

LoRaWAN Ex d Electro-chemical Oxygen Sensor



Smart Facility, Smart Factory

SKU: WSLRWEX-O2

LoRaWAN Ex d OXYGEN SENSOR WSLRWEX-G-O2

LoRaWAN



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Safe Zone

Hazardous Zones

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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Specification

| | |
|-----------------------------------|--|
| Measurement technology | Daviteq High-performance Ultra-low power Electro-chemical Gas Sensor |
| Gas sensor type and specification | List of compatible gas sensors and specification |
| 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



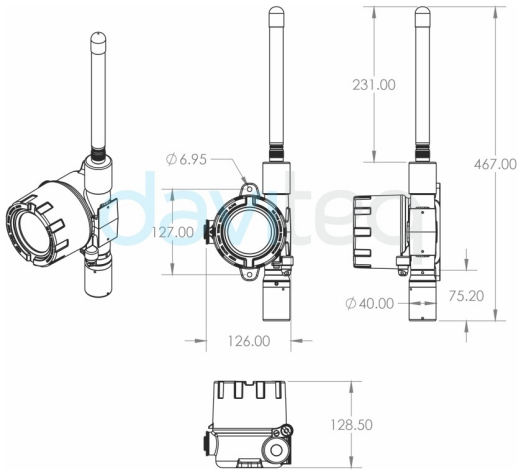
WSLRWEX-O2-H3.JPG

LoRaWAN NETWORK



WSLRWEX-O2-H4.JPG

DIMENSION DRAWING OF SENSOR NODE
(Unit: mm)



WSLRWEX-O2-H5.JPG

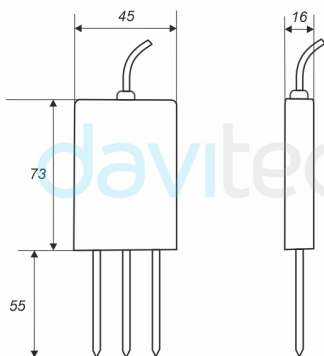
RECOMMENDED BATTERIES FOR WIRELESS NODE

LS 33600 Lithium battery



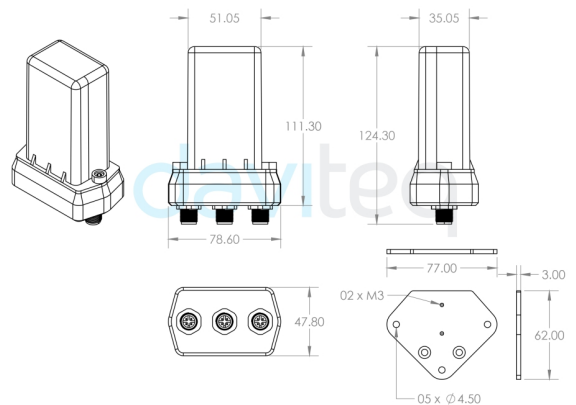
- 60°C..+85°C working temperature
- Low self-discharge rate
- 17.0 Ah Capacity

DIMENSION DRAWINGS OF SENSOR
(Unit: mm)



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DIMENSION DRAWING OF DEVICE
(Unit: mm)



WSNB-SMT-H8.JPG

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RECOMMENDED BATTERIES

E91 AA Alkaline battery



L91 AA Lithium battery



-18 .. + 60 oC working temperature

10-year shelf life

3000 mAh Capacity

Price: 1X

-40 .. + 60 oC working temperature

20-year shelf life

3500 mAh Capacity

Price: 3.5X

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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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