

Wind Speed and Direction Sensors

Model 034B

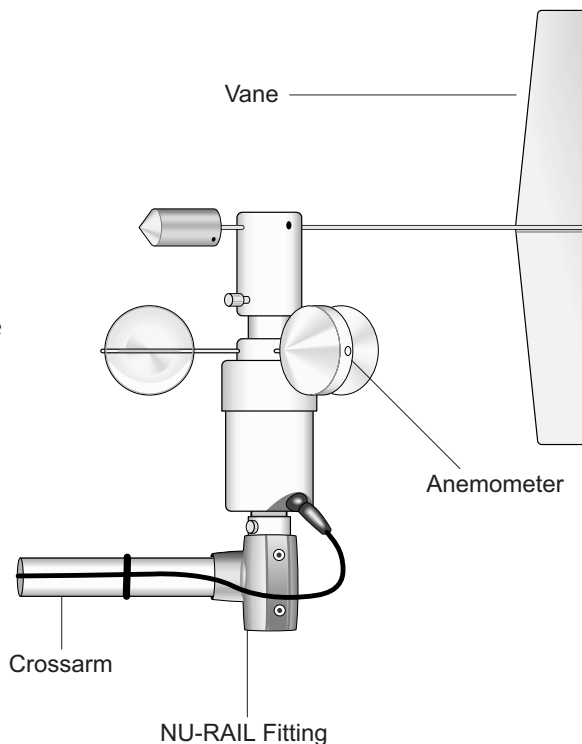
Met One's 034B Windset combines an anemometer and vane into a single integrated package. The 034B is cabled for use with our dataloggers. The 034B is compatible with all of our contemporary dataloggers and many of our retired dataloggers (e.g., 21X, CR23X). Constructed of light-weight aluminum, the 034B is a rugged instrument designed for continuous long-term operation.

Wind Speed

The wind speed sensor is a three-cup anemometer with 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 CM220 Right Angle Mounting Bracket. Alternately, the 034B can be attached to the top of our aluminum tripods via the CM215 Sensor Mounting Kit.



The CM220 consists of a rectangular bracket with a 90° angle bend, u-bolts, lock washers, and nuts.



The CM215 is secured to the mast by its middle flange, which seats inside the mast, and by a bolt that penetrates both sides of the mast and the CM215.

Ordering Information

- | | |
|--------|--|
| 034B-L | 034B Wind Sensor with user-specified lead length. Enter lead length in feet after L. For example, 034B-L13 orders a sensor with a 13' lead length. |
| 17953 | 1" x 1" NU-RAIL Fitting for attaching the 034B to a horizontal crossarm, such as a CM202, CM204, or CM206. |
| CM220 | Right Angle Mounting Bracket for attaching the 034B to a horizontal crossarm, such as a CM202, CM204, or CM206. |
| CM215 | Sensor Mounting Kit for attaching the sensor to the top of a CM110, CM115, or CM120 Aluminum tripod. |



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Recommended Lead Lengths

These lead lengths assume the sensor is mounted atop the tripod/tower via a CM202 crossarm.

CM6	CM10	CM110	CM115	CM120	UT10	UT20	UT30
10'	13'	13'	19'	24'	13'	24'	34'

Specifications

Wind Speed

Accuracy:	$\pm 0.11 \text{ m s}^{-1}$ ($\pm 0.25 \text{ mph}$) when less than 10.1 m s^{-1} (22.7 mph) $\pm 1.1\%$ of true when more than 10.1 m s^{-1} (22.7 mph)
Starting Threshold:	0.4 m s^{-1} (0.9 mph)
Operating range:	0 to 49 m s^{-1} (110 mph)
Sensor Output:	Pulsed contact closure

Wind Direction

Accuracy:	$\pm 4^\circ$
Starting Threshold:	0.4 m s^{-1} (0.9 mph)
Damping ratio:	0.25
Operating range:	0° to 360° mechanical 0° to 356° electrical
Resolution:	0.5°
Sensor Output:	10 kohm potentiometer

Assembly

Operating temperature range:	-30° to $+70^\circ\text{C}$
Weight:	907 g (2 lbs)



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