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 buttons, communication 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.)

Methods Used in Calibration and 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 ± 0.40°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 ±1.0%RH.

**Barometric Pressure:**
Pressure response is verified against a Vaisala PTB210A Digital Barometer. The Vaisala Barometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of ± 0.3hPa.

Approved By:

Nils Steffensen
Director of Engineering, Nielsen-Kellerman
# Product Specifications for Kestrel DROP Wireless Environmental Data Loggers

## CALCULATED MEASUREMENTS

<table>
<thead>
<tr>
<th>MEASUREMENT</th>
<th>ACCURACY (+/-)</th>
<th>RESOLUTION</th>
<th>SENSORS EMPLOYED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density Altitude</td>
<td>226 ft</td>
<td>1 ft, 1 m</td>
<td>Temperature, Relative Humidity, Pressure</td>
</tr>
<tr>
<td>Dew Point</td>
<td>3.4 °F</td>
<td>0.1 °F</td>
<td>Temperature, Relative Humidity</td>
</tr>
<tr>
<td>Heat Index</td>
<td>7.1 °F</td>
<td>0.1 °F</td>
<td>Temperature, Relative Humidity</td>
</tr>
<tr>
<td>THI (NRC)</td>
<td>1.5 °F</td>
<td>0.1 °C</td>
<td>Temperature, Relative Humidity</td>
</tr>
<tr>
<td>THI (Yousef)</td>
<td>2.3 °F</td>
<td>0.1 °C</td>
<td>Temperature, Relative Humidity</td>
</tr>
<tr>
<td>Wet Bulb Temperature - Psychrometric</td>
<td>3.2 °F</td>
<td>0.1 °F</td>
<td>Temperature, Relative Humidity</td>
</tr>
</tbody>
</table>

## ADDITIONAL PRODUCT INFO

- **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 3rd party apps).

- **Certifications**: CE certified, RoHS 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 516.6 Procedure IV; unit only; impact may damage replaceable impeller.

- **Sealing**: Waterproof (IP67 and NEMA-4).

- **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).