FSP SOLAR POWERMANAGER OFF-GRID SERIES



Power Solution for Unstable or without Utility Grid

1kVA-5kVA

FSP Solar PowerManager Off-Gird

An ideal Off-Grid inverter for households, FSP Solar PowerManager Off-Grid with specific AC and high efficiency MPPT Solar charger built-in, Dual charging sources (utility+solar) up to 140A current satisfying battery charging under different weather conditions and ensuring your power continuously.

Wide input range from 90-280Vac will overcome most of grid power instabilities.
Design as true sine wave off-grid inverter with 1kVA to 5kVA rating, 4/5kVA parallel function up to 30kVA (single phase) suitable for different applications and supporting 3-Phase power system in anymode. FSP Solar PowerManager Off-Grid with smart user-friendly control panel is an adjustable power source for optimal settings according to end users needs. The unit also offers USB Port for PC monitoring purpose.
As non-household application, FSP Solar PowerManager Off-Grid is able to provide power e.g. for a water pump.

GENERAL FEATURES

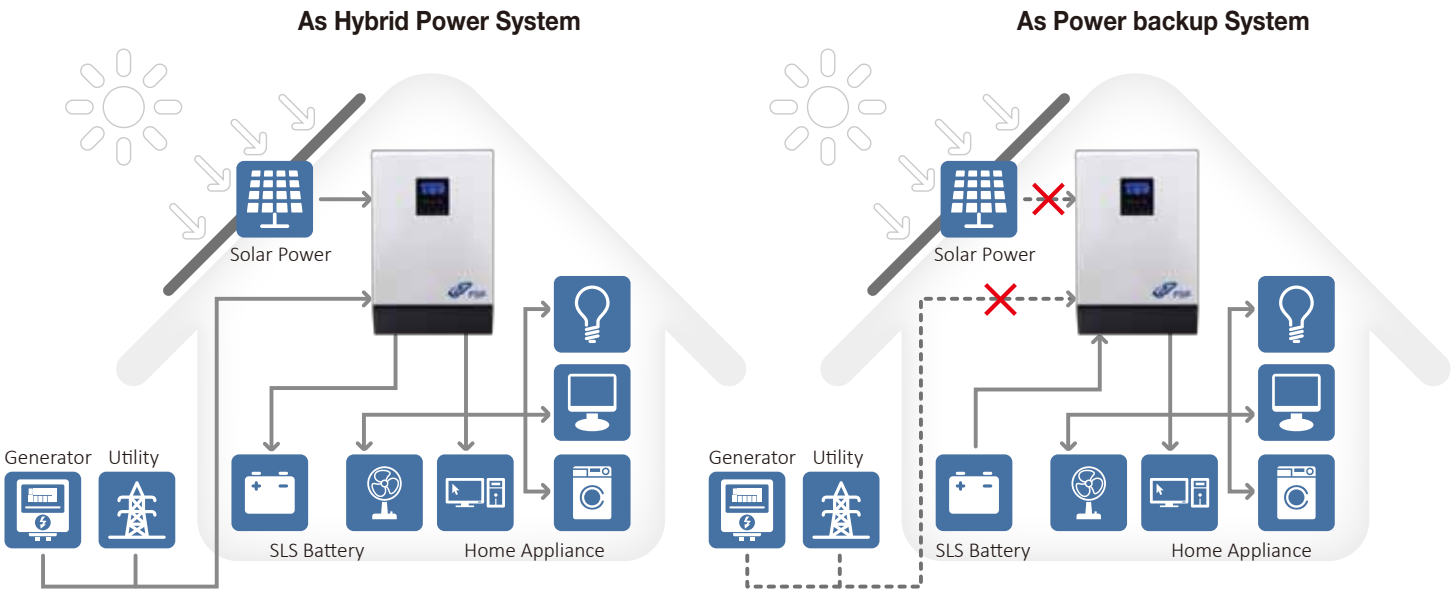
High frequency pure sine wave
Wide AC input range 90-280 Vac
Solar and AC Dual charger built in
Charging Ability up to 140A (AC+Solar)
Built-in dry-contact for Generator
Double surge capacity of rating
4k/5kVA parallel function support single Phase up to 30kVA
3Phase AnyMode support
Intuitive LCD Display
User friendly LCD Panel control & setting
Source Priority programmable
Remote Control Panel support
User defined Bulk/Float Charging voltage
Free monitoring software

FSP
FSP POWER SOLUTION GMBH

Ideal Off-Grid inverter

Programmable Power Source Priority function.
More Flexible, More Independent for energy usage and storage.

The Principle of FSP Solar PowerManager Off-Grid



FSP Solar PowerManager Off-Grid Smart Power Priority

Power and charging source priority of FSP Solar PowerManager Off-Grid smart design can be set up by the front LCD panel according to the power consumption environment, storing and withdrawal of energy are also user-defined.



O/P Source Priority 1 → 2 → 3 →

Output source Priority is Solar-> Bat-> Utility
Charging source priority is Solar Power Only

Solar energy is sufficient to charge the battery and carry the loads. Once solar power is low, system will switch to battery mode automatically until battery reaches low warning then system transfers to utility.



Output source is Utility first
Charging source priority is solar first

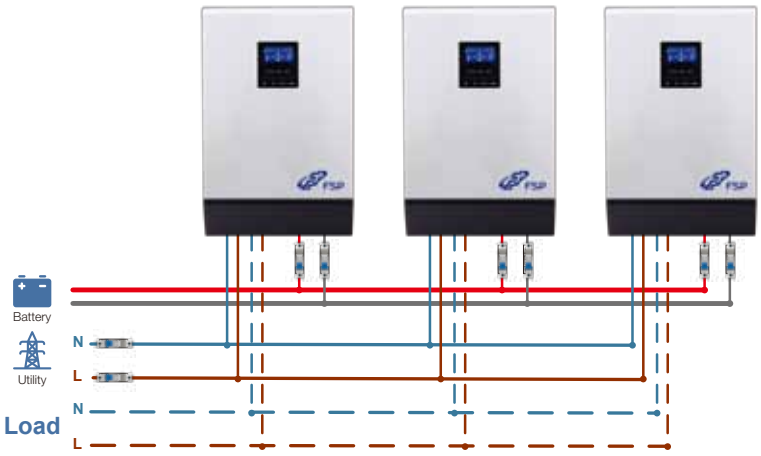
Utility will feed output loads, Solar power will charge the battery until solar power ceases. Solar and battery energy will be used when utility fails.
Power source priority is Utility-> Solar & Battery
Charging source priority is Solar-> Utility

Single Phase Parallel and 3-Phase AnyMode

High expansion ability: FSP Solar PowerManager Off-Grid 4kVA and 5kVA design can be expanded to 30kVA in parallel mode, single phase, and also specifically supports 3 Phase AnyMode. The Power capacity can satisfy most of household energy demand.

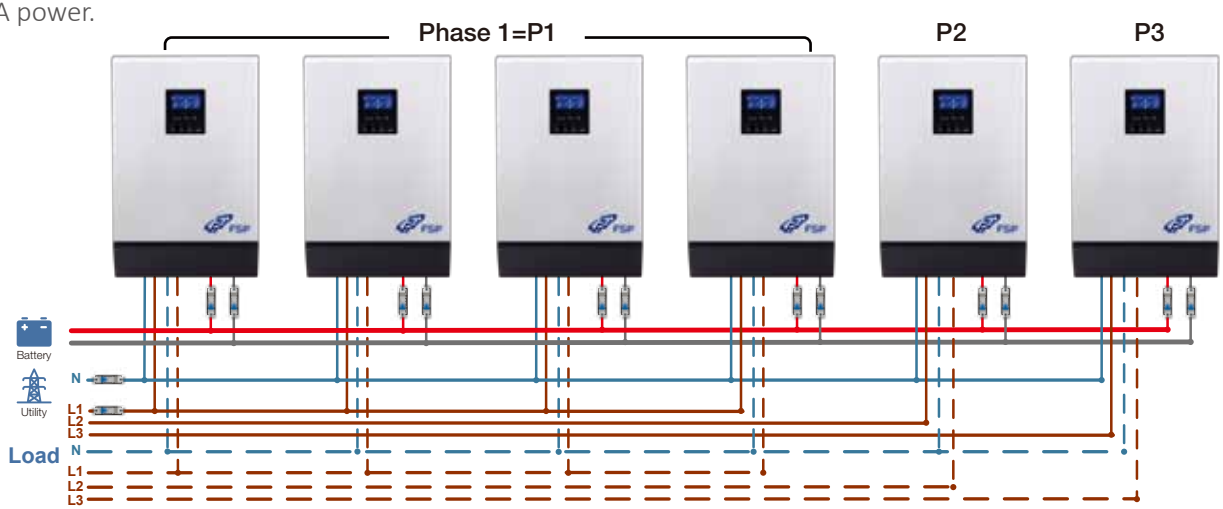
Parallel 3 units in Single Phase

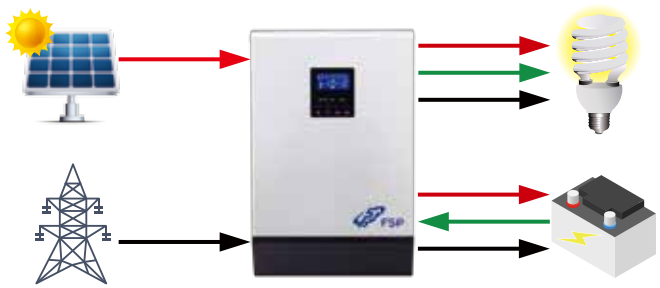
Up to 30kVA parallel ability: FSP Solar PowerManager Off-Grid will achieve expansion function by parallel kits in order to get more power capacity. (The drawing presents 3 units in parallel mode, power capacity is 15kVA.)



Parallel 6 units in 3 Phase AnyMode

FSP Solar PowerManager Off-Grid supports 3 Phase AnyMode. By consulting and measurement user can define which phase needs more power support, e.g. P1 = Phase 1 is consuming most of the power in the house, system can install Max 4 PC in L1 to get 20kVA power.

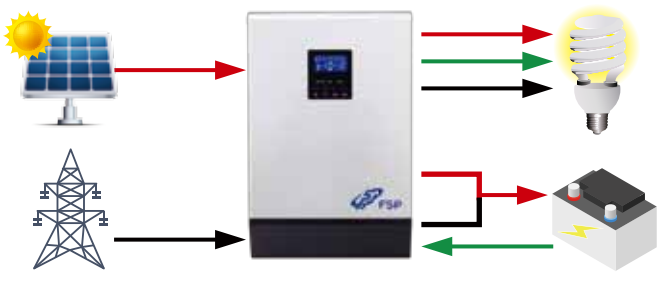




O/P Source Priority 1 → 2 → 3 →

Output source & Charger source priority is solar first

When Solar energy is sufficient to charge the battery and feed the loads, utility will stand by until Solar power ceases or battery voltage drops to user's setting.
Power source priority is Solar-> Battery or Utility
Charging source priority is Solar-> Utility



Output source is Solar-Bat-Utility
Charging source priority is Solar & Utility (4/5k only)

System will adapt Solar and utility both source to charge battery at the same time. Once solar power is low, system will switch to battery mode automatically until reach low bat warning then transfer to utility.
Power source priority is Solar-> Battery-> Utility
Charge source priority is Solar & Utility

TECHNICAL SPECIFICATIONS

MODEL	PM-OffGrid 1K-24	PM-OffGrid 1K-48	PM-OffGrid 2K-24	PM-OffGrid 3K-24	PM-OffGrid 3K-48	PM-OffGrid 4K	PM-OffGrid 5K
RATED POWER	1000VA/800W	1000VA/1000W	2000VA/1600W	3000VA/2400W	3000VA/2400W	4000VA/3200W	5000VA/4000W
INPUT							
Voltage	230 VAC						
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)						
Frequency Range	50 Hz/60 Hz (Auto sensing)						
OUTPUT							
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%						
Surge Power	2000VA		4000VA		6000VA	8000VA	10000VA
Efficiency (Peak)	90%-93%			93%			
Transfer Time	10 ms (For Personal Computers); 20 ms (For Home Appliances)						
Waveform	Pure sine wave						
BATTERY & AC CHARGER							
Battery Voltage	24 VDC	48 VDC	24 VDC	24 VDC	48 VDC	48 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC	27 VDC	27 VDC	54 VDC	54 VDC	54 VDC
Overcharge Protection	31 VDC	62 VDC	31 VDC	31 VDC	62 VDC	60 VDC	60 VDC
SOLAR CHARGER & AC CHARGER							
Maximum PV Array Power	600 W	900 W	600 W	600 W	900 W	4000 W	4000 W
MPPT Range @ Operating Voltage	30VDC~ 66VDC	60VDC~ 88VDC	30VDC~ 66VDC	30VDC~ 66VDC	60VDC~ 88VDC	60VDC~ 115VDC	60VDC~ 115VDC
Maximum PV Array Open Circuit Voltage	75VDC	75VDC	75VDC	75VDC	102VDC	145VDC	145VDC
Maximum Solar Charge Current	25A	18A	25A	25A	18A	80A	80A
Maximum AC Charge Current	20A	15A	30A	30A	15A	60A	60A
Maximum Charge Current	25A	18A	30A	30A	18A	140A	
	AC charger and solar charger can't work at the same time						
Maximum Efficiency	98%						
Standby Power Consumption	2 W						
PHYSICAL							
Dimension, D x W x H (mm)	100 x 272 x 355					120 x 295 x 468	
Net Weight (kgs)	6.8		7		7.4	11	
Ingress Protection Rating	IP20						
Cooling system	AirForce cooling						
OPERATING ENVIRONMENT							
Humidity	5% to 95% Relative Humidity(Non-condensing)						
Operating Temperature	0°C- 55°C						
Storage Temperature	-15°C- 60°C						

MODEL	PM-OffGrid 2K-24+	PM-OffGrid 2K-48+	PM-OffGrid 3K-24+	PM-OffGrid 3K-48+
RATED POWER	2000VA/2600W	2000VA/1600W	3000VA/2400W	3000VA/2400W
INPUT				
Voltage	230 VAC			
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)			
Frequency Range	50 Hz/60 Hz (Auto sensing)			
OUTPUT				
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%			
Surge Power	4000VA		6000VA	
Efficiency (Peak)	90%-93%			
Transfer Time	10 ms (For Personal Computers); 20 ms (For Home Appliances)			
Waveform	Pure sine wave			
BATTERY & AC CHARGER				
Battery Voltage	24 VDC	48 VDC	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC	27 VDC	54 VDC
Overcharge Protection	31 VDC	62 VDC	31 VDC	62 VDC
SOLAR CHARGER & AC CHARGER				
Maximum PV Array Power	1500 W	3000 W	1500 W	3000 W
MPPT Range @ Operating Voltage	30VDC~ 115VDC	60VDC~ 115VDC	30VDC~ 115VDC	60VDC~ 115VDC
Maximum PV Array Open Circuit Voltage	145VDC			
Maximum Solar Charge Current	60A			
Maximum Efficiency	98%			
Standby Power Consumption	2W			
PHYSICAL				
Dimension, D x W x H (mm)	140 x 295 x 479			
Net Weight (kgs)	11.5			
Ingress Protection Rating	IP20			
Cooling system	AirForce cooling			
OPERATING ENVIRONMENT				
Humidity	5% to 95% Relative Humidity(Non-condensing)			
Operating Temperature	0°C- 55°C			
Storage Temperature	-15°C- 60°C			

Product specifications are subject to change without further notice