



WIND SPEED • TEMPERATURE • WIND CHILL • HUMIDITY • HEAT INDEX • DEW POINT • WET BULB TEMPERATURE • BAROMETRIC PRESSURE • ALTITUDE

Know your conditions - Measure environmental conditions quickly and accurately

- Small, robust design
 - 3-hour pressure trend
 - Data hold function
 - Real time clock
 - Large easy to read display with backlight
 - Navigation made easy with prompts
 - 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
 - Five year warranty
 - Choice of measurement units
- OLIVE DRAB option: low intensity red backlight
 - YELLOW option: standard green backlight



DESCRIPTION

The Kestrel 3500 pocket weather meter provides high 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, dew point, wet bulb temperature, barometric pressure and altitude displays and also data hold. To make navigation between functions even easier, a prompt indicating the function, flashes on the screen as you scroll through.

The Kestrel 3500 Pocket Weather Meter is a small, pocket-sized electronic rotating vane type of anemometer with built-in temperature, humidity and barometric pressure 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.

A trend arrow displays whether the pressure is rising, stable or falling, this trend is calculated over a 3-hour period. The pressure is monitored even when the Kestrel 3500 is switched off.

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 humidity sensor compensates for temperature changes and is designed for stability and accuracy.

The liquid crystal display has large 9mm high digits and is backlit for a clear readout in low light conditions.

For users with after dark requirements, the olive drab K3500NV has a lower intensity red backlight to preserve the user's night vision. Power is from an easily replaceable standard lithium coin type cell, 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 3500 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.

APPLICATIONS

ALL – sailors, walkers, climbers, bird watchers, model boats/air craft, kite flyers, archery, shooting, fishing, golf & athletics

Agriculture – checking conditions prior to crop spraying or burning

Aviation – gliders, para-gliders, micro-lights, parachutists and ballooning

Construction – site safety, working conditions, working at height in cranes or access vehicles

Education – air flow experiments, environmental studies, outdoor sports

Heating and ventilation – air flow through fans, checking condition of filters

Industry – air flow measurements, pollution control

Science – aerodynamics, environmental science and meteorology

Fire fighters – checking fire spreading hazard



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SPECIFICATION

Physical	Dimensions	122mm x 42mm x 20mm		
	Cover dimensions	122mm x 46mm x 26mm		
	Weight	65g		
	Cover weight	37g		
	Lanyard	0.5m		
	Case colour	Yellow or olive drab for NV version		
Display	Display type	Reflective 4 digit LCD		
	Digit height	9mm		
	Display update	1 second		
	Functions (with on screen user prompts)	Current wind speed (3 second average) (SPd)		
		Average speed since power on (AVG) (SPd)		
		Maximum 3 second gust since power on (MAX) (SPd)		
		Temperature (deG)		
		Wind chill (chill)	Wet bulb temperature (bulb)	
		Relative humidity (r.h.)	Barometric pressure (bArO)	
		Heat Index (H.I.)	Altitude (Alt)	
	Dew point (d.P.)	Data hold (HOLD)		
	Speed units	kt, m/s, km/h, mph, ft/min, Beaufort Force (B)		
	Temperature units	°C, °F		
	Relative humidity units	%		
Pressure units	hPa, inHg			
Altitude units	m, ft			
Performance	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)	
	Barometric Pressure (1 sec response)	Heat index accuracy ±2°C (between 21.1°C and 54.4°C)		
		Dew point accuracy ±2°C (above 20% relative humidity)		
		Operational range	10 to 1100 hPa at 25°C	
		Specification range	750 to 1100 hPa at 25°C	
		Resolution	0.1 hPa	
		Accuracy	±1.5 hPa (max error over range 0°C to 70°C: ±2.0 hPa)	
	Altitude (1 sec response)	Typically ±1 hPa per year (correctable)		
Wet bulb temperature accuracy ±2°C (between 0°C and 37.8°C)				
Operational range		-2000m to +9000m (-6000 ft to +30,000 ft)		
Specification range		-2000m to +6000m at 25°C		
Accuracy		±15m (max error out of spec range: ±30m)		
Resolution		1m or 1ft		
Sensors	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		
	Pressure	Monolithic piezo-resistive silicon based sensor with second-order temperature correction		
Environmental	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		
Miscellaneous	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, humidity and pressure 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 for details