

TEMPERATURE & HUMIDITY / DATA SHEET

SS203-01

Wall-mounted Temperature & Humidity Sensor

Wall-mounted sensor for stable temperature and relative-humidity monitoring in protected environments.

Overview

- Industrial-grade microprocessor and high-precision temperature/humidity sensor.
- IP65 enclosure described in the source material as rainproof, snowproof and air-permeable.
- RS485 Modbus-RTU or analog 4–20 mA / 0–5 V / 0–10 V output; configurable wiring.



Protection IP65	Temperature –40 to +80°C	Humidity 0–100%RH	Output options RS485 / Analog
Key Advantages • IP65 dustproof and waterproof wall-mounted enclosure with good air permeability. • Imported high-precision sensing element for stable temperature and humidity measurement. • Particle-sintered probe sheath with the probe directly connected to the enclosure. • Wide 10–30 V DC supply and isolated power, measurement and signal sections.		Application Scenarios • Greenhouses and agricultural facilities. • Factories and production workshops. • Apartments, schools and warehouses. • Communication rooms, automation and automatic-control systems.	

MEASUREMENT & CONSTRUCTION

Technical Principle

The source material specifies an industrial-grade microprocessor and an imported high-precision temperature sensor for reliable temperature and relative-humidity measurement. The sensing element is housed in a particle-sintered probe sheath that provides air permeability while supporting the protected wall-mounted enclosure design. The source also states that the power input, temperature measurement unit and signal output are completely isolated.



SYSTEM DATA

Technical Specifications

Item	RS485 output	4–20 mA / 0–5 V / 0–10 V
Power supply	10–30 V DC	10–30 V DC
Maximum power consumption	0.1 W (at DC 24 V)	1.2 W
Measurement range	–40°C to +80°C; 0–100%RH	–40°C to +80°C; 0–100%RH
Protection rating	IP65	IP65
Accuracy	±3%RH (60%RH, 25°C); ±0.5°C (25°C)	±3%RH (60%RH, 25°C); ±0.5°C (25°C)
Resolution	0.1°C; 0.1%RH	0.1°C; 0.1%RH
Data refresh time	1 s	—
Component temperature resistance	–40°C to +80°C; 0–95%RH, non-condensing	–40°C to +80°C; 0–95%RH, non-condensing
Long-term stability	Humidity ≤1%RH/year; temperature ≤0.1°C/year	Humidity ≤1%RH/year; temperature ≤0.1°C/year
Response time	Temperature ≤25 s; humidity ≤8 s (at 1 m/s air speed)	Temperature ≤25 s; humidity ≤8 s (at 1 m/s air speed)
Analog wiring options	Not applicable	Three-wire or four-wire; two-wire option available for 4–20 mA

Note: RS485 and analog values are shown in separate columns where the supplied source table provides different specifications.

OUTPUT & INTERFACE

Output and Communication

Choose the output mode according to the host controller and installation wiring. The output options below are taken from the supplied source material.

Output mode	Interface	Source configuration details
Digital	RS485 / Modbus-RTU	10–30 V DC; maximum power consumption 0.1 W at DC 24 V; data refresh time 1 s
Analog	4–20 mA / 0–5 V / 0–10 V	10–30 V DC; maximum power consumption 1.2 W; three-wire or four-wire wiring; two-wire option for 4–20 mA

Probe option

Code	Description	Code	Description
1	External copper-head probe	2	External PE probe

Code	Description	Code	Description
3	External Siemens probe	4	External finished probe
5	Extended finished probe	6	Extended waterproof probe
7	Extended high-sensitivity probe	8	Extended standard probe
9	Extended metal waterproof probe	A	Extended 1/4-inch pipe-thread probe
B	Extended wide-temperature probe	ZJ	Extended clamp probe
HD	Movable-thread probe	FW	Honeycomb probe; humidity-responsive, not dustproof, withstands 2.5 m/s wind
FF	316 stainless-steel wind-resistant probe; withstands 30 m/s wind and blocks fine dust	THZ50	Stainless-steel temperature and humidity probe

ORDERING INFORMATION

Product Selection

Use the code segments below to specify the communication option, wall-mounted enclosure and probe variant. Codes and descriptions are translated from the supplied source table.

Category	Code	Description
Base model	SS203-01	Wall-mounted temperature and humidity sensor
Communication	4G-	4G version
Enclosure	2-	Wall-mounted enclosure

MECHANICAL DATA

Mechanical Dimensions & Installation

The source drawing indicates a main enclosure width of 110 mm, height of 85 mm and side depth of 44 mm. Numeric dimensions are retained and the supplier label has been removed.



Source dimensions: 110 mm × 85 mm enclosure face; 44 mm side depth

INSTALLATION & OPERATION

Installation Notes

Follow the selected output version and probe configuration during installation. The following notes summarize the supplied product information.

- Mount the enclosure on a wall or other suitable vertical surface with the probe exposed to the monitored air.
- Provide a 10–30 V DC supply and select RS485 or analog wiring according to the ordered version.
- For analog versions, use the three-wire or four-wire method; use the two-wire option only for the 4–20 mA configuration.
- Keep the air-permeable probe area unobstructed and follow the specified non-condensing operating condition.
- Confirm the selected probe code and communication option before commissioning.

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IP65 wall-mounted enclosure

Configuration & Support Summary

- Select the communication option, enclosure and probe variant through the ordering code.
- RS485 Modbus-RTU and analog output versions are available in the supplied source configuration.
- Analog versions support three-wire or four-wire wiring; a two-wire option is available for 4–20 mA.
- Engineering support is available for product selection, customization and technical integration.

Free cloud platform

Real-time data transmission, remote monitoring



CONTACT / SUPPORT

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