



## WeatherStation® Multisensor – Ultrasonic Instruments for Dynamic Platforms

A Compact, Rugged Instrument  
for Informed Decision-Making

### 200WX Multisensor

From racing and cruising sailboats to yachting and commercial fishing, Airmar has WeatherStation® products specifically designed for your marine application.

The WX Series WeatherStation instruments meet a growing need for real-time, site-specific, weather information. For applications where Dynamic True and Apparent wind are important, the 200WX is recommended. It includes a 10Hz GPS, three-axis solid-state compass, rate gyro and tilt sensors. This model features configurable NMEA 0183 and NMEA 2000® digital data outputs, providing unparalleled versatility for system integration.

200WX model offers a truly best-in-class solution at a better price than any other weather monitoring system on the market today.

### Applications:

- Sailing or powerboats
- Harbors and marinas
- Oil platforms



#### Ultrasonic Wind Measurement

Dynamic True and Apparent wind speed and direction with no moving parts



#### Barometric Pressure

Accurate atmospheric pressure measurement



#### Air Temperature

With calculated heat index and wind chill



#### 10 Hz GPS

Position, COG, SOG, time stamping



#### 3-Axis Accelerometer

For pitch and roll



#### 3-Axis Compass

With dynamic stabilization and better than 1° accuracy



#### 3-Axis Rate Gyro

For rate-of-turn data

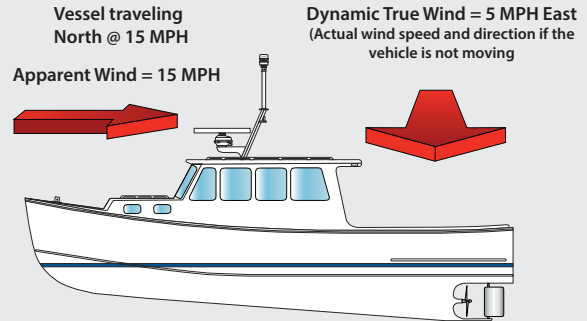


#### Relative Humidity (optional)

Field serviceable RH sensor with calculated dew point

# Understanding Dynamic True and Apparent Wind

Virtually all anemometers report wind speed and direction. Airmar's WeatherStation Instruments are unique because they calculate both dynamic true and apparent wind speed and direction. When the WeatherStation instrument is mounted on a moving (dynamic) platform, the apparent wind is the wind felt on your hand if you held it out while moving. Dynamic true wind is the wind relative to North but also corrected for the speed and direction of the vessel. WeatherStation WX instruments integrate a GPS and 3-Axis compass, which allows for the calculation of the dynamic true wind speed and direction based upon the apparent wind, speed of the vehicle, and vehicle heading. Dynamic True wind measurement can be critical for any application where the platform is moving.



Airmar's WX Series products are the only all-in-one unit to offer dynamic true and apparent wind speeds without additional sensors.

## SPECIFICATIONS

### Wind Speed

**Range:** 0 to 40 m/s (0 to 89 MPH)  
**Accuracy:** 5% at 10 m/s at 4 angles  
**Resolution:** 0.1 m/s  
**Calculations:** User configurable damping

### Wind Direction

**Range:** 0° to 359.9°  
**Accuracy:** ±3° at 10 m/s  
**Resolution:** 0.1°  
**Calculations:** User configurable damping

### Air Temperature

**Range:** -40° to 80°C (-40 to 176°F)  
**Accuracy:** ±1.1°C at 20°C  
**Resolution:** 0.1°C

### Relative Humidity (optional)

**Range:** 0 to 100% RH  
**Accuracy:** ±5% RH at 0 to 90% RH at 20°C  
**Resolution:** 0.1% RH

### Barometric Pressure

**Range:** 300 to 1100 hPa  
**Accuracy:** ±0.5 hPa at 25°C (or better)  
**Resolution:** 0.1 hPa

### Three-axis Compass

**Range:** 0 to 359.9°  
**Accuracy:** 1° static heading accuracy; 2° dynamic heading accuracy  
**Resolution:** 0.1°

### Pitch and Roll

**Measurement Type:** MEMS  
**Range:** 50°  
**Accuracy:** ±1° in range of ±30°  
**Resolution:** 0.1°

### GPS Position Accuracy: 3 m (10') CEP

### Operating Temperature Range: -25 to 55°C (-13 to 131°F)

### Operating Voltage

**Supply Voltage:** 9 VDC to 40 VDC  
**Supply Current (at 12 VDC):** <75 mA (<0.9 W)  
**NMEA 2000® Load Equivalency Number (LEN):** 2

### Weight

300 grams (0.7 lb)

### Mounting-thread Size, Base M39: Adapter on cable is standard 1"-14 UNS (3/4" NPT optional)

**Certifications and Standards:** CE, IPX6 (IPX4 with optional Relative Humidity sensor), RoHS, IEC61000-4-2, IEC60945, IEC60950\_1C, IEC60950\_22A, EN55022, EN55024, EN14982

## COMMUNICATIONS

**Available Hardware Interfaces:** Serial RS232, Serial RS422, CAN

**Available Protocols:** NMEA 0183, NMEA 2000

**Serial Data Transmission Code:** ASCII

**Serial Output Rate:** 1 Hz typical. User selectable. 10 Hz max recommended

## PART NUMBERS

**200WX:** 44-835-1-01, NMEA 0183 (RS422) and NMEA2000® (CAN Bus)

**200WX:** 44-837-1-01, RH, NMEA 0183 (RS422) and NMEA2000® (CAN Bus)

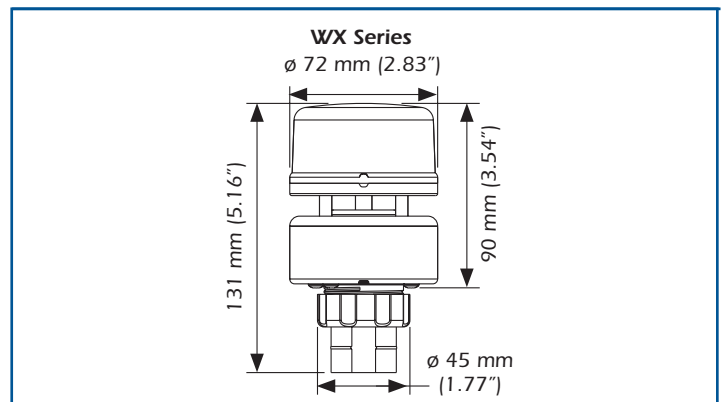
**200WX:** 44-846-1-01, NMEA 0183 (RS232) and NMEA2000® (CAN Bus)

**200WX:** 44-847-1-01, RH, NMEA 0183 (RS232) and NMEA2000® (CAN Bus)

\* Cables sold separately

RH = Relative Humidity

## DIMENSIONS



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