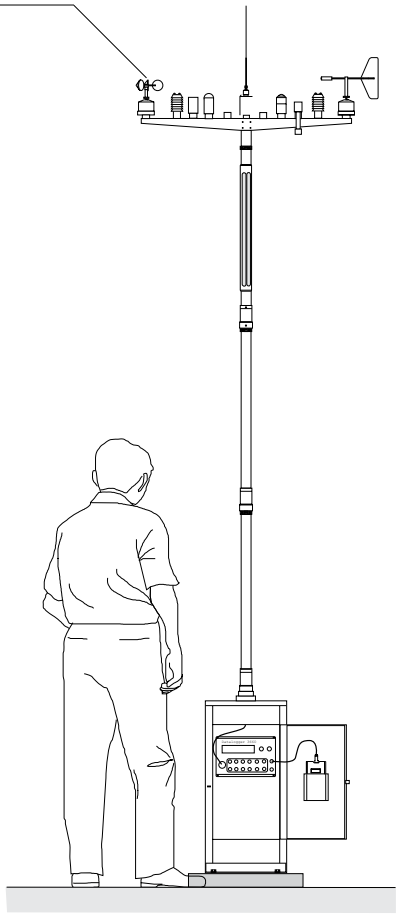
Wind Speed Sensor 2740/2740 EX

This sensor will measure the average and maximum wind speed (gust) during the sampling interval.
It is designed for use with the Aanderaa Automatic Weather Stations, Sensor Scanning Unit 3010,
Dataloggers 3660/3634, Display Units 3315/3017 or
Wind Display Panels 3400/3300.



Automatic Weather Station AWS 2700

The Wind Speed Sensor 2740 consists of a three cup rotor on top of an aluminum housing. The sensor can be fitted directly onto the sensor arm of Aanderaa Automatic Weather Stations or used separately if a connecting cable is used. The sensor will fit onto a 25 mm vertical tube.

The rotor bearings consist of 2 stainless steel ball bearings protected by a surrounding skirt. The lower end of the skirt is furnished with a magnet. The magnet's rotation is sensed by a magneto inductive switch located inside the housing. The sensor has 2 output signals; average and maximum wind speed (gust).

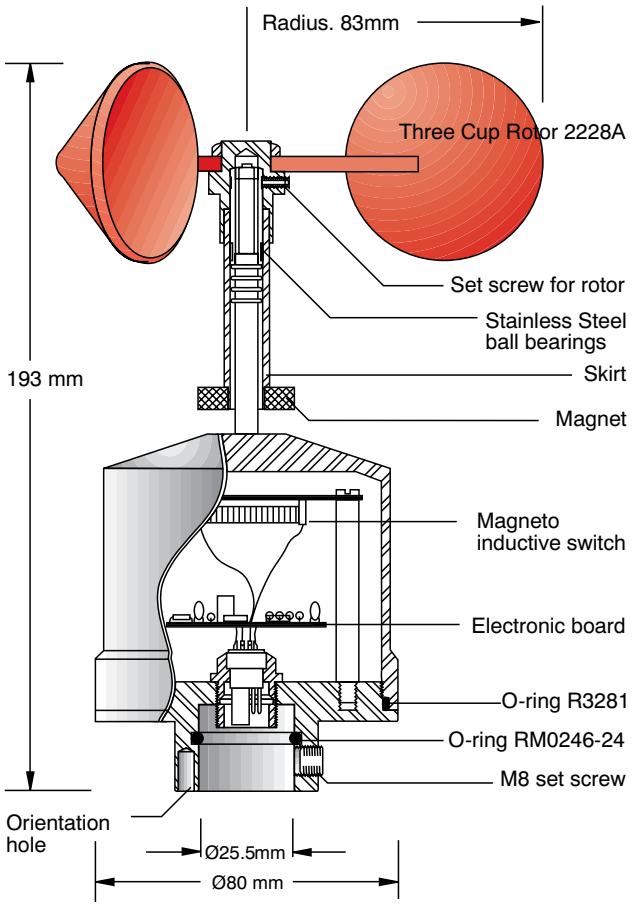
The arithmetic mean of the wind speed is obtained regardless of the sampling interval, providing that the sampling interval is between four seconds and 3 hours.

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

The micro controller reads pulses from the magneto inductive switch and calculates the average and the wind gust. It also provides the Aanderaa SR-10 output. Both average and gust will have the same conversion factor for calculation of speed in meters per second. This factor is independent of the sampling interval used.

From august 1998 the sensor is supplied with a new and rugged 3 cup rotor designated 2228A

Specifications for 2740/2740EX

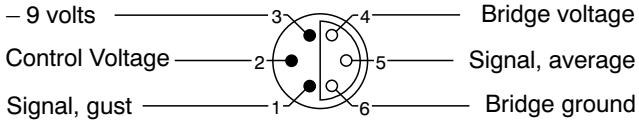


RANGE:	Up to 79 m/s
THRESHOLD SPEED:	Less than 0.3 m/s
DISTANCE CONSTANT:	1.5 meters
ACCURACY:	±2% or ±0.2 m/s, whichever is the greater
OUTPUT SIGNALS:	1. Average Wind, SR-10 2. Wind Gust, SR-10
CURRENT CONSUMP.:	250 µA
OPERATING VOLTAGE:	7 to 14V DC. Obtained from the scanning/ display units or display panels
CALIBRATION FACT.:	1.194 m wind way for each revolution. 2 counts each rotor revolution
OPERATING TEMP.:	–40 to +65°C
ELECTRICAL CONN.:	Receptacle 2843 mating Watertight Plug 2828L
MATERIAL HOUSING:	Al 6061T6 anodized 10-15µ
NET WEIGHT:	500 grams
PACKING:	Cardboard Box: 385x290x235 mm
GROSS WEIGHT:	1.3 kilograms (add 0.7 kg for 10m Connecting Cable 2842)
WARRANTY:	Two years against faulty materials and workmanship

The sensor is available as an Ex -certified sensor; contact factory for prices.

PIN CONFIGURATION

Receptacle, exterior view; pin = ● ;bushing = ○



Connecting Cable 2842 (10 meter cable with watertight plugs) with Gust Adapter Cable 2911 is available for connecting this sensor to the Aanderaa datalogging systems. Other lengths, or separate plugs and cables, are available on request.

CALIBRATION Serial No:

The Wind Speed Sensor has nominal calibration coefficients. The coefficients are:

A	0	C	0
B	7.770E-02	D	0

For previously supplied Wind Speed Sensors with Three Cup Rotor 2228 the coefficients are:
A = 4.000 E- 01 B = 7.460 E- 02 C and D = 0

The raw data readings (N), given by the Aanderaa Sensor Reading Units, are converted to engineering units by the formula:
$Wind(m/s) = A + BN + CN^2 + DN^3$

Date: .....Sign: .....

Representative's Stamp

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