This sensor consists of a light wind vane pivoted on top of a housing. Inside the housing a compass is magnetically coupled to the vane. The sensor can be mounted directly on the sensor arm of the Automatic Weather Station 2700, Data Bouy Sensor Ring on different types of sensor brackets from Aanderaa or on a 25 mm O.D. vertical aluminum tube. When installed on brackets or tubes, the sensor must then be connected to the SmartGuard Datalogger by a separate cable.

When direction is to be read, the compass will read out the average reading since the last reading was taken. The compass consists of a sensing element mounted on an electronic card. In the sensing element is a follower magnet which follows the magnet on the wind vane. Four Hall elements measure the direction every second and a micro controller on the electronic card calculates the average direction in the measuring period.

The housing is furnished with an N mark that must be orientated towards North or to a reference point like a ship’s center-line for an ordinary degree indication. When properly orientated this sensor will cause the data logging system to give a raw data reading of 0, 256, 512 and 768 for wind blowing from the North, East, South and West respectively.

A non-averaging version designated 3590B is also available. This sensor will only give a momentary value every time the sensor is read. To avoid galvanic corrosion do not fasten the sensor to other metals than aluminum.

Wind Direction 3590(averaging)

A sensor for measuring average wind direction in a sampling interval. It is designed to be used with Aanderaa SmartGuard and the Aanderaa Automatic Weather Station 2700.
Specifications 3590

PIN CONFIGURATION
Receptacle, exterior view; pin = ●; bushing = ○
- 9volt
Control voltage
System ground
Bridge voltage
Not connected

CALIBRATION
Provided that the orientation mark on this sensor is orientated towards North or to a reference point, the standard calibration formula, direction (degrees magnetic) = A + BN + CN^2 + DN^3 is valid. N is the raw data reading and the nominal calibration coefficients are:

<table>
<thead>
<tr>
<th>A</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>3.516E-01</td>
</tr>
</tbody>
</table>

Range: 0 to 360 degrees magnetic
Threshold Speed: Less than 0.3 m/s
Accuracy: Better than ±5 degrees Magnetic
Output Signal: Aanderaa SR10
Damping Ratio: 0.7
Operating Temperature: -40 to +65°C
Current Consumption: 200μA
Operating Voltage: 7 to 14VDC
Electrical Connection: Automatic Weather Station (AWS)/SmartGuard, Sensor Arm or Sensor Cable
Material Housing: Aluminum 6061-T6, anodized 10-15μ. Stainless steel
Weight: 620g
Packing: Cardboard box: 385x290x235mm
Gross Weight: 1.2 kg
Warranty: See Terms & Conditions, min. one year against faulty material and workmanship

Accessories, not included:
Sensor Cable 5327,5241,5242,5243,5244
Mast Cable 5235
Sensor Bracket 2808/3494/3314
Maintenance Kit, Wind Sensor 3805

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www.aanderaa.com

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Let’s Solve Water