

# SENSORS

| SENSOR              | ACCURACY (+/-)                          | RESOLUTION                            | SPECIFICATION RANGE   | NOTES   |
|---------------------|---|---------------------------------------|---|---|
| Ambient Temperature | 0.9 °F<br>0.5 °C                        | 0.1 °F<br>0.1 °C                      | 14 to 131°F<br>-10 to 55 °C   | Airflow of 2.2 mph 1 m/s or greater provides fastest response and reduction of insolation 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 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.  |
| Pressure            | 1.5 hPa mbar<br>0.044 inHg<br>0.022 PSI | 0.1 hPa mbar<br>0.01 inHg<br>0.01 PSI | 25°C/77°F<br>700-1100 hPa mbar<br>20.67-32.48 inHg<br>10.15-15.95 PSI | Monolithic silicon piezo-resistive pressure sensor with second-order temperature correction. Between 1100–1600 mbar, unit will operate with reduced accuracy. Sensor may not operate above 1600 mbar and can be damaged above 6,000 mbar or below 10 mbar. Calibration drift is negligible for the life of the product.   |

## CALCULATED MEASUREMENTS

| MEASUREMENT                          | ACCURACY (+/-)   | RESOLUTION       | SENSORS EMPLOYED                         |
|--------------------------------------|--|------------------|--|
| Density Altitude                     | 226 ft<br>69 m   | 1 ft<br>1 m      | Temperature, Relative Humidity, Pressure |
| Dew Point                            | 3.4 °F<br>1.9 °C<br>15-95% RH. Refer to Range for Temperature Sensor | 0.1 °F<br>0.1 °C | Temperature, Relative Humidity           |
| Heat Index                           | 7.1°F<br>4.0°C   | 0.1 °F<br>0.1 °C | Temperature, Relative Humidity           |
| THI (NRC)                            | 1.5 °F<br>0.8 °C   | 0.1 °F<br>0.1 °C | Temperature, Relative Humidity           |
| THI (Yousef)                         | 2.3 °F<br>1.3 °C   | 0.1 °F<br>0.1 °C | Temperature, Relative Humidity           |
| Wet Bulb Temperature - Psychrometric | 3.2 °F<br>1.8 °C   | 0.1 °F<br>0.1 °C | Temperature, Relative Humidity Pressure  |

## ADDITIONAL PRODUCT INFO

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| 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. WBGT requires about 8 minutes to reach 95% accuracy and about 15 minutes to reach 99% accuracy after exposure to large environmental changes. |
| Data Storage                           | Logged history stored for every measured value. Auto-store interval settable from 2 seconds to 12 hours*, overwrite on or off. D1: >13,000 data points, D2: >7,000 data points, D3: >6,000 data points.  |
| Bluetooth® Data Connect Option         | Wireless range up to 100ft 30m. Compatible with Kestrel LiNK app for iOS (model 4s and later) and select Android products (Android 4.3 and higher) (See website for complete list of compatible 3 <sup>rd</sup> party apps).   |
| Certifications                         | CE certified, RoHS, FCC, IC tested and WEEE compliant. Individually tested to NIST-traceable standards.  |
| Origin                                 | Designed and manufactured in the USA from US and imported components. Complies with Regional Value Content and Tariff Code Transformation requirements for NAFTA Preference Criterion B.   |
| Battery                                | User-replaceable CR2032 (included).  |
| Shock Resistance                       | MIL-STD-810g, Transit Shock, Method 516.5 Procedure IV; unit only; impact may damage replaceable impeller.   |
| Sealing                                | Waterproof (IP67 and NEMA-6)   |
| Battery Operational Temperature Limits | 0° F to 140° F   -18 °C to 60 °C Measurements may be taken beyond the limits of the operational temperature range of 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.   |
| Size & Weight                          | 2.4 x 1.8 x 0.9 in   6 x 4.5 x 2.3 cm 1.2oz   34g (Lithium battery included)   |

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