

Off-Grid Deep Water Well and House Trailer

RPAL48M-180-1300 + 6 PANEL EXPANSION KIT

Application Summary:

Customer purchased 40 acres of raw land in beautiful Unaweep Canyon, Colorado. They needed to install an off-grid solar system to be able to supply power to their 300ft deep water well pump and also power the house trailer they installed on the property.



Solution:

Using the RPAL48M-180-1300 RemotePro solar system and a 6 panel expansion kit, the customer is able to supply 1950W of solar power. The customer also purchased a 48VDC to 230VAC 3000W inverter to supply power to the 230VAC 10A deep water well pump and also a house trailer which required a 230VAC to 115VAC 3000W stepdown transformer to provide the correct voltage for the house trailer.

All AC power runs were done using direct burial 10AWG, 3 wire cable. They decided to run 230VAC because the cable power loss is less and smaller wire size can be used, reducing costs.

The Tycon RPAL enclosure had plenty of extra room to accommodate the inverter (purchased separately).

The Tycon RPAL48M-180-1300 came with the Aluminum Enclosure, eight 6V 180Ah batteries, 48V 60A MPPT Solar Controller. Solar Panel Mount with concrete anchors, four 325W 24V Solar Panels. The 6 panel expansion kit came with additional rails and clamps plus two 325W 24V Solar Panels.



Batteries are configured for 48VDC and utilize a 48V 60A MPPT Solar Charge controller which is part of the Tycon Kit



48VDC to 230VAC 3000W Inverter (blue color) was purchased separately and is not included in the Tycon Kit

The customer installed a 500 gallon water tank up the hill to supply pressurized water to his site. Having the water storage tank allows the customer to only run the 2300W deep well pump for about 15-30mins per day, leaving plenty of extra power for operating the refrigerator, lights, fans and air conditioning in the house trailer.



The installation of the solar panel assembly took 1 day to dig and pour the cement foundation because the ground at the site is very rocky. It took an additional 1/2day to install the solar system using 2 people.

Trenching for the wires and water lines, installation of the well pump, water lines and water tank took an additional 1 week.

List of Tycon Materials:

RPAL48M-180-1300 \$6499.95 Enclosure, Batteries, Controller, Solar Mount and Four Solar Panels
6 Panel Expansion Kit \$899.95 Additional Rails, Clamps, Cable and Two Solar Panels

Conclusion:

The customer now has a working water and power solution for his off-grid site, powered by a Tycon Solar Solution.



For further information, contact sales@tyconsystems.com