

ENVIRONMENTAL MONITORING / DATA SHEET

SS101H-01

Wind Speed Sensor

Rugged cup-anemometer wind speed sensor for stable industrial and outdoor monitoring, with multiple analog, pulse and RS485 output options.

Equipment Overview

High-reliability wind speed sensor for stable, accurate environmental monitoring in industrial and outdoor environments. Built-in digital circuit with electromagnetic-interference and lightning-surge protection; sealed rotating and internal structures resist water, salt spray and sand/dust intrusion. Outputs include 4–20 mA, 0–5 VDC, 0–10 VDC, pulse and RS485 (Modbus), depending on configuration.



0–30 / 0–50 m/s MEASURING RANGE	≥0.5 m/s STARTING WIND SPEED	IP65 PROTECTION LEVEL	–20 to +85 °C OPERATING TEMPERATURE
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CAPABILITY

Key Advantages

Sensing & Protection

- Non-contact magnetic sensing for reliable wind-speed measurement.
- Wide range with low starting wind speed.
- High-performance sensing and digital signal-processing circuit.
- Fault-tolerant circuit design helps prevent incorrect wiring.

Output & Construction

- Analog, pulse and RS485 (Modbus) outputs.
- EMC-oriented design with multi-level lightning and surge protection.
- Sealed structure resists water, salt spray and sand/dust.
- Wide supply options, including 15–30 VDC and dedicated pulse supplies.

APPLICATIONS

Application Scenarios

Factories & Power Wind-speed monitoring in factories and electric-power environments.	Ports & Mines Monitoring in ports, mines and other exposed industrial locations.	Wind Turbines Wind-speed sensing for wind-turbine and related outdoor installations.	Heavy Equipment Suitable for large mechanical equipment, construction machinery and other demanding applications.
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MEASUREMENT PRINCIPLE

Measurement Principle

Non-contact magnetic sensing converts wind-cup rotation into a signal linearly related to ambient wind speed. The built-in digital circuit provides RF/EMI resistance and lightning-surge protection.

PERFORMANCE

Technical Specifications

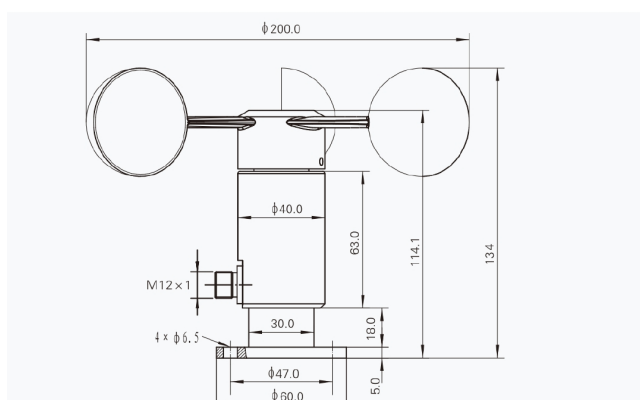
Item	Specification
Measuring Range	0–30 m/s; 0–50 m/s
Starting Wind Speed	≥0.5 m/s
Accuracy	±0.5 m/s (<5 m/s); ±3% FS (≥5 m/s)
Operating Voltage	15–30 VDC; 5 V / 12 V / 24 V for pulse configurations
Output Signal	4–20 mA; 0–5 VDC; 0–10 VDC; pulse (1 m/s = 6.667 pulses); RS485 (Modbus)
Operating Temperature	–20 to +85 °C
Operating Humidity	0–95% RH, non-condensing
Wind Resistance	>70 m/s for 30 min
Protection Level	IP65
Main Material	Aluminum alloy / polyester coating
Additional Group Pulse	Ordinary model: Level 3 (2 kV, 100 kHz), Class B; lightning-resistant model: Level 4 (4000 V, 100 kHz), Class B
Surge	Ordinary model: Class 1 (common mode 500 V, differential mode 250 V, Class B); lightning-resistant model: Class 4 (common mode 4000 V, differential mode 2000 V), Class B

MECHANICAL

Dimensions & Mounting

Key Dimensions

- Cup span: Ø200.0 mm
- Overall height: 134 mm
- Body diameter: Ø40.0 mm
- Mounting flange: Ø60.0 mm
- M12 × 1 electrical connector
- Four mounting holes: Ø6.5 mm



ELECTRICAL CONNECTION

M12 Connector Wiring

Output	M12 Pin	Line Color	Definition
Analog signal output	1	Brown	+Vcc (power positive)
Analog signal output	2	White	Iout / Vout (output positive)
Analog signal output	3	Blue	GND (power negative)
Analog signal output	4	Black	PE (ground)

Output	M12 Pin	Line Color	Definition
RS485 digital output	1	Brown	+Vcc (power positive)
RS485 digital output	2	White	RS485 A
RS485 digital output	3	Blue	GND (power negative)
RS485 digital output	4	Black	RS485 B
Pulse output	1	Brown	+Vcc (power positive)
Pulse output	2	White	PLS pulse output
Pulse output	3	Blue	GND (power negative)
Pulse output	4	Black	PE (ground)

Note: Other wiring methods can be customized. The specific electrical performance and wiring definition are subject to the actual product configuration.

ORDERING INFORMATION

Configuration Options

Option Group	Code	Source-Defined Option
Output / Power	1	4-20 mA / 24 VDC
Output / Power	2	0-5 VDC / 24 VDC
Output / Power	3	0-10 VDC / 24 VDC
Output / Power	4	5 V pulse / 12-30 VDC
Output / Power	5	5 V pulse output / 5 VDC
Output / Power	6	RS485 output / 24 VDC
Output / Power	7	CAN BUS
Output / Power	8	Wireless (4G CAT1)
Electrical Connection	1	M12 connector
Electrical Connection	2	Direct lead
Electrical Connection	3	Aviation plug
Electrical Connection	4	LED direct outlet
Extended Function	1	Standard type
Extended Function	2	Heating type
Measurement Type	M	Wind speed, m/s

Ordering note: The source ordering guide is a family-level code system. Final SS101H-01 ordering codes should be confirmed against the required output, electrical connection, accuracy and extended-function configuration.

CONTACT / SUPPORT

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