



**R.M. Young Company**

# Wind Monitor Alpine



wind

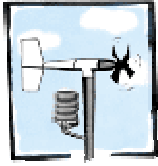
*High Performance Wind Sensor*

**YOUNG**



Model 05103  
**Wind Monitor**

[www.gwu-group.de](http://www.gwu-group.de)



The Wind Monitor – ALPINE MODEL offers the performance and rugged construction of our standard Wind Monitor with the added benefit of an iceresistant coating on external surfaces. It promises improved survivability for the most severe wind measuring applications.

The wind speed sensor is a four blade helicoid propeller. Propeller rotation produces an AC sine wave voltage signal with frequency directly proportional to wind speed. Slip rings and brushes are eliminated for increased reliability.

The wind direction sensor is a rugged molded vane. The wind speed sensor is a four blade helicoid propeller. Propeller diameter is slightly reduced from our standard model to minimize vibration at high speeds. External housing surfaces are coated with a specially formulated, ice-resistant coating to improve performance in harsh alpine conditions. The all-black color scheme further enhances ice-shedding performance of the sensor. The instrument is made of UV stabilized plastic with stainless steel and anodized aluminum fittings. Precision grade, stainless steel ball bearings are used. Transient protection and cable terminations are in a convenient junction box. The instrument mounts on standard 1 inch pipe. A mounting orientation ring assures correct realignment of the wind direction reference when the instrument is removed for maintenance.



The Wind Monitor ALPINE MODEL is available with two additional output signal options. Model 05103V-45 offers calibrated 0-1 VDC outputs (0-5 VDC optional), convenient for use with many dataloggers. Model 05103L-45 provides a calibrated 4-20 mA current signal for each channel, useful in high noise areas or for long cables (up to several kilometers). Signal conditioning electronics are integrated into the sensor junction box

### Ordering Informations Model

WIND MONITOR	05103-45
WIND MONITOR 0-5 VDC Output	05103V-45*
WIND MONITOR 4-20 mA Output	05103L-45*

\* Specify suffix for desired wind speed scale

M/S	M
MPH	P
KNOTS	N
KMH	K

### SPECIFICATIONS:

#### Range:

Wind speed: 0-100 m/s (224 mph)  
Azimuth: 0-360° (5° open)

#### Accuracy:

Wind speed: ± 0,3 m/s (0.6 mph)  
Wind direction: ± 3°

#### Threshold:

Wind speed: 1,0 m/s (2.2 mph)  
Wind direction: 1,1 m/s (2.4 mph)

#### Signal Output:

Wind speed:  
magnetically induced AC voltage, 3 pulses per revolution, 1800 rpm (90Hz) = 8,8 m/s

Wind direction:  
analog DC voltage from conductive plastic potentiometer - resistance 10 kΩ, linearity 0,25%, life expectancy - 50 million revolutions

#### Power Requirements:

Potentiometer excitation: 15 VDC (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)

### Model 05103-45V 0-5 VDC Outputs

Power Requirements: 8-24 VDC  
Max. (5 mA @ 12 VDC)  
Operating Temperature: -50 to 50°C  
Output Signals: 0-5 VDC (0-100 m/s)  
0-5 VDC (0-360 °)

### Model 05103-45L 4-20 mA Outputs

Power Requirements: 8-30 VDC (40 mA max.)  
Operating Temperature: -50 to 50°C  
Output Signals: 4 - 20 mA (0-100 m/s)  
4 - 20 mA (0-360 °)