



YOUNG

Model 05501 Wind Monitor-IS

The intrinsically safe Wind Monitor-IS is a high performance wind sensor approved for use in hazardous areas.

The Wind Monitor-IS can safely be used in Class 1, Division 1, Group A,B,C,D hazardous areas.*

The wind speed sensor is a four blade propeller. The propeller drives a reliable, non-contacting magnet/coil transducer; slip rings and brushes are not used.

The wind direction sensor is a durable molded vane. Vane angle is sensed by a precision, long-life potentiometer housed in a sealed chamber.

Internal circuitry converts signals for wind speed and wind direction into separate, 4 to 20 mA current outputs. This configuration is especially suited for long cable runs or for industrial settings where noise immunity is important.

The instrument is constructed of UV stabilized plastic with stainless steel and anodized aluminum fittings. Precision grade, stainless steel ball bearings are used. Circuitry and cable terminations are in a convenient junction box on the instrument base.

The instrument installs on standard 1 inch pipe. A mounting orientation ring assures correct alignment of the wind direction reference when the instrument is removed for maintenance.

**Tested in accordance with Safety Standard UL 913, Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, and III Division I, Hazardous (classified) locations. Must be properly installed with approved Intrinsically Safe barrier.*



Specifications

Range:

Wind speed: 0-60 m/s (134 mph)
Gust survival: 100 m/s (220 mph)
Azimuth: 360° mechanical, 355° electrical (5° open)

Accuracy:

Wind speed: ± 0.3 m/s (0.6 mph) or $\pm 1\%$
Wind direction: ± 3 degrees

Threshold:*

Propeller: 1.0 m/s (2.2 mph)
Vane: 1.1 m/s (2.4 mph)

Dynamic Response:*

Propeller distance constant (63% recovery) 2.7 m (8.9 ft)
Vane delay distance (50% recovery) 1.3 m (4.3 ft)
Damping ratio: 0.3
Damped natural wavelength: 7.4 m (24.3 ft)
Undamped natural wavelength: 7.2 m (23.6 ft)

Signal Output:

WS: 4 to 20 mA for 0 to 50 m/s (0 to 100 m/s optional)
WD: 4 to 20 mA for 0 to 360 degrees azimuth

Power Requirement:

8-30 VDC (40 mA max.)

Dimensions:

Overall height: 37 cm (14.6 in)
Overall length: 55 cm (21.7 in)
Propeller: 18 cm (7 in) diameter
Mounting: 34 mm (1.34 in) diameter
(standard 1 inch pipe)

Weight:

Sensor weight: 1.0 kg (2.2 lbs)
Shipping weight: 2.3 kg (5 lbs)

**Nominal values, determined in accordance with ASTM standard procedures.*

Ordering Information

WIND MONITOR-IS 05501LM



Complies with applicable CE Directives

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