# 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 assembly
- Fast response temperature sensor
- Long life lithium battery
- Low cost
- 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

Current, Max and Average Wind speed Temperature, Wind Chill Heat index, Dew Point Relative Humidity

#### **Units of Measure**

kt, m/s, km/h, mph, ft/min, Beaufort (B) °C, °F

%

## Accuracy

±3% of reading or ±0.1 m/s ±1°C

±3% or scale

#### Range

0.4 to 40 m/s

-29 to +70°C

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 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 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**

Case colour	SPECIFICATI			
Physical   Core weight   Core weight   Core weight   Core weight   Core weight   Core colour   Cor		Dimensions		122mm x 42mm x 20mm
Cover weight   37g     Lanyard   Disp     Display type     Function     Relative brainfully     Heat Index     Display type     Display type     Function     Relative brainfully     Heat Index     Display type     Display type     Function     Relative brainfully     Heat Index     Display type     Speed and the Relative brainfully     Heat Index     Display type     Speed and the Relative brainfully     Heat Index     Display type     Speed and the Relative brainfully     Heat Index     Coperational range     Speed (1 see case)     Speed (2 see case)     Coperational range     Speed (1 see case)     Coperational range     Speed (1 see case)     Coperational range     Speed (1 see case)     Collisional range     Collisional range     Speed (1 see case)     Collisional range     Collisional range     Speed (1 see case)     Resolution     Resolution     Resolution     Collisional range     Speed (1 see case)     Speed (1 see	Physical	Cover dimensions		122mm x 46mm x 26mm
Coles to Vision   Coles to V		Weight		65g
Performance  Performance  Performance  Relative  Relativ		Cover weight		37g
Performance  Performance  Relative to Mind full recursory (1 second 2 second average)  Average speed since power on (AVC)  Movimum 3 second gust since power on (AVC)  Average speed since power on (AVC)  Movimum 3 second gust since power on (AVC)  Average speed since power on (AVC)  Movimum 3 second gust since power on (AVC)  Average speed since power on (AVC)  Movimum 3 second gust since power on (AVC)  Average speed since power on (AVC)  Movim chill  Relative turnindty  Heat Index  Power state Index  Speed units  Average speed since power on (AVC)  Speed units  Average speed since power on (AVC)  A		Lanyard		0.5m
Performance  Perfo				
Performance  Perfo				†
Current vand speed (3 second average)				
Performance  Perfo		Display update		
Performance		Functions		
Performance  Perfo				
Performance	Display			
Relative humidity   Heat Index   Dev point   Data hold (POLD)				·
Heat Index   Dewy point   Data hold (HOLD)   Data				
Deep point   Data hold (HOLD)   Spead units   Temperature   Dearwiso (J. 16 bol.)   Spead   O. Amis to Bolmis (J. 8 to 135.0mph)   O. Amis to Bolmis (J. 8 to 135.0mph)   Calibration range   O. Amis to Bolmis (J. 8 to 89.0mph)   Larger of 2. 3% of reading on least significant digit. (Some loss of accuracy from bearing wear may occur with sustained operation at or near maximum speed)   Spead   S				,
Performance  Perfo				
Speed units   Temperature units   Temperature units   Co. "Fe   Operational range   O.4m/a to 80m/s (0.8 to 135.0mph)   O.4m/a to 40m/s (0.8 to 89.0mph)   Calibration range   O.4m/a to 40m/s (0.8 to 89.0mph)   Care response   Off-axis response   Calibration drift				-
Performance    Performance   Speed (1 sec response)   Speedication range   Speedication range		Sneed unite		
Performance   Specification range   Specification range   O.4m/s to 40m/s (0.8 to 135.0mph)		·		
Speed	Performance			<u> </u>
Performance  Perfo				
Performance   Calibration drift   Calibratio			0	` ' '
Performance  Performance  Performance  Performance  Performance  Performance  Performance  Temperature (1 sec response)			On axis accuracy	bearing wear may occur with sustained operation at or near maximum speed)
Performance    Calibration drift   Sesolution   Sesolutio		'	Off-axis response	-1% @ 5°, -2% @ 10°, -3% at 15°
Performance    Temperature (1 sec response)   Departional range (1 sec response)   De			Calibration drift	<1% after 100hrs operation at 7m/s
Performance  Temperature (1 sec response)  (1 sec response)  (2 specification range specification range response)  Temperature (1 sec response)  Resolution (1 specification range specification range response)  Relative Humidity (1 min response)  Relative Heat index accuracy 20 specification range specification drift specification drift specification drift specification drift specification range specification drift specification drift specification range specification drift specific			Resolution	
Performance    Temperature (1 sec response)   Specification range   Accuracy   ±1°C   Resolution   0.1°			Operational range	
Cover   Centification   Certification   Cert		(1 sec		
Resolution   University   Commonstration   University   Commonstration				
Wind chill accuracy			<u>·</u>	
Relative Humidity (1 min response)  Resolution (2 min response)  Resolution (2 min response)  Resolution (2 min response)  Resolution (3 min response)  Resolution (3 min response)  Resolution (4 min response)  Resolution (5 min response)  Resolution (6 min response)  Resolution (7 min response)  Resolution (8 min response)  Resolution (9 min response)  Resolutio				1 1 1
Relative Humidity (1 min response)  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 (between 21.1°C and 54.4°C)  Dew point accuracy ±2°C (between 21.1°C and 54.4°C)  Dew point accuracy ±2°C (between 21.1°C and 54.4°C)  Diameter 25mm.  High precision axle and jewel (sapphire) bearings.  User replaceable impeller assembly  Temperature Polymer capacitive sensor, mounted externally in thin-walled chamber  Electronics enclosure IP67 [Water resistant]  Shock Drop tested (MIL.STD.810F - unit only)  Temperature Polymer ange: -30°C to +65°C (for LCD readability and batteries) Storage range: -30°C to +60°C  EMC CE marked  Battery Lithium coin cell CR2032, included, user replaceable  300 hours of use, typical ± depending on backlight use  45 minutes after last key press  Sap on hard cover for protection  Wind chill equivalent temperature calculation  Wind chill equivalent temperature calculation  Heat Index calculation  Certification  Certification  Certification  Certificate of conformity (C of C) is included with each Kestrel. Calibration certificates are available for an additional fee.			<u>.</u>	
Humidity (1 min response)		Humidity (1 min		5% to 95% non-condensing
Accuracy   ±3% (when unit allowed to experimal temperature)   ±2% over 24 months (correctable)				·
Calibration drift			Accuracy	±3% (when unit allowed to equilibrate to external temperature)
Dew point accuracy   £2°C (above 20% relative humidity)   Diameter 25mm.   High precision axle and jewel (sapphire) bearings.   User replaceable impeller assembly   User replaceable   User replaceable   User resistant   User replaceable   User resistant   User replaceable   User			Calibration drift	±2% over 24 months (correctable)
Impeller   Diameter 25mm. High precision axle and jewel (sapphire) bearings. User replaceable impeller assembly		Heat index accuracy		±2°C (between 21.1°C and 54.4°C)
Impeller   High precision axle and jewel (sapphire) bearings. User replaceable impeller assembly		Dew point accuracy		±2°C (above 20% relative humidity)
Sensors   User replaceable impeller assembly	Sensors	·		
Temperature Relative Humidity Polymer capacitive sensor, mounted externally in thin-walled chamber  Sealing Electronics enclosure IP67 [Water resistant]  Shock Drop tested (MIL.STD.810F - unit only)  Temperature EMC CE marked  Battery Life Shot Sutto Sutto Shot Sutto Shot Sutto Shot Sutto Shot Shot Sutto Shot Shot Shot Shot Shot Shot Shot S				
Relative Humidity Sealing Sealing Electronics enclosure IP67 [Water resistant] Shock Drop tested (MIL.STD.810F - unit only) Operating range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C  EMC CE marked Battery Life Battery Life Auto switch off Cover Wind chill equivalent temperature calculation Heat Index calculation Certification Certification  Relative Humidity Polymer capacitive sensor, mounted externally in thin-walled chamber Electronics enclosure IP67 [Water resistant] Drop tested (MIL.STD.810F - unit only) Operating range: -30°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C  EMC CE marked Lithium coin cell CR2032, included, user replaceable 300 hours of use, typical ± depending on backlight use 45 minutes after last key press Snap on hard cover for protection 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 Steadman, from temperature and relative humidity 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.				<del>                                     </del>
Sealing Shock Drop tested (MIL.STD.810F - unit only)  Temperature Storage range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C  EMC CE marked Lithium coin cell CR2032, included, user replaceable  Battery Life 300 hours of use, typical ± depending on backlight use  Auto switch off Cover Snap on hard cover for protection  Wind chill equivalent temperature calculation  Heat Index calculation  Certification  Sealing Shock Drop tested (MIL.STD.810F - unit only)  Operating range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C  EMC CE marked  Lithium coin cell CR2032, included, user replaceable  300 hours of use, typical ± depending on backlight use  45 minutes after last key press  Snap on hard cover for protection  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  Steadman, from temperature and relative humidity  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.		·		
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Temperature Operating range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C  EMC CE marked  Battery Life 300 hours of use, typical ± depending on backlight use  Auto switch off Cover Snap on hard cover for protection  Wind chill equivalent temperature calculation Heat Index calculation  Heat Index calculation Certification  Certification  Temperature Storage range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C  CE marked  Lithium coin cell CR2032, included, user replaceable  300 hours of use, typical ± depending on backlight use  45 minutes after last key press  Snap on hard cover for protection  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  Steadman, from temperature and relative humidity  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.				i i
Storage range: -30°C to +60°C  EMC CE marked  Battery Life 300 hours of use, typical ± depending on backlight use  Auto switch off 45 minutes after last key press  Cover Wind chill equivalent temperature calculation  Wind chill equivalent temperature calculation  Heat Index calculation  Certification  Certification  Storage range: -30°C to +60°C  CE marked  Lithium coin cell CR2032, included, user replaceable  300 hours of use, typical ± depending on backlight use  45 minutes after last key press  Snap on hard cover for protection  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  Steadman, from temperature and relative humidity  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.				
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Miscellaneous  Wind chill equivalent temperature calculation Heat Index calculation  Certification  Certification  Certificate of conformity (C of C) is included with each Kestrel. Calibration certificates are available for an additional fee.  Snap on hard cover for protection  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  Steadman, from temperature and relative humidity  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.				300 hours of use, typical ± depending on backlight use
Wind chill equivalent temperature calculation  Heat Index calculation  Certification  Wind chill equivalent temperature calculation  Certification  Wind chill equivalent temperature calculation  Wind speed adjusted by a factor of 1.5 to yield equivalent results for wind speed measured at 10m above ground  Steadman, from temperature and relative humidity  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.		Auto switch off		45 minutes after last key press
Miscellaneous  Wind chill equivalent temperature calculation  Wind speed adjusted by a factor of 1.5 to yield equivalent results for wind speed measured at 10m above ground  Steadman, from temperature and relative humidity  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.		Cover		Snap on hard cover for protection
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A certificate of conformity (C of C) is included with each Kestrel.  Calibration certificates are available for an additional fee.				
			Certification	
Guarantee 5 years				
		Guarantee		5 years