



## Wind Direction Sensor (WD42)

### Features

- Visual indication of wind direction
- Special machining to prevent entry of wind-borne dust or moisture
- Full 360 degree measurement.
- Long operating life
- Low friction shielded bearings
- Good dynamic characteristics

### Applications

- Meteorology
- Wind Profiling
- Crop Studies
- Ecology
- Pollution Control

The WD42 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 brass pointer. The vane, arm and pointer turn the main spindle, which is supported by low friction shielded 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 pot detection sensors.

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



The two part spindle cap allows easy alignment to North on-site with the aid of a sensor test box. The instrument is normally used in conjunction with a Wind Speed Sensor (WS30 Series) or equivalent to measure the wind run and windspeed.

### Envirodata Environmental Monitoring & Management

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## Specifications

**Sensing Element:**

Vane

**Measurement Units:**

Degrees deviation from North

**Startup Threshold:**

0.3 m/s

**Resolution:**

1°

**Accuracy:**

±2°

**Measurement Range:**

0° to 359°

**Bearings:**

Low-friction stainless steel

**Special notes:**

Magnetic hall effect sensor has no gap over complete 360°

**Calibration Method:**

Frequency range is adjusted in the factory.

Attachment of the vane sets actual direction in the field.

**Reliability:**

Typically five (5) years operation possible before overhaul.

**Housing:**

Clear Anodised Aluminium & Delrin.

**Operating Conditions:**

Temperature -20°C to +70°C

Humidity 0% to 100%

**Sensor mounting:**

Heights of two, three and ten metres above ground level are commonly used.

**Supply Voltage:**

5.5 to 14 Volts DC

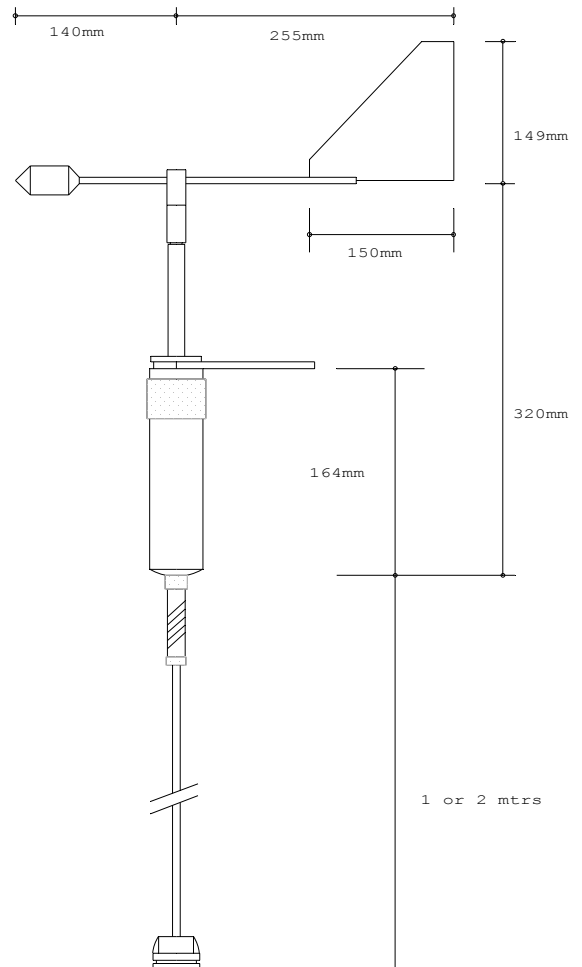
**Current Drain:**

<3.5 mA

**Output:**

Frequency (at supply voltage)

## Dimensions (mm)

**Configurations:**

Model	WD42
Output 0°-360° (Hz)	0-90
EasiData compatibility:	Mk4
Cable Type:	Airdata 3 core shielded
Cable Length:	2m

**Ordering Information:**

WD42 Model

**Shipping Weight:** 1.4kg

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