WX Ultrasonic WeatherStation® Instruments for Offshore Weather Monitoring

Available Model: 200WX-IPX7

Weather impacts every aspect of operations on offshore platforms, ships, and in ports. Rapid changes in weather and sea conditions make monitoring of both meteorological and oceanographic parameters a critical part of ensuring safety, while also maintaining operational efficiency.

Reliable environmental monitoring is critical for various offshore needs. The numerous sensors contained in the compact size of the 200WX is an attractive feature for installations where space is limited, such as on buoys, USVs, and ASVs.

Having worked with many autonomous vehicle and buoy manufacturers, we have further developed the 200WX to be more robust—meeting the operational challenges of the harsh ocean environment.

The WeatherStation WX Series products offer a truly best-in-class solution at a better price point than any other weather monitoring system on the market today, enabling individuals and professionals the ability to make informed decisions based on real-time site-specific weather information.

FEATURES

The 200WX-IPX7 WeatherStation instrument accurately measures current weather conditions, including:

- Theoretical wind speed and direction
- Air temperature and calculated wind chill
- Barometric pressure
- GPS position, speed over ground, course over ground
- Three-axis solid state compass with dynamic stabilization
- Three-axis rate gyro for rate of turn
- Best-in-class <1° pitch and roll accuracy
- IPX7 waterproof rating
- Current draw: <105mA (1.2W) at 12 VDC
- Available outputs: NMEA 0183 (RS422 or RS232) and NMEA2000® (CAN bus)
The document contains information about Airmar's WeatherStation® and WeatherCaster™ products, focusing on their specifications and features. Key points include:

### Achieving Best-in-Class Product Specifications

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Speed Range</td>
<td>0 knots to 78 knots (0 MPH to 90 MPH, 0 m/s to 40 m/s)</td>
</tr>
<tr>
<td>Wind Speed Resolution</td>
<td>0.1 knots (0.05 MPH, 0.1 m/s)</td>
</tr>
<tr>
<td>Wind Speed Accuracy @ 0°C to 55°C (32°F to 131°F)</td>
<td>1% of reading</td>
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<tr>
<td>Compressibility</td>
<td>Static heading accuracy: 1°; dynamic heading accuracy: 2°</td>
</tr>
<tr>
<td>Pitch and Roll</td>
<td>Accuracy: ±50° / &lt;1°</td>
</tr>
<tr>
<td>Air Temperature Range</td>
<td>±5°C to 55°C (-40°F to 131°F)</td>
</tr>
<tr>
<td>Air Temperature Resolution</td>
<td>0.1°C (0.1°F)</td>
</tr>
<tr>
<td>Barometric Pressure Range</td>
<td>300 mbar to 1100 mbar (24 inHg to 33 inHg, 800 hPa to 1100 hPa)</td>
</tr>
<tr>
<td>Barometric Pressure Resolution</td>
<td>0.1 mbar (0.029 inHg, 0.1 hPa)</td>
</tr>
<tr>
<td>Barometric Pressure Accuracy</td>
<td>±1 mbar (±0.029 inHg, ±1 hPa) when altitude correction is available</td>
</tr>
<tr>
<td>GPS Position Accuracy</td>
<td>3 m (10&quot;) with WAAS/EGNOS (95% of the time)</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-25°C to 55°C (-13°F to 131°F)</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>9 VDC to 40 VDC</td>
</tr>
<tr>
<td>Power Supply Current</td>
<td>≤80 mA ( &lt;1.25W)</td>
</tr>
<tr>
<td>Weight</td>
<td>300 grams (0.8 lb)</td>
</tr>
<tr>
<td>Communication Interface</td>
<td>NMEA 0183 (RS422 or RS232) and NMEA2000® (CAN bus)</td>
</tr>
<tr>
<td>Mounting Thread Size on Base</td>
<td>Standard 1&quot;-14 UNS (3/4' NPT optional)</td>
</tr>
<tr>
<td>Certifications and Standards</td>
<td>CE, IPX7, RoHS, IEC61000-4-2, IEC60945</td>
</tr>
</tbody>
</table>

### DATA OUTPUT PROTOCOL

**NMEA 0183 Sentence Structure**
- $YXXDR
- $WIMWR
- $WIMWD
- $TIROT
- $HCHDT
- $HCHDG
- $GPZDA
- $GPVTG
- $GPRMC
- $GPGSV
- $GPGGA
- $GPGLL
- $GPGLL

### DIMENSIONS

**200WX IPX7**

- Ø 72 mm (2.83")
- 90 mm (3.54")
- 131 mm (5.16")
- Ø 45 mm (1.77")

### PART NUMBERS

- 200WX: 44-848-1-01, NMEA 0183 (RS422) and NMEA2000® (CAN bus)
- *Cables sold separately*

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The innovative App for real-time weather data!

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