



Wind Direction Sensor (WD48)

Features

- Full 360 degree measurement
- Visual indication of wind direction
- Special machining to prevent entry of wind borne dust or moisture
- Magnetic Hall Effect sensing
- Low friction Stainless Steel bearings
- Low starting torque
- Good dynamic characteristics
- Long operating life

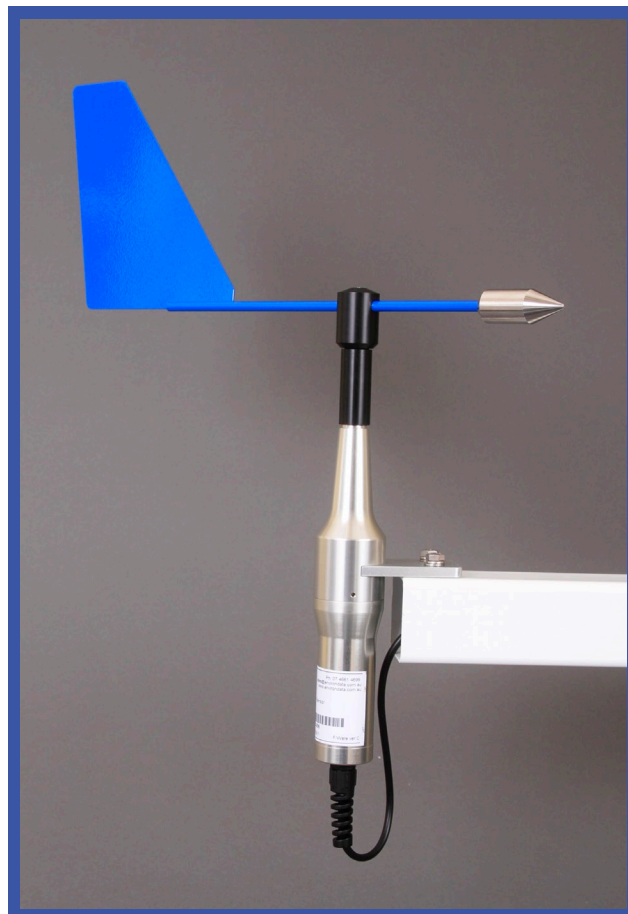
Applications

- Meeting Australian Standards
- EPA Reporting & Licensing
- Meteorology
- Wind Profiling
- Automation & Alarms
- Crop Studies
- Agronomy
- Pollution Tracking & Dispersion Monitoring

The WD48 wind direction sensor is a sensitive wind direction indicator that gives a variable pulse rate output and a visual indication of wind direction.

The aluminium wind vane is attached to an aluminium arm and adjustable Stainless Steel pointer. The vane, arm and pointer turn the main spindle, which is supported by low friction shielded long life marine grade stainless steel bearings.

A Hall Effect angular position sensor is used for accurate position measurement of the wind direction vane. This provides full 360 degree



detection and no loading of the wind vane typical of potentiometer based detection sensors.

Utilising Hall Effect detection technology makes the sensor more sensitive, more accurate and with a higher resolution, while also significantly enhancing the reliability & durability of the sensor.

A labyrinth machined into the spindle housing minimises the entrance of wind-borne dust or moisture into the upper bearing.

The two part spindle cap allows easy alignment to North on-site.

We recommend the use of Envirodata's WS49 series of Wind Speed sensors to provide you with the full suite of accurate wind movement sensors.

Specifications

Sensing Element:

- Vane driven Hall Effect position sensor

Measurement Units:

- Degrees deviation from North

Specifications:

- **Startup Threshold:** 0.30 m/s
- **Resolution:** 0.1°
- **Accuracy:** ±1°
- **Measurement Range:** 0° to 359.9°

Bearings:

- Low-friction marine grade stainless steel long life

Special notes:

- Magnetic Hall Effect sensor has no gap over complete 360° range

Calibration Method:

- Frequency range is adjusted in the factory.
- Not subject to drift
- Attachment of the vane sets actual direction in the field.

Reliability:

- 5 years service life expected before bearing replacement recommended to maintain peak operating performance

Housing:

- Anodised Aluminium

Operating Conditions:

- Temperature -20°C to +70°C
- Humidity 0% to 100%

Sensor mounting:

- Heights of two and ten metres above ground level are commonly used. Mounting height is determined by application.

Supply Voltage:

- 5.5 to 15 Volts DC

Current Drain:

- Average: < 6mA
- Peak: < 15mA

Output:

- Frequency; +5V square wave pulse
- 0°-360° is equivalent to 0-90Hz in a linear scale
- 4-20mA Converters are available (FA12)
- Sensor Alarms are available (SA12)

Cable:

- 3 Core Shielded UV Stabilised
- Cable Length: 2m Standard, extensions up to 200 metres available

Dimensions:

