# LORAWAN NH3 AND H2S SENSOR FOR TOILET ODOR

daviteq

SKU: WSLRW-G4F-NH3



LoRaWAN AMMONIA TOILET SENSOR
WSLRW-G4F-NH3

LoRaWAN

10-Year

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WSLRW-G4F-NH3 is a LoRaWAN sensor with a built-in advanced gas sensor to measure the concentration of Ammonia NH3 and H2S 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.

**HIGH SENSITIVITY**
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 COMPLIANCE**
LoRaWAN Class A, V1.0.3, all frequency bands

**ULTRA-LOW-POWER DESIGN**
Allow the sensor to run in 2-5 years with 2 x AA batteries



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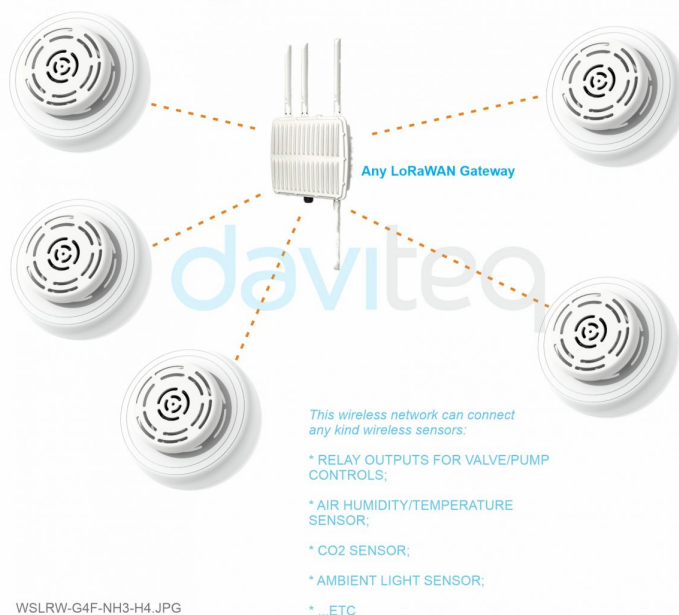
## SPECIFICATION

| | |
|---|---|
| Sensor type | High sensitive electrochemical type sensor, built-in auto-sampling mechanism |
| NH3 range | 0..100 ppm (or equivalent 0..285.7 ppm H2S) |
| NH3 tolerance limit | 200 ppm |
| Repeatability / Resolution / Stability per month | < 3% of reading / 0.1 ppm / < 1% of reading/month |
| Zero-point stability | +/- 0.3 ppm |
| Ambient pressure | 101.3 Kpa +/- 10% |
| Sensor life | 2 years, in clean air |
| Working temperature | -10 .. + 50°C |
| Working humidity | 15.. 90% RH |
| LoRaWAN SPECIFICATION | |
| SP factors | SF7..SF12 (with internal Antenna 2.67 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 | -40oC..+60oC (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

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## DIMENSION DRAWING OF WIRELESS SENSOR
### (Unit: mm)



R47.30

R4.00

60.00

50.15
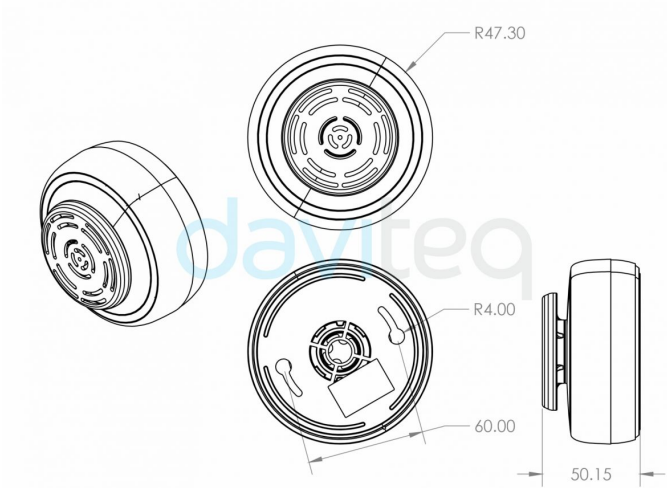
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## RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

**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

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## ORDERING INFORMATION

| WSLRW-G4F-NH3-100-01 | LoRaWAN Gas Sensor, 4-Seri, Ceiling mount type, NH3 Gas, 100PPM range |
|---|---|

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