WIND MEASUREMENT / DATA SHEET

SS104-01A
Heated Integrated Wind Speed and Direction Sensor

Heated wind speed and direction monitoring for cold-weather and outdoor operation.

Overview

- SS104-01A measures wind speed and wind direction and converts both values into an RS485 signal for direct transmission to recording equipment.
- The aluminum-alloy housing uses precision die-casting and protected internal circuits for weather resistance, strength and corrosion resistance.
- The heated configuration is specified with 60 W heating power and an operating temperature range of -20 to +85 °C.



Wind speed **0-50 m/s**	**Wind direction** **16 directions**	**Output** **RS485 Modbus RTU**	**Heating** **60 W**
Power **DC 10-30 V**	**Accuracy** **±0.5 m/s; ±3% FS**	**Resolution** **22.5° direction**	**Protection** **IP65**

Key Advantages

- Integrated wind speed and direction measurement in one sensor.
- Heated configuration with 60 W heating power.
- Aluminum-alloy structure with weather and corrosion resistance.
- RS485 Modbus RTU digital output.
- Low power consumption and strong anti-electromagnetic interference capability.

Application Scenarios

- Engineering machinery, cranes and tower cranes.
- Railways, ports, docks and power plants.
- Meteorological and environmental monitoring.
- Cold-weather outdoor wind monitoring.
- Cableways, greenhouses, agriculture and other industrial processes

Measurement Principle

The integrated sensor detects ambient wind speed and wind direction, converts the measured values into an RS485 Modbus RTU signal, and transmits the signal to recording or control equipment. The heated configuration adds 60 W heating power for operation across the specified temperature range.

Technical Specifications

Item	Specification
Digital output	RS485 (Modbus RTU)
Power supply	DC 10-30 V

Item	Specification
Heating power	60 W
Measuring range	Wind speed: 0-50 m/s; wind direction: 16 directions, 0-360°
Wind speed accuracy	±0.5 m/s (<5 m/s); ±3% FS (≥5 m/s)
Wind direction accuracy	16 directions; ±3°; resolution 22.5°
Maximum power consumption at DC 24 V	RS485 type: ≤300 mW
Starting wind speed	≥1 level wind
Operating temperature	-20 to +85 °C
Protection level	IP65

Note: Please inform SpeSense if special specifications are required. Final configuration is subject to the confirmed order.

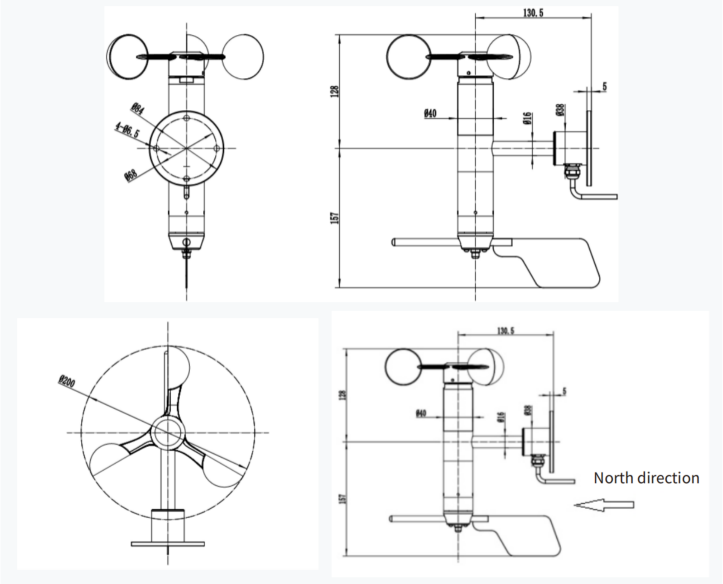
Output and Communication

Output format	M12 pinout	Line color	Definition
RS485 output	1	Brown	+Vcc
RS485 output	2	White	RS485A
RS485 output	3	Blue	GND / Heat-
RS485 output	4	Black	RS485B
RS485 output	5	Gray	Heat+

The source document specifies RS485 Modbus RTU output with a five-pin M12 connection. Confirm the final wiring before connection.

Mechanical Dimensions

The source drawing shows the heated mounting arrangement, the North direction reference, the rotor diameter and the M12 connection.



Dimension drawing | Units: mm

Product Selection

Selection	Configuration
Base model	SS104-01A - Heated Integrated Wind Speed and Direction Sensor
Output	RS485 (Modbus RTU)
Power supply	DC 10-30 V
Heating power	60 W
Electrical connection	M12 connector; 5-pin wiring shown in this datasheet
Measurement	Wind speed 0-50 m/s; wind direction 16 directions over 0-360°

Specify SS104-01A together with the required installation and wiring configuration.

CONTACT / SUPPORT

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