WIND MEASUREMENT / DATA SHEET

SS104-01
Integrated Wind Speed and Direction Sensor

Integrated measurement of wind speed and wind direction for indoor and outdoor monitoring.

Overview

- SS104-01 measures wind speed and wind direction and converts both values into electrical signals 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 source document describes low power consumption, strong anti-interference capability and stable operation in indoor and outdoor environments.



Wind speed **0-50 m/s**	**Wind direction** **16 directions**	**Outputs** **0-5 / 0-10 V; 4-20 mA**	**Digital** **RS485 Modbus RTU**
Power **DC 12-30 V**	**Accuracy** **±0.5 m/s; ±3% FS**	**Resolution** **22.5° direction**	**Starting wind** **≥1 level**

Key Advantages

- Integrated wind speed and direction measurement in one sensor.
- Small size, easy installation and compact appearance.
- Aluminum-alloy structure with weather and corrosion resistance.
- Wide power adaptability and long signal transmission distance.
- 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.
- Cableways, greenhouses, agriculture and clean spaces.
- Air-conditioning, energy-saving monitoring and other industrial processes

Measurement Principle

The integrated sensor detects ambient wind speed and wind direction, converts the measured values into electrical signals, and transmits the signals to recording or control equipment. The source document identifies 16 wind-direction positions over 0-360° and a wind-speed range of 0-50 m/s.

Technical Specifications

Item	Specification
Voltage output type	0-5 VDC; 0-10 VDC
Current output type	4-20 mA
Digital output	RS485 (Modbus RTU)

Item	Specification
Power supply	DC 12-30 V; DC 15-30 V for 0-10 VDC output
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	Voltage output: ≤300 mW; current output: ≤500 mW; RS485: ≤300 mW
Starting wind speed	≥1 level wind

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

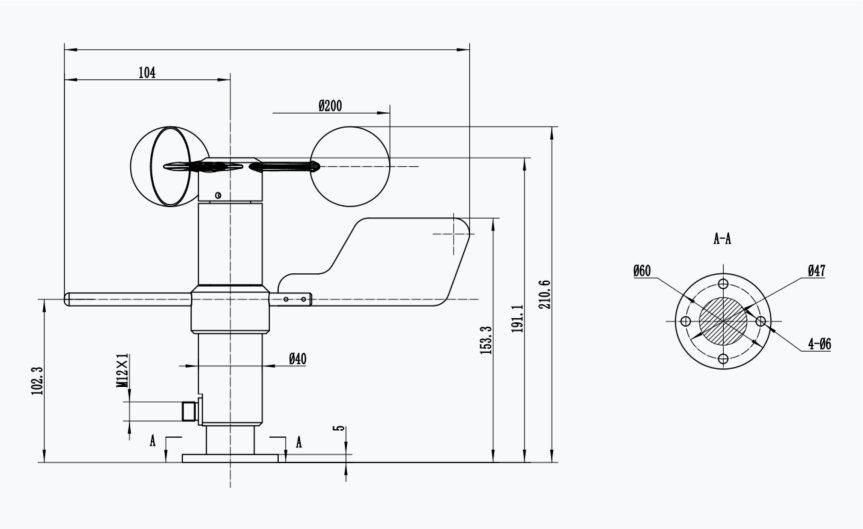
Output and Communication

Output	Pin	Line color	Definition
Current / voltage output	1	Brown	+Vcc
Current / voltage output	2	White	Wind speed: +Iout1 / +Vout1
Current / voltage output	3	Blue	GND
Current / voltage output	4	Black	Wind direction: +Iout2 / +Vout2
RS485 output	1	Brown	+Vcc
RS485 output	2	White	RS485A
RS485 output	3	Blue	GND
RS485 output	4	Black	RS485B

Confirm the selected output and power-supply combination before connection.

Mechanical Dimensions

The source drawing shows a maximum rotor diameter of Ø200 mm, housing diameter Ø40 mm, flange diameter Ø60 mm, 4 × Ø6 mm mounting holes and an M12 × 1 connector.



Dimension drawing | Units: mm

Product Selection

Selection	Configuration
Base model	SS104-01 - Integrated Wind Speed and Direction Sensor
Output selection	0-5 VDC; 0-10 VDC; 4-20 mA; RS485 (Modbus RTU)
Power selection	DC 12-30 V; DC 15-30 V for 0-10 VDC output
Electrical connection	M12 × 1 connector; 4-pin wiring shown in this datasheet
Measurement	Wind speed 0-50 m/s; wind direction 16 directions over 0-360°

Specify SS104-01 together with the required output, power-supply and wiring configuration.

CONTACT / SUPPORT

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