

LoRaWAN Carbon Dioxide Sensor



Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Factory, Smart Farm, Smart Healthcare, Smart Retail, Smart Transportation

SKU: WSLRW-CO2

LoRaWAN CO2 SENSOR
WSLRW-CO2



WSLRW-CO2-H1.JPG



Safe Zone



Hazardous Zones

WSLRW-CO2 is a LoRaWAN sensor utilizes CMOSens® Technology for IR detection enables Carbon Dioxide measurements of the highest accuracy at a competitive price. Along with the NDIR measurement technology for detecting CO₂ comes a best-in-class humidity and temperature sensor integrated on the same sensor module. Ambient humidity and temperature can be measured by special algorithm expertise through modelling and compensating of external heat sources without the need of any additional components. With Ultra-low Power design and smart firmware allow the sensor can last up to 10 years with 02 x AA-type battery (depends on configuration). The sensor will transmit data in kilo-meters distance to LoRaWAN gateway, any brand on the market.

Typical Applications: Indoor Air Quality monitoring, HVAC Control, Green house, Smart Agriculture,...

Applications

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

Notes For Applications



LoRaWAN communication

LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market



5-10 years battery

Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 5 years with 02 x AA batteries



High Accuracy & Stable

Advanced ultrasonic sensor with NDIR CO₂ sensor technology processing to deliver high accuracy and stable measurement



Measure other parameters

Integrated temperature and humidity sensor to monitor the ambient environment

DETECT CO2 GAS IN HVAC SYSTEM



WSLRW-CO2-H2.JPG

DAVITEQ TECHNOLOGIES INC

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Specification

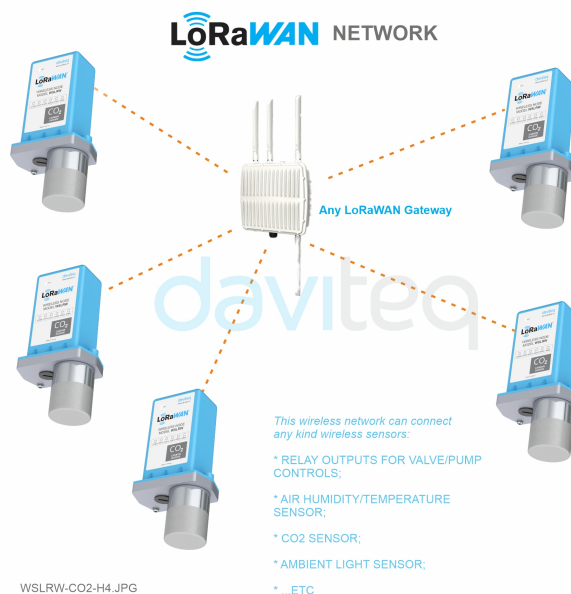
CO ₂ Sensor technology	NDIR sensor
CO ₂ range/resolution/accuracy	0~5000 ppm or 10000/ 1ppm/ (±30ppm + 3% reading)
Repeatability	±30ppm + 3% reading (in 0~50°C, after zeroing at 25°C)
Temperature range/ resolution/ accuracy	-40~80°C/ 0.1°C/ ±0.3°C in range 0~50°C
Humidity range/ resolution/ accuracy	0~100% RH/ 0.1% RH/ ±1.5% RH (in range 0~80% RH)
Barometric Pressure range/ resolution/ accuracy	300~1200 mbar/ 0.01 mbar/ ±4 mbar in range -20~85°C
Sensor housing material/ Rating	SS316/ SS304/ for Indoor use

COMMUNICATION

SF Factor	SF7~SF12
Antenna	Internal Antenna 2.0 dbi
Battery	02 x AA size 1.5VDC, battery not included
RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN, class A
Data sending modes	Interval time and when alarm occurred
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval	TBA soon
Working temperature	-40~60°C (with AA L91 Energizer®)
Housing/Protection	Aluminum + Polycarbonate/ IP67
Dimension	H180xW73xD42
Net weight	< 400g

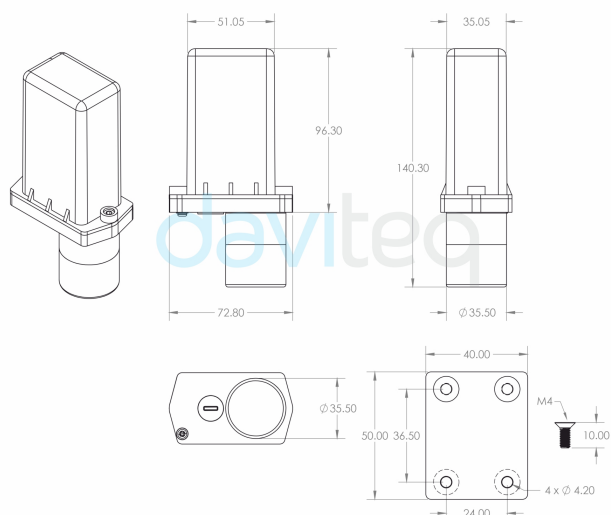


WSI RW-CO2-H3.JPG



WSLRW-CO2-H4.JPG

DIMENSION DRAWING OF WIRELESS SENSOR
(Unit: mm)



WSLRW-CO2-H5.JPG

RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

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

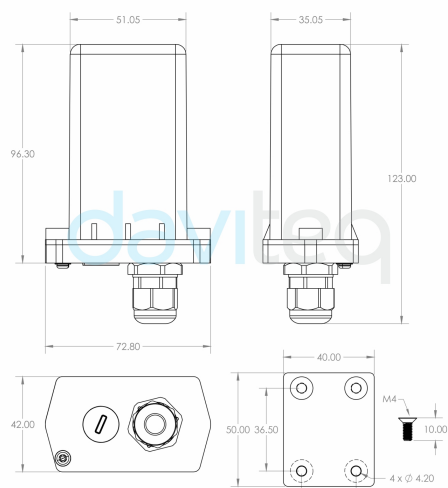
20-year shelf life

3500 mAH Capacity

Price: 3.5X

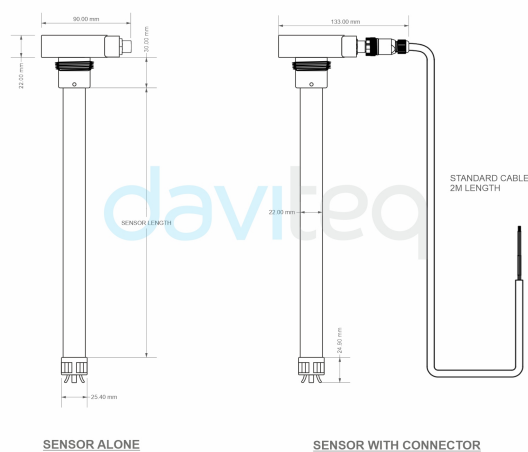
WSLRW-CO2-H6.JPG

DIMENSION DRAWING OF WIRELESS NODE
(Unit: mm)



WSLRW-CAP10-H7.JPG

DIMENSION DRAWING OF FUEL SENSOR
(Unit: mm)



WSLRW-CAP10-H8.JPG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-CO2-5000	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~5000ppm, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-10000	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~10000ppm, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-100	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~100%, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-5000-TH	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~5000ppm, Humidity and Temperature, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-10000-TH	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~10000ppm, Humidity and Temperature, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-100-TH	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~100%, Humidity and Temperature, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-5000-PTH	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~5000ppm, Humidity and Temperature, Barometric Pressure, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-10000-PTH	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~10000ppm, Humidity and Temperature, Barometric Pressure, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915
WSLRW-CO2-100-PTH	WIRELESS LORAWAN CARBON DIOXIDE GAS SENSOR, 0~100%, Humidity and Temperature, Barometric Pressure, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz for KR920, AS923, AU915, US915

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