



## UPAL48-900

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, 20A MPPT Battery Charge Controller with integral 7 port Gigabit PoE switch, 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**

# Qwik Install

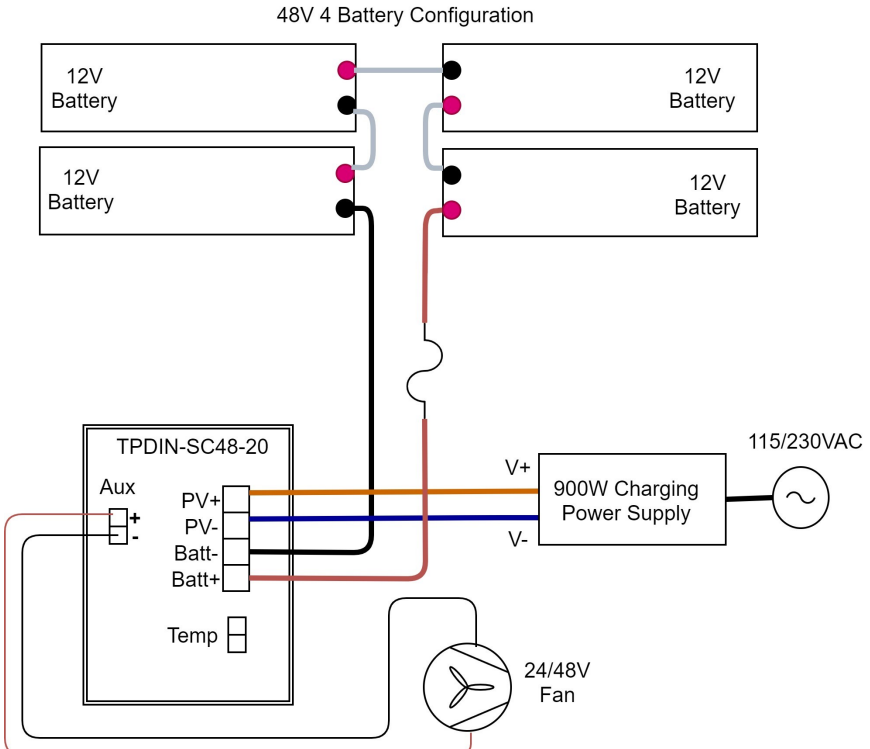
**STEP 1:** Prepare a foundation to provide level support for the enclosure.

**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 48VDC (See Wiring Diagrams Below)

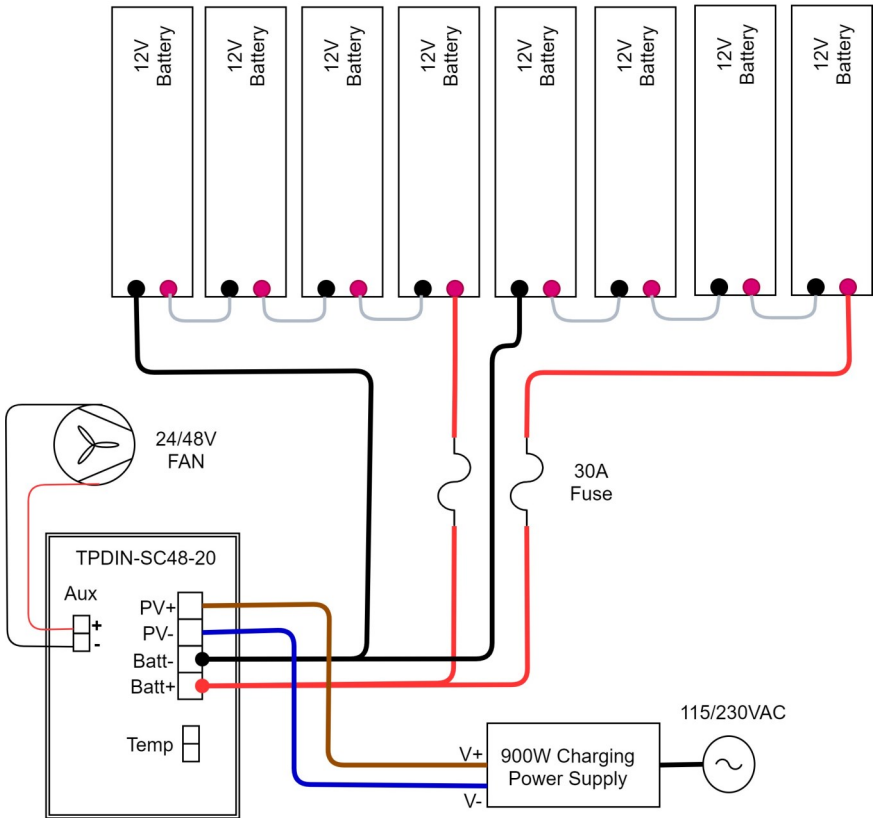
**STEP 3:** Install DIN rail to enclosure using the two screws provided. Attach TPDIN-SC48-20 Charge Controller to the DIN Rail.



**STEP 4:** Remove the large green connector from the controller. Connect the temperature probe to the charge controller and attach it to one of the battery terminals for temperature compensated charging. It can be connected to the battery + or - terminal. The temperature connections have no polarity.



### 48V 8 Battery Configuration



**STEP 5:** Remove the fuses from the battery cables and connect the battery cables to the batteries and the Charge Controller large green connector BAT+ and BAT- connections.

**STEP 6:** 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 Charge Controller large green connector PV+ and PV- inputs. The Brown wire is V+. Make sure to observe proper polarity.

**STEP 7:** Connect normal loads to the Charge Controller load outputs. Maximum load on the PoE ports is 0.645A and 2.25A on the Aux port. The overall maximum controller load is 200W. If connecting an inverter or pump or motor, it's best to connect directly to the batteries.

**STEP 8:** Double check connections and then re-install the fuses in the battery cables. Now connect the large green connector to the charge

controller. Once the charge controller is connected to the batteries, the Charge LED will turn on for about 60 seconds and then there will be no indicators lit until changes are made in the user interface. Please see the TPDIN-SC48-20 user guide for more information.

**STEP 9:** 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 10** Turn on the 72V 900W AC/DC power supply. The 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 11:** The enclosure comes with a thermostatically (45C) controlled 24/48V ventilation fan. Connect this fan directly to the batteries or to the Aux output on the charge controller.

**Note:** Please see the TPDIN-SC48-20 charge 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.

# Specifications

	<b>UPAL48-900</b>
<b>Battery Voltage (DC)</b>	48V
<b>Input Voltage (AC)</b>	115/230VAC, 50/60Hz, 5A Max.
<b>Capacities (Amp Hr)</b>	4 batteries 720Ah 8 batteries 1440Ah
<b>Avail Storage Capacity (WHR)</b>	4 batteries 8640WHR 8 batteries 17280WHR
<b>Max Output Power</b>	900W
<b>Suggested Max Load</b>	200W
<b>Battery Type</b>	Valve Regulated Sealed Lead Acid Pure Lead Carbon
<b>Battery Life</b>	5 years
<b>Battery Cable Fuse</b>	6 x 32mm Ceramic 30A 250V
<b>Controller Type</b>	20A MPPT Solar Controller with 7 ports gigabit PoE Switch and remote monitoring
<b>Max Solar Panel Size (PV)</b>	960W
<b>Bulk Charge</b>	57.6V
<b>Float Charge</b>	55.2V
<b>Over-discharge protection</b>	44V (user configurable)
<b>Over-discharge recovery volts</b>	50.4 (user configurable)
<b>Controller Self Consumption</b>	<3.5W
<b>Enclosure Type</b>	Ground Mount, Key Lock, Aluminum Diamond Plate
<b>Operating Temperature</b>	-40°C to +65°C (-40°F to 149°F)
<b>System Weight (without batteries)</b>	78lbs (35kg)
<b>Battery Weight</b>	127lb (57.6kg) each
<b>Certifications</b>	Individual components used have CE Certifications. Batteries have CE and UL.
<b>Warranty</b>	3 Years



## TPDIN-SC48-20 Charge Controller with integrated Gigabit PoE Switch

- Remote Monitoring
- 4 ports 802.3at or passive 24V or 48V PoE or POE Off.
- 3 ports passive 24V or 48V PoE or Poe Off
- 1 aux port 24 or 48VDC 2.25A
- Programmable email alerts
- Data logging and graphing
- SNMP compatible
- Comprehensive PoE port monitoring and control
- 200W total power out
- 20A battery charging
- Can support PV input (solar panels) up to 960W
- Low <3.5W self consumption

## **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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## **Notes**

