

NEW

MARINE

300WX
SERIES



Weather Data at Your Fingertips 300WX WeatherStation Instrument and CAST App

Airmar's ultrasonic 300WX WeatherStation® instruments redefine what's possible in marine weather sensing. Delivering ultra-accurate, real-time weather data, these rugged, compact, and maintenance-free instruments have zero moving parts for unmatched reliability. These all-in-one multisensor captures up to seven critical environmental parameters and seamlessly delivers that data to the NMEA 2000® network and to mobile devices through Airmar's intuitive CAST™ app.

Airmar's best-in-class WeatherStation instruments go beyond traditional weather sensing. Advanced measurements—including SOG/COG, pitch and roll, rate of turn, and position—combine with an integrated 3-axis compass and GNSS to enable dynamic True wind speed and direction from mobile platforms. The result: smarter data, greater precision, and total confidence in any conditions.

New Features of the 300WX WeatherStation Instruments:

- Enhanced wind speed accuracy: 1.5 knots RMS at 20 knots
- Bluetooth® wireless connectivity for use with Airmar's CAST™ app to view data, configure sensors, and perform firmware updates.
- Added communication protocols: J1939 and ISOBUS
- Automatic baud rate detection for J1939 and ISOBUS (250 kbps / 500 kbps)



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 on 300WX



Relative Humidity

Field serviceable RH sensor with calculated dew point (300WX only)



GNSS-Enabled

Position, COG, SOG, time stamping



3-Axis Compass

With dynamic stabilization



3-Axis Rate Gyro

For rate-of-turn data



3-Axis Accelerometer

For pitch and roll



Wireless Communication to CAST App

For viewing instrument data, configuring sensors and performing firmware upgrades

300WX Multisensor

The WeatherStation 300WX is a good choice for mobile, or stationary, weather-monitoring applications. Sensor-rich, in a durable, rugged, compact housing that is IP64-rated, the 300WX is ideal for marinas, yacht clubs and other stationary platforms.

Applications:

- Harbors and marinas
- Sail and powerboats
- Oil/Gas platforms

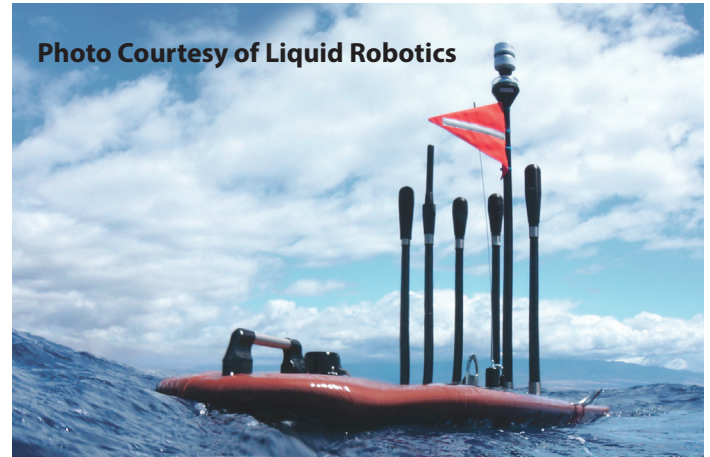


300WX-IP67 Multisensor

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. The 300WX-IP67 is the leading weather multisensor in the USV and autonomous vehicle markets with over one million hours of reliable data collection each year.

Applications:

- Autonomous and unmanned surface vehicles
- Buoys and offshore platforms
- Workboats/commercial fishing vessels
- Sail and Powerboats



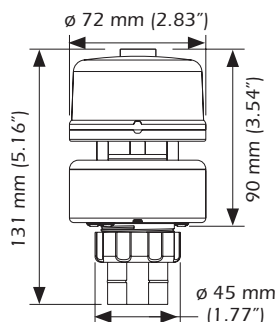
Meet the WeatherStation® 300WX-IP67 in BOLD NEW BLACK.

Now in stunning black, the WeatherStation® 300WX-IP67 brings high-performance, real-time weather data to your NMEA 2000® network—while elevating your vessel's modern blackout style.



Photo Courtesy of Scout Boats





300WX
Stationary and
Mobile Applications



300WX-IP67
Stationary and Mobile
Marine Applications



	300WX	300WX-IP67
Apparent wind speed and angle	✓	✓
Dynamic True wind speed and direction*	✓	✓
Barometric pressure	✓	✓
Air temperature	✓	✓
GNSS-Enabled (Position, COG, SOG)	✓	✓
Three-axis accelerometer for pitch & roll	✓	✓
Three-axis solid-state compass with dynamic stabilization: Better than 1° static compass accuracy Best-in-class 2° dynamic compass accuracy	✓	✓
Three-axis rate gyros provide rate-of-turn data	✓	✓
Relative humidity (field-serviceable) Calculated dew point Calculated heat index	✓	
Weatherproof rating	IP64	IP67
Operating voltage	9-40 VDC	9-40 VDC
Wireless connectivity to CAST app	✓	✓
Automatic Baud Rate Detection (250kbps/500kbps)	✓	✓

* **Dynamic True wind speed and direction** is important and often mission-critical. The 300WX calculates the dynamic true wind speed and direction based upon the apparent wind (the wind you would feel on your hand if you held it out while moving), speed of the vehicle, and vehicle heading.

SPECIFICATIONS

Wind Speed

Range: 0-40 m/s
Accuracy: 1.5 knots RMS @ 20 knots
Resolution: 0.1 m/s
Units: m/s, knots, km/h, MPH
Calculations: User configurable damping

Wind Direction

Range: 0° to 359.9°
Accuracy: 2.5° RMS @ 20 knots
Resolution: 0.1°

Air Temperature

Range: -25° to 55°C
Accuracy: ±1.1°C @ 20°C
Resolution: 0.1
Units: °C, °F

Relative Humidity – only offered in 300WX

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

Barometric Pressure

Range: 700 mbar to 1100 mbar
(20.5 inHg to 32.5 inHg, 700-1100 hPa)
Accuracy: ± 1 hPa @ 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 & Roll

Measurement Type: MEMS
Range: ±45°
Accuracy: ±1° in range of ±30°
Resolution: 0.1°
Units: Degrees

GNSS Position Accuracy: 2.5 m (8') CEP ‡

Operating Temperature Range: -25°C to 55°C

Operating Voltage:

Supply Voltage: 9 VDC to 40 VDC
Supply Current (@ 12 VDC): <55 mA (<0.66 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)

Output options include:

Hardware Interfaces: Serial RS232,
Serial RS422, CAN
Data Protocols:
Serial – NMEA 0183
CAN – NMEA 2000®, J1939, ISOBUS
Serial Data Transmission Code: ASCII

Certifications and Standards 300WX: CE, RoHS, IEC61000-4-2, IEC60945, IEC60950_1C, IEC60950_22A, EN55022, EN55024, EN14982; Ingress Protection

Certifications and Standards 300WX-IP67: CE, RoHS, IEC61000-4-2, IEC60945, IEC60950_1C, IEC60950_22A, EN55022, EN55024, EN14982; Ingress Protection, IP67

Cables sold separately unless otherwise specified

‡ GNSS-Enabled for connectivity to global GNSS constellations including: GPS (United States), GLONASS (Russia), Galileo (European Union), BeiDou (China), and QZSS (Japan). Accuracy rating based on WAAS-Enabled GPS.

CAST™ —The App That Maximizes Your AIRMAR Products

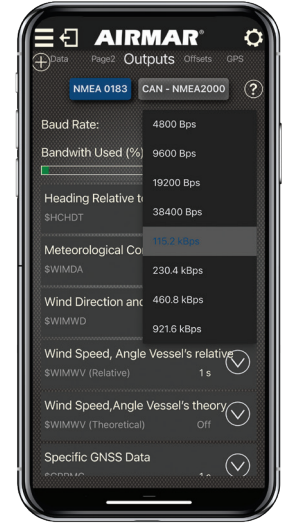
The Airmar CAST™ app connects directly from iOS and Android™ Smart devices to Airmar's 300WX WeatherStation Instruments. CAST connects using Bluetooth allowing users to configure sensors and outputs directly from a mobile device at distances up to 100 meters (330')*. This convenient feature enables users to connect to the WeatherStation wirelessly to perform firmware updates, rather than removing the instrument from a mast to do so. The CAST app also provides customizable data display layouts in digital, graphical, or hybrid formats to view current weather data.

*BLE quoted distance for outside operation with line of sight connectivity. Connectivity distance from inside the vessel may be less than stated.



CAST™

The innovative App for allowing users to calibrate, configure and view sensor data to evaluate and improve performance!

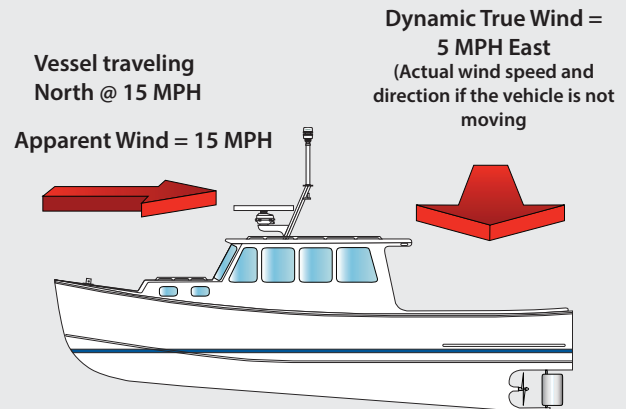


Note: Actual screen appearance and data availability may vary depending on the model of Airmar product it is connected to.

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.

Note: 300WX models also have the capability of interfacing with other external GNSS instruments for even more precise true wind calculations, which is important for racing sailboats and yachts to optimize trim and course.



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



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