WSO200

Ultrasonic Wind and Weather Station

The second generation WSO200 is a marine grade ultrasonic weather station that accurately measures wind speed and direction, air temperature, barometric pressure, relative humidity, wind chill factor, heat index, and dew points. The wind measurement is calculated using six ultrasonic sensors in delta configuration, which means there are no moving parts to wear out or to get caught in the rigging. Unlike mechanical anemometers and weather measuring devices, the WSO200 is not affected by the common issues such as bearing wear, salt and dirt build-up, or bird perching that can all result in failure or data inaccuracy.

Precise wind speed and direction is easily achieved under tilt of up to 30°, as can be the case with heeled sailboats or powerboats operating in pitching and rolling seas. This makes the new Maretron weather station a gamechanger for recreational boaters.

The WSO200 is NMEA 2000® certified. When combined with a Maretron DSM Series or dedicated TSM Series display or any device running N2KView® V3 software, all data is visible on the NMEA 2000 network for a truly plug and play experience. Add a Maretron depth, speed & temperature triducer (DST110), a Maretron GPS receiver (GPS200), and a Maretron compass (SSC300) to view true vessel referenced wind speed and direction as well as ground referenced speed and direction.
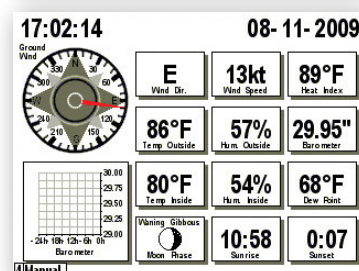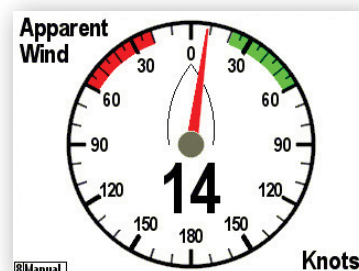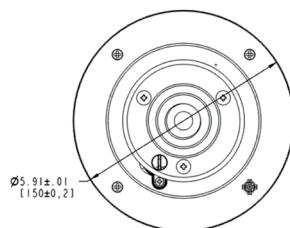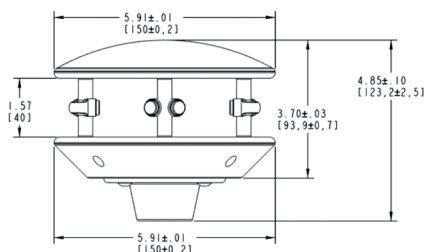
The WSO200 mounts on a 1"-14 Standard Marine Mount and is waterproof to IP67 standards.

The WSO200 provides these functions:

- Apparent Wind Speed
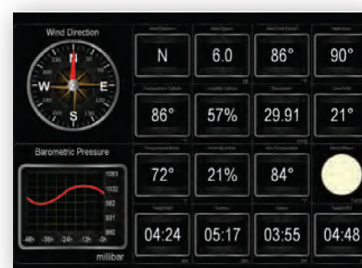- Apparent Wind Direction
- Atmospheric Pressure
- Air Temperature
- Relative Humidity

Second Generation Enhancements:

- User Replaceable Humidity Sensor
- Higher Signal to Noise Ratio
- Lower Power Consumption

NEW!

DSM410 & DSM570 Screen Shots

N2KView Environment Screen

PRODUCTS

PART NUMBER	DESCRIPTION
WSO200	Ultrasonic Wind/Weather Station

SPECIFICATIONS

PARAMETER	VALUE	COMMENT
Wind Speed Range	0 to 99 knots (1 to 185 kph)	
Wind Speed Resolution	0.1 knot (0.19 kph)	
Wind Speed Accuracy	+/-10% or 1 knot (1.9kph)	Tilt 0° (operates to 30° tilt)
Wind Direction Accuracy	± 5°	Tilt 0° (operates to 30° tilt)
Temperature Range	-25° to 55° C	
Temperature Resolution	0.18°F (0.1°C)	
Temperature Accuracy	±1.8°F (1°C)	
Relative Humidity Range	0-99% RH	
Relative Humidity Resolution	1% RH	
Relative Humidity Accuracy	± 4% RH	
Barometric Pressure Range	26 to 32" HG (880 to 1080 mb)	
Barometric Pressure Resolution	0.03" HG (1 mb)	
Barometric Pressure Accuracy	±0.09" HG (±3 mb)	

NMEA 2000® PARAMETER GROUP NUMBERS (PGNs)

PARAMETER	PGN#	PGN NAME	DEFAULT RATE
Periodic Data PGNs	130306	Wind Data	10 Times/Second
	130310	Environmental Parameters	10 Times/Second
	130311	Environmental Parameters	2 Times/Second
	130312	Temperature	2 Times/Second
	130313	Humidity	2 Times/Second
	130314	Actual Pressure	2 Times/Second
Response to Requested PGNs	126464	PGN List (Transmit and Receive)	N/A
	126996	Product Information	N/A
	126998	Configuration Information	N/A
Protocol PGNs	059392	ISO Acknowledge	N/A
	059904	ISO Request	N/A
	060416	ISO Transport Protocol, Connection Management	N/A
	060160	ISO Transport Protocol, Data Transfer	N/A
	060928	ISO Address Claim	N/A
	065240	ISO Address Command	N/A
	126208	NMEA Complex Request/Command/Ack.	N/A
Maretron Proprietary PGNs	126720	Device Configuration Information	N/A

ELECTRICAL

PARAMETER	VALUE	COMMENT
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	<50mA	Average Current Drain
Load Equivalence Number (LEN)	1	NMEA 2000® Spec. (1LEN = 50mA)
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	Energy Rated per SAE J1113

MECHANICAL

PARAMETER	VALUE	COMMENT
Size	5.91" Dia. x 4.85" Tall (150mm Dia. x 123.2mm Tall)	Including Mounting Bracket
Weight	10 oz. (283g)	Including Mounting Bracket
Mounting	Pole	Fits 1"-14 TPI Standard Marine Mount

ENVIRONMENTAL

PARAMETER	VALUE
IEC 60945 Classification	Exposed
Degree of Protection	IP67
Operating Temperature	-25°C to 55°C
Storage Temperature	-40°C to 70°C
Relative Humidity	93%RH @40° per IEC60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s² per IEC 60945-8
Rain and Spray	12.5mm Nozzle @ 100liters/min from 3m for 30min per IEC 60945-8.8
Solar Radiation	Ultraviolet B, A, Visible, and Infrared per IEC 60945-8.10
Corrosion (Salt Mist)	4 times 7 days @ 40°C, 95%RH after 2 hour Salt Spray Per IEC 60945-8.12
Thermal Shock	10 cycles -25°C to +55°C. Total test time 80 hours, 2 hour soak at each temperature
Electromagnetic Emission	Conducted and Radiated Emission per IEC60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12

CERTIFICATIONS

PARAMETER	COMMENT
NMEA 2000® Standard	Certified
Maritime Navigation and Radio Communication Equipment & Systems	IEC 61162-3
Maritime Navigation and Radio Communication Equipment & Systems	EC 60945
FCC and CE Mark	Electromagnetic Compatibility