



PROJOY
electric

— *Switch To Safety!* —

User Manual

PEEM-S100

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Product information is subject to change without notice. User documentation is frequently updated; please check www.projoy-electric.com for the latest information. To ensure optimal reliability and meet warranty requirements, Projoy Electric products must be installed according to the instructions in this manual. For warranty text refer to www.projoy-electric.com.

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Audience

This manual is intended for use by professional installation and maintenance personnel.

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Read This First

Dear customer, thank you for choosing Projoy products. We hope you will find our products meet your needs for renewable energy. Meantime, we appreciate your feedback regarding our products.

A DTU is a communication device for the Projoy microinverter system. DTU and microinverters are all connected to the same WIFI network. DTU will collect the AC power grid parameter by CT. If any power is exported to the power grid, DTU will send it to each microinverter and control the output of the system.


This manual contains important instructions for PEEM-S100 DTU and must be read in its entirety before installing or commissioning the equipment. For safety, only qualified technicians, who have received training or have demonstrated skills can install and maintain this DTU under the guide of this document.

Important Safety Information

During installation, testing, and inspection, adherence to all the handling and safety instructions is mandatory. Failure to do so may result in injury or loss of life and damage to the equipment.

Product Label

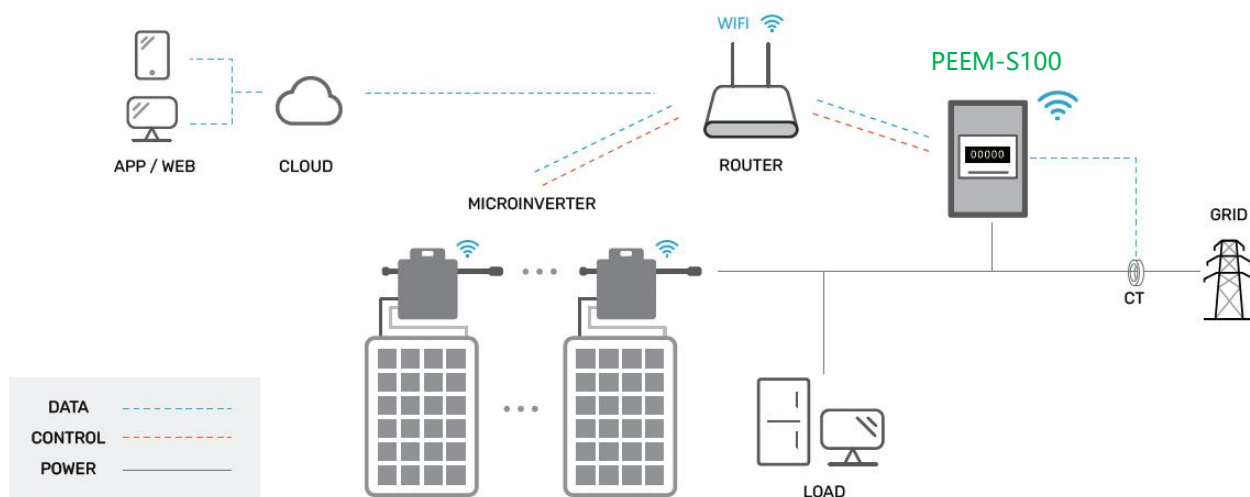
The symbols on the products are listed below and illustrated in detail.

| Symbol | Description |
|---|---|
|  | This device fulfills the requirements of the Radio Equipment Directive. |

System Introduction

The PEEM-S100 DTU is used in grid-tied applications which not allow electricity to be transmitted to the public power grid, is comprised of three key elements:

- Projoy Microinverter.
- M-Cloud monitoring system.
- PEEM-S100 DTU.

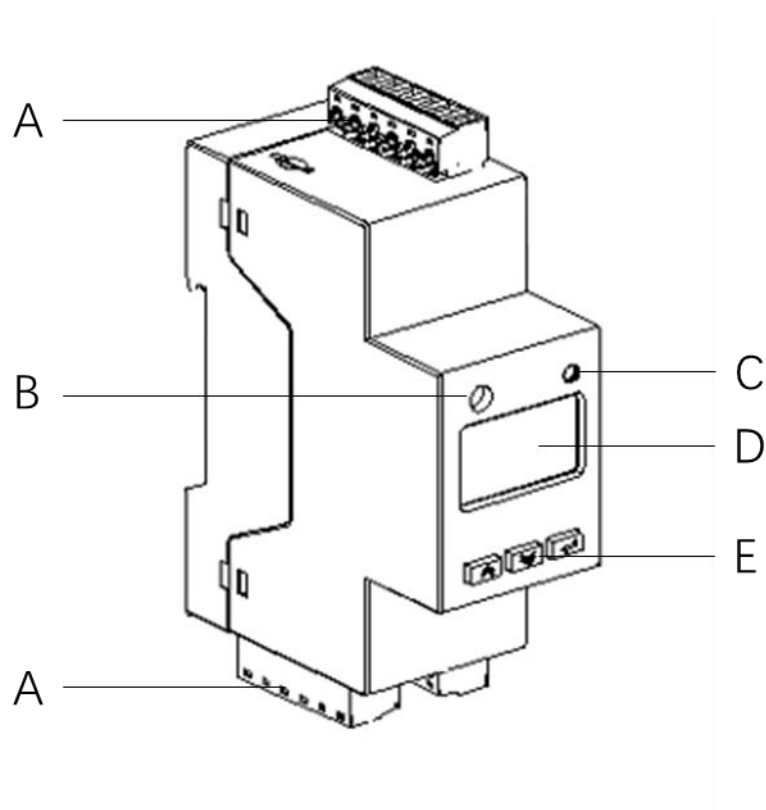


The microinverter converts the DC electricity generated by solar panels into AC electricity which is in accordance with the requirements of the public grid and sends the AC into the grid, reducing the load pressure of the grid.

The microinverter is integrated with the Wi-Fi module and connects to the home Wi-Fi router directly. Users can monitor the power generation of the system by M-Cloud monitoring App.

The PEEM-S100 DTU will detect the power to the public power grid. If there is an export to the public power grid, DTU will communicate with the microinverter locally and reduce the outpower of microinverters.

Product Description



| | | | |
|---|--------------|---|-------------|
| A | Connector | D | Screen |
| B | Antenna Port | E | Buttons * 3 |
| C | Status Light | | |

Datasheet

| Model | PEEM-S100 |
|---|--------------------------|
| AC Input | |
| Grid Type | Single phase |
| Input AC Voltage | 230V |
| Input AC Frequency | 50 / 60 Hz |
| Max. Current per phase | 100A |
| Power Consumption per phase | <1W |
| Communication | |
| Wi-Fi Type | WIFI (802.11 b/g/n) |
| Wi-Fi Frequency Range | 2400MHz-2483.5MHz |
| Maximum Distance to Router (Open Space) | 100m |
| Bluetooth Type | BLE 5.0 |
| Bluetooth Frequency Range | 2400MHz-2483.5MHz |
| Maximum Distance to mobile phone (Open Space) | 50m |
| Control | |
| Connection Limit | 28 Microinverters |
| Communicate to Server | 300 s |
| Communicate to Microinverter | 300 ms |
| Accessory | |
| External Antenna | Yes |
| Cable length of antenna | 2m |
| External CT | 1 |
| Cable length of CT | 2m |
| CT Type | φ 16mm |
| Mechanical Data | |
| Dimension(mm) | 36 * 90 * 90 |
| Weight (g) | 130 |
| Ambient Temperature(°C) | -20~+55 |
| Mounting System | Rail mounted (35mm) |
| Indicator Light | 1 * LED |
| Altitude(m) | < 2000 |
| Relative Humidity | 0 - 95%, No condensation |

Projoy Electric Co., Ltd declares that the radio equipment (DTU) is in complies with Directive 2014/53/EU.

OPERATING FREQUENCY (the maximum transmitted power)

2412MHz—2472MHz(EIRP <20dBm)

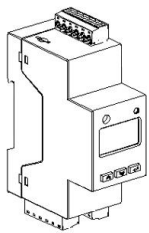
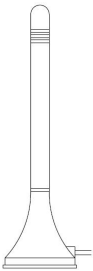
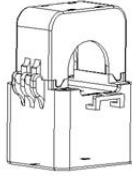

2402MHz—2480MHz(EIRP <10dBm)

Installation

Pre-installation Check

Check the Package

Although Projoy's products have surpassed stringent testing and are checked before they leave the factory, it is uncertain that the products may suffer damage during transportation. Please check the package for any obvious signs of damage, and if such evidence is present, do not open the package and contact your dealer as soon as possible.


| | | | |
|---|---|--|---|
|  |  |  |  |
| Meter * 1 | Antenna * 1 | CT * 1 | SN Label * 1 |

Check the Installation Environment and Position

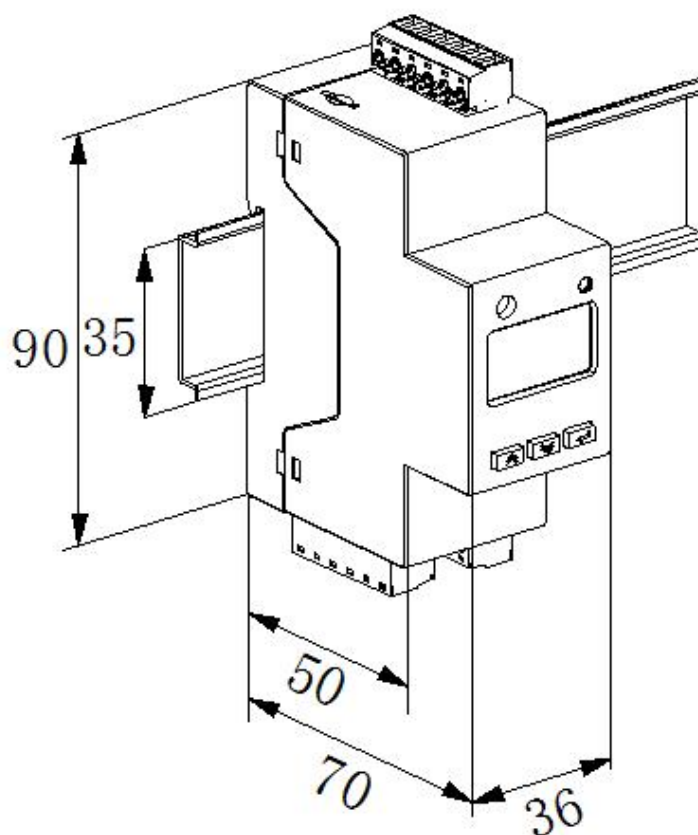
When choosing the position of installation, comply with the following conditions:

- ◆ Install the DTU near or in the home distribution box.
- ◆ Avoid electromagnetic interference that can compromise the correct operation of electronic equipment.
- ◆ Use a mobile phone to check the Wi-Fi signal strength at the installation position. If the Wi-Fi signal is bad, try to install the DTU in another position or move the Wi-Fi router.

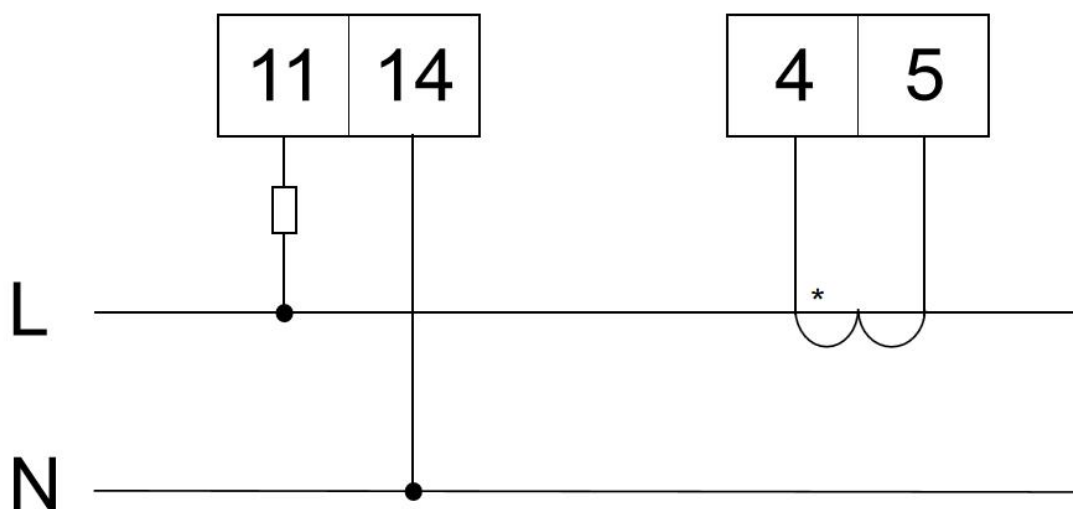
Installation Steps

|  DANGER |
|--|
| <ul style="list-style-type: none"> · Only qualified personnel should install, troubleshoot, or replace DTU and accessories. · Before installation, check the unit to ensure the absence of any transport or handling damages. · Unauthorized removal of necessary protections, improper use, incorrect installation, and operation may lead to serious safety and shock hazards or equipment damage. · Be aware that installation of this equipment includes the risk of electric shock. |

Step 1. Install the DTU.

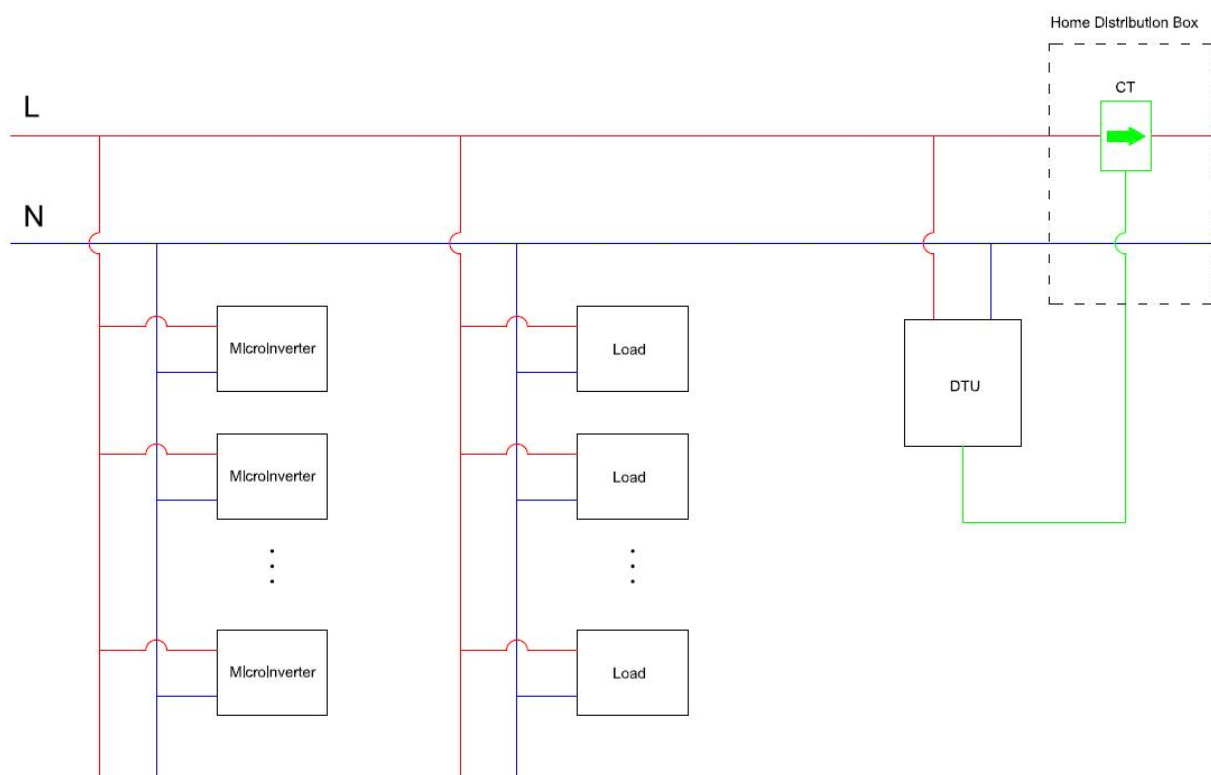


Fix the DTU onto the rails of AC distribution box. Connect the L and N cable to port 11 and port 14. Then connect CT cable to port 4 and port 5.



Step 2. Connect CT

Install the CT into the L cable. The direction on the CT should be pointed to the grid side.



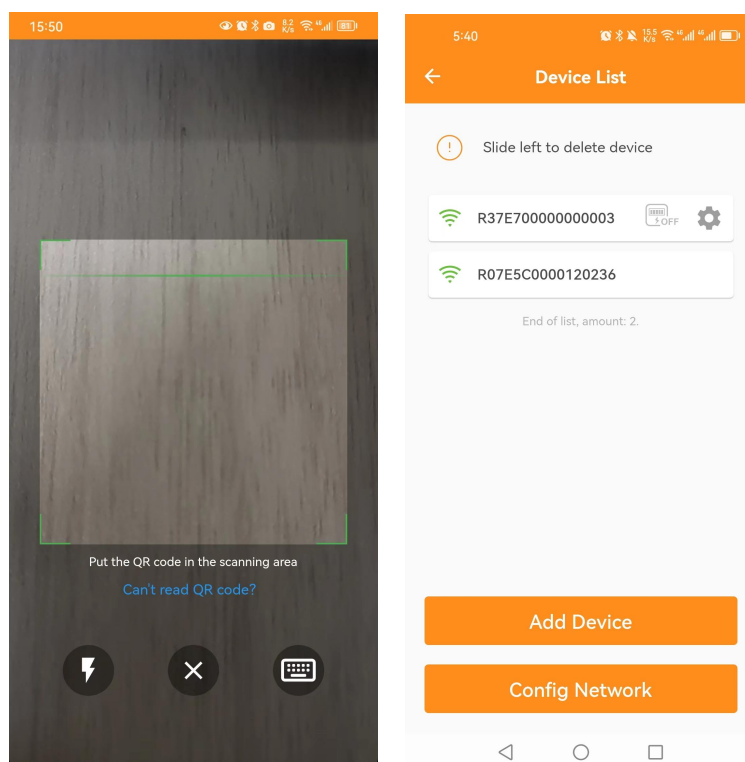
Step 3. Connect the Wi-Fi antenna

Connect the Wi-Fi antenna cable to the DTU. Put the antenna out of the distribution box to get a good Wi-Fi signal.


Step 4. Add the DTU to M-Cloud Home


Open M-Cloud Home App.

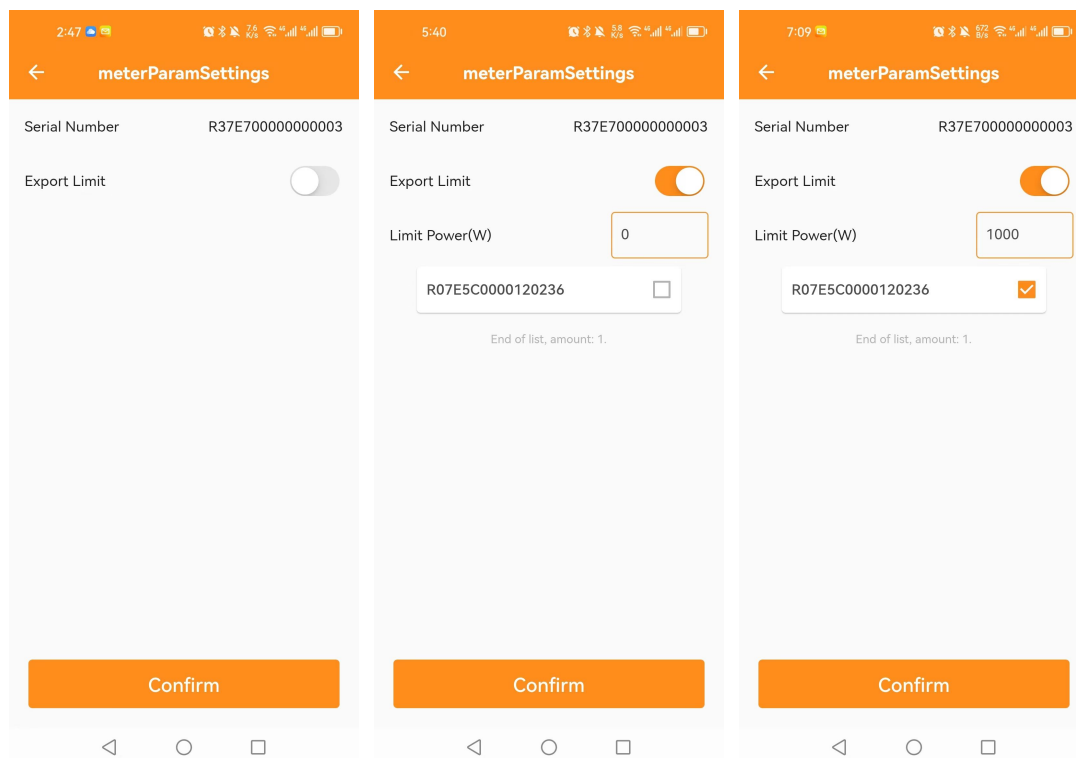
Scan the SN label of DTU and add it to the device list.



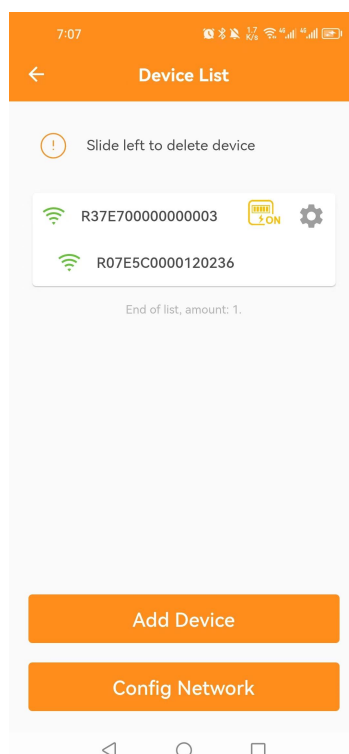
Step 5. Set the power limit function

Click the setting button  and enter the meter setting page.

Switch on the export limit button . Enter the limit power and choose the microinverter that need to control.



Press “Confirm” button. Then the status and relationship will be shown on the device list.



Maintenance Guide

Routine Maintenance

- ◆ Only authorized personnel are allowed to carry out the maintenance operations and are responsible for reporting any anomalies.
- ◆ Always use the personal protective equipment provided by the employer when carrying out maintenance.
- ◆ During normal operation, check that the environmental and logistic conditions are appropriate. Make sure that the conditions have not changed over time and that the equipment is not exposed to adverse weather conditions and has not been covered with foreign bodies.
- ◆ DO NOT use the equipment if any problems are found and restore the normal conditions after the fault has been corrected.
- ◆ The firmware version can be checked by using the monitoring system.
- ◆ Always de-energize the AC branch circuit before servicing.
- ◆ Do not attempt to dismantle the DTU or make any internal repairs! To preserve the integrity of safety and insulation, the DTU is not designed to allow internal repairs!
- ◆ Avoid temporary repairs. All repairs should be carried out using only genuine spare parts.

Storage and Dismantling

- ◆ If the equipment is not used immediately or is stored for long periods, check whether it is correctly packed. The equipment must be stored in well-ventilated indoor areas that do not have characteristics that might damage the components of the equipment.
- ◆ Take a complete inspection when restarting after a long time or prolonged stop.
- ◆ Please dispose of the equipment properly after scrapping, as component parts are potentially harmful to the environment, following the regulations in force in the country of installation.

Recycling and Disposal

This device should not be disposed of as residential waste. A DTU that has reached the end of its life is not required to be returned to the dealer. Users must find an approved collection and recycling facility in the area.

Warranty Service

This Warranty is subject to the following conditions:

- ◆ The products must have been installed and correctly commissioned by an authorized and licensed installer. Proof may be required of correct commissioning of the Product (such as a certificate of compliance). Claims for failures due to incorrect installation or commissioning are not covered under this Warranty.
- ◆ Where a Product or part thereof is replaced or repaired under this Warranty, the balance of the original Warranty period will apply. The replacement product or part(s) do not carry a new voluntary warranty.
- ◆ The product must have its original serial number and rating labels intact and readable.
- ◆ This Warranty does not extend to any product that has been completely or partially disassembled or modified, except where such disassembly is carried out by Projoy.
- ◆ The terms of this Warranty cannot be amended except in writing by one of our authorized officers.
- ◆ There must have been a commissioning report signed by the end user and the installer for product commissioning and handling instructions.

Exclusions

- (a) Projoy makes no warranties, either expressed or implied, orally, or in writing, concerning any other warranty coverage except those expressly stated in this limited Factory Warranty.
- (b) The Factory Warranty does not cover damages that occur due to:
 - Transport damage;
 - Installation or commissioning through any person who is not an Authorized, Certified Dealer;
 - Failure to observe the user manual, maintenance regulations, and intervals;
 - Modifications, changes, or attempted repairs, except as conducted by an Authorized Dealer;
 - Incorrect use or inappropriate operation;
 - Failure to observe the applicable safety regulations;
 - Force majeure.
- (c) This factory warranty does not cover cosmetic defects which do not directly influence energy production, or degrade form, fit, and function.
- (d) Claims that go beyond the scope of this limited Factory Warranty, in particular claims for compensation for direct or indirect damages arising from the defective device, for compensation for

costs arising from disassembly and installation, or loss of profits, are expressly NOT covered by this Factory Warranty.

(e) In no event will Projoy Electric Co., Ltd be held responsible or liable for any personal injuries resulting from the use of the system, or for any other damages, whether direct, indirect, incidental, or consequential; even if Projoy Electric Co., Ltd has been advised of such damages.

Distributor Responsibility

In the event of an equipment failure or fault, it is the Distributor's responsibility to work directly with the Projoy Service Centre to limit the return of non-faulty equipment. Projoy Service Centre will work with the Distributor to rectify the fault or fault message through telephone support or with direct PC links. Note: To qualify for further compensation and a replacement unit, the distributor/installer must first contact Projoy and fulfill the distributor's /installer's responsibilities under instruction.

Within the warranty period of the DTU, the invoice and date of purchase are required for the service. Besides, the trademark on the product should be visible, otherwise, a warranty is not available.

More information can be found in Projoy Warranty Policy.



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