# Model 911-UWS

## ULTRASONIC WIND SENSOR

### Applications

- **AIRPORTS**
- **METEOROLOGY**
- **HORTICULTURE**
- **MOBILE CONTROL TOWERS**
- **BUILDING RESEARCH**

### Features

- **RUGGED**
- **NO MOVING PARTS**
- **SENSITIVE**
- **ENVIRONMENTALLY PROVEN**

### Description

The 911-UWS delivers a state-of-the-art solution for reliable, accurate and cost-effective wind speed and directional measurement in a single non-mechanical device.

The elimination of moving parts from the sensor, together with a rugged stainless steel construction, means that 911-UWS is virtually maintenance free and requires no calibration on site. The new flexible design ensures that the 911-UWS can be configured by the user to their exact requirements. Communication is via an industry standard RS-422 bi-directional link and whilst is fully compatible with the MTECH Systems 2060 AWS RTU it can also be used with many other standard weather data loggers.

This sensor is rigorously tested to internationally recognised standards and meets the stringent performance criteria specified by meteorological, naval and airport authorities and oil and utility companies around the world

For wind speed the sensor has an impressive resolution of 0.01 M/s. For wind direction this device has an ICAO and WMO compliant resolution of 1.0 degrees.

### Operation

The 911 sensor utilizes a 12V DC power supply from the data-logger or Data telemetry unit. The heated head keeps the unit free from ice and snow, providing continuous use even in the most extreme weather conditions.

### Construction

The rugged stainless steel construction means that the sensor is virtually maintenance free even in the harshest and most hazardous environments.

### Calibration:

The 911-UWS requires no calibration on site.
The sensor comes as standard with a calibration check hood which verifies the sensor geometry.

# Specifications:

## General

| Parameter | | |
|---|---|---|
| **Excitation Supply** | 9-30 VDC | |
| **Excitation Current** | Natural Version | Heated Version |
| | 40mA | 3A @ 12VDC |
| **Output** | RS-422: 1200, 2400, 4800, 9600, 19200, 38400 baud 8 data, odd, even or no parity | |
| **Size** | 405mm x 210mm | |
| **Weight** | 1.5kg | |
| **Materials** | External: 316 Stainless steel | |
| **Operating temperature** | -50°C to +80°C | |
| **Humidity** | 0% to 100% RH | |
| **Precipitation** | 300mm/hr | |
| **Averaging** | 1 [default] to 3600 seconds | |
| **MTBF** | >125,000 Hours | |

## Wind Speed

| Parameter | |
|---|---|
| **Sensor Type** | Ultrasonic tri-axial sensor array |
| **Range** | 0-75m/s (0-168mph) |
| **Accuracy** | 2% |
| **Resolution** | 0.01 m/s |
| **Offset** | +-0.01 m/s |

## Wind Direction

| Parameter | |
|---|---|
| **Sensor Type** | Ultrasonic tri-axial sensor array |
| **Range** | 0-359° |
| **Accuracy** | ±1° |
| **Resolution** | 1° |

## Options

| Parameter | |
|---|---|
| **High Speed Option** | Detects 0-75m/s (0-168mph) |
| **Heater Option** | For uninterrupted operation in snowing or below 0°C condition |

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