

TEMPERATURE & HUMIDITY / DATA SHEET

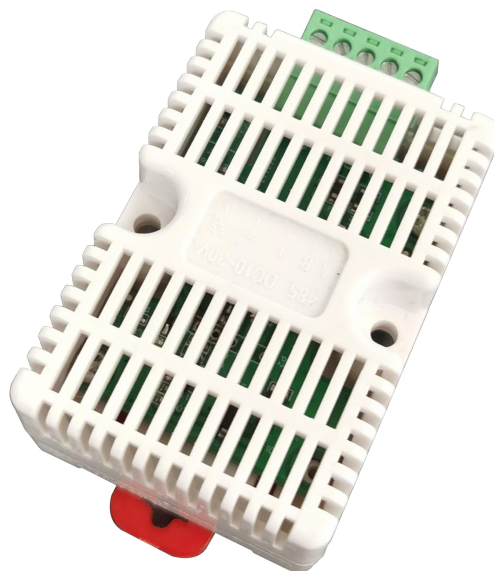
SS203-02

Temperature & Humidity Sensor

DIN-rail Modbus-RTU sensor with integrated temperature, humidity and atmospheric-pressure measurement.

Overview

- Integrated temperature/humidity sensing with a compact housing and built-in atmospheric-pressure measurement.
- Standard DIN35 rail clip for direct installation in control cabinets; wall mounting is also supported by the source description.
- RS485 Modbus-RTU interface with configurable communication address and baud rate; communication distance up to 2000 m.



Temperature Accuracy ±0.5 °C	Humidity Accuracy ±3%RH	Pressure Range 0–120 kPa	Output RS485
Key Advantages • Compact integrated temperature/humidity sensor with built-in atmospheric-pressure sensing. • Standard DIN35 rail mounting for convenient installation inside control cabinets. • Configurable Modbus-RTU address and baud rate for multi-device RS485 systems. • Pluggable terminal simplifies installation and maintenance. • Wide 5–30 V DC power input.		Application Scenarios • Control cabinets and electrical distribution panels. • Wall-mounted environmental monitoring. • Remote multi-device RS485 monitoring. • Greenhouse and field environmental observation. • Weather and environmental monitoring stations.	

MEASUREMENT PRINCIPLE

Measurement Principle

INTEGRATED DIGITAL SENSING

The transmitter integrates temperature/humidity and atmospheric-pressure sensing elements in a compact housing. Measured values are transmitted through the RS485 interface using the source-specified Modbus-RTU protocol. The supplied source does not provide a calibration equation; none is inferred here.

SYSTEM DATA

Technical Specifications

Item	Specification
Power Supply	5–30 V DC
Maximum Power Consumption	0.1 W
Atmospheric Pressure Accuracy	±0.15 kPa @ 25 °C, 101 kPa

Item	Specification
Relative Humidity Accuracy	±3%RH (60%RH, 25 °C)
Temperature Accuracy	±0.5 °C (25 °C)
Transmitter Operating Environment	-40 to +80 °C; 0-95%RH (non-condensing)
Atmospheric Pressure Range	0-120 kPa
Communication Protocol	Modbus-RTU
Output Signal	RS485
Long-term Stability – Pressure	-0.1 kPa/y
Long-term Stability – Temperature	≤0.1 °C/y
Long-term Stability – Humidity	≤1%RH/y
Response Time – Pressure	≤2 s
Response Time – Temperature	≤25 s (1 m/s wind speed)
Response Time – Humidity	≤8 s (1 m/s wind speed)
Parameter Setting	Via software

Output and Communication

The sensor uses standard RS485 communication with the source-specified Modbus-RTU protocol. The communication address and baud rate can be configured through software, and the source specifies a maximum communication distance of 2000 m. On a shared bus, do not reverse RS485 A/B and do not assign conflicting addresses to multiple devices.

MECHANICAL DATA

Mechanical Dimensions & Structure

The supplied source provides product and system structure images but no numeric external dimensions. The following views therefore retain the mounting, terminal and system-integration information without adding unprovided dimensions.

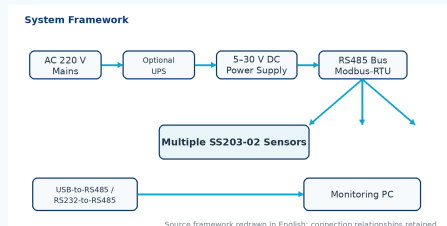
Product / terminal view



Compact DIN35-rail housing with pluggable terminal.

Source product image retained; no supplier watermark or third-party mark is present.

System framework



English redraw of the supplied RS485 system framework.

The source framework shows AC 220 V, optional UPS, 5-30 V DC supply, RS485 bus and monitoring computer integration.

ELECTRICAL CONNECTION

Wiring Instructions

The source terminal table defines the following five-position connection. Use a 5–30 V DC supply, verify polarity before energizing and keep RS485 A/B in the specified order.

No.	Function	Connection
1	RS485-A	RS485 A
2	RS485-B	RS485 B
3	Power +	5–30 V DC positive
4	Power –	Supply negative
5	No connection	No electrical connection

BUS WIRING NOTE

RS485 A/B must not be reversed. On a shared bus, each device must use a non-conflicting address.

INSTALLATION & OPERATION

Installation Notes

- Mount directly on a standard DIN35 rail in a control cabinet; wall mounting is also supported by the source description.
- Use the pluggable terminal and a 5–30 V DC supply; verify polarity before energizing.
- Set the Modbus address and baud rate through software and ensure unique addresses on a shared RS485 bus.

ORDERING INFORMATION

Product Selection

Code	Description
SS203-02	Model
QYWS-	Integrated atmospheric pressure, temperature and humidity
WS-	Temperature and humidity
N01-	RS485 communication, Modbus-RTU
8	DIN-rail housing

CONTACT / SUPPORT

SpeSense Technologies Inc.

Add: No. 9 Yuhe Road, Guitang Subdistrict, Yuhua District, Changsha City

Tel: +86-15386478166

Email: info@spesense.com

Web: www.spesense.com



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