UPS-STL-600

UPSPro®

Backup Power System

- Wireless Base Stations and Client Devices
- Surveillance Cameras
- Mission Critical Backup Power
- Remote Sensors



Congratulations! on your purchase of the UPSPro® backup power system. Please take a moment to review this Qwik Install Guide before assembly or battery installation. Other instructions come with other components of this kit. Be sure to review all instructions.

DANGER! Avoid Powerlines!
You Can Be Killed!

When following the instructions in this guide take extreme care to avoid contact with overhead power lines, lights and power circuits. Contact with power lines, lights or power circuits may be fatal. We recommend to install no closer than 20 feet to any power lines.

Safety: For your own protection, follow these safety rules.

- **Perform as many functions as possible on the ground**
- **Do not attempt to install on a rainy, windy or snowy day or if there is ice or snow accumulation at the install site or if the site is wet.**
- **Make sure there are no people, pets, etc. below when you are working on a roof or ladder.**

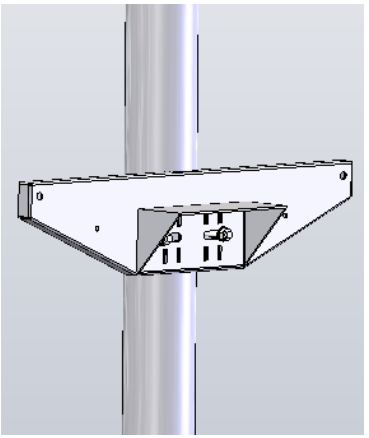
Recommended Tools: Phillips & Flat Screwdriver, 17/13/10mm wrench, 8mm nut driver

Please help preserve the environment and return used batteries to an authorized depot. Most auto parts stores will pay for your used battery.

Qwik Install

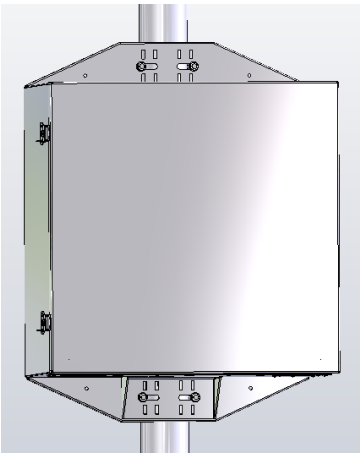
STEP 1: Prepare the enclosure: Install DIN rail (if required) to door using two phillips head screws. Install just the top mounting bracket to the enclosure using two 8mm bolts.

NOTE: It takes two people to mount the enclosure to a pole. The standard U-Bolt mounting accommodates a pole up to 4" diameter. Multiple pole straps can be used for extra strength. Pole straps are available for poles to 11" diameter or larger.



STEP 2: Install the bottom bracket and stabilizer bracket to the pole using U-Bolt and Pole Straps. The stabilizer bracket is used as an aid to mounting and additional support when mounted.

STEP 3: Lift the enclosure and place it on the stabilizer bracket. Connect the top bracket to the pole using U-Bolt and/or Pole Straps.



STEP 4: Attach the two 8mm bolts that hold the bottom bracket to the enclosure. Make sure all bolts are tight. (8-15 ft lbs)

STEP 5: Install the three wire feedthru cable glands in the holes in the bottom of the enclosure.

NOTE: The bottom plate can be removed from the enclosure if you need to add some additional feedthru. (ex; conduit connection)

STEP 6: Install the batteries in the enclosure. For 12VDC, the batteries are connected in parallel, for 24VDC, the batteries are connected in series pairs. (See wiring diagrams later in this guide).

NOTE: The enclosure has slot features that can be used to strap the batteries if desired. Tycon has velcro straps (#5700030) available. It takes two straps per battery.



STEP 7: Before attaching the battery cables to the batteries, first remove the battery cable fuse. This will prevent accidental short circuit.

Connect all battery minus (-) connections, then connect all battery plus (+) connections. Because of high charging currents, two battery cables are required for 12V installs.

NOTE: The fan supplied with the system operates on 12VDC or 24VDC. It is thermostatically controlled to turn on if temperature exceeds 45C. It can be connected directly to the batteries or to the load output of the controller.



STEP 8: Attach the DIN Rail adapters to the charge controller using the screws provided. Clip the controller to the DIN rail by putting the bottom of the DIN bracket into the bottom of the DIN rail, then push up and over the top of the DIN rail.

STEP 9: Connect the battery wires to the MPPT controller BAT inputs. Be sure to pay strict attention to polarity.

Connect the 600W 48V battery charger to the Solar Controller PV input (PV+ & PV-). Make sure to observe proper polarity. Brown wire is V+. The controller has a pluggable 3 wire AC cord. You can cut this cord to hardwire into the mains. You can also mount conduit to the enclosure if local codes require it.

CAUTION: Wiring with reverse polarity will cause equipment damage. Don't turn on 600W battery charger until MPPT controller has been energized with battery power.

Double check wiring and then install the fuse in the battery cables to energize the system. When a fully charged battery is connected, the controller should power up and display the system parameters.

STEP 10: Mount any customer electronics to the inside of the enclosure. Connect any loads to the Solar Controller LOAD output. (LOAD+ & LOAD-). Press red SET button to turn on/off the LOAD output.

STEP 11: Tighten all wire feedthrus. If they don't tighten on a small diameter wire, you can wrap some electrical tape around the wire in the seal area to increase its diameter and make a better seal.

Note: There are multiple cable gland feedthrough in the bottom of the enclosure. If you are not using any of the feedthrough you can cut a short piece of wire, put it through the cable gland and tighten the cable gland on the wire to seal it. When using 8 batteries, use the included hole plug to close the hole under the 600W 48V battery charger.

CAUTION: Be sure to connect the battery to the controller first and disconnect it last. Connecting PV connection to the controller without the battery connected could damage the controller.





UPS-STL-600 24V 4 Battery System

STEP 12: Turn on the 600W 48V Battery Charger. During operation the charger fan may run. This is normal.

STEP 13: Make sure the enclosure door gasket is clean, then close the door making sure all wires are clear. The enclosure can be locked using a standard combination or keyed padlock.



UPS-STL-600 24V 8 Battery System

TECH CORNER

Additional Information you may find useful

1. **CONTROLLER:** The TP-SC24-40-MPPT controller is designed for use with 12V or 24V battery systems. Maximum load output is 20A Max.

2.**Fuse:** There is a fuse in-line in the battery cables. If fuse is blown there was some sort of short in the battery connection and the controller will appear dead. Replace with 3AG 6.3 x 32mm 30A Slo-Blo fuse.

3. VENTING: The enclosure is vented thru a thermostatically (45C) controlled fan and top and bottom vents. The vents are covered with dust/insect filters. You should add the checking/cleaning of the filters during any routine maintenance cycle but at least annually.

4. BATTERY MAINTENANCE: The batteries used in the RemotePro® systems don't require any maintenance. They should last up to 5 years in normal use. **Note: Never store batteries for any length of time in a discharged state or it may kill the battery. Always fully charge be-**

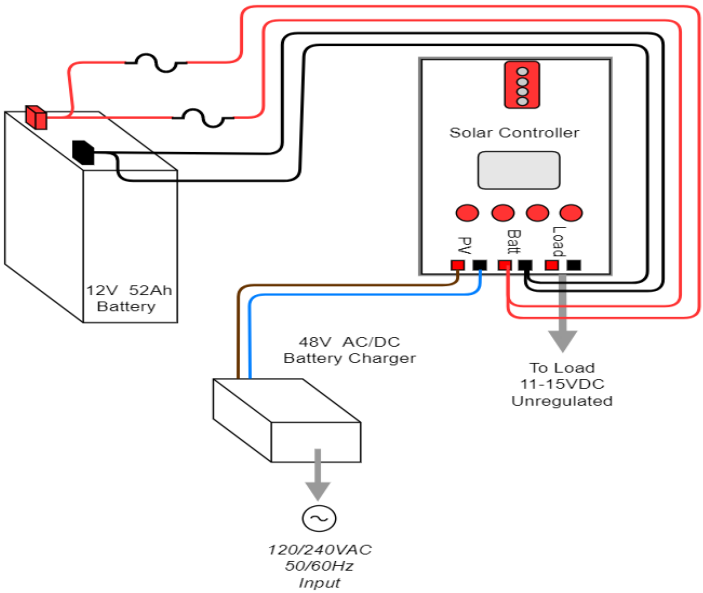
fore storage.

5. BATTERY OVERDISCHARGE: We highly recommend hooking all equipment loads to the controller load outputs. This output will disconnect the loads if the battery voltage drops below the preset low voltage disconnect level. **T**his will protect the battery from over-discharge. If batteries get completely discharged because the equipment was connected directly to the battery, you will reduce the battery life and you will most likely need to supercharge them with a good quality 10A automotive battery charger. Once they are back to a normal operating range, the integrated charge controller will maintain the charge. Don't charge batteries using an automotive charger for longer than 24hrs or you may damage the battery.

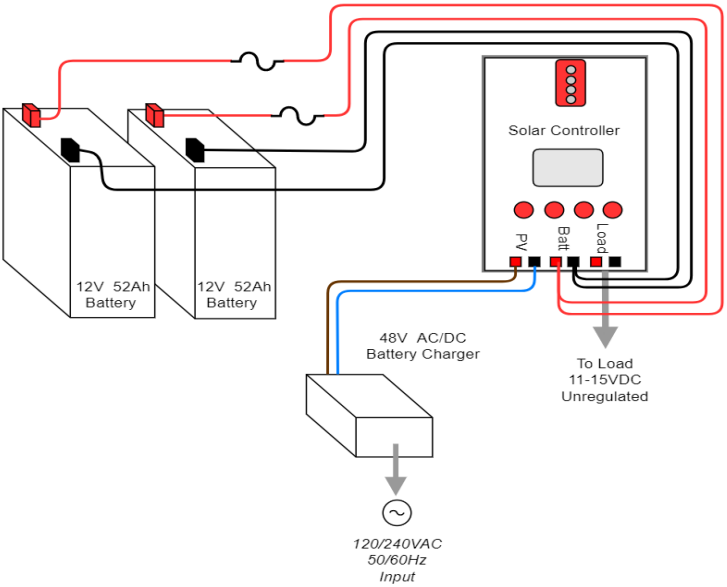
Specifications	UPS-STL-600
Battery Voltage (DC)	12V / 24V
Load Output Voltage (DC)	11-15V / 22-29V
Suggested Max Load	450W
AC Input Voltage	120/240VAC 50/60Hz 5A Max
Battery Charge Voltage	14.4V / 28.8V
Battery Charge Current	40A / 20A
Battery Charge Capacity	600W
Capacity (Ah) @ 12V	50Ah to 400Ah
Battery Type	Valve Regulated Sealed Lead Acid / Absorbent Glass Mat (AGM)
Battery Life	5 Years
Controller Type	40A MPPT with status display and load control
Overcharge Protection	14.4V / 28.8V
Over-discharge protection	11V / 22V
Over-discharge recovery voltage	12.6V / 25.2V
Controller Self Consumption	<1W
Maximum Solar Panel Size	550W / 1100W
Enclosure Type	Powder Coat Steel
Operating Temperature	-30°C to +60°C
System Weight (Without Batteries)	75lb (34kg)
Battery Weight (each)	37lb (17kg)

System Wiring Diagrams

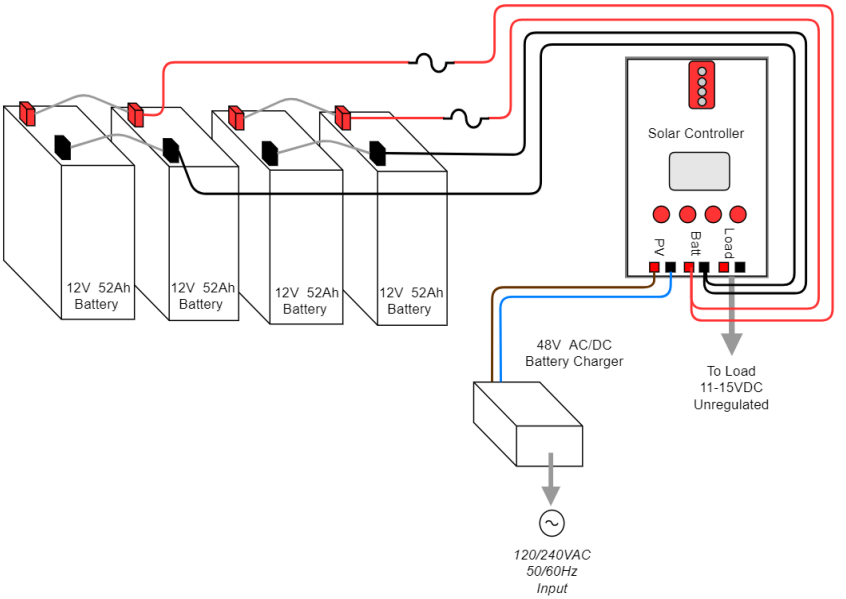
UPS-STL-600 12V 1 Battery Configuration



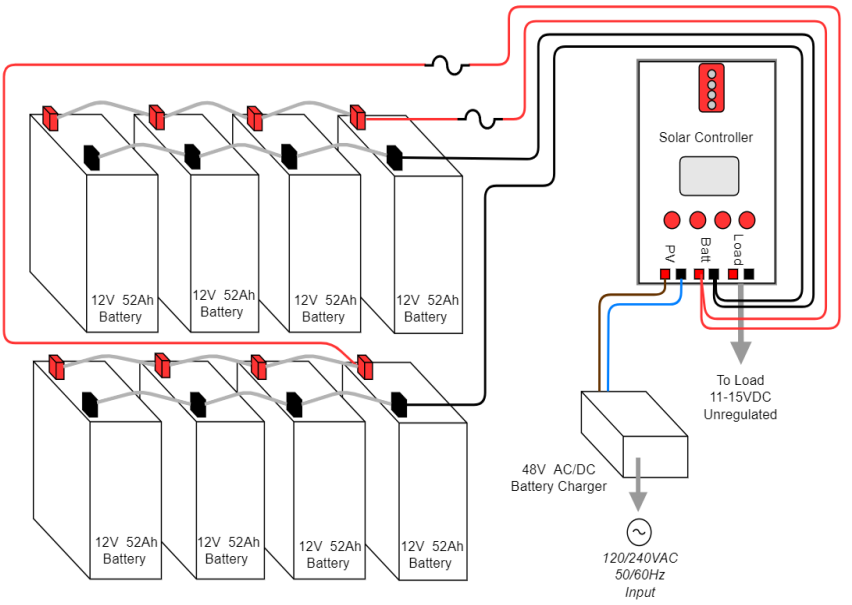
UPS-STL-600 12V 2 Battery Configuration



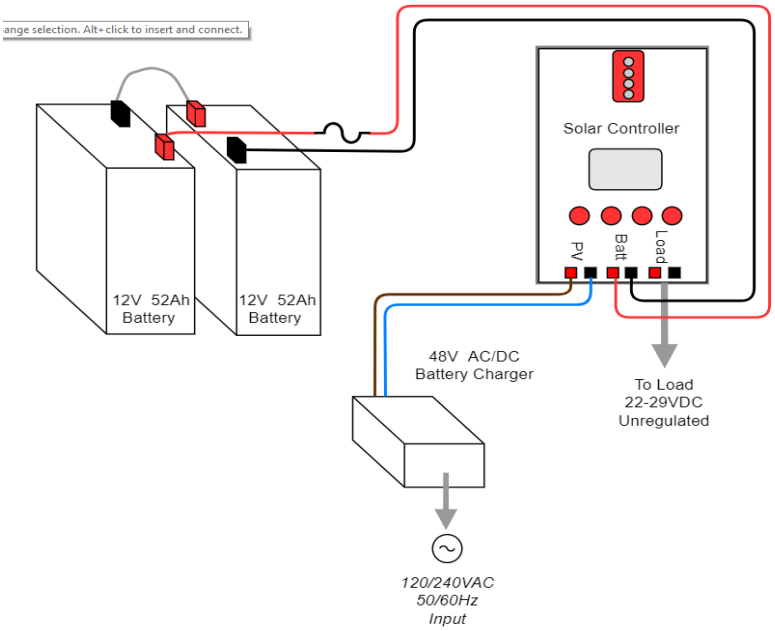
UPS-STL-600 12V 4 Battery Configuration



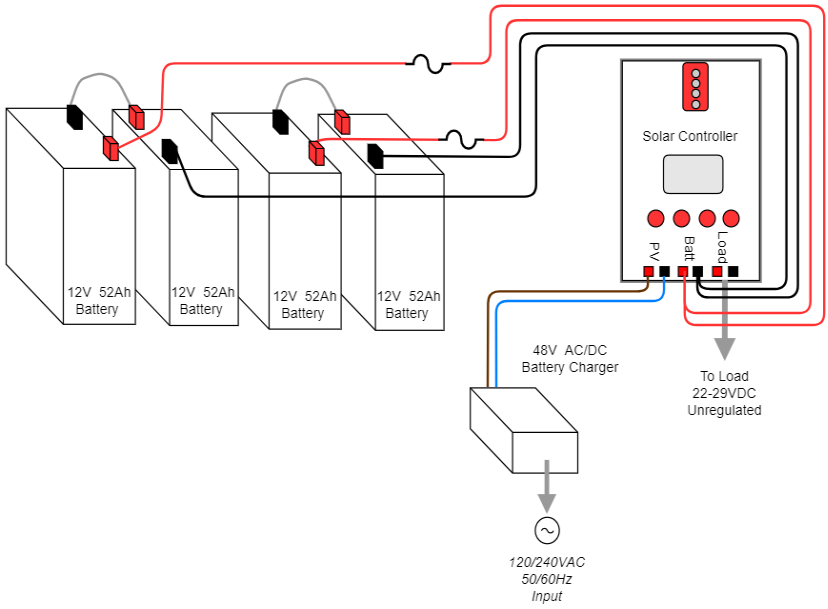
UPS-STL-600 12V 8 Battery Configuration



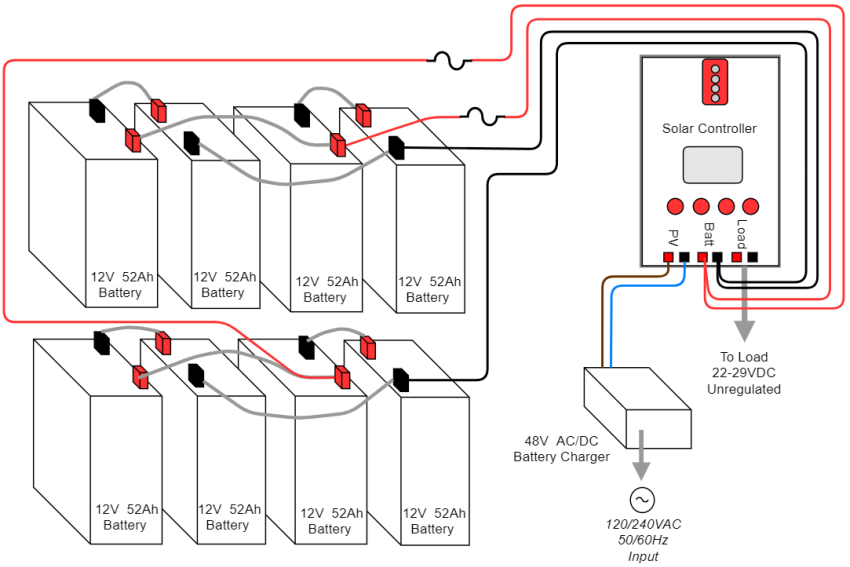
UPS-STL-600 24V 2 Battery Configuration



UPS-STL-600 24V 4 Battery Configuration



UPS-STL-600 24V 8 Battery Configuration



Notes

Accessories

TP-SC-BT1 RS232 to Bluetooth adapter.

- Allows for wireless monitoring and control of the MPPT solar charge controller up to 15m.
- Uses a smartphone app available for Android and IOS devices
- Completely weatherproof for outdoor mounting
- Low Cost



Remote Station Monitor

TPDIN-Monitor-WEB2



- Qty 4: Voltmeters and current meters
- Web Based: allows station monitoring over the internet.
- Qty 4:10A relays for controlling power to devices, starting a generator, etc.
- Measures internal and external temperatures
- Intuitive user interface and graphical set-up
- SNMP compatability
- Shunt compatible for measuring very high currents
- Email Alerts
- Programmable functionality

Limited Warranty

The UPSPro® products are supplied with a limited 36 month warranty which covers material and workmanship defects. This warranty does not cover the following:

- Parts requiring replacement due to improper installation, misuse, poor site conditions, faulty power, etc.
- Lightning or weather damage.
- Physical damage to the external & internal parts.
- Products that have been opened, altered, or defaced.
- Water damage for units that were not mounted according to user manual.
- Usage other than in accordance with instructions and the normal intended use.

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