vutility

HotDrop™

Welcome to Vutility!

We're glad you're here. We've created the HotDrop™ and Vutility to help you analyze your power consumption.

The HotDrop installation is simple and it's as easy as a clip of the latch. You'll be gaining valuable data on your energy consumption in minutes.

This guide will walk you through all the necessary steps to get your HotDrops installed and transmitting data.

If you have any questions, our support team is always available to help.

(833) 895-9111 | support@vutility.com

Getting Started

1 CREATE YOUR VUTILITY ACCOUNT

You'll receive an e-mail from us to start. Once you receive the e-mail, create a password and sign-in to ReVU. You'll use ReVU to access HotDrop visualizations.

2 DOWNLOAD LINK INSTALLER APP

Download the Vutility-Link app on your mobile phone. Vutility-Link will help you during the installation process. The same username and passcode as ReVU will be used for Vutility-Link.

Identify Locations

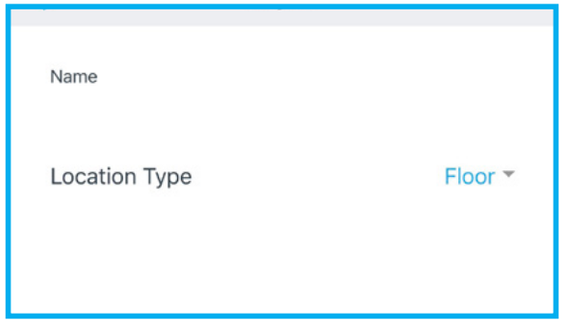
1 SCOPE NECESSARY LOCATIONS

Identify the locations that you would like to monitor. You can find more information about scoping your site in our scoping document. Once you determine the location, go to step 2.

Scoping Guide

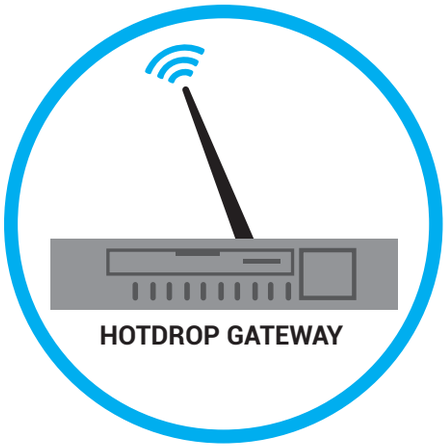
2 INPUT LOCATIONS IN LINK APP

- Tap Setup.
- Tap the + icon.
- Select the Location button.
- Name the location (HVAC 1, Lighting 2)
- Set the location type based on your organization's structure (Campus, Zone, Building, Floor).
- Save the location.



Gateway Installation

1 INSTALL LoRaWAN GATEWAY



Now, let's set up your gateway. The device should be within a few hundred feet of the HotDrop, in any direction. The gateway can transmit via ethernet or cellular data. Ensure that the gateway can export by checking the LED indicator light.

If using an ethernet connection:

- Verify left and right LED lights are on and blinking
- Verify gateway is able to access Port-1700

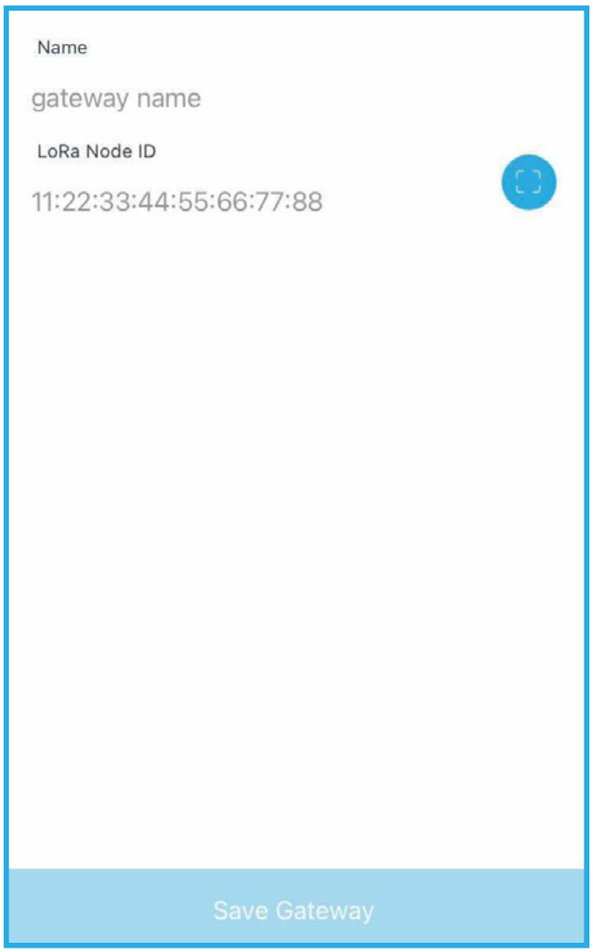
If using cellular data:

- Verify SIM card is activated
- LED blinks when SIM is registered with carrier and transmitting data.

2 ONBOARD GATEWAY INTO LINK

If you received a LoRaWAN gateway from Vutility, select LoRaWAN gateway when prompted. You will need to select the correct application server for your LoRaWAN region. This will need to match the application server selected when you add a HotDrop.

Add a name for the gateway.



3 Check Gateway Status

Make sure Multitech gateway can export data.
If using an ethernet connection:

- Verify left and right LED lights are on and blinking
- Verify gateway is able to access Port-1700

If using cell data backhaul:

- Verify SIM card is activated
- LED blinks when SIM is registered with carrier and transmitting data.

Status	Blinks when operating system is fully loaded
LoRa	Lights when LoRa software is active
Cell	Cellular models only. Lights when there is power to the radio. Blinks when the SIM is registrered with the carrier.
WIFI	Reserved for future use.
Ethernet Link	Left LED on the ethernet connector. Blinks when data is sent or received on the Ethernet link. Steady light when there is a valid etehernet conenction
Ethernet Speed	Right LED on the Ethernet connector. Lit when the Ethernet is linked at 100 Mbps. If not, illuminated, the Ethernet is linked at 10 Mpbs.

Ensure that the Gateway is online and communicating with HotDrops.

Vutility Server: Has the gateway seen Vutility devices?

- Online: yes
- Offline: no

AppServer: Is the gateway connected to Vutility's cloud?

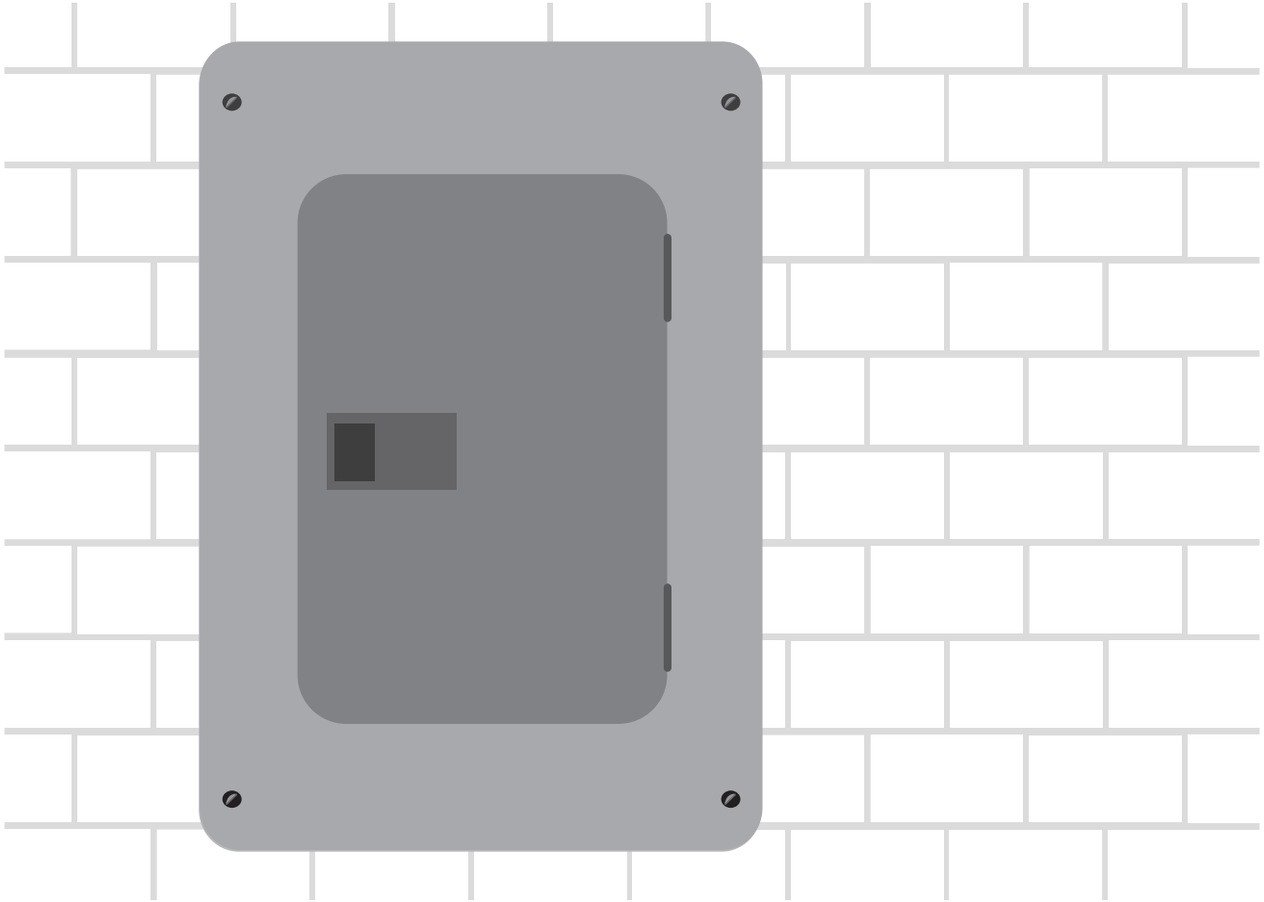
- Online: yes
- Offline: no

Server	Gateway not connected to cloud	Gateway connected to cloud but not Vutility devices	Gateway connected to the cloud and Vutility devices
Vutility	**Offline**	**Offline**	**Online**
AppServer	**Offline**	**Online**	**Online**

Install HotDrops

The following steps are for each HotDrop that you will install.

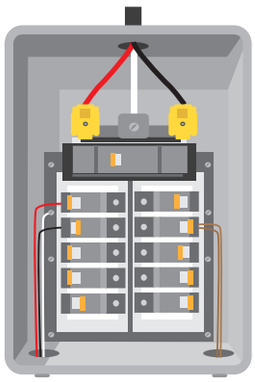
1 LOCATE CIRCUIT BREAKER PANEL



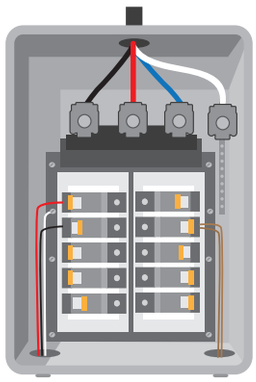
2 REMOVE FRONT PANEL

- Use common sense! Do not touch exposed wires or metals! We recommend wearing insulated gloves to avoid accidental electric shock.
- For maximum safety, we recommend turning off power to the circuit before getting started. The main power switch should be outside next to the utility meter.
- Safety first! If you don't feel comfortable with these steps, we recommend consulting with a professional electrician.

SERVICE PANEL EXAMPLES



A single-phase, two-pole residential service panel



Three-phase service panel

3 ONBOARD HOTDROP IN LINK

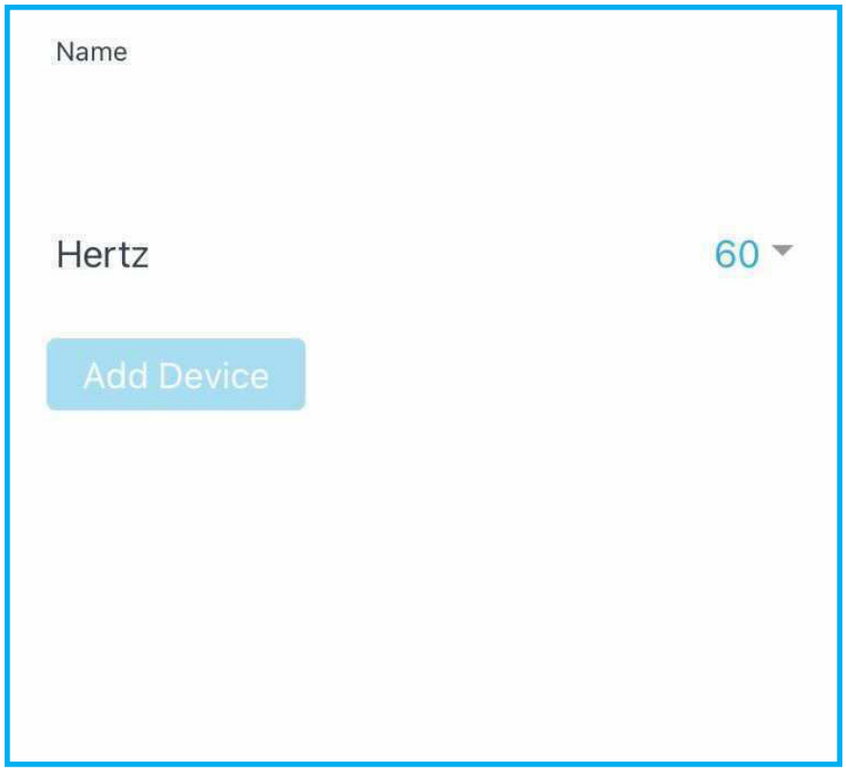
Now it's time to start installing HotDrops in your desired location. On the Link app, find the location you defined within your organization.

- Select the location
- Select the + icon.
- Select the HotDrop icon.

Create Circuit

- Enter a circuit name.

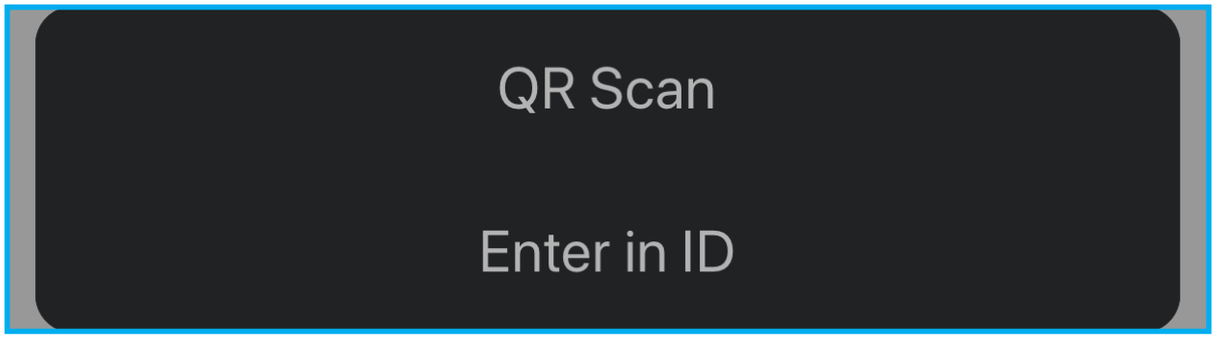
Note: circuits typically consist of three separate phases requiring three HotDrops.



Tap Add Device

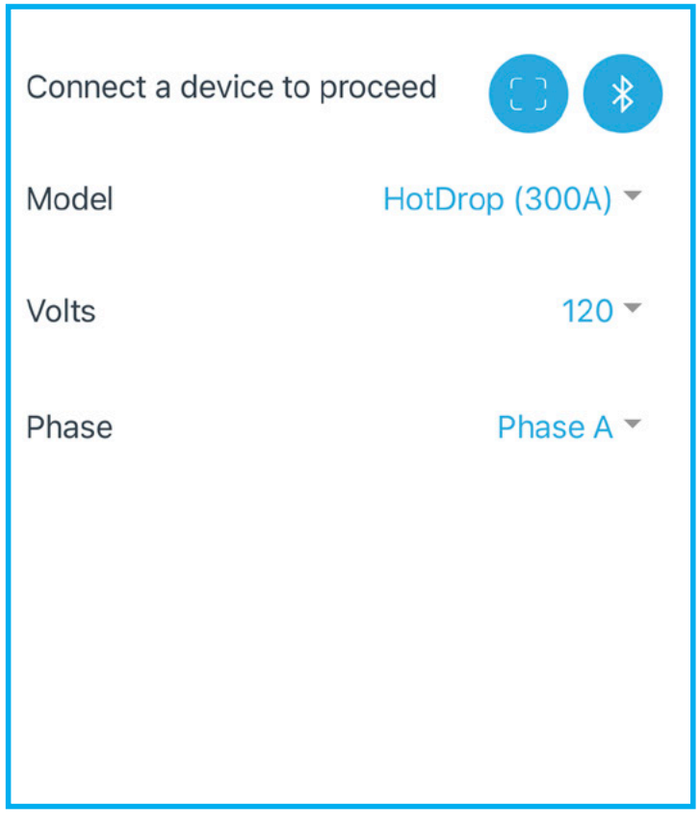
Tap QR Scan

Tap QR code scan and then select QR code scan.

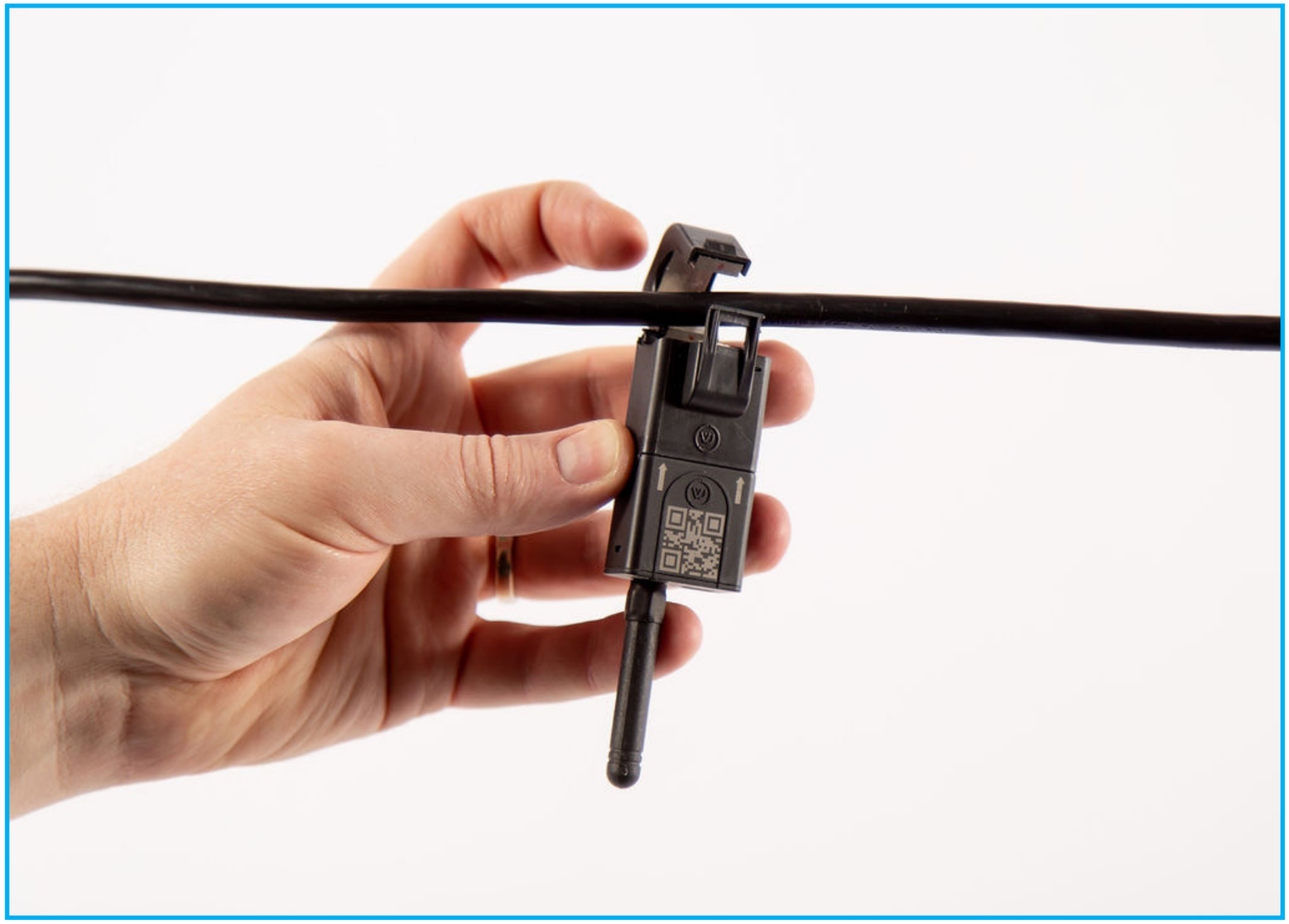


Scan the QR code on the HotDrop with your phone. The HotDrop ID will display on the screen.

- Select the HotDrop model.
- Verify the phase in which the HotDrop will be installed in the circuit.
- Tap configure.
- Repeat Steps 5 - 7 for each HotDrop in the circuit.
- Do not select **Save Circuit** until all HotDrops for the circuit have been onboarded.

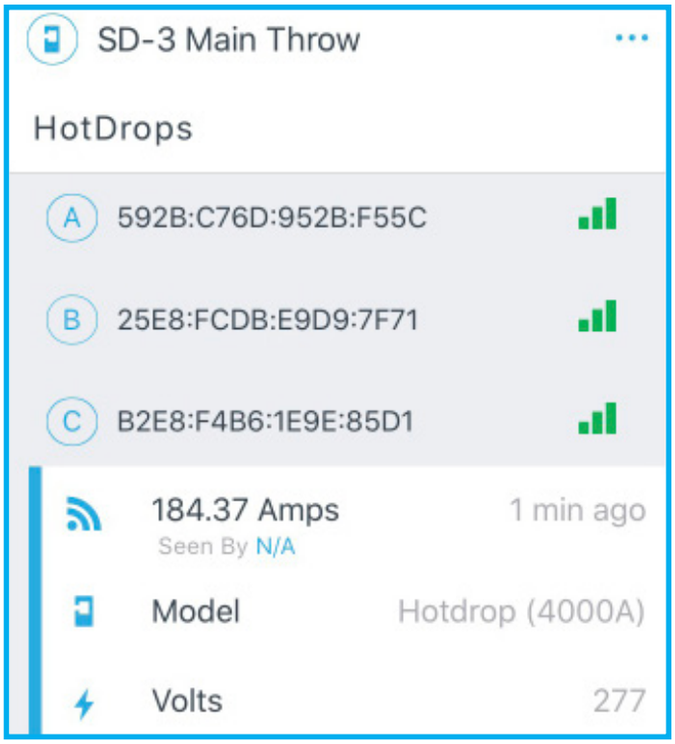


4 CLIP HOTDROP ON THE WIRE



5 VERIFY SETUP

Login to your Link account to verify setup.



- In the setup tab, identify the HotDrops that you want to verify.
- Tap on the HotDrop to expand the view and if there is data within the last few minutes, then data is properly flowing and everything is connected properly.

6 Troubleshoot HotDrops

Verify circuit is measuring amps and determine if HotDrops are transmitting by viewing LED Flashes.

- 4 flashes HotDrop capacitors charging
- 5 flashes HotDrop looking to join LoRaWAN gateway or network
- 6 flashes HotDrop joined gateway and is transmitting data

** HotDrops require minimum 1A to power and transmit data. Depending on amount of current, the times from clipping on HotDrop to seeing data may vary from a few minutes to a few hours.*

Support Resources

www.vutility.com

Phone: (833) 895-9111

Email: support@vutility.com

This device complies with the relevant provisions of the RoHS Directive for the European Union. In common with all Electrical and Electronic Equipment (EEE) the HotDrop™ should not be disposed of as household waste. Alternative arrangements may apply in other jurisdictions.

Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated in this document. Connection to a different power source other than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.

2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified Vutility service technician.

3. This equipment is provided with a detachable antenna. (Because of FCC regulations, please use the antenna provided).

4. Do not substitute the antenna with one that was not provided by Vutility.

Limited Safety Information

Unless otherwise stated in a contract, Vutiliti, Inc. (“Vutility”) warrants that the product(s) furnished hereunder (the “Product(s)”) shall be free from defects in material and workmanship for a period of one year from the date of shipment by Vutility under normal use and operation.

Vutility’s sole and exclusive obligation and liability under the foregoing warranty shall be for Vutility, at its discretion, to repair or replace any Product that fails to conform to the above warranty during the above warranty period. The expense of removal and reinstallation of any Product is not included in this warranty. The warranty period of any repaired or replaced Product shall not extend beyond its original term.

The above warranty does not apply if the Product:

(I) has been modified and/or altered, or an addition made thereto, except by Vutility, or Vutility's authorized representatives, or as approved by Vutility in writing;
(II) has been painted, rebranded or physically modified in any way;
(III) has been damaged due to errors or defects in wiring;
(IV) has been improperly installed;
(V) has been subjected to misuse, abuse, negligence, abnormal physical, electromagnetic or electrical stress, including lightning strikes, or accident;
(VI) has been damaged or impaired as a result of using third party firmware;
(VII) is missing any original Vutility label(s); or
(VIII) has not been received by Vutility within 30 days of issuance of the RMA.

In addition, the above warranty shall apply only if:

(I) the product has been properly installed and used at all times in accordance, and in all material respects, with the applicable Product documentation;
(II) all Ethernet cabling runs use CAT5 (or above);
(III) for outdoor installations, shielded Ethernet cabling is used; and
(IV) for indoor installations, indoor cabling requirements are followed.

Returns

No Products will be accepted for replacement or repair without obtaining a Return Materials Authorization (RMA) number from Vutility during the warranty period, and the Products being received at Vutility's facility freight prepaid in accordance with the RMA process of Vutility. Products returned without an RMA number will not be processed and will be returned freight collect or subject to disposal. Information on the RMA process and obtaining an RMA number can be found at: www.Vutility.com, or by calling +1 (855) 756-3569.

Disclaimer

EXCEPT FOR ANY EXPRESS WARRANTIES PROVIDED HEREIN, VUTILITY, ITS AFFILIATES, AND ITS AND THEIR THIRD PARTY DATA, SERVICE, SOFTWARE AND HARDWARE PROVIDERS HEREBY DISCLAIM AND MAKE NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, REPRESENTATIONS, GUARANTEES, OR WARRANTIES OF MERCHANT-

ABILITY, ACCURACY, QUALITY OF SERVICE OR RESULTS, AVAILABILITY, SATISFACTORY QUALITY, LACK OF VIRUSES, QUIET ENJOYMENT, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT AND ANY WARRANTIES ARISING FROM ANY COURSE OF DEALING, USAGE OR TRADE PRACTICE IN CONNECTION WITH SUCH PRODUCTS AND SERVICES. BUYER ACKNOWLEDGES THAT NEITHER VUTILITI NOR ITS THIRD PARTY PROVIDERS CONTROL BUYER'S EQUIPMENT OR THE TRANSFER OF DATA OVER COMMUNICATIONS FACILITIES, INCLUDING THE INTERNET, AND THAT THE PRODUCTS AND SERVICES MAY BE SUBJECT TO LIMITATIONS, INTERRUPTIONS, DELAYS, CANCELLATIONS AND OTHER PROBLEMS INHERENT IN THE USE OF COMMUNICATIONS FACILITIES. VUTILITY, ITS AFFILIATES AND ITS AND THEIR THIRD PARTY PROVIDERS ARE NOT RESPONSIBLE FOR ANY INTERRUPTIONS, DELAYS, CANCELLATIONS, DELIVERY FAILURES, DATA LOSS, CONTENT CORRUPTION, PACKET LOSS, OR OTHER DAMAGE RESULTING FROM ANY OF THE FOREGOING.

In addition, Vutility does not warrant that the operation of the Products will be error-free or that operation will be uninterrupted. In no event shall Vutility be responsible for damages or claims of any nature or description relating to system performance, including coverage, buyer's selection of products (including the Products) for buyer's application and/or failure of products (including the Products) to meet government or regulatory requirements.

Limitation of Liability

EXCEPT TO THE EXTENT PROHIBITED BY LOCAL LAW, IN NO EVENT WILL VUTILITI OR ITS SUBSIDIARIES, AFFILIATES OR SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES (INCLUDING LOST PROFIT, LOST DATA, OR DOWNTIME COSTS), ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF THE PRODUCT, WHETHER BASED IN WARRANTY, CONTRACT, TORT OR OTHER LEGAL THEORY, AND WHETHER OR NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

FCC GUIDELINES

FCC Statement: FCC ID: 2APCG-VUHDC1
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.

FCC Warning: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

Remarque: cet appareil été testé et déclaré conforme aux limites d'exposition pour les appareils numériques de classe B, selon la section 15 de la Règlementation de la FCC. Ces limites sont conçus pour fournir une protection raisonnable contre les inteférences nuisibles dans une installation résidentielle. Cet appareil produit, utilise et peut émettre de l'énergie radio fréquence et, si elle n'est pas installée et utilisée conformément aux instructions, peut causer des interférences nuisibles aux communications radio.

Cependant, il n'est pas garantie que des interférences ne se pro-duisent pas dans une installation particulière. Si cet appareil cause des interférences gênantes à la réception d'un signal radio ou de télévision, ce qui peut être déterminé en allumant et en éteignant l'appareil, l'utilisateur peut corriger les interférences en suivants une des mesures suivantes:

vutility