010C Wind Speed Sensor
020C 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 020C 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 020C 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 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

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

**010C Wind Speed Sensor**

#### Performance Characteristics
- **Maximum Operating Range:** 0-135 mph (0-60 m/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 (1.5 m) 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**
- **Mounting:** PN 191 Crossarm Assembly

**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:** 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**
- **Mounting:** PN 191-1 Crossarm Assembly

#### 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.
Technical Drawings

010C Wind Speed Sensor

020C Wind Direction Sensor

191-1 Mounting Arm & 010C-020C