



# WindSensor P2546-0PR

## Class 1 Anemometer

- **Class 1** anemometer with excellent performance in both flat and complex terrain for low measurement uncertainty on any site.
- Precision-molded one-piece rotor (OPR) introduced in 2011 provides unrivaled **durability** and consistent sensor-to-sensor repeatability.
- Distinctive rotor geometry provides **unmatched gust response** for accurate turbulence intensity measurements and complex wind sites.
- Uniquely suitable for **offshore** and coastal environments due to superior corrosion resistance and environmental protection.

*“With an outstanding track record in field performance and durability, the WindSensor P2546-0PR is Vestas’ preferred cup anemometer for precise wind resource assessment.”*

*–Lars Chr. Christensen,  
Vice President Plant Solutions,  
**Vestas***



Wind Resource  
Assessment



Solar Resource  
Assessment



Solar  
Monitoring



# WindSensor P2546-OPR

WindSensor's P2546-OPR anemometer combines Class 1 performance with unrivaled durability, for the most certain measurements in any environment. Originally designed for marine environments, the P2546-OPR is ideally suited for wind resource assessment and power performance studies both onshore and off.

<b>Description</b>	<b>Sensor type</b> <ul style="list-style-type: none"><li>• 3-cup anemometer</li></ul> <b>Sensor range</b> <ul style="list-style-type: none"><li>• 0 m/s to 75 m/s (0 mph to 168 mph)</li></ul> <b>Instrument compatibility</b> <ul style="list-style-type: none"><li>• all Renewable NRG Systems data loggers</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• wind resource assessment</li><li>• wind power performance measurements, per IEC 61400-12-1</li><li>• meteorological studies</li></ul>
<b>Output Signal</b>	<b>Signal generator</b> <ul style="list-style-type: none"><li>• P2546C-OPR: Coil</li><li>• P2546A-OPR: Bounce-free reed switch</li></ul> <b>Signal types</b> <ul style="list-style-type: none"><li>• P2546C-OPR: Low level AC sine wave, frequency linearly proportional to wind speed</li><li>• P2546A-OPR: Square wave, frequency linearly proportional to wind speed</li></ul> <b>Output signal range</b> <ul style="list-style-type: none"><li>• 0 Hz to 120 Hz</li></ul>	<b>Calibration</b> <ul style="list-style-type: none"><li>• each anemometer individually calibrated, calibration reports with transfer function provided via electronic download</li></ul> <b>Uncertainty</b> <p>IEC 61400-12-1 Classification</p> <ul style="list-style-type: none"><li>• Class 1.32A</li><li>• Class 3.71B</li><li>• refer to individual calibration report for information on calibration uncertainty</li></ul>
<b>Response Characteristics</b>	<b>Threshold</b> <ul style="list-style-type: none"><li>• &lt; 0.4 m/s (0.9 mph)</li></ul> <b>Swept diameter of rotor</b> <ul style="list-style-type: none"><li>• 188 mm (7.40 inches)</li></ul>	<b>Distance constant</b> (63% recovery) <ul style="list-style-type: none"><li>• 1.81±0.04 m (5.94 ±0.13ft )</li></ul> <b>Moment of inertia</b> <ul style="list-style-type: none"><li>• 9.93 E-05 kg-m<sup>2</sup> (7.32 × 10-5 S-ft<sup>2</sup> )</li></ul>
<b>Installation</b>	<b>Mounting</b> <ul style="list-style-type: none"><li>• onto a 25 mm (0.984 inch) diameter mast with two set screws</li></ul>	<b>Tools required</b> <ul style="list-style-type: none"><li>• 4mm Allen wrench</li></ul>
<b>Environmental</b>	<b>Operating temperature range</b> <ul style="list-style-type: none"><li>• -38 °C to 80 °C (-36 °F to 176 °F)</li></ul>	<b>Operating humidity range</b> <ul style="list-style-type: none"><li>• 0% to 100% RH</li></ul>
<b>Materials</b>	<b>Cups</b> <ul style="list-style-type: none"><li>• one-piece rotor, injection molded glass-fiber reinforced plastic</li></ul> <b>Body</b> <ul style="list-style-type: none"><li>• anodized aluminum</li></ul>	<b>Shaft</b> <ul style="list-style-type: none"><li>• stainless steel</li></ul> <b>Bearing</b> <ul style="list-style-type: none"><li>• stainless steel ball bearings</li></ul>
<b>Physical</b>	<b>Integral connector</b> <ul style="list-style-type: none"><li>• Lemo Series E Triaxial female connector</li></ul> <b>Cable mating connector</b> <ul style="list-style-type: none"><li>• Lemo Series E Triaxial male connector (included in delivery)</li></ul>	<b>Weight</b> <ul style="list-style-type: none"><li>• 0.40 kg (0.9 pounds)</li></ul> <b>Dimensions</b> <ul style="list-style-type: none"><li>• 3 cups of conical cross-section, 70 mm (2.76 inches) dia.</li></ul>

**For more information:**

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