LoRaWAN Toilet Odor Sensor
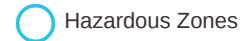
Smart Building, Smart City, Smart Facility, Smart Factory, Smart Healthcare, Smart Retail, Smart Transportation

SKU: WSLRW-G4F-NH3

daviteq

LoRaWAN AMMONIA TOILET SENSOR
WSLRW-G4F-NH3

LoRaWAN

10-Year

WIRELESS GAS SENSOR

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LoRaWAN

WSLRW-G4F-NH3-H1.JPG

✓ Safe Zone   ◯ Hazardous Zones

WSLRW-G4F-NH3 is a LoRaWAN sensor with a built-in advanced gas sensor to measure the concentration of Ammonia NH_3 and H_2S to help assess odors in the Toilet. A special design increases the sensor's sensitivity, even though it is mounted on the ceiling at a distance of up to 2.6m. The sensor has an ultra-low-power design and smart firmware that allows the sensor to run on 2 x 1.5VDC AA batteries for 2-5 years with 15 minutes of updating. The sensor supports all LoRaWAN frequency bands on over the World. Typical application: Odor monitoring in private or public restrooms, toilets, and WC, helps to manage optimal cleaning staff.

Applications

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

Notes For Applications

- Select the suitable sensor range to get highest accuracy v.s sensor life. Please consult our engineers;
- Electro-chemical sensors have life time is 1-2 years, depends on sensor type and actual operating conditions;
- Electro-chemical sensors need to be calibrated regularly (6-12 months), depends on actual operating conditions;
- Check carefully the working temperature and humidity of the application;

✓ **High Sensitive Odor Sensor**
Special design to get high sensitivity even the sensor is mounted on ceiling up to 2.6m

✓ **Anti-tampering**
Allow mounting the sensor on ceiling or high wall to prevent tampering

✓ **LoRaWAN communication**
LoRaWAN® Class A, V1.0.3, all frequency bands

✓ **10-Year battery**
Allow the sensor to run in 2-5 years with 2 x AA batteries

H_2S

WIRELESS GAS SENSOR

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NH_3

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Specification

Sensor type	High sensitive electrochemical type sensor, built-in auto-sampling mechanism
NH_3 range	0~100 ppm (or equivalent 0~285.7ppm H_2S)
NH_3 tolerance limit	200ppm
Repeatability/ Resolution/ Stability per month	< 3% of reading/ 0.1 ppm/ < 1% of reading/month
Zero-point stability	0~0.15ppm
Ambient pressure	101.3kPa ±10%
Sensor life	2 years, in clean air
Working temperature	-10~50℃
Working humidity	15~90% RH
COMMUNICATION	
SP 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, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN, class A, V1.0.3
Data sending modes	Interval time and when the 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℃ (with AA L91 Energizer®)
Case/ protection grade	ABS, indoor use, do not spray water directly on the device
Dimensions/ Weight	Diameter 95mm x Height 40mm/ < 250g

INTERFERERENCE GASES

| Interfering Gas	Concentration [ppm]	Reading [ppm]
Cl_2	20	-55
CO	300	0
CO_2	20000	0
H_2	200	0
H_2S	20	7
NO	20	-1
NO_2	20	-20
SiH_4	10	0
SO_2	20	-7

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LoRaWAN NETWORK

Any LoRaWAN Gateway
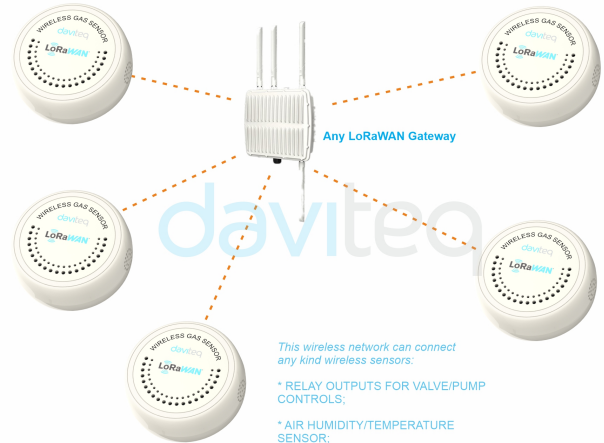
This wireless network can connect any kind wireless sensors:

* RELAY OUTPUTS FOR VALVE/PUMP CONTROLS;

* AIR HUMIDITY/TEMPERATURE SENSOR;

* CO2 SENSOR;

* AMBIENT LIGHT SENSOR;

* ...ETC

WSLRW-G4F-NH3-H4.JPG

DIMENSION DRAWING OF WIRELESS SENSOR
(Unit: mm)

94.60

37.85

R4.00

R1.75

60.00
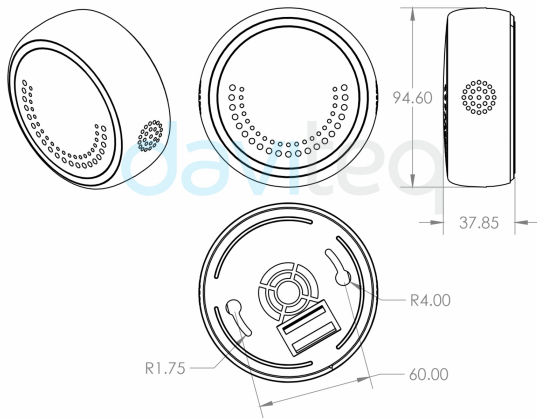
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RECOMMENDED BATTERIES FOR LoRaWAN SENSOR
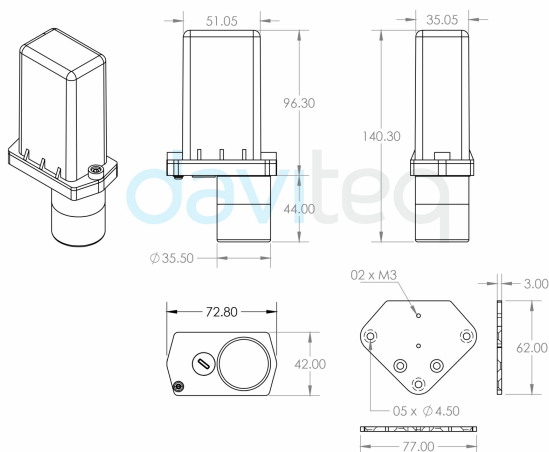
E91 AA Alkaline battery

L91 AA Lithium battery

-18 .. + 60 oC working temperature

10-year shelf life

3000 mAH Capacity

Price: 1X

-40 .. + 60 oC working temperature

20-year shelf life

3500 mAH Capacity

Price: 3.5X

WSLRW-G4F-NH3-H6.JPG

DIMENSION DRAWING OF WIRELESS SENSOR
(Unit: mm)

51.05

35.05

96.30

140.30

44.00

Ø 35.50

02 x M3

3.00

72.80

42.00

62.00

05 x Ø 4.50

77.00

WSLRW-G4-H7.JPG

RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

E91 AA Alkaline battery

L91 AA Lithium battery

-18 .. + 60 oC working temperature

10-year shelf life

3000 mAH Capacity

Price: 1X

-40 .. + 60 oC working temperature

20-year shelf life

3500 mAH Capacity

Price: 3.5X

WSLRW-G4-H8.JPG

Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-G4F-NH3-100-01	LoRaWAN Gas Sensor, 4-Seri, Ceiling mount type, NH$_3$ Gas, 100ppm range