

Anemometer WindSensor P2546D-OPR

S16300C

- MEASNET calibrated anemometer
- Compatible with our METEO-40 data logger
- One-piece rotor anemometer head
- Low threshold speed
- Short distance constant
- Negligible overspeeding
- Angular response independent of wind speed
- Symmetrical geometry
- No external power source

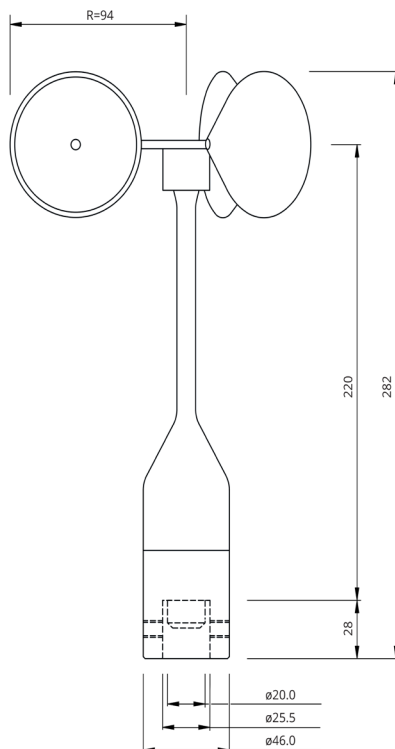
Description

Each P2546-OPR Cup Anemometer is individually calibrated compliant with IEC 61400-12-1. It is ideally suited for wind resource assessment and power performance studies both onshore and offshore.

The P2546D-OPR contains an electronic switching circuit activated by magnets mounted on the rotating shaft. This produces a switching output signal with frequency proportional to wind speed.



Dimensional drawing



Specification

The specifications are based on 80 wind tunnel calibrations performed according to the Measnet Cup Anemometer Calibration Procedure. The specified offset and gain figures represent the mean values of these calibrations. Variation is calculated from the straight line of the mean values.

All units are run-in for 225 hours at 9 m/s, in order to reduce the initial bearing friction to a level close to the steady state value.

After run-in, bearing friction is tested at -15 °C and at room temperature. The allowed limits for this test assures that the temperature influence on the calibration is within the specified limit.

Mounting

The inner diameter of the anemometer base is 25.5 mm. The diameter of the connector itself is 20 mm. Thus the inner diameter of the tube should be at least 21 mm. Please consider the dimensions when mounting the anemometer on the tube. We recommend using tubes with material thickness of 1.5 mm. See dimensional drawing.

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Characteristic	Description / Value
Calibration	Each anemometer individually calibrated compliant with IEC 61400-12-1.
Measurement range	0 ... 75 m/s
Slope	0.620 m
Offset	0.21 m/s
Starting threshold	< 0.3 m/s
Distance constant	$\lambda_0 = 1.81 \pm 0.04$ m
Switching characteristic	
Signal Type	NPN open collector, frequency proportional to wind speed
Duty cycle	45 ... 55 %
Max. switching voltage	30 V
Max. recommended switching current	10 mA
Output resistance	60 Ω
Operating temperature range	-40 ... +60 °C
Exterior materials	Anodized aluminum, Stainless steel and GRP
Weight	0.36 kg
Overall height	282 mm
Swept diameter of rotor	188 mm
Manufacturer	WindSensor
Accessories	Module M83570 or M83200 (pull-up resistor 5.1 k Ω required)

Sensor connection to Ammonit Meteo-40 data logger

Sensor	Ammonit Wire Color	Meteo-40 Counter	Supply Sensor
Signal, high	white	Counter CNT, 6k8 (Switch: 5 V via 6k8 to CNT, Pull-up resistor)	
Signal, low	black		Main Ground

Connect the shield logger-sided to Ground (GND)

Cable type: LiYCY 2 (3) x 0.25 mm²

Anemometer WindSensor P2546D Wind Speed

