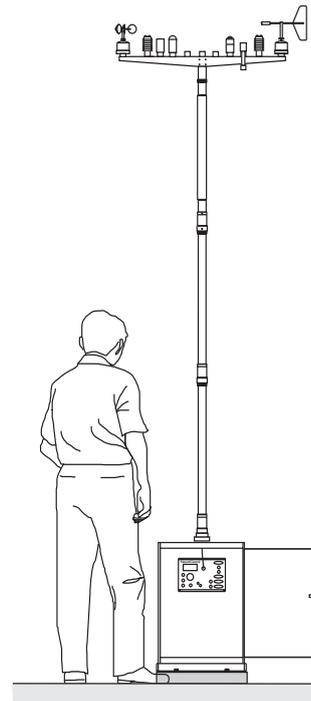


## Wind Direction 3590(averaging)

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.



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.

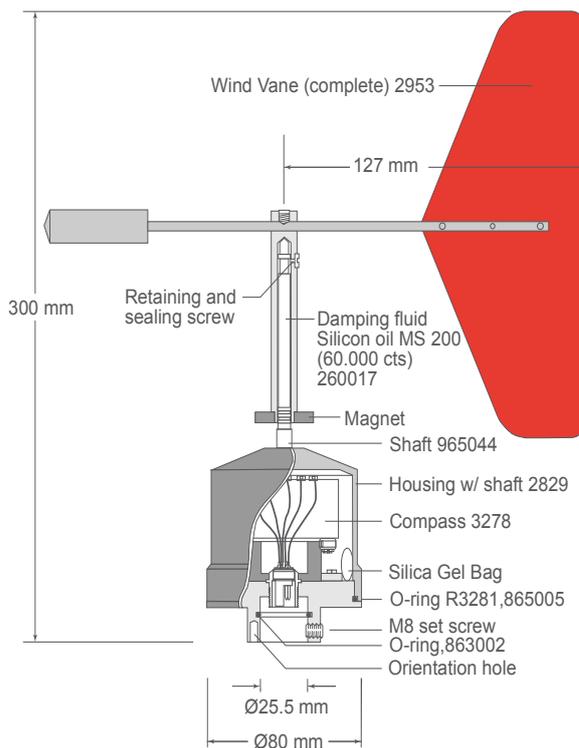
When direction is to be read, the compass will read out the average reading since the last reading was taken. The compass consists of a sensing element mounted on an electronic card. In the sensing element is a follower magnet which follows the magnet on the wind vane. Four Hall

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.

# Specifications 3590



**Range:** 0 to 360 degrees magnetic  
**Threshold Speed:** Less than 0.3m/s  
**Accuracy:** Better than  $\pm 5$  degrees  
 Magnetic  
**Output Signal:** Aanderaa SR10  
**Damping Ratio:** 0.7  
**Operating Temperature:** -40 to +65°C  
**Current Consumption:** 200 $\mu$ A  
**Operating Voltage:** 7 to 14VDC  
**Electrical Connection:** Automatic Weather Station (AWS)/SmartGuard, Sensor Arm or Sensor Cable  
**Material Housing:** Aluminum 6061-T6, anodized 10-15 $\mu$ . 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

## PIN CONFIGURATION

Receptacle, exterior view; pin = ●; bushing = ○  
 - 9volt ————— 3 ————— 4 ————— Bridge voltage  
 Control voltage — 2 ————— 5 ————— Signal  
 System ground — 1 ————— 6 ————— 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:

A	0	C	0
B	3.516E-01	D	0

  
 Let's Solve Water

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