WeatherStation® Multisensor – Ultrasonic Instrument 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 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 than any other weather monitoring system on the market today, enabling individuals and professionals 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: <75 mA (<0.9 W), LEN 2 at 12 VDC
SPECIFICATIONS

Wind Speed
Range: 0 to 40 m/s
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

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°C to 55°C (-13 to 131°F)

Power
Supply Voltage: 9 VDC to 40 VDC
Supply Current (at 12 VDC): <75 mA (<0.9 W), LEN 2
NMEA 2000® Load Equivalency Number (LEN): 2
Weight: 300 grams (0.7 lb)
Mounting-thread Size on Base: Standard 1"-14 UNS (3/4" NPT optional)

Certifications and Standards: CE, IPX7, RoHS, IEC61000-4-2, IEC60945,
IEC60950_1C, IEC60950_22A, EN55022, EN55024, EN14982

COMMUNICATIONS

Available Hardware Interfaces
Serial RS232, Serial RS422, CAN

Available Protocols
Comma delimited ASCII, NMEA 0183, NMEA 2000®

Serial Output Rate:
1 Hz typical, user selectable, 10 Hz max recommended

PART NUMBERS

200WX: 44-848-1-01, NMEA 0183 (RS422) and NMEA 2000® (CAN bus)
200WX: 44-849-1-01, NMEA 0183 (RS232) and NMEA 2000® (CAN bus)
Cables sold separately

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