

## V102, V107, V112 CORE Solar Batteries

### Description

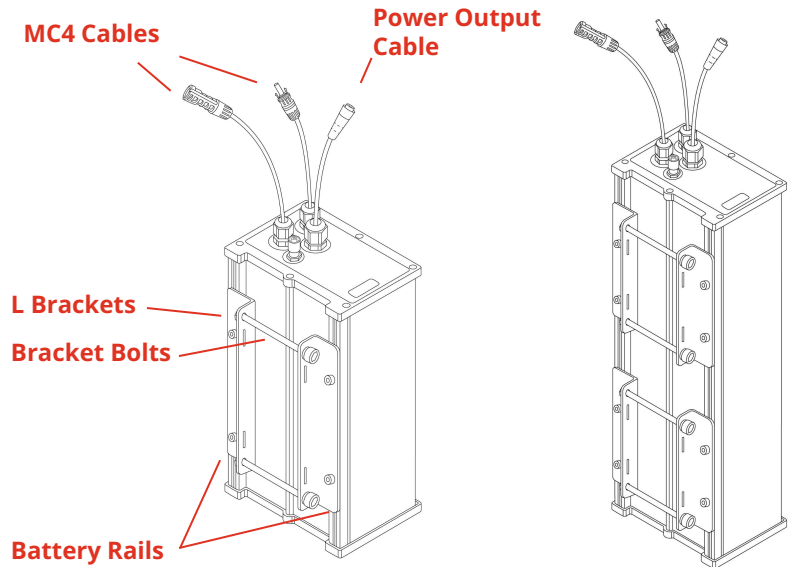
These waterproof batteries are designed to charge from solar panels and provide continuous power to gateways, routers, cameras, and other devices. Standard output is an unregulated 12V. PoE and 5V output and data monitoring are optional.

### Tools Required

- ⌚ 6 mm hex key wrench (included)
- ⌚ Adjustable wrench
- ⌚ Steel strap and ratchet (pole mount)
- ⌚ Zip ties

### Parts List

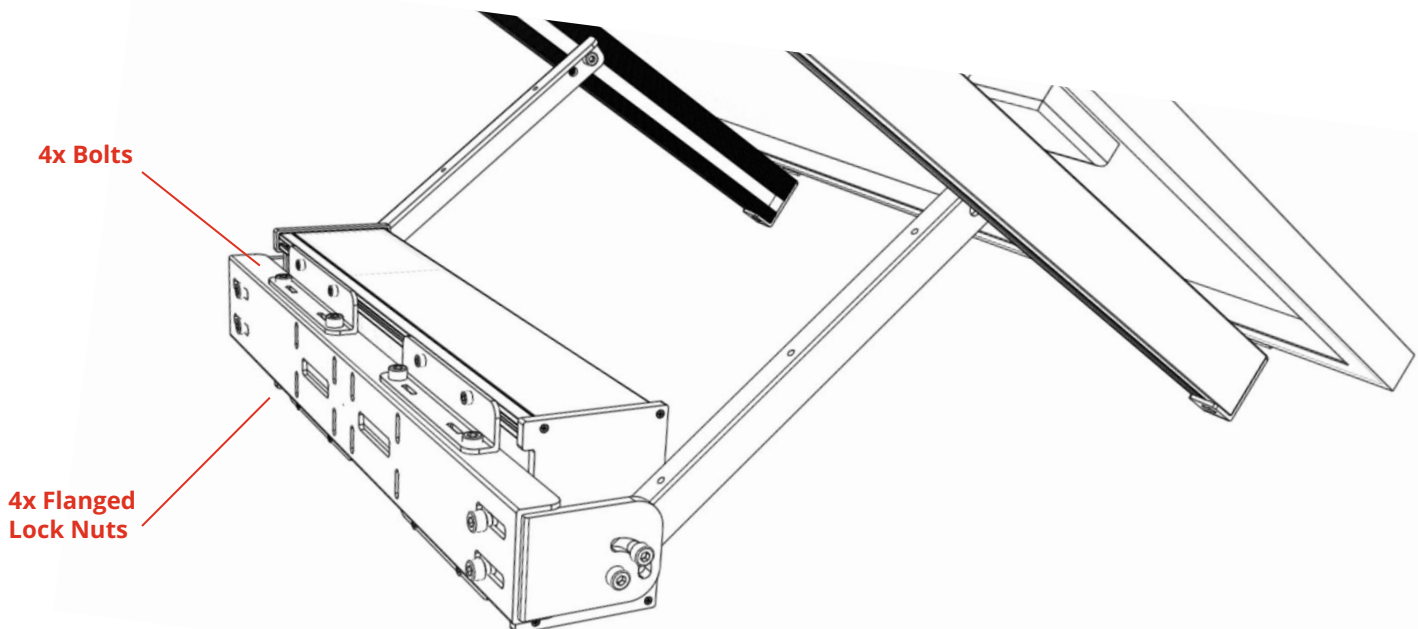
**1x Battery** (length varies by model)



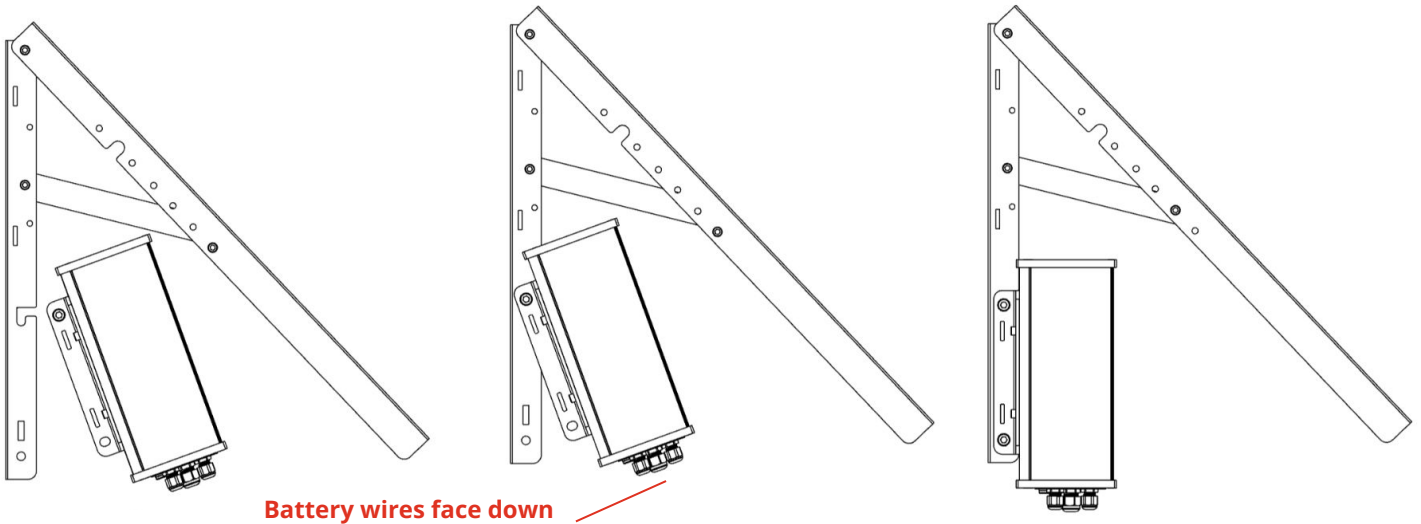
**We suggest testing your battery and end device prior to mounting the bracket and panel.**

**Step 1** - Install solar panel and bracket. Instructions included with bracket.

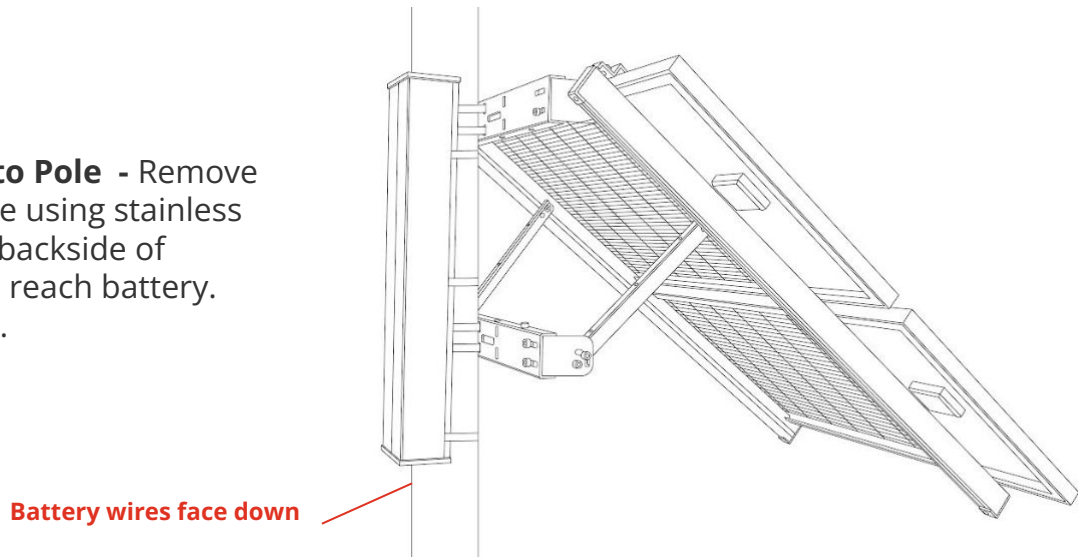
**Step 2 - Bracket Mount for V107 on BK110** - Remove long bolts from back of battery. Line up battery on solar panel bracket so that L brackets line up with holes. L brackets can shift on battery rails if needed. Reinsert bolts. Tighten flanged lock nuts.



**Step 2 - Bracket Mount for V102 or V107 Batteries on BK108 Bracket** - With upper Bracket Bolt in place, attach battery to hook on bracket. Pass through second Bracket Bolt and tighten both bolts. Wires on battery should face down.



**Step 2 - Bracket Mount for V112 to Pole** - Remove Bracket Bolts. Attach battery to pole using stainless steel straps through L brackets on backside of battery. Confirm solar panel cables reach battery. Wires on battery should face down.

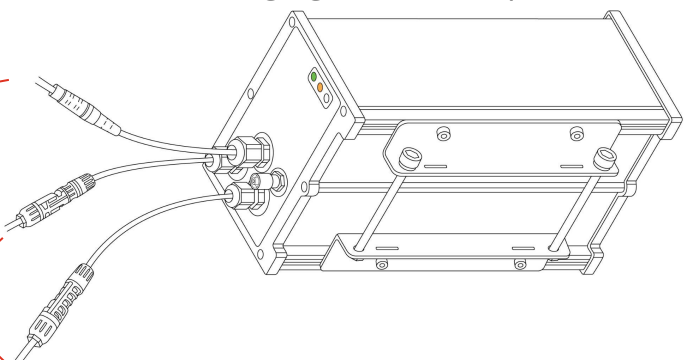


**Step 3 - Connect Device to Power Output Cable First, Then Solar Panel** - Connecting Power Output Cable turns on battery (If using PoE, see page 4). Ensure Power Output Cable is connected and charge controller is on before connecting solar panel. Charge controller light will be orange. MC4 solar panel connectors are keyed to the proper positive (+) and negative (-) connection. Connect each until it clicks.

Green light on the charge controller will blink to indicate it is charging when solar panels are outside in the sun.

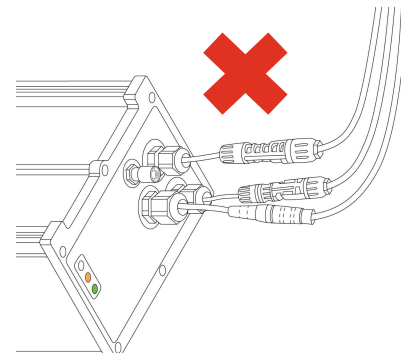
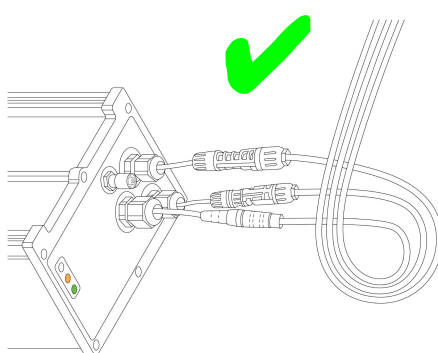
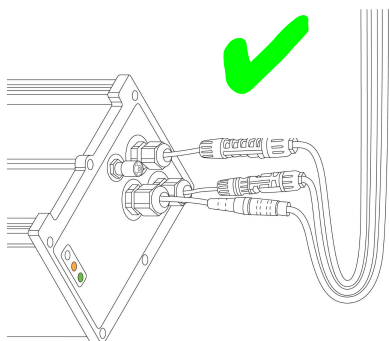
**1st - Connect Power Output Cable**

**2nd - Connect Solar Panel MC4 Cables**



**Step 4 - Secure wires with zip ties** - Cables should be secured so they do not move in the wind. Bundle wires together neatly and zip tie to the bracket.

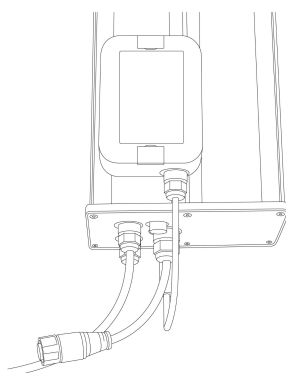
**Important:** If battery is horizontal, create a drip loop with the solar panel and power wires to minimize water flowing into the glands.



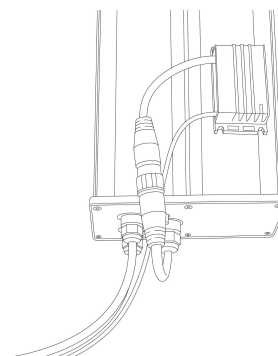
**LED Indicators** - Charge controller lights are visible through the front of the battery. They provide information about whether the system is receiving power from solar panels, providing power to a device, and other systems faults. Reminder, a cable or cap must be connected to the power output cable to turn the system on.

Green	Solid	System On, Not Charging
	Flashing Slow	Charging
	Flashing Fast	MPPT/Fast Charging
Amber	Solid	System On
	Flashing Slow	Low Battery Voltage
	Flashing Fast	Low Voltage Protection
Red	Solid	No Output
	Flashing Slow	Over Temperature
	Flashing Fast	Short Circuit Protection

**Optional Remote Monitoring** - Scan the QR code attached to the side of the battery to see the battery status: charge level, solar panel output, device power output.



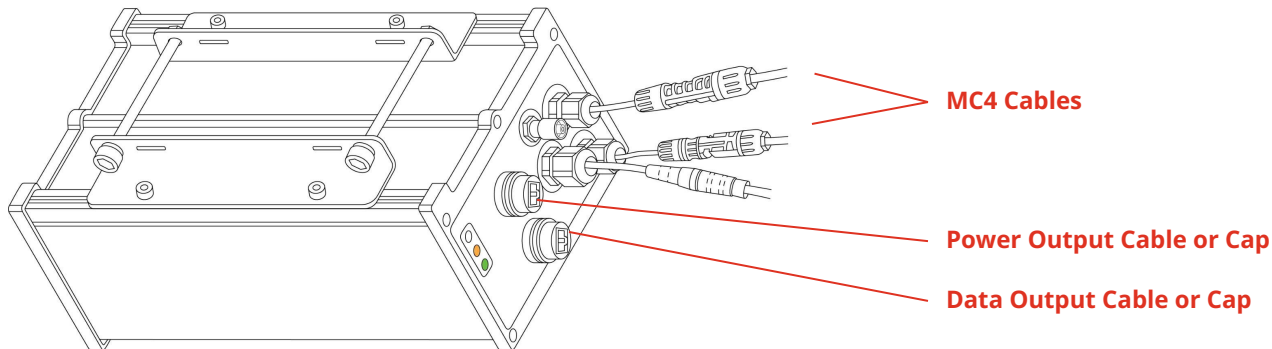
**Optional 5V Converter** - Regulator converts 12V battery output (unregulated) to 5V. USB-C and MicroUSB connectors are available.



### Optional PoE

A PoE injector can be installed inside the battery enclosure upon request. The injector has both a power and data port.

**Connect Power Cable or Cap to Output and Solar Panels** - The cap or power cable step turns on the charge controller. Orange light should turn on when charge controller is connected. Green light will blink when solar panels are connected outside in the sun.



**Connect Ethernet Cables** - Two compatible cables are included. If more length is needed, use outdoor rated patch cables without any strain relief or boot as not all ethernet cables will fit into the waterproof housing.

Remove caps on PoE ports and pass cable through the waterproof housing. Reassemble housing and tighten securely.

If not using data port, plug port to prevent water ingress.

