010C Wind Speed Sensor
020C Wind Direction Sensor

High Quality Wind Sensors

The 010C Wind Speed Sensor provides accurate and detailed information on horizontal wind speed. The lightweight three-cup anemometer is used in virtually all applications where fast response and low starting threshold are of paramount importance.

The 020C Wind Direction Sensor provides azimuth data for use in micrometeorological measurements related to operational studies and research. The lightweight airfoil vane is directly coupled to a single precision potentiometer. These sensors are especially useful when a low starting threshold, a high damping ratio, or a short delay distance is required.

Both wind speed and wind direction sensors are used in environments ranging from Antarctic cold to arid desert. The 010C, 010C-1 and 020C instruments meet USEPA and NRC specifications for critical measurement applications. See 'ALTERNATE WIND SENSORS' under specifications.

FEATURES

- Low starting threshold
- Internal heater for long bearing life
- Low profile to minimize "sensor turbulence"
- High damping ratio
- Short delay distance
- Quick-disconnect connector
- Field-replaceable electronic components
- Ingress Protection Level 65 (IP65)

Reliability

The 010C and 020C are made of stainless steel and anodized aluminum components and are functionally more reliable than any other sensors of their kind:

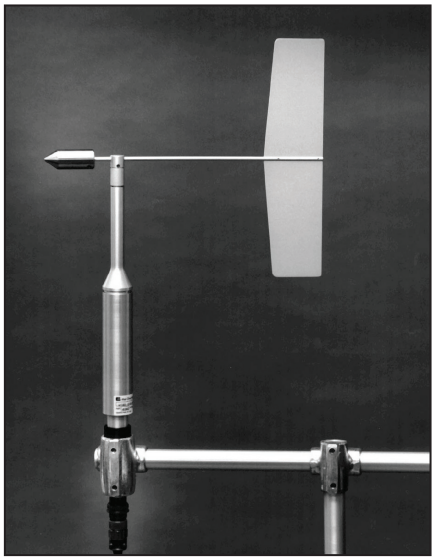
– Built-in electrical field surge protection greatly reduces problems associated with static fields, near-miss lightning hits and poor grounding systems

– Inclusion of Met One Instruments' internal heater (AC use only) provides positive clean aspiration through the bearings, thereby greatly increasing sensor bearing life

– Optional, external de-icing heater sleeve for applications where freezing rain, ice and low wind speeds may be encountered



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Met One Instruments, Inc.
1600 Washington Blvd.,
Grants Pass, OR 97526
Tel 541.471.7111
Fax 541.471.7116
sales@metone.com

Met One Instruments

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SPECIFICATIONS

Model 010C Wind Speed Sensor

PERFORMANCE CHARACTERISTICS

Maximum Operating Range:	0 - 125 mph (0 - 60 m/s)
Starting Speed:	0.5 mph (0.22 m/s)
Calibrated Range:	0 - 100 mph (0 - 50 m/s)
Accuracy:	±1% or 0.15 mph (0.07 m/s)
	Resolution <0.1 mph or m/s
Temperature Range:	-50°C to +65°C (-58°F to +149°F)
Distance Constant:	less than 5 ft (1.5m) of flow (meets EPA specifications)

ELECTRICAL CHARACTERISTICS

Power Requirements:	12 VDC at 10 mA, 12 VDC at 350 mA for internal heater
Output Signal:	11 volt (pulse frequency equivalent to speed)
Output Impedance:	100 Ω maximum

PHYSICAL CHARACTERISTICS

Weight:	1.5 lbs (.68 kg)
Finish:	Clear anodized aluminum; Lexan cup assembly

CABLE & MOUNTING

PN 1953	Cable Assembly; specify length in feet or meters
Mounting:	PN 191 Crossarm Assembly

Model 020C Wind Direction Sensor

PERFORMANCE CHARACTERISTICS

Azimuth:	Electrical 0° - 357°
	Mechanical 0° - 360°
Threshold:	0.5 mph (0.22 m/s)
Linearity:	±1/2% of full scale
Accuracy:	±3°
	Resolution <0.1°
Damping Ratio:	Standard 0.6 (magnesium tail) (meets EPA specifications)
Delay Distance:	Less than 3 ft (91 cm)
Temperature Range:	-50°C to +65°C (-58°F to +149°F)

ELECTRICAL CHARACTERISTICS

Power Requirements:	12 VDC at 10 mA, 12 VDC at 350 mA for internal heater
Output Signal Selectable:	a. 0 - 5 V for 0° - 360°
	b. 0 - 2.5 V for 0° - 360°
Output Impedance:	100 Ω maximum

PHYSICAL CHARACTERISTICS

Weight:	1.5 lbs (0.68 kg)
Finish:	Clear anodized aluminum

CABLE & MOUNTING

PN 1957	Cable Assembly; specify length in feet or meters
Mounting:	PN 191 Crossarm Assembly (contains orientation lock)

ALTERNATE WIND SENSORS

010C-1	
Distance Constant:	15 ft. (4.6 m) – aluminum cup assembly (meets EPA specifications)
020C-1	
Damping Ratio:	0.25 (aluminum tail)

Specifications are subject to change at any time.

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