NSS470 CO2/Temp/RH Sensor

INNOVATIVE MONITORING FOR UNSEEN ENVIRONMENTAL FACTORS WITH UTMOST EASE.

Introducing the groundbreaking NviroSense NSS470 sensor – your ultimate solution for monitoring invisible environmental parameters with unmatched convenience. This state-of-the-art battery-powered IP66 wireless sensor detects CO2, air temperature, and humidity with exceptional precision, providing you with real-time insights into photosynthesis rate and indoor/outdoor air quality. With an impressive measuring range of 400 to 10000 ppm for CO2, and a wide operating temperature span from -40°C to 85°C, the NSS470 excels in diverse environments, ensuring reliable performance at all times. Not only that, but its ability to cover a humidity range from 0 to 100 %RH makes it a versatile choice for a multitude of applications.

- **Simple Configuration:** Provide a no-code experience that lets users finish configuration with 4 steps.
- **Minimal Maintenance Cost:** Features IP66 enclosure, Bluetooth configuration, wireless data transmission, and built-in 19Ah battery that jointly reduces the cost of maintenance.
- **Compatible with Worldwide LoRaWAN® Networks:** Compatible with different types of LoRaWAN® gateways and multiple LoRaWAN® Network Servers (Helium, TTN, etc.) to enable fast connection with local LoRaWAN® networks.
- **High-performance Guarantee:** Went through rigorous reliability tests to ensure high performance and great durability.

KEY SPECIFICATIONS

Category	Feature	Specification
CO2	Range	400 to 10000 ppm
	Accuracy	±(30 ppm +3% of reading) (extended range ±10% of reading)
	Resolution	1 ppm
Air Temperature	Range	-40 to +85 °C
	Accuracy	±0.2 °C
	Resolution	0.01 °C
	Long-term Drift	<0.03 °C/year
Air Humidity	Range	0 to 100 %RH
	Accuracy	±1.8 %RH
	Resolution	0.01 %RH
	Long-term Drift	<0.25 %RH/year
General Parameters	Product Model	NSS470
	Microcontroller	Wio-E5
	Support Protocol	LoRaWAN v1.0.3 Class A
	Built-in Bluetooth	App Tool to change parameters

General Parameters	Max Transmitted Power Sensitivity	19dBm
	Sensitivity	-136dBm@SF12 BW=125KHz
	Communication Distance	2 to 10km (depending on gateway antenna and environments)
	IP Rating	IP66
Operating Parameters & Battery	Operating Temperature	0 to +50 °C (Effective measurement range of CO2) -40 to +85 °C (CO2 module not included)
	Operating Humidity	0 to 90 % RH (non-condensing)
	Device Weight	285g
	Certification	CE / FCC / RoHS
	Battery Life	Up to 10 years**
	Battery Capacity	19Ah (non-rechargeable)
	Battery Type	Standard D-size SOCl2 Battery

FEATURES AT A GLANCE

YOUR WIRELESS NETWORK
Develop a fully owned private LoRa network to capture, route and process IoT data for your application at multiple facilities.

RUGGED DURABILITY WITH A BROAD SENSOR ARRAY
Robust enclosures provide a resilient platform for recording and delivering data from within a range of harsh environments.

COMPREHENSIVE SECURITY AND RELIABILITY
Robust multi-layer security at each interface to safeguard your network at every level.

BROAD CERTIFICATION AND APPROVALS
CFR 21 (part 11), PPECB, FCC, IC, CE, ASNZS, NCC, and Bluetooth SIG listing.

THE PLATFORM FOR BUILDING ACTIONABLE IoT INTELLIGENCE
Route sensor data to the cloud with NviroSense's simplified wireless connectivity deployment.

PERSONAL SUPPORT FOR YOUR IMPLEMENTATION
Support works with NviroSense engineering to help configure and deploy your application.

APPLICATION AREAS

PHARMACEUTICAL WAREHOUSING

COLD CHAIN MANAGEMENT & FOOD SAFETY

IN-FIELD AGRICULTURAL MONITORING

INDUSTRIAL & MINING APPLICATIONS

NVIROSENSE SUPPORT

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