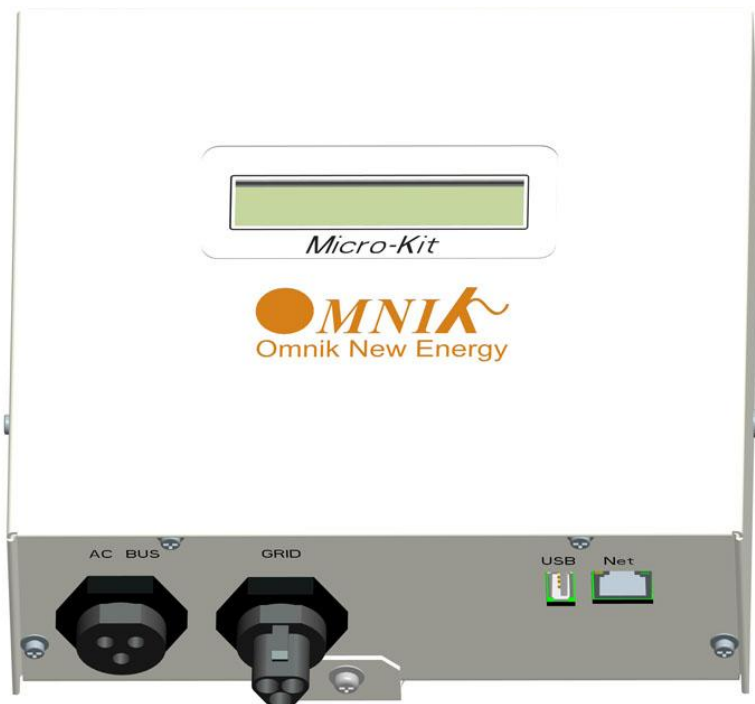


User Operating Manual

Model Number: PIU4K



This manual is an integral part of the unit. Please read the instruction manual carefully before installation, operation or maintenance. Keep this instruction manual for future reference. This document is not to be reproduced in any manner, nor are the contents to be disclosed to anyone, without the express authorization of Omnik.

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1 Read This First

Thank you for selecting Omnik new energy– a leading supplier of micro-inverter products for the solar PV market. Omnik’s new product “Micro-Kit” acts as the power interface (PI) to the utility grid. It is a separate device installed at the coupling point to the utility grid to provide the safety functions such as over/under voltage, over/under frequency, and especially active anti-islanding as well as lightning protection and line impedance stabilizing network (LISN), modular design. The data of real-time performance information of energy harvest for all Omnik micro-inverter systems can be collected by Omnik’s built in energy terminal unit Energy Terminal Unit (ETU)”, and be transmitted to Omnik Solar Energy Data Acquisition System (SEDAS) to achieve a global data monitoring for PV power plant.

This user manual includes Micro-Kit overview, installation, operation instruction and technical parameters. To assure properly installation and operation, please carefully read this user manual before installation, and pay attention to the caution symbol affixed on the product.





Please hand this user manual to the end user.

2 Symbols in the manual

2.1 Safety symbols


Warnings and cautions tell you about the dangerous conditions that can occur if you do not follow all instructions in this manual.












Please read following safety symbols to indicate dangerous conditions and important safety instruction.

	<p>DANGER</p> <p>The DANGER symbols in this manual and on the Micro-Kit</p> <p>Indicate a hazard with a high level of risk which if not avoided, will result in death or serious injury.</p>
	<p>WARNING</p> <p>The WARNING symbols in this manual and on the Micro-Kit indicate a hazard with a medium level of risk which if not avoided, could result in death or serious injury.</p>
	<p>CAUTION</p> <p>The CAUTION symbols in this manual and on Micro-Kit indicate a hazard with a low level of risk which if not avoided, could result in minor or moderate injury.</p>
	<p>NOTE</p> <p>The NOTE symbols in this manual indicate the important product information.</p>

2.2 Other Symbols

Some Symbols replace words on the equipment, on a display, or in manuals.

	<p>Trademark</p>
---	------------------

	No access for unauthorized personal
	Caution, risk of danger
	Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC. Indicates that the device, accessories and the packaging must not be disposed as unsorted municipal waste and must be collected separately at the end of the usage Please follow Local Ordinances or Regulations for disposal or contact an authorized representative of the manufacturer for information concerning the decommissioning of equipment.
	Direct current
	Alternating current
PE	Protective conductor
	Earth(ground)TERMINAL
	Protective conductor Terminal
	Fuse
	Refer to the operating instructions
	Caution, risk of electric shock
	CE mark is attached to the solar Micro-Kit to verify that the unit follows the provisions of the European Low Voltage and EMC Directives

PV	Photovoltaic
+	DC terminal, indicating the polarity of the connections, positive, all positive connections shall be made with Red insulated wire
-	DC terminal, indicating the polarity of the connections, negative, all negative connections with black insulated wires
PCS	Power conversion equipment, hereby is our DC/AC inverter
SERVICE PERSONNEL	A person having appropriate technical training and experience necessary to be aware of hazards to which that person may be exposed in performing a task and of measures to minimize risks to that person or other persons
Qualified personnel	Person adequately advised or supervised by an electrically skilled person to enable him or her to perceive risks and to avoid hazards which electricity can create. For the purpose of the safety information of this manual, a "qualified person" is someone who is familiar with requirements for safety, refrigeration system and EMC and is authorized to energize, ground, and tag equipment, systems, and circuits in accordance with established safety procedures. The Micro-Kit and endues system may only be commissioned and operated by qualified personnel.
DVC	Decisive voltage class
Closed Electrical Operating Area	Room or location for electrical equipment to which access is restricted to skilled or instructed persons by the opening of a door or the removal of a barrier by the use of a key or tool and which is clearly marked by appropriate warning signs

2.3 Technical competence

The procedures described in this manual should be performed by trained and authorized personnel only. Maintenance should only be

undertaken by competent individuals who have a general knowledge of and experience with devices of this nature. No repairs should ever be undertaken



or attempted by anyone not having such qualifications.

Compliance with safety regulations depends upon installing and configuring system correctly, including using the specified wirings. Only professional assemblers who are familiar with requirements for safety, Photovoltaic system and EMC must install the system. The assembler is responsible for ensuring that the end system complies with all the relevant laws in the country where it is to be used. Omnik require using only genuine replacement parts, manufactured or sold by Omnik for all repair parts replacements.

Read completely through each step in every procedure before starting the procedure; any exceptions may result in a failure to properly and safely complete the attempted procedure.

Servicing of this product in accordance with this manual should never be undertaken in the absence of proper tools, test equipment and the most recent revision to this manual, which is clearly and thoroughly understood.

2.4 Safety Instructions




This chapter contains the safety instructions that you must follow when installing, operating and servicing the unit. If ignored, physical injury or death may follow, or damage may occur to the unit. Read the safety instructions before you commence work on the unit. If you are unable to understand the Dangers, Warnings, Cautions or Instructions, contact the manufacturer or an authorized service dealer before installing, operating and servicing the unit.

To ensure your personal safety and the proper use of Micro-Kit, please carefully read this manual before installation. If the product is damaged when installation not comply with this manual, Omnik do not respond for any quality assurance and other risks.

For Omnik Micro-Kit Warranty Terms and Conditions, see the appendix of this manual.

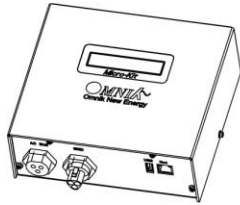
- Be aware that only qualified personnel should install and /or replace Omnik Micro-Kit.
- Perform all electrical installations in accordance with all local electrical codes.
- Comply the rules of correctly use of tools and personal protective equipment (PPE) for insuring the Micro-Kit safe running.

- Be aware that only qualified personnel should maintain Omnik Micro-Kit.
- Connection of any photovoltaic system to the electrical utility grid should only commence after receiving prior approval from the utility company.
- The Micro-Kit MUST be installed and debugged complying with this manual by the professional authorized by Omnik.
- All electrical installation MUST meet the local standard.
- To assure the safe running, must comply with the relative standard for using the tool properly and Personal Protective Equipment (PPE). Away from the chemical and reagent.
- The Micro-Kit must installed environments suitable for it's IP rating.
- CAUTION! The device is intended for fixed installation, Located on a part that is not removable without impairing the operation of the unit.
- CAUTION! Visible and legible to the operator during the normal operation of the device.
- WARNINGS - Risk of electric shock- Do not open cover. No user serviceable parts inside. Servicing limited to qualified service personnel.
- WARNINGS - The printed circuit boards contain components sensitive to electrostatic discharge. Wear a grounding wrist band when handling the boards. Do not touch the boards unnecessarily.
- WARNINGS - Do not operate any device which is damaged, lacking parts or dented. Failure to observe this warning may result in an electric shock, injury, fire or accident.
- WARNINGS - Before installing the unit, agree with the customer the site.
- WARNINGS - The output connection with AC grid shall be protected by a max. 20A circuit breaker.
- The PIU4K-230-AU shall be connected with the Omnik M248A-230-AU inverter as a system. It cannot operate as a stand-alone unit or in case of AC grid disruption

	<p>WARNING: Be aware that the input AC voltage of the Omnik Micro-Kit shall not exceed the rated voltage; higher voltage may cause permanent damage to the device. It contains no user serviceable and Omnik- Micro-Kit Warranty parts.</p>
	<p>CAUTION: SAVE THESE INSTRUCTIONS– This manual contains important instructions for Micro-Kit that shall be followed during installation and maintenance.</p>
	<p>Warning: Only authorized persons can be allowed for installation of inverter</p>

3 Packing and Feature

3.1 Assembly parts



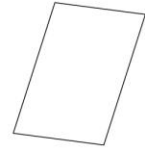
A



B



C



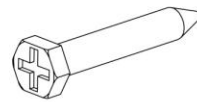
D



E



F



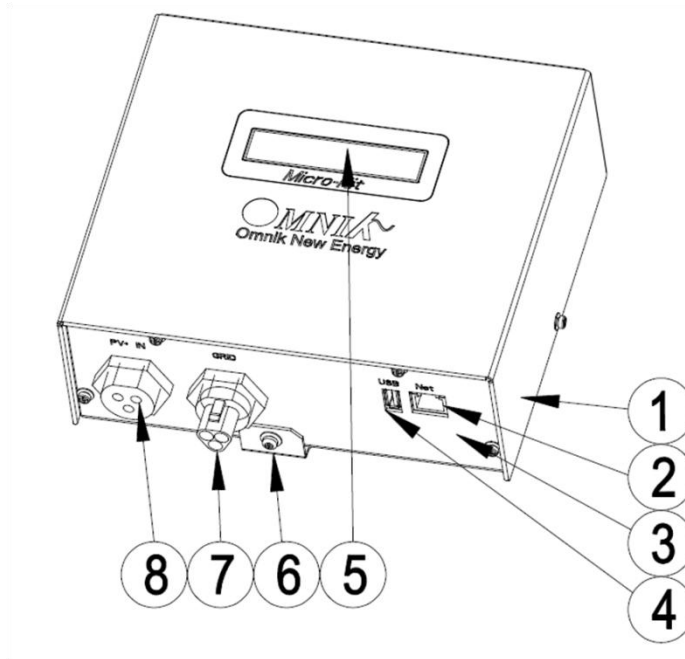
G



H

Object	Quantity	Description
A	1	Micro-Kit
B	1	Bracket
C	1	M4X8 Screw
D	1	User manual
E	1	AC Bus connector
F	1	Grid connector
G	3	ST6X50 Screw
H	3	Expansion tube

3.2 Structure of Micro-Kit



- 1 Cover
- 2 RJ45 socket
- 3 Base
- 4 USB socket
- 5 Display screen
- 6 Mounting plate
- 7 Output socket
- 8 Input socket

Note: If the Ethernet Cable and Can bus Cable are not connected, no holes of outlets shall be opened.

3.3 Main functions

3.3.1 Basic protection functions

- **Over/Under Voltage protection**

Micro-Kit _DSP1 sample the real time voltage signal of one grid period, and get the current grid frequency by Lock-in Algorithm, compare the signal with

Grid_frequency_max, Grid_frequency_min. If the signal is more than Grid_frequency_max or less than Grid_frequency_min, Micro-Kit_DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working. If the signal is less than Grid_frequency_max and more than Grid_frequency_min, Micro-Kit_DSP1 will connect the relay in 60~180S, all the micro-inverters will start working again.

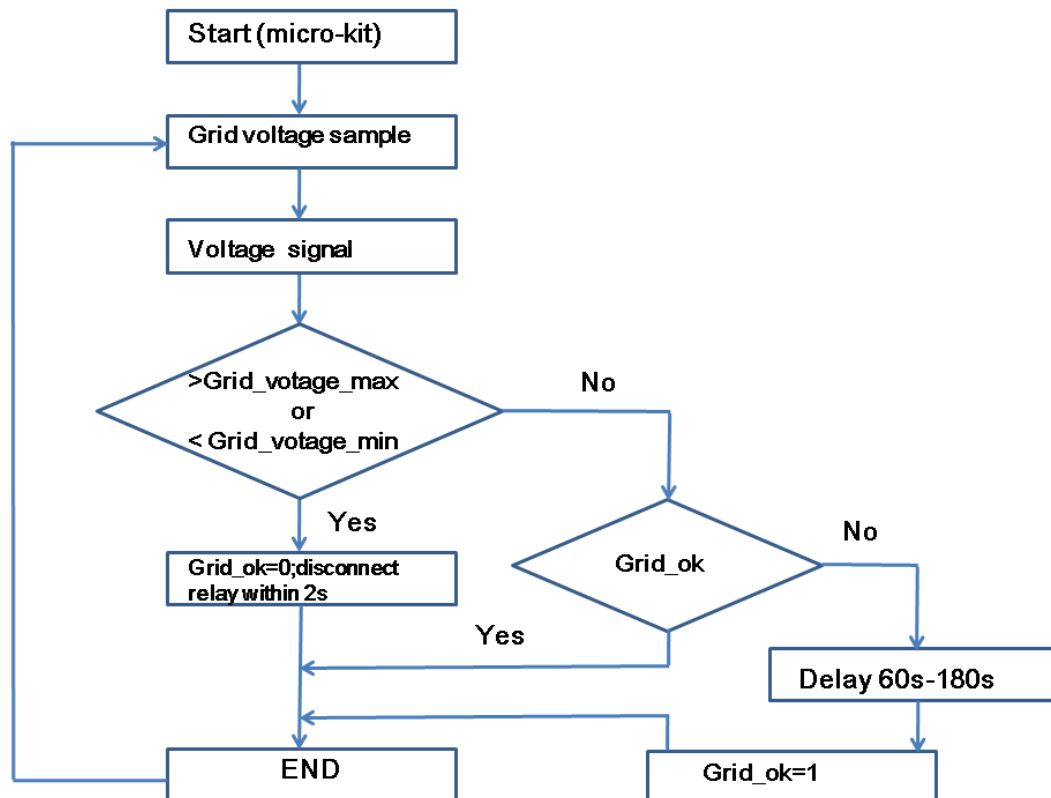


Figure 3.3.1 under/over voltage protection flow chart

• **Over/Under Frequency protection**

Micro-Kit_DSP1 sample the real time voltage signal of one grid period, and get the current grid voltage by Lock-in Algorithm, compare the signal with Grid_voltage_max, Grid_voltage_min. If the signal is more than Grid_voltage_max or less than Grid_voltage_min, Micro-Kit_DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working. If the signal is less than Grid_voltage_max and more than Grid_voltage_min, Micro-Kit_DSP1 will connect the relay in 60~180S, all the micro-inverters will start working again.

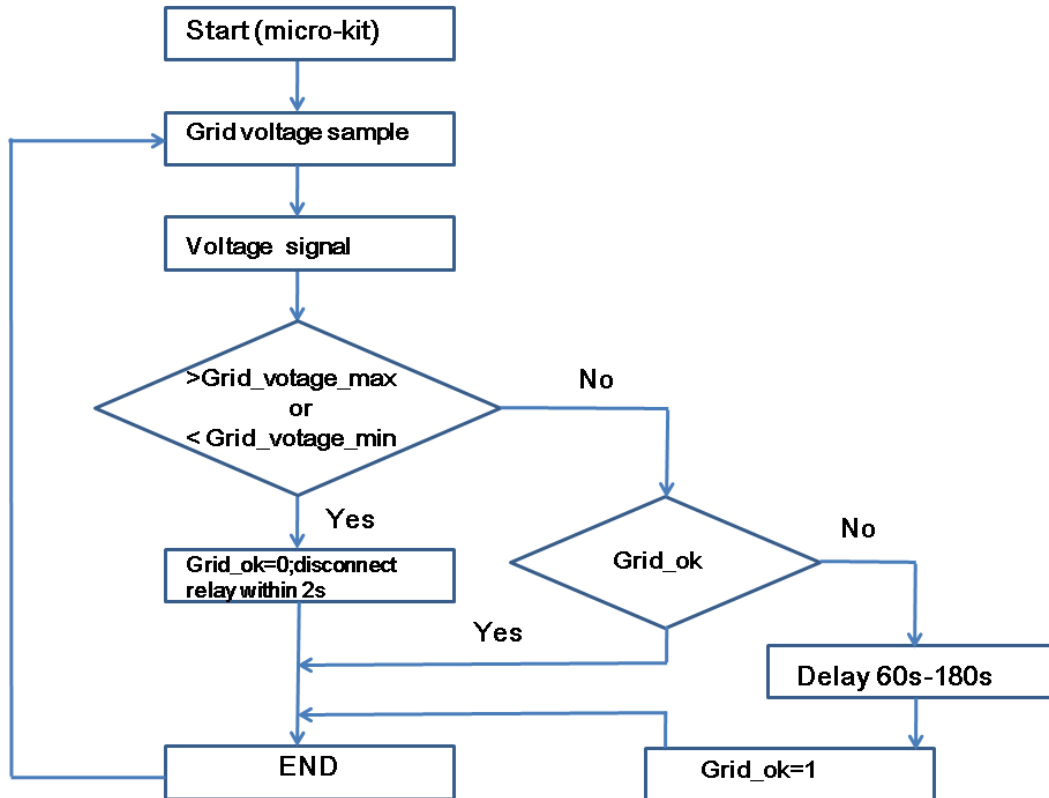


Figure 3.3.2 under/over frequency protection flow chart

- **Over Current Protection:**

If the output over current caused by internal fault of M248 is occurred, the fuse will be open to disconnect the M248 and grid, the LED will be flickered at the same time.

Micro-Kit _DSP1 sample the real time current signal of one grid period, and get the current grid current by Lock-in Algorithm, compare the signal with Grid_ current_ max. If the signal is more than Grid_ current_ max, Micro-Kit _DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working. If the signal is less than Grid_ current_ max, Micro-Kit _DSP1 will connect the relay in 60~180S, all the micro-inverters will start working again.

- **Short Circuit Protection:**

M248 sample the real time voltage signal of one grid period, and get the current grid voltage by Lock-in Algorithm. If the grid is short circuit, Lock-in Algorithm will be failed and M248 will stop working within 2S, and have a fault alert by LED. Micro-Kit _DSP1 sample the real time voltage signal of one grid period, and get the current grid voltage by Lock-in Algorithm, If the grid is short circuit, Lock-in Algorithm will be failed and Micro-Kit _DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working.

- **Anti- Islanding Protection**

M248 increase the reactive distortion to the output current at normal operating

conditions, and all the M248 are same connection to keep the consistency of distortion. Micro-Kit _DSP1 sample the real time voltage signal of one grid period, and get the current grid reactive power by Lock-in Algorithm, compare the signal with Grid_VA_max, the reactive power detected is more than Grid_VA_max if the system is islanding, and Micro-Kit _DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working.

•**DC Injection(1A):**

Micro-Kit _DSP1 sample the real time current signal of one grid period, and get the current grid DC injection by FFT Algorithm, compare the signal with Grid_current0_max (equivalent to 1A), If the DC injection is more than Grid_current0_max, Micro-Kit _DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working.

•**Leakage Current (30mA):**

Micro-Kit _DSP1 sample the real time current signal of one grid period through differential current sensor, and get the current grid leakage current directly, compare the signal with Grid_leakage_current_max (equivalent to 30mA), If the DC injection is more than Grid_leakage_current_max, Micro-Kit _DSP1 will disconnect the relay connected to the grid within 2S, and all the micro-inverters will stop working.

3.3.2 Plant monitoring functions

• **Use the Power Line Carrier Communication (PLCC) technology within Photovoltaic power plant**

By PLCC technology, Micro-Kit collects generation data from the PV power plant, and transmits to the central database by its built in ETU. Measures the data of energy harvest by high-precision digital power meter by high-precision digital power meter, Micro-Kit measures the data of energy harvest to achieve the photovoltaic power plant status monitoring, and transmits the collected data to central database by eLog.

• **High-Frequency Line Impedance Stabilization Network (LISN)**

By high frequency LISN integrated, Micro-Kit can improve the immunity, but also effectively prevent the Micro-Kit interference to the grid.

• **Uses CAN-bus to connect every single power interface Micro-Kit to realize power data monitoring**

Every Micro-Kit connect with others through CAN-bus. Photovoltaic power generation data can be collected by embedded component, ETU, which is connected with internet and central database and transmitted data to central database. Solar Energy Data Acquisition System (SEDAS) analyses the data.

3.4 Technical Parameters

Model	PIU4K
Data (AC)	
Rated switched power	3.68KW
Rated voltage	230V
Rated current	16A
voltage range	195V ~ 253V (Adjustable With Country Deviation)
frequency range	49Hz ~ 51Hz (Adjustable With Country Deviation)
Electrical Portal	
Grid and Array	Double Relay
Grid	Connect to Grid
Array	Connect to Array
Mechanical Data	
Enclosure environmental rating	IP40
Operating temperature range	-20°C ~ 65°C
Dimensions (WxHxD) in mm	212x209x81mm
Weight	1.5kg
Features	
Compliance	CQC/TUV/DK5940/G83/SEMKO/ETL
Warranty	5 Years
Power Consumption	6W

4 Installation

4.1 Operating Condition

Operating Temperature Ambient temperature: -20°C ~ + 65°C 。

Operating Humidity Air Relative Humidity <=90%

Rated Input AC230V/50Hz

4.2 System diagram

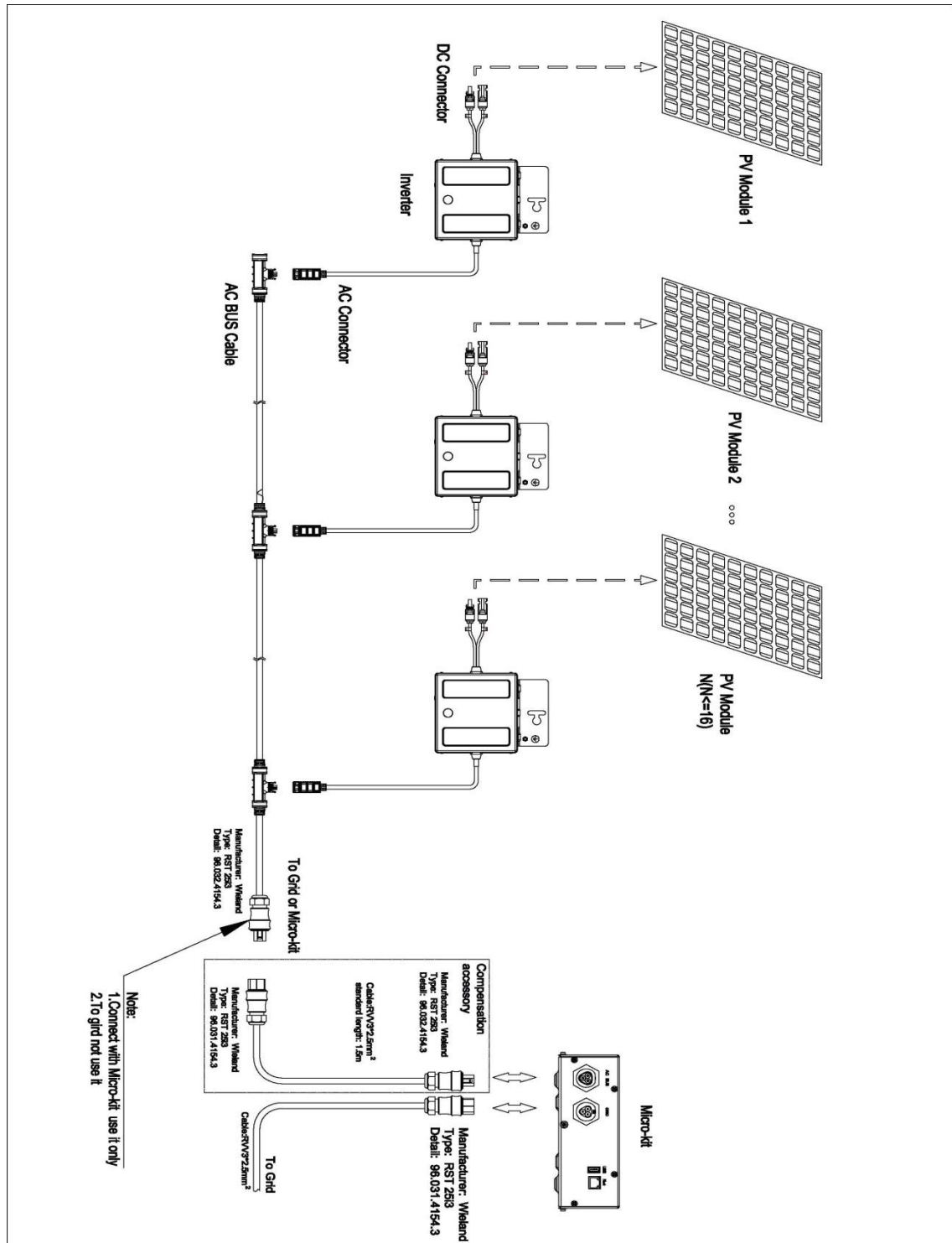


Figure 4.2 System diagram

4.3 Installation Procedure

Dimension See below Figure 4.3.1.

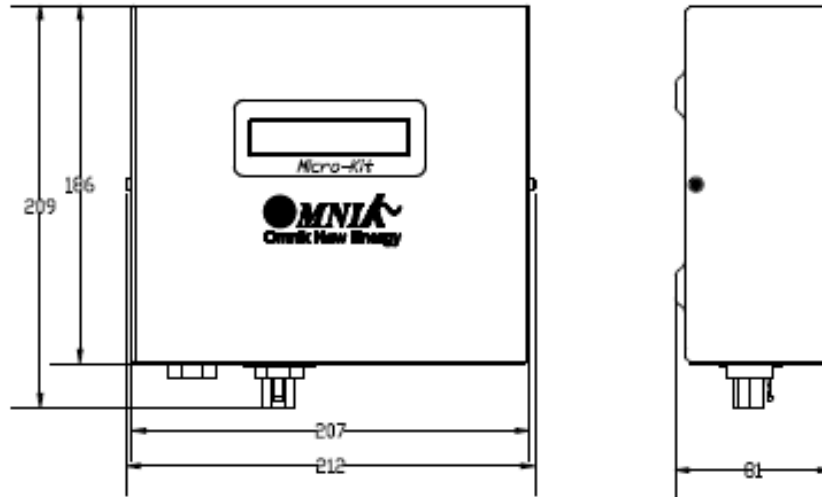




Figure 4.3.1 Dimension of Micro-Kit

	<p>Warning</p> <ul style="list-style-type: none"> • Micro-Kit MUST connect to earth effectively. • To comply with local installation of the safety practices and guidelines, and shall comply with the proper use of tools and personal protective equipment (PPE) requirements.
	<p>Caution Between the cables, power supply cable and CAN Bus, and RJ-45 cable to the internet (if optional), must be isolated from each other. Do not place these cables in the same rack.</p>

Installation Diagram

See below Figure 4.3.2.

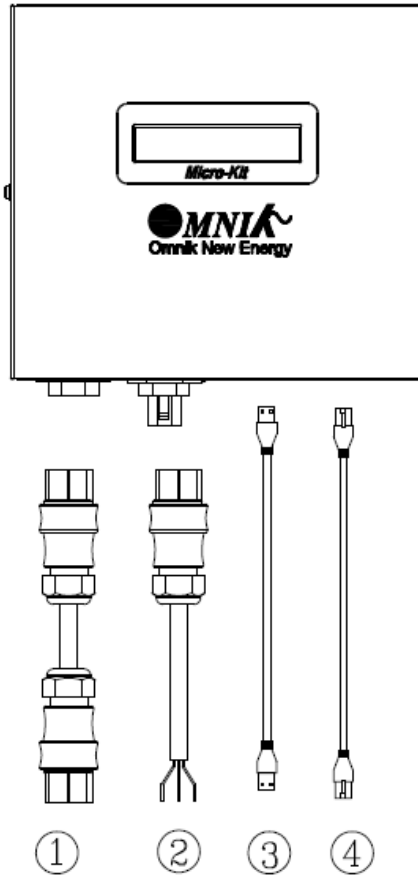


Figure 4.3.2 Installation Diagram

Step 1: Connect the plants terminal to AC BUS Cable.

Step 2: Connect the grid terminal to the Grid.

Step 3: Connect the USB terminal of Micro-Kit to Debug-COM.

Step 4: Connect the RJ45 terminal of Micro-Kit to the Ethernet devices connected to the Internet or network card on the PC (Optional).



<p>White - N Black - L Green - PE</p>			<p>Pin1-White Pin2-Brown Pin3-Green Pin4-NC</p>
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Table 4.3.1 AC Input Terminal

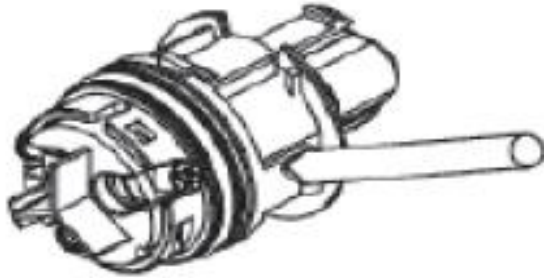


Note

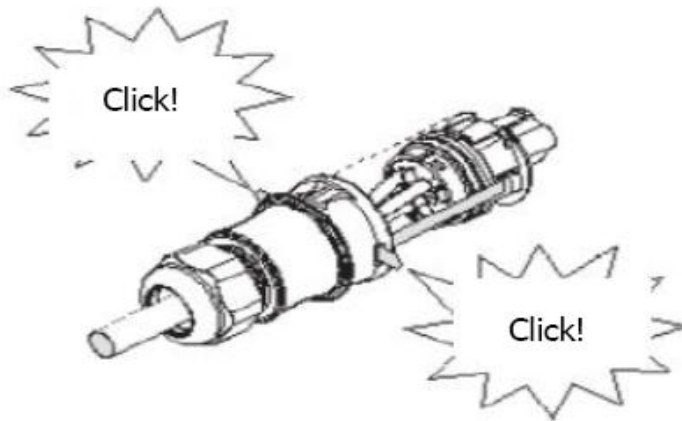
Note: CAN bus terminal, grid terminal, plants terminal are all standard component. Be connected to relative terminal.

Grid connection

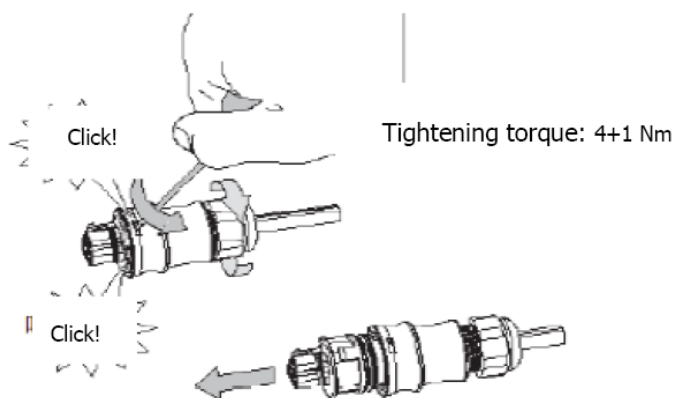
1. Wire fastening and split



Screw connection: Tightening torque typically 0.8Nm-1.0Nm

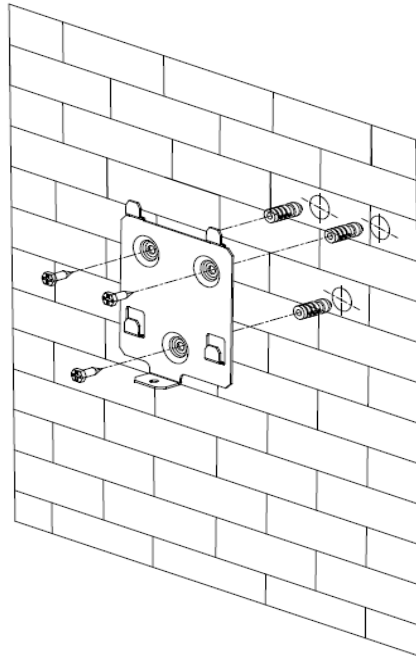


2. Connector fastening and split

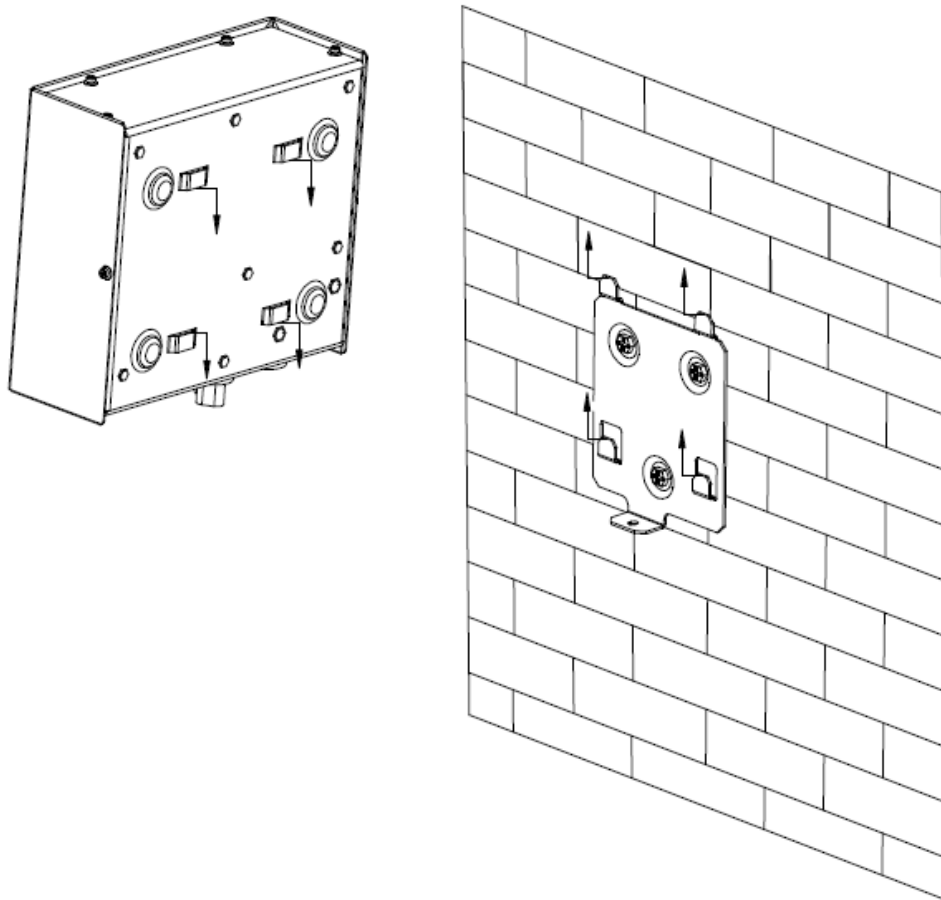


3. Connector Locking and split

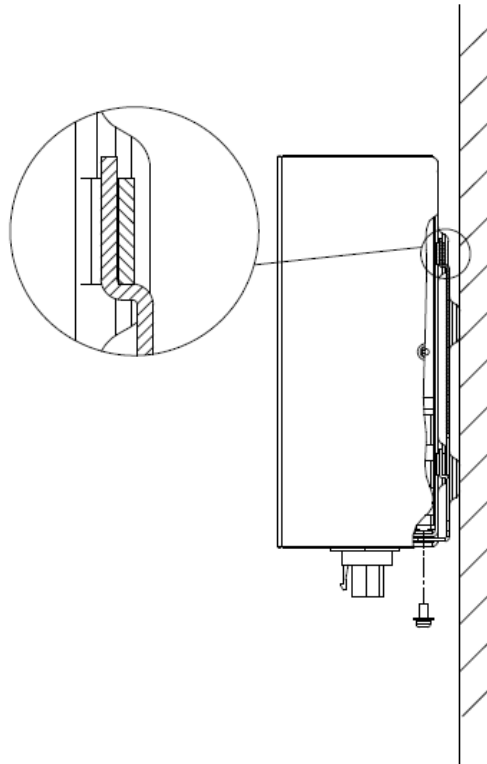
- 2. Place Φ 12mm expansion tubes in every hole by rubber hammer, then fix the bracket to the wall with 3 ST6X50 screws.**



- 3. Connect Micro-Kit to bracket as following figure.**



4. Fasten Micro-Kit and bracket with M4X8 screw.



5 Operating Static

Energy data terminal ETU is the core component of the world's first Power Plant Interface (PPI) created by Omnik, it realizes the connection between solar power plant and internet. As an intelligent communication gateway, ETU uses Omnik's Power Line Communication (PLC) technology to continuously monitor the data of energy harvest of solar power plant such as power, voltage, current and frequency; it can also transmit the real-time data of energy harvest to Omnik's Solar Energy Data Acquisition System (SEDAS) to realize the monitoring around the world.

Set aside a minimum functionality of the ETU module in the Micro-Kit, you can optional this ETU modules to achieve the connection between PV power plant and the Internet. RJ45 cable should be simultaneously matching with ETU module.

5.1 Working Mode

The working modes of an Omnik Micro-Inverter are:

- Start up**
- Active**
- Fault**
- Standby**

The detailed working mode descriptions are as below:

Start up

Start up mode is for a newly installed Micro-Kit. This startup mode must base on the proper AC, micro-inverter, Ethernet and Can bus cables connecting.

Active

When the Micro-Kit is in normal operation process, this insures that the power available from micro-inverter array is exported to the utility grid. The LED inside of Micro-Kit will flash in green.

Fault

If the system does not operate correctly, Omnik Micro-Kit would stop automatically and enter into Disable mode. The Omnik Micro-Kit system keeps detecting the disable information, it will be in disable mode until fault release. If the inoperative Micro-Kit has been repaired and match to the electrical utility grid, the whole system would enter operation mode after 60 seconds to 5 minutes. Be aware that only qualified personnel should maintain the OMNIK Micro-Inverters. The LED will flash in yellow (communication fault) or red.

Standby

When the Micro-Kit is in operation process but keeps with low voltage and

current in micro-inverter side for a certain time. The Micro-Kit manages transition from “Active” to “Standby”. In “standby” mode, Micro- Inverters keep detecting the energy output of each micro-inverter. When the output energy reaches the power generation conditions, the inverter would enter into “Active” from the “Standby” state.



- The equipment maintenance only can be carried through by service department of Omnik, or the service centre or professional authorized by Omnik. Maintenance personnel should be familiar with all the warnings in this manual and the proposed steps
 - Must be sure to disconnect the input and output power before removal of equipment for maintenance.

5.2 Grid-Connection

Micro-Kit system connects grid automatically. It detects and monitors the performance of each PV module through each micro-inverter. When the output energy reaches the power generation conditions, the Micro-Kit system begin connect grid and generate electricity.

5.3 Grid Disconnect

If the state grid cannot match the following situations (table 5.3.1), it bring the Omnik Micro-Inter to a rest.

Type	Rated	Variation Range
Voltage	230V	205V - 265V
Frequency	50Hz	47Hz – 51Hz

Table 5.3.1 Parameter of European state power grid

Only to be carried out by qualified competent personnel.

Start Micro-Kit after checking all below steps:



WARNING
Connect the Micro-Kit to the electrical utility grid only after receiving prior approval from the utility company.

**WARNING**

Only qualified personnel could connect Omnik Micro-Kit to the electrical utility grid.

5.4 Installation checklist

To ensure the safe operation of the devices, they may be installed and commissioned only by qualified personnel in full compliance with the warnings referred to in this manual.

Checklist

Check the mechanical and electrical installation of the unit before startup. Go through the checklist below together with another person. Read the Safety instructions and EC directives on the previous pages of this manual before you work on the unit.

Mechanical Installation

Check screw connections on the inverter for tightness. The ambient operating conditions are allowed. (See Technical parameter); The unit is fixed properly on a nonflammable wall. (See Mechanical installation.) The cooling air will flow freely. The unit is fixed tightly and support is enough. (See Mechanical installation.)

Electrical Installation

Check all screws of the connection terminals in the installation system before and after the inverter for tightness.

The AC output voltage matches the unit nominal voltage. Make sure that the whole micro-inverters array power cannot exceed the permissible input power range of the device. The micro-inverter output cable and Micro-Kit input cable's connections and their tightening torques are OK. There are no tools, foreign objects or dust from drilling inside the unit. Unit, connection box and other covers are in place. The Micro-Kit output power cable and the main power connection is OK. The Ethernet and Can bus (more than 2 Micro-Kit) connections are OK. The external cords and cables are fixed tightly, and strain relief clamp is provided for external accessible cords and cables. Cord and cable inlets are sealed completely after cord/cable installation.

5.5 Start-Up– Checks

The device has been checked at the factory and adjusted so that it can be commissioned immediately after being installed.

Following Section Installation checklist, for your personal safety and to avoid damage, the following safety checks should be performed before start by a qualified person who has adequate training, knowledge, and practical experience to perform these tests. The data should be recorded in an equipment log. If the device is not functioning properly or fails any of tests, the device has to be repaired.

1. Inspect the equipment and accessories for mechanical and functional damage.
2. Inspect the safety relevant labels for legibility.
3. Inspect the fuse to verify compliance with rated current and breaking characteristics.
4. Measurement of insulation resistance
5. Measurement of earth resistance
6. Mounting structures: Verify tightness and integrity of bolts and other fastening devices; Verify if there is significant corrosion.

6 Disconnecting a Micro-Kit from the system

To ensure safe disconnection of the Micro-Kit from the solar power plant, it must NOT be carried out under load conditions. Ensure the following disconnection steps are carried out in the order shown:

1. Disconnect the AC by isolating the branch via the circuit breaker.
2. Disconnect the AC cable from micro-inverter in the branch circuit.
3. Make sure the LED inside of Micro-Kit is off.
4. Disconnect the Ethernet and CAN bus cable.
5. Remove the Micro-Kit from the system.

7 Monitoring and Troubleshooting and Maintenance



No use-serviceable parts inside, before servicing and in the event of internal malfunction the unit, send the Micro-Kit to authorized representative or manufacturer!

Never operate this product and change any part of Micro-Kit yourself.

Only trained and authorized professional personnel WHO ARE FAMTLIAR WITH THE REQUIREMENTS OF SAFETY was allowed to perform servicing and maintenance work.

7.1 Safety checks

Safety checks should be performed at least every 12 months by manufacturer's qualified person who has adequate training, knowledge, and practical experience to perform these tests. The data should be recorded in an equipment log. If the device is not functioning properly or fails any of tests, the device has to be repaired.

For safety check details, refer to this manual, section 3 Safety instruction and EC Directives.

7.2 Maintain periodically

Only qualified person may perform the following works.

During the process of using the Micro-Kit, the manage person shall examine and maintain the machine regularly. The concrete operations are as follow.

1. Check the SEDAS (Solar Energy Data Acquisition System) website if the indicators the Micro-Kits are in normal state. This check should be performed at least every 6 months.
2. Check if the input and output wires are damaged or aged. This check should be performed at least every 6 months.



Before cleaning the Micro-Kit:

Wear gloves and safety glasses.

Disconnect grid cable and micro-inverter's cable with Micro-Kit – Isolating device.

Clean the inverter with wet cloth carefully.

7.3 Micro-Kit Status LED Indications and Error Reporting

Micro-Kit has an inside LED to indicate the status of the Micro-Kit. The following table 7.3.1 is the LED indications and error report.

LED Operation	Working Mode
2 short yellow blinks	startup
Flashing yellow continuously	Producing power and communicating with ETU
4 short yellow blinks	Producing power and not communicating with ETU
6 short yellow blinks	Disable
3 short yellow blinks	Standby




Table 7.3.1 Status LED Indications and Error Reporting

Fields	Explain	Unit
Grid Voltage	Grid Voltage	V
Grid Current	Export DC	A
Grid Frequency	Grid Frequency	Hz
DC input voltage	DC input voltage	V
DC	Input DC	A
Power	Output Power	W
Temperature	Ambient temperature	°C
Module Temperature	M248 Module Temperature	°C
Daily Working Hours	Working Hours for the day	Minute
Daily power generation	generation power for the day	kWH
Monthly power generation	Daily power generation for the month	kWH
Amount of power generation	Amount of power generation	kWH
Amount of working hours	Amount of working hours	Hour

Diagram 7-3-1 Details Control Information

Fields	Explain
Module Disable	M248 module disable in the PV system
Over temperature	M248 over temperature in the PV system
Over current	PV module export over current
Over DC voltage	Over DC voltage in PV module
Over AC voltage	Over voltage in state grid
Low voltage	Low voltage in state grid
Frequency disable	Abnormal frequency in state grid
Island effect	Anti-island protection

Diagram 7-3-2 Information of Disable Mode

 NOTE	NOTE Disable Micro-Inverter does not affect the operation of all Omnik Micro-Inverter system. System will bypass the disable Micro-Inverter.
	WARNING Be aware that only qualified personnel should troubleshoot the PV array or the Omnik Micro-Inverter.
	WARNING Never disconnect the DC wire connectors under load. Ensure that no current is flowing in the DC wires prior to disconnecting.

7.4 Internet WEB

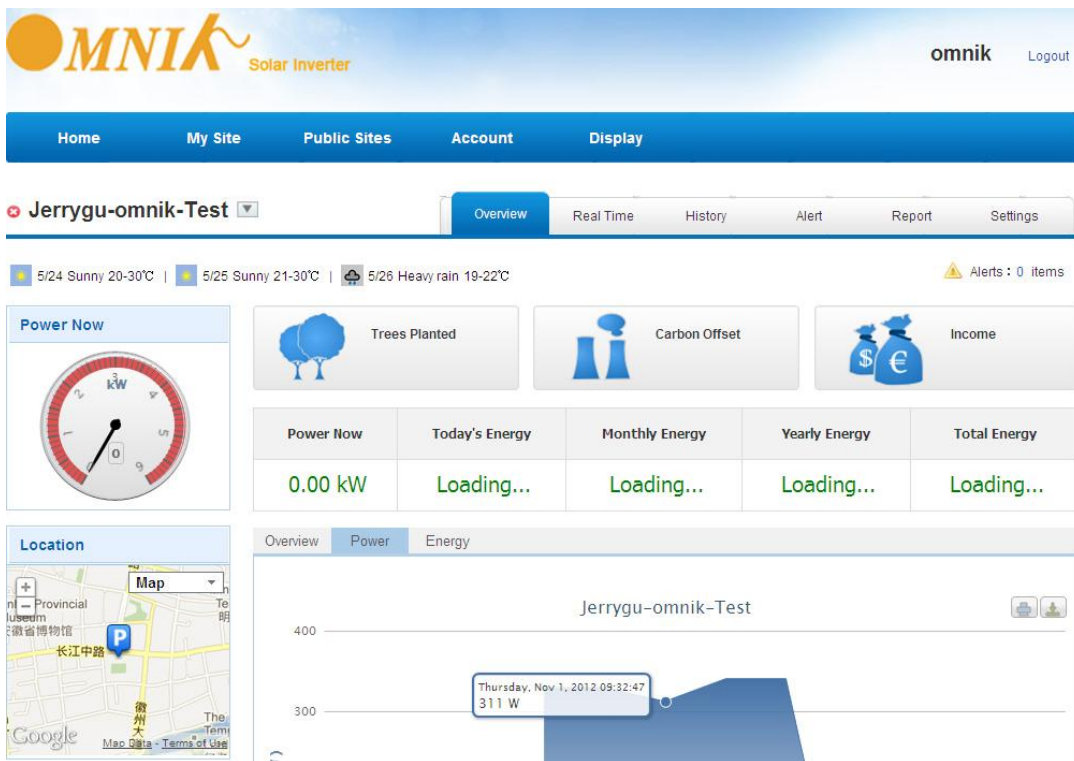
Introduction

Use The monitoring website developed by Omnik to real time track the statistics information of the energy harvest for all Omnik micro-inverter system and monitor per-module's performance which is integrated into the Omnik micro-inverter system.

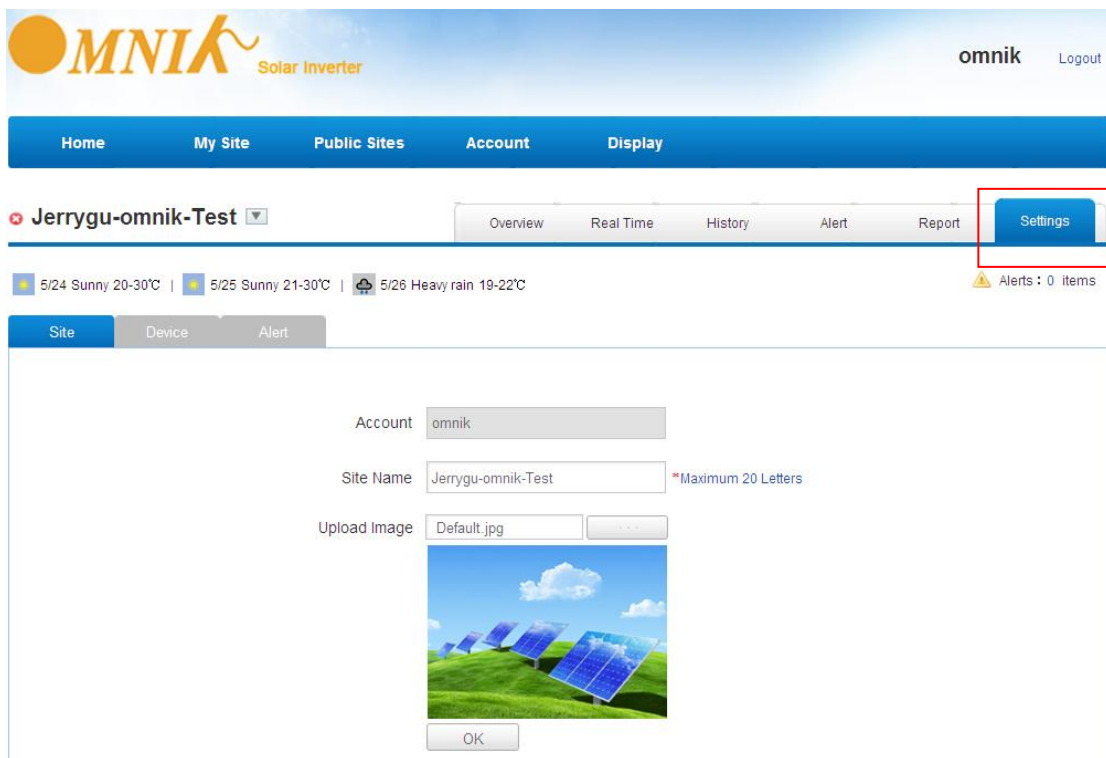
Register address: <http://221.131.118.124:28080>



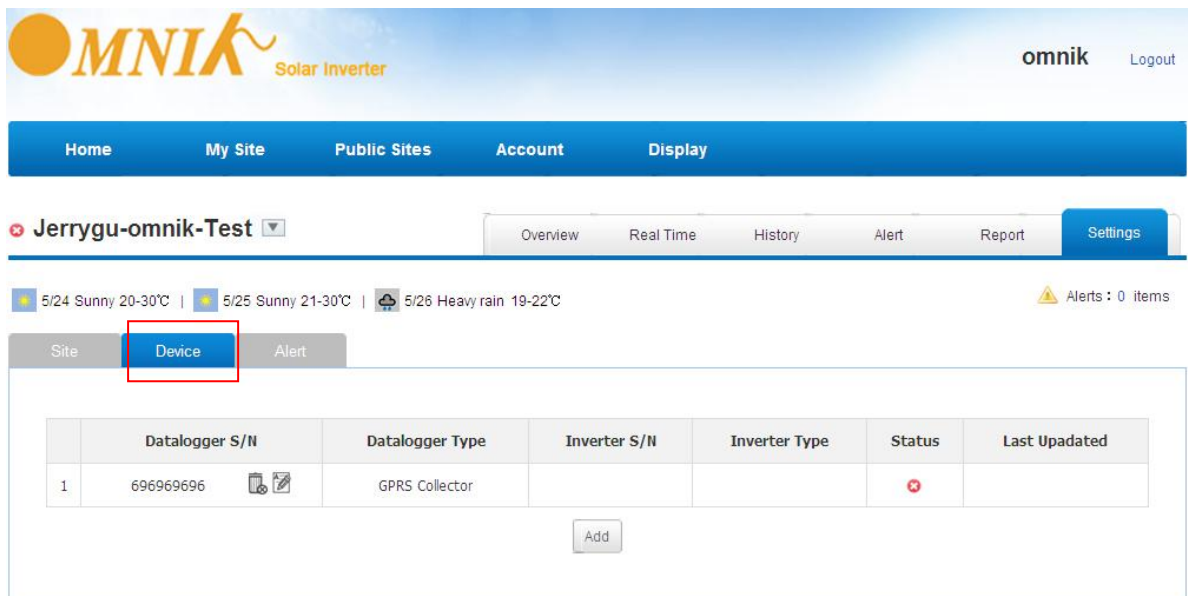
Data collector Micro-Kit registers procedure:
Register Succeed, log on and enter the webpage as below:



click “settings” ,and enter the Micro-Kit register page:



click “device”



At the last part of the page, click “add”, fulfill the Micro-Kit serial Number in the blank space, for example: “90000001”, click “OK” and finish the register of the data collector.

8. Contact

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Appendix

Limited Warranty

OMNIK provides the 5-year warranty (The exact time depends on the contract) due to our responsible attitudes toward customers and partners and our confidence in OMNIK products. During the warranty period, if any defect in workmanship and materials of the Omnik micro-inverters is detected, customers is entitled by the warranty to ask for replacement or repairing from Omnik with no extra cost. During the Warranty period, require the product invoices and purchase date for free replacement or repairing. The Limited Warranty does not cover the product which trademark is not visible.

The Limited Warranty does not cover following situations:

- Damaged by transportation
- Improperly installed
- Improperly operated
- Improperly handled or used
- Use under conditions for which the product was not designed or in an unsuitable environment.
- Any installation and use beyond the scope of relevant international standards
- Damage cause by non-normal natural environment