

Expert C Off Grid Inverter



- Pure sinewave PV inverter with Output power factor = 1
- Selectable input voltage range for PC or home appliances
- Smart battery charging algorithm to optimize battery life
- Configurable AC/Solar input priority via LCD panel
- Compatible to mains or generators
- Auto restart while AC back and cold start function available
- Overload and short circuit protection
- Anti-Dust kits (optional) for harsh environment

Model Number	FSP102PV-230CFW-12	FSP202PV-230CFW-24	FSP302PV-230CFW-24	FSP502PV-230CFW-48
Grid system	Single Phase, 230Vac			
Rated power	1,000VA/ 1,000W	2,000VA/ 2,000W	3,000VA/3,000W	5,000VA/ 5,000W
Parallel capability	No			
Max. PV input power	600W	1,200W		2,400W
Operation voltage range	15 -18Vdc	30 -32Vdc	30 -32Vdc	60 -72Vdc
Max. PV input current	40A	40A	40A	40A
Max. PV voltage (OC)	55Vdc	80Vdc		105Vdc
Number of MPPT	0			
Input Characteristic				
AC voltage	Single Phase, 230Vac			
Selectable Voltage Range	170-280 Vac (For PC/ SPS applications) 90-280 Vac (For Home facilities)			
Frequency range	50 Hz/ 60 Hz (Auto)			
Output Characteristic				
AC voltage regulation @ backup mode	10,000VA			
Surge ability	4,000VA 230Vac ± 5% 6,000VA			
Transfer time	2,000VA	10 ms (For PC/ SPS) ; 20 ms (For home facilities)		
Output waveform	Pure sinewave			
Peak Efficiency	90 - 93%			5,280W
Charging Characteristic				
Max. charging power	1,200W		1,680W	110A
Max. charging current	600W	50A	70A	60A
Max. PV charging current	50A		25A	48Vdc
Max. AC charging current	20A			60Vdc
Nominal Battery voltage		31Vdc	24Vdc	33Vdc
Over charge protection	12Vdc			40
Battery floating voltage	16Vdc		27Vdc	28
Rated backup time w/ 100Ah (min)	13.5Vdc	50		
Standby power consumption	<2W			
Operating ambient temp range				
Operating ambient temp range	-10 °C - 50 °C			
Humidity	5 - 95% RH, non-condensing			300 x 440 x 100 mm
Altitude	0 - 1000m			285 x 334 x 100 mm
Dimensions (W x H x D)	225 x 320 x 88 mm	5.5kg	6.5kg	9.0kg
Net weight				
Protect function	5.0kg	Overload, short circuit, over voltage, high temperature		
Cooling	Air forced			
Enclosure environmental rating	IP20			
Interface				
HMI	LCD display			
Communication port	USB/ RS232			
Dry contact port	NA			
Features				
Monitoring software	Yes			
Compliance	IEC 55022 Class A, IEC 60950			
Certification	CE			

*Power derating 1% per 100m while higher than 1000m

*Product specification are subject to change w/o further notice

Rating

Series	Type	Phase (input/out)	1 kVA	2 kVA	3 kVA	4 kVA	5 kVA	5.5 kVA	10 kVA
HySpirit	Hybrid	3/3	—	—	—	—	—	—	●
HySpirit	Hybrid	1/1	—	—	—	●	●	●	—
Expert	Off grid	1/1	●	●	●	●	●	—	—
Essensolar	Off grid	1/1	●	●	●	—	●	—	—
Expert C	Off grid	1/1	●	●	●	—	●	—	—
Essensolar C	Off grid	1/1	—	—	●	—	●	—	—
Essensolar C plus	Off grid	1/1	—	—	●	—	●	—	—

note: ● Standard — None

Function

Function	HySpirit 3/3	HySpirit 1/1	Expert	Essensolar	Expert C	Essensolar C	Essensolar C Plus
PVI type	Hybrid/ Grid-tied		Off grid				
Output waveform	Pure Sinewave						
Power configuration (Input)	Three phase		Single phase				
Power configuration (Output, STD)	Three phase		Single phase				
Power configuration (Output, three phase)	Yes	—	Yes, with parallel kits		—		
Form factor	Wall mount						
Built-in MC4	●	●	—	—	—	—	—
Built-in PV switch	●	●	—	—	—	—	—
Parallel redundancy	●	●	● / ○	● / ○	—	—	—
Feed into grid	●	●	—	—	—	—	—
AC Charger	●	●	●	●	●	●	●
PV Charger with MPPT	●	●	—	●	—	●	●
PV Charger with PWM	—	—	●	—	●	—	—
Energy Storage	●	●	●	●	●	●	●
Without battery operation	●	●	—	● / ○	—	● / ○	●
intelligent slot	●	●	—	—	—	—	—
2nd LCD control panel (Optional)	—	—	●	●	—	—	●
Detachable LCD control panel	—	—	—	—	—	—	●
EMS port (External relay control)	●	● / ○	—	—	—	—	—
Emergency power off	●	● / ○	—	—	—	—	—
Battery thermal sensor	●	● / ○	—	—	—	—	—
Dry contact port	●	● / ○	●	●	—	—	●
USB/ RS232	●	●	●	●	●	●	●
Reserved comm. port CAN/ RS485	●	—	—	—	—	—	●
Application SW	SolarPower			WatchPower			

note: ● Standard ○ Option — None