

010C Wind Speed Sensor 020D Wind Direction Sensor

Both wind speed and wind direction sensors are used in environments ranging from Antarctic cold to arid desert heat. The 010C 010C-1 and 020D instruments meet U.S. EPA and NRC performance specifications for critical regulatory, research or scientific measurement applications.

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(s) are of paramount importance.

The 020D Wind Direction Sensor provides azimuth data for use in micro-meteorological 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.

Reliability

The 010C and 020D 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



020D Wind Direction Sensor



010C Wind Speed Sensor

Features

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

Specifications

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Performance Characteristics

Maximum Operating Range:	0-135mph (0-60m/s)
Starting Speed:	0.5 mph (0.22 m/s)
Calibrated Range:	0 -112 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

020D 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:	0-5, 0-2.5 (optional 0-1) VDC for 0° -360°
Output Impedance:	Ω maximum

Physical Characteristics

Weight:	1.5 lbs (.68 kg)
Finish:	Clear anodized aluminum

Cable & Mounting

PN 1957	Cable Assembly; specify length in feet or meters
Mounting:	PN 191-1 Crossarm Assembly

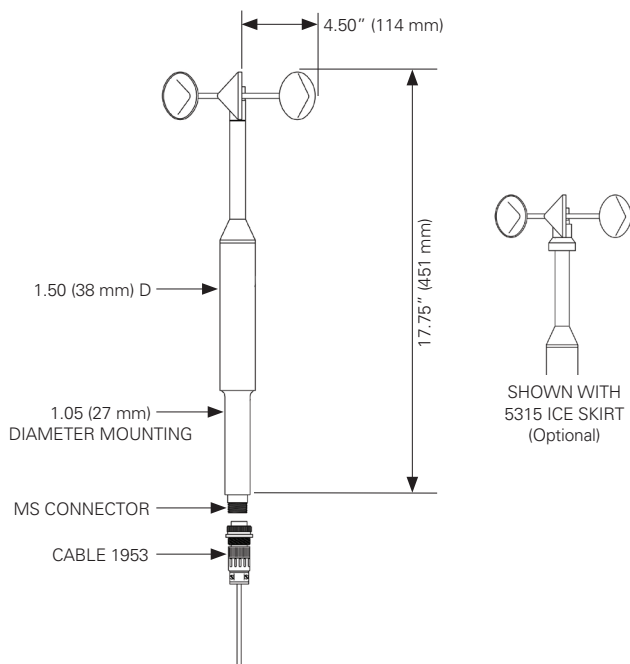
Wind Sensors W/ Aluminum Cups & Vane

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

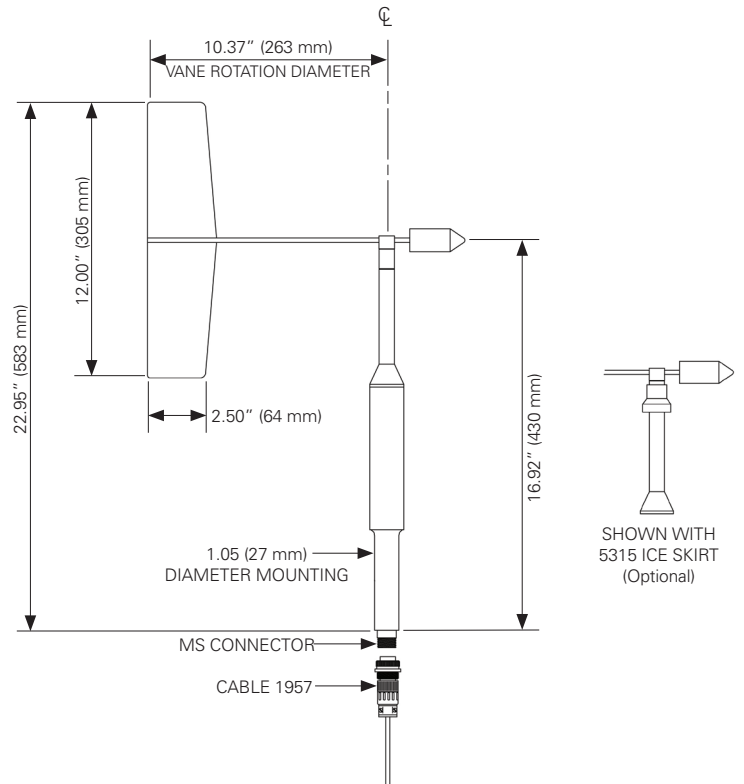
Specifications are subject to change at any time.

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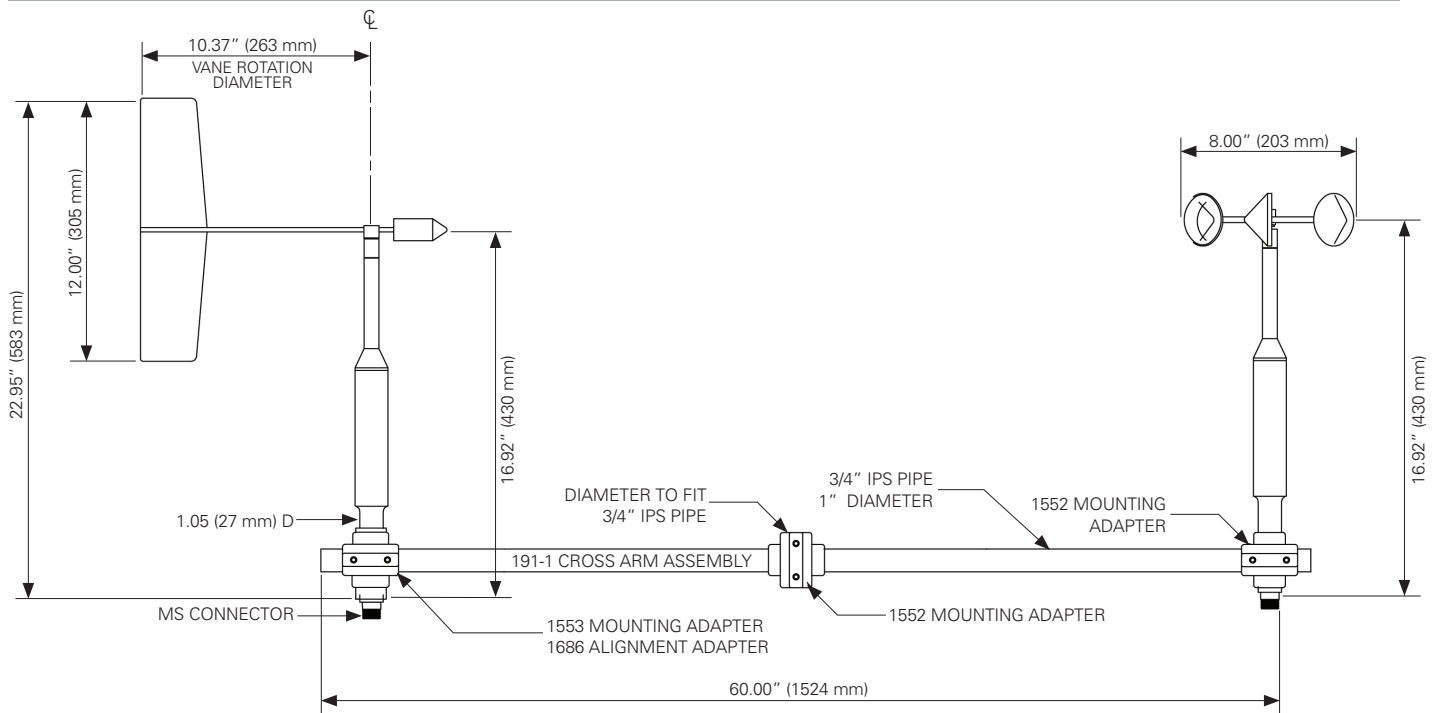
Technical Drawings



010C Wind Speed Sensor



020D Wind Direction Sensor



191-1 Mounting Arm & 010C-020D

