

Sigfox Carbon Dioxide Sensor



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

SKU: WSSFC-CO2

OBSOLETE, replaced by

Safe Zone

Hazardous Zones

SIGFOX CO2 SENSOR WSSFC-CO2



WSSFC-CO2-H1.JPG

WSSFC-CO2 is a Sigfox-ready 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 complete Wireless and Sensor package run on 2 x AA battery 1.5V for 2-5 years with 15 minutes update. It can support all RC zones. 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

- Sigfox Ready**
Device are best operating performance on the SIGFOX network
- 5-10 years battery**
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can operated 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



WSSFC-CO2-H2.JPG

DAVITEQ TECHNOLOGIES INC

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Created date: Dec-21-2022


Updated date: Aug-28-2024


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Specification

CO ₂ Sensor technology	NDIR sensor
CO ₂ range/resolution/accuracy	0-5000 ppm/ 1ppm/ (±30ppm + 3% reading) (other ranges: 0-10000ppm, 0-100%)
Repeatability	±10ppm
Temperature Stability	±2.5ppm/°C in range 0-50°C
Temperature range/resolution/accuracy	-40~70°C/ 0.1°C/ ±0.5°C in range 0-50°C
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
COMMUNICATION	
Sigfox zones	select RC1-RC2-RC3c-RC4-RC5 -RC6-RC7
Antenna	Internal Antenna 2.0 dBi
Battery	02 x AA Type 1.5VDC, working time up to 10 years (depends on configuration)
RF Module complies to	CE, FCC, ARIB
Working temperature	-40~60°C (using Energizer® Lithium Ultimate AA battery)
Housing/Protection	Aluminum + Polycarbonate/ IP67
Dimension	H180xW73xD42
Net weight	< 400g

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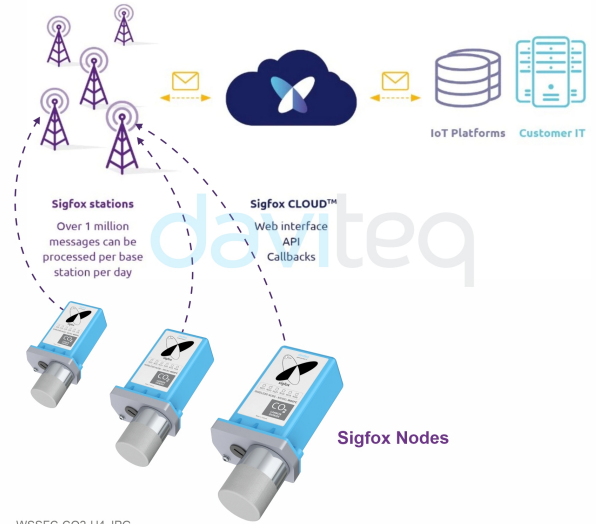
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Monitoring Carbon Dioxide in The Air



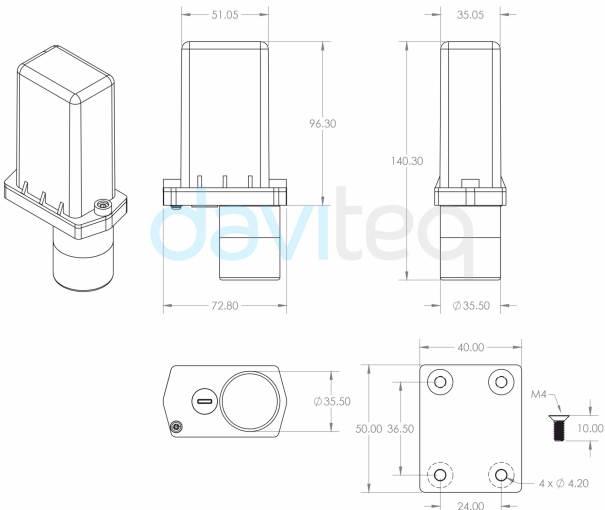
WSSFC-CO2-H3.JPG

SYSTEM ARCHITECTURE



WSSFC-CO2-H4.JPG

DIMENSION DRAWING OF WIRELESS SENSOR
(Unit: mm)



WSSFC-CO2-H5.JPG

RECOMMENDED BATTERIES

E91 AA Alkaline battery

L91 AA Lithium battery

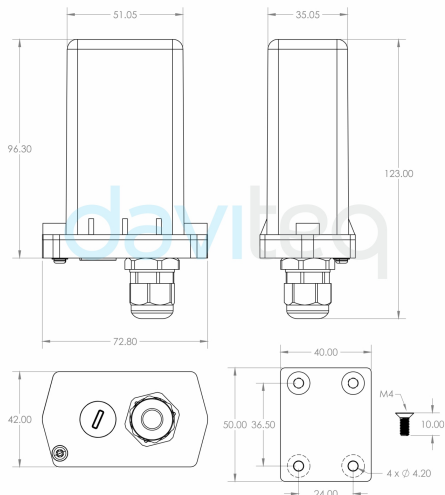


-18 .. + 60 oC working temperature
10-year shelf life
3000 mAh Capacity
Price: 1X

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

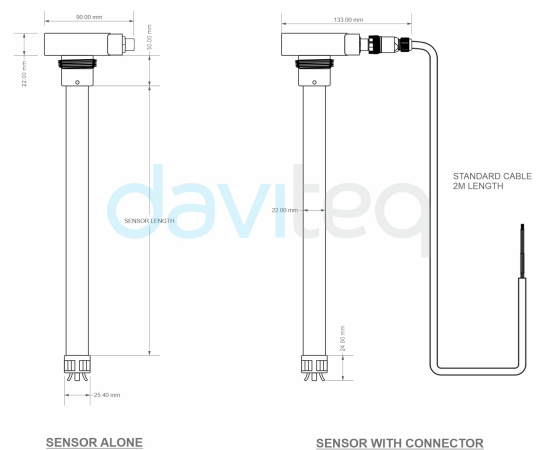
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DIMENSION DRAWING OF WIRELESS NODE
(Unit: mm)



WSSFC-CAP10-H7.JPG

DIMENSION DRAWING OF FUEL SENSOR
(Unit: mm)



WSSFC-CAP10-H8.JPG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSSFC-CO2-5000	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~5000ppm, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-10000	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~10000ppm, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-100	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~100%, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-5000-TH	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~5000ppm, Humidity and Temperature, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-10000-TH	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~10000ppm, Humidity and Temperature, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-100-TH	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~100%, Humidity and Temperature, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-5000-PTH	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~5000ppm, Humidity and Temperature, and Barometric Pressure, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-10000-PTH	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~10000ppm, Humidity and Temperature, and Barometric Pressure, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones
WSSFC-CO2-100-PTH	SIGFOX-READY CARBON DIOXIDE GAS SENSOR, 0~100%, Humidity and Temperature, and Barometric Pressure, Internal antenna, Type AA battery 1.5VDC, IP67, for all RC zones

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