

WIRELESS AMBIENT OXYGEN SENSOR



SKU: WS433-O2

WIRELESS AMBIENT OXYGEN SENSOR WS433-O2



WS433-O2-H1.PNG

WS433-O2 is the Wireless Ambient Oxygen Sensor, it utilizes a galvanic cell type oxygen sensor that provides a linear output voltage signal relative to the percent oxygen present in a particular atmosphere. The sensor features no position dependency, excellent chemical durability, and it is not influenced by CO. The wireless portion is Sub-GHz technology from Texas Instruments allows long-range transmission at ultra-low power consumption. It will connect 2-way wirelessly to the wireless coordinator WS433-CL to send data and receive the configuration. It can be configured the operation parameters like data sending interval, health check cycle...remotely from Globiots platform or via ModbusRTU software (thru the WS433-CL). Its default data rate is 50 kbps, can be switched to 625 bps to increase the communication range. It can last up to 10 years with a single AA battery.

There are a lot of applications as environment monitoring for office, hospital, cleanroom, agriculture, food warehouse...

- ✓ **RELIABLE & SECURED WIRELESS CONNECTION**
Sub-Ghz technology from Texas Instruments allows reliable wireless connection and secured data by AES-128
- ✓ **10-YEAR WITH A SINGLE BATTERY**
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology from Texas Instruments allow the sensor can last up to 10 years with a single battery AA.
- ✓ **NOT AFFECTED BY OTHER GASES**
Virtually no influence from CO₂, CO, H₂S, NO, H₂ (Version O2-02)
- ✓ **NOT AFFECTED BY TEMPERATURE CHANGES**
Temperature compensation circuit included
- ✓ **HIGH ACCURACY AND STABLE**
Good linearity

MONITORING OXYGEN IN FRUIT STORAGE



WS433-O2-H2.PNG

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SPECIFICATION

Measuring range / Max overload	0-25% O2 / 30% O2
Accuracy / Resolution	+/- 0.25% O2 / 0.01
Long term output drift	< 5% of reading per year
Interference gases for version O2-01	CO2, not used in the environment with CO2 > 25% (1% of CO2 will increase 0.3% of O2 output)
Interference gases for version O2-02	Virtually no influence from CO2, CO, H2S, NO, H2. Only influenced by NO2 (1% NO2 will increase 0.6% of O2 output)
Working Pressure	1013hPa ± 20%
Working Temperature	-10 .. + 50 oC for O2-02 and -30 .. + 50 oC for O2-01
Storage Temperature	0 - 20 oC
Working Humidity	0-99%RH non-condensation for O2-02 and 5-95%, non-condensation for O2-01
Response time	≤15s (Sensors should be used under conditions where the air exchange is greater than 200~300ml/minute)
Life expectancy at 20° C in normal air	approx. 3 years for WS433-O2-02 and 2 years for WS433-O2-01
Transmission distance, LOS	400m (2-meter height)
Antenna Type / Frequency	Internal Antenna / ISM 433Mhz, Sub-GHz technology from Texas Instrument, USA
Battery	01 x AA 1.5VDC, up to 10-year operation, depends on the configuration
Certificates	CE/EMC
Vietnam Type Approval Certification	QCVN 73:2013/BTTTT, QCVN 96:2015/BTTTT (DAVITEQ B00122019)
Operating temperature of Electronics	-40oC..+60oC (with AA L91 Energizer)
Housing	Poly-carbonate, IP67
Installation method	L-type bracket SUS304 , by M4 screws or double-sided 3M tape (included)
Dimensions & weight Product / Package	125x30x30mm (wireless part only), < 50g (without battery) / 190x50x50mm, < 90g

MONITORING OXYGEN IN DRY AGRICULTURAL PRODUCTS STORAGE SUCH AS RICE, GREEN BEAN COFFEE,...



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CONNECT WIRELESS SENSORS TO any PLC or HMI



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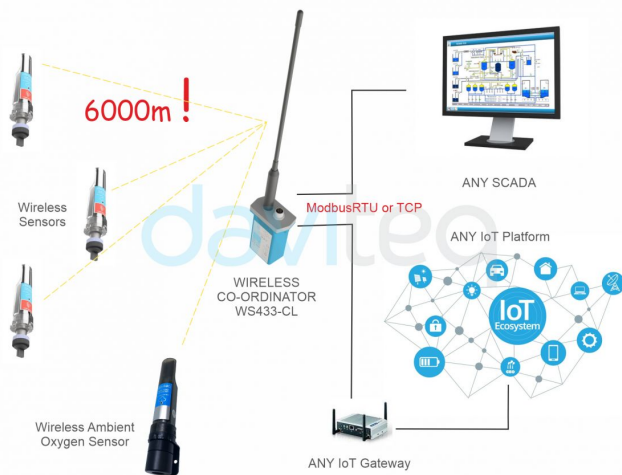
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CONNECT WIRELESS SENSORS TO any SCADA or IoT Platform



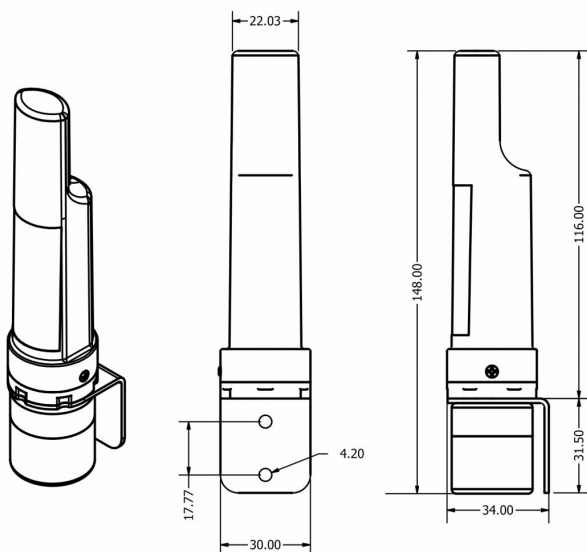
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CONNECT WIRELESS SENSORS TO GLOBIOTS Platform



WS433-O2-H6.PNG

DIMENSION DRAWING OF WIRELESS SENSOR (Unit: mm)



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RECOMMENDED BATTERIES FOR WIRELESS SENSOR WS433

E91 AA Alkaline battery



-18 .. + 60 oC working temperature
10-year shelf life
3000 mAh Capacity
Price: 1X

L91 AA Lithium battery



-40 .. + 60 oC working temperature
20-year shelf life
3500 mAh Capacity
Price: 3.5X

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ORDERING INFORMATION

ITEM CODE	DESCRIPTIONS
WS433-O2-01	WIRELESS OXYGEN GAS SENSOR, 433MHZ, 0-25%, FOR CO2 < 25%, AA 1.5 - 3.6VDC BATTERY, IP67
WS433-O2-02	WIRELESS OXYGEN GAS SENSOR, 433MHZ, 0-25%, AA 1.5 - 3.6VDC BATTERY, IP67