

# LoRaWAN Ex d NDIR Flammable Gas Sensor



Smart Energy, Smart Facility, Smart Factory

SKU: WSLRWEX-GHC

## LORAWAN EX D NDIR FLAMMABLE GAS SENSOR WSLRWEX-GHC



Safe Zone

Hazardous Zones

WSLRWEX-GHC is a LoRaWAN sensor with Ex d explosion-proof approval and comes with a built-in high-performance NDIR technology sensor to detect the Hydrocarbon Gas concentration in the air. Ultra-low-power design and smart firmware allow the complete Wireless and Sensor package to run on a single battery for 5 years or more with 30 minutes update (GHC-01 and GHC-02 versions only). It supports global frequency bands EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915. The sensor can work perfectly with any LoRaWAN Gateway on the market. Typical applications: CH<sub>4</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, C<sub>3</sub>H<sub>8</sub>, C<sub>4</sub>H<sub>10</sub> leakage detection for Gas distribution station, Metering skid, Pressure reducing station...

### Applications

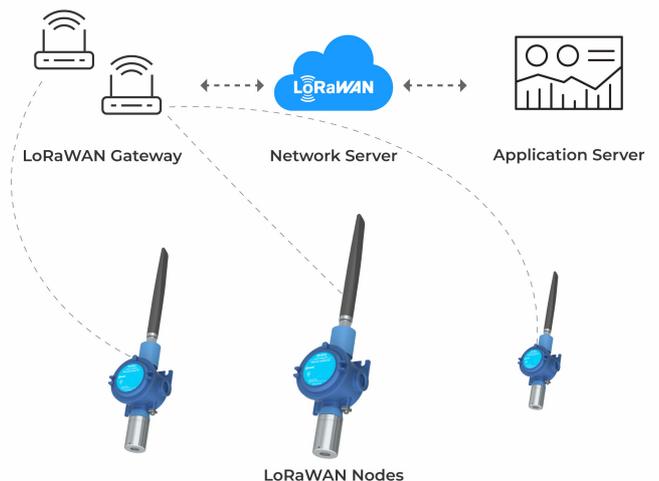
Gas Leakage Detection, Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring

### Notes For Applications

Diffusion holes of the sensor should be protected against the ingress of sprayed liquid or waterdrops. The sensor is not intended to measure the target gas concentration contained in fluids. Correct measurement is provided when the ambient temperature changes not faster than 0.6°C/ min.

- LoRaWAN communication**  
Support LoRaWAN Class A, connect to any LoRaWAN gateway on the market
- Durable sensor with 10 year life span**  
Advanced NDIR technology sensor for continuous working for more than 10 years without intervention or replacement.
- 5-10 years battery (GHC-01 and GHC-02)**  
Ultra-low power sensor technology for up to 5-year battery life with a single battery
- Ex d Zones 1-2-21-22**  
Ex d approved design for Zone 1-2-21-22

## LORAWAN EX D NDIR FLAMMABLE GAS SENSOR WSLRWEX-GHC



SYSTEM ARCHITECTURE

### DAVITEQ TECHNOLOGIES INC

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Created date: Dec-21-2022

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## Specification

Measurement technology	Daviteq High-performance and Ultra-low power NDIR sensor, 10 years sensor life span.
Measuring range	0~100% flammable gas LEL, equivalent to 0~5% vol. (CH <sub>4</sub> ). For C <sub>2</sub> H <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , C <sub>3</sub> H <sub>8</sub> , C <sub>4</sub> H <sub>10</sub> gas application please contact us
Resolution   Response time (T90)	0.1% LEL/ < 40 seconds
Measurement variation	for CH <sub>4</sub> it is ±0.1% vol. or ±5% of reading (whichever is greater) in the 20~25°C temperature range
Temperature   Humidity   Operating pressure	-40~60°C/ 0~98% RH, non-condensing/ 80kPa~120kPa
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)
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
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 (without battery)
Mounting type	Wall mount

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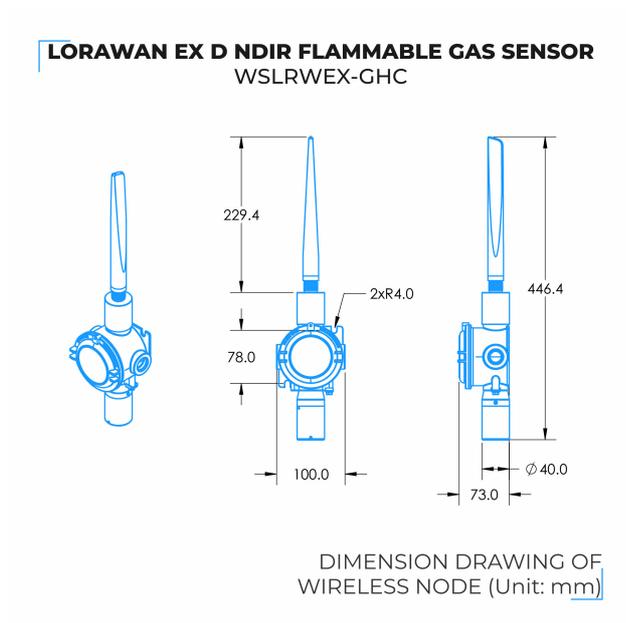
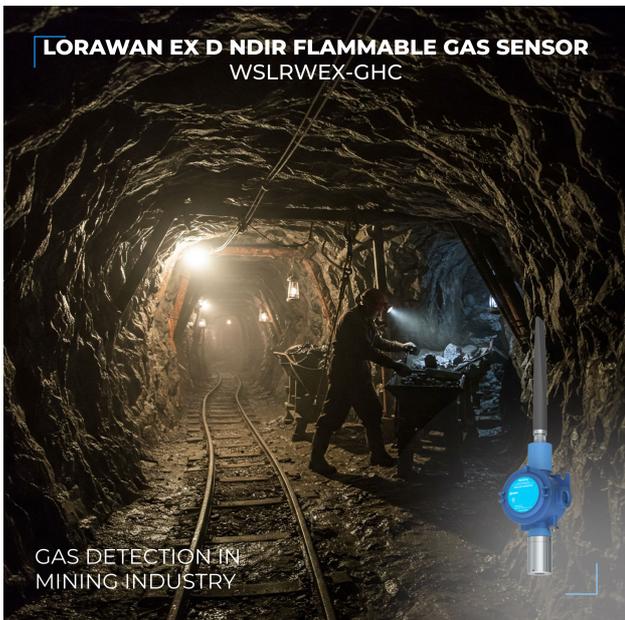
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**LORAWAN EX D NDIR FLAMMABLE GAS SENSOR**  
WSLRWEX-GHC




3.6V  
Li-SOCl<sub>2</sub>

LS 26500  
Lithium battery

-60~85°C working temperature  
Low self-discharge rate  
7.7 AH capacity



RECOMMENDED BATTERIES



## Ordering Information

ITEM CODE	DESCRIPTIONS
WLSRWEX-GHC-01	LORAWAN FLAMMABLE GAS SENSOR, CH4 0-100% LEL, EX D APPROVED ZONES 1-2-21-22, BATTERY 3.6V, IP66, FOR EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
WLSRWEX-GHC-02	LORAWAN FLAMMABLE GAS SENSOR, C3H8 0-100% LEL, EX D APPROVED ZONES 1-2-21-22, BATTERY 3.6V, IP66, FOR EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
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
	*For example: CH <sub>4</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> etc.

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