UPS-DC

UPSPro®

Outdoor UPS System

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

Congratulations! on your purchase of the UPSPro® Outdoor UPS backup power system. Please take a moment to review this Qwik Install Guide before assembly or battery installa-

DANGER! Avoid Powerlines!
You Can Be Killed!

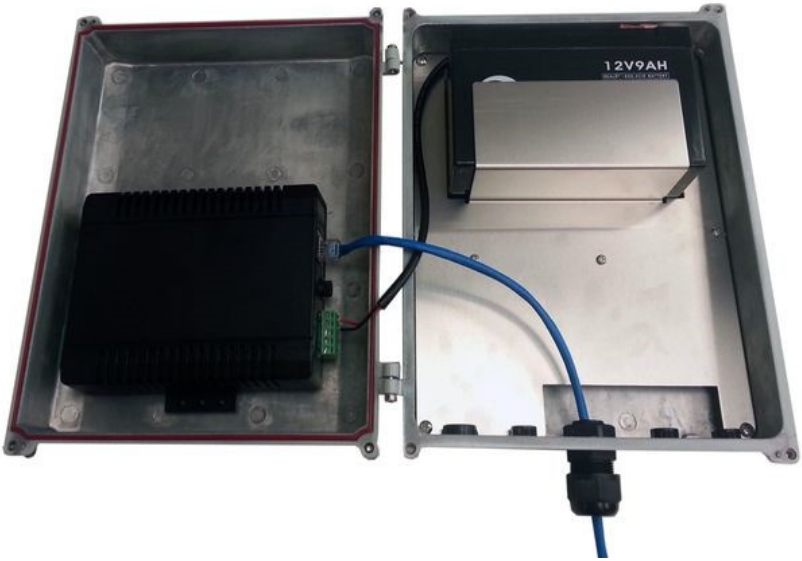
When following the instructions in this guide take extreme care to avoid contact with overhead power lines, lights and power circuits. Contact with power lines, lights or power circuits may be fatal. We recommend to install no closer than 20 feet to any power lines.

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, 3mm Allen Wrench, 8mm and 14mm Open End Wrench

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



Qwik Install

STEP 0: The UPSPro® is Solar Ready™ so a solar panel can be added at any time to provide supplemental or full time power.

STEP 1: Connect the Battery to Controller BAT terminals. Be sure to observe polarity. Black wire connects to battery negative terminal and BAT(-) terminal on the controller. When a fully charged battery is connected, the Green LOA LED should light on controller and power will be present at the PoE output and also the green secondary output on the back of the controller.

STEP 2: Install battery to enclosure with battery terminals on right. Install metal plate using 8 screws.

STEP 3: Install controller to inside cover of housing using Velcro tape. Be sure that controller doesn't interfere with battery when cover is closed. Mount all the way to the left side to give room for CAT5 cables.

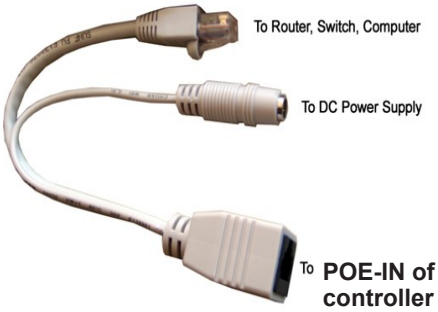
STEP 4: Install Cable Feedthru into center hole in bottom of enclosure. Feedthru gasket is on outside of enclosure and nut on inside. Tighten nut.

OPTION: add a drop of threadlocker to the nut to prevent accidental loosening.

STEP 5: Install two bracket pieces to the back of enclosure using 4 screws. Bracket can be used for wall mounting or pole mounting.

STEP 6: Install CAT5 cable between PoE inserter/Power Supply inside building and the UPSPro® unit controller RJ45 IN connector.

STEP 7: Mount any electronics boards to the metal plate. Install a CAT5 cable between the controller PoE OUT and the electronics. There is a secondary voltage output on the back of the controller which can be used in addition to the PoE OUT. The secondary output is equal to the battery voltage.

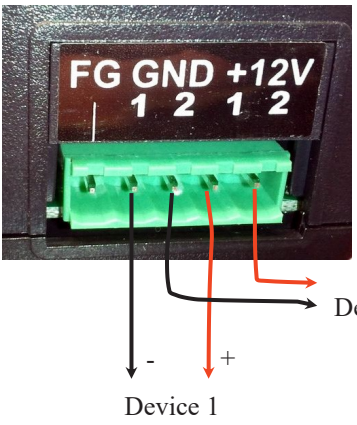


On the bottom of the enclosure there are double D cutouts for standard N Female bulkhead connectors which can be used for an external antenna or RF device. Just remove the hole plug to use these cutouts.

STEP 8: Tighten the RJ45 Feedthru on the Cat5 cable. If the cable diameter is too small to make a good seal, wrap a couple turns of electrical tape around the CAT5 cable at the seal area to increase it's diameter.

STEP 9: 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.

STEP 10: Tighten the 4 seal screws evenly to seal the cover. Use a grease or oil on the 4 cover attached screws to make it easier to remove later.



FG = Frame Ground (Do Not Connect to V-)

GND = V- (There are two V– connections:1 and 2)

+12V or +24V = V+ (There are two V+ connections: 1 and 2)

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 12V. This protects the battery from over-discharge and increases battery life and performance.

2. **CAPACITY:** With a typical AP running 3.5W average. The battery should be able to provide backup power for up to 26 hours at room temperature. For cold temperatures the capacity is reduced by 20-30%.

3. **VENTING:** The enclosure is vented thru a small hole on the bottom. The hole is covered with a PTFE breathable membrane vent. Do not remove or block the vent cover.

4. **DUAL INPUTS:** The UPS-DC can be used with solar power alone or PoE power alone or a combination of both.

5. **SOLAR PANEL:** The controller used in the UPS-DC can handle a maximum panel size of 135W. Do not exceed 8A into the SOL input or damage to the controller can occur. When the solar panel is generating power, the SOL input will take priority and the PoE input will not be used to charge the battery. When the solar panel isn't generating power then the battery will be charged from the PoE input.

6. **SOLAR PANEL ANGLE:** Solar panel angle should be adjusted to optimize output. Optimum angle is based on location longitude and is different if summer or winter. If the panel won't have seasonal adjustment, set for winter angle and leave this setting year round. See tyconsystems.com for additional information. If you are planning to keep solar panel angle fixed all year then set the angle to Your_Latitude * 0.9 +30

7. **BATTERY HOOKUP:** Always connect the battery first and disconnect the battery last. The controller should not be run without a battery connected.

8. **BATTERY MAINTENANCE:** The batteries used in the UPSPro® systems don't require any maintenance. They should last up to 5 years in normal use.

9. 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 11V 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 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.

10. **DUAL OUTPUTS:** The UPS-DC has a PoE output which can be 12V, 18V, 24V or 48V depending on which model is purchased. There is also an auxiliary protected output on the back of the controller to sup-

SPECIFICATIONS

Subject to change without notice

PoE Output Voltage (DC)	12V, 18V, 24V or 48V
Battery Voltage (DC)	12V
Battery Capacity	9AH
Battery Type	Valve Regulated Sealed Lead Acid / Absorbent Glass Mat (AGM)
Battery Life	5 Years
Controller Type	Dual Input Solar/POE, 12V 8A *Max panel size 135W*
Overcharge Protection	14.4V
Over-discharge protection	11.0V
Over-discharge recovery voltage	12.0V
Controller Self Consumption	<0.5W
PoE Power Supply	24VDC 60W
Enclosure Type	Die Cast Aluminum
Enclosure External Size	11 x 8.5 x 3.5” (279 x 216 x 89mm)
Enclosure Internal Size	10 x 7.75 x 3” (254 x 197 x 76mm)
Space for Customer Electronics	7.75 x 5 x 1.25” (197 x 127 x 32mm)
Operating Temperature	-30C to +60C (-22F to 140F)
System Weight (without batteries)	4lb (1.8kg)
Battery Weight (each)	2.5kg (5.5lb)

ply 12VDC. This is useful for applications requiring 2 different voltages.

11. POE SWITCH: Tycon Power® offers a universal voltage 5port and 8port PoE switch if more than one device needs to be powered from the battery system. The **TP-SW5G-NC** and **TP-SW8-NC** offer the unique feature that the voltage supplied to the switch is the PoE voltage sent to the devices. So 12VDC in and you get 12VDC PoE to the devices. The operating voltage is 12V to 56VDC.

12. **OTHER ACCESSORIES**: Tycon® also offers a variety of voltage conversion products to meet almost any need. Just visit tyconsystems.com for more info.

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.