



- Scalable: Parallel operation up to 9 units only available for 3kVA & 5kVA
- Output power factor = 1
- Selectable input voltage range for PC or home appliances
- Built-in MPPT charger controller and selectable charging current based on your applications
- Smart battery charging algorithm to optimize battery life
- Configurable AC/Solar input priority via LCD panel
- Mains or generators compatible
- Auto restart while AC back and cold start function available
- Various operations, available for balanced 3 phase or unbalanced 3 phase

EssenSolar Off Grid Inverter

MODEL NUMBER	FSP102PV-230F-24	FSP102PV-230F-48	FSP302PV-230F-24	FSP302PV-230F-48	FSP502PV-230F-48
Grid system	Single Phase, 230Vac				
Rated power	1,000VA/ 1,000W	1,000VA/ 1,000W	3,000VA/ 2,400W	3,000VA/ 3,000W	5,000VA/ 5,000W
Parallel ability	No	No	Yes, 9 units	No	Yes, 9 units
Max. PV input power	600W	900W	1,000W	900W	4,000W
Max. PV voltage (OC)	75Vdc	102Vdc	100Vdc	102Vdc	145Vdc
MPPT voltage range (Full Power)	30 - 66Vdc	60 - 88Vdc	30 - 80dc	60 - 88dc	60 - 115Vdc
Number of MPPT	1	1	1	1	1
INPUT CHARACTERISTIC					
AC voltage	Single Phase, 230Vac				
Selectable Voltage Range	170-280 Vac (For PC/ SPS applications)				
Frequency range	90-280 Vac (For home facilities)				
OUTPUT CHARACTERISTIC					
AC voltage regulation @ backup mode	230Vac ± 5%				
Surge ability	2,000VA	2,000VA	6,000VA	6,000VA	10,000VA
Transfer time	10 ms (For PC/ SPS) ; 20 ms (For home facilities)				
Output waveform	Pure sinewave				
Efficiency (Line mode)	95%	95%	95%	95%	95%
Efficiency (Battery to AC)	90 - 93 %	90 - 93 %	90%	93%	90%
CHARGING CHARACTERISTIC					
Max. charging power	1,080W	1,584W	2,400W	1,584W	6,720W
Max. charging current	45A	33A	100A	33A	140A
Max. PV charging current	25A	18A	40A	18A	80A
Max. AC charging current	20A	15A	60A	15A	60A
Nominal Battery voltage	24Vdc	48Vdc	24Vdc	48Vdc	48Vdc
Over charge protection	31Vdc	62Vdc	30Vdc	62Vdc	66Vdc
Battery floating voltage	27Vdc	54Vdc	27Vdc, max. 30Vdc	54Vdc	54Vdc, max. 64Vdc
Rated backup time w/ 24V or 48V/100Ah (min)	112	186	28	63	40
Max. Efficiency (PV to Battery)	98%	98%	98%	98%	98%
Standby power consumption	<2W	<2W	<2W	<2W	<2W
PHYSICAL & ENVIRONMENT DATA					
Operating temp range	0°C - 55°C				
Storage temp range	-15°C - 60°C				
Humidity	5 - 95% RH, non-condensing				
Altitude	0 - 1000m				
Dimensions (W x H x D)	272 x 355 x 100 mm	272 x 355 x 100 mm	272 x 385 x 100 mm	272 x 355 x 100 mm	295 x 468 x 120 mm
Net weight	6.9 kg	6.9 kg	7.5 kg	7.5 kg	13.5 kg
Protect function	Overload, short circuit, over voltage, high temperature				
Cooling	Air forced				
Enclosure environmental rating	IP20				
INTERFACE					
HMI	LCD display				
Communication port	USB	USB	USB	USB	USB/ RS232
Dry contact port	Yes	Yes	Yes	Yes	Yes
Optional accessories	Remote control panel, Parallel kits (Only for 3k/5k parallel model)				
FEATURES					
Monitoring software	Yes				
Compliance	IEC 55022 Class A, IEC 62109, IEC 60950				
Certification	CE				