

# FSP SOLAR POWERMANAGER HYBRID SERIES



Smart Energy for Smart Home

## 10KW-15KW

### FSP Solar PowerManager-Hybrid

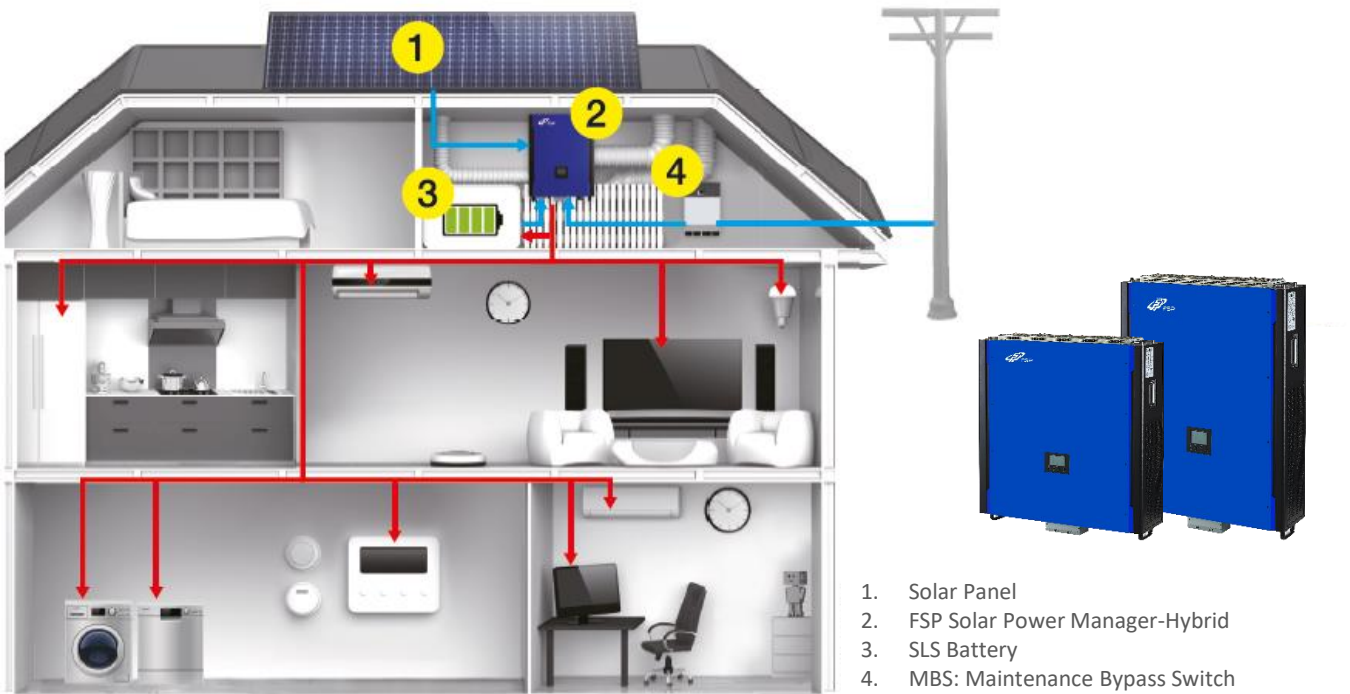
Offers a more intelligent power solution for our customers to reduce the energy bill and make a contribution to our homeland, to our earth. Your energy can be used as efficiently, as smart as possible under current power consumption environment.

### 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, 50549, TOR
- Model Parallel function available



## 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.

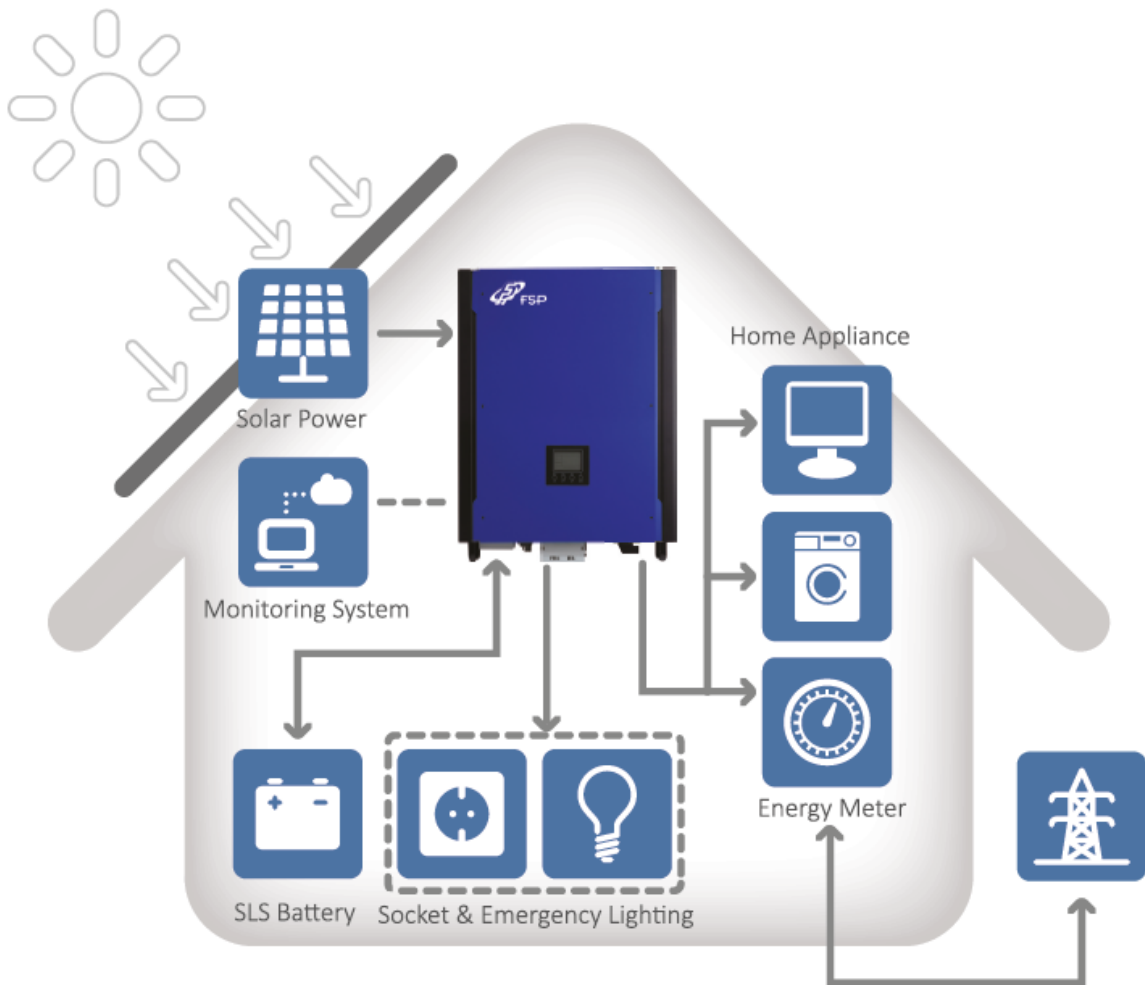


### Back-up Power when Grid Outage

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:

Modbus 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

# FSP Solar PowerManager-Hybrid Series

MODEL	PowerManager-Hybrid 10kW PPF10L0101	PowerManager-Hybrid 15kW PPF15L0101
PHASE	3-phase in / 3-phase out	3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	14850W	22500W
RATED OUTPUT POWER	10000W	15000W
MAXIMUM CHARGING POWER	9600W	15000W
MAXIMUM CHARGING POWER		
PV INPUT		
Nominal DC Voltage	720VDC	720VDC
Maximum DC Voltage	900VDC	900VDC
Start-up Voltage	320VDC	320VDC
Initial Feeding Voltage	350VDC	350VDC
MPP Voltage Range	400VDC / 800VDC	400VDC / 800VDC
Number of MPP Trackers	2	2
Maximum Input Current	2 x 18.6A	1 x 37.6A 1 x 18.6A
GRID OUTPUT		
Nominal Output Voltage	230VAC(P-N)/400VAC(P-P)	230VAC(P-N)/400VAC(P-P)
Output Voltage Range	184-265 VAC* per phase	184-265 VAC* per phase
Nominal Output Current	14.5A per phase	21.7A per phase
Power Factor		> 0.99
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	96 %	96 %
European Efficiency@ Vnominal	95 %	95 %
HYBRID / OFF-GRID OPERATION		
PV INPUT		
Nominal DC Voltage	720VDC	720VDC
Maximum DC Voltage	900VDC	900VDC
Start-up Voltage	320VDC	320VDC
Initial Feeding Voltage	350VDC	350VDC
MPP Voltage Range	400VDC / 800VDC	350VDC / 850VDC
Number of MPP Trackers	2	2
Maximum Input Current	2 x 18.6A	1 x 37.6A 1 x 18.6A
GRID OUTPUT		
Nominal Output Voltage	230VAC(P-N) / 400VAC(P-P)	230VAC (P-N)/ 400VAC(P-P)
Output Voltage Range	184-264.5 VAC* per phase	180 VAC * per phase
Nominal Output Current	14.5A per phase	21.7A per phase
AC INPUT		
AC Start-up Voltage	120-140VAC per phase	120-140VAC per phase
Auto Restart Voltage	180VAC per phase	180VAC per phase
Acceptable Input Voltage Range	170-280 VAC per phase	170-280VAC per phase
Maximum AC Input Current	40 A	40 A
BATTERY MODE OUTPUT		
Nominal Output Voltage	230VAC(P-N) / 400VAC(P-P)	230VAC(P-N) / 400VAC(P-P)
Efficiency (DC to AC)	91%	91%
BATTERY & CHARGER		
Nominal DC Voltage		48 VDC
Maximum Charging Current	Default 60A, 10A-200A (Adjustable)	Default 60A 5A-300A (adjustable)
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	167.5 x 500 x 622	219 x 650 x 820
Net Weight (kgs)	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	-10 to 55°C	-10 to 55°C
Altitude	0 ~ 1000 m** Max2000m	