



# Certificate of Conformity

This instrument was produced under rigorous factory production control and documented standard procedures. It was individually visually inspected, leak tested and electronically tested for button and software performance. The accuracy of each of its primary measurements was individually tested against standards traceable to the National Institute of Standards and Technology (“NIST”) or calibrated intermediary standards. This instrument is certified to have performed at the time of manufacture in compliance with the following specifications as they apply to this DROP’s specific model, measurements and features.

## 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  $\pm 0.040^{\circ}\text{C}$ .

### Station Pressure:

Pressure response is verified in comparison with a Vaisala PTB210 Digital Barometer. The Vaisala Barometer is calibrated annually and is traceable to NIST with a maximum relative expanded uncertainty of  $\pm 0.3$  hPa. Kestrel DROP units are verified during manufacturing to conform within  $\pm 2.5$  hPa from the PTB210. It is expected that each unit will conform to the full accuracy specification within 7 days from date of manufacture.

### 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  $\pm 1.0\% \text{RH}$ .

	Accuracy	Resolution	Range
Temperature	$\pm 0.9^{\circ}\text{F}/0.5^{\circ}\text{C}$	$0.1^{\circ}\text{F}/0.1^{\circ}\text{C}$	$-10^{\circ}\text{C}$ to $55^{\circ}\text{C}$
Humidity	$\pm 2\% \text{RH}$	$0.1\% \text{RH}$	10% to 90% RH, $25^{\circ}\text{C}$
Pressure	$\pm 1.5$ mbar at $25^{\circ}\text{C}$ , 700-1100 mbar/ $\pm 0.044$ inHg at $77^{\circ}\text{F}$ , 20.67-32.48 inHg	$0.1$ mbar/ $0.01$ inHg	$25^{\circ}\text{C}/77^{\circ}\text{F}$ , 700 - 1100 mbar/ 20.67-32.48 inHg

DROP D1 #0710, DROP D2 #0720, DROP D3 #0730

Nielsen-Kellerman



### Approved By:

Michael Naughton, Engineering Manager

# Product Specifications

	Accuracy	Resolution	Range
Dew Point	± 3°F ±1.8°C	0.1°F/0.1°C	10% to 90% RH at 77°F/25°C over 10 - 55°C/50 - 131°F
Heat Index	± 5°F ± 2.6°C	0.1°F/0.1°C	10% to 90% RH at 77°F/25°C over 10 - 55°C/50 - 131°F
Density Altitude	± 25.0 m ± 82.0 ft	0.1 m/0.1 ft	10% to 90% RH over 10 - 55°C/50 - 131°F 700 - 1100 mbar/20.67-32.48 inHg

	Temperature	Humidity	Pressure
Operational Range	0°F/-18°C to 140°F/60°C	0 to 100% RH	10-1200 hPa

Data Storage	D1: 13064 data points	D2: 8165 data points	D3: 6220 data points
Size & Weight	2.4 x 1.8 x 0.9 in. / 6 x 4.5 x 2.3 cm. 1.2oz / 34g		
Battery Type	User-replaceable CR2032 (included)		
Connectivity	<i>Bluetooth</i> <sup>®</sup> Low Energy (BLE) connects to iOS devices (models 4s and later- see website for complete list of compatible models)		
Logging Rate	2 seconds to 12 hours		
Storage Temperatures	-22°F to 140°F / -30°C to 60°C		
Shock Resistance	MIL-STD-810G, Transit Shock, Method 516.5 Procedure IV (4 foot drop test)		
Water Resistance	IP67 and NEMA-6 (30 minute submersion at 1 meter, 3.3 ft)		
Compliance	CE certified, FCC, IC tested, RoHS and WEEE compliant.		
Source	Designed and manufactured in USA. Complies with Regional Value Content and Tariff Code Transformation requirements for NAFTA Preference Criterion B.		

## WARNING

- This product contains a coin cell battery. Never put batteries in mouth. Swallowing may lead to serious injury or death.
- Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children.
- If a coin cell battery is ingested or placed in any part of the body, immediately seek medical attention and have the doctor phone the National Capital Poison Control Center at 1-800-222-1222.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada license-exempt RSS Standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interference, y compris celles pouvant causer un mauvais fonctionnement de l'appareil.