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GRID INTERACTIVE HYBRID INVERTER - 3PHASE



**Battery Less
Operation**

**2 Years
Warranty**

Grid Interactive Hybrid Solar Inverter - Three phase in-Three Phase out inverter gives maximum performance and reliability to run your heavy duty appliances. This inverter enables you to have the flexibility to be used as a On-Grid, Off-Grid or Hybrid Inverter as per your convenience

FEATURES

Redundant Power Supply (Grid & DG):

- Twin Power supply to improve the power availability for the operation of PCU



Graphical Display with Real-Time Operational Graph:

- Realtime SLD logic for easy understanding for the system operations.



NO Break Changeover:

- No time delay during changeover from Solar to Battery or Grid and vice-versa.



In-built safety for High Temp, Smoke and Reverse Polarity

- PCU will shut down in case of fire/smoke and protects the connected loads and the system.



Unbalanced Load Operation

- Prevents system trip during in the unbalancing load condition
- 100% Single phase, 50-50 unbalance, 33-33-33, equal balance



Minimized Internal Losses

- High performance and efficient controller
- Eliminate input current harmonics



GRID INTERACTIVE HYBRID INVERTER - 3PHASE

Model Name	LS 310GIH	LS 312GIH	LS 315GIH	LS 320GIH	LS 325GIH	LS 330GIH
INVERTER CAPACITY (kVA)	10	12.5	15	20	25	30

GRID

Input Wiring	3Ph five wire (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	up to 4%
Charger Peak Efficiency	upto 95%
DG Compatibility	YES (Double of Inverter Capacity)
Grid Compatibility	YES SAME AS INVERTER CAPACITY
Grid Charger capacity	50 % of KVA rating

SOLAR

Charger Type	MPPT					
Max PV Connection in kWP	11	13.8	16.5	22	27.5	33
Max PV Voltage (VOC)	300V	300V	300/500 V	500V	500V	500/600V
MPPT Voltage Range (Vmp)	165-250V	165-250V	165-250V for 120VDC / 300-450V for 240VDC	300-450V for 240VDC / 450-600V for 360VDC		
Max Input current (Isc)	60 A	75 A	90 A for 120VDC and 50A for 240VDC	66 A for 240VDC and 44 A for 360VDC	83 A for 240VDC and 55 A for 360VDC	100A for 240VDC and 66 A for 360VDC
String Combination @335Wp	S: 5 P: 6	S: 6 P: 6	S: 5 P: 9 (@120vdc) S: 9 P: 5 (@240vdc)	S:10 P: 6 (@240vdc) S: 12 P: 5 (@360vdc)	S: 9 P: 8 (@240vdc) S: 12 P: 6 (@360vdc)	S:10 P: 9 (@240vdc) S: 13 P: 7 (@360vdc)
No of MPPT Channel	1					
Panel Reverse Protection	Yes					
Solar Charger Efficiency	up to 95%					

BATTERY

Nominal Battery Voltage (VDC)	120	120	120/240	240	240/360
Battery Buffer Setting	DC Voltage Selectable Through Key pad				
Grid Charging Current	SETTABLE THROUGH Key PAD				
Temperature Compensated Charging	YES				
Battery Charging Voltage	Selectable from LCD Display				
Type & No. of cells	Lead Acid / VRLA / Ni-Cd/ Lithium Ion				
BMS compatible	YES				

OUTPUT

Output Current (Amp) Total	34	43	54	69	86	104
Output Voltage (Inverter Mode)	415V AC ± 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)	No Break Change Over Time					
DC to AC Galvanic Isolation	In built Isolation Transformer at Inverter Output					
Anti Islanding Function	In Compliance with IEC 62116					
Auto Bypass feature	YES					
Unbalance load handling capacity	YES					

CONFIGURATION

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
Cooling	Forced Air
Cable Entry	Bottom

PARAMETERS DISPLAYED ON LCD

Input Group	1. Voltage, 2.Current, 3. Frequency, 4. kW, 5. kVA, 6. Import kWh , 7. Export kWh, 8. Power Factor
Inverter Group	1. Voltage, 2. Current, 3. Frequency, 4. kVA
Output Group	1. Voltage, 2. Frequency
Output Group	1. Solar Voltage , 2. Solar Current, 3. Power(kW), 4. Solar Energy (kWh)
Battery Group	1. Voltage, 2.Current 3. Charging Status

PROTECTIONS

ELECTRICAL PROTECTIONS	CIRCUIT BREAKER and Fuse
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ELECTRONIC PROTECTIONS

Alarms	Alarms are provided for all important protections.	
Inverter Group	1.Input Under Voltage, 2.Input Over Voltage, 3. Charger Over Voltage, 4. Under /Over Frequency	
Inverter Group	1. Output Under Voltage,2.Output Over Voltage 3. Overload, 4. Output short Circuit, 5. Inverter Over Tem-perature	
Solar Group	1. Surge Protection , 2. Reverse PV Panel protection	
Battery Group	1. Battery low , 2. Battery Over charge 3.,Battery Charging Current limit	

CONNECTIVITY

Communication	RS 232 or RS 485	
Protocol	MODBUS RTU	
LCD with backlight & Tactile Key pad Interface	YES	
Safety 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)

PANEL COMBINATION

	Please discuss with Technical team for Battery less Panel combination					
Dimensions (in mm)						
KVA Rating	10	12.5	15	20	25	30
Width (W)	450	450	450	450	450	600
Depth (D)	800	800	800	800	950	1000
Height (H)	800	800	800	800	800	1300
Weight (Kg) APPROX.	150	150	150	300	350	600

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- ◆ Solar Panel, UPS, PCU, SCC & SMU: Customer End
- ◆ Battery: CSC location



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