Wireless CO2 Sensor with Humidity & Temperature WS433-CO2

SKU: WS433-CO2

Doc No: WS433-CO2-DS-EN-10



WS433-CO2-H1.PNG



WS433-CO2-H3.PNG

Introduction

WS433-CO2 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. 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 co-ordinator WS433-CL to send data and receiving 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. The sensor can last up to 5 years with 2 x AA battery.

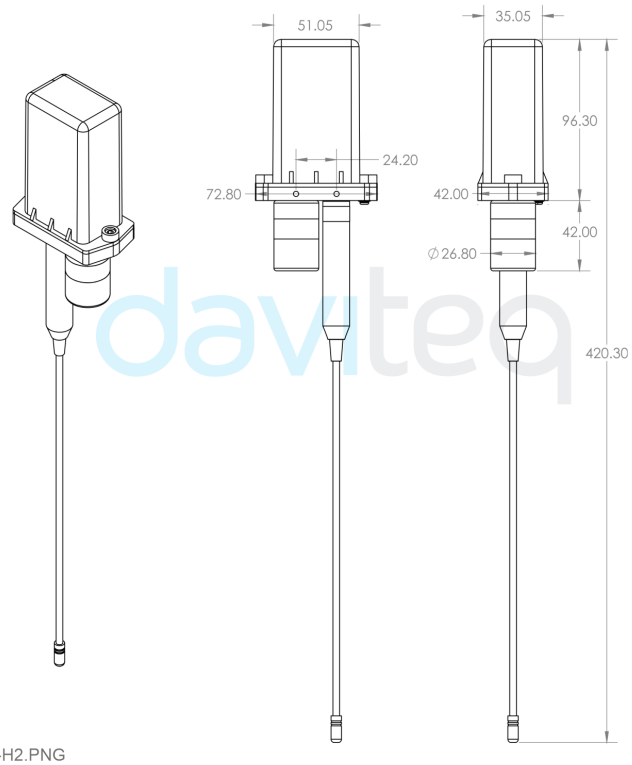
- NDIR CO2 sensor technology;
- Integrated temperature and humidity sensor;
- Best performance-to-price ratio;
- Dual-channel detection for superior stability;
- High performance Sub-GHz Wireless communication;
- Ultra-low power with 5 years battery;
- Plug & Play.

Typical Applications

Carbon Dioxide is a key indicator for indoor air quality. Thanks to new energy standards and better insulation, houses have become increasingly energy-efficient, but the air quality can deteriorate rapidly. Active ventilation is needed to maintain a comfortable and healthy indoor environment and improve the well-being and productivity of the inhabitants. Daviteq sensor solutions offer an accurate and stable monitoring of CO2 in the air, as well as temperature and humidity. This enables our customers to develop new solutions that increase energy efficiency and simultaneously support the well-being of everyone.

- Indoor Air Quality monitoring;
- HVAC Control;
- Green house;
- Smart Agriculture.

DIMENSION DRAWING OF WIRELESS SENSOR
(Unit: mm)



WS433-CO2-H2.PNG

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Specification

SENSOR SPECIFICATION	
CO2 Sensor technology	NDIR sensor
CO2 range/resolution/accuracy	0-40.000 ppm / 1ppm / (+/- 30ppm + 3% reading)
Repeatability	+/- 10ppm
Temperature Stability	+/- 2.5ppm / oC in range 0-50 oC
Temperature range/resolution/accuracy	-40..+70oC / 0.1oC / ± 0.5 °C in range 0-50 oC
Humidity range/resolution/accuracy	0-100%RH / 0.1%RH /+/- 3.0%RH in range 25-100% RH
Sensor Filter	316SS sintered filter
Sensor housing material / Rating	SS316/SS304 / for Indoor use
WIRELESS SPECIFICATION	
Data speed	Up to 50kbps
Transmission distance, LOS	1000m
Antenna	Internal Antenna
Battery	02 x AA 1.5-3.6VDC, up to 5 years operation, depends on the configuration
Frequency Band	ISM 433MHz, Sub-GHz technology from Texas Instrument, USA
International Compliance	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval Certification	QCVN 73:2013/BTTTT, QCVN 96:2015/BTTTT (DAVITEQ B00122019)
Security Standard	AES-128

Operating temperature of PCB	-40oC..+60oC (with AA L91 Energizer)
Housing/Protection	Aluminum+Polycarbonate / IP67
Dimension	H180xW73xD42
Net weight	<400 grams

Ordering Code

Item code	Descriptions
WS433-CO2-01	WIRELESS CARBON DIOXIDE GAS SENSOR, 433MHZ, 0-40.000PPM, 2 X AA 1.5 VDC BATTERY, IP67

⚠ Link for full datasheet: https://filerun.daviteq.com/wl/?id=k8VO8VoA2iCUsIbvvctyoJw7FvAZ0LNx

⚠ Link for manual:

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