

# Wind Monitor

The Wind Monitor is a high performance wind sensor. Rugged and corrosion-resistant construction makes it ideal for wide range of wind measuring applications.



The wind speed sensor is a four blade helicoid propeller. Propeller rotation produces an AC sine wave voltage signal. The wind direction sensor is a rugged yet lightweight vane. Vane angle is sensed by a precision potentiometer.

Constructed of UV stabilized plastic with stainless steel and anodized aluminum fittings, the sensor is mounted on standard 1 inch pipe. Model 05103V offers calibrated 0 - 5 V DC outputs; model 05103L provides a calibrated 4 - 20 mA current signal for each channel.



**Corrosion resistant construction**



**Waterproof model for offshore and marine use available**



**High performance**



**Two output signal options**

## Range

|                   |  |
|-------------------|--|
| <b>Wind speed</b> | 0 - 100 m/s (224 mph)                      |
| <b>Azimuth</b>    | 360° mechanical, 355° electrical (5° open) |

## Accuracy

|                       |                                      |
|-----------------------|--------------------------------------|
| <b>Wind speed</b>     | ±0.3 m/s (0.6 mph) or 1 % of reading |
| <b>Wind direction</b> | ±3°                                  |

## Threshold

|                  |                   |
|------------------|-------------------|
| <b>Propeller</b> | 1.0 m/s (2.2 mph) |
| <b>Vane</b>      | 1.1 m/s (2.4 mph) |

## Signal output

|                   |  |
|-------------------|--|
| <b>Wind speed</b> | <ul style="list-style-type: none"> <li>• magnetically induced AC voltage</li> <li>• 3 pulses per revolution</li> <li>• 1800 rpm (90 Hz) = 8.8 m/s (19.7 mph)</li> </ul>                    |
| <b>Azimuth</b>    | <ul style="list-style-type: none"> <li>• analog DC voltage from conductive plastic potentiometer – resistance 10K Ω, linearity 0.25 %, life expectancy – 50 million revolutions</li> </ul> |

**Power requirement**

|                                 |                 |
|---------------------------------|-----------------|
| <b>Potentiometer excitation</b> | 15 V DC maximum |
|---------------------------------|-----------------|

**Dimensions**

|                        |                |
|------------------------|----------------|
| <b>Overall (h x l)</b> | 37 x 55 cm     |
| <b>Propeller</b>       | diameter 18 cm |
| <b>Mounting</b>        | diameter 34 mm |

**Weight**

|                        |        |
|------------------------|--------|
| <b>Sensor weight</b>   | 1.0 kg |
| <b>Shipping weight</b> | 2.3 kg |

**Model 05103V** (0 - 5 V DC outputs)

|                              |                              |
|------------------------------|------------------------------|
| <b>Power requirement</b>     | 8 - 24 V DC (5 mA @ 12 V DC) |
| <b>Operating temperature</b> | - 50 to 50° C                |
| <b>Output signals</b>        | 0 - 5 V DC full scale        |

**Model 05103L** (4 - 20 mA outputs)

|                              |                          |
|------------------------------|--------------------------|
| <b>Power requirement</b>     | 8 - 30 V DC (40 mA max.) |
| <b>Operating temperature</b> | - 50 to 50° C            |
| <b>Output signals</b>        | 4 - 20 mA full scale     |