



UPS-ST12xx
UPSPro[®]
Backup Power System

- Wireless Base Stations
- Surveillance Cameras
- Lighting Applications
- Up to 30W loads



Congratulations! on your purchase of the UPSPro[®] outdoor backup power system. Please take a moment to review this Qwik Install Guide before assembly or battery installation.



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 Screwdriver, 13mm and 10mm Open End Wrench, 8mm nut driver, Flat Blade Screwdriver



Please help preserve the environment and return used batteries to an authorized depot

Qwik Install

STEP 1: Add Grounding Wire Between Door and Enclosure: Remove plastic covers on copper studs on inside of door and inside of enclosure. Add jumper wire between 2 copper studs and use copper washers and nuts to secure.



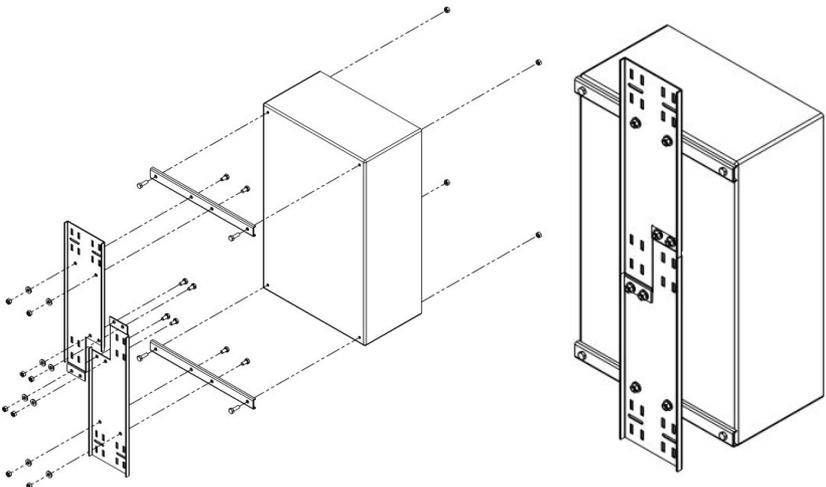
STEP 2: Add wire feedthrus into



the bottom connector plate. Attach the connector plate to the bottom of the enclosure using self tapping screws provided.

STEP 3: Install hole plug in drain hole in bottom right corner of the enclosure.

STEP 4: If pole mounting the enclosure, assemble the pole mount kit to the back of the enclosure and mount the enclosure to a pole using the 6 hose clamps provided. The enclosure can also be wall mounted using the 4 holes in the back of the enclosure.



STEP 5: Insert the battery platform in the bottom of the enclosure. The battery platform has cutouts so wires can be routed under the battery as needed.

STEP 6: Mount the DIN rail to the door using screws provided. Mount

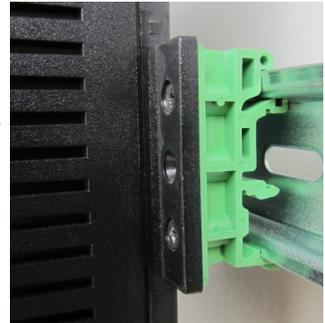


any extra equipment to the orange backplate and secure the backplate in the enclosure. Note: The DIN rail can also be mounted to the orange backplate or sides of enclosure if desired.



STEP 7: Attach the green DIN Rail adapters to the charge controller using the screws provided. Clip the controller to the DIN rail.

STEP 8: Install the battery in the enclosure. Connect the battery cables to the controller, then to the battery. Be sure to observe proper polarity. Black wire connects to battery negative terminal and BAT(-) terminal on the controller. Red wire connects to battery positive terminal and BAT + on the controller.



STEP 9: When a fully charged battery is connected properly the LOA LED will be lit.

STEP 10: The controller has battery overdischarge protection to disconnect the load if the battery voltage (charge) is too low. The LOA LED will be on when the battery charge is within safe limits and the load output is turned on.





LED Indicators

- POE** (The controller detect POE power at POE Input)
- SOL** (The controller detects current into the SOLar input)
- CHA** (The battery is charging)
- LOA** (Load Power is Turned On = Green)
- REV** (battery is connected incorrectly, check polarity)

STEP 11: Connect the load to the controller. POE output to the POE OUT RJ45 connector and other loads to the green secondary output connector on the back of the controller. The secondary output can support 1.5A maximum load.

STEP 12: Plug or 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. The enclosure needs some small amount of venting so be sure NOT to seal all holes and feedthrus with silicon.

STEP 13: Make sure lid gasket is clean and free from any particles, then carefully close the cover, making sure that wires are clear of the seam and hinge area. Use the special key to close the two cover locks.

TECH CORNER

Additional Information you may find useful

- 1. CONTROLLER:** The controller turns off power to the load at 11V and reconnects when the battery reaches 12.0V. This protects battery from overdischarge and increases battery life and performance. Note: The load will turn on immediately as soon as AC power is restored and POE power starts flowing into the controller.
- 2. CAPACITY:** The UPSPro® UPS-ST12xx is rated at 30W load output.
- 3. VENTING:** The enclosure is vented thru the wire feedthrus and various hole plugs in the bottom of the enclosure. Don't make these airtight with silicon.
- 4. BATTERY MAINTENANCE:** The batteries used in the UPSPro® systems don't require any maintenance. They should last up to 5 years in normal use.
- 5. BATTERY OVERDISCHARGE:** We highly recommend hooking all equipment loads to the controller voltage output. This output will disconnect the load if the battery voltage drops below the set voltage and this 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. Discharged batteries will freeze at very low temperatures. If you are storing the UPSPro® system for an extended time, disconnect the battery from the controller.
- 6. ACCESSORIES:** Tycon® also offers a variety of voltage conversion products to meet almost any need. Just visit tyconsystems.com for more info.

NOTES

SPECIFICATIONS

Subject to change without notice

	UPS-ST12xx
Battery Voltage	12V
Total Load Output	30W
Secondary Voltage Output	12V 1.5A
POE Output	12V @1A, 18V@1.6A, 24V@1.25A or 48V @0.625A DC POE
POE Output—Pinouts	4,5 (V+) ; 7,8 (V-)
POE Input	18-57V @ 2.6A
Storage Capacity	51Ah 600VA
Battery Type	Valve Regulated Sealed Lead Acid / GEL
Battery Life	5 Years
Charge Voltage	Equalize = 14.6V, Float = 13.5V
Over-discharge protection	11V Load Off 12V Load On
Self Consumption	<0.5W
Enclosure Type	Powder Coat Steel
Operating Temperature	-30°C to +60°C

Compatible Solar Panel Kits

Tycon Systems® Solar Panel kits come with High Performance solar panels, side of pole mounts and outdoor rated connection cabling. Solar panels have a 25 year output warranty. Pole mounts and panels are designed for wind loads to 90MPH.



TPSK12-85W—12V 85W Solar Panel, Pole Mount, Cable



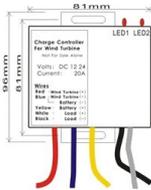
TPSK12-120W—12V 120W Solar Panel, Pole Mount, Cable

Solar Kits	6 Hours Peak Sun	3 Hours Peak Sun
TPSK12-85W	20W continuous	10W continuous
TPSK12-120W	30W continuous	15W continuous

Compatible Wind Turbine

TPW-400N-12/24 400W 12V/24V Wind Turbine

- Includes controller
- Good low wind performance
- Self braking in high wind
- 80MPH survivability
- Sealed and maintenance free



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.