

LoRaWAN Ex d Electro-chemical Oxygen Sensor



Smart Facility, Smart Factory

SKU: WSLRWEX-O2

OBSOLETE, replaced by [WSLRWEX-G4](#)

Safe Zone

Hazardous Zones

LoRaWAN Ex d OXYGEN SENSOR WSLRWEX-G-O2

LoRaWAN



WSLRWEX-O2-H1.JPG

WSLRWEX-O2 is an Ex d approved LoRaWAN electrochemical-type oxygen sensor with a high sensitivity to low concentrations of detected gas, high selectivity, and a stable baseline. 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 for 5 years or more with 15 minutes update. 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

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 (36 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, 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 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

OXYGEN MONITORING IN MINES



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DAVITEQ TECHNOLOGIES INC

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Created date: Feb-16-2024


Updated date: Nov-08-2025


Specification

Measurement technology	Daviteq High-performance Ultra-low power Electro-chemical Gas Sensor
Gas sensor type and specification	Oxygen, 0-30%, in High Humidity, 4% drift over 3 years
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 ₂ battery (recommended SAFT LS33600)
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	H202xW126xD128 (not including antenna)/ ≈1500g (without battery)
Mounting	Wall mount bracket

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MONITOR OXYGEN IN CHEMICAL WAREHOUSES



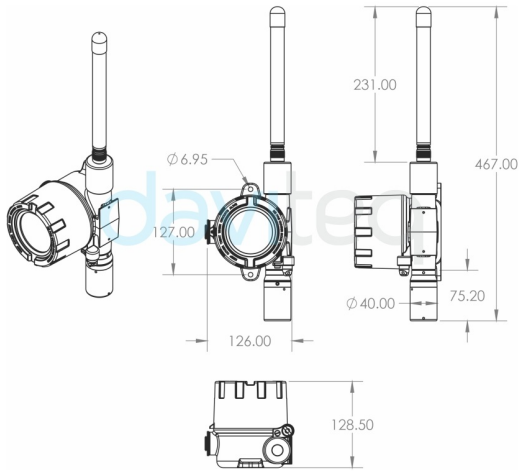
WSLRWEX-O2-H3.JPG

LoRaWAN NETWORK



WSLRWEX-O2-H4.JPG

DIMENSION DRAWING OF SENSOR NODE
(Unit: mm)



WSLRWEX-O2-H5.JPG

RECOMMENDED BATTERIES FOR WIRELESS NODE

LS 33600 Lithium battery



- 60°C..+85°C working temperature
- Low self-discharge rate
- 17.0 Ah Capacity

RECOMMENDED BATTERIES FOR LoRaWAN NODE

LS 26500 Lithium battery



- 60°C..+85°C working temperature
- Low self-discharge rate
- 7.7 Ah Capacity

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WHAT'S IN THE PACKAGE?




Main Device Antenna Accessories


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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRWEX-O2-Y	LORAWAN ELECTRO-CHEMICAL OXYGEN SENSOR, EX D APPROVED ZONES 1-2-21-22, BATTERY 3.6V, IP66, FOR EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915
Where	
Y	Range in ppm
Select Y from Oxygen sensor list this link	List of oxygen 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-O2-02	2-point calibration by standard gas
	*Recommended for first use

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