

World's Smallest & Lightest 3D Ultrasonic Anemometer



TriSonica™ Mini Wind & Weather Sensor

The TriSonica™ Mini is compact, lightweight, and efficient. It is small enough to fit in the palm of your hand, yet it is a powerful and highly accurate tool engineered for atmospheric monitoring, weather reporting, and ecosystem research.

Its size and featherweight profile make it perfect for unmanned aerial systems (UAS), while the fact that it has no moving parts, thus eliminating maintenance issues, enables it to be stationed on fixed or portable towers for real-time 3-dimensional air flow measurements.

Say goodbye to cumbersome and bulky cup-and-vane anemometers, and hello to the TriSonica Mini Wind & Weather Sensor.

The TriSonica Mini Wind & Weather Sensor is a compact (measurement path of just 35 mm), lightweight (less than 50 grams), low velocity anemometer. Even with its small size it provides wind speed, direction, temperature, humidity, pressure, tilt, and compass data. The TriSonica Mini Wind & Weather Sensor can also provide measurements of all three dimensions of air flow. The open path provides the least possible distortion of the wind field. Four measurement paths provide a redundant measurement. The path with the most distortion is removed from the calculations to provide accurate wind measurements. Furthermore, data output can be customized to user requirements.

Available with a pipe-mount base accommodating any 1/2" DN15 Schedule 10 pipe. To further protect components and streamline your installation, wiring runs through the interior of the pipe when using this configuration.

Size, Weight, and Power Optimization

 Lightweight Weight: 225 grams	 Compact Size: 10.2 cm x 10.2 cm x 24.9 cm	 Efficient Power: 5-32VDC @ 30mA
SIZE 9.1cm x 9.1cm x 5.2cm	WEIGHT 50 grams	POWER 5-32 VDC @ 30mA 400 mV (max.), 320 mV (typ.)
DIGITAL OUTPUT RS-232 (TSM-FB) RS-232, RS-422, UART-3V (TSM-PM)	DATA OUTPUT RATE 1Hz, 2Hz, 5Hz, 10Hz, 20Hz, 40Hz	ULTRASONIC OPERATING FREQUENCY 60 kHz
WIND SPEED Range: 0-50 m/s Resolution: 0.1 m/s Accuracy (0-10 m/s): ±0.2 m/s Accuracy (11-30 m/s): ±2% Accuracy (31-50 m/s): ±4%	WIND DIRECTION Range (x/y): 0-360° Range (z): ±30° Resolution: 1.0° Accuracy: ±1.0°	TEMPERATURE Range: -40° C to 85° C Resolution: 0.1° C Accuracy: ±2.0° C <i>Derived from Speed of Sound and Humidity</i>
HUMIDITY SENSOR Range: 0-100% RH Resolution: 0.1% Accuracy: ±3%	PRESSURE SENSOR Range: 50-115 kPa Resolution: 0.1 kPa Accuracy: ±1.0 kPa	3D ACCELEROMETER Range (x, y, z): ±2g Tilt (Pitch, Roll): ±90°
MAGNETOMETER Range (x, y, z): ±16 Gauss Heading Accuracy: ±5.0°	DEW POINT CALCULATION <i>Derived from Temperature and Humidity Values</i>	AIR DENSITY CALCULATION <i>Derived from Speed of Sound and Pressure</i>

