

WIND MONITORING / DATA SHEET

SS101-01

Wind Speed Sensor

Meteorological wind speed sensor with configurable analog and digital outputs.

Overview

- SS101-01 measures environmental wind speed and converts wind cup rotation into an electrical signal for recording and control.
- The sensor uses non-contact magnetic sensing, an integrated digital circuit and a sealed metal structure designed for outdoor monitoring applications.
- Analog and digital output configurations are available according to the selected order configuration.



Measuring Range 0-30 / 0-50 / 0-60 m/s	Accuracy ±0.5 m/s (<5 m/s); ±3% FS (≥5 m/s)	Output 4-20 mA / RS485	Power Supply DC 12-30 V
Wind Resistance >70 m/s	Protection IP65	Operating Window -20°C to +85°C	Humidity 0-95% RH, non- condensing

Key Advantages

- Non-contact magnetic sensing measurement.
- Built-in high-performance sensor for accurate and reliable data collection.
- Wide measurement range with low starting wind speed.
- Full-metal housing with corrosion resistance and strong wind resistance.
- Fault-tolerant circuit protection and multi-level lightning and surge protection design.

Application Scenarios

- Factories, power plants, ports and mines.
- Meteorological stations and environmental monitoring.
- Wind turbines and large mechanical equipment.
- High-altitude operation process monitoring.
- Other industrial processes where wind speed safety monitoring is required.

MEASUREMENT PRINCIPLE

Technical Principle

The wind cup rotates with the ambient horizontal wind. Non-contact magnetic sensing detects the rotation, while the built-in digital circuit produces an electrical signal that is linearly related to wind speed for recording, monitoring and control.

SYSTEM DATA

Technical Specifications

Item	Specification
Product model	SS101-01
Output signal	4-20 mA standard; RS485 optional; 0-5 V optional as listed on the product webpage
Power supply	DC 12-30 V
Measuring range	0-30 m/s, 0-50 m/s or 0-60 m/s
Starting wind speed	≤0.5 m/s
Accuracy	±0.5 m/s (<5 m/s); ±3% FS (≥5 m/s)
Wind resistance	>70 m/s
Operating temperature	-20°C to +85°C
Operating humidity	0-95% RH, non-condensing
Electrostatic protection	15 kV
Protection rating	IP65
Housing / wind cup material	Aluminum alloy / polyester coating
Electrical connection	Direct outlet; standard cable length 3 m

Note: Technical indicators and cable definitions may differ from the actual product. Verify the final specification and wiring against the actual order.

OUTPUT / COMMUNICATION

Output Interfaces

Item	Specification
4-20 mA	Standard current output for analog acquisition
RS485	Optional digital output
0-5 V	Optional output listed on the product webpage; verify final order configuration

ORDERING INFORMATION

Product Selection

Item	Specification
Base model	SS101-01 - Wind Speed Sensor

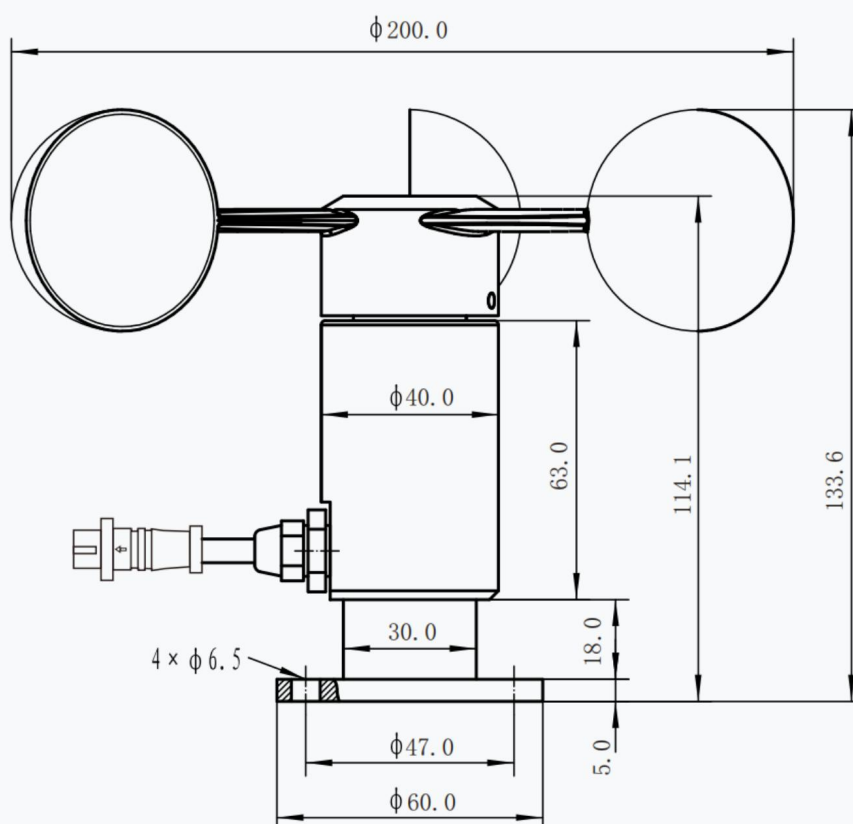
Item	Specification
Output selection	4-20 mA standard; RS485 optional; 0-5 V optional as listed on the product webpage
Electrical connection	Direct outlet; standard cable length 3 m
Precision	± 0.5 m/s (< 5 m/s); $\pm 3\%$ FS (≥ 5 m/s)
Measurement unit	m/s

Specify SS101-01 together with the required output configuration. Final cable definitions and technical indicators are subject to the actual order.

MECHANICAL DATA

Mechanical Dimensions

Source dimensions are retained in millimeters. Key dimensions: maximum rotor diameter $\varnothing 200$ mm; overall height 138.6 mm; housing diameter $\varnothing 40$ mm; flange diameter $\varnothing 60$ mm; $4 \times \varnothing 6.5$ mm mounting holes.



Dimension drawing | Units: mm

ELECTRICAL CONNECTION

Wiring Instructions

Wire colors and functions below are translated from the source wiring table. Verify final wiring against the supplied product configuration before installation.

Output	Pin	Function	Wire color
4-20 mA	1	+Vcc (power positive)	Red
4-20 mA	2	GND (power negative)	Black
4-20 mA	3	+Iout (output positive)	White
4-20 mA	4	PE (ground)	Yellow
RS485	1	+Vcc (power positive)	Red
RS485	2	GND (power negative)	Black
RS485	3	RS485A	White
RS485	4	RS485B	Yellow

Note: Other wiring methods can be customized; the specific wiring is subject to the product order.

CONFIGURATION AND SUPPORT

Selection Summary

Configuration Summary

- 4-20 mA is listed as the standard output.
- RS485 is listed as an optional digital output.
- 0-5 V is listed as an optional output on the product webpage.
- Specify SS101-01 and the required output configuration at order.

Field Use Summary

- Wind speed monitoring in factories, power plants, ports and mines.
- Meteorological and environmental monitoring stations.
- Wind turbines and large mechanical equipment.
- High-altitude operation process monitoring.

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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