LoRaWAN Ex d NDIR Acetylene Gas Sensor

daviteq

SKU: WSLRWEX-GHC03

○ Safe Zone   ✓ Hazardous Zones

LoRaWAN Ex APPROVED FLAMMABLE GAS SENSOR WSLRWEX-GHC03

LoRaWAN

10-Year

WSLRWEX-GHC-H1.JPG

WSLRWEX-GHC03 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. The measurement module includes dual detector channels with a reference for background compensation and a temperature sensor for temperature compensation. 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: C_2H_2 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℃/ 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.

✓ **Built-in high-accuracy sensor**
Dual detector channels with a reference for background compensation and a temperature sensor for temperature compensation

✓ **Ex d Zones 1-2-21-22**
Ex d approved design for Zone 1-2-21-22

LoRaWAN NETWORK

Any LoRaWAN Gateway

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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 0~2.5% vol. (C_2H_2).
Resolution | Response time (T90)	0.1% LEL/ <40 seconds
Maximum variation of zero from −20~+55℃	±30 ppm/℃
Maximum deviation from linearity	±0.1% vol
Long-term zero drift/month	±500 ppm
Temperature | Humidity | Operating pressure	-20~60℃/ 0~95% RH, non-condensing/ 70~130kPa
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)
Device certification	CE or FCC on demand
Configuration	via Local LCD, or Downlink or via USB cable (PC software provided free of charge)
Power supply	12~35VDC, max 200mA by external DC supply or Ex approved Solar Power Skid (as below ordering information)
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℃ 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	H450xW150xD150/ ≈2000g
Mounting type	Wall mount

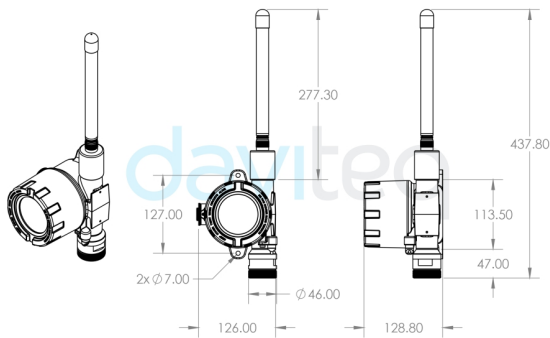**MEASUREMENT OF HYDROCARBONS OR CARBON DIOXIDE CONCENTRATION IN THE OIL REFINERY**

WSLRWEX-GHC-H2.JPG

MONITORING HYDRO CARBON IN PETROCHEMICALS

WSLRWEX-GHC-H3.JPG

DIMENSION DRAWING OF SENSOR NODE
(Unit: mm)

277.30

437.80

127.00

113.50

47.00

2x ⌀ 7.00

⌀ 46.00

126.00

128.80

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRWEX-GHC03-01	LORAWAN FLAMMABLE GAS SENSOR, C2H2 0-100% LEL, EX D APPROVED ZONES 1-2-21-22, 12-35 VDC EXTERNAL POWER, IP66, FOR EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Accessories	
GHC-03-CAL-01	Field calibration cap for Ex d GHC03 Gas Sensor
GHC-03-GUARD-01	Rain guard type 1 for Ex d Gas Sensor
GHC-03-SG-01	Splash guard type 1 for Ex d Gas Sensor
Calibration Services	
CALGAS-C2H2-02	2-point calibration by C_2H_2 standard gas