

Kestrel 3000 Specifications

Measurement Response Time	Units	Operational Range	Resolution	Accuracy (+/-)	Specification Range
Wind Speed 1 second	m/s	0.4 to 60.0 m/s	0.1	Larger of 3% of reading or least significant digit	0.4 to 40.0 m/s
	ft/min	59 to 11,948 ft/min	1		59 to 7877 ft/min
	km/h	1.0 to 218.0 km/h	0.1		1.0 to 144.0 km/h
	mph	0.8 to 135.0 mph	0.1		0.8 to 89.0 mph
	knots	0.6 to 118.3 kt	0.1		0.6 to 78.0 kt
	Beaufort	0 to 12 B	1		0 to 12 B
1 inch diameter impeller with precision axle and sapphire bearings. Off-axis accuracy -1% @ 5° off-axis; -2% @ 10°; -3% @ 15°. Calibration drift < 1% after 100 hours use at 16 MPH / 7 m/s. Sustained operation above 60 MPH / 27 m/s will wear impeller rapidly and may cause destruction of impeller. Replacement impeller (NK PN-0801) may be field-installed without tools (US Patent 5,783,753).					
Temperature 1 second	°F	-49.0 to 257.0 °F	0.1	1.8 °F	-20.0 to 158.0 °F
	°C	-45.0 to 125.0 °C	0.1	1.0 °C	-29.0 to 70.0 °C
Measures air, water and snow temperature. Thermally isolated, hermetically sealed, precision thermistor mounted externally (US Patent 5,939,645). Calibration drift negligible.					
Relative Humidity 1 minute	%RH	0.0 to 100.0 %	0.1	3.0 %RH	5.0 to 95.0 % non-condensing
	Polymer capacitive humidity sensor mounted in thin-walled chamber external to case for rapid, accurate response (US Patent 6,257,074). (To achieve stated relative humidity accuracy, unit must be permitted to equilibrate to external temperature when exposed to large, rapid temperature changes and must be kept out of direct sunlight.) Calibration drift +/- 2% over 24 months. Relative humidity may be recalibrated at factory or in field using Kestrel Humidity Calibration Kit (NK PN-0802).				
Wind Chill 1 second	°F	0.7 to 135.0 MPH, -49.0 to 257.0 °F	0.1	1.8 °F	1.8 to 89.0 mph, -50.0 to 50.0 °F
	°C	0.4 to 60.0 m/s, -45.0 to 125.0 °C	0.1	1.0 °C	0.4 to 40 m/s, -45.6 to 10.0 °C
Calculated from the primary measurements of wind speed and temperature. Utilizes the NWS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed adjusted by a factor of 1.5 to yield equivalent results to wind speed measured at 10 m above ground. (Specification temperature limits established by WCT Tables.)					
Heat Index 1 minute	°F	0.0 to 100.0 %RH, -49.0 to 257.0 °F	0.1	3.6 °F	70.0 to 130.0 °F, 0 to 100% RH
	°C	0.0 to 100.0 %RH, -45.0 to 125.0 °C	0.1	2.0 °C	21.1 to 54.4 °C, 0 to 100 %RH
Calculated from the primary measurements of temperature and relative humidity. Utilizes the NWS Heat Index (HI) tables. (Specification temperature limits established by HI tables.)					
Dewpoint 1 minute	°F	0.0 to 100.0 %RH, -49.0 to 257.0 °F	0.1	3.6 °F	-20.0 to 158.0 °F, 20.0 to 95.0% RH
	°C	0.0 to 100.0 %RH, -45.0 to 125.0 °C	0.1	2.0 °C	-29.0 to 70.0 °C, 20.0 to 95.0 %RH
Calculated from the primary measurements of temperature and relative humidity. Temperature to which the air would need to be cooled at a constant pressure to become saturated.					

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Max/Avg Wind Speed	One-button clear and restart of Max Wind Gust and Average Wind measurement.
Display	Reflective 3 1/2 digit LCD. Digit height 0.36 in / 9 mm.
Display Update	1 second.
Display Backlight	Aviation green electroluminescent backlight.
Operational Temperature Range (LCD and Batteries)	The operational temperature range of the liquid crystal display and batteries is 14° F to 131° F / -10 °C to 55 °C. Beyond the limits of the operational temperature range, the unit must be maintained within range and exposed for minimum time necessary to take reading.
Storage Temperature	-22 °F to 140 °F / -30 °C to 60 °C.
Auto Shutdown	After 45 minutes of no key presses.
Certifications	CE certified. Individually tested to NIST-traceable standards (written certificate of tests available at additional charge).
Batteries	CR2032, one, included. Average life, 300 hours of use, +/-depending on backlight use.
Environmental	Waterproof (IP67 standard). Drop-tested (MIL.STD.810F; unit only. Substantial impact may damage replaceable impeller.).
Dimensions	Unit 4.8 x 1.7 x 0.7 in / 122 x 42 x 18 mm. Case 4.8 x 1.9 x 1.1 in / 122 x 48 x 28 mm.
Weight	Unit 2.3 oz / 65 g. Case 1.3 oz / 37 g.

Kestrel Meters are designed and manufactured at NK's facility in Boothwyn, Pennsylvania, and are individually calibrated at the time of manufacture. Every Kestrel Meter comes with a Certificate of Conformity to document the unit's accuracy—all Kestrel measurements are traceable to the National Institute of Standards and Technology, ensuring the highest level of reliability.