



Ultrasonic Wind Sensor Model 2040

Description

The AWI Ultrasonic Wind Sensor provides the best solution on the market for reliable, accurate and cost-effective wind speed and directional measurement. It combines the latest patented advances in ultrasonic technology together with AWI's years of experience as the recognised world leading supplier of all-weather sensors. The elimination of moving parts, together with a rugged stainless steel construction, means that AWI Ultrasonic Wind Sensor is virtually maintenance-free and requires no calibration on site. The heated head keeps the unit free from ice and snow, providing continuous use even in the most extreme weather conditions.

A new flexible design ensures that the AWI Ultrasonic Wind Sensor can be configured by the user to their exact requirements, which may include analog outputs, 10 Hz output, heating or sonic temperature.

The Windows™-based WindCom communications package allows the user to operate the anemometer in various modes, permitting the measurement of U & V vectors, or wind speed and direction. Communication is via an RS422 bidirectional link, which allows several units to be networked together and data to be logged on demand. The AWI Ultrasonic Wind Sensor has been rigorously tested to internationally recognised standards and meets the stringent performance criteria specified by airport, marine, oil, production, meteorological and utility organisations around the world.



- Ultrasonic measurement of wind speed and direction
- User-configurable
- RS-422 output
- Optional analog output

Specifications

DIMENSIONS

Size 405mm x 210mm
Weight 1.5kg

MEASUREMENT

Output 1Hz, 4Hz, 10Hz
Parameters UV, Polar, NMEA, Tunnel
Units m/s, Knots, MPH, KPH ft/min
Averaging Flexible 1-3600 seconds

WIND SPEED

Range 0 - 75 m/s (0 - 168 mph)
Starting Threshold 0.01 m/s
Accuracy 2%
Resolution 0.01 m/s
Offset ± 0.01 m/s

DIRECTION

Range 0 - 359°
Dead Band Direction None
Accuracy ± 2°
Resolution 1°

SENSORS

Specifications (cont'd)

SONIC TEMPERATURE

Range -40°C to + 70°C (refer to user manual)

DIGITAL OUTPUT

Communication RS422, full duplex
Baud Rates 1200 2400 4800 9600 19200 38400
Formats 8 data, odd, even or no parity
Anemometer Status Supplied as part of standard message

ANALOGUE OUTPUT - OPTIONAL

Quantity 3 (speed, direction, status or sonic temp)
Scale Multiples of ± 10 m/s up to 70 m/s
Type ± 2.5 V, 0 - 5V or 4 - 20mA
V output resistance 60 Ohms
4 - 20mA loading 10 - 300 Ohms

MATERIALS

External Construction Stainless Steel 316

ENVIRONMENTAL

Moisture Protection IP66 (NEMA4X)
Operating Temperature -55°C to +70°C
Humidity 5% to 100% RH
Precipitation 300mm/hr
EMC EN 61000-6-2 : 2001
EN 61000-6-3 : 2001
Icing MILSTD810E Method 521.1
Procedure 1

MISC

Standards Traceable to NAMAS standards
Site Calibration None Required
Integrity Check Unit (Zero Wind)
supplied as optional extra

POWER REQUIREMENT

Anemometer only 9-30 V DC (40mA @ 12 V DC)
Heating Option 3A @24V AC or DC



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