

# LoRaWAN Ex d D-battery-powered Electrochemical Gas Sensor



Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Factory, Smart Farm

SKU: WSLRWEX-G4

☐ Safe Zone

☒ Hazardous Zones

## LORAWAN EX D ELECTRO-CHEMICAL GAS SENSOR WSLRWEX-G4



LoRaWAN



WSLRWEX-G4 is an Ex d approved LoRaWAN electrochemical-type gas sensor with a high sensitivity to low concentrations of detected gas, high selectivity, and a stable baseline. The device supports different types of gas such as CO, NO, NO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, O<sub>3</sub>, SO<sub>2</sub>, Cl<sub>2</sub>, HCHO... The device is used in Hazardous Zone 1-2. With Ultra-low-power design and smart firmware allow the complete Wireless and Sensor package to run on a single battery up to 10 years. It supports global frequency bands EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915. The sensor can work perfectly with any LoRaWAN Gateway and any Network Server on the market.

### Applications

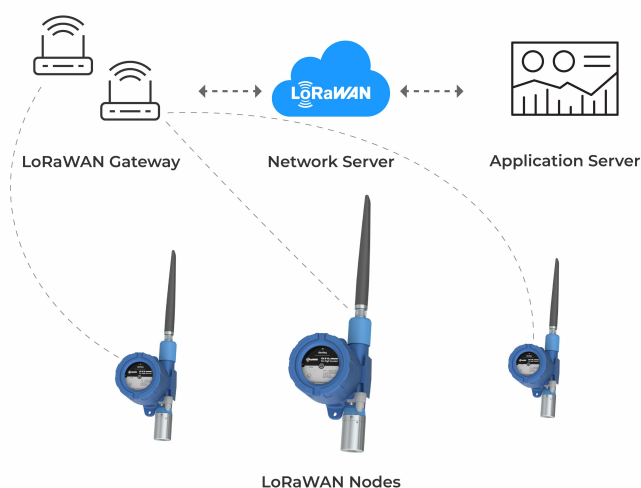
Gas Leakage Detection, Ambient Air Quality Monitor, Indoor Air Quality Monitor

### Notes For Applications

- Select the suitable sensor range to get the highest accuracy v.s sensor life. Please consult our engineers. Electrochemical sensors need to be calibrated regularly (6-12 months), depending on actual operating conditions.
- Check carefully the working temperature and humidity of the application. Use the Rain-guard of Splash-guard for outdoor installation or where water jets exist.

- ☒ **LoRaWAN communication**  
Support LoRaWAN Class A, to connect to any LoRaWAN gateway on the market
- ☒ **High performance sensor**  
High accuracy and ultra-low power sensor from Daviteq
- ☒ **5-10 years battery life**  
Ultra low power sensor technology to allow 5-10 years battery life with a single battery
- ☒ **Ex d Zones 1-2-21-22**  
Ex d approved for hazardous zones 1-2-21-22

## LORAWAN EX D ELECTRO-CHEMICAL GAS SENSOR WSLRWEX-G4



SYSTEM ARCHITECTURE

### DAVITEQ TECHNOLOGIES INC

Ho Chi Minh City, VN | Koblenz, DE | Melbourne, AU | Zurich, CH

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info@daviteq.com

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Created date: Mar-03-2025

Updated date: Mar-03-2025

Specification

Measurement technology	Daviteq High-performance Ultra-low power Electro-chemical Gas Sensor
Select Gas Sensor type	CO, NO, NO <sub>2</sub> , H <sub>2</sub> S, NH <sub>3</sub> , O <sub>3</sub> , SO <sub>2</sub> , Cl <sub>2</sub> , HCHO etc.
Gas sensor type and specification	<a href="#">List of compatible gas sensors and specification</a>
COMMUNICATION	
SF Factors	SF7~SF12
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)
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
Hazard Protection Label	ATEX II 2G Ex db IIC T5/T6 Gb, ATEX II 2G Ex db mb [Ia Ga] IIA/IIB/IIC T5..T6 Gb, and ATEX II 2 G Ex d IIC T4 Gb
Compatible	ATEX 2014/34/EU/ Standard IEC-EN60079-0 IEC-EN60079-1 IEC-EN60079-31
Areas of application	Zones 1 & 2 gas hazardous areas
Size   Net weight	H240xW140xD130 (not including antenna)/ ≈1500g (without battery)
Mounting	Wall mount bracket

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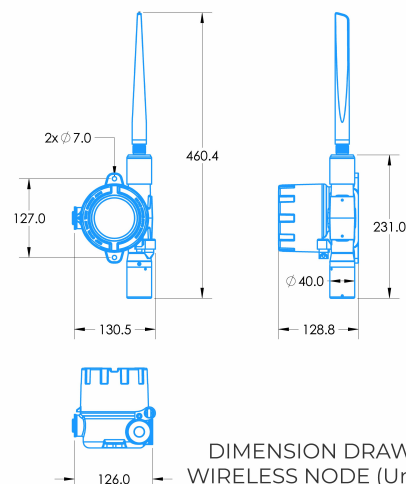
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WSLRWEX-G4



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WSLRWEX-G4



LS 33600  
Lithium battery

-60~85°C working temperature  
Low self-discharge rate  
17000 mAh capacity

RECOMMENDED BATTERIES

**LORAWAN EX D ELECTRO-CHEMICAL GAS SENSOR**  
WSLRWEX-G4



STANDARD PRODUCT PACKAGE

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRWEX-G4-X-Y	LORAWAN ELECTRO-CHEMICAL GAS SENSOR, EX D APPROVED ZONES 1-2-21-22, BATTERY 3.6V, IP66, FOR EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Where	
X	Gas Sensor Type
Y	Range in ppm
Select X and Y from this link	List of compatible gas sensors and specification
Accessories	
GS4H-CAL-01	Field calibration cap for Ex d Gas Sensor
GS4H-GUARD-01	Rain guard type 1 for Ex d Gas Sensor
GS4H-SG-01	Splash guard type 1 for Ex d Gas Sensor
Calibration Services	
CALGAS-X-02	2-point calibration by standard gas
*Recommended for first use	
Where	
X	Gas Sensor Type

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