

SunMagic REefi

Reliable & Performing PCU for your Energy conversion needs !

STANDARD SPECIFICATION

SMART STORAGE SOLAR INVERTER REEFI SERIES- 5kVA to 300kVA

INVERTER CAPACITY (kVA)	5	10	15	20	25	30	40	50	60	80	100	120	150	200	250	300
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GRID

Input Wiring	3 PH + N + E															
Input Neutral Requirement	YES															
Nominal Voltage	330V to 450V FOR 3PH															
Grid Frequency Sync Range	50 Hz (± 6%)															
Unity power Factor for grid charging	Near to Unity															
Operating condition	Continuous															
Input Fault Level	≥10 kA															
Self-Consumption	UPTO 4%															
Charger Peak Efficiency	upto 95%															
DG Compatibility	YES (Double of Inverter Capacity)															
Grid Compatibility	YES SAME AS INVERTER CAPACITY															
Input Voltage distortion allowed	LESS THAN 3%															
Grid Charger capacity	50 % of KVA rating															

SOLAR

Charger Type																	
Max PV Connection in KWP	5	10	15	20	25	30	40	50	60	80	100	120	150	200	250	300	
Max PV Voltage (VOC)	250V	300V	500V	500V	500V	500/600V	500/600V	500/600V	500/600V	500/600V	500/600V	500/600V	600V	1000V	1100V	1100V	
MPPT Voltage Range	120-180V	165-250V	300-450V for 240VDC / 450-600V for 360VDC OR 384VDC										700 - 900V				
MPPT Modes Available	3 (Selectable)																
No of MPPT Channel	1				2		2	2	2	2	2	2	3	3	3		
Panel Reverse Protection	Yes																
Solar Charger Efficiency	UPTO 95%																

BATTERY

Nominal Battery Voltage (VDC)	96	120	120	240	240	240/360/384	240/360/384	240/360/384	240/360/384	240/360/384	240/360/384	360/384	360/384	480	576/600	576/600
Battery Buffer Setting	DC Voltage Selectable Through kay pad															
Grid Charging Current	SETTABLE THROUGH KAY PAD															
Temperature Compensated Charging	Yes															
Battery Charging Voltage	Selectable from LCD Display															
Type & No. of cells	Lead Acid / VRLA / Ni-Cd/ Lithium Ion															
Enable/Disable grid & PV charging battery simultaneously	Yes															
BMS compatible	Yes															

OUTPUT

Load Power Factor	0.8 lag															
Output Voltage (Inverter Mode)	415V AC ± 2 %															
Voltage Regulation	± 2 %															
Output Frequency (Free Running)	50 Hz ± 1%															
Output Waveform	Pure Sine wave															
Peak Inverter Efficiency (Full Load)	upto 90 %															
Total Harmonic Distortion	upto 3% at Linear Load															
Overload Capacity	125% for 60Sec, 150% for 5 Sec															
Changeover Time (Full load)	10 msec															
DC to AC Galvanic Isolation	In built Isolation Transformer at Inverter Output															
Anti Islanding Function	Available, In Compliance with IEC 62116															
Auto Bypass feature	YES															
Unbalance load handaling capacity	YES															
Duty	Continuous															

CONFIGURATION

Type	BiDirectional Solar SPU															
Modes Available	Grid saving, Battery backup, Export															
power Export to Grid	Enable / Disable option Available															
power import from Grid	Enable / Disable option Available															

ENVIRONMENTAL	
Acoustic Noise Level from 1 m	≤ 65 dB
Operating Temperature	0 to 40 Deg C(Dust free cooled and dry environment)
Storage Temperature	-10 Deg C to 60 Deg C
Relative Humidity	Up to 95 % (Non Condensing)
Altitude	< 1000 meter above sea level
Sysmic Requirement	upto 0.5g

PHYSICAL	
Enclosure Protection Grade	IP 20 Compatible to IEC 60529:2001-02- As per MNRE Requirement
Enclosure Thickness	as per industrial standard
Cooling	Forced Air
Colour	RAL 7016 / RAL 9016
Cable Entry	Bottom

PARAMETERS DISPLAYED ON LCD

INPUT GROUP	INVERTER GROUP	OUTPUT GROUP	SOLAR GROUP	BATTERY GROUP
Input Voltage	Output Voltage	Voltage	Solar Voltage	Battery Voltage
Input Current	Output Current	Frequency	Solar Current	Battery Current
Input Frequency	Output Frequency		Solar Power (kW)	Soc
kW	KVA		Solar Energy (kWh)	
KVA				
import kwh				
Export kwh				
P.F.				

MECHANICAL PROTECTIONS

ELECTRICAL PROTECTIONS

Circuit Breaker				
fuse				

ELECTRONIC PROTECTIONS

	INVERTER GROUP	OUTPUT GROUP	SOLAR GROUP	BATTERY GROUP
Alarms are provided for all important protections.	Input Under Voltage	Output Under voltage	Surge Protection	Battery Low
	Input Over Voltage	Output Over voltage	Reverse Portection	Battery Over voltage
	Charger Over voltage	Output Overload		Battery Charging Current Limit
	Surge Protection	Output Short Circuit		
	Under/Over Frequency	Inverter Over temperature		

CONNECTIVITY

Communication	RS 232 or RS 485			
Protocol	MODBUS RTU			
LCD with backlight & Tactile kay pad Interface	Yes			
Testing standard	IEC -61683:1999, IEC- 60068-2-1, IEC-60068-2-2, IEC-60068-2-14, IEC-60068-2-30- As per MNRE Requirement			
Saftey Factor	1 for electronic devices, 1 for electrical			
Earthing Connection (Ref. is 3043)	Earth terminal block	25- 40 kVA : 3 x 25 mm GI (Earth bus bar running along the panel)	45-150 kVA : 6 x 50 mm GI (Earth bus bar running along the panel)	200-300KVA : 6 x 50 mm GI (Earth bus bar running along the panel)
Illumination lamp				
Gland Plate				
Utility Socket				

DIMENSIONS

Dimensions (in mm)																
KVA Rating	5	10	15	20	25	30	40	50	60	80	100	120	150	200	250	300
Width (W)	450	450	450	450	450	450	600	800	800	1100	1100	1100	1565	1570	2900	2900
Depth (D)	800	800	800	800	950	950	1000	950	950	800	800	800	850	850	850	850
Height (H)	800	800	800	800	800	800	1300	1700	1700	1900	1900	1900	1900	1900	1900	1900
Weight (Kg) APPROX.	125	150	150	300	350	450	650	650	700	850	900	1000	1200	1400	1500	1600

Add on ACCESSORIES (not standard Part fo inverter)	GSM Based Remote Monitoring
	Modbus RS485
	RADIATION SENSOR (Pyranometer)
	SMOKE DETECTOR
	IP 42 Enclosure and above
	MANUAL BYPASS