



Wind Speed and Direction Set Smart Sensor

Part # S-WSET-B

Overview

The Wind Sensor Set includes Onset's research-grade plug-and-play Wind Speed Smart Sensor and the Wind Direction Smart Sensor. This combination provides average wind speed, highest 3-second wind gust, and average wind direction for the measurement interval. These durable sensors will provide many years of accurate and reliable performance.

NOTE: Mount these on the M-CAA Full Cross Arm for proper sensor spacing for accurate wind measurement in all wind directions.

The cross arm must be mounted on a stable mast using guy wires as needed to prevent the sensors from vibrating in high winds.

Highlighted Features

- Wind Sensor Set includes Onset's research-grade plug-and-play Wind Speed Smart Sensor and the Wind Direction Smart Sensor
- Provides average wind speed, highest 3-second wind gust, and average wind direction for the measurement interval
- Durable sensors

In what environment does this sensor operate?

This sensor operates in indoor and outdoor environments.

What measurements does this sensor support?

The S-WSET-B sensor supports the following measurement: Wind

Detailed Specifications

Wind Speed and Direction Set Smart Sensor

Specifications	Wind Speed/Gust (S-WSB-M003)	Wind Direction (S-WDA-M003)
Measurement Range	0 to 76 m/s (0 to 170 mph)	0 to 355 degrees, 5 degree dead band
Maximum Wind Speed Survival	76 m/sec (170 mph)	67 m/sec (150 mph)
Accuracy	± 1.1 m/s (2.4 mph) or ± 4% of reading whichever is greater	± 5 degrees
Resolution	0.5 m/s (1.1 mph)	1.4 degrees
Starting Threshold	1.0 m/s (2.2 mph)	1.0 m/s (2.2 mph)
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 components of wind direction are accumulated every three seconds for duration of logging interval. Average direction is calculated from the average of these.
Operating Temperature Range	-40°C to +75°C (-40°F to +167°F)	-40°C to +70°C (-40°F to +158°F)
Environmental Rating	Weatherproof	Weatherproof
Service Life	Greater than 5 years typical	4 to 6 years typical depending upon environmental conditions
Housing	Three cup polycarbonate anemometer; Modified Teflon® bearings and hardened beryllium shaft with ice shedding design	Injection-molded housing and vane, static dissipating base, lead-free silicon bronze nose, and aluminum mounting rod.
Bearing Type	Modified Teflon® bearings	two shielded stainless steel ball bearings
Turning Radius	9.5 cm (3.75 in.)	Approximately 13.5 cm (5.25 in.)
Dimensions	41 x 16 cm (16 x 6.5 in.) including 1.27 cm (0.5 in) diameter mounting rod; 5.5 cm (2.1 in.) drip overhang	46 x 20 cm (18 x 8.5 in) including 1.27 cm (0.5 in) diameter mounting rod, 2.5 mm (0.1 in) drip overhang
Weight	Approximately 700 g (1.5 lbs)	Approximately 370 g (13 oz)
Number of Data Channels	2	1
Measurement Averaging Option	No	Automatic averaging (see Measurement Definition)
Cable Length Available	3.5 m (11.5 ft)	3.5 m (11.5 ft)
Length of Smart Sensor Network Cable	0.5 m (1.6 ft)	0.5 m (1.6 ft)
CE	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)
Part Number	S-WSB-M003	S-WDA-M003

