

NEW

AGRICULTURE AND INDUSTRIAL

300WX
SERIES



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

Airmar's ultrasonic 300WX WeatherStation® instruments redefine what's possible in 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 a vehicle's on-board systems 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:

- Added communication protocols: J1939 and ISOBUS
- 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.
- 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

The Only Multisensor You Need – on Land, at Sea, Crewed or Fully Autonomous

Airmar 300WX vs. 300WX-IP67:

Same Core Features. One Key Difference.

- **300WX** → Includes Relative Humidity (RH) (IP64-rated)
- **300WX-IP67** → No RH, waterproof & dustproof (IP67-rated)

Why IP67 Matters

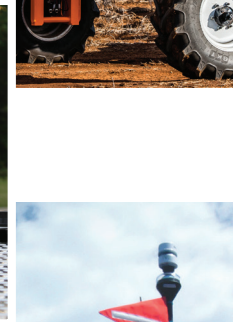
- **Fully Waterproof** – Submersible up to 1 meter for 30 minutes
- **Dustproof** – Sealed against sand, dirt and debris
- **Corrosion Resistant** – Against saltwater

300WX-IP67 Best for:

- Offshore platforms, buoys and oil rigs
- Autonomous and unmanned surface vessels at sea
- Dusty industrial sites (mining, construction, harvesting, planting)

Why Relative Humidity Matters:

- **Environmental Monitoring and Mobile Weather** – track dew point, heat index, and moisture levels
- **Enables Delta T Calculations** – The key to perfect spraying conditions! Optimize droplet size, reduce drift, improve chemical efficacy. Critical for agricultural spraying (of fertilizers, pesticides, herbicides) and precision farming
- **Enables Wet Bulb Temperature Calculations** – Essential for evaporation modeling in applications such as: Forestry/Wildfire Risk Assessment, Greenhouses, Livestock facilities to monitor heat stress in poultry, dairy and swine operations, automated climate control applications

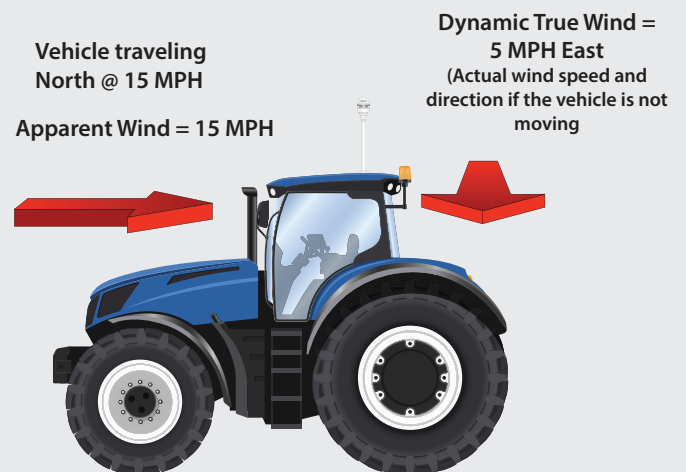


#1 Weatherstation Instrument Choice for Mobile Applications

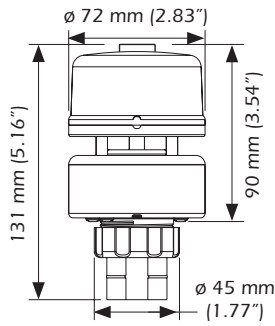
Understanding Dynamic True and Apparent Wind

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 USVs and weather monitoring vehicles.



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



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: 9VDC 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.

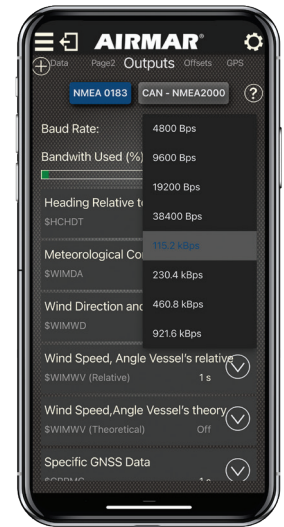
CAST™ — the App That Maximizes Your AIRMAR Products

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 the installed location. 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 a vehicle may be less than stated.



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

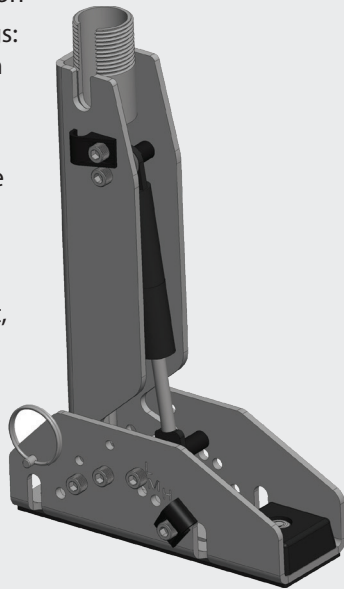


Note: Actual screen appearance and data availability may vary depending on the model of Airmar product it is connected to.

WeatherStation® Mount for Stationary and Moving Platforms

This versatile mount enables many mounting applications for WeatherStation Instruments. The collapsible design makes it handy to store in down position when vehicle is in a garage, barn or traveling at high speeds.

- Aluminum construction provides a strong but light weight mount for all installations
- Two-positions for storage – easily deployed by hand from down to up position
- 3 Different force settings: Low, Medium, and High
- 1-14 threads used on mount
- Extensions are available in 15" (38.1cm) and 30" (76.2cm)
- Mounting kits available for rooftop, pole mount, side mount



Data Logging – Convenient data logging solution for your 300WX WeatherStation

Every SmartFlex™ CES Module has built-in wifi and ethernet, for connectivity to the internet and Cloud based services. With the 300WX connected, custom values logs or entire bus logs can be sent to the cloud, where key personnel can be aware of current conditions as well as past network traffic and events. SmartFlex also provides the capability to push SMS/Email messages to personnel based on custom criteria. In addition, each SmartFlex module has two USB 2.0 access points to place storage devices of any size.

Values Logging

- Pick any value on the 300WX or any connected device
- Custom set the time interval to log
- Optional trigger/event condition to trigger logging (such as high wind events)

