GROWATT

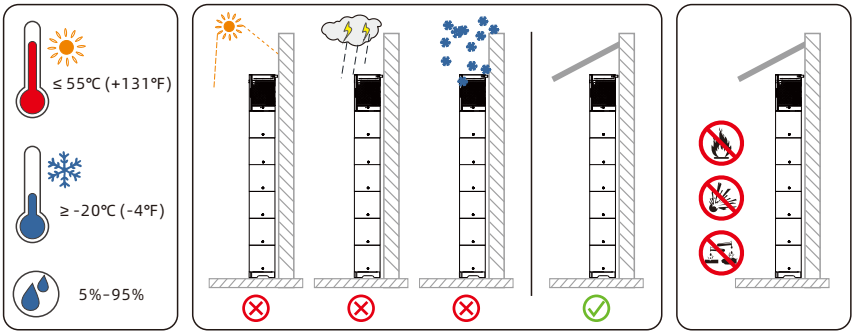



# MODA 4-15KTL3-HU

## Quick Guide

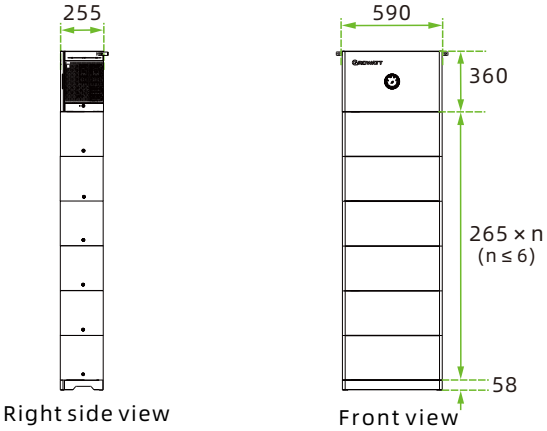
# 1. Installation requirements

## 1-1 Installation environment requirements




## 1-2 Installation space requirements

### Dimensions

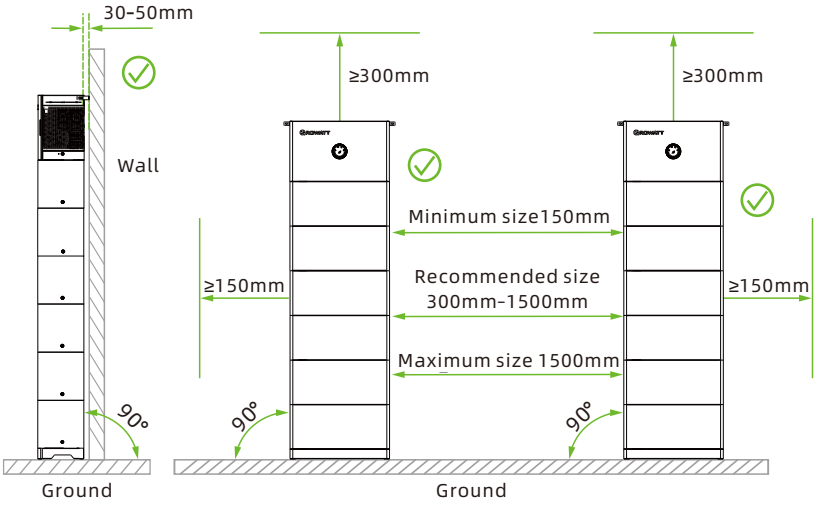



Unit: mm

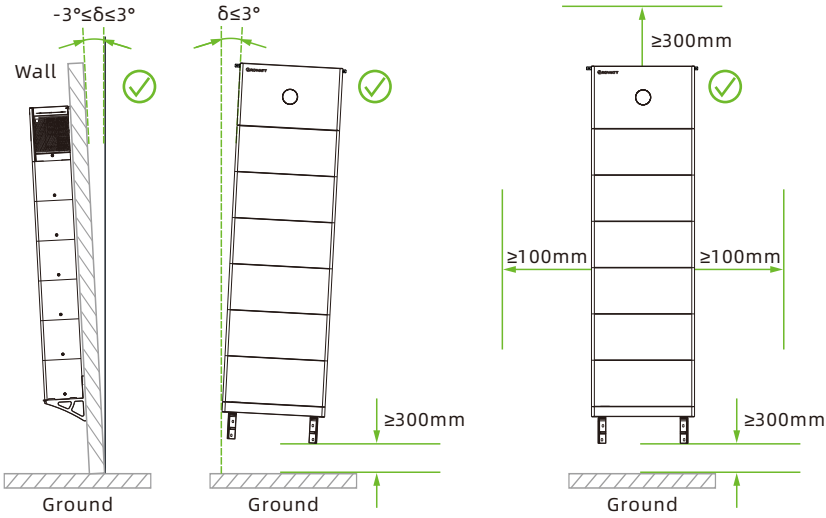
| Number of battery (pcs) | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Height (mm) | 625 | 890 | 1155 | 1420 | 1685 | 1950 |

## Installation Clearance

- Floor mounting




- Wall mounting




**⚠ NOTE:**

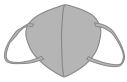
A single column can be configured with up to eight modules (1 inverter + 6 batteries).

## 2. Installation

### 2-1 Installation tools

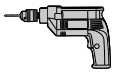

Safety gloves


Goggles


Mask


Safety shoes


Helmet

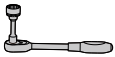

Hammer drill
(Drill bit: Φ=10 mm)


Hammer

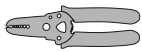

Level

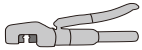

Measuring tape

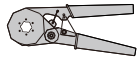

Marker

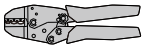

Socket Wrench


Phillips screwdriver


Wire stripper


Hydraulic pliers


Tube terminal crimping tool


PV terminal crimping tool


Multimeter


RJ45 crimping tool

### 2-2 Packing list

**Inverter**


Inverter × 1


Base × 1


Decorative cover × 2


M4×12 screw × 2


Anti-tipping plate × 2


Plastic tube × 2


Self-tapping screw × 2


1mm shim × 4


2mm shim × 4


OT terminal × 1


M6×16 screw × 1


PV terminal core (+/-) × 3



PV terminal (+/-) × 3



PV connector wrench × 1



Tubular terminal × 10



COM waterproof cover × 1



AC waterproof cover × 2



10-pin terminal × 1



Allen wrench × 1



Network cable × 1



CT × 3



AC unlocking tool × 1




Parts list × 1




Quick guide × 1

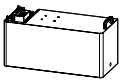



Warranty card × 1




Commissioning guide × 1

**Battery**



Battery × 1




Warranty card × 1



M4×12 screw × 3

**Wall bracket (optional)**



Wall bracket × 1



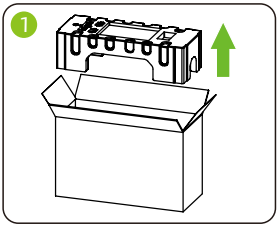
M8×80 expansion bolt × 8

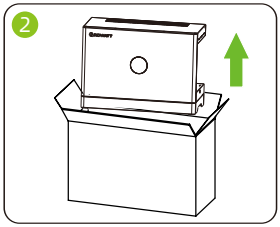


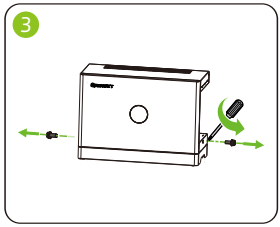
M6×20 screw × 4

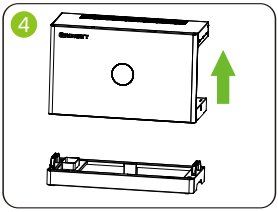
## 2-3 Preparation work before installation

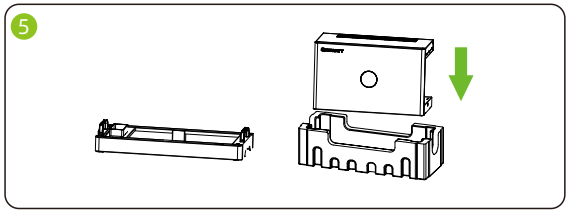
Before shipment, the inverter and base are pre-installed together. The base must first be removed. Follow these steps:



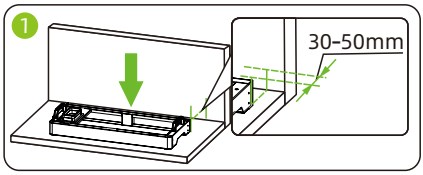



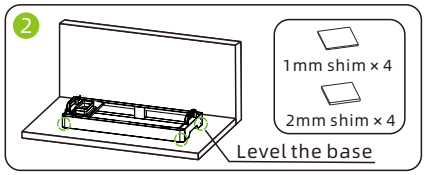



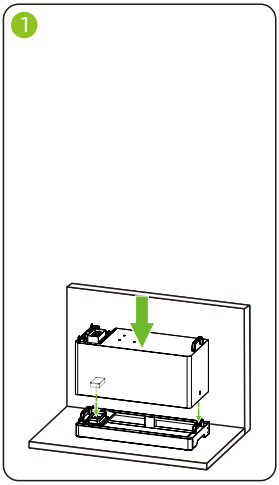
## 2-4 Floor-mounted installation

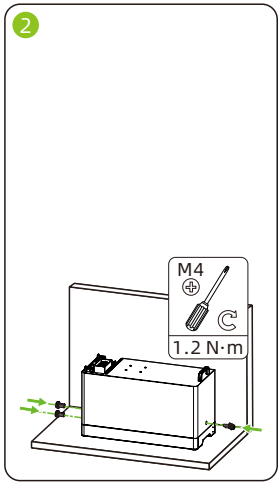
### Mounting base

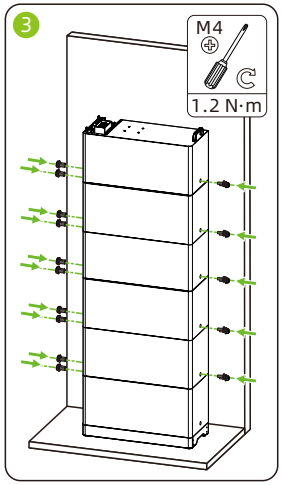


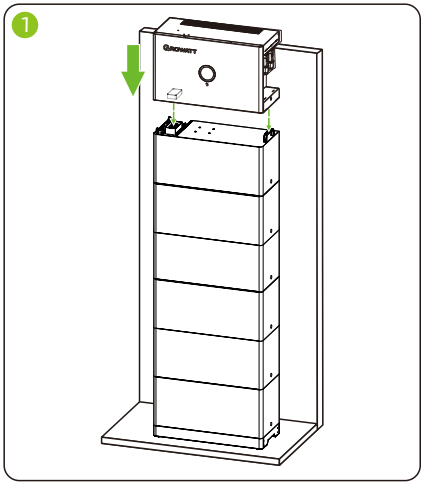

### Mounting battery

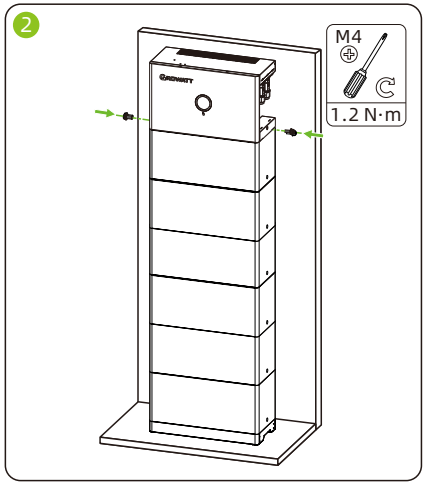


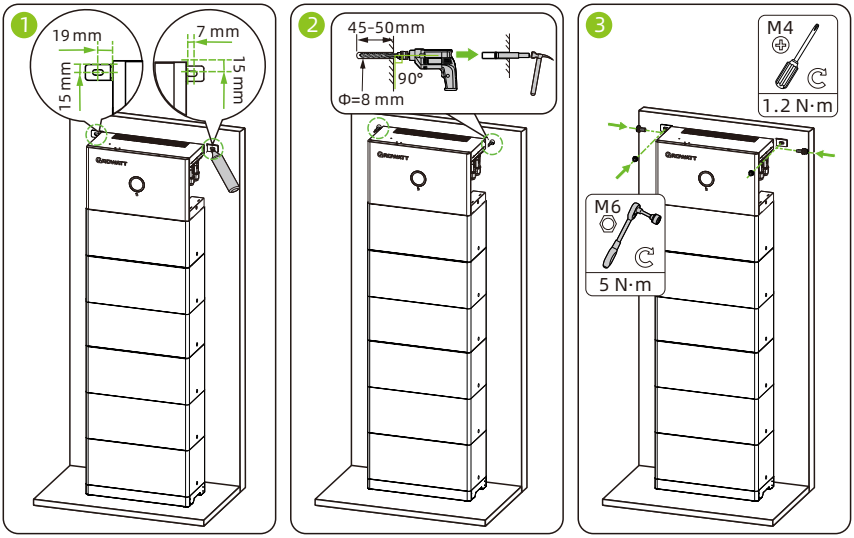




### Mounting inverter



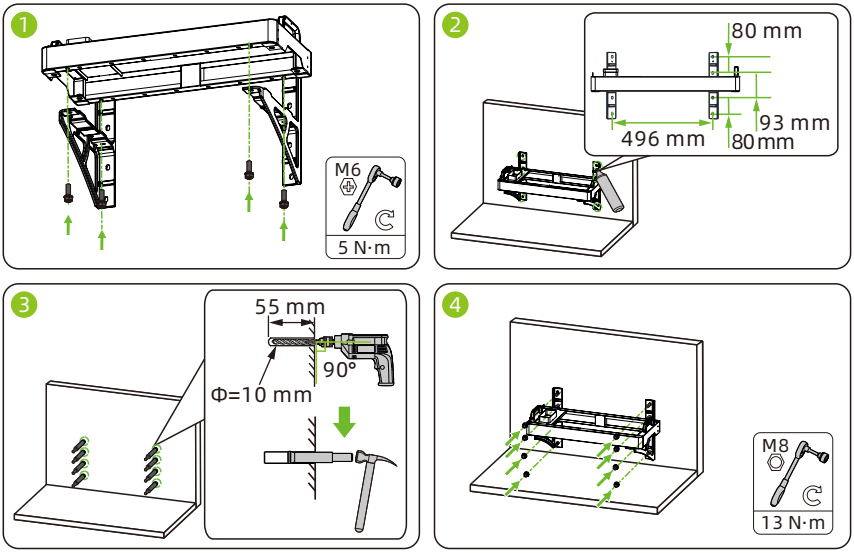



## Mounting Anti-tipping plates

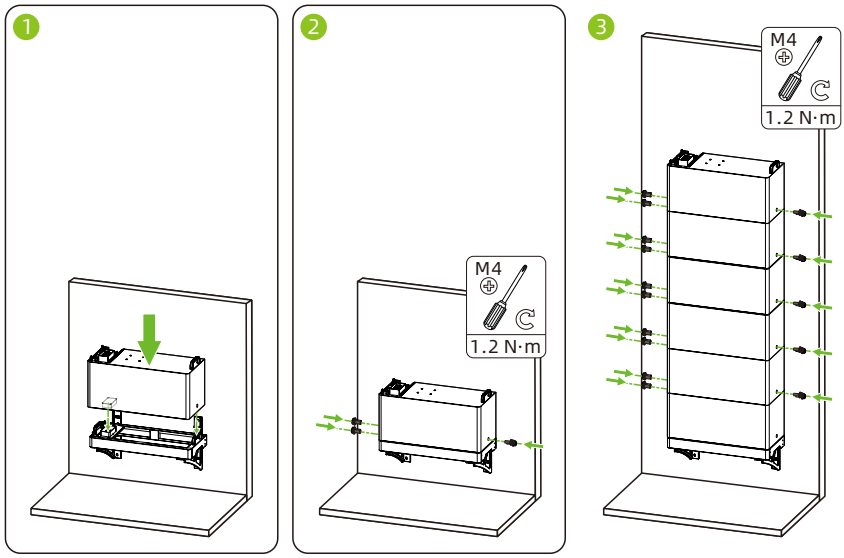



## 2-5 Wall-mounted installation

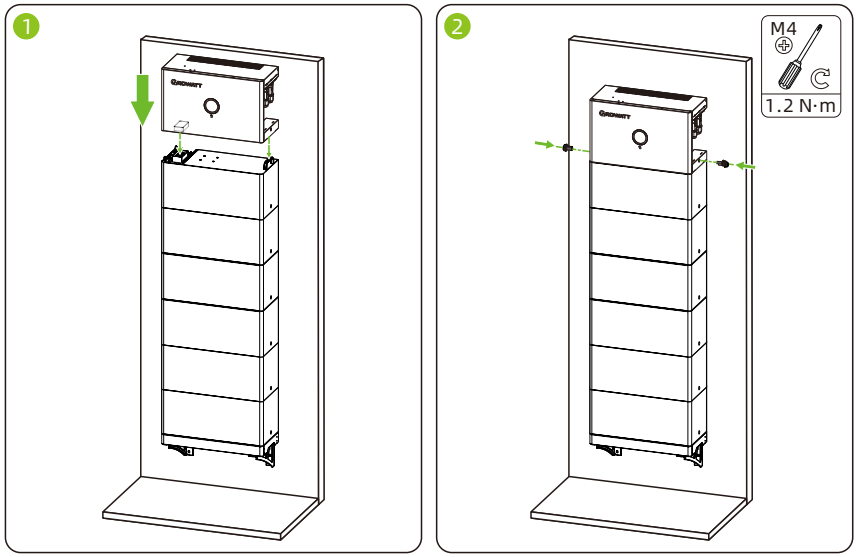
### Install the wall bracket



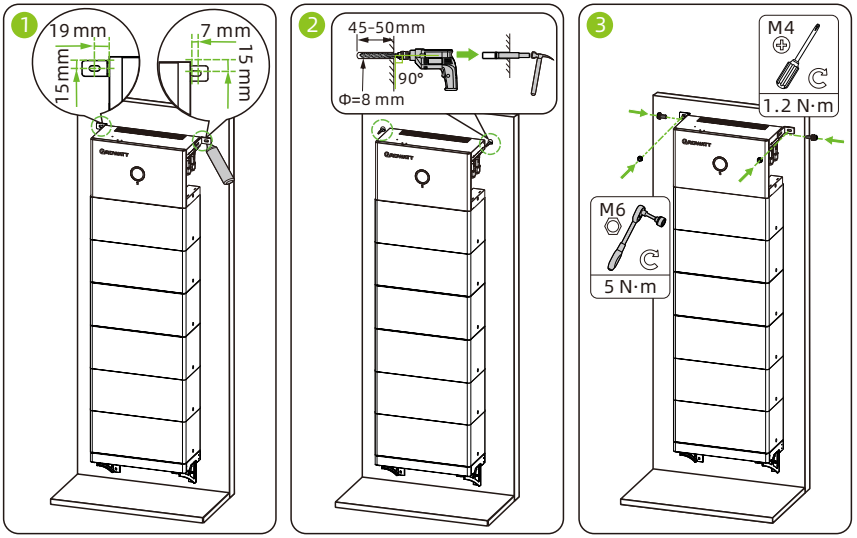
## Mounting battery



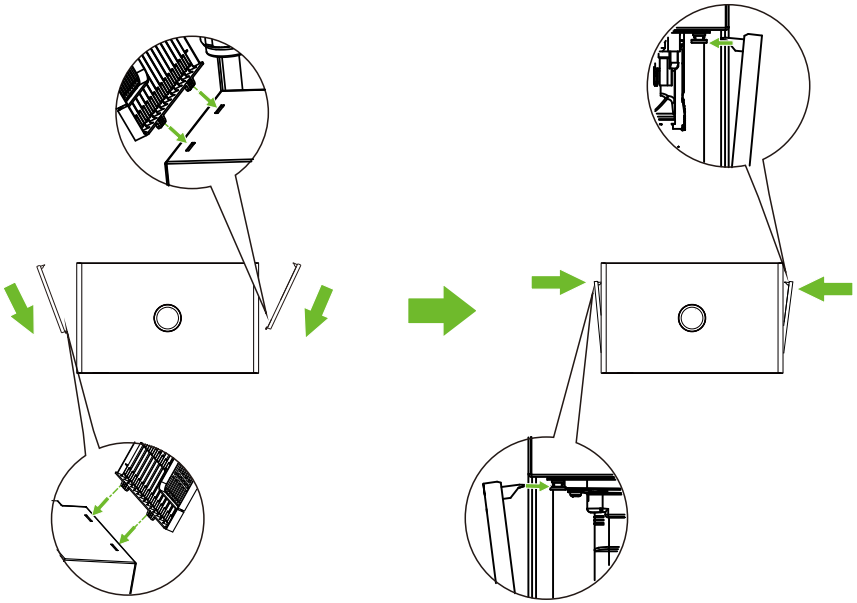

## Mounting inverter



## Mounting Anti-tipping plates




## 2-6 Protective cover installation



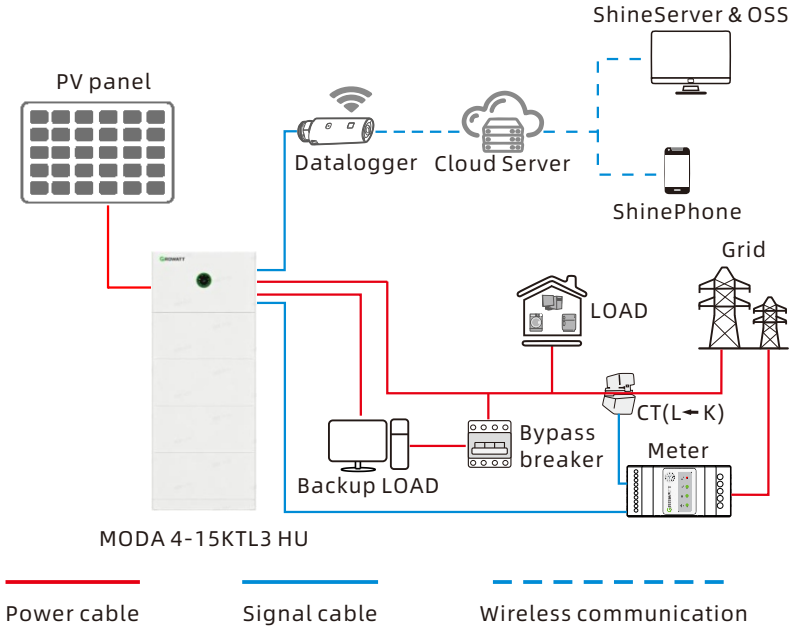
## 3. Electrical connection

### 3-1 Wiring diagram

**Partial backup**

**⚠ NOTE:**

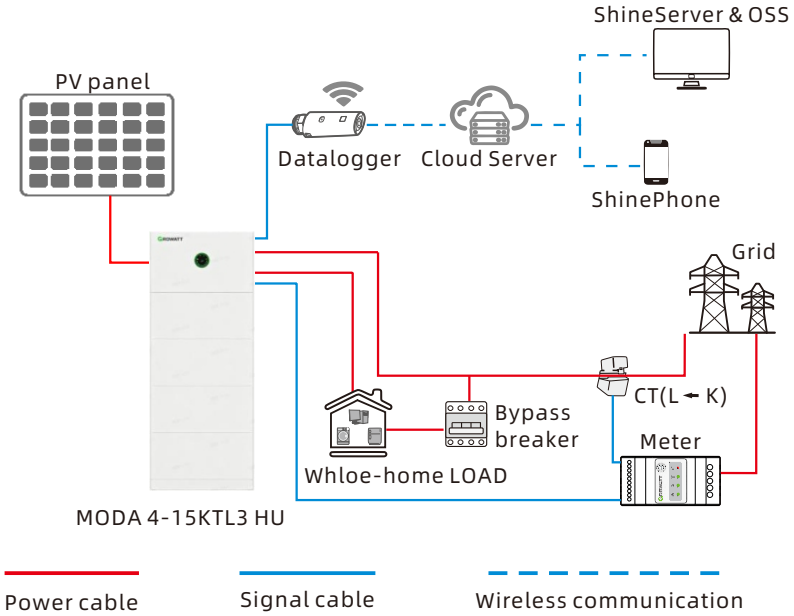
- Due to the power limitations of the battery and the inverter, not all the electrical appliances can be powered when the system goes off-grid. You can configure the partial back-up function with the essential loads connected to the LOAD port on the inverter and other loads to the grid.
- It is recommended that an external manual bypass breaker be added, as shown in the figure below, to avoid disconnecting the load in the event of a machine bypass operation failure.



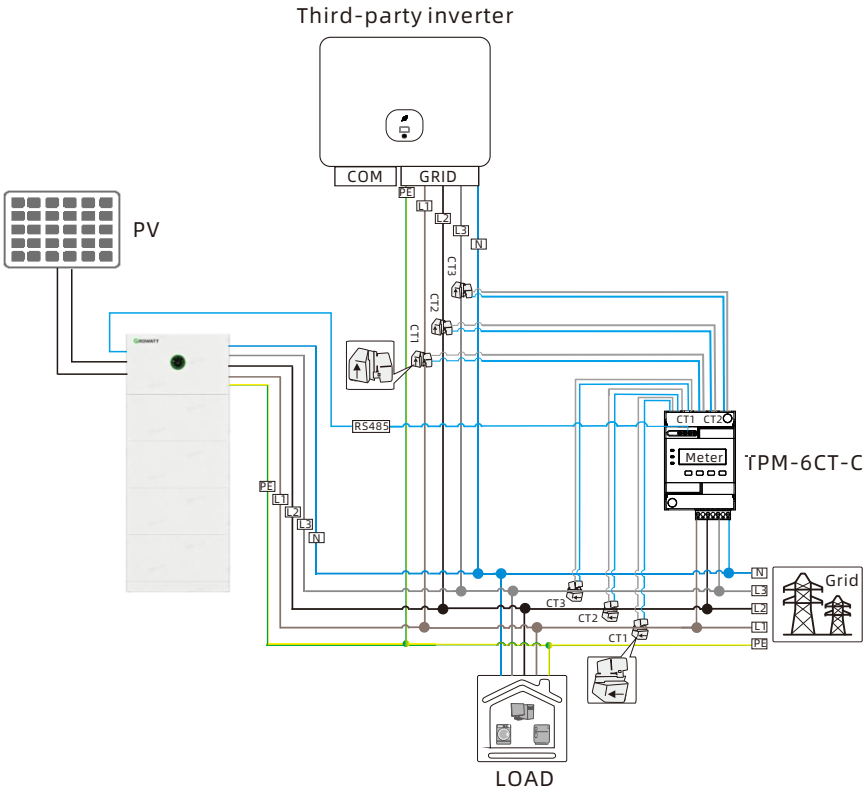
**Whole-home backup**

**⚠ NOTE:**

- When the maximum power output capacity of the system in the off-grid state surpasses the total power demand of the electrical appliances, you can configure the system for a whole-home backup setup. In this case, you can connect all loads to the LOAD port of the inverter.
- It is not recommended to connect a load greater than the rated power of the inverter.



**AC Couple**



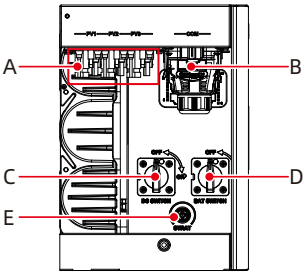

**⚠ NOTE:**

For AC-coupled systems, the TPM-6CT-C energy meter is required as a separate purchase in the European region.

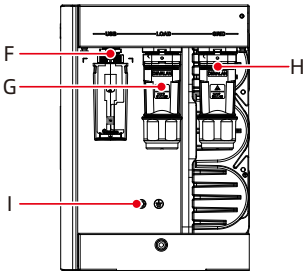
## 3-2 Cable dimensions

| No. | Cable | Recommended Specifications | |
|---|---|---|---|
| | | MODA 4-8KTL3-HU | MODA 10-15KTL3-HU |
| 1 | Ground cable | 12-16mm² | |
| 2 | AC output cable | | |
| 3 | PV input cable | 4-6 mm² | 6-8 mm² |
| 4 | Communication cable | 0.32-0.52 mm² | |

## 3-3 Connection area and terminal introduction




Left side view



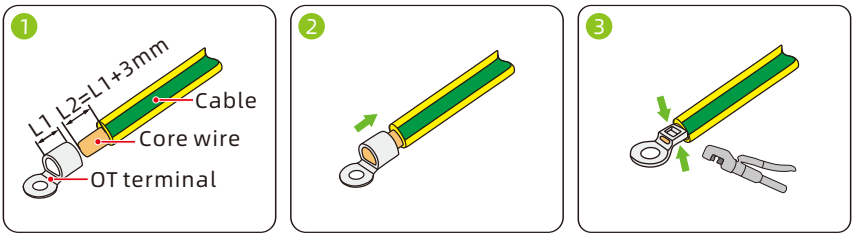

Right side view

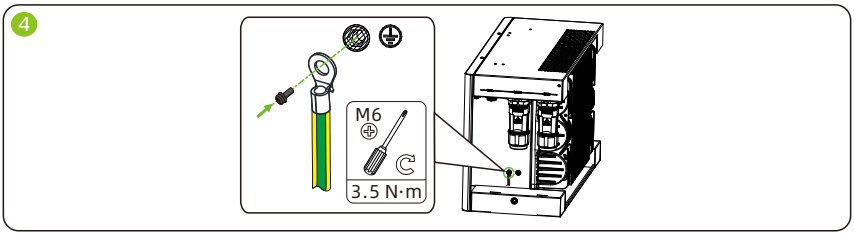
(A) PV connector (B) Communication connector (C) DC switch

(D) BAT switch (E) Black start button (F) USB

(G) Load AC connector (H) Grid AC connector (I) Safety grounding

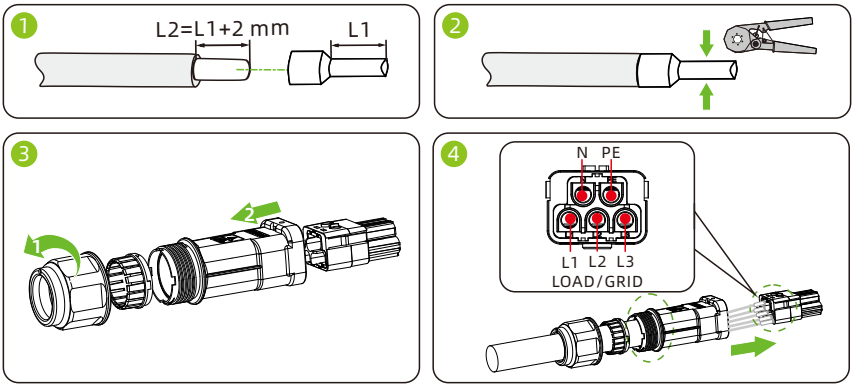
## 3-4 Safety grounding connection



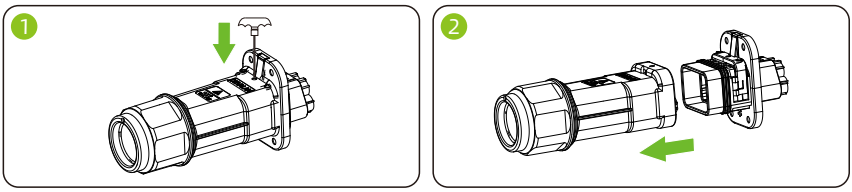



## 3-5 AC connection

### Install




### Remove



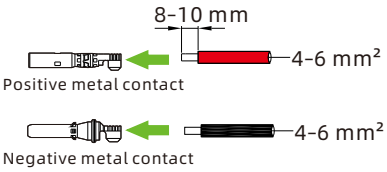

**⚠ NOTE:**

The inverter's GRID and LOAD ports share the same wiring method, but the GRID and LOAD connectors (cable end ↔equipment end) are keyed so that they cannot be mated incorrectly.

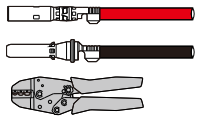
## 3-6 PV connection

### Install

1



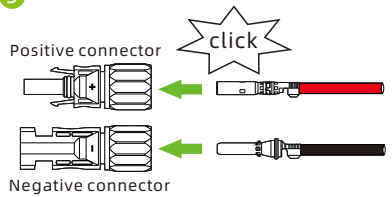

2



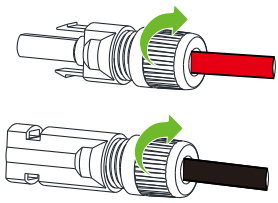
⚠ **NOTE:**

Ensure that the cable cannot be pulled out after being crimped.

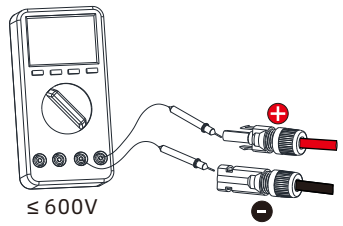
3



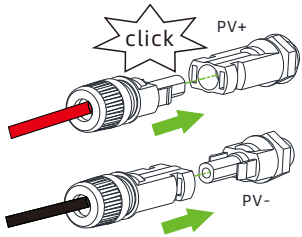

4



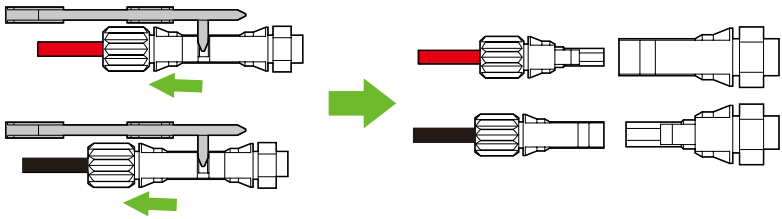
5




6

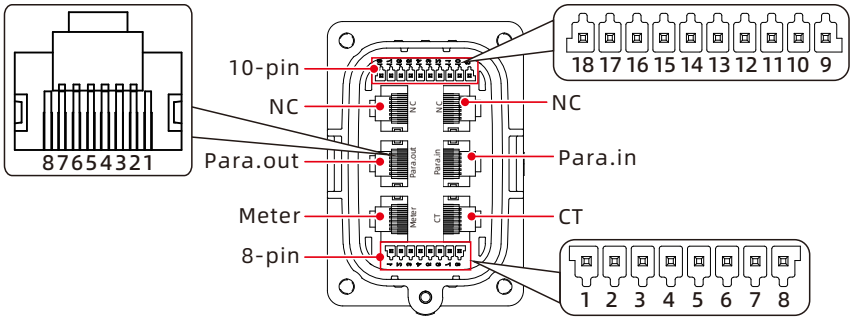



### Remove



## 3-7 Communication connection

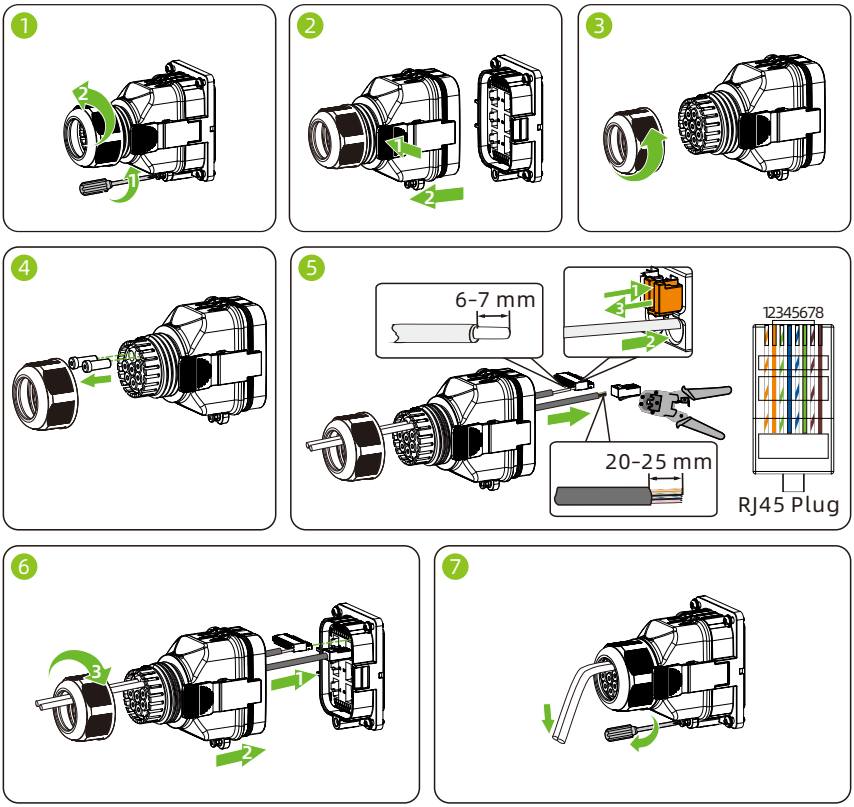
### Terminal Definition




| Port | Pin | Signal | Function |
|---|---|---|---|
| Para.out | 1 | 485-1_B | External communication |
| | 5 | 485-1_A | |
| | 2 | Sc_A/H | Inverter parallel |
| | 3 | PL CANH（DSP_2） | |
| | 4 | Sc_B/L | |
| | 6 | PL CANL（DSP_2） | |
| | 7 | BAT1 CAN H（M3_2） | |
| | 8 | BAT1 CAN L（M3_2） | |
| Para.in | 1 | 485-1_B | External communication |
| | 5 | 485-1_A | |
| | 2 | Sc_A/H | Inverter parallel |
| | 3 | PL CANH（DSP_2） | |
| | 4 | Sc_B/L | |
| | 6 | PL CANL（DSP_2） | |
| | 7 | BAT1 CAN H（M3_2） | |
| | 8 | BAT1 CAN L（M3_2） | |

| Port | Pin | Signal | Function |
|---|---|---|---|
| Meter | 4 | NC | / |
| | 1 | 485-2_B | Meter communication |
| | 2 | GND.S | |
| | 3 | 5V.S | |
| | 5 | 485-2_A | |
| | 6 | GND.S | |
| | 7 | RS485_3B | |
| | 8 | RS485_3A | |
| CT | 1 | I_Load.P3 | AC current sampling |
| | 2 | I_Load.N3 | |
| | 3 | I_Load.P2 | |
| | 4 | I_Load.P1 | |
| | 5 | I_Load.N1 | |
| | 6 | I_Load.N2 | |
| | 7/8 | NC | / |
| 10-pin terminal | 11 | 12V.S | Dry contact: the power supply should not be greater than 2 W |
| | 12 | DRY.G | |
| | 13 | DRM1/5 | DRMS connection |
| | 14 | DRM2/6 | |
| | 15 | DRM3/7 | |
| | 16 | DRM4/8 | |
| | 17 | REF | |
| | 18 | COM | |

## Install



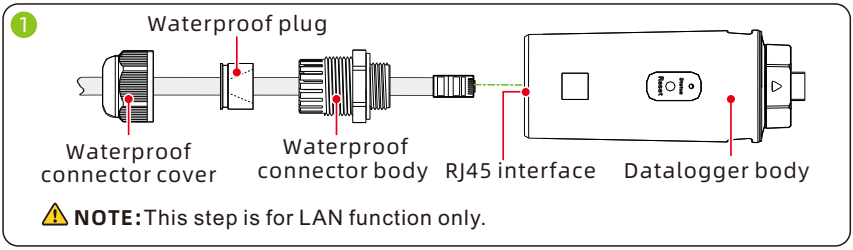

## DRMS connection

| Mode | Switches on DRE | | Function |
|---|---|---|---|
| DRM 0 | S0 | S9 | • When switches S0 and S9 are turned on, the inverter will shut down<br>• When switch S0 is turned off and S9 is turned on, the inverter will be grid-tied |
| DRM 1 | S1 | S9 | Do not consume power |
| DRM 2 | S2 | S9 | Do not consume at more than 48% of rated power |
| DRM 3 | S3 | S9 | Do not consume at more than 73% of rated power. Generates maximum inductive reactive power. |

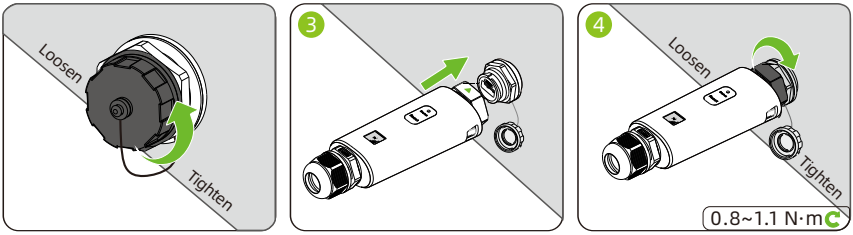
| Mode | Switches on DRE | | Function |
|---|---|---|---|
| DRM 4 | S4 | S9 | Increase power consumption |
| DRM 5 | S5 | S9 | Do not generate power |
| DRM 6 | S6 | S9 | Do not generate at more than 48% of rated power |
| DRM 7 | S7 | S9 | Do not generate at more than 73% of rated power. Generates maximum capacitive reactive power |
| DRM 8 | S8 | S9 | Increase power generation (subject to constraints from other active DRMS) |

## 3-8 Datalogger connection

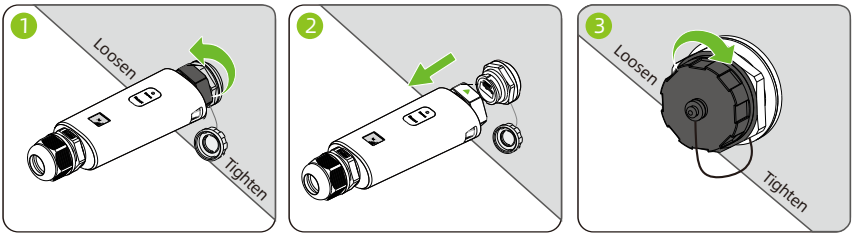
### Install




⚠ **NOTE:** This step is for LAN function only.




### Remove



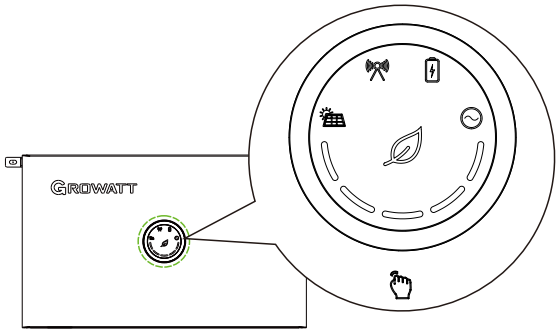
## 4. Power on/off the system

### 4-1 Power on

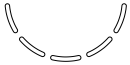
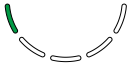
1. Check if all cables are properly connected as required.
2. Check if the PV and grid voltage are within the specified range.
3. Turn on the BAT switch, then turn on the PV switch.
4. Turn on the ON-GRID circuit breaker, then turn on the Backup circuit breaker.
5. When MODA 4-15kTL3-HU indicator is green, it indicates that the system is powered on successfully.

**Indicator**

• Inverter

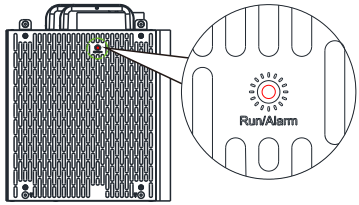



| Indicator | Color | Status | Description |
|---|---|---|---|
| | | Off | PV disconnected |
| | | On | PV normal operation |
| | | Flash | PV reverse polarity |
| | | On | PV side fault |
| | | On | Communication normal |
| | | On | Cloud platform disconnected |
| | | Off | Datalogger disconnected |
| | | On | Battery normal |
| | | On | Battery hibernation |
| | | Flash | Partial battery fault |
| | | On | All battery fault |

| Indicator | Color | Status | Description |
|---|---|---|---|
|  | | Off | Grid disconnected |
| | | On | Grid connected standby |
| | | On | Grid connected running |
| | | On | Off-grid running |
| | | Flash | Off-grid overload |
| | | Flash | Grid abnormality |
| | | On | Inverter AC side fault |
|  |  | Off | Battery has no power |
| |  | ON or Flash | • 0% <SOC≤ 20%<br>• Battery neither charging nor discharging is ON/Battery charging and discharging is flashing |
| |  | ON or Flash | • 20% <SOC≤ 40%<br>• Battery neither charging nor discharging is ON/Battery charging and discharging is flashing |
| |  | ON or Flash | • 40% <SOC≤ 60%<br>• Battery neither charging nor discharging is ON/Battery charging and discharging is flashing |
| |  | ON or Flash | • 60% <SOC≤ 80%<br>• Battery neither charging nor discharging is ON/Battery charging and discharging is flashing |
| |  | ON or Flash | • 80% <SOC≤ 100%<br>• Battery neither charging nor discharging is ON/Battery charging and discharging is flashing |
|  | | On | System normal |
| | / | / | / |

| Indicator | Color | Status | Description |
|---|---|---|---|
|  |  | Light up clockwise | System upgrade |
| |  | On | System failure |
| | / | Color rotation | Power on init |
|  | / | / | Wake indicator |

• Battery




| Indicator | Color | Status | Description |
|---|---|---|---|
|  |  | On | Normal |
| |  | Flash | Upgrade |
| |  | On | Fault |
| |  | Off | Hibernation |



## 4-2 Power off

1. Turn off the Backup circuit breaker, then turn off the ON-GRID circuit breaker.
2. Turn off the PV switch, then turn off the BAT switch.

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