoring, Safety Monitoring, Energy Monitoring, Oil & Gas Pipeline Monitor, Electric Meter Reading, Gas Meter Reading, Water Meter Reading, Production Monitoring

WSLRWEX-DI-H1.JPG

LoRaWAN communication	For hazardous Zone 1-2-21-22
5-10 years battery	Plug & Play

## SPECIFICATION

Digital Inputs	2-channel dry contact or low voltage ( $\leq 3.3V$ )	Communication	LoRaWAN® Class A, V1.0.3
Operation	Detecting status or Pulse counting (max 1kHz)	SF Factors	SF7~SF12
VERSION	DI-12 (Low-speed digital input)	Antenna	External Antenna
Input	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Functions	Logic Detecting or Pulse Counting Logic Detecting: 2 channels, recommended minimum interval time between 02 statuses is 5 seconds. Pulse Counting: 1 channel only, max frequency 2Hz, minimum Pulse width (low or high) is 200mS, counter is uint32 type.	Data sending modes	interval time, or when status changes, or manually triggered by a magnetic key.
VERSION	DI-12H (High-speed digital input)	Configuration	via Downlink or offline USB cable (PC software is supplied for free)
Input	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)	Battery	01 x C type LiSOCl <sub>2</sub> 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

PRODUCT PAGE



LoRaWAN Ex APPROVED FLAMMABLE GAS SENSOR  
WSLRWEX-GHC

WSLRWEX-GHC

LoRaWAN



## LoRaWAN Ex d NDIR Flammable Gas Sensor

[ATEX](#) [IECEX](#)

### Applications

Gas Leakage Detection, Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring

WSLRWEX-GHC-H1.JPG

LoRaWAN communication	Durable Sensor with 10 year life span
5-10 years battery (GHC-01 and GHC-02)	Ex d Zones 1-2-21-22

## SPECIFICATION

Measurement technology	Daviteq High-performance and Ultra-low power NDIR sensor, 10 years sensor life span.	SF factors	SF7~SF12
Measuring range	0~100% flammable gas LEL, equivalent to 0~5% vol. (CH <sub>4</sub> ). For C <sub>2</sub> H <sub>6</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>3</sub> H <sub>8</sub> , C <sub>4</sub> H <sub>10</sub> , C <sub>2</sub> H <sub>2</sub> gas application please contact us	Antenna	2 dbi external antenna N-type
Resolution   Response time (T90)	0.1% LEL / < 40 seconds	RF power and frequency	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Measurement variation	for CH <sub>4</sub> it is $\pm 0.1\%$ vol. or $\pm 5\%$ of reading (whichever is greater) in the 20~25°C temperature range	Protocol	LoRaWAN® Class A, V1.0.3
Temperature   Humidity   Operating pressure	-40~60°C / 0~98% RH, non-condensing / 80kPa~120kPa	Data sending mode	cyclically, or when an alarm occurs or activated by a magnetic key. Suggest up to 48 messages per day.
		RF module compliant	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (USA), ARIB STD-T108 (Japan)
		Configuration	via Downlink or via USB cable (PC software provided free of charge)
		Power	01 x battery type C 3.6V LiSOCl <sub>2</sub> (recommended SAFT LS26500) for GHC-01 and GHC-02, 12/24VDC external power supply for GHC-03
		Equipment housing	Aluminum alloy, powder coated, IP66, Wall mount installation

PRODUCT PAGE





Ex D APPROVED LoRaWAN PROCESS PRESSURE SENSOR  
WSLRWEX-PPS

WSLRWEX-PPS

LoRaWAN



## LoRaWAN Ex d Process Pressure Sensor

[ATEX](#) [IECEX](#)

### Applications

Oil & Gas Pipeline Monitor, Process Monitoring, Safety Monitoring

WSLRWEX-PPS-H1.JPG

LoRaWAN Communication	10-Year battery
High Accuracy & Stable	Ex d Zones 1-2-21-22

## SPECIFICATION

Sensor	Advanced Piezo technology	Protocol	LoRaWAN® Class A, V1.0.3
Measurement range	Select from -1~1000 bar Gage/ Absolute/ Sealed Gage (Over pressure protection: 2 x span)	SF Factors	SF7~SF12
Accuracy & Stability	0.2% of span, < 0.1% span/ year	Antenna	External Antenna 2.0 dbi
Wetted parts & Measuring Fluids	316SS, Any fluid which is workable with materials 316SS	RF Frequency and Power	860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Process Working temperature	-40~130°C (compensation in -10~80°C)	Data sending modes	interval time, or when status changes, or manually triggered by a magnetic key.
Process connection	1/2" NPT-male as standard, others please consult factory	Configuration	via Downlink or offline USB cable (PC software is supplied for free)
		Battery	01 x C type LiSOCl <sub>2</sub> 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

PRODUCT PAGE



LoRaWAN TILT SENSOR  
WSLRW-AG

WSLRW-AG

LoRaWAN



## LoRaWAN Tilt Sensor

[CE](#) [FCC](#)

### Applications

Facility Monitoring, Flood Monitoring, Infrastructure Monitoring, Level Monitoring, Machine Health Monitoring, Safety Monitoring, Tilt Monitoring

WSLRW-AG-H1.JPG

LoRaWAN communication	10-Year battery
High Precision Tilt Measurement	Solar Powered for Fast Sampling Rate

## SPECIFICATION

Tilt Sensor	Built-in advanced accelerometer to deliver tilt angle measurement of XYZ for AG-01 version, XY for AG-03 version	SF Factors	SF7~SF12
Tilt Measurement range	±90° for AG-01 version   ±30° for AG-03 version	Antenna	Internal Antenna 2 dbi or external antenna
Tilt Resolution	±0.01° for AG-01 version   ±0.001° for AG-03 version	Power Supply	Primary batteries 02 x AA size 1.5VDC (battery not included) or Solar Panel with Rechargeable batteries 2 x AA Panasonic® Eneloop™ Standard (not included)
Tilt Repeatability	±0.075° for AG-01 version   ±0.010° for AG-03 version	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Tilt Temperature Drift	±0.2° per 10°C for AG-01 version (when installation X~0° and Y~0°)	Protocol	LoRaWAN Class A V1.0.3
Sensor sampling rate	1Hz max (recommend for Solar powered version)	Data sending modes	interval time, alarm (from FW5) and manually triggering by magnetic key
Shock Detection	Yes, max 2G threshold (only available in some FW version, please consult us)	Alarm function	from FW5, for X-axis only
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	

PRODUCT PAGE



LoRaWAN PRECISION FUEL LEVEL SENSOR  
WSLRW-CAP10

WSLRW-CAP10-H1.JPG

WSLRW-CAP10

LoRaWAN Precision  
Fuel Level Sensor[CE](#) [FCC](#)

## Applications

Energy Monitoring, Fuel Monitoring, Process Monitoring, Smart Irrigation, Vehicle Tracking

LoRaWAN communication

5-Year battery

High Precision 0.1%

Easy to Install

## SPECIFICATION

Measurement Range (mm)	Standard Range: 700, 1000, 1500, can be extended up to 4000	SF Factors	SF7~SF12
Accuracy/ Resolution/ Repeatability	±0.1% of span/ 0.1%/ ±0.1% of span	Antenna	Internal Antenna 2.0 dBi
Thermal drift	< +0.03% of span per 10°C	Battery	02 x AA size 1.5VDC, battery not included
Connector	M12 male, 4-pin, Coding A		860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Sensor MTBF	More than 10 years	RF Frequency and Power	
Sensor wetted materials	Aluminum and engineering plastic	Protocol	LoRaWAN, class A
Operating Temperature & Humidity Range	-40~85°C, 0~100% RH	Data sending modes	Interval time and when alarm occurred
Sensor rating	IP67, outdoor	RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Certification	CE-Marking per EN61236-1 (with test report)	Working temperature	-40~60°C (using Energizer® Lithium Ultimate AA battery)
		Dimensions and Net-weight	H140xW73xD42, 250g (LoRaWAN Device only)

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LoRaWAN CO2 SENSOR  
WSLRW-CO2

WSLRW-CO2-H1.JPG

WSLRW-CO2

LoRaWAN Carbon  
Dioxide Sensor[CE](#) [FCC](#)

## Applications

Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring

LoRaWAN communication

5-10 years battery

High Accuracy &amp; Stable

Measure other parameters

## SPECIFICATION

CO2 Sensor technology	NDIR sensor	SF Factor	SF7~SF12
CO2 range/resolution/accuracy	0~5000 ppm or 10000/ 1ppm/ (±30ppm + 3% reading)	Antenna	Internal Antenna 2.0 dBi
Repeatability	±30ppm + 3% reading (in 0~50°C, after zeroing at 25°C)	Battery	02 x AA size 1.5VDC, battery not included
Temperature range/ resolution/ accuracy	-40~80°C/ 0.1°C/ ±0.3°C in range 0~50°C		860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Humidity range/ resolution/ accuracy	0~100% RH/ 0.1% RH/ ±1.5% RH (in range 0~80% RH)	RF Frequency and Power	
Barometric Pressure range/ resolution/ accuracy	300~1200 mbar/ 0.01 mbar/ ±4 mbar in range -20~85°C	Protocol	LoRaWAN, class A
Sensor housing material/ Rating	SS316/ SS304/ for Indoor use	Data sending modes	Interval time and when alarm occurred
		RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
		Vietnam Type Approval	TBA soon
		Working temperature	-40~60°C (with AA L91 Energizer®)

PRODUCT PAGE



LoRaWAN GAS SENSOR  
WSLRW-G4

WSLRW-G4

## LoRaWAN Gas Detecting Sensor

[CE](#) [FCC](#)

### Applications

Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring, Gas Leakage Detection

WSLRW-G4H.JPG

LoRaWAN communication	5-10 years battery
High Accuracy & Stable	Multiple choices of gas

LoRaWAN AMMONIA TOILET SENSOR  
WSLRW-G4F-NH3

WSLRW-G4F-NH3

## LoRaWAN Toilet Odor Sensor

### Applications

Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring, Odor Monitoring

WSLRW-G4F-RH03H.JPG

High Sensitive Odor Sensor	Anti-tampering
LoRaWAN communication	10-Year battery

## SPECIFICATION

Select gas sensor	CO, NO, NO <sub>2</sub> , H <sub>2</sub> S, NH <sub>3</sub> , O <sub>2</sub> , O <sub>3</sub> , SO <sub>2</sub> , Cl <sub>2</sub> , HCHO etc.	SF Factors	SF7~SF12
Gas sensor type and specification	List of compatible gas sensors and specification	Antenna	Internal Antenna 2.0 dbi
Sensor housing/ Rating	SS316/SS304 housing with 316SS sintered filter/ for indoor use (buy the optional accessory rain-guard for outdoor installation)	Battery	02 x AA size 1.5VDC, battery not included
		RF Frequency and Power	860~930MHz, 14~20 dBm, 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 or Offline cable (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°C (with AA L91 Energizer®)

## SPECIFICATION

Sensor type	High sensitive electrochemical type sensor, built-in auto-sampling mechanism	SP factors	SF7~SF12
NH <sub>3</sub> range	0~100 ppm (or equivalent 0~285.7ppm H <sub>2</sub> S)	Antenna	Internal Antenna 2.0 dbi
NH <sub>3</sub> tolerance limit	200ppm	Battery	02 x AA size 1.5VDC, battery not included
Repeatability/ Resolution/ Stability per month	< 3% of reading/ 0.1 ppm/ < 1% of reading/month	RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Zero-point stability	0~0.15ppm	Protocol	LoRaWAN, class A, V1.0.3
Ambient pressure	101.3kPa ±10%	Data sending modes	Interval time and when the alarm occurred
Sensor life	2 years, in clean air	Configuration	via Downlink or Offline cable (software is free)
Working temperature	-10~50°C	RF Module	complies to ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Working humidity	15~90% RH	Working temperature	-40~60°C (with AA L91 Energizer®)

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