



GRIDLINK-SPI

Ongrid Solar Pump Inverter

HBL's OGSPi the Grid Connected Solar Pump Inverter is an innovative solution for water pumping application with power export feature. Whenever there is excess solar power generation OGSPi can export power simultaneously while feeding required power to drive the water pump simultaneously.

In the absence of grid power OGSPi will operate as stand-alone VFD and can drive the motor pump on solar power.

Leading Features

- ⊙ Transformerless ONGRID inverter with efficiency > 98%
- ⊙ Maintenance free operation
- ⊙ Dynamic MPPT control design
- ⊙ IP 65 enclosure, suitable outdoor Installations
- ⊙ Multiple protection functions for high reliability
- ⊙ Web-based data monitoring
- ⊙ Supports different types of water pumps (both Surface and Submersible)
- ⊙ Natural convection cooling
- ⊙ Mounting : Wall, ground & pole

System Advantages:

Existing: Grid connected Pump System	HBL SOLUTION: HBL smart Grid Inverter
Complex arrangement is required	Simple solution and very easy installation
Separate Pump controller is required	Integrated unit, no need of separate unit
When Grid is not available solar Power is not utilized	Even when grid is unavailable, solar energy will drive the pump. Power will not export and will meet the anti islanding condition
Maintenance is difficult due to complex arrangement	Easy maintenance

Specifications of Grid Connected Solar Pump Inverter 10KW, 15KW and 20KW

System Configuration	10KW GTI with 3HP Pump	15KW GTI with 5HP Pump	20KW GTI with 7.5HP Pump
DC Input			
Maximum input power, KW	11KW	16.5KW	22KW
Nominal Power	10KW	15KW	20KW
MPP range@Pnom	450V -650V	450V -650V	22KW
Operating range	300V - 800V	300V - 800V	300V - 800V
Startup DC voltage	250V	250V	250V
Max. input current	16.4A	24.6A	32.8A
Number of MPP trackers	1	1	1
Number of strings	2	3	4
System in GTI Mode			
Rated output power	10KW	15KW	20KW
Rated voltage	3ph, 4wire, 415V nom.	3ph, 4wire, 415V nom.	3ph, 4wire, 415V nom.
Frequency	47-53Hz	47-53Hz	47-53Hz
Rated current	14A	20.8A	27.8A
Power Factor	1/0.8i..0.8c	1/0.8i..0.8c	1/0.8i..0.8c
Voltage range	350-456V	350-456V	350-456V
Total Harmonic Distortion	<3% @ Nominal power	<3% @ Nominal power	<3% @ Nominal power
Maximum efficiency	98.50%	98.50%	98.50%
System in SPI Mode			
OUTPUT			
Output Phase	3ø, 3 Wire	3ø, 3 Wire	3ø, 3 Wire
Capacity	3HP (2.2KW)	5HP (3.7KW)	7.5HP (5.6KW)
Output Voltage Maximum	400VAC	400VAC	400VAC
Output frequency	3-50Hz	3-50Hz	3-50Hz
Output Current	6.3Amps	9.3Amps	14.5Amps
Water output	As per MNRE	As per MNRE	As per MNRE
System Front Panel			
Display	5" Graphic LCD	5" Graphic LCD	5" Graphic LCD
LEDs on Front Panel	System ON	System ON	System ON
	Grid	Grid	Grid
	System in Sync	System in Sync	System in Sync
	Fault	Fault	Fault
Mechanical & Environment			
Ambient temperature	-25 o C...+ 55oC	-25 o C...+ 55oC	-25 o C...+ 55oC
Relative humidity	0...95%	0...95%	0...95%
Altitude	1000m	1000m	1000m
Protection class	IP65	IP65	IP65
Noise level	<45dBA	<45dBA	<45dBA
Enclosure Dimensions (H X W X D)	555X500X180	555X500X180	TBD
Weight	45Kg. Approx.	TBD	TBD
Fault messages on LCD	SPV Under voltage		
	Over temperature		
	AC Overload		
	Grid Fail		
	AC Under/Over Voltage/Unbalance		
Measurements on LCD	SPV Voltage		
	SPV Current		
	SPV Instantaneous Power		
	Inverter Voltages		
	Inverter Currents		
	Instantaneous Powers		
	Frequency and PF		
	Temperature		
	Energy Exported		
System Protections			
	Motor dry run		
	Reverse Polarity		
	Soft start		
	Over temperature		
	Output short circuit		
	Output phase loss		
	Output Open circuit		
	Lightning and Surge		
	Provided		
DC switch	Provided		
Input and Output connections	DC: solar connectors- MC4, AC: cable connection and terminal (max. cross-section : 6 sq. mm)		
Interfaces	Modbus 485, Modbus TCP, Ethernet, GSM (Optional)		
Certifications			
Safety	IEC 62109-1/-2,		
Grid compliance	"IEC 61683 IEC 60068-2(1,2,14,30), IEC 61000-6-2,3 &4, IEC 61727, IEC 62116"		

HBL®

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