

# SOLAR HYBRID SINE WAVE INVERTER

Solar Hybrid Sine Wave Inverter is committed towards providing you complete comfort irrespective of availability or non-availability of utility power with support of Optimizing Solar Power as well as Battery Energy Storage and provide your appliances the exact replication of mains Power.

It is suitable for use at Homes, Shops and Showrooms, Offices, Factories, Doctors Chamber, Nursing Homes & Hospitals, Petrol Pumps, Toll Collection Booths and many other applications.



## Salient Features:

- Wide LCD display for better system information as well as LED indication.
- DSP based design with absolute and stable sine wave output voltage & frequency.
- State of art MOSFET based PWM technology with greater efficiency at lower cost with dynamic stability\*.
- Three Stage solar charging (TSSC) suitable for all types of battery charging\*.
- Combined mains and solar intelligent constant current charging with solar power priority\*.
- Maximum Solar Power Utilization during charging and backup mode\*.
- PV availability, battery charging from solar power and PV pole reversal protection with display on LCD and LED\*.
- User friendly, feather touch control and selection switches with LED indication on front panel.
- Deep discharge battery charging from mains as well as solar\*.
- More back-up being a sine wave UPS (ASIC Control).
- No humming Noise (Silent UPS)
- Selector switch for UPS mode/ Normal mode.
- Protections such as Mains Fuse Trip, Overload, Short circuit, Battery low available with LCD available.
- Mains available, battery charging/Charged and its voltage indication provided on LCD display as well as LED.
- Quiet operation of AC motor as well as the other inductive load unlike modified sine wave.

# TECHNICAL SPECIFICATION SOLAR HYBRID INVERTER/UPS (0.7KVA/12V DC TO 2.1KVA/24V DC) & (2.5KVA/48V DC TO 10KVA/192V DC)

Sr.No.	Parameter	Unit	Rating				
1	Model name		700VA 12V DC	900VA 12VDC	1100VA 12VDC	1600VA 24VDC	2100VA 24VDC
2	System rating (Name Plate)	VA	700	900	1100	1600	2100
3	Full Load Input Current ± 2A	Amp	45	55	65	51	65
4	Operating DC voltage	V		12		24	24
5	PV Input						
6	Input voltage max Voc	Vdc		25		45	45
7	Maximum solar array power	Wp	700	900	1100	1600	2100
8	Max PV modules of 335Wp	Nos	2	2	3	4	6
9	Switching element in SCC				MOSFET		
10	Type of solar charger				PWM		
11	Max current rating of SCC	Adc			40:0		
12	Efficiency of SCC	%			>90		
13	Switching element in inverter				MOSFET		
14	Type of control				PWM		
15	Nominal Output voltage in inverter mode	Vac			220V± 7V		
16	Output supply phases				Single		
17	Nominal Output frequency of Inverter	Hz		50/60±1 (Default is 50Hz)selectable 50/60Hz(Optional)			
18	Frequency (Min-Max during Grid by pass) UPS mode	Hz			47-53/57-63		
19	Frequency (Min-Max during Grid by pass) Inverter mode	Hz			40-60/50-70		
20	Output voltage regulation	%			180-220		
21	Output THD(v) at Linear load	%			<5%		
22	Crest Factor				03:01		
23	Overload capacity 125%	Sec			6(6 Retry)		
24	Overload capacity 150%	Sec			2 (6 Retry)		

Sr. No.	Parameter	Unit	Rating					
1	Model name		2.5KVA 48VDC	3.5KVA 48VDC	5KVA 48V DC	5VA 96VDC	7.5/10 KVA120VDC	10KVA 192VDC
2	System rating (Name Plate)	VA	2500	3500	5000	5000	7500/10000	10000
3	Full Load Input Current ±2A	Amp	43	63	104	50	63/77	48
4	Operating DC voltage	V		48		96	120	192
5	Input voltage max Voc	Vdc		90		180	235	300
6	Maximum Solar array power	Wp	2500	3500	5000	5000	7500/10000	10000
7	Max PV modules of 335Wp	Nos	8	10	16	16	20/30	32
8	Switching element in SCC					MOSFET		
9	Type of solar charger					PWM		
10	Max current rating of SCC	Adc				50		
11	Efficiency of SCC	%				>90		
12	Switching element in Inverter					MOSFET		IGBT
13	Nominal Output voltage in inverter mode	Vac			220V± 7V			230V± 7V
14	Output supply phases					Single		
15	Nominal Frequency (in inverter mode)	Hz				50± 1		
16	Frequency (Min-Max during Grid by pass) UPS Mode	Hz				47-53		
17	Frequency (Min-Max during Inverter Mode)	Hz				40-60		
18	Output voltage regulation	%			195-220			195-230
19	Output THD (v) at Linear load	%				<5%		
20	Crest Factor					03:01		
21	Overload capacity 125%	Sec				6(6 Retry)		
22	Overload capacity 150%	Sec				2(6 Retry)		
23	Grid low cut voltage (IT load/Normal load)	Vac				180/100 ± 10		
24	Grid low cut voltage recovery (IT load/Normal load)	Vac				190/110 ± 10		
25	Grid high cut voltage (IT load/Normal load)	Vac				265/280 ± 10		
26	Grid high cut voltage recovery (IT load/Normal load)	Vac				255/270 ± 10		
27	Grid charging Enable/Disable					yes		
28	Selection of Operating Mode					QC-Charging current= 20A±1A Solar + Mains		
29	Input current at no load at Nominal Battery voltage	Adc	2.2   2.2	2	2.2	2.2	2   2	2.2
30	Protection					Batt Low, Batt High, Overload, Short circuit, Over temp, PV reverse, MCB Trip/Fuse Trip		
31	LCD Display parameters					PV Current, Bty voltage, Mains voltage, PCU on-off, UPS mode on-off, Solar on-off, load percentage, load status (on solar, battery)		
32	Operating Temperature range	°c				0-50		
33	Changeover time from inverter to mains in UPS Mode	ms				<10		
34	Changeover time from inverter to mains	ms				<10		
35	Changeover time from mains to inverter (UPS Mode)	ms				<10		
36	Changeover time from mains to inverter (normal Mode)	ms				<50		
37	Input Protection					Through MCB		

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