

**020C**

Wind-Direction Sensor



Ordering Information

Wind Direction Sensor

020C-L Met One Wind Vane Sensor with user-specified cable length. Enter length, in feet, after the -L (see Recommended Cable Lengths on previous page). Must choose a cable termination option (see below).

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 a connector for attachment to a prewired enclosure.

Mounts

- 1049** 3/4-in. x 1-in. NU-RAIL Fitting for mounting the 020C to a cross-arm, such as a CM202, CM204, or CM206.
- CM220** Right Angle Mounting Bracket for attaching the 020C to a cross-arm, such as a CM202, CM204, or CM206; the 28798 mounting bushing is required to use the CM220 (see below)..
- 28798** Mounting bushing that is required if using the CM220 Right Angle Mounting Kit.

Overview

The 020C measures wind direction with research-grade accuracy and precision. It is commonly used with the WMS100 for wind-farm power performance measurements. The 020C is especially suited to applications requiring a low starting threshold, a high damping ratio, or a short delay distance.

The lightweight, airfoil vane is directly coupled to a single precision microtorque potentiometer. The built-in electronics provide a voltage source for the potentiometer and amplifies the output signal for transmission over long cable lengths.

The vane assembly is easily installed or replaced without requiring recalibration. All sensor components are constructed with stainless steel and anodized aluminum.

Specifications

- › Finish: Anodized aluminum
- › Temperature Range: -50° to 85°C (-58° to 185°F)
- › Maximum Cable Length: 300 ft
- › Weight: 0.68 kg (1.5 lb)
- › Output: 0 to 5 Vdc for 0 to 360° (0 to 2.5 Vdc optional)
- › Output Impedance: 100 Ω maximum

Power Requirements

- › Sensor Source: 12 Vdc
- › Sensor Load: 10 mA
- › Heater Source: 12 Vdc
- › Heater Load: 350 mA

Measurements

- › Electrical Range: 0° to 357°
- › Mechanical Range: 0° to 360°
- › Threshold: 0.5 mph
- › Output Linearity: $\pm 0.5\%$ of full scale
- › Accuracy: $\pm 3^\circ$
- › Damping Ratio: 0.4
- › Delay Distance: < 91 cm (3 ft)

Cable Length Recommendations

CM106B ²	CM110	CM115	CM120	UT10	UT20	UT30
4 m (13 ft)	4 m (13 ft)	6 m (19 ft)	7 m (24 ft)	4 m (13 ft)	7 m (24 ft)	10 m (34 ft)

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

