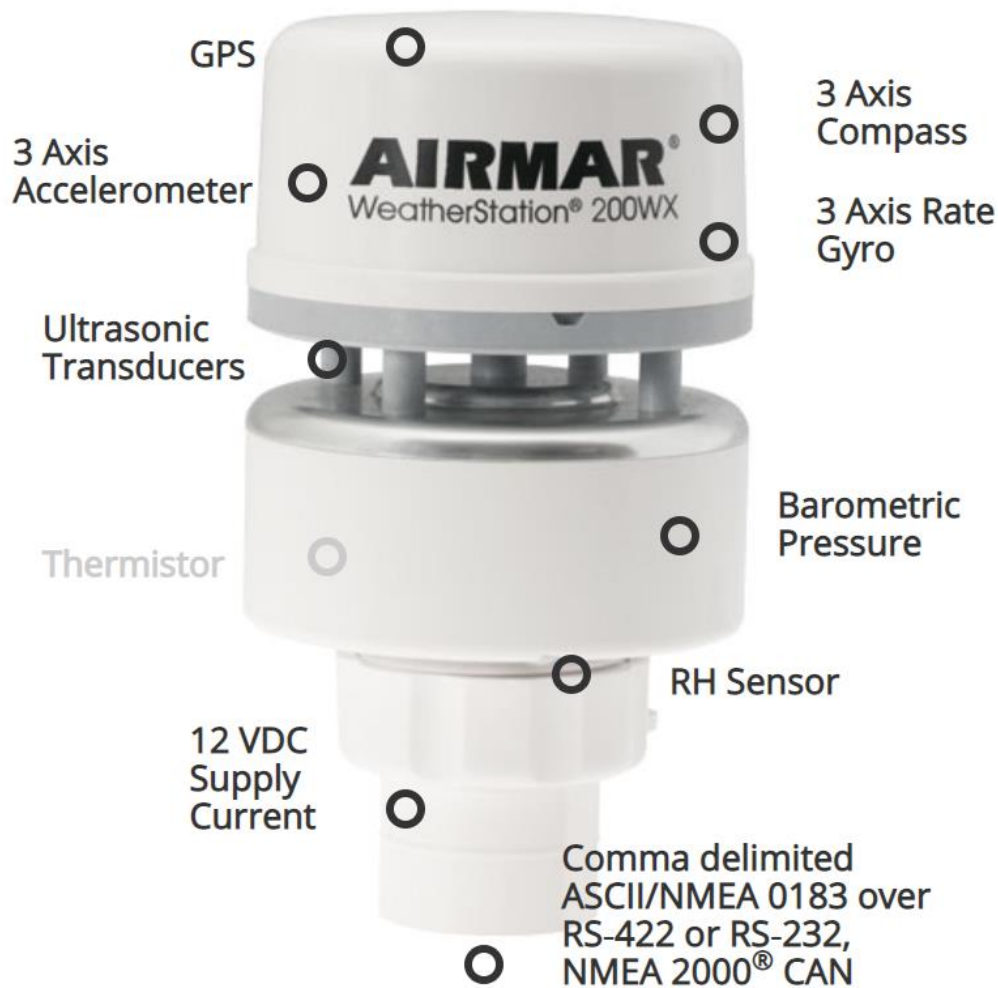




Sailbuoy Airmar User Manual

Date: 4 November 2020

Bergen, Norway



Copyright by Offshore Sensing AS. All rights reserved.

This document may not, in whole or in part, be copied, photocopied, reproduced, translated, or reduced to any electronic medium or Machine readable form without prior consent in writing from Offshore Sensing AS.

Offshore Sensing AS shall not be liable for any errors or for incidental or consequential damages in connection with the use of this manual. The information in this document is subject to change without notice. Always use the most recent version of this document.



Contents

- Introduction 3
- Airmar sensor configuration 3
- \$WIMDA – windspeed, direction..... 3
- Airmar Sailbuoy configuration 3
- Transmitted data..... 4
- Mounting..... 4
- Raw output example from Airmar 6
- Configuring the Airmar 6



Introduction

The Airmar 200WX is a Weatherstation containing various sensors. Documentation can be found on www.airmar.com

Airmar sensor configuration

The Airmar is configured to stream data at 4800 baud and to output the following sentences:

Sentence	Frequency [Hz]
GGA	0.2
HDG	1
MDA	1
MWV (R)	1
RMC	1
XDR (A)	0.1
XDR (C)	1
XDR (D)	1

The sensor is configured using the WeatherCaster software from Airmar.

The following sentences should be enabled:

\$WIMDA – windspeed, direction

\$WIMWV – windspeed if no gps fix

\$HCHDG - heading

Airmar Sailbuoy configuration

----- AIRMAR -----

```

5: $AIRRP  RunOrder (1-9).....: 5
6: $AIRRC  RunCounter.....: 1
7: $AIREN  On.....: 1
8: $AIRTO  TimeoutSec.....: 120
9: $AIRAO  AlwaysOn.....: 0
10: $AIRLG  LogToDisk.....: 1

```

Command	No Parameters	Description	Min	Max
\$AIRRP	1	RunOrder (1-9)	1	9



\$AIRRC	1	RunCounter	0	
\$AIREN	1	Airmar is enabled (1) or disabled (0)	0	1
\$AIRTO	1	TimeoutSec (maximum acquisition time)	0	3600
\$AIRAO	1	AlwaysOn (leaves airmar on between acquisitions) ¹		
\$AIRLG	1	LogToDisk (log airmar output to disk)	0	1

¹The sensor consumes around 100 mA while running.

Transmitted data

AirmarAirTemp – mean air temperature

AirmarWindDirection – mean direction

AirmarWindSpeed - mean windspeed

AirmarWindGust – 95% largest windspeed value

AirmarHeading – mean heading

AirmarAirFix – GPS corrected data.

Note: If the sensor is not powered on long enough the AirmarAirFix will be 0. This means the sensor has not gained a GPS fix and the data transmitted will be of a lower quality.

Mounting

Before attaching the sensor, it is important to lubricate around the connector with marine silicone to ensure that water does not enter the pins when the sensor is mounted. Hand tighten the screw.

Align the sensor with the alignment lines.





Raw output example from Airmar

```
$WIMWV,179.6,R,0.7,N,A*2D
$GPRMC,,V,,,,,,,,,0.9,W,N*23
$YXXDR,C,,C,WCHR,C,,C,WCHT,C,,C,HINX,P,1.0983,B,STNP*48
$HCHDG,208.7,0.0,E,0.9,W*54
$WIMDA,32.4328,I,1.0983,B,25.5,C,,,,,,,,,,,,,*3D
$WIMWV,164.8,R,0.8,N,A*20
$GPRMC,,V,,,,,,,,,0.9,W,N*23
$YXXDR,C,,C,WCHR,C,,C,WCHT,C,,C,HINX,P,1.0983,B,STNP*48
$HCHDG,208.5,0.0,E,0.9,W*56
$WIMDA,32.4328,I,1.0983,B,25.5,C,,,,,,,,,,,,,*3D
$WIMWV,179.6,R,0.8,N,A*22
$GPRMC,,V,,,,,,,,,0.9,W,N*23
$YXXDR,C,,C,WCHR,C,,C,WCHT,C,,C,HINX,P,1.0983,B,STNP*48
$HCHDG,208.6,0.0,E,0.9,W*55
$WIMDA,32.4328,I,1.0983,B,25.5,C,,,,,,,,,,,,,*3D
$WIMWV,179.6,R,0.7,N,A*2D
$GPRMC,,V,,,,,,,,,0.9,W,N*23
$YXXDR,C,,C,WCHR,C,,C,WCHT,C,,C,HINX,P,1.0983,B,STNP*48
$HCHDG,208.6,0.0,E,0.9,W*55
$GPGGA,,,,,0,,,,,,,,,*66
$WIMDA,32.4328,I,1.0983,B,25.5,C,,,,,,,,,,,,,*3D
$WIMWV,179.6,R,0.7,N,A*2D
$GPRMC,,V,,,,,,,,,0.9,W,N*23
$YXXDR,C,,C,WCHR,C,,C,WCHT,C,,C,HINX,P,1.0983,B,STNP*48
$HCHDG,208.6,0.0,E,0.9,W*55
$WIMDA,32.4328,I,1.0983,B,25.5,C,,,,,,,,,,,,,*3D
$WIMWV,179.6,R,0.7,N,A*2D
```

Configuring the Airmar

To configure the sensor, use the WeatherCaster software from Airmar.
Connect to the sensor using the Direct Serial menu.