



Certificate of Conformity

This instrument was produced under rigorous factory production control and documented standard procedures. It was individually inspected and leak tested and the functioning of its display, backlight, buttons and firmware was verified. The accuracy of each of its primary measurements was individually calibrated and/or validated against standards traceable to the National Institute of Standards and Technology ("NIST") or other calibrated standards in accordance with the documented standard test methods detailed below. This instrument is warranted to perform in compliance with the published specifications for the specific measurements and features of its model number including specified typical drift since its date of manufacture. (See *Kestrel Limited Warranty for full warranty terms.*)

Standards Used in Testing

Temperature:

Temperature response is verified in comparison with an Ametek DTI-050 Digital Temperature Indicator and STS Reference Sensor. The DTI-050 is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of $\pm 0.40^\circ\text{C}$.

Relative Humidity:

Relative humidity is verified in comparison with an Edgetech HT120 Humidity Transmitter. The HT120 is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of $\pm 1.0\%\text{RH}$.

Approved By:

Tom Scott, Director of Engineering, Hardware/Firmware
6/13/2024

Product Specifications for Kestrel 7000

SENSORS

SENSOR	ACCURACY (+/-)	RESOLUTION	SPECIFICATION RANGE	NOTES
Ambient Temperature	0.9 °F 0.5 °C	0.1 °F 0.1 °C	-20.0 to 158.0 °F -29.0 to 70.0 °C	Airflow of 2.2 mph 1 m/s or greater provides fastest response and reduction of insulation effect. For greatest accuracy, avoid direct sunlight on the temperature sensor and prolonged sunlight exposure to the unit in low airflow conditions. Calibration drift is negligible for the life of the product. For further details, see Display & Battery Operational Temperature Limits.
Relative Humidity	2%RH	0.1 %RH	10 to 90% 25°C non-condensing	To achieve stated accuracy, unit must be permitted to equilibrate to external temperature when exposed to large, rapid temperature changes and be kept out of direct sunlight. Calibration drift is typically less than ±0.25% per year.

CALCULATED MEASUREMENTS

MEASUREMENT	ACCURACY (+/-)	RESOLUTION	SENSORS EMPLOYED
Dew Point	3.4 °F 1.9 °C 15-95% RH. Refer to Range for Temperature Sensor	0.1 °F 0.1 °C	Temperature, Relative Humidity
Heat Index	7.1°F 4.0°C	0.1 °F 0.1 °C	Temperature, Relative Humidity

ADDITIONAL PRODUCT INFO

Display & Backlight	Multifunction, multi-digit monochrome dot-matrix display. Choice of white or red LED backlight.
Response Time & Display Update	Display updates every 1 second. After exposure to large environmental changes, all sensors require an equilibration period to reach stated accuracy. Measurements employing RH may require longer periods particularly after prolonged exposure to very high or very low humidity.
Data Storage & Graphical display, Min/Max/Avg History	Logged history stored and displayed for every measured value. Manual and auto data storage. Min/Max/Avg history may be reset independently. Auto-store interval settable from 2 seconds to 12 hours*, overwrite on or off. Logs even when display off except for 2 and 5 second intervals. Kestrel 7000 units hold over 10,000 data points.
Data Upload & Bluetooth® Data Connect Option	Wireless range up to 100ft. Connection requires Kestrel Link Dongle or Kestrel LINK app. Employs Kestrel Link protocol for data transmission with Link supported devices. (Kestrel LINK for iOS/Android, Kestrel Link for PC/MAC).
Clock / Calendar	Real-time hours:minutes:seconds clock, calendar, automatic leap-year adjustment.
Auto Shutdown	User-selectable – Off, 15-60 minutes with no key presses.
Languages	English, French, German, Spanish.
Certifications	CE certified, RoHS, FCC, IC tested and WEEE compliant. Individually tested to NIST-traceable standards.
Origin	Designed and built in the USA from US and imported components. Complies with Regional Value Content and Tariff Code Transformation requirements for NAFTA Preference Criterion B.
Battery Life	AA Lithium included. Up to 400 hours of use, reduced by backlight or Bluetooth radio transmission use.
Shock Resistance	MIL-STD-810H, Transit Shock, Method 516.8 Procedure IV; unit only; impact may damage replaceable impeller.
Sealing	Waterproof (IP67 and NEMA-6)
Display & Battery Operational Temperature Limits	14° F to 131° F -10 °C to 55 °C Measurements may be taken beyond the limits of the operational temperature range of the display and batteries by maintaining the unit within the operational range and then exposing it to the more extreme environment for the minimum time necessary to take reading.
Storage Temperature	-22.0 °F to 140.0 °F -30.0 °C to 60.0 °C.
Altitude Operating Range	Sea level to 10,000m / 33,000 ft
Pollution Degree of the Intended Environment	4
Environmental Conditions	Indoor and outdoor use. Wet location.
Size & Weight	5.6 x 1.9 x 1.1 in 14.2 x 4.5 x 2.8 cm, 5.1 oz 145 g. (Lithium battery included)