WIND MEASUREMENT / DATA SHEET

SS101-05A
Low-Temperature Wind Speed Sensor

Heated all-metal wind speed sensing for reliable monitoring in cold, dusty and industrial environments.

Overview

- SS101-05A is a high-performance wind speed sensor for stable and accurate ambient wind speed measurement.
- Built-in temperature detection and PTC heating automatically activate or deactivate heating as ambient temperature changes.
- The all-metal housing, aluminum alloy wind cups and sealed components support severe cold, dusty and outdoor environments.



Measuring range	Start speed	Accuracy	IP rating
0-50 / 0-30 m/s	>=0.5 m/s	+/-0.5 m/s / +/-3%FS	IP65
Heating	**Heating power**	**Start temp.**	**Stop temp.**
PTC / 24 VDC	48 W	3 C +/-2 C	40 C +/-5 C

Key Advantages

- Non-contact magnetic sensing measurement principle.
- Built-in high-performance sensor for accurate and reliable data collection.
- Automatic PTC heating control for severe cold environments.
- All-metal housing with corrosion resistance and strong wind resistance.
- Aluminum alloy wind cups for operation in harsh environments.
- Fault-tolerant circuit protection, CE EMC and multi-level lightning/surge protection are stated on the source page.

Application Scenarios

- Factories and power plants.
- Ports, industrial and mining sites.
- Wind turbines and large-scale machinery.
- High-altitude operations and construction machinery.
- Outdoor wind monitoring in cold environments.

Measurement Principle

SS101-05A uses non-contact magnetic sensing. The internal circuit captures anemometer cup rotational speed and produces an electrical output linearly related to ambient horizontal wind speed. Built-in temperature detection controls the PTC heating function according to ambient temperature.

Technical Specifications

Item	Specification
Measuring range	0-30 m/s; 0-50 m/s
Operating voltage	15-30 VDC
Start-up wind speed	>=0.5 m/s

Item	Specification
Accuracy	+/-0.5 m/s (<5 m/s); +/-3%FS (>=5 m/s)
Output signal	4-20 mA; 0-5 VDC; 0-10 VDC; RS485 (Modbus)
Operating temperature	-20 C to +85 C
Operating humidity	0%-95% RH, non-condensing
Wind resistance	>70 m/s for 30 min
IP rating	IP65
Body material	Aluminum alloy / polyester coating
Wind cup material	Aluminum alloy
Heating method	PTC heating
Heating voltage	24 VDC (48 W)
Heating start temperature	3 C +/-2 C
Heating stop temperature	40 C +/-5 C
Burst immunity	Standard: Level 3 (2 kV, 100 kHz), Class B; lightning-resistant: Level 4 (4000 V, 100 kHz), Class B
Surge immunity	Standard: Level 1 (common mode 500 V, differential mode 250 V), Class B; lightning-resistant: Level 4 (common mode 4000 V, differential mode 2000 V), Class B

Specific electrical performance and wiring definitions are subject to the actual product and selected configuration.

Output / Communication

Output Options

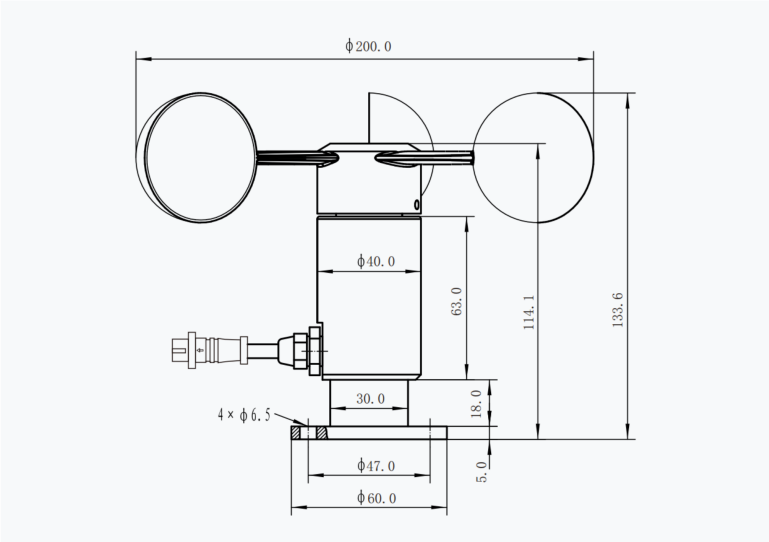
- 4-20 mA analog output.
- 0-5 VDC analog output.
- 0-10 VDC analog output.
- RS485 output using Modbus protocol.

Heating and Electrical Notes

- 15-30 VDC operating supply.
- PTC heating: 24 VDC, 48 W.
- Heating starts at 3 C +/-2 C and stops at 40 C +/-5 C.
- Verify the actual output and wiring configuration before connection.

Mechanical Dimensions / Installation

The official product page presents a dimensions figure but does not expose its dimension values in text. The drawing below is provided as a compact-form-factor reference; verify the final selected configuration before installation.



Reference compact-form-factor drawing; verify final configuration

Product Selection / Ordering Information

Selection	Configuration
Base model	SS101-05A - Low-Temperature Wind Speed Sensor
Operating voltage	15-30 VDC
Output signal	4-20 mA; 0-5 VDC; 0-10 VDC; RS485 (Modbus)
Construction	All-metal housing with aluminum alloy wind cups
Heating method	PTC heating
Heating supply	24 VDC (48 W)
Heating thresholds	Start: 3 C +/-2 C; stop: 40 C +/-5 C
Measuring range	0-30 m/s; 0-50 m/s

Specify SS101-05A with the required output and installation configuration. Final connection details are subject to the actual product.

Electrical Connection / Wiring

The official page lists output signal families but does not provide a pin-level wiring table in text. Use the wiring definition supplied with the selected product configuration; do not assume a universal pin assignment.

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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