

**WIND SPEED • TEMPERATURE • WIND CHILL  
RELATIVE HUMIDITY • HEAT INDEX • DEW POINT**

**Know your conditions**

Measure environmental conditions quickly and accurately

Wide range of wind speeds and a low start-up speed

Reliable, portable and easy to use



- **Small, robust design**
- **Data hold function**
- **Large easy to read display with backlight**
- **Waterproof and floats**
- **High precision Zytel® mounted impeller**
- **Replaceable impeller assembly**
- **Fast response temperature sensor**
- **Long life lithium battery**
- **Includes protective cover, lanyard and battery**
- **5 year warranty**
- **Choice of measurement units: Knots, Metres per second, Kilometres per hour, Miles per hour, Feet per minute and Beaufort Force. Centigrade and Fahrenheit**



Measurement	Units of Measure	Accuracy	Range
Current, Max and Average Wind speed	kt, m/s, km/h, mph, ft/min, Beaufort (B)	±3% of reading or ±0.1 m/s	0.6 to 40 m/s
Temperature, Wind Chill Heat index, Dew Point	°C, °F	±1°C	-29 to +70°C
Relative Humidity	%	±3% or scale	5 to 95%

**DESCRIPTION**

The Kestrel 3000 Environmental meter provides high quality, performance and functionality. It has three buttons below the display, making operation simple and allowing the user to view data in current, maximum and average wind speed, temperature, wind chill, relative humidity, heat index and dew point displays and also the data hold function.

The Kestrel 3000 is a small, electronic rotating vane type of anemometer with built-in temperature and humidity sensors. It uses high precision Zytel® bearings and a light weight impeller to provide accurate air flow measurements even at low speeds. The impeller assembly is replaceable by the user in the case of damage.

In order to quickly determine a steady temperature reading, the precision thermistor temperature sensor is mounted externally.

Wind chill and heat index are equivalent temperatures that show the user how their environment really feels. Wind chill is the combination of wind speed and temperature, while heat index is the combined effect of air temperature and relative humidity.

The liquid crystal display has large 9mm high digits and is backlit for a clear readout in low light conditions. Power is from an easily replaceable standard lithium coin cell battery, which will typically give up to 300 hours of operation. The instrument automatically switches off if no keys are pressed for 45 minutes.

The Kestrel 3000 is made from high impact injection moulded plastic and corrosion resistant materials with the electronics fully sealed. It will float if accidentally dropped into water. There is a hard cover for protection when not in use and a lanyard is provided for added security.

## SPECIFICATION

<b>Physical</b>	Dimensions	122mm x 42mm x 20mm	
	Cover dimensions	122mm x 46mm x 26mm	
	Weight	65g	
	Cover weight	37g	
	Lanyard	0.5m	
	Case colour	Maroon	
<b>Display</b>	Display type	Reflective 3½ digit LCD	
	Digit height	9mm	
	Display update	1 second	
	Functions	Current wind speed (3 second average)	
		Average speed since power on (AVG)	
		Maximum 3 second gust since power on (MAX)	
		Temperature	
		Wind chill	
		Relative humidity	
		Heat Index	
Dew point			
Data hold (HOLD)			
Speed units	kt, m/s, km/h, mph, ft/min, Beaufort Force (B)		
Temperature units	°C, °F		
<b>Performance</b>	Speed (1 sec response)	Operational range	0.6m/s to 60m/s (1.3 to 135.0mph)
		Specification range	0.6m/s to 40m/s (1.3 to 89.0mph) Start-up speed stated as lower limit, readings may be taken down to 0.4 m/s   79 ft/min   1.5 km/h   .9 mph   .8 kt after impeller start-up.
		On axis accuracy	Larger of ± 3% of reading or least significant digit. (Some loss of accuracy from bearing wear may occur with sustained operation at or near maximum speed)
		Off-axis response	-1% @ 5°, -2% @ 10°, -3% at 15°
		Calibration drift	<1% after 100hrs operation at 7m/s
		Resolution	0.1 kt, m/s, km/h, mph. 1 FPM below 1999 FPM, 10 FPM above 2000 FPM. 1 Beaufort (0 to 12)
	Temperature (1 sec response)	Operational range	-45.0°C to +125.0°C
		Specification range	-29.0°C to +70.0°C
		Accuracy	±1°C
		Resolution	0.1°
	Relative Humidity (1 min response)	Wind chill accuracy	±1.0°C (from wind speed and temperature)
		Operational range	0% to 100%
		Specification range	5% to 95% non-condensing
		Resolution	0.1%
		Accuracy	±3% (when unit allowed to equilibrate to external temperature)
		Calibration drift	±2% over 24 months (correctable)
Heat index accuracy	±2°C (between 21.1°C and 54.4°C)		
Dew point accuracy	±2°C (above 20% relative humidity)		
<b>Sensors</b>	Impeller	Diameter 25mm. High precision axle and low-friction Zytel® bearings. Replacement impeller field installs without tools.	
	Temperature	Air, water or snow temperature. Hermetically-sealed, precision thermistor mounted externally and thermally isolated (US Patent 5,939,645) for rapid response. Airflow of 2.2 mph   1 m/s or greater provides fastest response and reduction of insulation effect. Calibration drift negligible.	
	Relative Humidity	Polymer capacitive sensor, mounted externally in thin-walled chamber	
<b>Environmental</b>	Sealing	Electronics enclosure IP67 and NEMA-6 [Water resistant]	
	Shock	Drop tested (MIL-STD.810F - unit only)	
	Temperature	Operating range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C	
	EMC	CE marked	
<b>Miscellaneous</b>	Battery	Lithium coin cell CR2032, included, user replaceable	
	Battery Life	300 hours of use, typical ± depending on backlight use	
	Auto switch off	45 minutes after last key press	
	Cover	Snap on hard cover for protection	
	Wind chill equivalent temperature calculation	Perceived temperature resulting from combined effect of wind speed and temperature. Utilises the (US) NWS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed adjusted by a factor of 1.5 to yield equivalent results for wind speed measured at 10m above ground	
	Heat Index calculation	Steadman, from temperature and relative humidity	
	Certification	Wind speed, temperature and humidity measurements are tested during manufacture. A certificate of conformity (C of C) is included with each Kestrel. Calibration certificates are available for an additional fee.	
Guarantee	5 years		

The manufacturer reserves the right to amend the specification and therefore the information in this document may be subject to change. Please check our website [www.r-p-r.co.uk](http://www.r-p-r.co.uk) for details

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