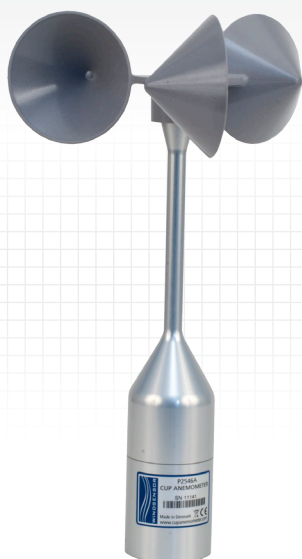


**P2546A**

Class 1 Anemometer



# IEC Class 1 performance

## Ideal for wind energy applications

### Overview

The P2546A is a Class 1 anemometer often used for wind speed resource assessment, and wind turbine power performance monitoring. Wind speed is sensed by a three-cup rotor assembly.

Magnets mounted on the shaft cause a switch to close and open two times per revolution. The anemometer is mounted using the 27739 30-inch mounting pole.

### Benefits and Features

- › IEC Class 1 performance
- › Constructed from only durable materials such as anodized aluminum and stainless steel
- › No bounce switch
- › Mechanism reduces the variation in operating time over the frequency range
- › Compatible with all of our dataloggers

### Specifications\*

- › Starting Threshold:  $< 0.4 \text{ ms}^{-1}$
- › Starting Speed:  $0.27 \text{ ms}^{-1}$
- › Gain:  $0.6201 \text{ m}$
- › Distance Constant:  $\lambda_0 = 1.81 \pm 0.04 \text{ m}$
- › Standard Deviation of Offset:  $0.014 \text{ ms}^{-1}$
- › Standard Deviation of Gain:  $0.027 \text{ m}$
- › Variation Among Units:  $\pm 1\%$
- › Nonlinearity:  $< 0.04 \text{ ms}^{-1}$
- › Temperature Influence ( $-15^\circ$  to  $60^\circ\text{C}$ ):  $< 0.05 \text{ ms}^{-1}$
- › Signal Type: potential free contact closure
- › Duty Cycle: 40% to 60%
- › Maximum Switching Voltage: 30 V
- › Maximum Recommended Switching Current: 10 mA
- › Series Resistance:  $330 \Omega$ , 1 W
- › Operating Temperature:  $-35^\circ$  to  $60^\circ\text{C}$

\*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 among units designates the maximum deviation of any unit from the straight line representing these mean values. All units are run-in for 225 hours at  $9 \text{ ms}^{-1}$ , 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  $-15^\circ\text{C}$  and at room temperature. The allowed limits for this test assures that the temperature influence on the calibration is within the specified limit.

