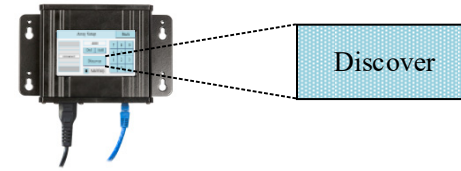


## Buttons and Indicators

### Communications Gateway Discover Button

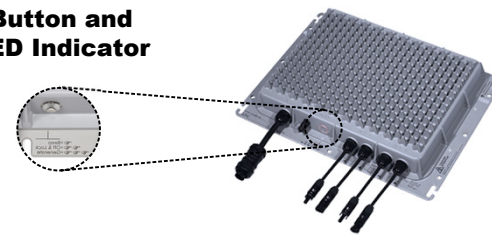
Button State	Meaning
	Initial state.
	Once pressed, a dark blue color indicates the Gateway is in the process of discovering inverters. It will return to the initial state with an empty serial number list if no inverters are found.
	A dark red color indicates an error was found. Examples: "signal strength is too low"; "too much background noise on circuit". The red color only clears when the user re-tries and the fault condition no longer applies.
	Once discovery has successfully occurred, this button returns to the initial state.



### Inverter Front Button

Button Push	Result
1 press 	<ul style="list-style-type: none"> <li>Make inverter beep; i.e. "Are you alive?"</li> </ul>
2 presses 	<ul style="list-style-type: none"> <li>"Off &amp; Locked". Unit is disabled.                             <ul style="list-style-type: none"> <li>Unit will not begin the 5-minute self-start.</li> </ul> </li> </ul>
3 presses 	<ul style="list-style-type: none"> <li>Start generating immediately</li> <li>If locked, unlock and generate immediately                             <ul style="list-style-type: none"> <li>If system is faulted, unit will unlock but will not generate</li> </ul> </li> </ul>
Long press (> 2 secs) 	<ul style="list-style-type: none"> <li>"Alternate functions" mode: Ready to accept further button pushes. This times out after 10 seconds.</li> </ul>
1 press (after long press) 	<ul style="list-style-type: none"> <li>Clear latched faults; for example, after residual-current device (RCD) test or arc-fault test has initiated a fault condition.</li> </ul>
3 presses (after long press) 	<ul style="list-style-type: none"> <li>RCD-test activation. Successful activation of RCD test should cause a fault condition (rapid red flashing) until cleared.</li> </ul>
4 presses (after long press) 	<ul style="list-style-type: none"> <li>Arc-fault test activation. Successful activation of arc-fault detection should cause a fault condition (rapid red flashing) until cleared.</li> </ul>

### Button and LED Indicator



### Inverter Indicators

Indicator State	Meaning
Green solid 	<ul style="list-style-type: none"> <li>Powered up</li> <li>Not generating</li> <li>No faults</li> </ul>
Green, left-right alternating flash 	<ul style="list-style-type: none"> <li>Power-on self-test                             <ul style="list-style-type: none"> <li>Will take &lt;1 minute</li> </ul> </li> </ul>
Green, clockwise circular flash 	<ul style="list-style-type: none"> <li>Powered up</li> <li>Generating, no faults</li> </ul>
Red rapid flash 	<ul style="list-style-type: none"> <li>Fault condition                             <ul style="list-style-type: none"> <li>Arc detected</li> <li>No grid</li> </ul> </li> </ul>
Green flash, mostly on 	<ul style="list-style-type: none"> <li>"Off and Locked"; unit is disabled</li> </ul>
Green flash, mostly off 	<ul style="list-style-type: none"> <li>Sleeping</li> <li>Not generating</li> </ul>

# ProHarvest PHXL480-10k

This guide provides instructions for installation and setup of the product. It assumes knowledge of features, functions, and general operation. This guide is a supplement for the purpose of expediting installation. For complete safety and installation information, see the *PHXL480-10k Owner's Manual* at [www.outbackpower.com](http://www.outbackpower.com).

These instructions are for use by qualified personnel who meet all local and governmental code requirements for licensing and training for the installation of 3-phase electrical power systems with AC and DC voltage up to 1000 volts.



### CAUTION: EQUIPMENT DAMAGE

- This system is to be connected to 480 Vac 3-phase wye input ONLY (three phases, neutral, ground).
- This product has no user-serviceable parts. Tampering with the product will void the warranty.
- Applying incorrect polarity to DC string inputs will result in damage. This will void the warranty.
- The Communications Gateway is for indoor use only.
- All conductors (L1, L2, L3, neutral, ground) must be connected. Neutral must be bonded to earth ground. Failure to do so can damage the inverter and void the warranty.

### A ProHarvest 480V Inverter

- PHXL480-10k



### AC Connection Tool (included in box)



### DC Connection Tool (included in box)



### AC Cable (ordered separately)

- CBL-480A-05 (5')
- CBL-480A-15 (15')
- CBL-480A-30 (30')
- CBL-480A-50 (50')



### Communications Gateway (ordered separately)

- PROGW-A-277



Includes SD card, Ethernet cable, 277 Vac cable

### AC Splice (optional component)

- PROSPL-60



### B Installation Notes:

- Type 6 rated ingress protection
- Cooling is most efficient if this product is mounted vertically in shade, bolted to PV racking and with connectors pointed downward. However, any orientation is acceptable.
- Use mounting hardware sizes up to 3/8". This is the largest size that will fit the baseplate mounting slots.

### C Grounding Notes:

- Metal enclosure must be grounded (NEC 690.43).
- AC connector provides equipment ground.
- Optional (Canada installations):** Grounding may be achieved by adding a lay-in lug (pictured, not provided) or by using mounting bolts. These bolts must be attached to a grounded metal structure using paint-cutting washers.



**IMPORTANT:**  
Not intended for use with life support equipment.



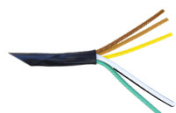
### Date and Revision

April 2019, Revision B

# Installation

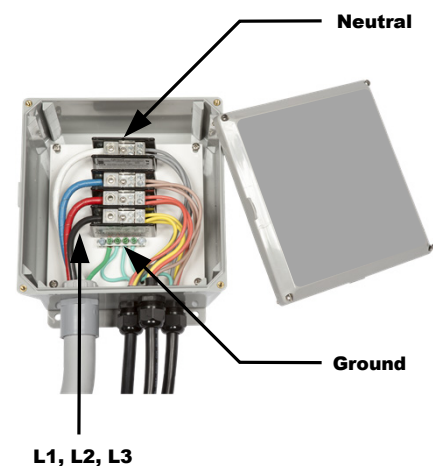
## D Connecting to AC Wiring

- Remove the sealing cap using the AC connector tool.
- Connect the inverter AC cable to the AC system.
- NOTE:** This connector is a certified AC disconnect.
- When wiring:
  - Any colored conductor can connect to any phase (L1, L2, or L3).
  - The white conductor connects to neutral.
  - The green conductor connects to equipment ground. The ground should always be the first connection established and the last removed.
- Connect the AC receptacles as shown to the right.
- NOTE:** The unit is only watertight when all connectors are fully engaged.
  - To unmate the receptacles, see the image to the left. Insert the center pin of the AC connector tool into the hole in the connector collar. Turn the assembly gently and pull. Do not force.



## E AC Splice

- The optional AC splice box, PROSPL-60, may be used to combine up to three PHXL480-10k inverters to one dedicated branch circuit.



## F Connecting the Gateway

- Connect the Gateway AC cable to one AC phase through a 15A OCPD.
    - This connection should be as close to the inverter as possible.
    - Do not turn on AC power.
  - White = neutral
  - Green = ground
  - Black = one phase
- NOTES:**
- The Gateway is for indoor use only.
  - The Ethernet connection can be made at this time.



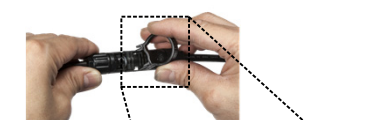
## G Connecting the PV Strings

- Remove connector end caps.
  - Connect 2 PV strings as shown to the right.
  - Secure the DC wiring to the array racking.
    - To unmate the receptacles, use the DC connector tool as shown below.
- NOTES:**
- With DC present but no AC, the front button will indicate an error. This is normal. See the **Buttons and Indicators** section.
  - The unit is only watertight when all connectors are fully engaged.
  - This connector is a certified DC disconnect. Additional disconnects are not needed.
  - For PV string lengths and so on, see the inverter manual. Uneven string lengths are acceptable.
  - This product is rated for 1,000 Vdc.



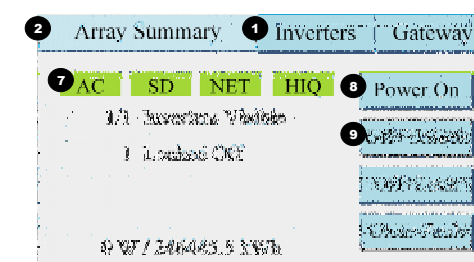
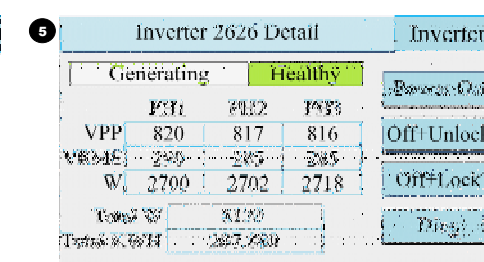
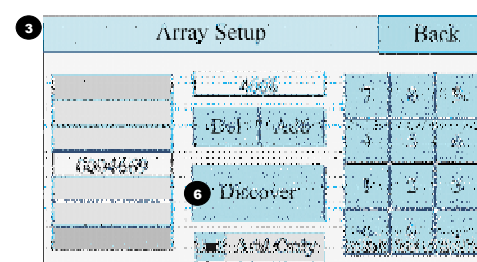
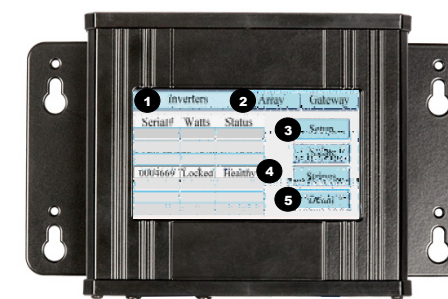
### CAUTION: EQUIPMENT DAMAGE

Do not reverse the DC "+" and "-" input polarities. This will damage the inverter and void the warranty.



## H System Discovery and Operation

- Turn on AC power to the Gateway and inverter(s).
- The system will wait 5 minutes and then perform a self-test. (See the **Buttons and Indicators** section for self-test indications.) On the **Inverters** tab 1, press the **Setup** button 3.
- On the **Array Setup** screen (see below), press the **Discover** button 6. The Gateway will search for all ProHarvest inverters and determine if they are functional. The message onscreen will be **Healthy** (4).
- Press the **Detail** button 5 to bring up that screen (see below). If a fault is indicated, check the AC wiring.



- Select the **Array** tab 2 to enter the **Array Summary** screen.
  - Press the **Off+Unlock** button 9 to unlock the power generation function on any previously locked inverters.
  - Press the **Power On** button 8 to omit the 5-minute delay if desired.
  - Select the **Inverters** tab (1) to return to the previous screen.

All unlocked inverters that have completed the 5-minute wait time will begin selling power.

### Installation is complete.

**NOTE:** Gateway communication status is shown with the indicators (7) **AC**, **SD**, **NET**, and **HIQ**. These are normally shaded green and indicate that the system is in good condition. One or more will turn red when a fault occurs. See the product manual for troubleshooting.

