

## 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 jewel mounted impeller
- Replaceable impeller
- Fast response temperature sensor
- Long life lithium battery
- Low cost
- Includes protective cover, lanyard and battery
- Two 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, B	±3% of reading or ±0.1 m/s	0.3 to 40 m/s
Temperature, Wind Chill	°C, °F	±1°C	-29 to 70°C
Heat index, Dew Point			
Relative Humidity	%	±3% or scale	5 to 95%

### DESCRIPTION

The original Kestrel Weather Meters have been redesigned to provide even better quality, performance and functionality. Three buttons on the front of the instrument mean operation is extremely simple and allow the selection of current, maximum and average wind speed, temperature, wind chill, relative humidity, heat index and dew point displays and also data hold.

The Kestrel 3000 Environmental meter is a small, pocket-sized electronic rotating vane type of anemometer with built-in temperature and humidity sensors. It uses high precision jewel 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 type cell, which will typically give up to 400 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

### Performance

Speed range: 0.3m/s to 40m/s (0.7 to 89mph)  
 On axis accuracy:  $\pm 3\%$  of reading or  $\pm$  least significant digit  
 Off -axis response:  $-1\%$  @  $5^\circ$ ,  $-2\%$  @  $10^\circ$ ,  $-3\%$  at  $15^\circ$   
 Calibration drift:  $<2\%$  after 100hrs operation at 7m/s

Some loss of accuracy from bearing wear may occur with sustained operation at or near maximum speed

Temperature accuracy:  $\pm 1^\circ\text{C}$   
 Temperature Resolution:  $0.1^\circ$   
 Relative Humidity Accuracy:  $\pm 3\%$  or scale  
 RH Range: 5% to 95%  
 RH resolution: 1%

### Display

Operating Modes: Current 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)  
 Display update: 1 second  
 Speed units: kt, m/s, km/h, mph, ft/min, Beaufort Force (B)  
 Temperature units:  $^\circ\text{C}$ ,  $^\circ\text{F}$   
 Type: Reflective LCD  
 Digit height: 9mm

### Physical

Dimensions: 122mm x 42mm x 20mm  
 Cover Dimensions: 122mm x 46mm x 26mm  
 Weight: 65g  
 Cover weight: 37g

### Environmental

Sealing: Electronics enclosure IP67  
 Water resistant to 1m of water, floats  
 Shock: Drop tested to 2m  
 Temperature: Operating range  $-15^\circ\text{C}$  to  $50^\circ\text{C}$  (LCD readability lost)  
 Storage range  $-20^\circ\text{C}$  to  $80^\circ\text{C}$   
 EMC: CE marked

### Miscellaneous

Battery: Lithium coin cell CR2032, user replaceable.  
 Battery Life: 400 hours operation, typical  
 Auto switch off: 45 minutes after last key press  
 Impeller: Diameter 25mm  
 High precision jewel bearings  
 User replaceable impeller assembly  
 Temperature sensor: Hermetically sealed precision thermister  
 Humidity sensor: Silicon based capacitive sensor  
 Case colour: Red  
 Cover: Snap on hard cover for protection  
 Lanyard: 0.5m  
 Windchill equivalent temperature calculation: Calculated as specified by the US and Canadian weather services  
 Heat Index Calculation: Steadman, from temperature and relative humidity  
 Guarantee: 12 months, parts and labour. Second year of warranty after registration  
 Certification: Wind speed, temperature and humidity measurements are tested during manufacture. Factory Certification is available for an additional fee

The manufactures reserve the right to amend the specification and therefore the information in this document may be subject to change.

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