

S-WCA-M003

Wind Speed and Direction Smart Sensor



Discontinued

Provides average wind speed, highest 3-second wind gust, and average wind direction in the measurement interval.

[View upgrade options](#)

Supported Measurements

Wind

Features

- Provides average wind speed, highest three-second wind gust, and average wind direction
- High sensitivity
- Fiberglass reinforced thermoplastic cups

Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email sales@onsetcomp.com
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support www.onsetcomp.com/support/contact
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

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Wind Speed and Direction Smart Sensor (S-WCA-M003) Specifications

Specifications	Wind Speed/Gust	Wind Direction
Measurement Range	0 to 44 m/s (0 to 99 mph)	0 to 359 degrees
Maximum Wind Speed Survival	In non-icing conditions: 45 m/sec (100 mph) peak, or 34 m/sec (75 mph) sustained* In icing conditions: 34 m/sec (75 mph) peak, or 18 m/sec (40 mph) sustained*	
Accuracy	± 0.5 m/s (± 1.1 mph) $\pm 3\%$ 17 to 30 m/s (38 to 67 mph) $\pm 4\%$ 30 to 44 m/s (67 to 99 mph)	± 5 degrees
Resolution	0.19 m/s (0.42 mph)	1.4 degrees
Starting Threshold	0.5 m/s (1.1 mph)	0.5 m/s (1.1 mph)
Damping Ratio	NA	0.4
Distance Constant	Approximately 3 m (9.8 ft)	0.8 m (2.6 ft)
Measurement Definition	Cup revolutions are accumulated every three seconds for the duration of the logging interval. Wind speed is the average speed for the entire logging interval. Gust speed is the highest three-second wind recorded during the logging interval.	Unit vector direction
Operating Temperature Range	-40°C to +75°C (-40°F to +167°F)	
Environmental Rating	Weatherproof	
Service Life	2 to 5 years typical depending upon environmental conditions	
Housing	Anodized aluminum housing, injection-molded plastic cups, stainless steel fasteners, Acetal base	
Bearing Type	Stainless steel shielded ball bearing	Bushing
Turning Radius	108 mm (4.25 in.)	Approximately 108 mm (4.25 in.)
Dimensions	317 mm (12.5 in.) H x 419 mm (16.5 in.) W, 12.7 mm (0.5 in.) diameter mounting pole	
Weight	Approximately 700 g (1.5 lbs)	
Bits per Sample	8 for each channel, 24 total	
Number of Data Channels**	3	
Measurement Averaging Option	Automatic averaging (see Measurement Definition)	
Cable Length Available	3.0 m (9.8 ft)	
Length of Smart Sensor Network Cable *	3.0 m (9.8 ft)	
Part Number	S-WCA-M003	

* **Warning:** The S-WCA wind speed and direction sensor is designed for sensitivity, not ruggedness. It is not suitable for use in the following locations:

1. on tall buildings
2. in the wake of wind turbines or other locations with turbulence
3. in locations with icing combined with high winds

The wind sensor must be mounted on a mast secured with guy wires to prevent the sensor from vibrating in high winds. For harsh applications we recommend using one of the following [RM Young wind sensors](#) with one of our adapters: [Wind Sentry Adapter](#), [Wind Monitor Adapter](#), [Wind Monitor AQ Adapter](#), or [Marine Wind Monitor Adapter](#).

** A single HOBO Weather Station logger can accommodate 15 data channels and up to 100 m (325 ft) of smart sensor cable (the digital communications portion of the sensor cables).