

Off-Grid Solar Inverter

INV - OFFGRID_HOME

High performance off-grid solar inverter


Features

- Hybrid Design (Grid & Solar Charging)
- Inbuilt intelligent charge controller
- High Efficiency Design
- Superior Algorithm
- Solar priority / Grid Priority Logic
- Electronic Protection
- Auto restart facility
- LCD Display
- Inbuilt Measurements
- Compact / Rugged design
- Remote monitoring facility (Optional)

Specification

MODEL	IG300VA	IG800VA	IG1000VA	IG1500VA	IG2000VA	IG2500VA	IG3000VA	IG4000VA	IG5000VA
Capacity (VA)	300	800	1000	1500	2000	2500	3000	4000	5000
Capacity (W)	240	640	800	1200	1600	2000	2400	3200	4000
Battery VDC	12V		12V/24V	24V/48V	48V				
Nominal Output Voltage	220 – 240 VAC								
INPUT									
User Selection Mode	UPS MODE / INVERTER MODE								
Voltage Range	180 – 256V AC / 110 – 290V AC								
Voltage Cut off Range	180 – 265 ± 5 V AC / 110 – 290 ± 10 V AC								
Voltage Recovery Range	190 – 255 ± 5 V AC / 120 – 275 ± 10 V AC								
Frequency Range	47 – 53 Hz								
OUTPUT									
Voltage Regulation on Mains	Same as Mains Input								
Voltage Regulation in Battery Mode	220V AC Nominal ± 2% (Range 210V – 240V)								
Frequency Regulation on Mains Mode	Same as Mains Input								
Frequency Regulation in Battery Mode	50HZ ± 0.1 Hz								
Power Factor	>0.8								
Waveform	Pure Sine Wave								
Efficiency	>85%								
Over Load (PCU Mode) 120% load on Inverter for 30 sec. ;	360	960	1200	1800	2400	3000	3600	4800	6000
After 3 Retries and Shutdown.	348	928	1160	1740	2320	2900	3480	4640	5800
Max Load (Grid Mode)	400	1000	1300	2000	2500	3000	4000	5000	6500
Battery Charging -GRID									
Grid Charging Current	5A		5A/10A			20A			
Boost Charging' voltage	14.4 ±0.2V		14.4V/28.8V ±0.2V			57.6 ±0.2 V			
Float Charging' voltage	13.8 ±0.2V		13.8 ±0.2 V/27.6 ±0.2 V			55.2 ± 0.2 V			
'Battery low voltage cut-off'	10.5 ±0.2 V		10.5±0.2 V/21 ±0.2 V			42.0 ± 0.2 V			
Battery Voltage High	16.25 ±0.2 V		16.25 ±0.2 V/32.5 ±0.2 V			65V			
SPV Charging - SOLAR									
Charge controller Type	MPPT (Maximum Power Point Tracking)								
Maximum SPV Input Power	250Wp	450Wp	450/900Wp	1000Wp	2000Wp	2000Wp	2300Wp	2400Wp	3000Wp
Nominal SPV input Voltage	18V	18V	18 /34V	34V	60V	60V	60V	60V	60V
Max. PV Input voltage (VOC)	40Voc	50Voc	50 / 70Voc	75Voc	100Voc	100Voc	120Voc	120Voc	150Voc
Panel Voltage Operation range	18 - 36V	18 - 40V	18 - 40V/ 34 - 70V	34 - 75V	60 - 100V	60 - 100V	60 - 120V	60 - 120V	60 - 150V
Max. Charging Current	20A	35A	35A	40A	40A	40A	45A	50A	60A

PROTECTIONS	
Over Load	For 100% Load – Buzzer Indication, 101% above load trips & retry for 4 times then inverter shutdown
Output Short Circuit	Circuit breaker on mains, Shutdown on inverter
Battery Reverse Protection	Fuse
Low Battery	Load Disconnection
Thermal Shutdown	Below 0°C and above 90°C
Lightening/Surge	Protected up to 4KV Surge
Solar Reverse	Blocking diode is provided to prevent reverse flow of current
Change Over Time	<20ms
ENVIRONMENT OPERATING CONDITIONS	
Operating Temperature	0 - 50°C
Storage Temperature	0 to +60 °C
Relative Humidity	0-95% non-condensing
Cooling	Forced fan cooling
Altitude	Less than 2000 meter above sea level
Communication	Optional
DISPLAY	
LED Display	Mains ON(Red), Charging On Mains (RED), Charging On Solar(Green), Inverter(Green), Battery Low(Yellow), Overload/Short Circuit(Yellow)
LCD Display	Battery Voltage, Input Voltage Band (Narrow or Wide) , Grid Charging Current , Solar Voltage., Solar Charging Current, Solar Units Saved kWH, Over Load, Battery Low Indication.