

## **WSO100**

Maretron's outdoor weather station measures wind speed and direction, air temperature, barometric pressure, and relative humidity. The wind measurement is performed using ultrasonic sensors, which means there are no moving parts to wear out or to get caught in the rigging.

The WSO100 accurately measures wind speed and direction even when tilted, making it ideally suited for heeled sailboats or powerboats operating in pitching and rolling seaways.

When used with a Maretron display (DSM200), you can view apparent wind speed and direction, humidity, air temperature, barometric pressure (with graphs to see trends), wind chill factor, heat index, and dew point. If you add speed through water (DST100), GPS (GPS100) and compass (SSC200), you can view true vessel referenced wind speed and direction as well as ground referenced speed and direction.

The WSO100 provides these functions:

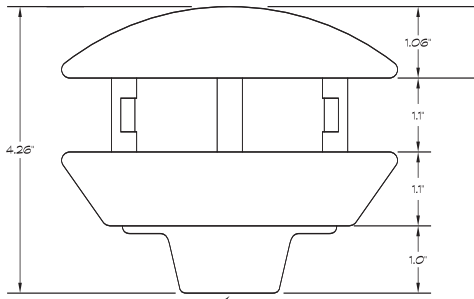
- Apparent Wind Speed
- Apparent Wind Direction
- Atmospheric Pressure
- Air Temperature
- Relative Humidity

The WSO100 is easily mounted to a standard marine mount with its standard 1"-14 male threads.

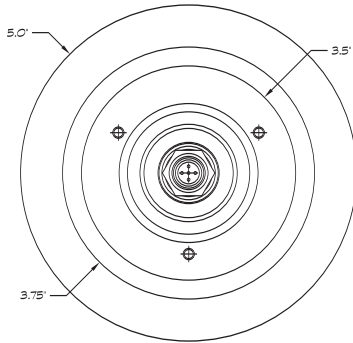


# **Maretron**

*Leading the way in NMEA 2000® technology*



1" - 14 - UNS-2B THREAD  
(1" - 14 TPI STANDARD MARINE MOUNT)



### Specifications

Parameter	Type	Comment
Wind Speed Range	0.5 to 99 mph	
Wind Speed Resolution	0.1 mph	
Wind Speed Accuracy	+/-5% or 1 mph	Tilt 0° (operates to 30° tilt)
Wind Direction Accuracy	+5%	Tilt 0° (operates to 30° tilt)
Temperature Range	-25° to 55° C	
Temperature Resolution	0.1° F	
Temperature Accuracy	± 1° F	
Relative Humidity Range	0 - 99% RH	
Relative Humidity Resolution	1% RH	
Relative Humidity Accuracy	4%	0%-99% RH
Barometric Pressure Range	880 to 1080 mb (26 to 32" Hg)	
Barometric Pressure Resolution	0.7 mb (0.02" Hg)	
Barometric Pressure Accuracy	± 3.4 mb (± 0.1" Hg)	

### Certifications

Standard	Comment
NMEA 2000®	Level A
Maritime Navigation and Radiocommunication Equipment & Systems	IEC 60945
FCC and CE mark	Electromagnetic Compatability

### NMEA 2000® Parameter Group Numbers (PGNs)

Description	PGN #	PGN Name
Periodic Data PGNs	130311	Environmental Parameters
	130306	Wind Data
Response to Request PGNs	130310	Environmental Parameters
	126464	PGN List (Transmit and Recieve)
	126996	Product Information
	126998	Configuration Information
Protocol PGNs	059392	ISO Acknowledge
	059904	ISO Request
	060416	ISO Transport Protocol, Connection Management
	060160	ISO Transport Protocol, Data Transfer
	060928	ISO Address Claim
	065240	ISO Address Command
	126208	NMEA Complex Request/Command/Acknowledge
Maretron Proprietary PGNs	127720	Configuration

### Electrical

Parameter	Value	Comment
Operating Voltage	9 to 16 Volts	DC Voltage
Power Consumption	< 350mA	Average Current Drain
Load Equivalence Number (LEN)	7	NMEA 2000® Spec. (1 LEN = 50mA)
Reverse Battery Protection	Yes	Indefinetly
Load Dump Protection	Yes	Energy Rated Per SAE J1113

### Mechanical

Parameter	Value	Comment
Size	4.25" dia. x 3.45"	Including Mounting Bracket
Weight	10 Oz.	Including Mounting Bracket

### Enviromental

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°C per IEC 60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s² per IEC 60945-8.7
Rain and Spray	12.5mm Nozzle @ 100liters/min from 3m for 30min per IEC 60945-8.8
Solar Radiation	Ultraviolet B, A, Visible, and Infared 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
Electromagnetic Emission	Conducted and Radiated Emission per IEC 60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12

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