Photovoltaic Inverter (PV) GSI-3000,4600,5000 Instruction and Operator's Manual

GSI-3000,4600,5000 Introduction and Operator's Manual

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Jun. 2015 Version 3

GSI-3000,4600,5000 Introduction and Operator's Manual

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0.Notes on this Manual

0.1 About this Manual

The intention of this manual is to provide instructions for the mounting, installation, maintenance and troubleshooting. Please store with system documentations and ensure that it is accessible at all times.

0.2 Safety Symbols Used

Warning: Indicates a hazardous situation which could result in death or serious injury if not avoided.

Caution: Indicates a situation that can result in damage to the unit or other equipment if not avoided.

Electric Shock Hazard: Indicates a hazardous situation which can result in electrical shock if not avoided.

Burn Hazard: Indicates a hazardous situation which can result in scalds or burns if not avoided.

1.Safety Guidelines

◎GSI is a grid-tied PV inverter that converts direct current (DC) electricity into alternating current (AC) with an ability to synchronize to interface with a utility grid line. Please do not connect anything other than a PV module source to the inverter.

◎This is a transformerless inverter, please make sure PV modules connected to the unit have an IEC61730 class A rating.

◎Risk of electrical shock and energy hazard. All failures should be examined by a qualified technician. Please do not remove the case of the inverter by yourself!

◎Please do not install the inverter in places with high moisture or near water.

◎Please do not install the inverter in places with high ambient temperature, under direct sunlight, or near fire source.

◎Please do not stack any object on the inverter as it may impede heat dissipation.

◎Comply with the local regulations, standards, and operational procedures when setting up the PV inverter.

◎Electrical Shock Hazard :

To prevent electrical shock while repairing, please make sure all AC & DC switches are disconnected.

◎Case Surface :

The Body of PV inverter may possess very high temperatures while operating, please refrain from contact.

2.Introduction

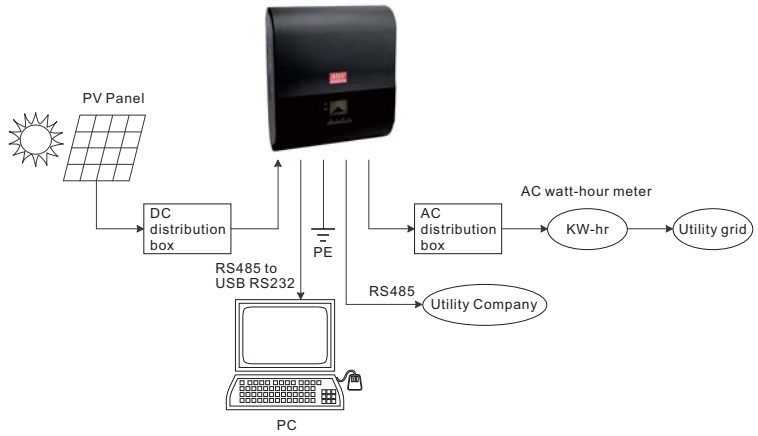


Figure 2.1 System block diagram

Energy is transferred from the PV module to the GSI as a DC input. Next it is converted to an AC output through the GSI and transferred to the utility grid. Data can be acquired through the RS-485 communication interface.

2.1 Features

- True sine wave current output (THD<3%)
- High efficiency up to 96%
- IP65 design for indoor or outdoor installations
- Multi-string input and MPPT
- RS485 communication interface
- Optional DC disconnect switch
- 5 years warranty
- Graphic LCD display
- Anti-islanding protection
- Transformerless design
- With internal ground fault detector
- Monitoring software

2.2 Block Diagram

Grid Type (3000VA)

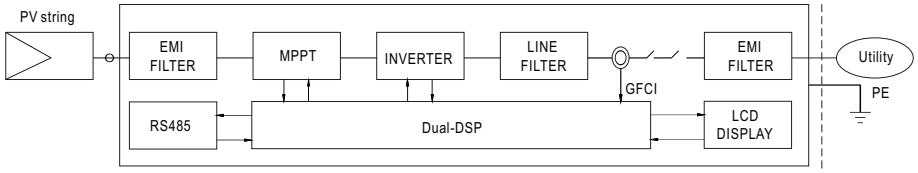


Figure 2-2

Grid Type (4600VA/5000VA)

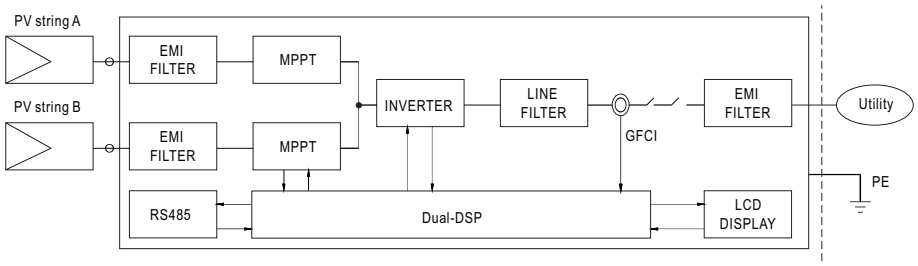


Figure 2-3

2.3 Main Specification

GSI - 3000 A - TW

- TW: Country code TW: Suitable for Taiwan
- A: Blank: Without DC disconnect switch (Standard); A: With DC disconnect switch (Optional)
- 3000: Output power 3000 : 3000VA; 4600 : 4600VA; 5000 : 5000VA (Note.1)
- GSI: Series name

Note.1:Only for use in taiwan.

SPECIFICATION

	GSI-3000	GSI-4600	GSI-5000(Note.1)
DC Input			
Max. Input Power(Note.2)	3160W	4850W	5280W
Input Voltage Range	100 ~ 550VDC	100 ~ 550VDC	100 ~ 550VDC
MPP Range	125 ~ 500VDC	125 ~ 500VDC	125 ~ 500VDC
Number of MPP Tracker	1	2	2
Max. Input Current	1*16A	2*10A	2*10A
AC Output			
Rated Output Power (Typ.) (@230V, 50Hz)	3000VA	4600VA	5000VA
Max. Output Power (Typ.)	3000VA	4600VA	5000VA
AC Voltage Range	180 ~ 264VAC, Single Phase	180 ~ 264VAC, Single Phase	180 ~ 264VAC, Single Phase
AC Grid Frequency	50±5Hz / 60±5Hz	50±5Hz / 60±5Hz	50±5Hz / 60±5Hz
Max. Output Current (Typ.)	13.1A	20A	22A
Power Factor (at rated power)	>0.99	>0.99	>0.99
Adjustable Displacement Power Factor	0.9 overexcited ~ 0.9 underexcited	0.9 overexcited ~ 0.9 underexcited	0.9 overexcited ~ 0.9 underexcited
THD(at rated power) (Typ.)	<3%	<3%	<3%
DC Current Injection (Typ.)	<0.5% of rated output current	<0.5% of rated output current	<0.5% of rated output current
Efficiency			
Max. Efficiency (Typ.)	>96%	>96%	>96%
Euro Efficiency (Typ.)	>95%	>95%	>95%
Protection			
DC Reverse Polarity	Yes	Yes	Yes
Over Temperature	Yes	Yes	Yes
AC Short	Yes	Yes	Yes
Residual-Current Monitoring Unit	Yes	Yes	Yes
Over Voltage Category Main	Ⅲ	Ⅲ	Ⅲ
Over Voltage Category PV	Ⅱ	Ⅱ	Ⅱ
Standards Compliance			
Grid Certificate	VDE-AR-N 4105, CGC NB/T 32004, IEEE 1547		VDE 0126-1-1, IEEE1547
LVD	TUV EN62109-1,-2, CGC NB/T 32004		TUV EN62109-1,-2
EMI Conduction & Radiation	EN61000-6-3, EN61000-3-2,-3, CGC NB/T 32004	EN61000-6-3, EN61000-3-11,-12, CGC NB/T 32004	EN61000-6-3, EN61000-3-11,12
EMS Immunity	EN61000-6-2 (include EN61000-4-2,3,4,5,6,8,11), EN61000-4-12,-14,-18		EN61000-6-2 (include EN61000-4-2,3,4,5,6,8,11)
Environment			
Working Temperature(Note.3)	-25 ~ +60℃	-25 ~ +60℃	-25 ~ +60℃
Working Humidity	4 ~ 100% RH non-condensing	4 ~ 100% RH non-condensing	4 ~ 100% RH non-condensing
Maximum Altitude Rating	2000m	2000m	2000m
Pollution Degree	Ⅲ	Ⅲ	Ⅲ
Storage Temperature / Humidity	-30 ~ +70℃	-30 ~ +70℃	-30 ~ +70℃
Vibration	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
Protection Degree	IP65	IP65	IP65

	GSI-3000	GSI-4600	GSI-5000
General Data			
Cooling	Convection	Forced Air with Fan	Forced Air with Fan
Interface	RS485	RS485	RS485
Display	LED / Graphic LCD	LED / Graphic LCD	LED / Graphic LCD
Dimension(L*W*H)	438*390*158mm (L*W*H)	438*390*158mm (L*W*H)	438*390*158mm (L*W*H)
Weight	20Kg; 1pcs/21Kg/2.16CUFT	20Kg; 1pcs/21Kg/2.16CUFT	20Kg; 1pcs/21Kg/2.16CUFT
NOTE	1.Only for use in Taiwan. 2.Intput derating capacity referenced by Static Characteristics section. 3.Output derating capacity referenced by Derating Curve section.		

3.Appearance

3.1 Front View

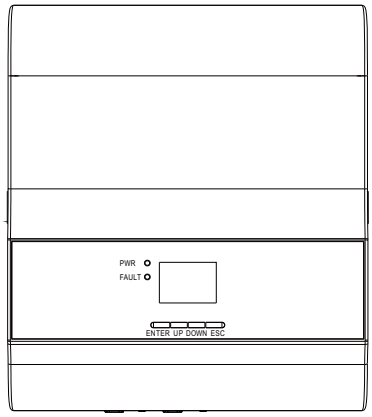


Figure 3-1

PWR : Power indicator, refer to chapter 6 for instructions
FAULT : Failure indicator, refer to chapter 6 for instructions
ENTER : Enter, refer to chapter 6 for instructions
UP : Enter, refer to chapter 6 for instructions
DOWN : Down, refer to chapter 6 for instructions
ESC : Exit, refer to chapter 6 for instructions

3.2 Electrical and Communication Connections

■ GSI-3000

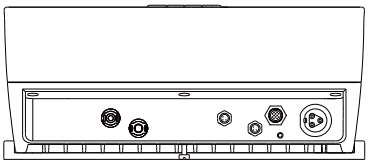


Figure 3-2

■ GSI-3000A

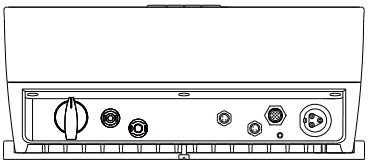


Figure 3-3

■ GSI-4600/5000

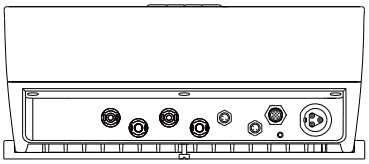


Figure 3-4

■ GSI-4600A/5000A

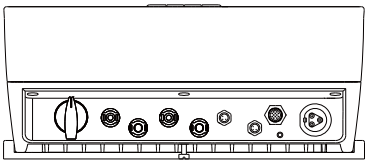


Figure 3-5

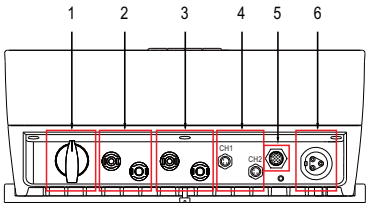


Figure 3-6

1 : DC Switch：DC input switch (Optional for A-Type)
2 : PV String A DC connector：DC channel A input connector
3 : PV String B DC connector：DC channel B input connector
4 : Remote Port : Communication connector
(CH1: linked to PC)
(CH2: linked to utility company)
5 : Production Test : This connector is accociated with factory's production test
6 : AC Connector：AC output connector

4.Functions

4.1 Brief Description

The GSI is a single phase grid-tied PV inverter, which is unlike to the stand-alone PV inverter in the sense that it does not need an external battery, which is expensive and bulky; furthermore reducing the sizeable cost of maintaining this battery. The GSI can effectively convert photovoltaic DC power harvested from the PV module to AC power which is fed back to the utility grid, reaching the goal of generating and conserving energy. The control unit employs digital signal processing (DSP), using advanced digital control methods and algorithms to increase converting efficiency and provide additional features. Power-level circuitry utilizes single stage high frequency switching IGBT, which has the merit of simple structure and high efficiency. PV inverter system can be remotely controlled by software, providing the user with convenient means of power monitoring and data collection without an additional monitoring system.

4.2 Safety Features

To ensure the safety of personnel, GSI has an internal leakage current monitoring system. When a failure occurs and leakage current is present, the system will activate and detach connection to the utility grid. Whether under intentional or unintentional contact, this protection mechanism will trigger to prevent electrical shock.

4.3 Control

GSI provides the following inverter control functions :

1.Parameter Monitoring (voltage, current, frequency).
2.Utility grid synchronization.
3.Maximum Power Point Tracking (MPPT).
4.Input and output current limiting.
5.Temperature monitoring.
6.Graphic display.
7.Communication (through RS485 interface).

4.4 Efficiency

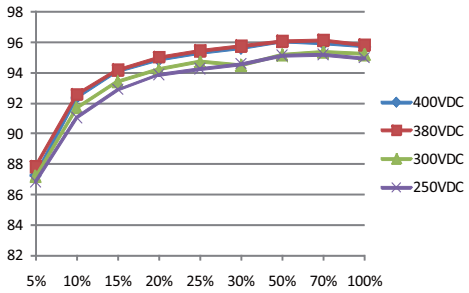


Figure 4-1 Efficiency characteristic curve

4.5 Derating

When the input voltage is low or when ambient temperature is high, the GSI-3000, 4600,5000 will automatically derate the output.

■ **Derating**

GSI-3000

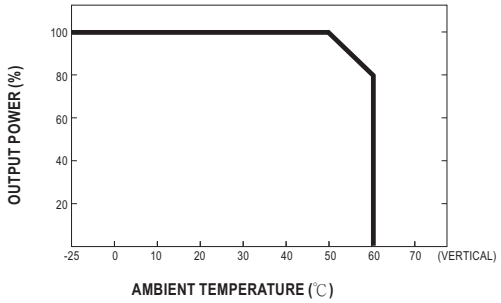


Figure 4-2 GSI-3000 Load vs. Ambient Temperature Curve

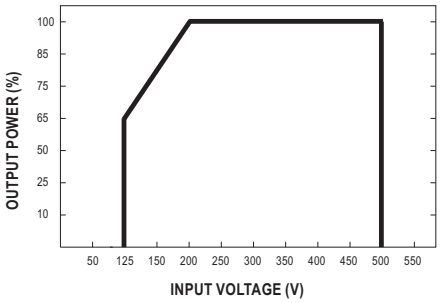


Figure 4-3 GSI-3000 Load vs. Input Voltage Curve

GSI-4600

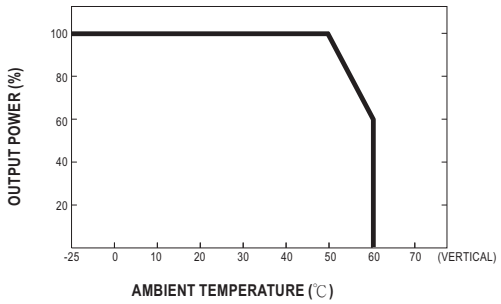


Figure 4-4 GSI-4600 Load vs. Ambient Temperature Curve

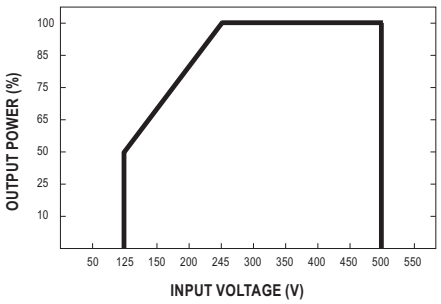


Figure 4-5 GSI-4600 Load vs. Input Voltage Curve

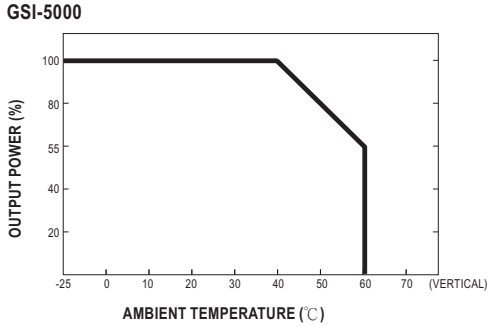


Figure 4-6 GSI-5000 Load vs. Ambient Temperature Curve

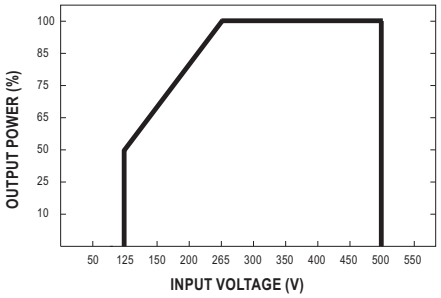


Figure 4-7 GSI-5000 Load vs. Input Voltage Curve

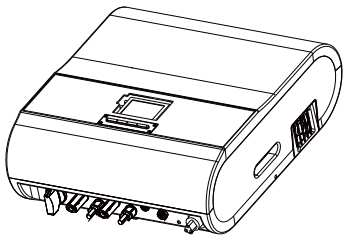
5.Installation

5.1 Package Check List

Item	Quantity
Ⓐ GSI-3000,4600,5000	1
Ⓑ Wall Mounting Bracket	1
Ⓒ Plastic Anchor	3
Ⓓ Mounting Bracket Screw	2
Ⓔ Rear Panel Support Screw	1
Ⓕ Screw for Plastic Anchor	3
Ⓖ User Manual	1
Ⓗ MC4 DC Wire End Connector (+)	2 (GSI-3000*1)
Ⓘ MC4 DC Wire End Connector (-)	2 (GSI-3000*1)
Ⓙ Wieland Flange Wire End AC Connector	1
Ⓚ Communication Wire	2
Ⓛ MC4 DC Connector Disassembling Tool	1

Table 5-1

Ⓐ



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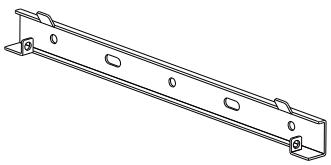

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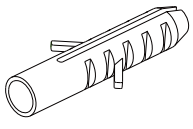

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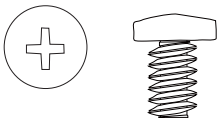


M6*8

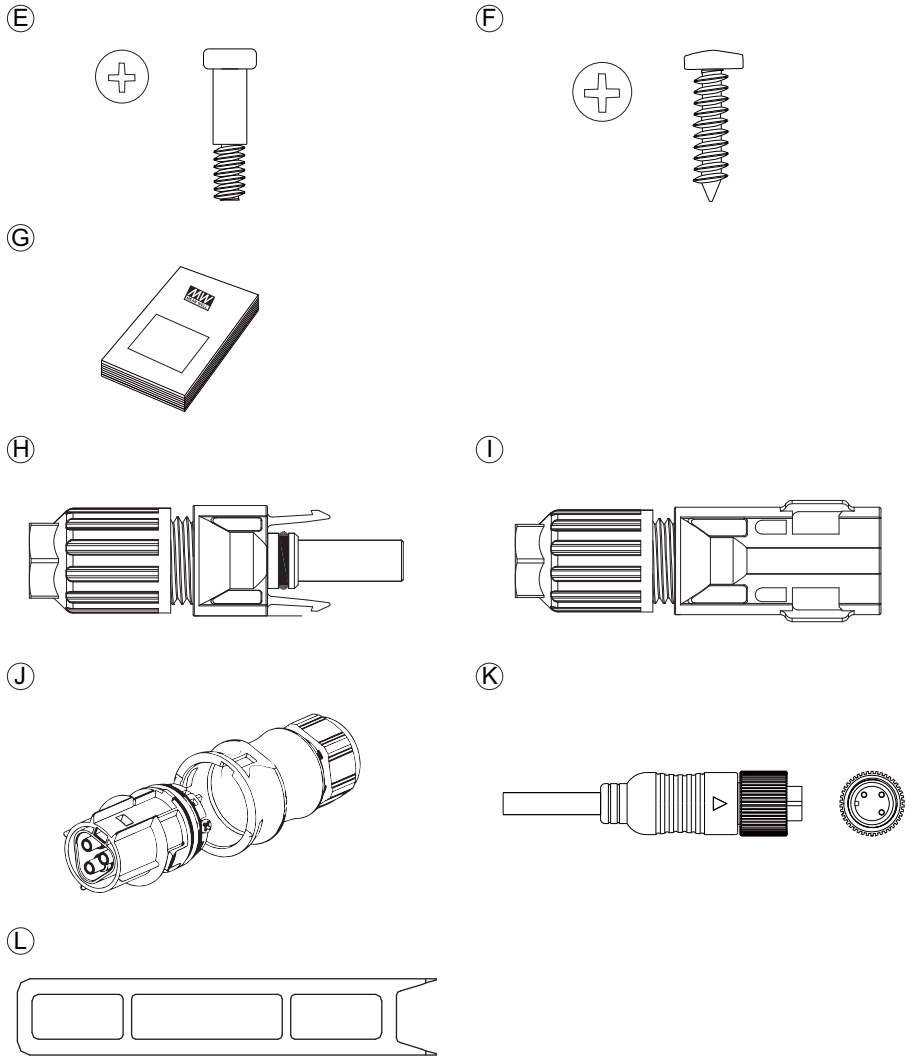


Figure 5-2 Component illustration

5.2 Choosing Installation Location

WARNING!

◎Do not mount the inverter in areas where highly flammable materials are stored.

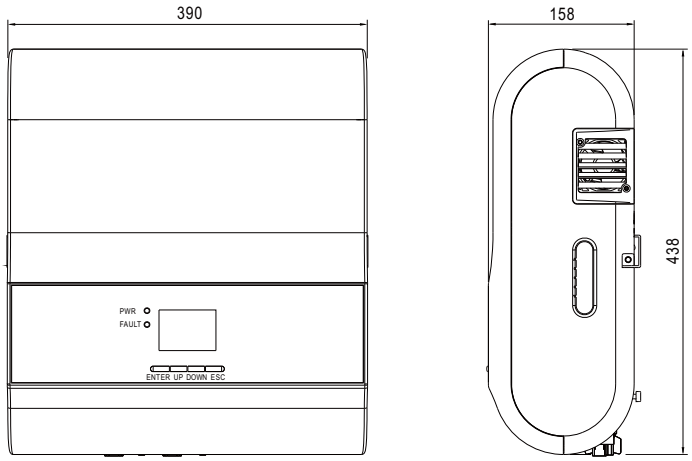
◎Do not mount the inverter in areas having a potentially explosive atmosphere.

WARNING!

◎Install the inverter in such a way that it cannot be touched accidentally.

◎Do not install the GSI-3000,4600,5000 in a location that can be easily touched.

5.2.1 Dimensions and Weight



GSI-3000,4600,5000：20Kg

Figure 5-3

5.2.2 Environment

◎Install on a firm surface which is capable of withstanding at least 20KG of weight.

◎Installation location must be accessible at all times.

◎Ambient temperature should be lower than 40℃ at all times to ensure optimal performance.

◎Do not expose the GSI to direct sunlight to prevent excessive heating which will result in power derating.

◎The GSI may produce audible noise while operating.

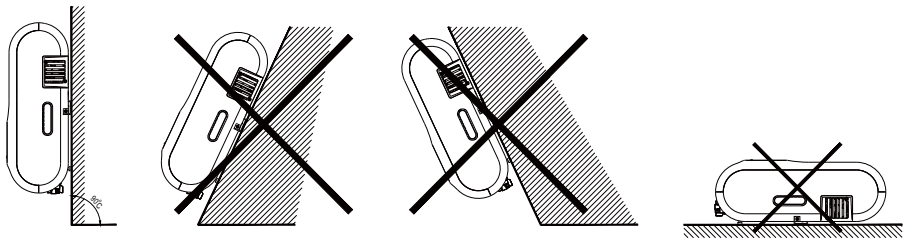
5.2.3 Safety Distance

When choosing wall mounting location, make sure the distance between the inverter and walls, other inverters or objects fulfils the minimize distance requirements on the table below to ensure effective installation and heat dissipation space.

Direction	Minimum Distance
Left/Right	25cm
Top	30cm
Bottom	30cm

5.2.4 Permitted Mounting Position

Please install in an upright position, do not lean forward, backward, or lay flat.



5.3 Wall Mounting

5.3.1 Install Wall Mounting Bracket

Requirements :

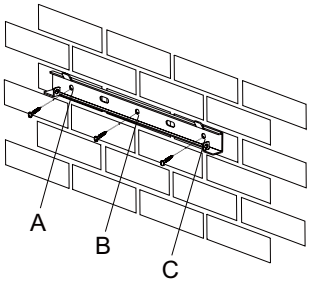
1.Install only on vertical surfaces

2.Install on a firm surface

5.3.2 Installation Procedure

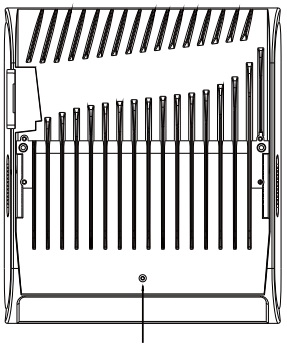
1.Use the mounting bracket as a template to mark positions then drill holes.

2.Insert the plastic anchors into the holes then screw the corresponding screws to fix the wall mounting bracket on the wall.



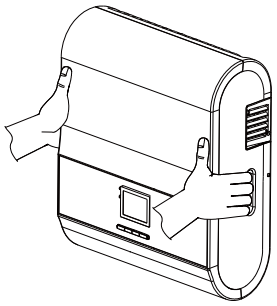
Positions to mark for drilling

3.Install rear panel support screws on the rear of the GSI.

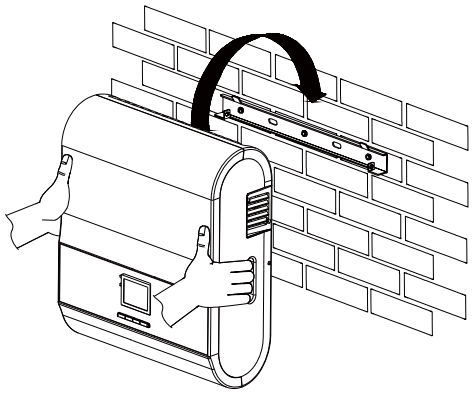


Rear panel support screw position

4.For more convenient maneuvering, please make use of the side handles.

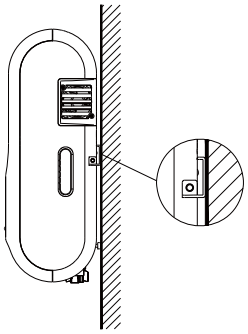


5.Mount this GSI onto the wall mounting bracket.

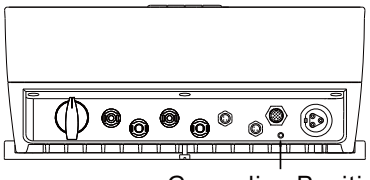


6.Check the sides of the GSI for correct positioning.

7.Use the mounting bracket screw to fix the side holes of the GSI onto the wall mounting bracket.



8.Use the grounding screw to connect the grounding wire to the GSI.



Grounding Position

5.4 Electrical Connections

Warning!

◎Electrical connection should only be made after making sure the GSI-3000,4600,5000 is thoroughly installed.

◎One circuit breaker should only be connected to one inverter, please do not connect multiple inverters with one circuit breaker.

◎Connection of the GSI-3000,4600,5000 to the utility grid must be operated by qualified personnel, and must be licensed by the local authorities.

Warning!

◎Before connecting the PV module, please make sure the GSI-3000, 4600,5000 is disconnected from the utility grid.

◎When installing the PV module, please make sure it is not directly exposed to sunlight to prevent electrical shock.

◎Mixing of DC inputs in forbidden.

Example: GSI-4600 has two sets of DC input channels: A and B. When a PV module is connected to the positive terminal of A(B) and negative terminal of B(A), it is called a mixed connection.

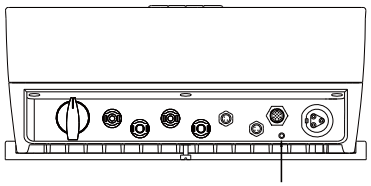
DC input: Uses 2 sets of MC4 connectors.

AC output: Uses Wieland Flange connector.

5.4.1 Connection Requirements

Before wiring, fix the inverter, and check the distribution panel to see if the circuit break is in its OFF state, to ensure the safety of the electrical technician. Please choose wire diameter according to our advised values (5.4.2), and conform to local electrical code wiring standards to guarantee the quality of the wiring.

Caution : Grounding screw must be screwed on.



Grounding screw

5.4.2 Cable selection

1. Choice of wire diameter must follow safety rules which limit the particular wires to a maximum current flow.
2. It is advised to use wires of larger diameter to reduce transmission loss.
3. Use color coded cables to indicate the positive and negative terminals of the DC input.
4. Use color coded cables to indicate the line, neutral, and potential earth terminals of the AC output.

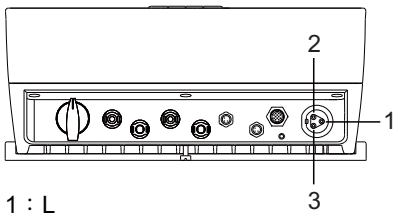
Model	GSI-3000	GSI-4600	GSI-5000
Max. Rated Input Current	1x16A	2x10A	2x10A
Input Cable Cross-section(Typ.)	2.5mm^2	2.5mm^2	2.5mm^2
Max. Rated Output Current	13.1A	20A	22A
Output Cable Cross-section(typ.)	2.5mm^2	4mm^2	4mm^2

Table 5-2

5.4.3 Wiring Method

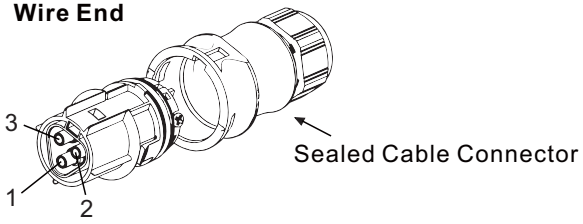
AC connection:

Inverter End



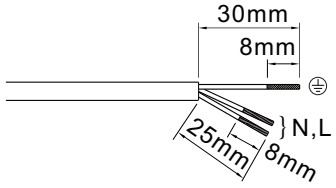
1：L
2：N
3：PE

Wire End



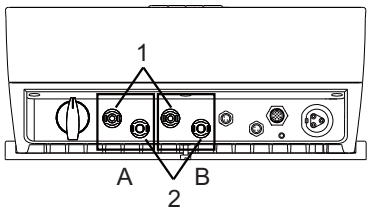
1：L
2：N
3：PE

Required Stripping Length



DC connection:

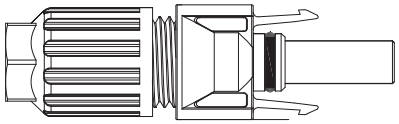
Inverter End



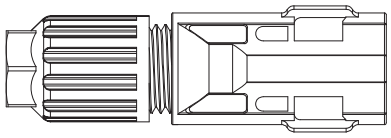
1：DC Input (+)
2：DC Input (-)
A：Channel A
B：Channel B

Wire End

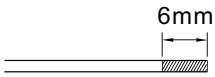
DC Input (+)



DC Input (-)



Required Stripping Length



GSI-3000,4600,5000 DC input limits:

Model	Maximum Input Voltage	Maximum Input Current
GSI-3000	550Vdc	16Adc
GSI-4600,5000	550Vdc	10Adc x 2

5.5 Power ON/OFF

Warning!

◎Connection of the GSI-3000,4600,5000 to the utility grid must be operated by qualified personnel, and must be licensed by the local authorities.

◎Please make sure your installation settings comply with local standards and directives on wiring methods and limitations.

5.5.1 Power ON

1. Inspect the DC switch in PV module distribution box, use a multimeter to measure if the input is within rated values (125~500V).

⚠ Caution : When designing the system, the user must be mindful of the open circuit voltage when the ambient temperature is at its lowest; This voltage must not be greater than inverter ratings.

2. Inspect the AC switch on the distribution panel, make sure the utility grid's voltage and frequency is within typical range.

⚠ Caution : If the local electrical code requires an additional residual current breaker (RCD), the user should choose one with rated breaking leakage current above 100mA.

3. Turn on DC switch and AC switch.
4. After transmission has begun, the inverter will display a boot screen. At this time the GSI will verify the utility grid's AC voltage and frequency. When this process is complete, the inverter will officially start generating power which is then fed back into thte utility grid.

5.5.2 Power OFF


Risk of electric shock, Energy storage timed discharge. 1 minutes

1. Switch OFF the circuit break in the PV module distribution box and the graphics on the GSI display screen will go out.
2. Switch OFF the circuit break on the AC distribution panel and the GSI will be disconnected from utility grid.
3. Check if the display screen has no graphics, the GSI is now OFF.

5.6 Disassembly

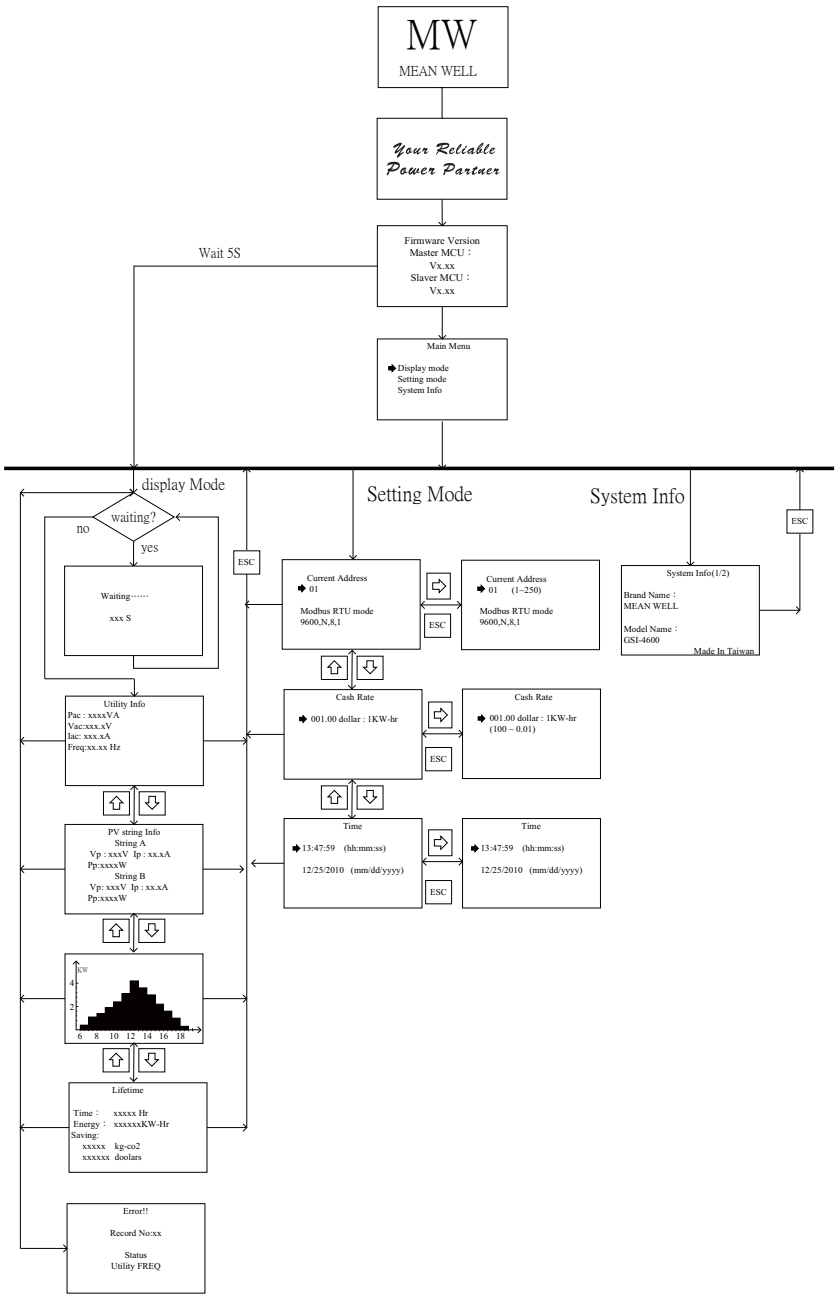
5.6.1 Disassembling Procedure

1. Remove the side and mounting bracket screw.
2. Use the handles on the side of the GSI and remove it from the wall mounting bracket.

6.Operation

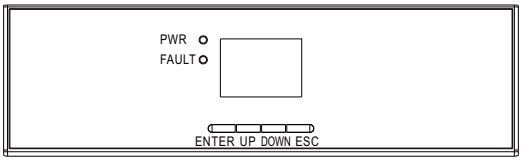
6.1 LCD Display

Menu Structure



6.2 Buttons

1.ENTER：Enter
2.UP：Up
3.DOWN：Down
4.ESC：Leave



6.3 LED Indicators

1.PWR : The green LED ON indicates that input power is normal. The green LED OFF indicates the OFF state, and the inverter will not connect to the utility grid.

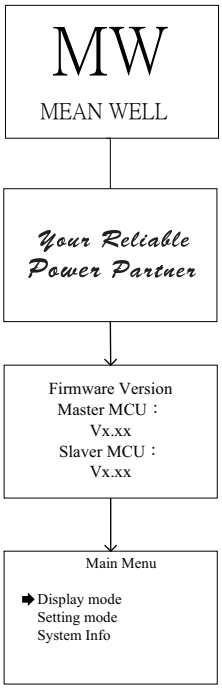
2.FAULT：The red LED ON indicates that the inverter is not connected to the utility grid or the utility grid connection is abnormal. The red LED OFF means that connection to utility grid was successful.

6.4 Operation Procedure

6.4.1 Startup Screen

When the GSI is powered ON, the following startup screen will be displayed. Under the main screen, there are three choices on the menu: Display Mode, Setting Mode, System Info. The user may use the UP/DOWN buttons to scroll through and press ENTER to select. In each mode, the user may use ESC to return to the main screen.

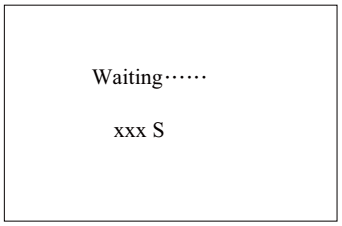
NOTE : If no selection is made after startup, Display Mode is automatically selected.



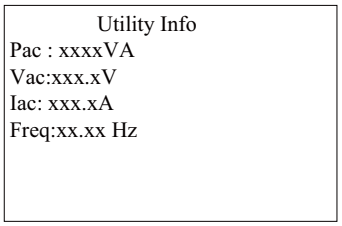
6.4.2 Display mode

When Display mode is selected, the user must wait for the system to verify whether the utility grid is normal before enabling the UP/DOWN buttons to select Power Generation Info: Utility Info, PV Setting Info, Daily Generated Power, Life Time, Error Code.

6.4.2.1 Waiting time before entering next screen

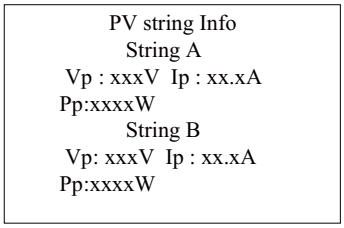


6.4.2.2 AC output info



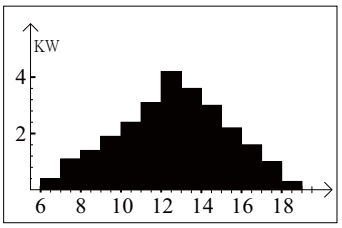
Pac：AC Power　　Iac：AC Current
Vac：AC Voltage　　Freq：Frequency

6.4.2.3 PV DC input info



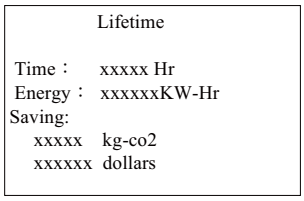
PV String：Split into channels A and B　　Ip：DC Current
Vp：DC Voltage　　Pp：DC Power
(Note: GSI-3000 only displays channel A)

6.4.2.4 Daily power generated by day time



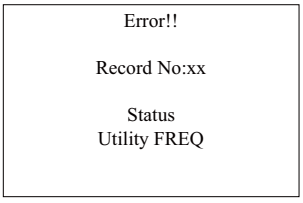
X-axis : Time of day
Y-axis: Power

6.4.2.5 Operating Time



Time : Accumulated operating time
Energy: Accumulated power generation
Saving-(kg-CO_2) : Reduced carbon dioxide emission
Saving-(dollar): Saved electric billing

6.4.2.6 Error Code



Record No : xx, Please refer to table below

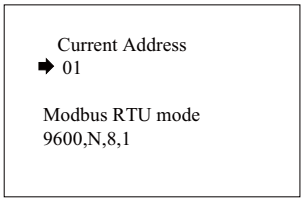
Error Code	Error Cause	Error Code	Error Cause
00	No Error	07	Leakage Current Abnormal
01	Grid Voltage Abnormal	08	Insulation Abnormal
02	Grid Voltage High for past 10 minutes	09	Over Temperature Protection
03	Grid Frequency Abnormal	11	Relay Connection Abnormal
04	DC Current Injection High	12	Fan Lock
05	PV End Voltage High	14	DC Bus Voltage High
06	PV End Voltage Low	15	PWM Abnormal

Table 6-1

6.4.3 Setting mode

After entering Setting mode, pressing the UP/DOWN buttons will display Current Address, Cash Rate, or Time.

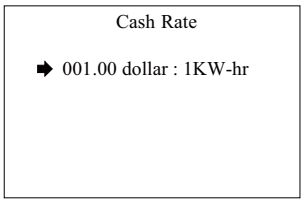
6.4.3.1 Current Station Address



The system employs the Modbus RTU Mode Protocol Current Address:

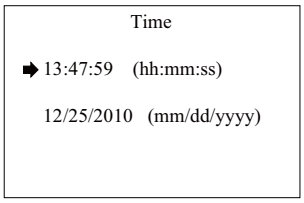
The current station address can be selected between 1 and 250

6.4.3.2 Cash Rate



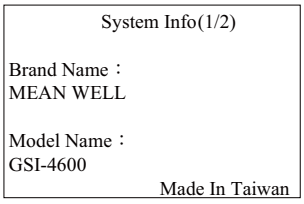
Electric billing saved per kilowatt generated (Dollar: 1KW-hr):
Can be chosen from 0.01 to 100.

6.4.3.3 Time Setting



(hh:mm:ss)：Hour: Minute: Second Setting
(mm:dd:yyyy)：Month: Day: Year Setting

6.4.4 System Info



Brand name：MEAN WELL
Model Name: GSI-4600 (Either GSI-3000,GSI-4600 or GSI-5000)

7.Troubleshooting

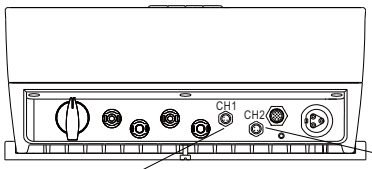
When an unpredictable error occurs, MEAN WELL advises the user to check the error code and notify the local system installation vendors to repair the inverter.

Error Code	Error Cause	Error Cause	Suggested Solution
01	Grid Voltage Abnormal	1.Grid voltage too high or too low 2.Grid connection contact resistance too high 3.Grid disconnected 4.AC cable damaged	1.Measure whether connection between grid voltage and GSI contact is outside range 2.Check if circuit breaker has been triggered 3.Increase wire diameter to reduce resistance
02	Grid Voltage High for past 10 minutes	1.Grid voltage too high 2.Grid connection contact resistance too high	Measure whether connection between grid voltage and GSI contact is too high
03	Grid Frequency Abnormal	Grid frequency outside acceptable range or Grid disconnected	1.Measure whether grid frequency is outside range 2.Check if circuit breaker has been triggered
04	DC Current Injection High	Internal fault	Reset and check again. If fault is frequent, please notify MEAN WELL
05	PV End Voltage High	DC voltage too high	1.Disconnect the GSI from the PV module immediately to protect the GSI 2.Check PV module voltage; wait for a suitable input condition to reconnect the GSI *The GSI may already be damaged
06	PV End Voltage Low	DC voltage too low	Wait for greater sunshine! (Only display, will not be logged)
07	Leakage Current Abnormal	Excessive leakage current may be due to ground fault	Check for a ground fault
08	Insulation Abnormal	Installation error or foreign object entered	Check whether equipment is installed correctly or if a foreign object has entered
09	Over Temperature Protection	1.Operation temperature too high 2.Fan lock	1.Check if ventilation passage is clear or if ambient temperature is too high 2.Clean or change fan
11	Relay Connection Abnormal	Internal fault	Reset and check again. If fault is frequent, please notify MEAN WELL
12	Fan Lock	1.Foreign object stuck 2.Fan fault	1.Clean fan 2.Change fan
14	DC Bus Voltage High	Internal Fault	Reset and check again. If fault is frequent, please notify MEAN WELL
15	PWM Abnormal	Internal Fault	Reset and check again. If fault is frequent, please notify MEAN WELL

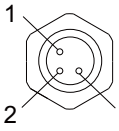
Table 7-1

8.Communication

8.1 Communication Connections



CH1 Connection to PC
1. Red: Positive Terminal
2. White: PE
3. Black: Negative Terminal



CH2 connection to utility company
1. Red: Positive Terminal
2. White: PE
3. Black: Negative Terminal

8.2 Wiring Method

Please use the included cables with other wateproof wiring material.

9.Monitoring Software

9.1 Installation

Please download from MEAN WELL's official website and install.

9.2 Operation

9.2.1 Open the monitoring software. Select the "Open Com Port" button to start or stop communication with the GSI-3000,4600,5000.

a.Com Port Setting

Choose the PC com port address to link with the GSI-3000,4600,5000

b.Modbus Address

This option is the device address of the GSI-3000,4600,5000. The software setting and GSI-3000,4600,5000 must have the same address for it to be read. Address can be searched and set from the GSI-3000,4600,5000 interface.

c.Model Select

Choose GSI-3000,GSI-4600 or GSI-5000.

9.2.2 In the Data Display tab, select Start Receive Data to receive data.

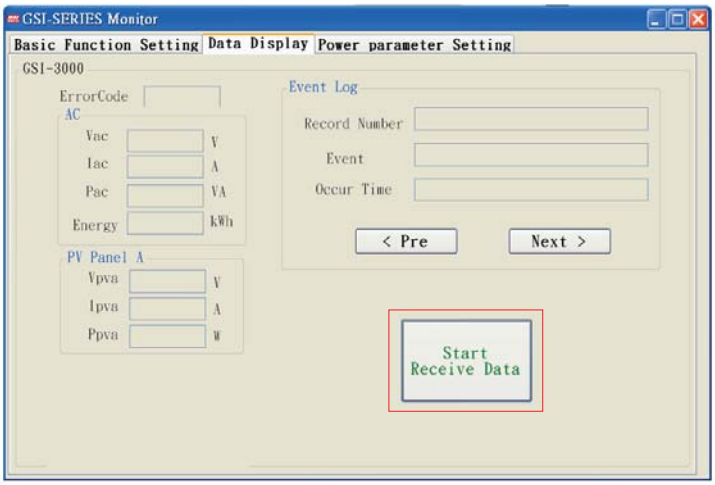
ErrorCode: Displays current GSI-3000,4600,5000 status (00 for normal operation)

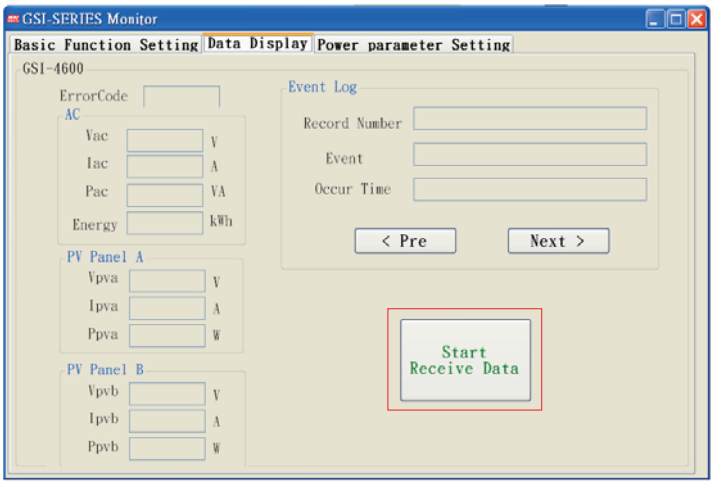
AC: Displays GSI-3000,4600,5000's power generation info.

PV Panel A: Displays info of PV Array A.

PV Panel B: Displays info of PV Array B.

Event Log: For recording warnings by the GSI-3000,4600,5000; Five entrys of data can be recorded at most, with the oldest entry being erased when there are more than five.





9.2.3 Power parameter Setting

a.Input Password (For utility employees to modify)

Password : meanwell

b.Cos ϕ

Set power factor to be leading or lagging to compensate the local power system.

c.Power Limit

Set the maximum power output of the GSI-3000,4600,5000 to a particular precentage or wattage.

d.GSI system setting

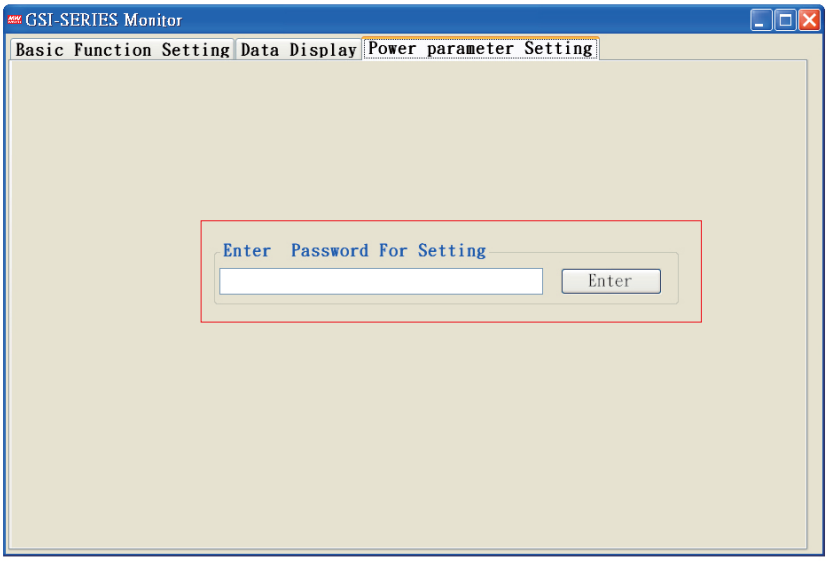
Remove accumulated power generation data.

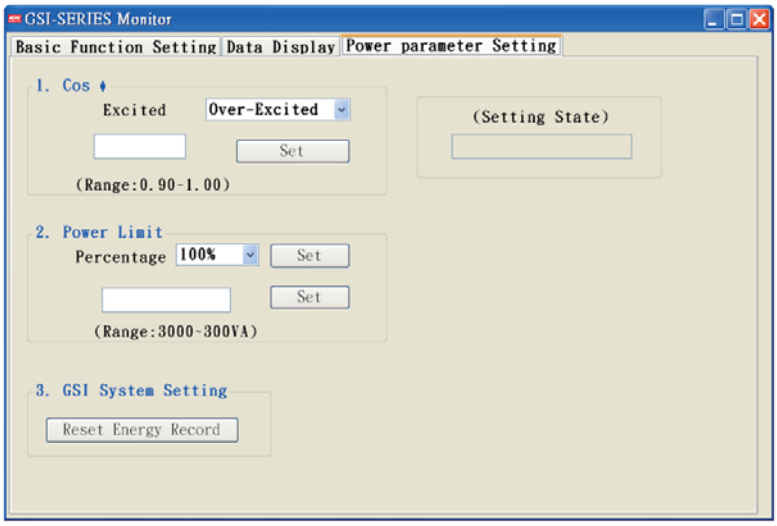
e.Setting state

Set in Progress : Setup in progress

Try Again : Try again

Success : Setup successful





Note :

GSI-3000,4600,5000 employs MODBUS protocol with RS-485 interface. If you need detailed information on the communication protocol, Please contact MEAN WELL.

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