ENERTECH UPS PVT LTD



SUN MAGIC⁺

SUN MAGIC⁺ is a state of art PCU product from ENERTECH product basket with Global standards. This unit will give operational flexibility to its customers to enjoy the benefits of advanced monitoring and control features.

Grid power in Indian subcontinent frequently suffers from voltage &/or frequency variations, Grid outages, voltage sag/ surges which inhibits users from enjoying benefits of solar grid tied systems.

SUN MAGIC+ series has evolved to overcome the limitations and give maximum possible yield to its users using DSP based advance control and monitoring features.

SUN MAGIC+ product range aims to cater roof top requirement for commercial, Individual and utility scale solar plant requirements with 3Phase grid export + battery backup feature.

SUN MAGIC+ range of products are ideal for projects ranging from 10KWp to 100KWp array installations-3Phase applications. SUN MAGIC+ product, packaged with optional data monitoring software, GSM based wireless monitoring provides perfect solution for power plant management large scale.

Distinctive Features:

- ✓ Bidirectional solar PCU
- ✓ Hybrid inverter (Solar/ Grid/BATT)
- ✓ Vector Modulated Inverter Control
- ✓ Multiple DSP control operation
- ✓ Range 10KW to 100KW
- ✓ Battery Less operation compatible
- ✓ Paralleling Compatibility
- ✓ MPPT Based Solar Charger -2 modes of operations
- ✓ Higher Capacity PV connection option available
- ✓ Multi Mode function: SGB/ SBG/GFM (selectable)
- ✓ SBG Modes with Buffer level selection facility 25/50/75
- ✓ GFM FEED mode feeds power to grid when grid available, feeds power to load when grid fails.
- ✓ GFM levels are selectable 0/25/50/75/100
- ✓ Unity power Factor for grid charging
- ✓ Adjustable Grid Charging Current:
- ✓ Vthd <3%
- ✓ Changeover time less than 20ms
- ✓ 40 X 4 LCD with backlight & Tactile Kay Pad Interface
- ✓ Detailed Metering : Solar KW , Solar KWH,
- ✓ Fault logs : 9 recent faults
- ✓ Auto fault reset for non critical faults
- ✓ Optional Input : Pyranometer , Wind speed, Battery Temperature, Heat sink Temperature
- ✓ Advanced Battery Management Feature
- ✓ Temperature Compensated Charging
- ✓ Generator compatible
- ✓ Communication Port: RS232
- ✓ GSM Based Remote Monitoring option

SPECIFICATIONS

SR.N O	Parameter	10KVA	15KVA	20KVA	25KVA	30KVA	40KVA	50KVA	60KVA	80 to 100KVA	
	D CHARGER										
1	Grid Voltage Sync Range	330V to 450V(±5V)									
2	Grid Frequency Sync Range		50Hz ± 6%								
3	Charger Peak Efficiency		>90%								
4	Max Grid Import Power		Double of Inveter capacity dependent on battery charging current								
_	Capacity										
5	Max Batt Amp (Charging)			5A to 20	OA subjected to	<u> </u>	ity and inverter r	ating			
6	Self Consumption Recommended DG/GRID				Double	<4% of Inverter Cap	nacity				
,	Capacity				Double	or inverter cap	Jacity				
SOL	SOLAR CHARGE CONTROLLER										
	Controller Type					DSP					
1	Charge Controller Type		MPPT								
2	Charger Topology					BUCK					
3	MAX PV Connection	10KWP	15KWP	20KWP	25KWP	30KWP	40KWP	50KWP	60KWP	80KW to 100KW	
Λ	Capacity No of MPPT Channels					1					
7	No of MITT Chamiles					1					
5	Per Channel PV Capacity (Nominal/ Peak)	10KWP	15KWP	20KW WP	25KWP	30KWP	40KWP	50KWP	60KWP	80KW to 100KW	
6	Max. Open Circuit PV Volts (Voc)	300V	500V	500V	500V	500V	700V	700V	700V	700V	
7	MPPT Voltage Range	165 – 250V	290-400V	290-400V	290-400V	290-400V	450-600V	450-600V	450-600V	450-600V	
8	Minimum PV Voltage	165V	290V	290V	290V	290V	450V	450V	450V	450V	
9	Max I/P Amps per channel	83A	63 A	83 A	104 A	125 A	110 A	138A	165	220A to 275A	
10	Max Battery Amps during PV charging		Full Capacity in Boost Mode / Current Control in Float Mode as per Battery AH								
11	Battery type Supported		LMLA, VRLA, SMF, Ni-Cd: Charging Profile can be configured as per the battery requirement								
12	Peak Charging Efficiency >94% Upto 98%										
INV	INVERTER										
	Controller	DSP									
	Switching Element	IGBT									
1	Nominal Battery Voltage VDC	120	240	240	240	240	360	360	360	360	
2	No of Phases/Connection Type	3Ph , 4 Wire- RYBN									
3	Nominal Output Voltage	400V AC ±2%,									
4	Output Frequency	50Hz ± 0.5%									

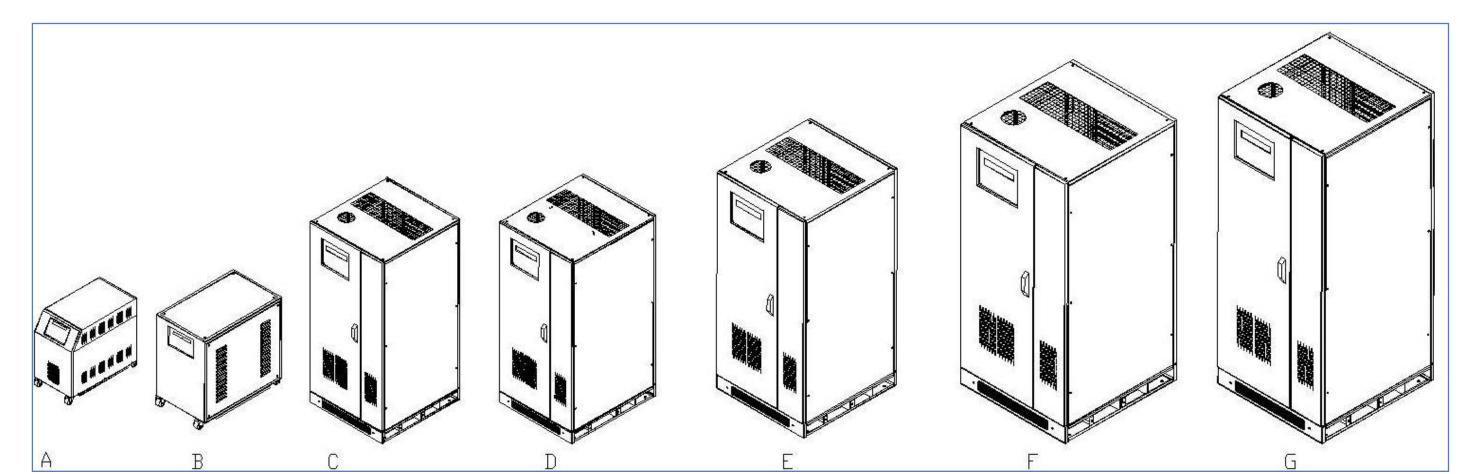
5	Continues Output Power	8KWP	12KWp	16KWP	20KWF	24KWP	32KWP	40KWP	48KWP 6	64KWP to 80KWP		
6	Out put Amp in each phase	11	17	23	28	34	46	57	69	92 to 116		
7	Voltage Regulation (Stand Alone)	'	±2%									
8	Frequency regulation (Stand Alone)		±0.5Hz									
9	THD		V THD <3% I THD <10%									
10	Out Put Waveform		Pure Sine Wave									
11	Galvanic Isolation		In built Isolation Transformer at Inverter Output									
12	Output Power Factor		1.0 to 0.6 Lagging									
13	Peak Efficiency (Full Load)		Upto 90%% Upto 92%%									
14	1 5		125% FOR 60 SEC, 150% FOR 5 SEC / Can be customized									
15	Allowable Phase Imbalance		30%									
16	DG Compatibility		Available									
17	Auto Bypass feature		Available									
18	Grid Export Mode		Available, Enable/Disable Options available									
19	Anti Islanding Function	Available, In Compliance with IEC 62116										
20	Compatible IEC standards				IEC -61683:1	L999- As per MNRE I	Requirement					
CON	IFIGURATION											
1	Modes Available		3: Hybrid , Grid Export, Stand Alone									
2	Battery Buffer Setting		Selectable from 25%,50%,75%									
3	MPPT Modes		2									
	ICATIONS	Grid On, PV On, Grid Charger On, Load On Inverter, Load On Mains, Bypass, Fault										
1	LED		<u> </u>		_		er, Load On Mains	s, Bypass, Fauit				
2		Data Tima	INDUT CDD		Display Para		Invest CDD	Colon CDD	Dott CDI	D		
		Date, Time, Total Up	INPUT GRP	DG GRP	O/P GRP	Power GRP	Invert GRP	Solar GRP	Batt GRI	P Faults		
		Time, Total Down Time, Current Up Time, Current Down Time, Current Status	Voltages Currents Frequency Power W Power VA Import KWH Export KWH	Power W Power VA KWH Run Hr	Voltages Currents Frequency Power W Power VA Load% Energy	Total I/P KW,KV/ Total O/P KW,KV Input PF Output PF	Voltages A Currents Frequency Power KW Power VA	PV Vol, Curr PV Power PV Energy Panel Temp PVRadiation	Voltage Current I/P KWH O/P KWH Batt Tem Batt %			
3	Alarm				Audibl	e For Fault And W	arnings					
PRO	PROTECTIONS											
1	PV				-	, Reverse Polarity I						
2	Battery					/ Under Voltage, Ov						
3	Grid	Over/ under Voltage, Over/ Under Frequency, Surge Protection										
4	Load					verloads, Short circu						
5	Circuit Breakers	Grid Input MCB/MCCB, Battery Input MCB/MCCB, PV Input MCB/MCCB, Load Rotary Switch										
6	Temperature	Inverter Over Temperature										

Encl	Enclosure								
1	Degree of Protection IP 20 Compatible to IEC 60529:2001-02- As per MNRE Requirement								
2	Cooling	Temperature Dependent Forced Cooling							
3	Noise	<50dB							
4	Color	Siemens Grey/Blue							
5	5 Termination Bottom								
Envi	Environmental								
1	Temperature Range (Operating)	0 to 50°C							
2	Temperature Range (Storage)	-10 to 50°C							
3	Altitude (max)	1000 m							
4	Humidity	0-95% NON Condensing							
5	Compatible IEC standards	IEC- 60068-2-1, IEC-60068-2-2, IEC-60068-2-14, IEC-60068-2-30- As per MNRE Requirement							
	Connectivity	RS-232/GSM							

DIMENSIONS

Specifications are subjected to changes without prior notice

	А	В	С	D	Е	F	G
Ratings	5-8KW	10-12.5KW	15KW	20-35KW	40-60KW	65-75KW	80-100KW
Width	450 mm	500 mm	750 mm	800 mm	800 mm	900 mm	900 mm
Length	800 mm	800 mm	800 mm	900 mm	1000 mm	1200 mm	1200 mm
Height	825 mm	825 mm	1600 mm	1600 mm	1800 mm	1900 mm	2100 mm
Weight	125KGS	150KGS	350KGS	350KGS	600KGS	800-1000KGS	



OTHER PRODUCTS:

Solar Conversion KIT, Solar Lift Inverter, Solar PCU for Petrol Pump, AJB ACDB DCDB, Industrial ONLINE UPS, Industrial Battery charger, Frequency Converter, Grid Tied Inveter

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OUR ESTEEMED CUSTOMERS



OUR APPROVALS

