

LoRaWAN Ex d NDIR Flammable Gas Sensor



Smart Energy, Smart Facility, Smart Factory

SKU: WSLRWEX-GHC

LoRaWAN Ex APPROVED FLAMMABLE GAS SENSOR WSLRWEX-GHC

LoRaWAN



WSLRWEX-GHC-H1.JPG

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: CH₄, C₂H₄, C₂H₆, C₃H₈, C₄H₁₀, C₂H₂ leakage detection for Gas distribution station, Metering skid, Pressure reducing station...

Applications

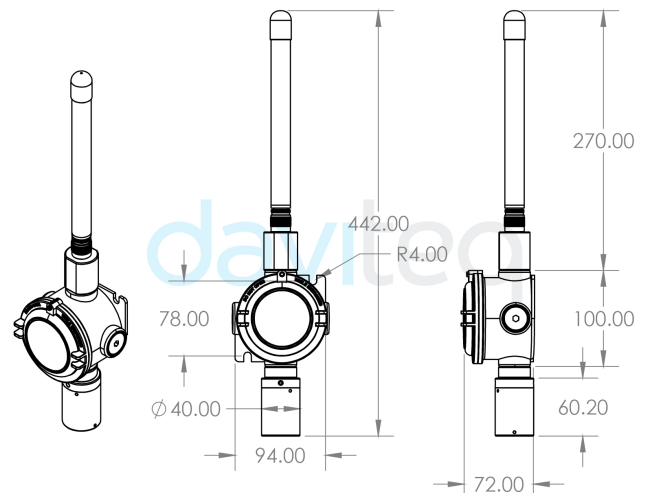
Gas Leakage Detection, Ambient Air Quality Monitor, Indoor Air Quality Monitor, Gas Analyzing, Warehouse Monitoring

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 allows 5-year battery life with a single battery, 30 minutes update in AS923.
- Ex d Zones 1-2-21-22**
Ex d approved design for Zone 1-2-21-22

DIMENSION DRAWING OF SENSOR NODE (Unit: mm)



WSLRWEX-GHC-H2.JPG

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1/4

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 ₄). For C ₂ H ₄ , C ₂ H ₆ , C ₃ H ₈ , C ₄ H ₁₀ , C ₂ H ₂ gas application please contact us
Resolution Response time (T90)	0.1% LEL/ < 40 seconds
Measurement variation	for CH ₄ 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. 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 ₂ (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
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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2/4

WHAT'S IN THE PACKAGE?



WSLRWEX-GHC-H3.JPG

RECOMMENDED BATTERIES

LS 26500 Lithium battery



-60°C..+85°C working temperature

Low self-discharge rate

7.7 Ah Capacity

WSLRWEX-GHC-H4.JPG

WIRELESS NODE WITH ExD MAGNETIC PROXIMITY SENSOR



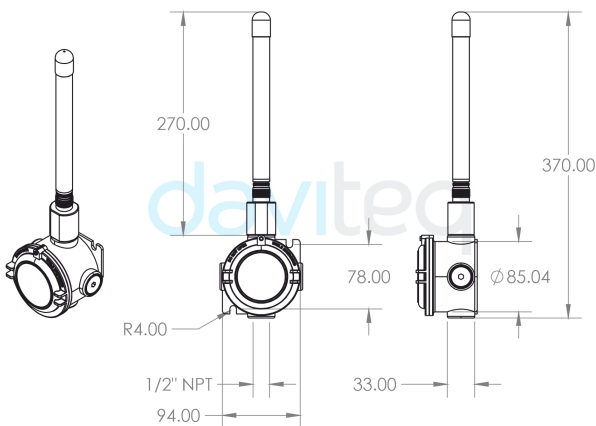
WSLRWEX-DI-H5.JPG

WIRELESS NODE WITH ExD FLOW SWITCH



WSLRWEX-DI-H6.JPG

DIMENSION DRAWING OF WSLRWEX-DI (Unit: mm)



WSLRWEX-DI-H7.JPG

RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

LS 26500 Lithium battery



-60°C..+85°C working temperature

Low self-discharge rate

7.7 Ah Capacity

WSLRWEX-DI-H8.JPG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRWEX-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
WSLRWEX-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
WSLRWEX-GHC-03	LORAWAN FLAMMABLE GAS SENSOR, C2H2 0-100% LEL, EX D APPROVED ZONES 1-2-21-22, 12/24VDC SUPPLY, 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 ₄ , C ₂ H ₄ , C ₃ H ₈ , C ₄ H ₁₀ etc.

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4/4