

# Sub-GHz Gas Detecting Sensor



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

SKU: WS433-G4

## WIRELESS GAS SENSOR WS433-G4



WS433-G4-H1.JPG



WS433-G4 is a Sub-GHz electrochemical-type gas sensor with a high sensitivity to low concentrations of detected gas, high selectivity, and a stable baseline. The device supports different types of gas such as CO, NO, NO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, O<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub>, Cl<sub>2</sub>, HCHO... Ultra-low Power design and smart firmware allow the sensor to last up to 5 years with a 02 x AA-type battery (depending on configuration). The sensor will transmit data at a hundred meters distance to the Wireless Coordinator WS433-CL. The coordinator will give output RS485 ModbusRTU to any SCADA or DCS system.

Typical Applications: Gas, toxic gas detecting, air quality monitoring for facility, building, pump station, HVAC...

### Applications

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

### Notes For Applications

- Select the suitable sensor range to get highest accuracy v.s sensor life.
- Have life time is 1-2 years, depends on sensor type and actual operating conditions;
- Need to be calibrated regularly (6-12 months), depends on actual operating conditions;
- Check carefully the working temperature and humidity of the application;
- Use the Rain guard or Splash guard for outdoor installation or where

**Sub-GHz Technology**  
High performance Sub-GHz wireless technology from TI

**Ultra-low power with 5 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 electrochemical-type gas sensor technology processing to deliver high accuracy and stable measurement

**Multiple choices of gas**  
Select CO, NO, NO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, O<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub>, Cl<sub>2</sub>, HCHO...

### DETECT AMMONIA GAS IN PROCESS PLANT



WS433-G4-H2.JPG

## DAVITEQ TECHNOLOGIES INC

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Created date: Dec-21-2022


Updated date: Aug-28-2024


1/4


## Specification

SENSOR SPECIFICATION	undefined
Gas sensor type and specification	<a href="#">List of compatible gas sensors and specification</a>
Sensor housing/ Rating	SS316/SS304 housing with 316SS sintered filter/ for Indoor use (buy the optional accessory rain-guard for outdoor installation)
SUB-GHZ TRANSMITTER	undefined
Technology	Sub-GHz, ISM 433MHz
Antenna	Internal Antenna
Battery	02 x AA Energizer® L91, life time up to 5-10 years (depending on configuration). Batteries are not included.
Frequency band and Power	433-434MHz, +10 dBm
Configuration	via Downlink
Data transmission mode	internal or alarms occur
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval Certificate	QCVN 73:2013/BTTTT, QCVN 96:2015/BTTTT (DAVITEQ B00122019)
Working temperature	-40~60°C (with AA L91 Energizer®)
Housing/Protection	Aluminum + Polycarbonate/ IP67
Dimension/ Net weight	H180xW73xD42/ < 400g

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2/4

MONITORING CARBON DIOXIDE IN THE AIR



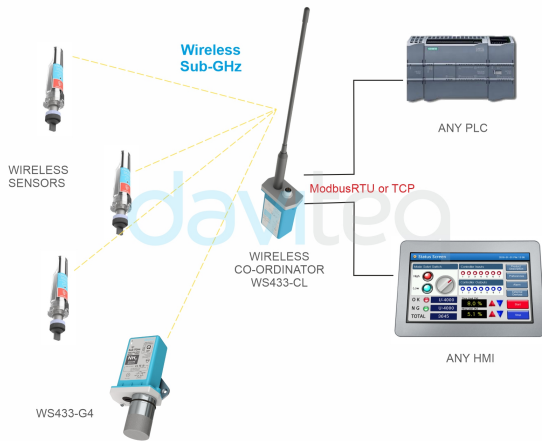
WS433-G4-H3.JPG

GAS SENSOR WITH RAIN GUARD FOR OUTDOOR INSTALLATION



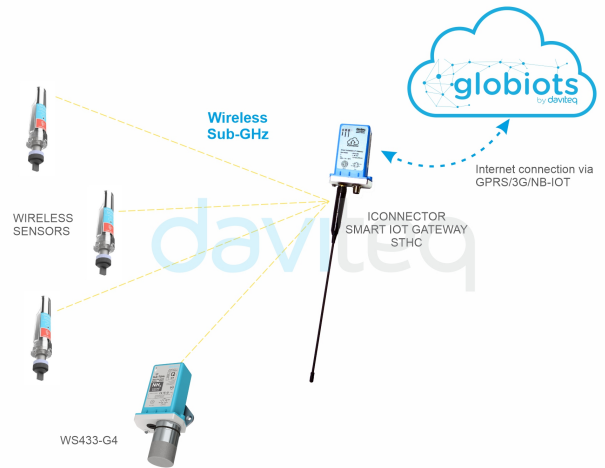
WS433-G4-H4.JPG

CONNECT WIRELESS SENSORS TO any PLC or HMI



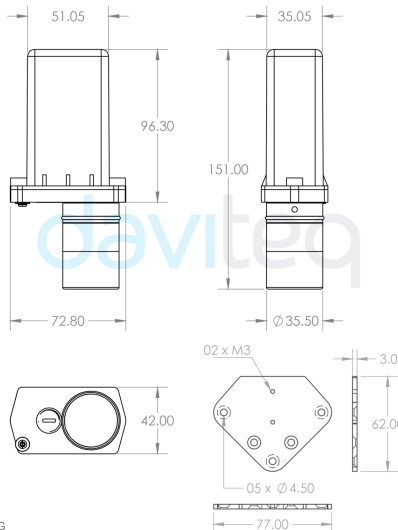
WS433-G4-H5.JPG

CONNECT WIRELESS SENSORS TO GLOBIOTS Platform



WS433-G4-H6.JPG

DIMENSION DRAWING OF WIRELESS SENSOR (Unit: mm)



WS433-G4-H7.JPG

RECOMMENDED BATTERIES

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


WS433-G4-H8.JPG


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## Ordering Information

ITEM CODE	DESCRIPTIONS
WS433-G4-CO-200-01	LoRaWAN Gas Detecting Sensor, Carbon Monoxide Gas CO, 0-200ppm
WS433-G4-H2S-50-01	LoRaWAN Gas Detecting Sensor, Hydrogen Sulfide Gas H <sub>2</sub> S, 0-50ppm
WS433-G4-NH3-100-01	LoRaWAN Gas Detecting Sensor, Ammonia Gas NH <sub>3</sub> , 0-100ppm
WS433-G4-Cl2-20-01	LoRaWAN Gas Detecting Sensor, Chlorine Gas Cl <sub>2</sub> , 0-20ppm
Accessories and optional items	
ACC-G4-RAINGUARD-01	Rain guard for G4 Gas Sensor
CALGAS-CL2-02	02-point Calibration Services for Chlorine Gas Cl <sub>2</sub>
CALGAS-CO-02	02-point Calibration Services for Carbon Monoxide Gas CO
CALGAS-H2S-02	02-point Calibration Services for Hydrogen Sulfide Gas H <sub>2</sub> S
CALGAS-NH3-02	02-point Calibration Services for Ammonia Gas NH <sub>3</sub>

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4/4