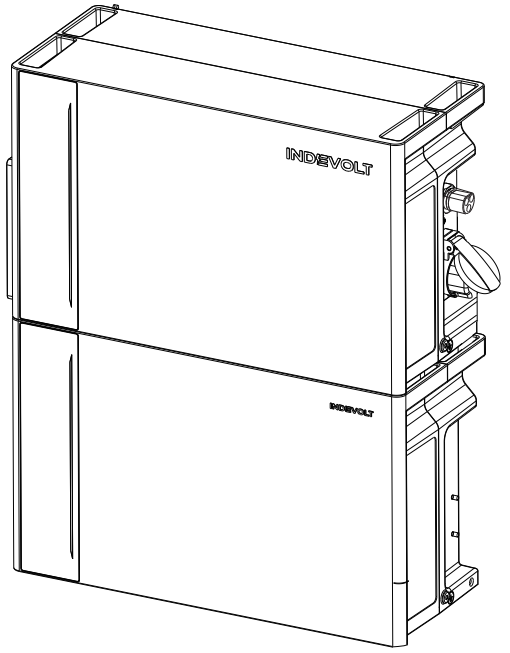
INDEVOLT

PowerFlex 3000 Series



User Manual/Bedienungsanleitung/ Manuel d'utilisation/ Gebruikershandleiding

EN

Contents

1. Introduction 1
2. Ensuring Product Safety 1
3. Packing List 3
4. Overview 4
5. Installation 7
6. Electrical Connection 14
7. AC-coupled Connection 21
8. Storage and Maintenance 22
9. Specifications 23
10. Frequently Asked Questions 25
11. INDEVOLT APP 26
12. Warranty and Contact Details 27

1. Introduction

Applications	
On-grid Usage As a balcony PV energy storage system, it can maximize the utilization of solar power generation and battery energy storage, achieving self-consumption in home energy use and reducing your electricity costs.	Off-grid Usage When your home experiences a power outage, it serves as an emergency backup power source, supplying electricity to your refrigerator or water heater to meet essential household needs.

The user manual covers 2 models. The configuration differences of each model are as follows. Please match the following configuration difference table according to the model you purchased. The main model distinctions are as follows:

Product Name	Model	Battery Type	PV Function
PowerFlex 3000 Hybrid	PG-800B PG-2400B PG-3000B	$LiFePO_4$	Support (PV Input)
PowerFlex 3000 AC	PG-800B1 PG-2400B1 PG-3000B1	$LiFePO_4$	Not Supported

Important Information for Users

Due to product version upgrades or other reasons, the content of this document will be updated from time to time. Unless otherwise agreed, this document is intended as a guide, and all statements, information and suggestions in this document do not constitute any express or implied warranties of any kind.

This document describes the installation, electrical connection, commissioning, and maintenance of the product. Please read this manual carefully before installing and using the product. Ensure you understand the safety information and are familiar with the product's functions and features.

2. Ensuring Product Safety

Read all instructions before using this product. Do not make any changes or create settings that are not described in this manual. If physical injury, loss of data, or damage is caused by failure to follow instructions, the warranty does not apply.

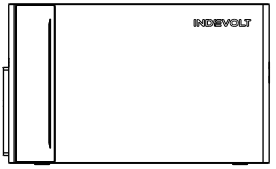
- To reduce the risk of injury, close supervision is required when the product is used near children.
- Do not put fingers or hands into the product.
- Accessories not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.

• To reduce the risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the product.
• Do not use the product in excess of its output rating. Overloading outputs above the rating may result in a risk of fire or injury to persons.
• Do not use the product or any attachment that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.
• Do not operate the product with a damaged cord or plug, or if the output cable is damaged.
• Do not disassemble the product. Take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
• Do not expose the product to fire or high temperatures. Exposure to fire or temperatures above 70°C may cause an explosion.
• To reduce the risk of electric shock, unplug the power pack from the outlet before attempting any instructed servicing.
• Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
• When charging a device, the product may feel warm. This is a normal operating condition and should not be a cause for concern.
• When charging the internal battery, work in a well-ventilated area and do not restrict ventilation in any way.
• Do not clean the product with harmful chemicals or detergents.
• Misuse, dropping, or excessive force may cause product damage.
• When disposing of secondary cells or batteries, separate cells or batteries of different electrochemical systems.
• Do not use or store this product in direct sunlight for a long period, such as in a car, cargo bed, or any other place where it will be exposed to high temperatures. Doing so may cause the product to malfunction, deteriorate, or generate heat.
• Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.
• Do not use this product near strong static electricity or strong magnetic fields.
• Do not expose this product to flammable, explosive gas, or smoke.
• Do not stand on the product.
• Do not immerse the product in water. If the product accidentally falls into water, place it in a safe, open place and keep it away from fire until it is completely dry.
• When using the device, ensure the connected equipment has a secure grounding connection to prevent electrical hazards.

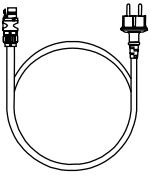
	This symbol indicates the presence of high voltage and the risk of electric shock.
	To avoid electric shock or injury, the inverter must not be touched or used until 10 minutes have elapsed since it was switched off or disconnected from the grid.
	Observe the operating instructions.
	Do not dispose of the system together with household waste. Please contact the service partner to dispose of it in accordance with regulations for electronic waste and used batteries.

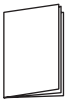
3. Packing List

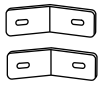
Power Module

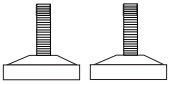


Power Module x 1


AC Power Cable x 1


User Manual x 1

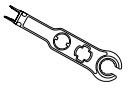

Wall Mount Fitting x 2


Adjustable Leveling Foot x 4

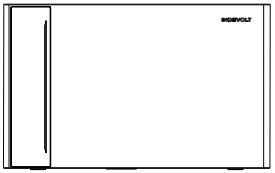

x 2
Self-drilling Screw M5x60

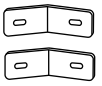

x 2
Screw M4x20


x 3
Screw M4x8


MC4 Connector Removal Tool (Excluding AC model)

Battery Module (optional)


Battery Module x 1


Wall Mount Fitting x 2


x 2
Self-drilling Screw M5x60

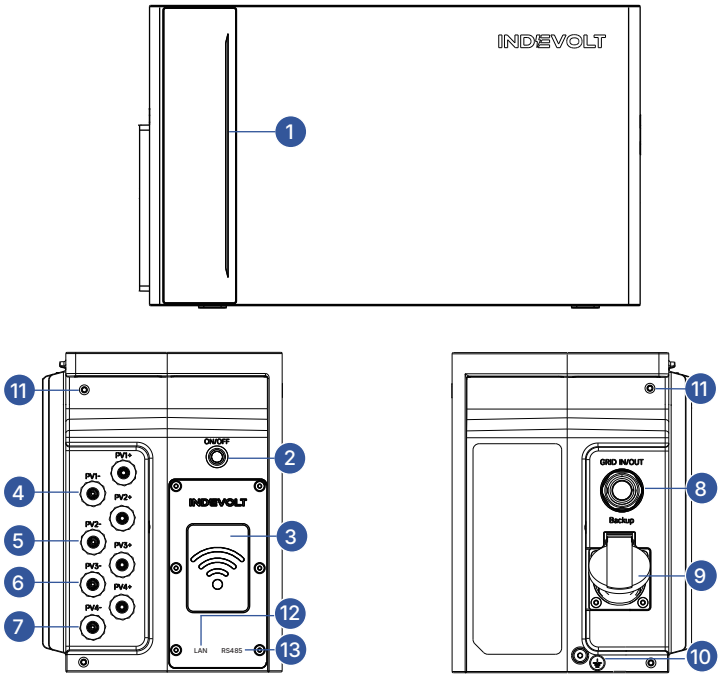

x 2
Screw M4x20


x 3
Screw M4x8

4. Overview

4.1 Product Overview

The following is the overall port function description. Notably, AC model do not include a PV port.



1. Operating status LED
2. ON/OFF Button
3. Wireless Modules
4. MC4 connection for PV input 1(This port is not available for AC model)
5. MC4 connection for PV input 2(This port is not available for AC model)
6. MC4 connection for PV input 3(This port is not available for AC model)
7. MC4 connection for PV input 4(This port is not available for AC model)
8. Grid-connected Terminal
9. Backup Terminal
10. Protective conductor screw hole (protective conductor should be at least 4 mm^2)
11. Bracket fixing
12. LAN Terminal
13. RS485 Terminal

4.2 Controls

You can power on the device using any of the following methods:

Method	Condition	Description
PV Wake-up	Connect PV Input	The device automatically starts when the PV voltage exceeds the preset wake-up threshold.
Grid Wake-up	Connect Grid Input	The device automatically starts when connected to the utility grid.
Manual Start	Press Power Button	Press and hold the Power Button for 2 seconds to start from battery.

To completely shut down the device, please strictly follow the steps below:

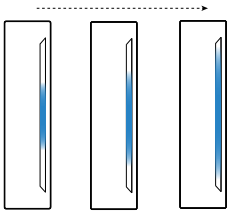
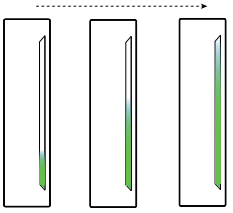
Step 1: Disconnect the Grid input and the PV input.

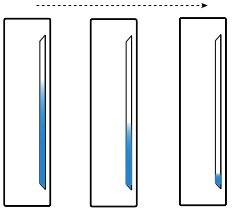
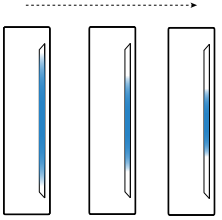
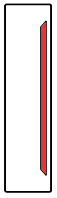
Step 2: Wait for at least 10 seconds.

Note: This allows the internal capacitors to discharge and ensures the system correctly detects the power disconnection.

Step 3: Press and hold the Power button for 2 seconds then release. The device runs the shutdown animation and all LEDs turn off.

4.3 Instructions for the LED displays

LED	Description	Status
	The LED is blue and lights up from the centre to the top and bottom	Starting
	The LED is green and illuminates from the current battery SOC level to the top	Charging

LED	Description	Status
	The LED is blue and fades from current battery SOC level to the bottom	Discharging
	The LED is blue and lights from both sides to the centre	Shutting down
	The LED is red, indicating a fault	Fault

5. Installation

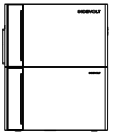
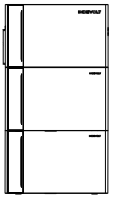
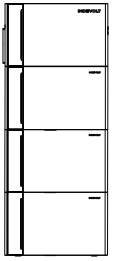
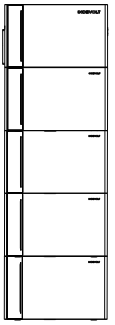
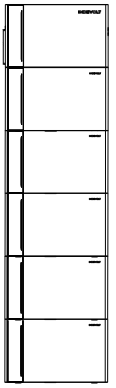
5.1 Select installation location

- Do not install the modules near direct sunlight, fire or explosive materials.
- Ensure that the location is protected from potential hazards such as flooding.
- Recommended for use at altitudes below 2000 m.

5.2 Measure the distance

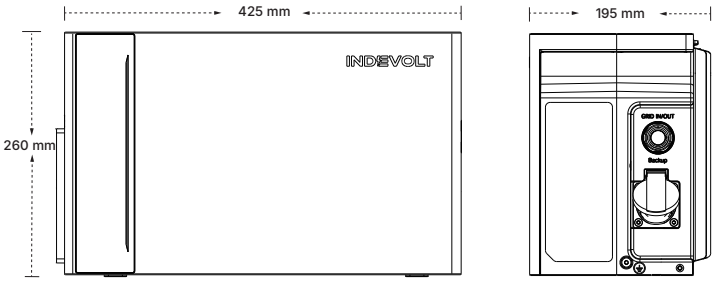
Reserve sufficient space for heat dissipation and safety insulation.

1. Select the appropriate installation space depending on the device configuration to be installed.

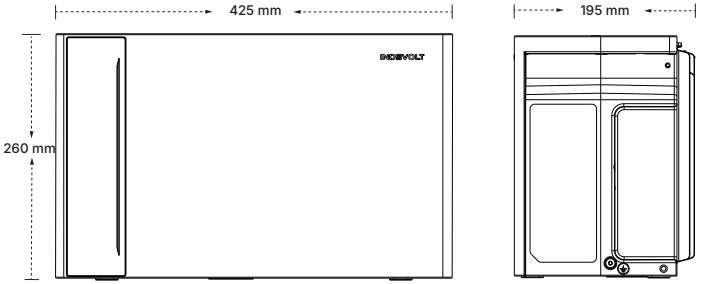
Power Module + Battery Module						
Expansion Battery PFA 2000	0	x1	x2	x3	x4	x5
	2,016 Wh	4,025.6 Wh	6,035.2 Wh	8,044.8 Wh	10,054.4 Wh	12,064 Wh
Expansion Battery SFA 4000	0	x1	x2	x3	x4	x5
	2,016 Wh	6,035.2 Wh	10,054.4 Wh	14,073.6 Wh	18,092.8 Wh	22,112 Wh

2. Device Size Information:

Size of power module



Size of battery module



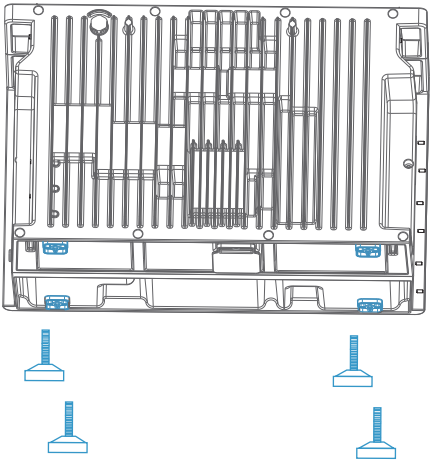
Note: The following components are not included in this package.
Please make sure that they are ready before installation and electrical connection.



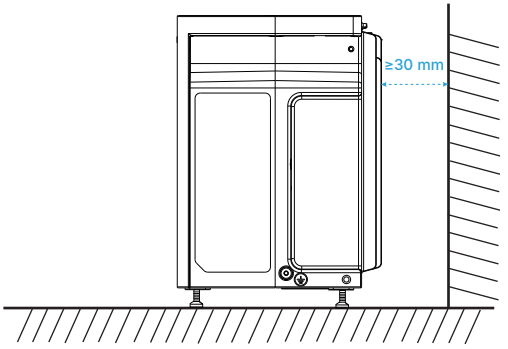
5.3 Installation

The following steps describe the installation of a power module and two battery modules as an example.

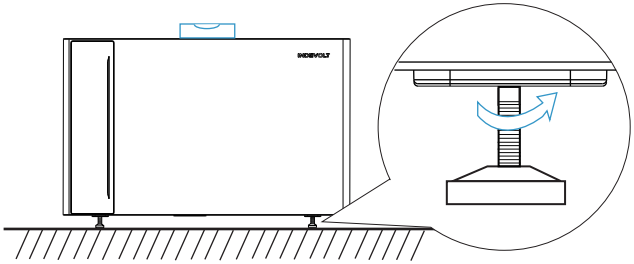
1. Install four support feet on the bottom of the expansion battery.



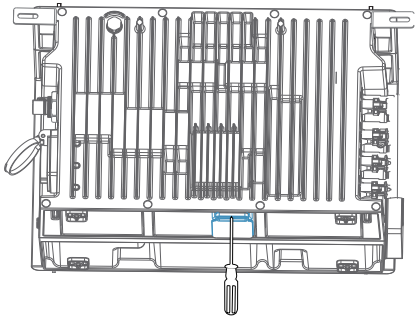
2. A minimum clearance of 30 mm must be maintained at the rear of the device(heatsink area) to ensure adequate ventilation and efficient heat dissipation.

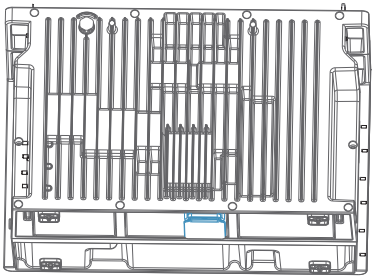


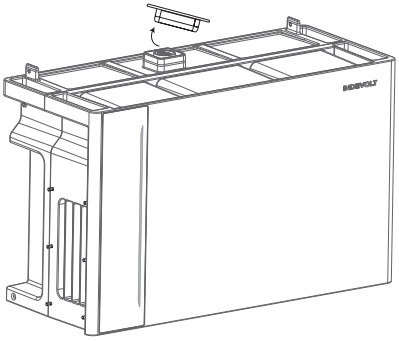
3. Adjust the height of the four support feet at the bottom of the equipment to ensure it is in a level position, calibrate using a level.



4. Remove the bottom protective cap of the power module, As well as removing the protective caps at the top and bottom of the middle battery module.



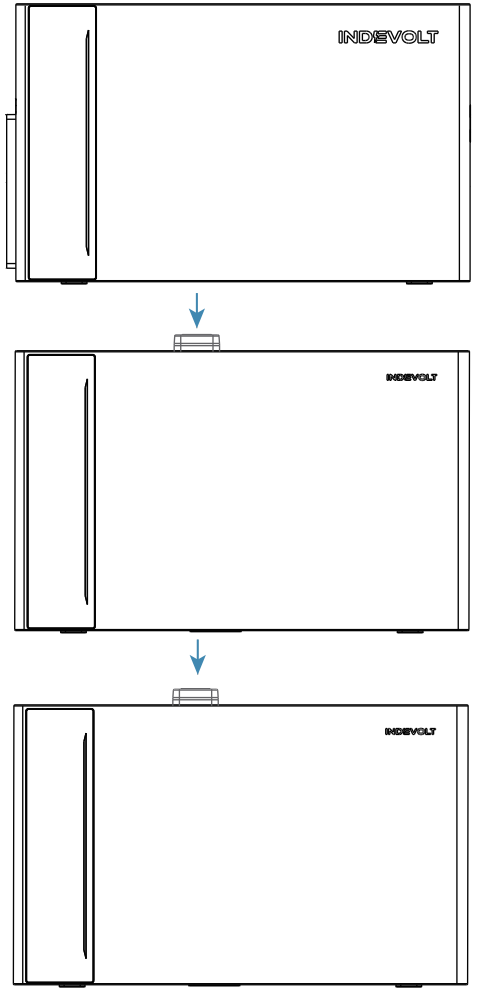




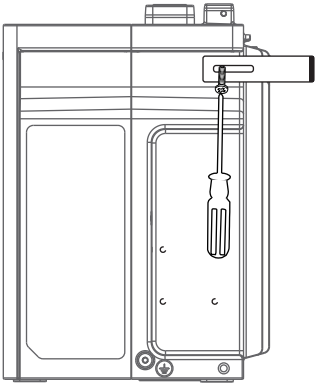
When installing the bottom battery pack, keep the rubber plug in place to prevent water damage.

Please be careful not to remove the protective cap of the bottom-most expansion battery to avoid damage to the device!

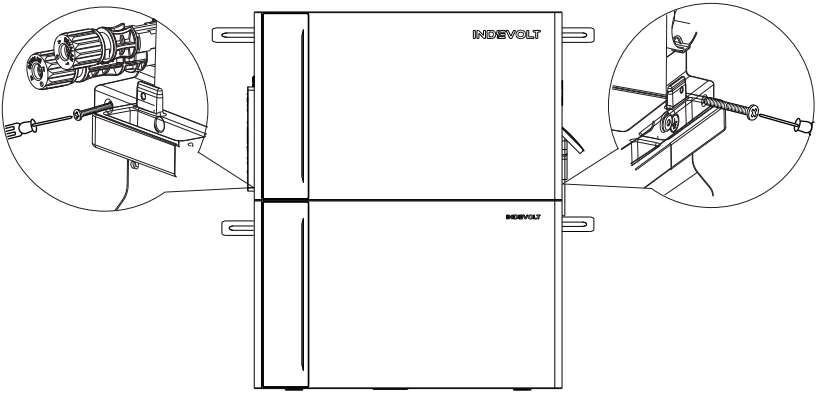
5. Stack the expansion battery packs one after another with the power module on top, connecting the two corresponding connectors.



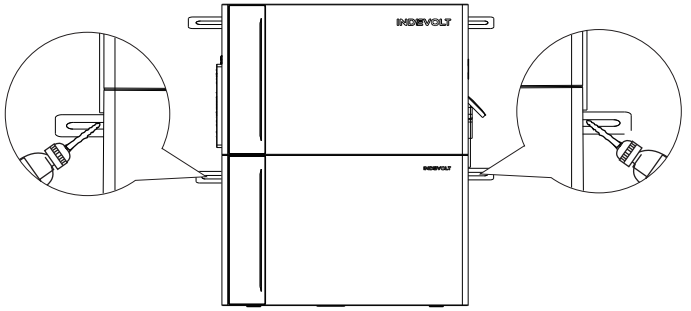
6. Attach the L-shaped wall bracket to both sides of the first expansion battery under the power module using M4 Phillips screws.



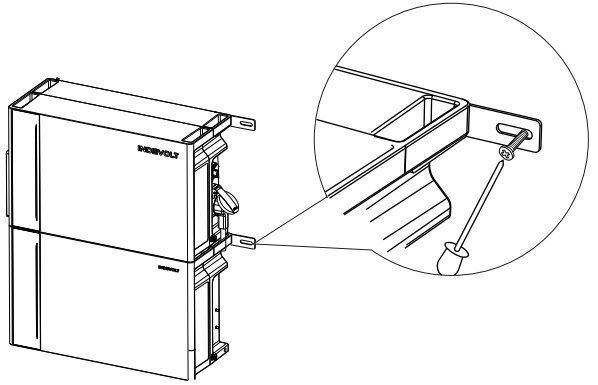
7. After the power module and battery module are installed, Secure the two modules using M4 Phillips screws.



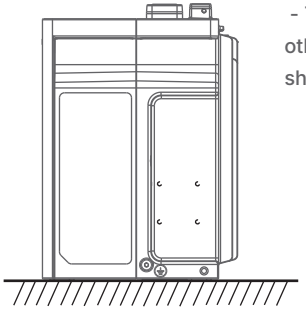
8. Mark the position of the drill holes on both sides and use a drill with a φ8 drill bit and a depth of 60 mm.



9. Use a hammer to insert the plastic sleeve of the M5×60 self-tapping screw into the hole, and then use a Phillips screwdriver to fasten the M5×60 self-tapping screw to the L-shaped wall mounting bracket.



This product contains a dual isolation transformer that complies with safety requirements without requiring measurement of the array grounding insulation resistance or detection of array fault currents.



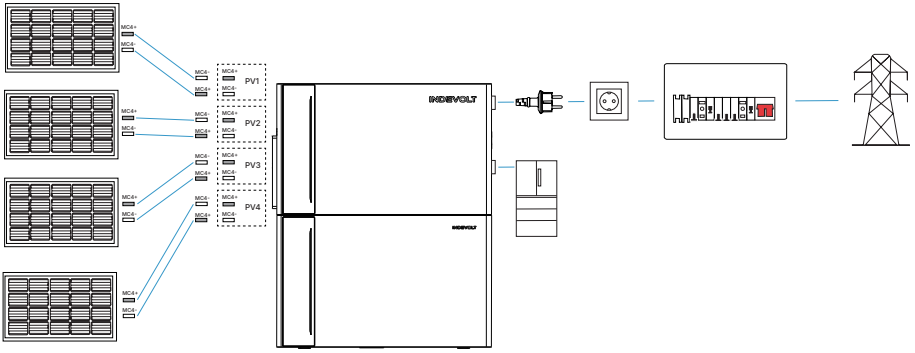
- The mains connection must be connected to an earthed socket, otherwise there is a risk of electric shock. Alternatively, the housing should be earthed. The earthing point is shown below.

6. Electrical Connection

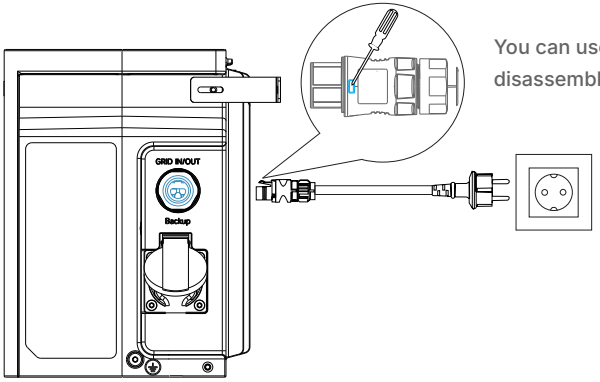
6.1 Connecting the cables

Note: The following PV connection instructions apply only to Hybrid model.
AC models, which do not have a PV port, are not covered in this section.

The following steps describe the installation of a system with four solar panels as an example. The standard AC output power of the inverter is limited to 800 W. Should you wish to increase this value, the installation must be inspected by a qualified electrician to confirm compliance with current safety requirements. Following this inspection, you may apply within the INDEVOLT application to increase the power to 3000 W.



1. Connect the power module to a power socket at home using the mains cable with safety plug supplied.



You can use a flathead screwdriver to disassemble the AC terminal connection

2. PowerFlex 3000 Hybrid features four independent Maximum Power Point Trackers (MPPTs) units. Each photovoltaic input operates as a separate MPPT.

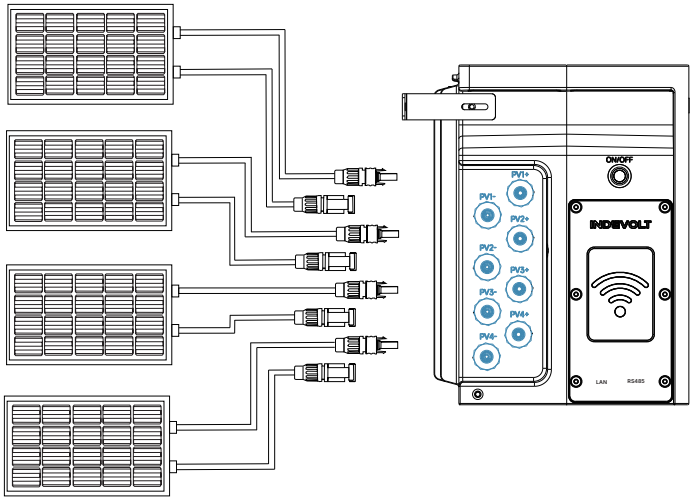
Open-circuit voltage (Voc): < 60 V per PV input

Short-circuit current (Isc): < 22 A per PV input

For optimum efficiency, we recommend solar cables with a maximum length of 3 m to reduce transmission losses.

The positive (+) and negative (–) terminals of a module must be connected to the same PV input.

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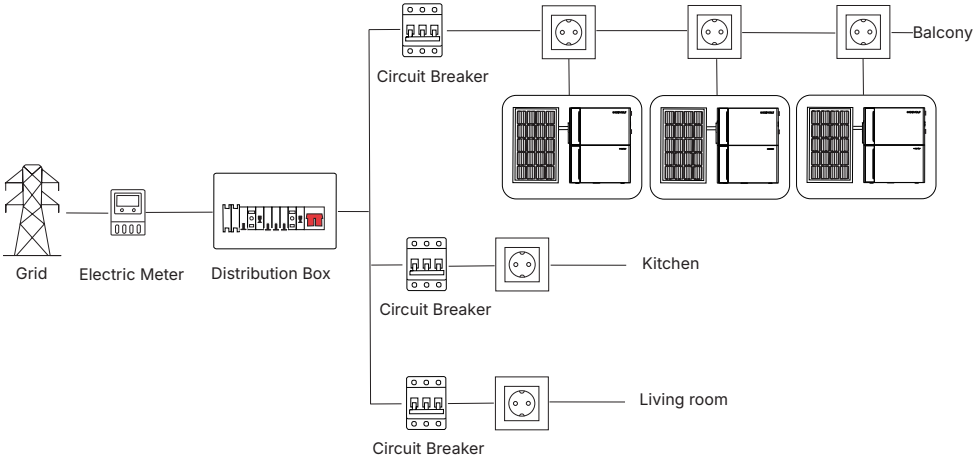


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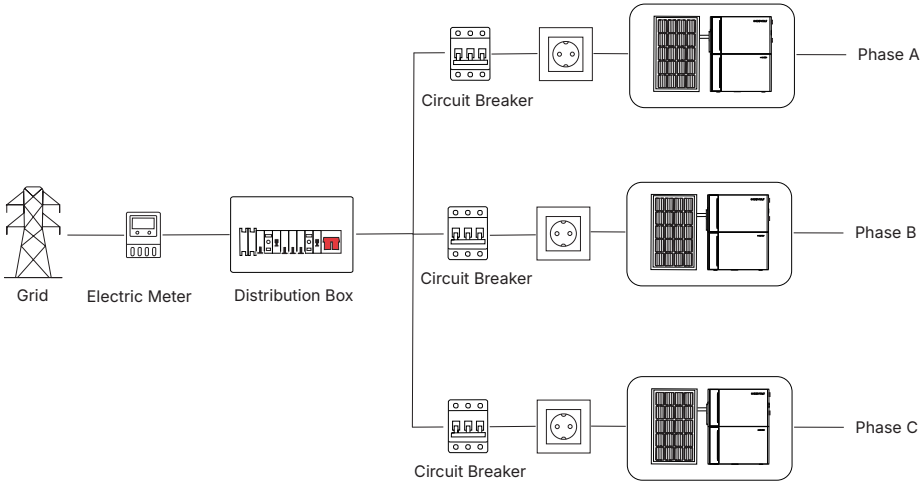
When the battery module malfunctions, the system will enter a fault protection mode and shut down automatically. This lock cannot be automatically restored and requires professional after-sales service. The system function will be resumed after confirmation by professional after-sales personnel that it meets the requirements.

6.2 Electricity system

Installation in single-phase electricity system



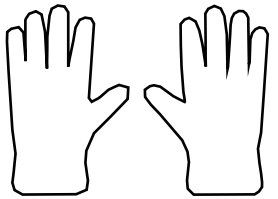
Installation in three-phase electricity system



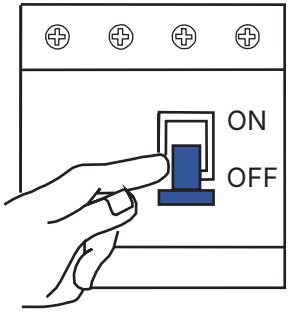
6.3 Connection to the mains via the circuit breaker (optional)

Important: This installation must only be carried out by a qualified electrician to avoid the risk of electric shock, fire or other hazards.

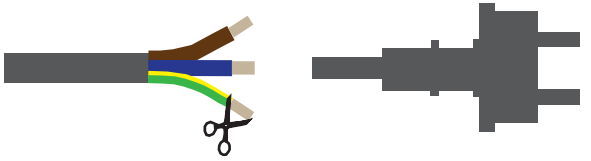
1. Wear insulated protective gloves (not included; to be provided by the electrician or user).



2. Switch off protective and safety devices and ensure that the relevant circuit breaker is OFF before starting work. Use a multimeter to check that there is no voltage at the terminals. Only continue once you have confirmed that there is no voltage.



3. Remove the plug from the AC cable and strip the insulation from the three wires until the copper is visible.

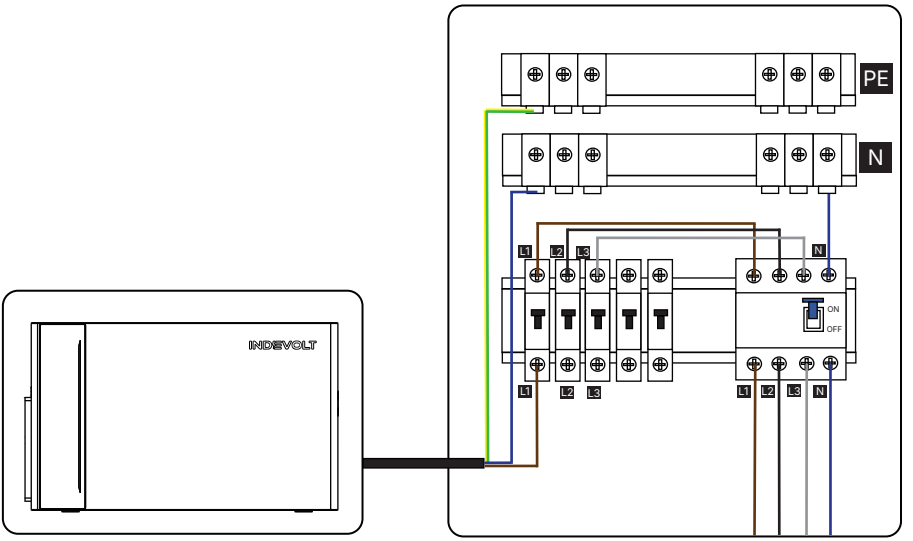


4. Connection in the distribution board (control cabinet):

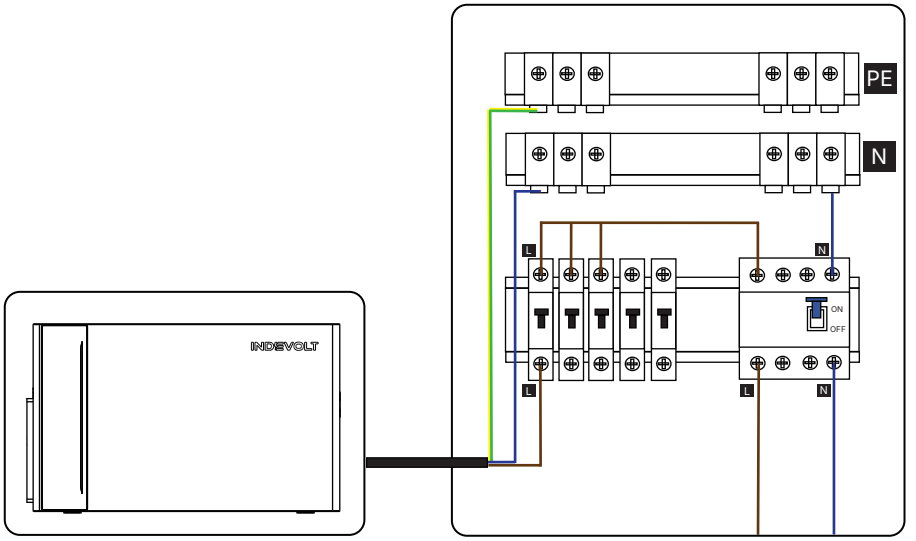
(1) Connect the outer conductor (L) to a free circuit breaker.

(2) Connect the neutral conductor (N) and protective conductor (PE) to the N busbar and PE/earthing busbar respectively.

Connection diagram for three-phase domestic installation



Connection diagram for single-phase domestic installation

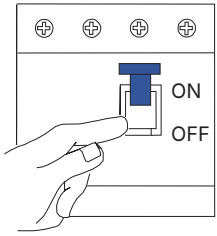


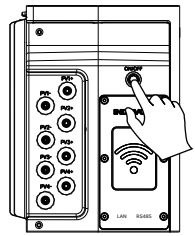
5. Switching on

(1) Before switching on, check that all connections are secure and correct.

(2) Switch on the main switch/main fuse of the domestic installation.

(3) Press and hold the button on the PowerFlex 3000 for 2 seconds to switch on the device.





6.4 Wiring the RS485 communication port (optional)

Wiring Sequence and Precautions

Pin	Designation	Function
1	GND	Shield ground
2	GND	Shield ground
3	N.C.	Not occupied
4	RS485 A	RS485 communication
5	RS485 B	RS485 communication
6	N.C.	Not occupied
7	DC 5V	Maximum operating current: 200 mA
8	DC 5V	Maximum operating current: 200 mA

Crimp the RJ45 plug and wire it according to the pin assignment above.

Notes:

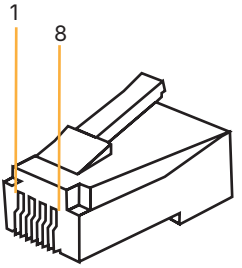
- RS485 A (pin 4) and RS485 B (pin 5) must be routed via the same twisted pair of wires.
- This is not an Ethernet connection. Do not connect to a switch, router or PoE device.

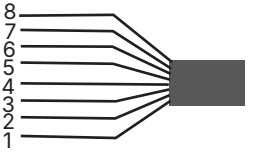
6.5 Wiring the LAN communication port (optional)

This device supports both T568A and T568B wiring standards. Choose the appropriate standard for your network, ensuring both ends of the cable use the same standard.

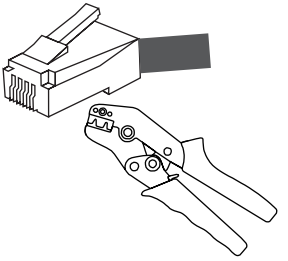
The T568B wiring sequence is as follows:

8	
7	
6	
5	
4	
3	
2	
1	

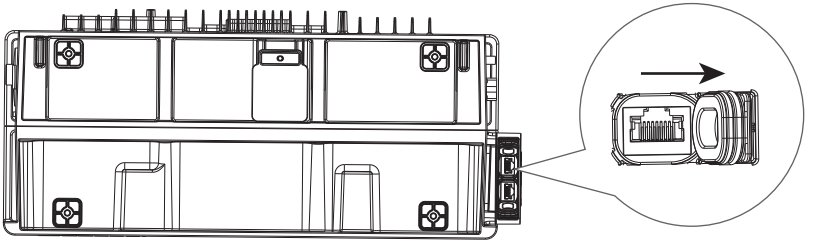




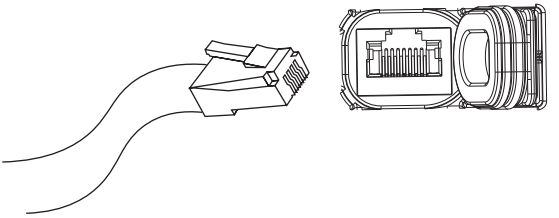
1. Cable entry and crimping, feed the communication cable through the cable gland.



2. Remove the protective cap from the RJ45 port on the PowerFlex 3000.



3. Firmly insert the RJ45 plug until you hear a 'click'.

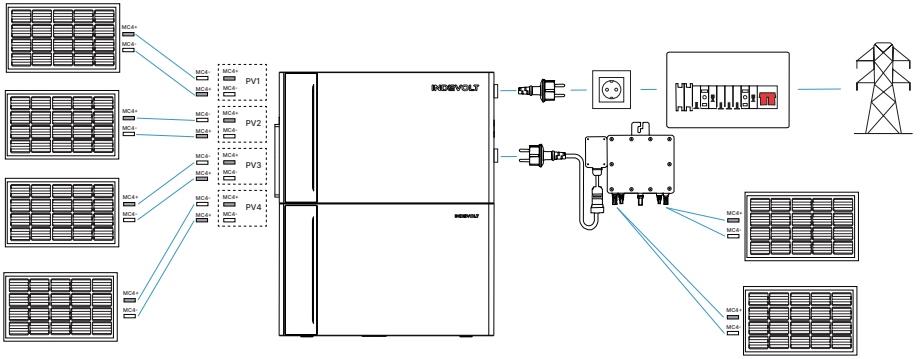


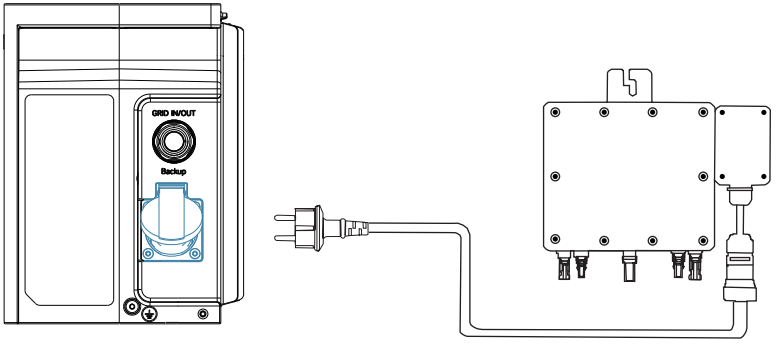
7. AC-coupled Connection

If you already have a micro-inverter, you can also couple the output of the micro-inverter to the Backup Terminal of the device via AC-coupled. At this time, the PV input will be provided to the load through the micro-inverter. If the power exceeds 3000 W(can be adjusted through the APP), the device will disconnect from the micro-inverter.

Note:

1. AC model only support connection to solar modules via micro-inverters and do not have a PV port.
2. Before utilising AC-coupled mode, please ensure the device's Bypass Socket port is set to micro-inverter coupling mode. This configuration can be adjusted via the INDEVOLT App.





8. Storage and Maintenance

1. Place batteries according to the signs on the packing case during storage. Do not store the batteries upside down or on their side.
2. Handle batteries with caution to avoid damage.
3. The storage environment requirements are as follows:
   – Ambient temperature: –20°C–+60°C; recommended storage temperature:20°C–30°C
   – Relative humidity: ≤ 95% RH (non-condensing)
   – Place batteries in a dry and clean place with proper ventilation.
   – Place batteries in a place that is away from corrosive organic solvents and gases.
   – Keep batteries away from direct sunlight.
   – Keep batteries at least 2 meters away from heat sources.
4. The batteries in storage must be disconnected from external devices. The indicators on the batteries should be off.
5. Do not dispose of batteries in a fire. The batteries may explode.
6. Do not open or damage batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
7. Use a cotton cloth and water to clean. Do not use steel wool or other hard materials for cleaning.
8. For long-term storage, charge and discharge the device once every 3 months (discharge battery to 20%, then recharge it to 80%).
9. Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.
10. Dispose of deformed, damaged, or leaking batteries directly irrespective of how long they have been stored.

9. Specification

Spec of Power Module

Parameter	Specification
Model	PG-800B/PG-2400B/PG-3000B PG-800B1/PG-2400B1/PG-3000B1
PV Input (This parameter is not available for AC model)	
Max. PV Input Power	3000 W (4*750 W)
Max. PV Input Voltage	60 V DC
Max. PV Input Isc	22 A DC
Max. PV Input Current	20 A DC
MPPT Voltage Range	15-55 V DC
Number of MPPTs	4
AC Parameter	
Rated AC Output Power (on-grid)	800 W (Standard) / 3000 W (*Premium)
Rated Output Current (on-grid)	3.5 A AC (Standard) / 13 A AC (*Premium)
Max. AC Continuous Output Power (off-grid)	3000 VA(with exp battery)
Max. AC Continuous Output Current (off-grid)	13 A AC
Max. AC Continuous Input Power	3000 W(with exp battery)
Max. AC Continuous Input Current	13 A AC
AC Input/Output Voltage/Frequency	L+N+PE, 230 V AC ,50 Hz
Power Factor	0.8(lagging)-0.8(leading)
Battery Info	
Battery Type	$LiFePO_4$
Battery Rated Energy	2016 Wh
General Information	
Dimensions	425*195*260 mm
Weight	22.0±1 kg(Hybrid)/21.5±1 kg (AC)
Charging temperature	-20°C to 55°C
Discharging temperature	-20°C to 55°C
Waterproof rating	IP65
Operating altitude	Below 2000 m
Overvoltage rating	OVC II (PV), OVC II (DC), OVC III (AC)

Protection level	Class I
Degree of pollution	PD3 (extern),PD2 (intern)
Bluetooth	Bluetooth 5.0 2402 ~ 2480 MHz EIRP Power(Max): ＜20.0 dBm
2.4 GHz Wi-Fi	IEEE 802.11 b/g/n/ax 2412 ~ 2484 MHz EIRP Power(Max): ＜20.0 dBm
5 GHz Wi-Fi	IEEE 802.11 a/n/ac/ax 5180 ~ 5885 MHz EIRP Power(Max): ＜20.0 dBm

Disclaimer of Warranties

In off-grid mode, without expansion battery, single power module AC output power support up to 1000 W.

The device has a default maximum rated grid - connected power of 800W and supports adjustment up to 3000 W. Please be sure to reasonably configure the grid - connected power parameters in line with local grid regulations and relevant policies to ensure safety and compliance.

CE Statement:

We Power Genius GmbH declares that this Hybrid Solar Inverter is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

In accordance with Article 10(2) and Article 10(10), this product is allowed to be used in all EU member states.

Spec of Extra Battery Module

Parameter	**Specification**	
Product Name	PFA 2000	SFA 4000
Battery Type	Semi-Solid State $LiFePO_4$	
Battery Rated Energy	2009.6 Wh	4019.2 Wh
Dimensions	425*195*260 mm	426*225*301 mm
Weight	19.0±1 kg	31.0±1 kg
Charging temperature	-20°C to 55°C	
Discharging temperature	-20°C to 55°C	
Waterproof rating	IP65	
Protection level	Class I	

10. Frequently Asked Questions

Q. What kind of solar panels are compatible with the device?

A. We recommend the total PV Voc (voltage range) is in the range of 10-60 V. PV Isc (short circuit current): 22 A max.

Q. If the solar panel's power is below 400 watts, can it be connected to the device? Will it cause damage?

A. No, it will not damage the device.

Q. Can the device be used below 0°C? What is the ideal outside temperature?

A. Below 0°C, device can charge and discharge normally. Photovoltaic power generation also occurs normally. During winter, photovoltaic power generation is low.
You'll likely use most PV generated electricity with less excess power wasted.
Please see the ideal ambient temperature ranges below for the battery:
Charging temperature: -20~55°C
Discharging temperature: -20~55°C

Q. Are micro inverters required for the use of the product?

A. The product does not require a micro inverter. A micro inverter is already integrated into the design. The product features 4 MPPTs, but you can add an additional micro inverter for increased solar power output.

Q. What precautions should I take before inserting/adding expansion battery?

A. When inserting/adding expansion batteries, you must turn off and shut down the system to protect yourself and the device. Performing this operation while switched on is not covered by the warranty. Follow the steps below for proper installation:
a. Disconnect the power module and the solar panels.
b. Press and hold the power button for 2 seconds to turn off the device.
c. After switching off the power module, insert the extended batteries into the power module.
d. Connect solar panels for normal use

Q. Can I use it during a home power outage?

A. Of course, you can still charge the device via PV, and the device's off-grid output socket can power 3000 W loads.

11. INDEVOLT APP

INDEVOLT users can download and use the INDEVOLT app from the APP Store or Google Play. The INDEVOLT app provides you with an all-in-one solution for monitoring and managing your INDEVOLT devices.

Download the App

Start

Before you can manage your INDEVOLT devices using the INDEVOLT app, you need to complete the following steps.

-Register your INDEVOLT account

-Add a home

App Features for INDEVOLT

Add devices

Add your INDEVOLT device and configure the network. You can open the INDEVOLT app and follow these steps:

1.Select 'Add Device' in the top right corner of your home page and choose 'Battery'.

2.Select the INDEVOLT brand and enter the device serial number as prompted.

Data monitoring

With the INDEVOLT app, you can view the operating status of your devices at any time.

Before officially using the product, we recommend that you visit the INDEVOLT official website, find and enter the "Help Center" section on the page.

We will continuously update product-related tutorials, operation guides, and the latest instructions in the Help Center, covering installation, setup, daily use, and frequently asked questions. This will help you quickly get familiar with product features, standardize operations, and enhance your user experience.

12. Warranty and Contact Details

1. Limited warranty

We pledge to the original consumers and purchasers that this product will be free from defects in workmanship and materials under normal use during the applicable warranty period set forth in paragraph 2 below, except for the exclusions set out in paragraph 5 below. This warranty statement sets out the total warranty obligations. We do not assume, nor authorize anyone to, assume any other liability for us in connection with the sale of our products.

2. Warranty period

Valid upon product registration with purchase proof. Covers manufacturing defects under normal use; excludes consumables, damage, or unauthorized modifications. Terms subject to regional policies. Visit Indevolt Support for details.

3. Remedy

We will repair or replace (At our option and expense) any faulty product during the applicable warranty period due to defects in workmanship or materials.

4. Limited to original consumers

The service is limited to the warranty of the product purchased by the original consumer and is not transferable to any subsequent owner.

5. Exclusions

This product warranty does not apply:
Any damage to this product due to misuse, abuse, modification, accidents, or non-normal purposes authorized based on product information at that time.

How to get warranty service

If you require warranty service or further assistance, please contact customer service via the purchase link and they will respond promptly.