

200WX



Airmar's WeatherCaster™ software (shown here on a Furuno TZtouch Multifunction Display) is included with the 200WX WeatherStation® instrument.



Delivering an Accurate, Affordable, All-in-One Unit

The all-in-one weather sensor measures apparent wind speed and direction, barometric pressure, air temperature, relative humidity, dew point and wind chill temperature. In addition, with the internal compass and GPS, true wind speed and direction can also be calculated. The UV stabilized, compact housing is fully waterproof and resistant to chemicals and sunlight.

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

Ultrasonic WeatherStation® Instrument

Features

- Apparent wind speed and direction
- Ultrasonic wind readings up to 90 MPH/78 KTS (40 m/s)
- Barometric pressure
- Air temperature
- Calculated wind chill temperature
- Optional field-serviceable relative humidity
 - Calculated dew point
 - Calculated heat index
- Optional heater and upper ring
- True wind speed and direction
- 10 Hz GPS (COG/SOG/Position)
- Three-axis accelerometer for pitch and 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
- Best-in-class pitch and roll accuracy
- Output options include:
 - RS422/CAN BUS
 - RS232/CAN BUS



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Technical Information

SPECIFICATIONS

Wind Speed Range: — 0 knots to 78 knots (0 MPH to 90 MPH, 0 m/s to 40 m/s)
Wind Speed Resolution: — 0.1 knot (0.1 MPH, 0.1 m/s)
Wind Speed Accuracy @ 0°C to 55°C (32°F to 131°F), no precipitation*:
 — **Low Wind Speeds:**
 • 0-10 knots; 1 knot RMS +10% of reading (0 MPH to 11.5 MPH; 1.1M PH + 10 % of reading) (0 m/s to 5 m/s; 0.5 m /s + 10 % of reading)
 — **High Wind Speeds:**
 • 10-78 knots; 2 knots RMS or 5%, whichever is greater (11.5 MPH to 90 MPH; 2.3 M PH or 5%, whichever is greater) (5 m/s to 40 m/s; 1 m/s or 5 %, whichever is greater)
Wind Speed Accuracy in wet conditions:** — 5 knots RMS (5.7 MPH RMS, 2.5 m/s RMS)
Wind Direction Range: 0° to 360°
Wind Direction Resolution: 0.1°
Wind Direction Accuracy @ 0°C to 55°C (32°F to 131°F), no precipitation*:
 — **Low Wind Speeds (5° RMS typical):** • 4-10 knots (4.6 MPH to 11.5 MPH, 2 m/s to 5 m/s)
 — **High Wind Speeds (2° RMS typical):** •> 10 knots (>11.5 MPH, >5 m/s)
Wind Direction Accuracy in wet conditions (8° RMS Typical):** >8 knots (>9.2 MPH, >4 m/s)
Compass Accuracy:
 — 1° static heading accuracy; 2° dynamic heading accuracy
Pitch and Roll Range / Accuracy: ±50° / <1°
Air Temperature Range: -40°C to 55°C (-40°F to 131°F)
Air Temperature Resolution: 0.1°C (0.1°F)
Air Temperature Accuracy: ±1.1°C (±2°F)* @ >4 knots wind (>4.6 MPH wind) (>2 m/s wind)
Barometric Pressure Range: 300 mbar to 1100 mbar (24 inHg to 33 inHg, 800 hPa to 1100 hPa)
Barometric Pressure Resolution: 0.1 mbar (0.029 inHg, 0.1 hPa)
Barometric Pressure Accuracy: ±1 mbar (±0.029 inHg, ±1 hPa) when altitude correction is available
Relative Humidity Range: 10% to 95% RH
Relative Humidity Accuracy*: ±5% units RH
GPS Position Accuracy: 3 m (10') with WAAS/EGNOS (95% of the time, SA off)
Operating Temperature Range: -25°C to 55°C (-13°F to 131°F)
Supply Voltage: 9 VDC to 40 VDC
Supply Current (@ 12 VDC): — <1.7W (<140 mA)
Weight: 300 grams (0.8 lb)
Communication Interface: RS232 or RS422 & CAN
Mounting Thread Size on Base: 1"-14 UNS or 3/4" NPT
Certifications and Standards (Pending): CE, IPX6 (Relative Humidity/IPX4), RoHS, IEC61000-4-2, IEC60945

RMS—Root Mean Square, LEN—Load Equivalency Number
 Humidity and temperature readings compared to Vaisala® Instruments

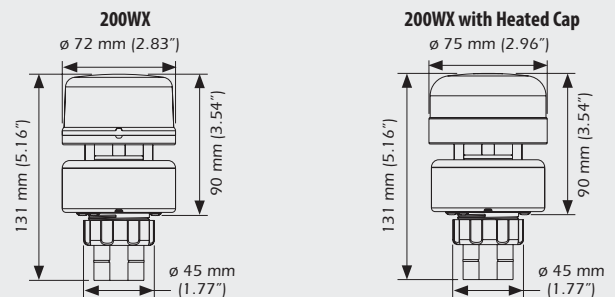
* When the wind speed is less than 2 m/s (4.6 MPH) and/or air temperature is below 0°C (32°F), wind, temperature, and relative humidity readings will be less accurate.

** Wet conditions include moisture, rain, frost, dew, snow, ice and/or sea spray in the wind channel.

DATA OUTPUT PROTOCOL

CAN (NMEA 2000®) Output Message Structure	RS422 (NMEA 0183) Sentence Structure
59392.....ISO Acknowledgment	\$GPDTM RS422 Datum Reference
060928.....ISO Address Claim	\$GPGGA GPS Fix Data
126208.....Acknowledge Group Function	\$GPGLL.....Geographic Position—Latitude and Longitude
126464.....PGN List	\$GPGSA..... GNSS DOP and Active Satellite
126992.....System Time	\$GPGSV..... Satellites in View
126996.....Product Information	\$GPRMCRecommended Minimum GNSS
126998.....Configuration Information	\$GPVTG..... COG and SOG
127250.....Vessel Heading	\$GPZDA..... Time and Date
127251.....Rate of Turn	\$HCHDG..... Heading, Deviation, and Variation
127257.....Attitude	\$HCHDT True Heading
127258.....Magnetic Variation	\$TIROT Rate of Turn
129025.....Position and Rapid Update	\$HCTSTrue Heading and Status
129026.....COG and SOG, Rapid Update	\$WIMDA..... Meteorological Composite
129029.....GNSS Position Data	\$WIMWD Wind Direction and Speed
129033.....Time and Date	\$WIMWV..... Wind Speed and Angle
129044.....Datum	\$WIMWR Relative Wind Direction and Speed
129538.....GNSS Control Status	\$WIMWT..... True Wind Direction and Speed
129539.....GNSS DOPs	\$YXDRTransducer Measurements
129540.....GNSS Sats in View	
130306.....Wind Data	
130310.....Environmental Parameters	
130311.....Environmental Parameters	
130312.....Temperature	
130313.....Humidity	
130314.....Actual Pressure	
130323.....Meteorological Station Data	

DIMENSIONS



FURUNO

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