



# 81000RE

## 3-AXIS ULTRASONIC WIND SPEED & DIRECTION



### Product Description

The MUNRO Model 81000RE Ultrasonic Anemometer is a 3-axis, no-movingparts wind sensor. It is perfectly suited for applications requiring fast response, high resolution and threedimensional wind measurement.

The sensor features durable corrosion resistant construction with 3 opposing pairs of ultrasonic transducers supported by stainless steel members. The transducers are arranged so that measurements are made through a common volume. A fast 160 Hz internal sampling rate ensures superior measurement resolution. Output rates from 4 to 32 Hz may be selected. Each 81000RE is individually

wind, tunnel tested and calibrated to compensate for wind shadow effects of the support structure.

Model 81000 features four voltage output channels. Serial RS-232 and RS-485 outputs are available as well. For applications requiring synchronized air log measurements, Model 81000V includes four voltage input channels instead of voltage outputs. Wind, sonic temperature & voltage input data are transmitted serially. For each model, a variety of preset or custom output format options may be selected by the user. Both models install on standard 1 inch pipe. Wiring connections are housed in a convenient weatherproof junction box.

### Technical Specifications

WIND SPEED	
Range	0 to 40 m/s (0 to 90 mph)
Resolution / Threshold:	0.01 m/s
Accuracy	$\pm 1\% \pm 0.05$ m/s (0 to 30 m/s) $\pm 3\%$ (30 to 40 m/s)
WIND DIRECTION	
Range	0 to 360°
Elevation Range	$\pm 60^\circ$
Resolution	0.1°
Accuracy	$\pm 2^\circ$ (1 to 30 m/s) $\pm 5^\circ$ (30 to 40 m/s)
SPEED OF SOUND	
Range	300 to 360 m/s
Resolution	0.01 m/s
Accuracy	$\pm 0.1\% \pm 0.05$ m/s (0 to 30 m/s)
SONIC TEMPERATURE	
Range	-50 to +50
Resolution	0.01 m/s
Accuracy	$\pm 2^\circ\text{C}$ (0 to 30 m/s)
Serial Output	RS-232 or RS-485 1200 to 38400 baud 4 to 32 Hz (user-Selected) User Programmable ASCII output configuration (select from U, V, W, Speed sound, Sonic temperature, 2D speed, 3D speed, Azimuth, Elevation) Units: m/s, cm/s, mph, knots, km/h
Analog Voltage, Outputs	4 voltage outputs, 0 to 5000 mV (select from U, V, W, Sonic temperature or Speed, Azimuth, Elevation, Sonic temperature)