

FSP SOLAR POWERMANAGER HYBRID SERIES



Smart Energy for Smart Home

4KW-15KW

FSP Solar PowerManager-Hybrid

Offers a more intelligent power solution for our customers to reduce the energy bill and make a contribution to our homeland, to our earth. Your energy can be used as efficiently, as smart as possible under current power consumption environment.

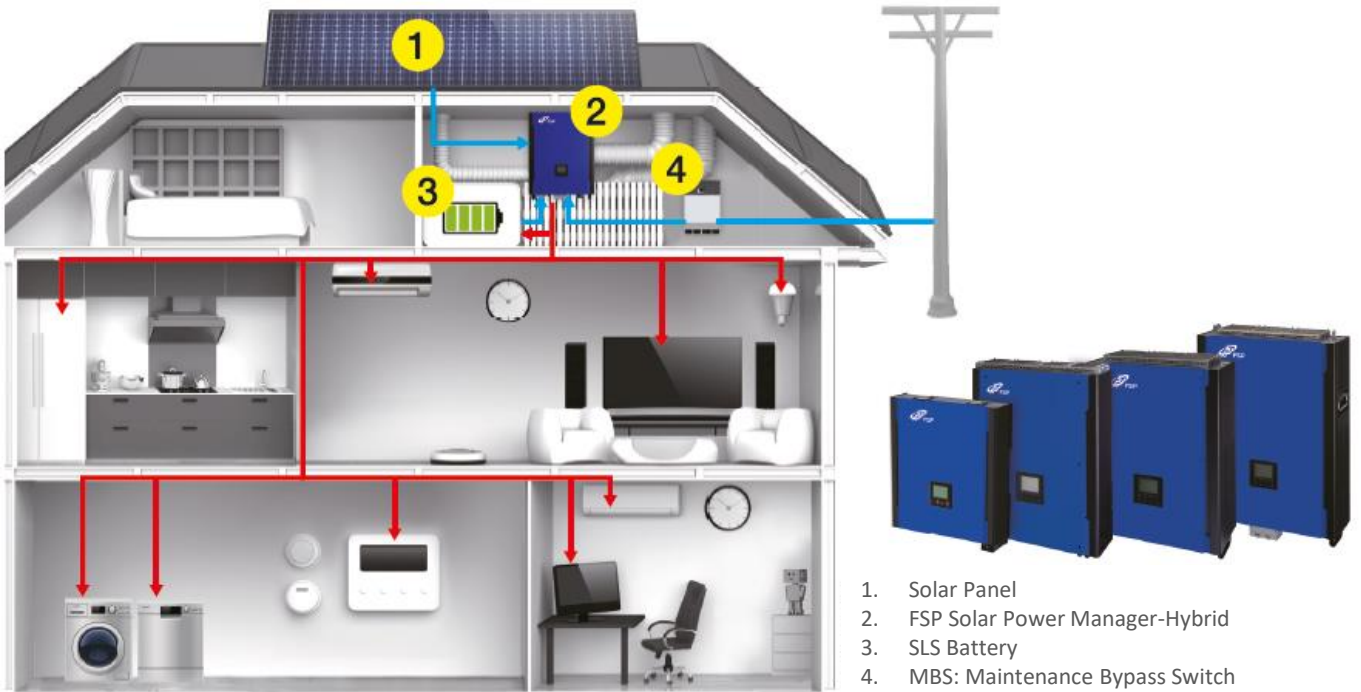
YOUR ENERGY, YOU DECIDE

By the unique optimum technology of FSP Solar PowerManager Hybrid Series you can control whether or how to use your energy, to store the generated power into battery or feed into the grid. Moreover, if grid power failed, by the brilliant ability of FSP Solar PowerManager-Hybrid Series, the load will be handled smartly by direct support from solar, by combining solar & storage energy or withdrawing storage power only. Multiple communication methods for different applications: FSP Solar Power-Manager Hybrid Series implements USB, RS232 ports and also fits with intelligent slot for SNMP card monitoring or Modbus Card for smart meter compensation applicable to keep your electricity meter at zero, to stay your electricity meter at zero.

GENERAL FEATURES

- Just ONE integrated design of Grid-tied & Off-Grid function
- Solar PowerManager-Hybrid implements AC I/P breaker and DC switch
- Solar Energy Storage
- Optimized Self-Consumption
- Load Dual-compensated: Solar & Storage Power or Grid & Storage Power
- Power securing during Grid Failure
- Back-up function
- Intuitive LCD Display
- SNMP, Modbus AS400 Support
- Certified VDE0126 & VDE4105
- 5kW&10kW Model Parallel function available, up to 6PC





Multi-Operation Mode



Solar Energy Multi-Use

Intelligent design adding more options to use Solar Energy: it is not just conventional PV inverter Feed-in function, the system with sufficient solar power will not only feed in grid, but also store energy and support loads



Self-Consumption

When Solar Energy is low e.g. at night, the FSP Solar PowerManager will automatically withdraw the power from Energy storage (Battery) without using power from utility; saving & reducing your energy bill.

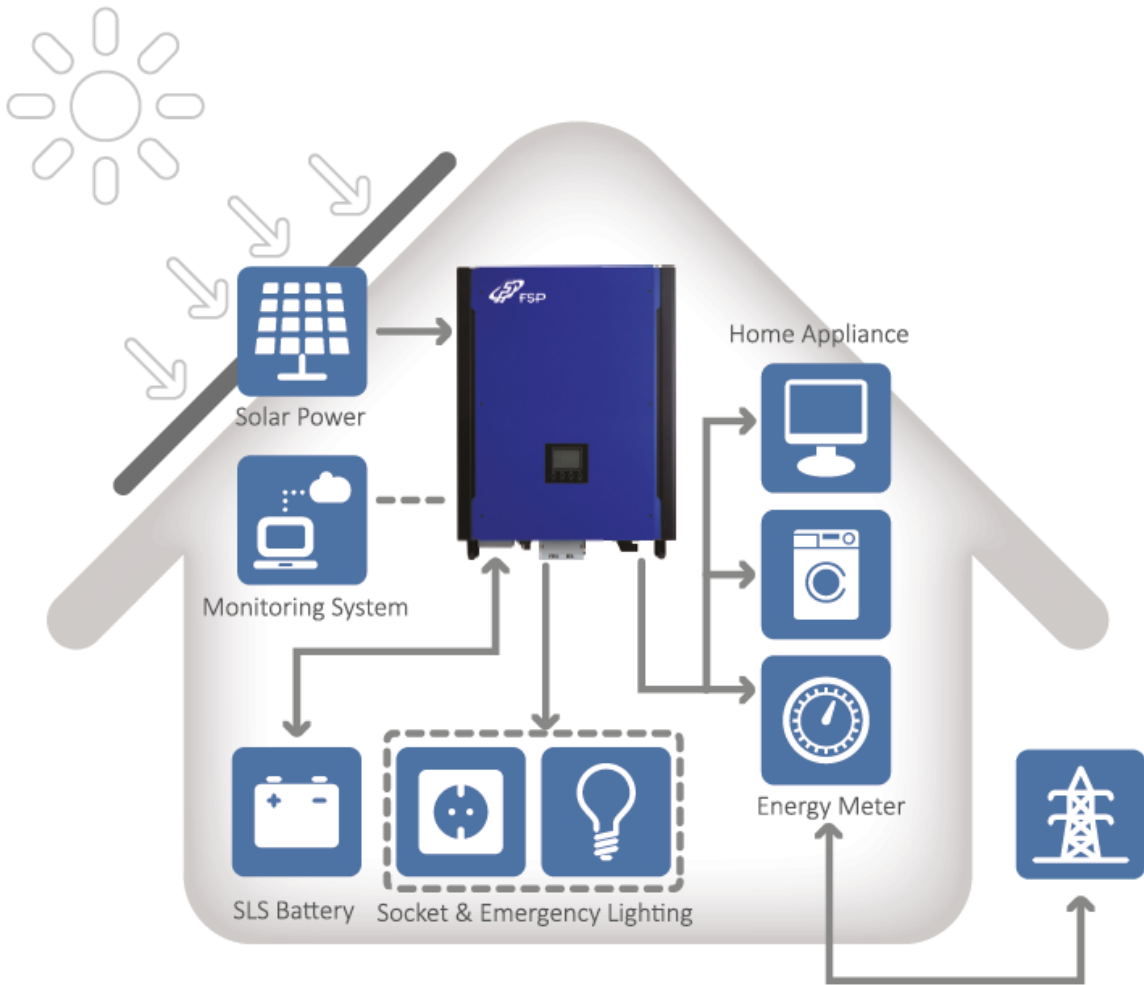


Back-up Power when Grid Outage

FSP Solar PowerManager implements off-grid inverter function. If a utility failure or outage occurs, the system will switch to back-up mode and offer continuous power.

Manage Your Own Power

FSP Solar PowerManager-Hybrid is an ingenious design unit. Product achieves tri-power source, Solar, Utility, and Battery Management.



FSP Solar PowerManager-Hybrid Compensation Mode:

Modus Card for smart meter compensation applicable to keep your electricity meter at zero. All the loads are connected with Grid FSP Solar PowerManager-Hybrid which is an auxiliary power. At daytime, Solar Power is sufficient to feed in grid and store energy at the same time. At night time, FSP Solar PowerManager-Hybrid will withdraw the power constantly from the battery providing energy to your home appliances in order to decrease your energy bill. If a utility outage occurs, FSP Solar PowerManager-Hybrid will generate the back-up power for emergency demand.

TECHNICAL SPECIFICATIONS

MODEL	Power manager-Hybrid 4kW PIP40A0300	PM-9200+(5KPlus)	FSP Power manager 10KW FSP103PV-230TH-48	FSP Power manager 15kW
PHASE	Single phase	Single phase	3-phase in / 3-phase out	3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	5000W	10000W	14850W	22500W
RATED OUTPUT POWER	4000W	5000W	10000W	15000W
MAXIMUM CHARGING POWER	4000W	4800W	9600W	15000W
MAXIMUM CHARGING POWER				
PV INPUT				
Nominal DC Voltage	360VDC	720VDC	720VDC	720VDC
Maximum DC Voltage	580VDC	900VDC	900VDC	900VDC
Start-up Voltage	116VDC	225VDC	320VDC	320VDC
Initial Feeding Voltage	150VDC	250VDC	350VDC	350VDC
MPP Voltage Range	280VDC / 500VDC	250VDC / 850VDC	400VDC / 800VDC	400VDC / 800VDC
Number of MPP Trackers	1	2	2	2
Maximum Input Current	1 x 18A	2 x 10A	2 x 18.6A	1 x 37.6A 1 x 18.6A
GRID OUTPUT				
Nominal Output Voltage	202/208/220/230/240VAC	208/220/230/240VAC	230VAC(P-N)/400VAC(P-P)	230VAC(P-N)/400VAC(P-P)
Output Voltage Range	184 - 265 VAC*	184 - 265 VAC*	184-265 VAC* per phase	184-265 VAC* per phase
Nominal Output Current	17.5 A	21 A	14.5A per phase	21.7A per phase
Power Factor			> 0.99	
EFFICIENCY				
Maximum Conversion Efficiency (DC/AC)	93 %	96 %	96 %	96 %
European Efficiency@ Vnominal	95 %	95 %	95 %	95 %
HYBRID / OFF-GRID OPERATION				
PV INPUT				
Nominal DC Voltage	360VDC	720VDC	720VDC	720VDC
Maximum DC Voltage	580VDC	900VDC	900VDC	900VDC
Start-up Voltage	116VDC	225VDC	320VDC	320VDC
Initial Feeding Voltage	150VDC	250VDC	350VDC	350VDC
MPP Voltage Range	280VDC / 500VDC	250VDC / 850VDC	400VDC / 800VDC	350VDC / 850VDC
Number of MPP Trackers	1	2	2	2
Maximum Input Current	1 x 18A	2 x 10A	2 x 18.6A	1 x 37.6A 1 x 18.6A
GRID OUTPUT				
Nominal Output Voltage	202/208/220/230/240VAC	230VAC(P-N) /400VAC(P-P)	230VAC(P-N) /400VAC(P-P)	230VAC (P-N)/ 400VAC(P-P)
Output Voltage Range	184 - 264.5 VAC*	184-264.5 VAC* per phase	184-264.5 VAC* per phase	180 VAC * per phase
Nominal Output Current	17.5 A	21 A	14.5A per phase	21.7A per phase
AC INPUT				
AC Start-up Voltage	120 - 140 VAC	120-140VAC per phase	120-140VAC per phase	120-140VAC per phase
Auto Restart Voltage	180 VAC	180VAC per phase	180VAC per phase	180VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC	170-280 VAC per phase	170-280 VAC per phase	170-280VAC per phase
Maximum AC Input Current	40 A	40 A	40 A	40 A
BATTERY MODE OUTPUT				
Nominal Output Voltage	202/208/220/230/240VAC	230VAC(P-N) /400VAC(P-P)	230VAC(P-N) /400VAC(P-P)	230VAC(P-N) /400VAC(P-P)
Efficiency (DC to AC)	92%	93%	91%	91%
BATTERY & CHARGER				
Nominal DC Voltage			48 VDC	
Maximum Charging Current	80 A	Default 60A, 5A-100A (Adjustable)	Default 60A, 10A-200A (Adjustable)	Default 60A 5A-300A (adjustable)
GENERAL				
PHYSICAL				
Dimension, D x W x H (mm)	117 x 438 x 535	204.2 x 460 x 600	167.5 x 500 x 622	219 x 650 x 820
Net Weight (kgs)	16.2	29	45	62
INTERFACE				
Communication Port		RS-232/USB and CAN Interface		
Intelligent Slot		Optional SNMP, Modbus, and AS-400 cards available		
ENVIRONMENT				
Humidity		0% - 95% RH (No condensing)		
Ingress Protection Rating		IP20		
Cooling system		AirForce cooling		
Operating Temperature	0 to 40°C	-10 to 55°C	-10 to 55°C	-10 to 55°C
Altitude		0 ~ 1000 m** Max2000m		

These figures may vary depending on different AC voltage and country requirements.

Power derating 1% every 100 m when altitude is over 1000m.

The above efficiency are tested in laboratory facilities and environmental conditions.

Product specifications are subject to change without further notice.