



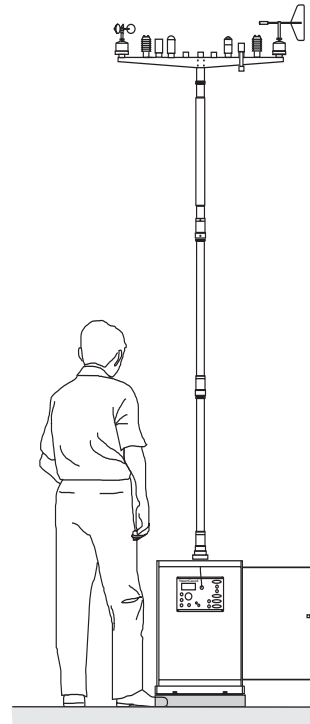
The Wind Speed Sensor 2740 consists of a three cup rotor on top of an aluminium housing. The sensor can be fitted directly onto the Sensor Cross Arms 3415/3435 of an Aanderaa automatic weather station or used separately if a connecting cable is used. The sensor foot will fit onto a 25 mm vertical tube.

The rotor bearing assembly consist of two stainless steel ball bearings in an assembly protected by a surrounding skirt. The lower end of the skirt is furnished with a magnet, and the magnet's rotation is sensed by a magneto inductive switch located inside the housing.

A micro controller reads the pulses from the magneto inductive switch sensing the rotor's rotation and uses the pulse count to calculate the wind speed. The sensor has two output signals; average wind speed and maximum wind speed (gust) during the sampling interval.

Wind Speed Sensor 2740

A sensor for measuring the average and maximum wind speed (gust) during the sampling interval. The sensor is designed for use with Aanderaa SmartGuard and the Aanderaa Automatic Weather Station 2700.



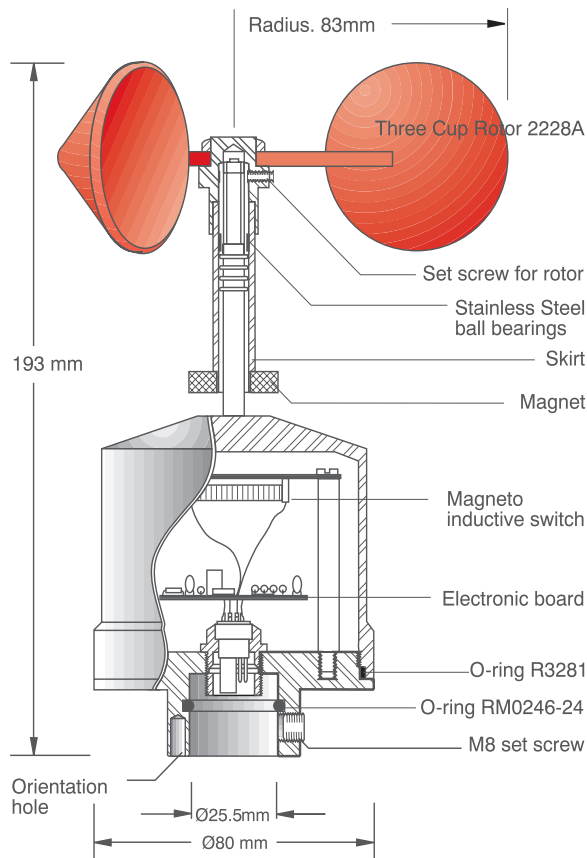
The average wind speed is obtained as the arithmetic mean of the wind regardless of the sampling interval, provided that the sampling interval is between four seconds and three hours.

The maximum wind speed is the highest speed occurring over a two-second period at any time during the sampling interval.

The micro controller also provides the Aanderaa SR10 output signals for wind speed and gust. Both output signals will have the same conversion factor for calculation of wind speed in engineering units from the ten-bit output data. This factor is independent of the sampling interval used.

From august 1998 the sensor has been supplied with a new and more rugged three-cup rotor designated 2228A.

Specifications 2740

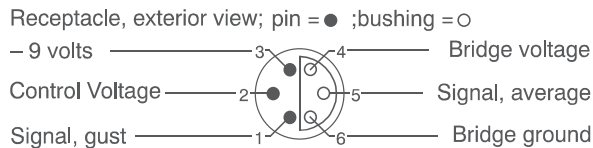


- Range:** Up to 79m/s
- Threshold speed:** Less than 0.3m/s
- Distance constant:** 1.5 m
- Accuracy:** ±2% or ±0.2m/s, whichever is greater
- Output signals:**
 1. Average wind speed, SR10
 2. Wind gust, SR10
- Current consumption:** 300 µA
- Operating voltage:** 7 to 14V DC
- Calibration factor:**
 - 1.194 m wind way for each rev.
 - 2 counts each rotor revolution
- Operating temp.:** -40 to +65°C
- Electrical connection:** Automatic Weather Station (AWS)/SmartGuard, Sensor Arm or Sensor Cable
- Material housing:** Al uuminum 6061-T6, anodized 10-15µ, Stainless steel
- Net weight:** 500g
- Packing:** Cardboard box, 385x290x235mm
- Gross weight:** 1.3 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

PIN CONFIGURATION



CALIBRATION

The wind speed sensor has nominal calibration coefficients.

The coefficients are:

The raw data readings (N) from the sensor are converted to engineering units by the following formula:

$$\text{Wind (m/s)} = A + BN + CN^2 + DN^3$$

A	0	C	0
B	7.770E-02	D	0

For previously supplied wind speed sensors with the old Three-Cup Rotor 2228 the coefficients are:
 A = 4.000 E-01 B = 7.460 E-02 C and D = 0



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