



# Verigo

Truth in Transit

## POD HUMIDITY

### MODEL PA3

The **Pod environmental data logger** records and wirelessly transmits temperature and relative humidity (RH) data and excursion alerts to your smartphones and tablets; no cables or readers required! Simply download Verigo's app for Android™ or iOS™ to your smart device and start using your Pod.

Users can customize their Pod for each monitoring session by inputting a distinct name, scanning a product barcode, setting temperature and RH thresholds, and fully configuring for any particular application.

During use, the mobile app allows users to view all Pods up to 30 meters (*100 feet*) away in real time with their current temperature and RH readings and alerts.

Want to see more details about a particular Pod? Wirelessly connect to your Pod to view full data graphs and detailed alerts indicating threshold excursions. For further analysis, use the app's share function to email data as a PDF or CSV straight from your mobile device.

All data is stored in the cloud automatically via Verigo's secure Web App, allowing users back at the office to search complete records of all Pod data, view location points, and generate PDF and CSV files for data review and analysis.

**LOOP ATTACHMENT**

**LED INDICATOR**

**MULTI-USE BUTTON**



**QR CODE**



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## SPECIFICATIONS (MODEL PA3)

TEMPERATURE SENSOR			
Measurement Range	-25°C to 60°C	(-13°F to 140°F)	
Accuracy <sup>1</sup>	±0.5°C max ±0.3°C typical	(0.9°F max) (0.53°F typical)	
Resolution	0.01°C	(0.018°F)	
Response Time (T90)	Less than 10 min	(in 1.0 m/s +0.2 airflow)	
HUMIDITY SENSOR****			
Measurement Range	0% to 100% RH		
Recommended Operating Range	5% up to 80% RH	<i>(non-condensing from -10°C to 60°C)</i>	
Accuracy	± 5% RH max <sup>2</sup> ± 2% RH typical	<i>(within recommended range)</i> <i>(within recommended range)</i>	
Resolution	0.03% RH		
WIRELESS COMMUNICATION			
Transmission Range	Up to 30 meters <i>(about 100 feet)</i>		
Data Acquisition	Visual using Mobile and/or Web App Email as CSV and/or PDF		
Signal Strength	Visible in Mobile App		
LOGGING OPTIONS			
Logging Interval	1 min to 18 hours, user configurable		
High Resolution Logging	User can enable or disable <i>(logging occurs if temperature or RH changes)</i>		
Sampling Interval	30 seconds		
Activation	Button Press or Using Mobile App: Immediate and Delayed Logging <i>(set delay interval or date &amp; time)</i>		
Shutdown	Using Mobile App <i>(data logging will stop when memory is full)</i>		
Sensor Thresholds	User configurable over full operating range		
Notifications	Enable or disable SMS/email notifications indicating sensor threshold excursions		
HARDWARE			
Single/Multi-Use Battery Life <sup>3</sup>	Multi-Use	Shelf Life (inactive)	Typical <sup>4</sup> Continuously Active
		7 years	2-4 years      1.5 years
Battery Type	3V Primary Lithium Manganese Dioxide <i>(non-rechargeable)</i>		
Low Battery Indicator	Visible in Mobile App		
LED INDICATOR			
Upon a button press: (flashes seen)	1 green	Inactive Pod	
	2 green	Active Pod	
	2 red	Active Pod with a threshold excursion	
	4 green	Pod currently connected to a mobile device	
	4 red	Pod connected to a mobile device, with a threshold excursion	
OPERATING RANGE			
	-20°C to 60°C	(-4°F to 140°F)	
MEMORY			
Temperature	40,000 data points		
Humidity	40,000 data points		
CASE			
	ABS		
DIMENSIONS			
Pod	97 x 43 x 13 mm	<i>(3.8 x 1.7 x 0.5 in)</i>	
WEIGHT			
Pod Humidity	30 g <i>(1.06 oz)</i>		
CERTIFICATIONS			
Environment Rating	IP65		



Verigo

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**When not in use**, Pods should be stored in an environment with an ambient temperature between 0°C and 30°C.

**Sensor malfunction/failure** can occur when Pods are exposed to condensing levels of humidity for an extended period of time.

**1 Per sensor manufacturer datasheet:** The humidity and temperature sensors are factory-calibrated and the calibration data is stored in the on-chip non-volatile memory. Please click [here](#) to view the sensor manufacturer's data sheet.

### 2 Humidity Sensor Max Accuracy

The humidity measurement accuracy specification is based upon testing performed on random samples of at least 2% of all manufactured units at an ISO 17025 certified calibration laboratory. At least 99% of all units manufactured will perform within the stated accuracy claims with more than 99% certainty.

**3 Exact battery life** can vary depending on device age, use case and operating temperature. Battery life will be inherently diminished when Pods are operated continuously at temperatures below 0°C.

**4 "Typical" use** of a Pod is considered to be actively logging for a total of 8-16 hours with one full log download per day, every day while operating at 0°C - 20°C.

## HUMIDITY SENSOR

### Recommended Operating Range

The recommended operating range for the data logger is 20% up to 80% RH (non-condensing) for temperatures of -10C to 60C. Operation outside of this range can result in a shift in sensor readings. Prolonged exposure outside of this range can result in extensions in Pod recovery time. Pods exposed to condensing levels of humidity for an extended period of time will likely result in electrical failure.

### Hysteresis

The RH sensor will experience hysteresis, and readings can vary based on the duration of time the sensor sat at the previous humidity level. This means that sensor readings can be dependent on whether the sensor is changing from a low-to-high vs. a high-to-low humidity environment. Any effects resulting from hysteresis should disappear after suitable soak times, allowing the sensor to stabilize. Typical effects of hysteresis ( $\pm 1\%$  RH) over the range of 20% to 80% RH are taken into consideration for the accuracy claim.

### High Humidity Environments

Exposure to high humidity (80% RH and above) can cause drift in sensor readings. Based on information from the sensor manufacturer, this drift could be up to 1.5% RH for short, non-condensing exposures. The sensor comes with a factory-fitted protective cover to help mitigate some of the effects from high humidity exposure. The observed drift can disappear slowly as the sensor is brought back to and operated under normal ambient conditions. The time required for the sensor to recover depends on the magnitude and duration of exposure to high humidity.

Above 90% RH it is difficult to avoid condensation on the sensor, which will result in sensor errors. Additionally, prolonged exposure to high humidity may result in shifts in sensor readings that persist indefinitely.

### Stated accuracy does not include:

- Effects from operation outside the recommended operating range, or long term exposure to very humid conditions.
- Contamination of the sensor by particulates, chemicals, etc.
- Other aging-related shifts (long-term stability).

### Terms and Conditions:

No claims, representations or warranties, whether expressed or implied, including but not limited to warranties of merchantability, fitness for a particular purpose, of title, or of noninfringement of third party rights, are made by Verigo as to the safety, reliability, durability or performance of Verigo's products. Verigo is not responsible for any liabilities resulting from negligence, misuse, modification, or alterations to the product by the user. Furthermore, Verigo accepts no liability whatsoever for the safety, reliability, durability or performance of any of its products. IN NO EVENT, REGARDLESS OF CAUSE, SHALL VERIGO BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER ARISING UNDER BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, AND WHETHER BASED ON THIS AGREEMENT OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

User assumes responsibility for correct operation of the product and any software associated with it. User assumes responsibility for determining the suitability of the product to the user's needs, for configuring and using the product to meet those needs, and for the proper placement/location of the product in the environment it is being used. User assumes responsibility for verifying and interpreting results obtained from product use. Verigo's Pod Temperature, Pod Humidity, and Pod Probe are not waterproof.



# POD HUMIDITY

## Federal Communication Commission (FCC) Compliance Statement:

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.

Note: The Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

## Industry Canada

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.

## Avis de conformité pour l'Industrie Canada

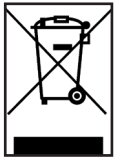
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## Code of Federal Regulations (CFR)

Electronics associated with Verigo Pods are compliant with CFR Title 21. Verigo declares that all homogeneous materials in the following devices do not exceed the maximum concentration levels of hazardous substances as described in Directive 2011/65/EU of the European Parliament or are RoHS exempt.

Android is a trademark of Google Inc. iOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.

## WEEE Recycling Instructions



This symbol on our product and/or its packaging indicates that this product must not be disposed of with your other household waste. WEEE (Waste Electrical and Electronic Equipment) is potentially hazardous to human and environmental health. Re-use, recycling and recovery efforts are the responsibility of all consumers, producers and representatives dealing with Electrical and Electronic Equipment. For more information on recycling, please contact either your local distributor, the retail outlet where you made your purchase or your local waste-management authority.



**The case of our Pod contains ABS.**

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