WIND MEASUREMENT / DATA SHEET

SS101H-02A
Anti-freezing Wind Speed Sensor

Heated wind speed measurement for reliable monitoring in freezing rain, snow and harsh outdoor environments.

Overview

- SS101H-02A is an anti-freezing wind speed sensor for accurate ambient wind speed measurement in harsh climates.
- Non-contact magnetic sensing and a built-in analog circuit provide a wind speed signal linearly related to horizontal wind speed.
- The sensor is designed for low temperature, freezing rain, snow, frost, heavy rain, dust, strong wind and lightning-prone environments.



Measuring range 0-50 m/s	Start speed <=0.5 m/s	Accuracy +/-0.5 m/s / 3%FS	Protection IP66
Heating 24 VDC	Heating power 120 W	Start temp. 6 C +/-2 C	Stop temp. 60 C +/-5 C

Key Advantages

- Non-contact magnetic sensing measurement principle.
- Built-in analog circuit with a linear relationship to ambient horizontal wind speed.
- Heating voltage of 24 VDC and heating power of 120 W.
- Aluminum alloy wind cups with resistance to corrosion and strong wind.
- Fault-tolerant circuit protection helps prevent damage from wrong wiring.
- Multi-level lightning protection, anti-surge design and 15 kV electrostatic protection.

Application Scenarios

- Desert and other harsh outdoor environments.
- Wind power generation.
- Ultra-low-temperature sites.
- Freezing rain, snow and frost monitoring.
- High-humidity wind speed monitoring.

Measurement Principle

SS101H-02A uses non-contact magnetic sensing. The internal analog circuit captures wind-cup rotational speed and produces an electrical signal with a linear relationship to ambient horizontal wind speed. The source identifies the sensor as an anti-freezing design for low-temperature and freezing conditions.

Technical Specifications

Item	Specification
Measuring range	0-50 m/s
Wind resistance	>=60 m/s
Operating voltage	18-36 VDC
Resolution	0.1 m/s
Heating voltage	24 VDC (120 W)
Electrostatic protection	15 kV
Start-up wind speed	<=0.5 m/s
Output signal	4-20 mA; 0-20 mA; 0-5 V; 0-10 V
Operating temperature	-40 C to +70 C
Accuracy	+/-0.5 m/s (wind speed <=30 m/s); 3%FS (wind speed >30 m/s)
Wind cup material	Aluminum alloy
Working humidity	0-100% relative humidity
Protection level	IP66
Heating start temperature	6 C +/-2 C
Heating stop temperature	60 C +/-5 C
Measurement principle	Non-contact magnetic sensing

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

Output / Electrical Characteristics

Output Options

- 4-20 mA analog output.
- 0-20 mA analog output.
- 0-5 V analog output.
- 0-10 V analog output.

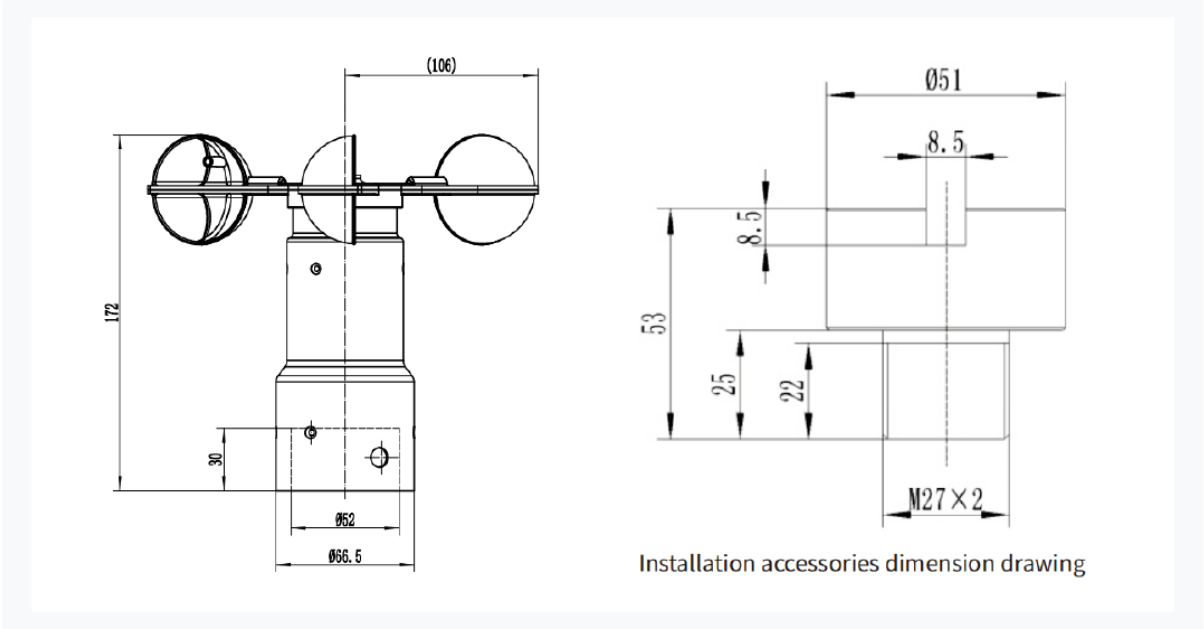
Heating and Protection

- 18-36 VDC operating voltage.
- Heating voltage: 24 VDC; heating power: 120 W.
- Heating starts at 6 C +/-2 C and stops at 60 C +/-5 C.
- 15 kV electrostatic protection; multi-level lightning and surge protection.

Mechanical Dimensions / Installation

The source drawing presents the wind-cup assembly, mounting base and installation accessories. Dimension labels are retained in the drawing below; verify the final selected configuration and mounting orientation before installation.

Dimensions



Installation accessories dimension drawing

Dimension drawing reproduced from the source PDF

Product Selection / Ordering Information

Selection	Configuration
Base model	SS101H-02A - Anti-freezing Wind Speed Sensor
Output / power option 1	4-20 mA / 24 VDC
Output / power option 2	0-5 VDC / 24 VDC
Output / power option 3	0-10 VDC / 24 VDC
Electrical connection	Aviation plug
Extended function	Heating type
Accuracy option	+/-3%FS
Measuring range code	M - wind speed in m/s

Specify SS101H-02A with the required output/power option, electrical connection and measurement range. Final connection details are subject to the actual product.

Electrical Connection / Wiring

The source specifies an aviation plug as the electrical connection option but does not provide a pin-level wiring table. Use the wiring definition supplied with the selected product configuration.

CONTACT / SUPPORT

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