



PWP4KW™ shown below



Pre-Wired Panels For Remote Power Systems

Dramatically Cut Installation Time

The PWP Pre-Wired Panels include all the parts for Off-Grid power systems to connect PV, Batteries and Loads. The small footprint makes them an easy fit for cabins, cottages, homes and remote communication sites. Optional accessories are also installed, wired, and tested prior to shipping from the Apollo Solar factory.

Wide Range of Power Sizes – 3.2kW to 12kW

A single 24V/3.2kW or a 48V/4kW TSW Inverter/Charger plus 1 or 2 T80/T80HV MPPT charge controllers are provided on the PWP with all the breakers and wiring for a complete remote power system. Multiple PWP units can be stacked side by side for up to 32kW of AC Power and PV arrays up to 34kW with 48 volt batteries.

Universal Global AC Compliance

The AC input and output may be wired for single phase at 120VAC, 230VAC, 240VAC, 120/240 Split-Phase, or 3-Phase at 120/208, 2230/400 or 340/415VAC, all including the choice of 50Hz or 60Hz.

80 Amp MPPT Charge Controllers

Choice of T80 or T80HV (providing up to 180V open-circuit input) with built-in Battery State-of-Charge energy monitor.

All the circuit breakers are front accessible

The Inverter Switchgear Module has room for 18 breakers that include Ground Fault Protection, all the required DC and AC breakers plus the optional Generator Selector.

Exclusive Off-Grid Remote Monitoring via any PC*

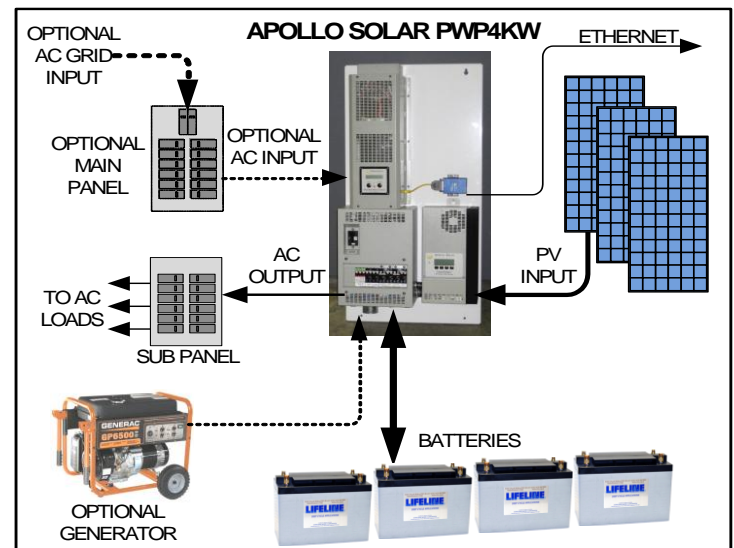
The Apollo Communication Gateway provides all system data via Local Net and/or Internet with secure access 24/7.
*Please see more monitoring capability details on P. 3 of this data sheet.

UL Certified for US and Canada

Entire system is certified to UL1741 & CSA C22.2 No. 107.1

Factory Pre-Wired Panel for the complete Off-Grid Power System:

- Choice of TSW Inverter / Chargers 3200watt / 24V or 4000 Watt / 48V
- AC may be 120/240VAC split-phase, 120 VAC or 230 VAC, or 3 Phase at 120/208, 230/400 all at 50Hz or 60Hz
- 80 Amp, 140 Voc or 180 Voc MPPT PV Charge Controller



Block Diagram of PWP showing optional AC inputs

PWP™

SPECIFICATIONS

PWP Unit dimensions	44.5" X 24" X 8" (1130mm X 610mm X 203mm)	Length X Width X Depth
PWP Shipping dimensions ...	48" X 30" X 14" (1219mm X 762mm X 356mm)	
Weight	Unit: 43.3 kg / 95.5 lbs Max	Shipping weight: 48 kg / 105 lbs Max
Warranty	5-year Limited Warranty	
Environmental.....	Enclosure: Indoor Type 1	
Certification	UL1741, CSA C22.2 No. 107.1	
Included Accessories	The accessories for the individual TSW and T80 are included with the PWP. Those are: Battery voltage monitor cable, and Battery Temperature Sensor and Shunt Board attached to the Shunt inside the ISM. The circuit breakers for AC in, AC out, AC bypass and the TSW battery breaker are included.	

For the detailed electrical specifications see the individual spec sheets for the TSW3224, TSW4048, T80, T80HV, Inverter Switchgear Module (ISM) and the Apollo Communication Gateway.

PART NUMBERS FOR ORDERING:

The Apollo Pre-Wired Panels are a move toward standardization to make all systems more cost effective. By offering the variations and options listed below, the PWP will meet the majority of Off-Grid PV power needs. The sales staff at Apollo Solar will be happy to assist installers and dealers to select the appropriate product variation.

PWP PART NUMBERING KEY:					
PWP	4KW-	120/240-	60Hz-	140-	GFP- ACG- CELL- SRG- GSEL-
					Add Options as needed
					140 for T80, 180 for T80HV PV Input
					60 or 50 Hz for the TSW Inverter
					120/240, 120, or 230 for the TSW AC Voltage. Specify 120 for 120/208VAC 3 phase systems.
					3.2kW (24VDC) or 4kW (48VDC) TSW inverter size
PWP- for the Pre Wired Panel product line					

Use this table to create the part number with the selections and options required for your installation.

For example: The part number for a 4kW system using a TSW4048 and T80 Charge Controller with Communication Gateway is: PWP4KW-120/240-60Hz-140-ACG.

HIGHER POWER PWP SYSTEMS:

Systems above 4kW use multiple PWP units stacked side by side. An 8kW PWP system includes 2 PWP panels. Separate home runs of wire for AC and battery are recommended to each PWP. Each T80 or T80HV charge controller must have separate wires from the individual section of the PV array. The system limit is 32kW or 8 PWPs.

OPTIONS FOR PWP SYSTEMS:

The options are selected from the table below. Simply add the option SKU to the part number separated by dashes.

PWP OPTIONS:		
SKU	NAME OF OPTION	DESCRIPTION
GFP	Ground Fault Protection on PV input	Required by NEC on residential systems in USA
ACG	Apollo Communication Gateway	Provides monitoring of all parameters to our server and access to the data from any PC via the web.
CELL	GSM Cellular Modem	Connects ACG gateway if local internet is not available. Includes antenna mounted to PWP.
GSEL	Generator Selector Switch	Manual switch between Line or Genset AC Input
SRG	Surge Protection on PV input	The 70kA MOVs start clamping DC at 200 volts**
NOTE: Options must be included at the time the order is placed since they are factory installed. ** The Surge Protection Devices are not warranted. Their life is effected by surges.		

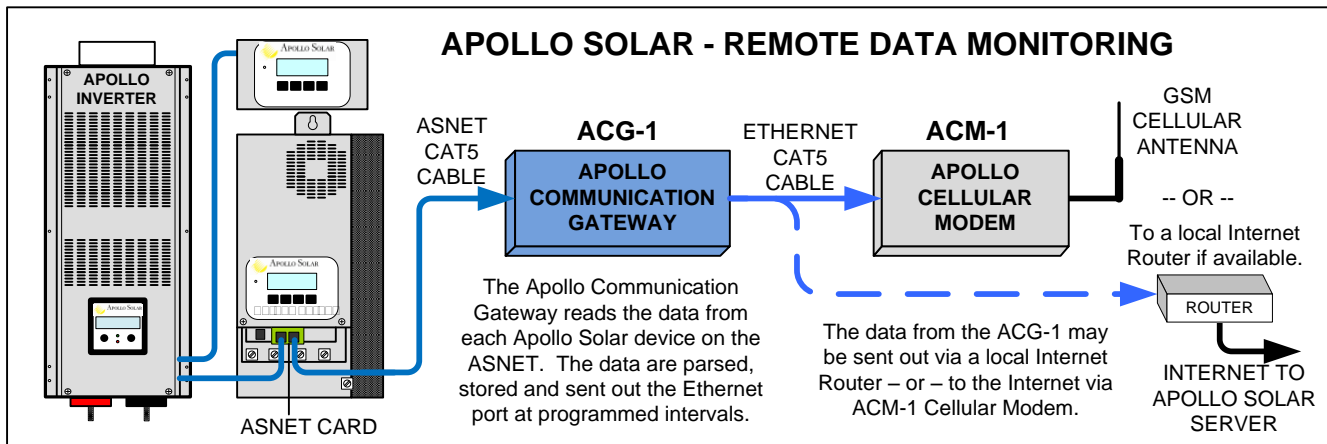
VARIATIONS:

The Pre-Wired Panels are also available in variations to include a second Charge Controller, or Second Inverter.

The photo below shows a residential PWP with 2 T80 MPPT 80A Controllers.



The photo below shows 1 TSW and 2 T80HVs. The Pre-Wired Panel shown is designed for Telecom/Industrial Applications.



The ACG-1 connects between the ASNET and any internet router. The Apollo Cellular Modem is an option when the internet is unavailable.

Plug and Play Web-Based Monitoring of Apollo Charge Controllers and Inverters, up to 100 connected Apollo devices per Gateway.

Works with Apollo ASNET and Modbus Enabled Products. SNMP version allows user-formatted data display and system integration.



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Specifications are subject to change. April 2012