

INDUSTRIAL PRODUCT DATASHEET

RS485 Carbon Monoxide CO Sensor: Modbus RTU, Air Quality Monitoring, Carbon Monoxide and Temperature

RS485 Carbon Monoxide CO Sensor: Modbus RTU, Air Quality Monitoring, Carbon Monoxide and Temperature — a compact, wall-mounted sensor measuring CO from 0 to 2000 ppm and temperature with RS485 Modbus RTU output for...

SKU

100069114

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PRICE

\$159.00(Excl. VAT)



Overview



The RS485 Carbon Monoxide CO Sensor is a compact, wall-mounted sensor for industrial processes, environmental monitoring, smart-home air quality systems, and laboratory research. It measures CO concentrations from 0 to 2000 ppm with a resolution of 10 ppm, provides calibrated temperature data, and supports RS485 Modbus RTU communication with a wide 5–28 V DC power input.

Key Features

The RS485 Carbon Monoxide CO Sensor is a compact, wall-mounted sensor widely used in industrial processes, environmental monitoring, smart-home air quality systems, and laboratory research. It measures CO concentrations from 0 to 2000 ppm—with a resolution of 10 ppm—and provides calibrated temperature data. Integrated temperature compensation, linear output, and low baseline drift help maintain stable readings under changing conditions. For easy integration, it supports RS485 Modbus RTU communication and low-power 5–28 V DC operation. Moreover, its IP50 design, reverse-polarity protection, and built-in surge, TVS, and ESD protection support reliable long-term use.

This sensor is available with an RS485 Modbus RTU interface. It is compatible with the [SenseCAP S2100 LoRaWAN® Data Logger](#), enabling low-power, long-range data transmission over LoRaWAN® networks.

Note: This sensor is rated IP50 and is designed for indoor environments. It is not suitable for direct outdoor exposure or locations with water ingress risks.

- **Integrated CO and Temperature Monitoring:** Measures carbon monoxide concentrations from 0 to 2000 ppm—with a resolution of 10 ppm—and provides calibrated temperature data. Moreover, its T90 response time of less than 35 seconds enables timely detection of concentration changes.
- **Temperature Compensation and Flexible Calibration:** Supports both sensor-sensitivity calibration and standard-gas calibration. Zero and span calibration help improve measurement accuracy. Meanwhile, configurable temperature-compensation coefficients and temperature-offset adjustment reduce the influence of changing ambient temperatures.
- **Industrial RS485 Modbus RTU Communication:** Uses the RS485 Modbus RTU interface for reliable long-distance data transmission and connection of multiple sensors on the same communication bus. Configurable device address, baud rate, parity, and data format make integration with industrial controllers, data loggers, and monitoring systems more flexible.
- **Compact, Low-Power and Protected Design:** Features a compact, wall-mounted structure and supports a wide 5–28 V DC power supply. Its low-power design helps reduce energy consumption. Furthermore, surge, reverse-polarity, TVS, and ESD protection improve operational reliability—supporting an expected service life of at least two years in air.

Recommendation for S2100 Data Logger

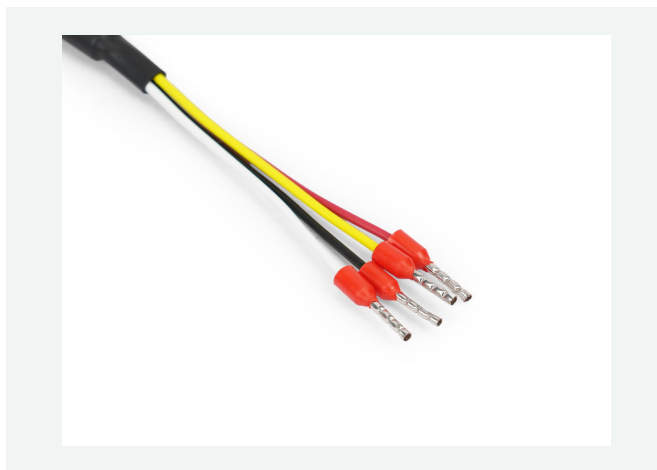
SenseCAP S2100 Data Logger can connect to Modbus RS485/Analog/GPIO industrial sensors including the [Grow Your Idea](#) and transmit data from sensors to the LoRaWAN network. Benefiting from its high robustness and waterproof and dustproof enclosure, the S2100 data logger can work under harsh environments such as high UV exposure, heavy rain, dusty conditions, etc. which is ideal for outdoor use. Based on LoRaWAN, it can cover a long transmission range of 2km in urban scenes and 10km in line-of-sight while keeping lower power consumption. Equipped with built-in Bluetooth and app service for OTA configuration and remote management, it enables quick setup and update. It can be battery-powered or connected to a 12V external power supply. When the 12V power supply is connected, the replaceable built-in battery is set to be used as the backup power supply.

Attention:

If you need to connect sensors or an external power supply for the S2100, please refer to the wiring diagram below. Please note that the sensor supply voltage range is 5–28 V, while the external power supply for the S2100 must be a stable 12 V supply.

Seeed also provides the [SenseCAP Portal](#) and [SenseCraft](#) to help users better manage and check data remotely.

Product Gallery



Specification

General Parameters	
Product Model	S-CO-01A
Sensor Description	RS485 Carbon Monoxide CO Sensor
Output Interface	RS485, Modbus-RTU
Default Serial Communication	Slave address: 1; baud rate: 9600 bps; data bits: 8; stop bits: 1
Power Supply	5-28V DC
Power Consumption	quiescent current <2mA @12V DC; maximum current during measurement <7mA @12V DC
Operating Temperature	-20 ~ 50 °C
Operating Humidity	15 to 90 %RH non-condensing
IP Rating	IP50
Installation	Wall mounting
Cable Length	2 meters
Dimensions	Sensor body: 111 x 25.5 mm (Length x Diameter)

Carbon Monoxide Concentration Measurement	
Range	0-2000ppm
Resolution	10ppm
Sensitivity	0.028±0.010 uA/ppm
Response Time(T90)	<35 seconds
Temperature Measurement	
Range	- 40~80°C
Resolution	0.01°C
Accuracy	± 0.3°C

Applications

- **Industrial Process Monitoring**
- **Environmental Monitoring**
- **Smart Home Air Quality Monitoring**
- **Laboratory and Scientific Research**

Part List

Carbon Monoxide CO Sensor	x1
Mounting Bracket	x1
Plastic Screw	x2
Metal Screw	x2

Compliance & Logistics

HSCODE	9027100090
USHSCODE	9027894590
UPC	
EUHSCODE	9027109000
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/RS485-Carbon-Monoxide-CO-Sensor-p-6946.html>
- [Datasheet for Carbon Monoxide CO Sensor](#)

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