

034B

Met One Wind Speed and Direction Sensor

Met One's 034B Wind Set combines an anemometer and vane into a single integrated package. It is cabled for use with our dataloggers, and is compatible with all of our contemporary dataloggers as well as many of our retired dataloggers (e.g., CR510, CR10X, CR23X).

Wind Speed

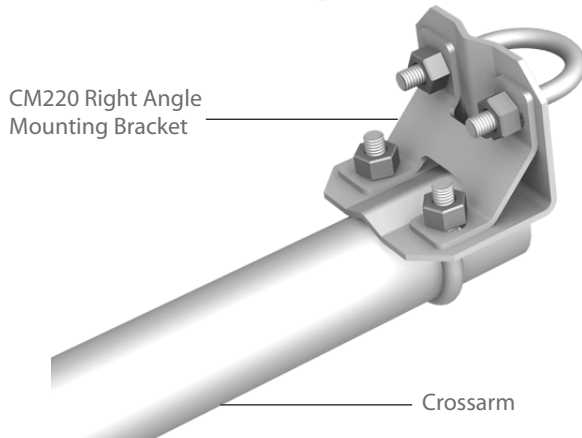
The 034B measures wind speed using a three-cup anemometer that contains a sealed magnetic reed switch. Rotation of the cupwheel produces a pulse that is directly proportional to wind speed. The frequency of the pulse is measured by the datalogger pulse count channel, then converted to engineering units (mph, $m s^{-1}$, knots).

Wind Direction

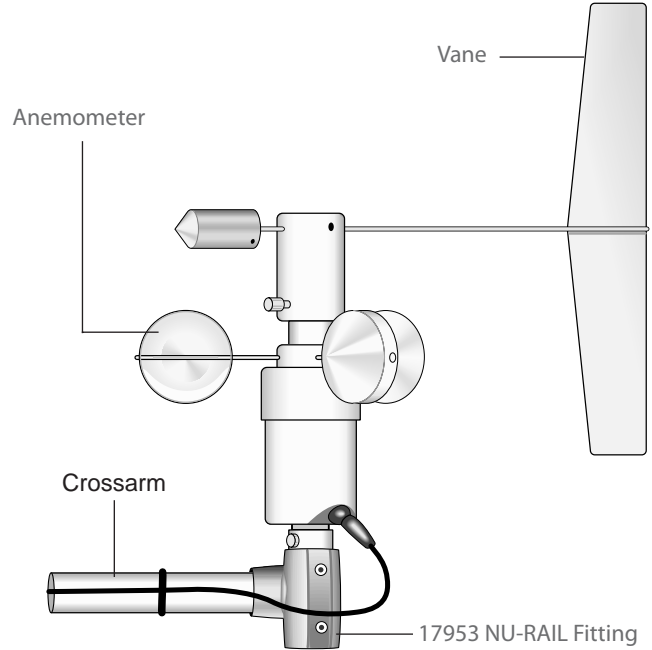
Wind direction is sensed with a potentiometer. With the precision excitation voltage from the datalogger applied to the potentiometer element, the output signal is an analog voltage that is directly proportional to the azimuth of the wind direction.

Mounting Options

The 034B can be attached to a CM202, CM204, or CM206 crossarm via a 17953 NU-RAIL fitting or a CM220 Right Angle Mounting Bracket. Alternatively, the 034B can be attached to the top of our stainless-steel tripods via the CM216 Sensor Mounting Kit. The CM216 extends 4 in. above the mast of a stainless steel CM110, CM115, or CM120 tripod.



A closeup of the CM220 Right Angle Mounting Bracket shows the construction and crossarm attachment.



The 034B is constructed of lightweight aluminum. It's a rugged instrument designed for continuous, long-term operation.

Ordering Information

Wind Speed and Direction Sensor

034B-L 034B Wind Set with user-specified cable length. Enter cable length in feet after L. A cable termination option is required (see below). Recommended cable lengths for Met One's 034B are on page 2.

Cable Termination Options (choose one)

- PT** Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals.
- PW** Cable terminates in connector for attachment to a prewired enclosure.
- CWS** Cable terminates in a connector for attachment to a CWS900-series interface. Connection to a CWS900-series interface allows this sensor to be used in a wireless sensor network.

Mounts

- CM220** Right Angle Mounting Bracket for attaching the 034B to a crossarm, such as a CM202, CM204, or CM206.
- 17953** 1-in. x 1-in. NU-RAIL Fitting for mounting the 034B to a crossarm, such as a CM202, CM204, or CM206.
- CM216** Sensor Mounting Kit for attaching the 034B to the top of a CM110, CM115, or CM120 stainless-steel tripod.

Recommended Cable Lengths

CM6	CM106	CM10	CM110	CM115	CM120	UT10	UT20	UT30
10 ft	13 ft	13 ft	13 ft	19 ft	24 ft	13 ft	24 ft	34 ft
<i>These cable lengths assume the sensor is mounted atop the tripod/tower via a CM202 crossarm.</i>								

Specifications

Assembly

Operating Temperature: -30° to +70°C

Weight: 907 g (2 lbs)

Wind Direction (Vane)

Operating Range: 360° mechanical;
356° electrical (4° open)

Accuracy: ±4°

Damping Ratio: 0.25

Resolution: 0.5°

Potentiometer Resistance: 0 to 10 kΩ open at crossover

Vane Length: 11.4 cm (4.5 in.)

Wind Speed (Anemometer)

Operating Range: 0 to 75 m s⁻¹ (167 mph)

Accuracy: ±0.11 m s⁻¹ (±0.25 mph) when
less than 10.1 m s⁻¹ (22.7 mph)
±1.1% of true when more than
10.1 m s⁻¹ (22.7 mph)

Resolution: (1.789 mph)/(scan rate in seconds)
or
(0.7998 m s⁻¹)/(scan rate in seconds)

Starting Threshold: 0.4 m s⁻¹ (0.9 mph)

Sensor Output: Pulsed contact closure

Anemometer Height: 24.4 cm (9.6 in.)

Anemometer Radius: 10.7 cm (4.2 in.)

