



UPAL24/48-900

900W UPSPro®

- Wireless Base Stations and Client Devices
- Surveillance Cameras
- Communications Towers
- Radio Towers



Congratulations! on your purchase of the UPSPro® 900W Backup Power System. Please take a moment to review this Qwik Install Guide before use. Please also review other user guides that are included in the package.

Operation Modes: AC/DC Grid, Solar Ready (May require blocking diode on solar panels)

Key Features: Industrial Strength, Weatherproof, Key Lock, 24VDC or 48VDC Output, 60A MPPT Battery Charge Controller, 72V 900W AC/DC Power Supply, up to 1440Ah Battery Capacity.

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 if you are working on a roof or ladder.**



Recommended Tools: Phillips and Small Flat Blade Screwdrivers, adjustable wrench



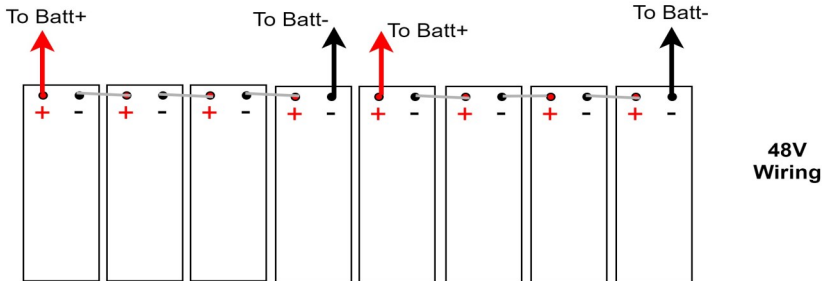
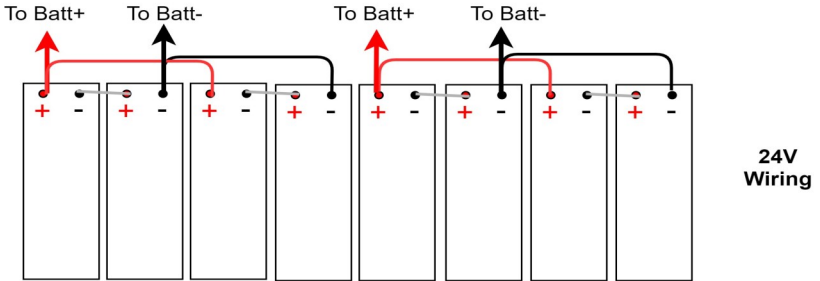
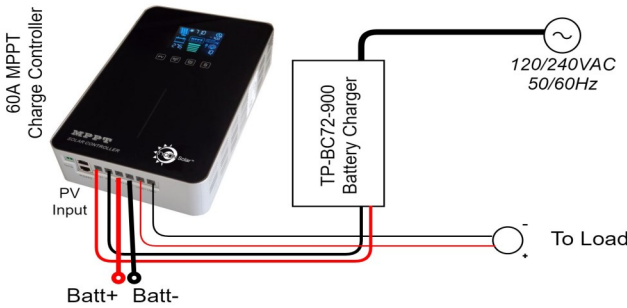
Please help preserve the environment and return any used batteries to an authorized depot

WARNING: 60A MPPT Controller is Positive Ground. Do Not Connect Battery Minus to Chassis Ground. Batteries should be floating. OK to connect controller ground screw to chassis ground.

Qwik Install

STEP 1: Prepare a foundation to provide level support for the enclosure.

STEP 2: Place enclosure on the foundation. Install 4 or 8 batteries in the box. **Batteries are heavy. Be sure to have a helper.** Connect all batteries in series configuration for either 24VDC or 48VDC (See Wiring Diagram Below)



STEP 3: Install green DIN rail adapters to the 60A MPPT Battery Charge Controller mounting plate. Attach mounting plate to the controller.



STEP 4: Install DIN rail to enclosure using the two screws provided. Install MPPT battery charge controller to DIN Rail.

STEP 5: Remove the black cover from the MPPT controller to access the wire connection screws. Connect the temperature probe to the controller and place it on one of the batteries for temperature compensated charging.

STEP 6: Remove the fuses from the battery cables and connect the battery cables to the batteries and the MPPT Charge Controller BAT+ and BAT- connections.



STEP 7: Make sure to set the AC input voltage selector on the 72V 900W AC/DC Power Supply to either 115 or 230 depending on your AC voltage source. The 900W Power Supply can sit in the bottom of the enclosure next to the batteries. Connect the Power Supply DC output wires to the MPPT Charge Controller PV+ and PV- inputs. The Brown wire is V+. Make sure to observe proper polarity.

STEP 8: Connect normal loads to the MPPT Charge Controller load output. Maximum load is 30A Max. If connecting an inverter or pump or motor, it's best to connect directly to the batteries.

STEP 9: Double check connections and then re-install the fuses in the battery cables. You may see a spark when connecting the fuse. This is normal. Once the MPPT charge controller is connected to the batteries, it's display should turn on and you will see status on the screen. The controller has a display that turns on with vibration so if display is dark, tap it to turn on.

Warning: Battery should always be connected first and disconnected last from the MPPT charge controller.

STEP 10: Route any external wires through the cable glands on the back of the enclosure. Tighten the cable glands on the wires to make weatherproof connections. Plug unused holes using the supplied hole plugs. If any cable glands are installed but unused, cut a short piece of wire and tighten in the cable gland to seal it.



If desired, attach a security cable/chain through the features on the back of the enclosure to an existing pole/tree.

STEP 11 Turn on the 72V 900W AC/DC power supply. The MPPT charge controller will show PV input is active and the batteries will start charging after 1-2 minutes. When the AC/DC power supply is charging, both LED will be red and the unit fan will come on. This is normal. When the batteries are fully charged the 72V 900W charger will go into standby mode and one LED will turn green.

STEP 12: The enclosure comes with a thermostatically (45C) controlled 24/48V ventilation fan. Connect this fan directly to the batteries.

Note: Please see the MPPT solar controller user guide for additional details.

TECH CORNER

Additional Information you may find useful

Solar Ready: The system is solar ready. You may need to add a 100V 30A blocking diode (Tycon pn 5600059) between the solar panel and the PV input to avoid reverse current from the 72V AC/DC power supply going back into the solar panels.

Batteries: The batteries are maintenance free and should last over 5 years in normal operation. The charge controller will automatically do a balance charge on the batteries periodically.

Enclosure: We recommend making extra keys in case the enclosure keys are lost.

NOTES

Specifications

	UPAL24/48-900
Battery Voltage (DC)	24V or 48V (customer configure)
Input Voltage (AC)	120/240VAC, 50/60Hz, 5A Max.
Capacities (Amp Hr)	4 batteries 720Ah 8 batteries 1440Ah
Avail Storage Capacity (WHR)	4 batteries 8640Whr 8 batteries 17280Whr
Max Output Power	900W
Suggested Max Load	750W
Max Instantaneous Load	30A 500msec
Battery Type	Valve Regulated Sealed Lead Acid Pure Lead Carbon
Battery Life	5 years
Battery Cable Fuse	6 x 32mm Ceramic 30A 250V
Controller Type	60A Positive Ground MPPT Solar Controller with Status Display and 30A Load with on/off switch
MaxSolar Panel Size	1600W @ 24V Battery, 3200W @ 48V Battery
Controller Display Status	Battery Voltage, Charging Voltage, Charging Current, Load Current, Temp
Bulk Charge	28.8V @ 24V Battery, 57.6V @ 48V Battery
Float Charge	27.6V @ 24V Battery, 55.2V @ 48V Battery
Over-discharge protection	22V @ 24V Battery, 44V @ 48V Battery
Over-discharge recovery volts	25.2V @ 24V Battery, 50.4 @ 48V Battery
Controller Self Consumption	<1W
Enclosure Type	Ground Mount, Key Lock, Aluminum Diamond Plate
Operating Temperature	-40°C to +65°C (-40°F to 149°F)
System Weight (without batteries)	78lbs (35kg)
Battery Weight	127lb (57.6kg) each
Certifications	Individual components used have CE Certifications. Batteries have CE and UL.
Warranty	3 Years

Accessories

TP-SC-WIFI RS485 to WIFI adapter.

- Allows for wireless monitoring and control of the MPPT solar charge controller.
- Requires an available local WiFi signal to connect.
- Uses a smartphone app available for Android and IOS devices.



TP-SC-USB-485 USB to RS485 Adapter

- Allows for direct connection of the solar controller to a Windows PC with USB.
- Uses a free PC Windows software to monitor and control the MPPT solar controller.



Remote Station Monitor

TPDIN-Monitor-WEB3 V2

- Interfaces with Tycon MPPT solar controllers via RS485 using **TPDIN-Cable-RS485**. Logs data and provides remote monitoring and control over the network via Ethernet Interface.
- Single RS485 cable interface to the MPPT solar controller.
- Intuitive user interface and graphical setup
- Email Alerts
- SNMP compatibility
- Programmable functionality
- Additional features to expand monitoring and control capabilities:
 - Qty 4: Voltmeters and current meters
 - Qty 4:10A relays for controlling power to devices, starting a generator, etc.
 - Measures internal and external temperatures
 - Intuitive user interface and graphical setup
 - Shunt compatible for measuring very high currents



Limited Warranty

The UPSPro® Backup Power System is 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.
- Usage other than in accordance with instructions and the normal intended use.

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