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SHAKTI
PUMPING LIFE

INSTALLATION & OPERATING INSTRUCTIONS

SUN SHAKTI GRID-TIE 3kVA & 6kVA INVERTER

SHAKTI
PUMPING LIFE

CONTENT PAGE NO.

CHAPTER 1 : SAFETY INSTRUCTIONS

General Safety

- Read the user manual before operating the product.
- Installation and maintenance of the product must be carried out by trained and qualified person only.
- To prevent risk of shock during installation & maintenance, please make sure that all AC and DC terminals are plugged out.
- Before opening the housing, the inverter must be disconnected from all the energy sources like Grid & PV.
- After disconnecting all the inputs / sources of the unit, wait 5 minutes before opening the unit cover, it takes couple of minutes to discharge all the capacitors inside the unit.
- Ensure polarity, tightness and wire size are correct, before energizing the Inverter.
- Unit must be earthed using appropriate wire size diameter & its diameter should be equal to or higher than that of input power supply wires (refer regional safety standard specific to your location).
- Ensure the PV Panel specifications are matching with the product specifications.

CHAPTER 2 : PRODUCT DESCRIPTION

Sun Shakti Grid-Tie Inverter is a high performance, transformer-less, high switching frequency based grid-tie Inverter with IP 65 ingress protection. The Grid-Tie Inverterâs digital control coordinates with PV source and ensures maximum energy harvesting from it. The system is enabled with RS232 communication port. A Shakti dongle can be connected to the same to achieve unique user experience where it can be controlled and monitored by Shakti RMS mobile app. The dongle system is equipped with GSM/GPRS/WiFi and Bluetooth modules for communication.

The operation of the grid-tie inverter is depicted in the figure 2.1. The inverter converts the DC power input from the PV array to single phase AC power output which is fed to the grid.

Fig 2.1 Grid-Tie Inverter operation illustration

CHAPTER 3 : PACKAGE CONTENTS

Inspection

Note: Never install or operate any unit which is damaged or has missing components. Doing so can result in injury.

Check the following items when unpacking the Inverter:

1. Ensure there is operation manual and warranty card in the packing box.
2. Ensure the nameplate is correct as ordered.
3. Ensure the optional parts are as per order, if ordered.
4. Contact the customer care if there is any damage to the unit or the optional parts.

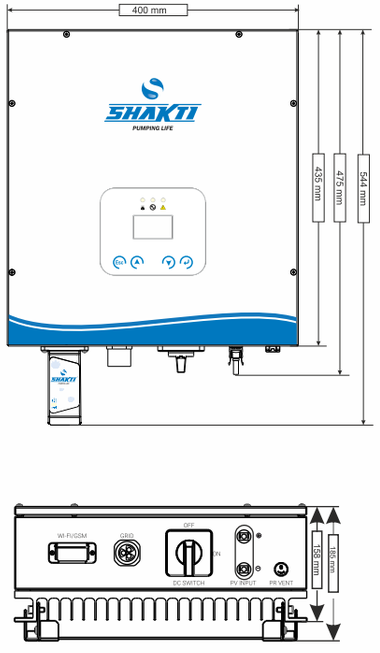


Fig. 3.1 3kVA Grid-Tie Inverter unit

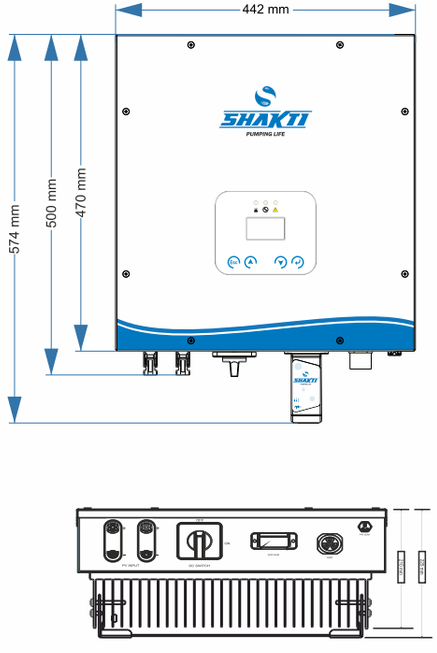


Fig. 3.2 6kVA Grid-Tie Inverter unit

Following is the list of items in the packaging.

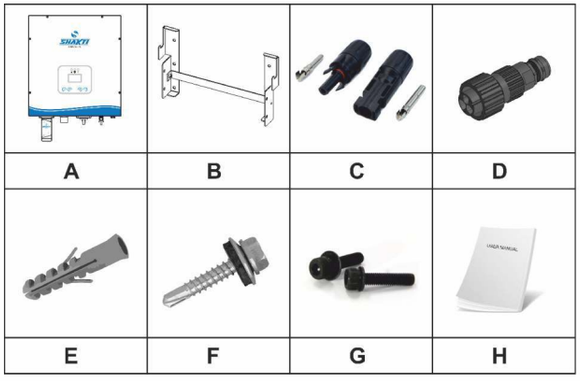
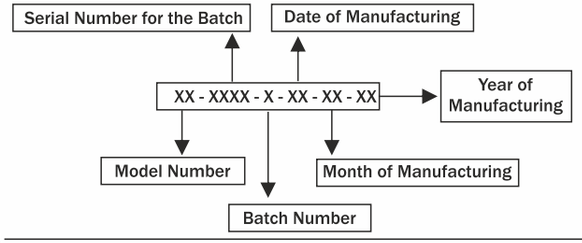


Fig. 3.3

Table 3.1

SL No.	Name	QTY		UNIT
		3KW	6KW	
A	Inverter	1	1	No.
B	Wall Mount Bracket	1	1	EA
C	PV Connectors	2	4	EA
D	M6Ï 50 Hex Head Tapping Screw	6	6	EA
E	Anchor - Expansion tube	6	6	EA
F	M6 X 15 Socket Head Screw	4	4	EA
G	AC Connector	1	1	EA
H	User Manual	1	1	EA

Model Explanation



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CHAPTER 4 : SPECIFICATIONS

Technical Data	Model Name	SSG 1P 1kW	SSG 1P 2kW	SSG 1P 3kW	SSG 1P 3.3kW
	Model No.	9000029600	9000029601	9000029602	9000030647
INPUT PV DATA					
Maximum PV Power		1200 W	2400 W	3600 W	3600 W
Maximum PV Voltage		510 VDC			
PV Start Voltage		150 VDC			
Max. PV Current		1 X 13 A			
Max PV Isc Current		14 A			
MPPT Range		170-415 VDC			
Nominal PV Voltage		300 VDC			
Peak MPPT Accuracy		> 99.5 %			
Number of PV Inputs		1			
OUTPUT AC DATA					
Rated Output Power		1000 W	2000 W	3000 W	3300 W
Max. Apparent Power		1100 VA	2200 VA	3300 VA	3300 VA
Max. Output Power		1100 W	2200 W	3300 W	3300 W
Rated Grid Voltage		230 V 1L/N/PE			
Rated Grid Frequency		50/60 Hz			
Rated Grid Current		4,5 A	9 A	13,5 A	14,5 A
Max. Grid Current		5 A	10 A	15 A	15 A
Power Factor		0.8 leading ~ 0.8 lagging			
Total Harmonic Distortion		< 5% (at nominal power)			
EFFICIENCY					
Max. Efficiency		94%	95%	96%	96%
Euro Efficiency (at 600VDC)		93%	94%	95%	95%
PROTECTION					
DC Reverse Polarity		YES			
Grid Monitoring		YES			
Shortcircuit		YES			
Over Temperature		YES			
Integrated DC Switch		YES			
Output Over Current		YES			
Insulation Resistance Detection		YES			
Residual Current Monitoring Unit		YES			
Surge Protection DC Side		YES			
Surge Protection AC Side		YES			
Anti-Islanding		YES			
DISPLAY & COMMUNICATION					
Display Type		Graphical LCD			
Status Indicator		LEDs			
Serial Communication		RS232			
Remote Monitoring		Yes(Optional)			
WiFi		Yes(Optional)			
OTHER INFO					
L X W X H		475 X 400 X 185mm^3			
Net Wt./ Gross Wt.		13Kg/15Kg			
Topology		Transformer less 2 leg Inverter			
Pollution Degree		PD3			
Over Voltage Category		PV OVC II /Grid OVC III			
Protection Class		Class I			
Operating Temperature		-10 to 50 °C			
Relative Humidity		0 ~ 95% RH(Non-Condensing)			
Altitude		2000 m			
Environmental		Indoor & Outdoor Installation			
IP Degree of Protection		IP 65			
Cooling		Natural Convection			
Standards		IEC62109-1/2, IEC61683, IEC60068-2-(1,2,14,30), IEC60529, IEC62116, IEC61727			

Technical Data	Model Name	SSG 1P 4kW	SSG 1P 5kW	SSG 1P 6kW
	Model No.	9000029603	9000029604	9000029605
INPUT PV DATA				
Maximum PV Power		4800 W	6000 W	7200 W
Maximum PV Voltage		510 VDC		
PV Start Voltage		150 VDC		
Max. PV Current		2 X 13 A		
Max PV Isc Current		14 A		
MPPT Range		170-415 VDC		
Nominal PV Voltage		300 VDC		
Peak MPPT Accuracy		> 99.5 %		
Number of PV Inputs		2		
OUTPUT AC DATA				
Rated Output Power		4000 W	5000 W	6000 W
Max. Apparent Power		4400 VA	5500 VA	6600 VA
Max. Output Power		4400 W	5500 W	6600 W
Rated Grid Voltage		230 V 1L/N/PE		
Rated Grid Frequency		50/60 Hz		
Rated Grid Current		18 A	22.5 A	27 A
Max. Grid Current		20 A	25 A	30 A
Power Factor		0.8 leading ~ 0.8 lagging		
Total Harmonic Distortion		< 5% (at nominal power)		
EFFICIENCY				
Max. Efficiency		96%	96%	96%
Euro Efficiency (at 600VDC)		95%	95%	95%
PROTECTION				
DC Reverse Polarity		YES		
Grid Monitoring		YES		
Shortcircuit		YES		
Over Temperature		YES		
Integrated DC Switch		YES		
Output Over Current		YES		
Insulation Resistance Detection		YES		
Residual Current Monitoring Unit		YES		
Surge Protection DC Side		YES		
Surge Protection AC Side		YES		
Anti-Islanding		YES		
DISPLAY & COMMUNICATION				
Display Type		Graphical LCD		
Status Indicator		LEDs		
Serial Communication		RS232		
Remote Monitoring		Yes(Optional)		
WiFi		Yes(Optional)		
OTHER INFO				
L X W X H		574 X 443 X 210 mm^3		
Net Wt./ Gross Wt.		23Kg/25Kg		
Topology		Transformer less 2 leg Inverter		
Pollution Degree		PD3		
Over Voltage Category		PV OVC II /Grid OVC III		
Protection Class		Class I		
Operating Temperature		-10 to 50 °C		
Relative Humidity		0 ~ 95% RH(Non-Condensing)		
Altitude		2000 m		
Environmental		Indoor & Outdoor Installation		
IP Degree of Protection		IP 65		
Cooling		Natural Convection		
Standards		IEC62109-1/2, IEC61683, IEC60068-2-(1,2,14,30), IEC60529, IEC62116, IEC61727		

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CHAPTER 5 : INSTALLATION

Mounting Method, Installation Position and Mounting Procedure of the Grid-Tie Inverter is illustrated as follows:

5.1.Mounting Method

1. The equipment employs natural convection cooling, and it can be installed indoor or outdoor.
2. Please install the equipment under the guidance of Figure 5.1. Vertical
   installation on floor level is recommended. Mount vertically or tilted backwards by max. 15°. Never install the inverter tilted forwards, sideways, horizontally or upside down.
3. Install the inverter at eye level for convenience when checking the LCD
   display and possible maintenance activities.
4. When mounting the inverter, please consider that disassembly for service work may be required.

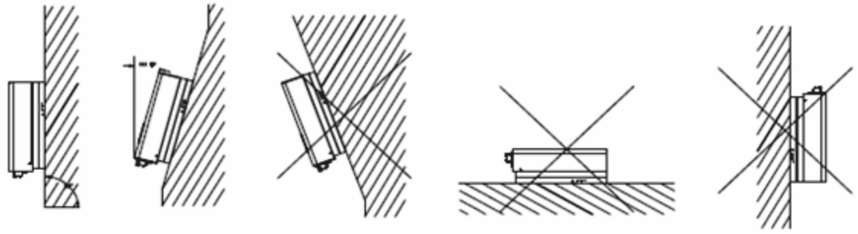


Fig. 5.1

5.2. Installation Position

Do not expose the inverter to direct solar irradiation as this could cause power derating due to overheating. The ambient temperature should be between -25fiC ~ 60fiC (-13fiF ~ 140fiF) to ensure optimum operation. Choose locations with sufficient air exchange. Ensure additional ventilation, when necessary. To make sure the installation spot is suitably ventilated, if multiple grid-tie solar inverter units are installed in same area, the following safety clearance shall be followed for proper ventilation conditions.

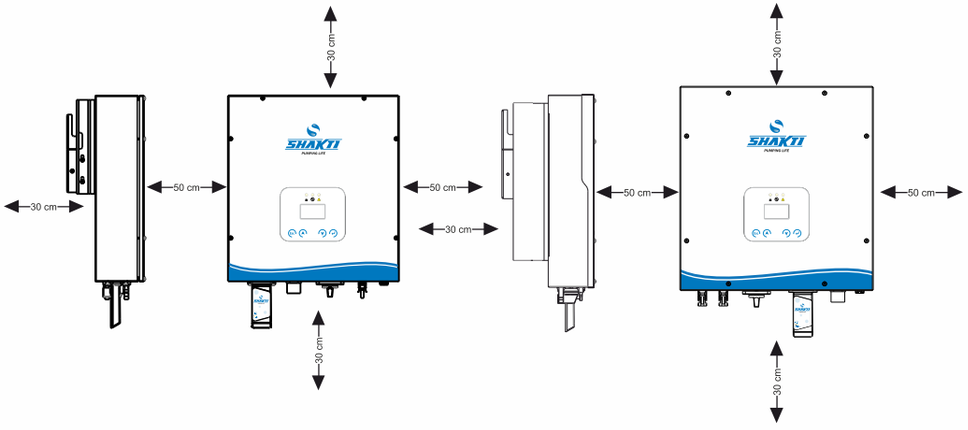


Fig 5.2 3kVA Grid-Tie Inverter Clearance

Fig 5.3 6kVA Grid-Tie Inverter Clearance

5.3. Mounting Procedure

1. Mark the Positions of the Drill Holes of the wall mount bracket.

The mounting position should be marked as shown in Figure 5.4.

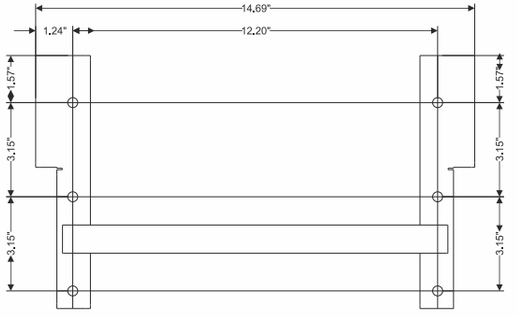


Fig. 5.4

2. Drill Holes and Place the Expansion Tubes According to the guides, drill 3 holes in the wall (in conformity with position marked in Figure 5.5), and then place expansion tubes in the holes using a rubber mallet.

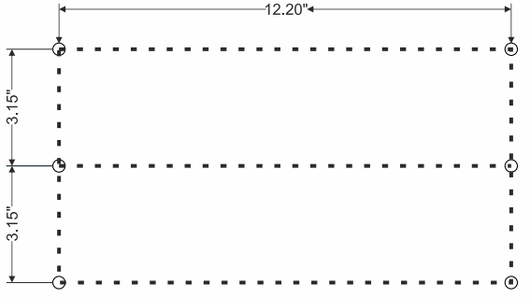
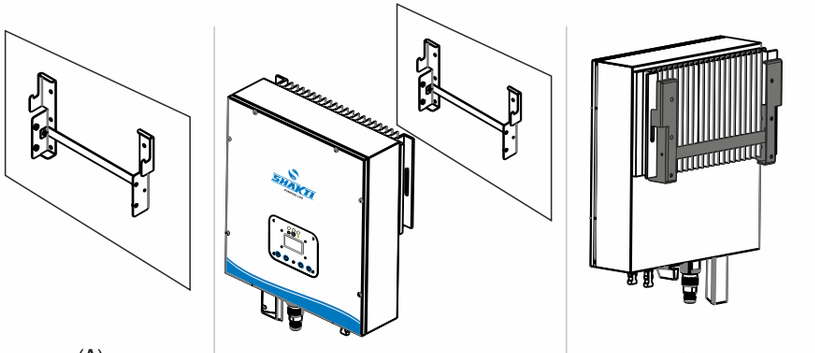


Fig. 5.5

3. Mount the Inverter

Carefully mount the inverter to the rear panel as shown in Figure A, Figure B, & Figure C. Make sure that the rear part of the equipment is closely mounted to the rear panel.



(A)

STEP 1:
Mount wall mount Bracket
3 nos. Anchor & Screws

(B)

STEP 2:
2 persons hold unit and Hook on the wall mounting bracket
Install unit as shown

(C)

STEP 3:
After unit installation use 4 nos.of M6 screws for assembly

Fig 5.6 Mounting Steps for 3kVA & 6kVA Grid-Tie Inverter unit

CHAPTER 6 : CONNECTIONS AND INSTALLATION

6.1. WARNING

1. Violation of these messages may cause severe injury or property damage.
2. Untrained person should not work on any part/system of Inverter.
3. Only licensed person, who has been trained on design, installation, commissioning and operation of Inverter, is permitted to operate this equipment.
4. Input power cable must be connected tightly.
5. Earth the equipment securely.
6. Wait for 5 minutes after the power is switched off to install/service the Inverter.
7. The gauge of the grounding cable must not be less than that of power supply cable.
8. Use recommended circuit breaker for Inverter input.

6.2. Rear Panel

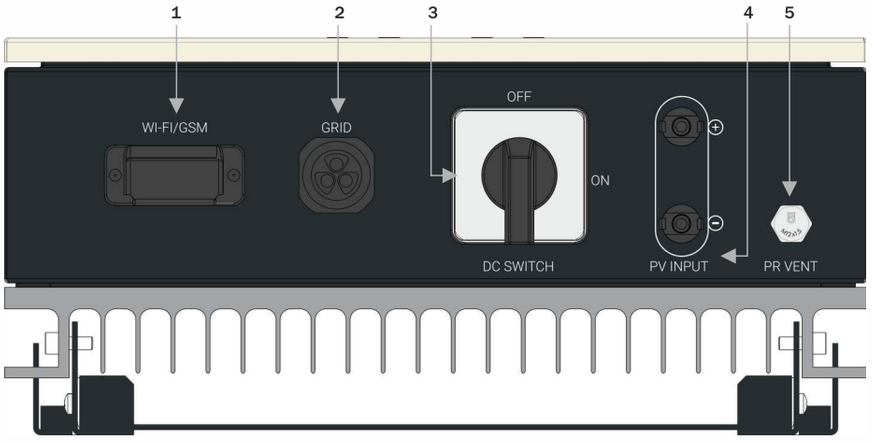


Fig. 6.1 Rear Panel view of 3kVA Grid-Tie Inverter

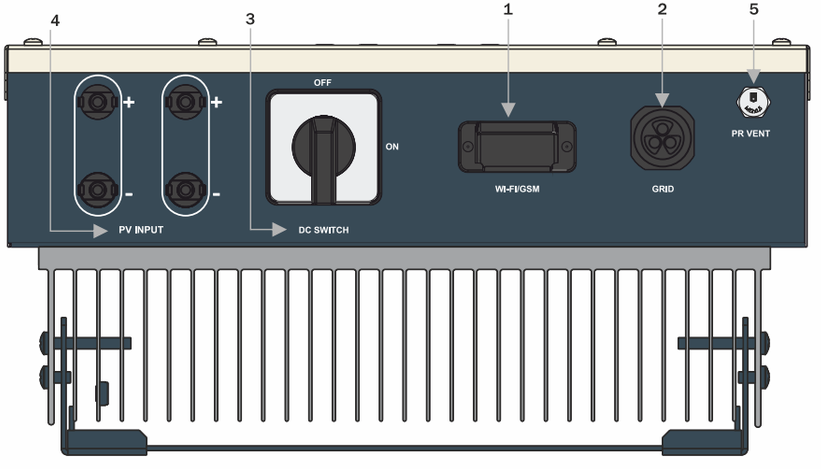


Fig. 6.2 Rear Panel view of 6kVA Grid-Tie Inverter

Table 6.1

Marking	Description
1	DB9 Connector
2	AC Output Connector
3	PV DC Disconnect Switch
4	PV Input Connectors
5	Pressure Relief Vent

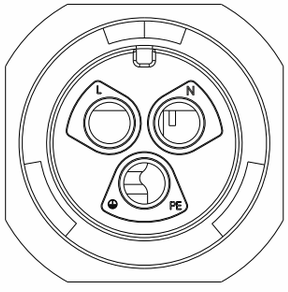


Fig. 6.3 AC OUTPUT

6.2.1 DB9 Connector

Connect SPL dongle for GSM/WiFi and Mobile App connectivity. Shakti RMS / Iot Dongle Appearance and configuration is described in section 6.3.

6.2.2 AC Output Connector

3 PIN AC connector from lit kit to be assembled to cable as per recommended gauge and connected inverter as shown location.

1. Connect cable according to connections mark on the connector L, N & PE.
2. Cross-sectional area of cable (mm) - Recommended Value : 4.0~6.0
3. Outside Diameter of the Cable (mm) : 4.2~5.3
4. Secure all the parts of the AC connectors tightly.
5. Plug in the AC connector to the equipment securely, ensuring the pins are connected directly.
6. Connect a 32 A external circuit breaker at the AC output.
   Connect the cables according to the connection marks and following connections:
   1. L : Phase of AC output
   2. N : Neutral of AC output
   3. PE : Earth connection

6.2.3 PV DC Disconnect switch

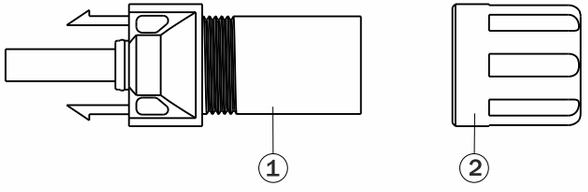
This switch is provided to isolate the PV DC input from the inverter during servicing of the inverter or any other maintenance work on the PV panels.

6.2.4 PV Input Connectors

Table 6.2

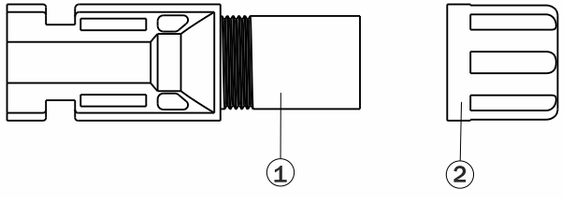
Cross - Section Area of Cables (mm2)		Outside Diameter of the Cables (mm)
Scope	Recommended Value	
4.0-6.0	4.0	4.2 ~5.3

DC connector is made up of the positive connector and the negative connector as shown in fig 6.4 & 6.5. The 3kVA model has one pair of PV input connectors whereas 6kVA has two.



1. Insulated Enclosure 2. Lock Screw

Fig. 6.4 Positive Connector

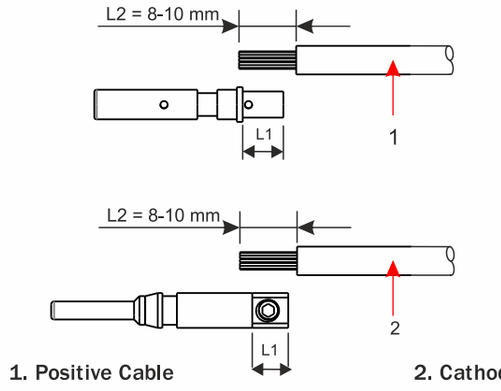


1. Insulated Enclosure 2. Lock Screw

Fig. 6.5 Negative Connector

Connecting Procedures

1. Tighten the lock screws on positive and cathode connector.
2. Use specified strip tool to strip the insulated enclosure of the positive and cathode cables and appropriate length.
3. Feed the positive and cathode cables into corresponding lock screws as shown fig 6.6.



1. Positive Cable 2. Cathode Cable

Fig. 6.6 Connecting Cables

4. Put the metal positive and cathode terminals into positive cable and cathode cable whose insulated enclosure has been stripped, & crimp them tightly with a wire crimper. Make sure that the withdrawal force of the pressed cable is bigger than 400N.
5. Plug the pressed positive and cathode cables into relevant insulated enclosure, a "click" should be heard or felt when the contact cable assembly is seated correctly.
6. Fasten the lock screws on positive and negative connectors into respondent insulated enclosure and make them tight.
7. Connect the positive and cathode connectors into positive & negative DC input terminals of the inverter, a"click" should be heard or felt when the contact cable assembly is seated correctly as shown in fig 6.7.

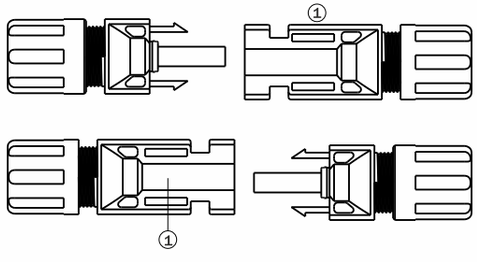


Fig. 6.7 1) Connection Port

6.2.5 Pressure Relief Vent

Pressure relief vent releases the internal pressure.

6.3 SHAKTI RMS/IoT DONGLE

Remote Monitoring and Control
In-built Data Logger & RTC
Compatible with GSM, WiFi & Bluetooth

1. Product Appearance

Figure 1

Status Indicator:

Pulse LED (GREEN)	Blink In every second	Normal
	Constant ON/OFF	Abnormal
Signal LED (RED)[1] GPS/Signal (RED)[2]	ON	Normal[1]/ GPS location fixed[2]
	Blink In every second	Getting GPS location[2]
	OFF	Abnormal(Signal low/zero)
NETWORK LED (GREEN)[2]	Constant ON	4G Connectivity
	Constant OFF	2G Connectivity
Wi-Fi LED (YELLOW)[1]	ON/Blink	Normal
	OFF	No WiFi Network

here 1 and 2 indicates 2G and 4G dongle respectively.

2. Installation and Connection:

For installing the SHAKTI IoT dongle.
Follow these steps :

Step1: Remove the cover and take out the motherboard.

Figure 2

Step2:
Insert SIM card as per the correct direction marked.

Figure 3

Step3:
Put the motherboard back into the enclosure.

Figure 4

Step 4:
Insert the dongle into DB9 port and use two M3x10 screws to fix the dongle along with gasket.

3. Configuration

Step1: Connect the "Shakti IoT dongle" to the main device and check the "pulse LED" (green) blinking in every second.

Step2:
If the SIM card is present in the "Shakti IoT dongle" and network is available in that area the Signal LED (RED) will be ON as per the status indicator table.

Step3:
To configure the Wi-Fi in 2G dongle follow these steps:3.1)

Turn ON Wi-Fi on your Mobile and select "SHAKTI_DONGLE and connect it with the password "shakti123".

An HTML page will open in your browser otherwise browse http://192.168.4.1. You will get the HTML page like this:

Figure 6

3.2) Now "Configure Wi-Fi" now new page will open like this:

Figure 7

3.3) Select your preferred WiFi with proper password and then save. In case your WiFi network is not visible in the list scan again.

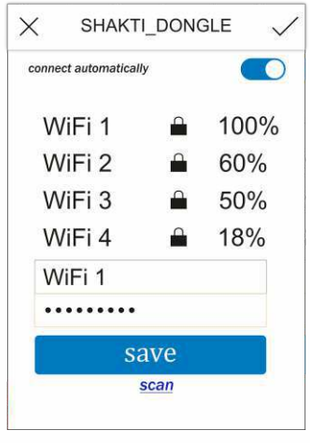


Figure 8

On successful configuration, WiFi LED (yellow) will be ON.

NOTE
a) Shakti IoT Dongle is designed to work with GSM on priority, WiFi is always secondary.
b) For using Wi-Fi remove SIM card then connect shakti dongle.
c) On successful TCP connection WI-FI yellow LED will blink in every second.

4. Troubleshooting
1) If Pulse LED is constantly ON/OFF, check main device power supply or restart the device.
2) If signal LED not glowing, check sim card / signal strength.
3) If Wi-Fi LED not glowing, check Wi-Fi network / reconfigure Wi-Fi settings.

5. Contact Shakti to integrate IoT Dongle to other products & solutions.

CHAPTER 7 : BASIC OPERATION

7.1 LCD Module Description

Following table describes the functionality of the status LEDs/Buttons on the DISPLAY

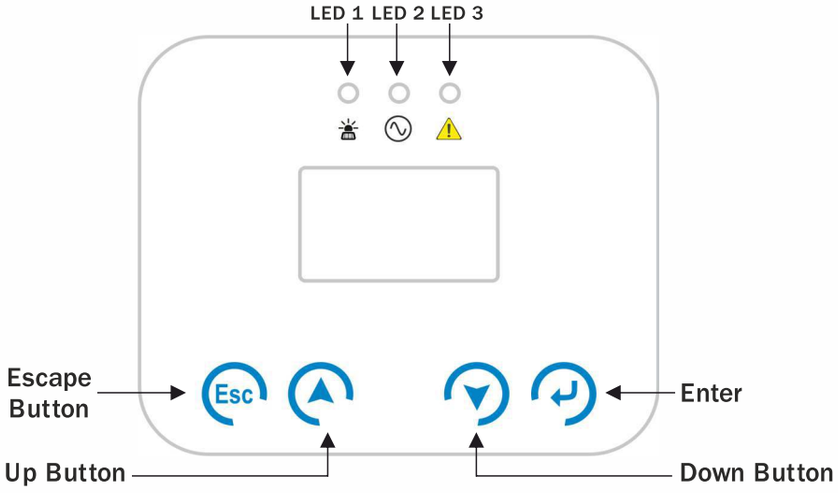


Fig. 7.1 LCD Display

Table 7.1

Button	Functionality
ESC	Previous Screen
UP BUTTON	Used for Scrolling up / increasing the parameter value in configuration menu
DOWN BUTTON	Used for Scrolling down / decreasing the parameter value in configuration menu
ENTER	Selection

Table 7.2

LED STATUS				
LED	LED 1 (Green)	LED 2 (Dual)		LED 3 (Red)
		Green	Amber	
OFF				
STAND-BY				
GRID-TIE				
FAULT				

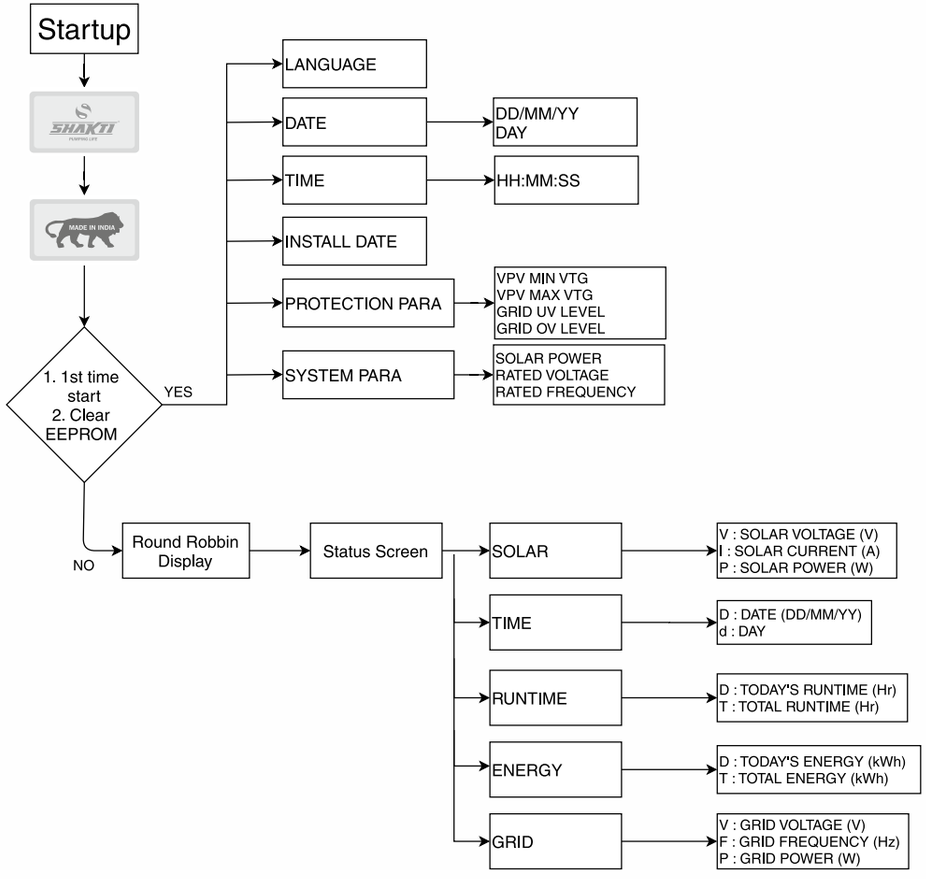
Table 7.3 STATUS

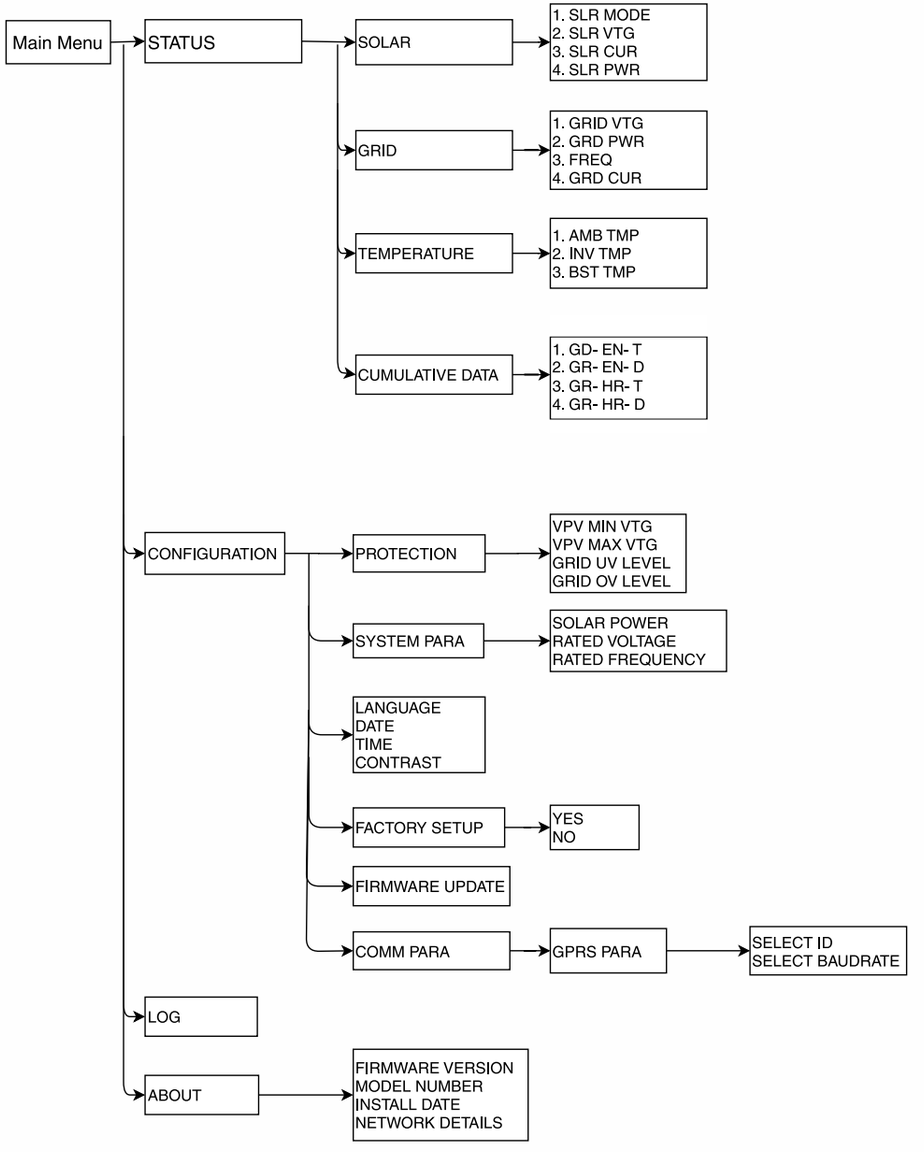
Solar	1. Solar mode • Enabled • Disabled 2. Solar Voltage (V) 3. Solar Current (A) 4. Solar Power (W)
Grid	1. Grid Voltage (V) 2. Grid Power (W) 3. Grid Frequency (Hz) 4. Grid Current (A)
Temperature	1. Ambient Temperature (deg) 2. Inverter Temperature (deg) 3. Boost Temperature (deg)
Cumulative Data	1. Total Grid Energy (kWh) 2. Today's Grid Energy (kWh) 3. Total Grid Hour (hr) 4. Today Grid Hour (hr)

TABLE 7.4 **CONFIGURATION**

Protection			
Parameter	Default Value	Range	Set Accuracy
PV Min Vtg	170 V	170 – 300 V	1V
PV Max Vtg	490 V	250 – 490 V	1V
Grid OV	265 V	200 – 285 V	1V
Grid UV	190 V	160 – 200 V	1V
Language			
Date			
Parameter	Navigation	Range	Set Accuracy
dd/mm/yy	➢ Use Enter key to move between dd, mm ➢ Use up/down key to change the values of	31/12/xx	1/1/xx
Time			
Parameter	Navigation	Range	Set Accuracy
hh:mm:ss	➢ Use Enter key to move between ➢ Use up/down key to change the values of	24:60:60	1:01:01
Contrast			
Parameter	Navigation		
LCD Contrast	Use up and down keys to change the LCD		
System Parameters			
Parameter	Default Value	Range	Set Accuracy
Rated Output Voltage	230V	220-240 V	10V
Output Frequency	50/60Hz	50-60 Hz	10Hz
Restore factory Settings			

Following is the LCD Menu Tree





INSTALLATION & OPERATING INSTRUCTIONS

SHAKTI PUMPING LIFE

CHAPTER 8 : TROUBLESHOOTING

Inverter not powering on :

- Check the PV and Grid connections.
- Check the DC disconnect switch position.

Grid Tie Power is not Enough/not working :

- Check for cloud cover on the PV panels.
- Check the installation direction and orientation of the panel.
- Check is Status ->Solar mode is disabled. In case it is disabled, enable it in Configuration->Solar.
- Check if PV DC disconnect switch is not ON.

Table 8.1

Sl.No	Fault message	Log menu display	Description	Fault clearing
1	“PRECHARGE FAIL”	“PREFL”	During power ON, failure of pre-charging the DC bus	Restart the unit
2	“INV SHORT CKT”	“INVSC”	When there is a short circuit at the output of unit	Ensure output is not short and Restart the unit
3	“INV FREQ FLT”	“FRQER”	When output frequency is outside the selected range	Restart the unit
4	“INV VTG FLT”	“VTGER”	When output voltage is not in the range set	Restart the unit
5	“PV SOURCE FLT”	“PVERR”	When DC source is connected to PV input	Ensure DC source is not connected at PV input and Restart the unit
6	“PV GFD FLT”	“GFDER”	When PV ground fault is detected	Check PV connections
7	“ADC FLT”	“ADCER”	When there is a fault with ADC voltages	Restart the unit
8	“DC BUS OV”	“DCOV”	DC bus voltage is greater than the set value	Restart the unit
9	“DC BUS UV”	“DCUV”	DC bus voltage is less than the set value	Restart the unit
10	“GRID RLY FLT”	“GDRLO”/”GDRLC”	GRID relay is welded in NO/NC position	Restart the unit
11	“INV RLY FLT”	“INRLO”/”INRLC”	INV relay is welded in NO/NC position	Restart the unit
12	“OVER TEMP”	“OTEMP”	Unit temperature raised above over temp limits	Restart the unit
13	“NTC FLT”	“NTCFT”	NTC is not connected properly in the unit	Ensure proper NTC connection and Restart the unit
14	“ILEAKAGE ERR”	“LKGFL”	Leakage current is above set limit	Restart the unit
15	“EEPROM ERR”	-	Error Read/Write to external flash	Restart the unit
16	“POWR DERATING”	-	Output power de-rated as temp inside the unit is above set limit	Automatic reset when temp goes below set value

CHAPTER 9 : MAINTENANCE

To ensure the normal operation of the inverter, it is advisable to perform the following checks regularly:

1. The tightness and condition of all the terminals, screws and cables.
2. Ensure the environmental conditions like temperature humidity etc., around the inverter are well within the specified limits.
3. Ensure there is no dust accumulation on the inverterâs body.
4. No physical damage on the outer cover of the inverter.

If maintenance is required in the inverter, please follow the instructions given below to put the inverter out of operation:

1. Switch off the AC circuit breaker connected between inverter and grid.
2. Switch off the DC switch to turn off the DC input power.
3. Use proper voltmeter to confirm the disconnection of AC and DC power from the unit.
4. Remove the AC wiring completely to disconnect unit from the grid.
5. Remove the DC wiring to disconnect unit from PV Array.

Note: Before any maintenance work, please switch off the AC and DC power to avoid any risk of electric shock.

CHAPTER 10 : RECYCLING AND DISPOSAL

Electrical and electronics waste should not be thrown out in open, put to fire or buried. They must never be treated as residential waste. An inverter which has reached end of its life or is not needed any more should be returned to the dealer or the company. User is advised to act as per the government norms prevailing in the area.

WARRANTY CERTIFICATE

Dear Customer, Congratulation, for purchasing our product.

Pump and Motor are warranted against defects in workmanship and material under normal use, service & specified duty conditions. We provide one time warranty service for twelve months from the date of purchase by the first user.

Shakti Pumps (India) Limited warrants this product to be free from damage/ defects in material and workmanship under normal use and service for Twelve Months from the date of purchase by the first user. The user shall produce valid and original copy of invoice for availing warranty. The user shall carry defective pump set to nearest authorized service center .

This warranty does not cover any loss or damage/ defect of any nature resulting from wrong product selection/ improper installation or installation by unauthorized/ untrained person/ sandy condition/ dry running and improper use of the pump sets. The warranty also does not cover consequential losses/ damages arising due to failure of pump/ motor. No warranty will be provided on mechanical seal, rubber parts, fasteners, cables in pump motor / pump sets. Our obligation is limited to recycling or repairing or replacing product/ parts exî factory. Equipment for repairs should be returned free of cost to us. The forgoing is subject to the provision that the user does not open the unit and make any change or repair without prior approval of authorized service center during the warranty period. This warranty excludes every condition whether statutory or otherwise, whatsoever not herein expressly set out.

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WARRANTY CARD

Customer to fill following details

Name : .....
Address : .....
City/Village : .....
District : .....
State : .....
Country : .....
Pin Code : .....
Mobile no. : .....
Email id : .....

Information on Device:

Model no : .....
Serial no. : .....
Invoice no. : .....
Commissioning date : .....
Fault date and time : .....
Message related to fault on display : .....
Brief fault description and photo of display : .....
Sign : .....
Date : .....
Place : .....

Installer to fill following details

Modules Used : .....
Modules per string : .....
Number of strings : .....
Dealer license Number : .....
Company : .....
City/Village : .....
State : .....
Country : .....
Pin Code : .....
Mobile no. : .....
Email id : .....
Sign : : .....
Date : : .....
Place: : .....

INSTALLATION & OPERATING INSTRUCTIONS

BOOK-POST

Stamp

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