40020036B

M–Combiner Quick Installation Guide

Applicable model: MC100

Download Center

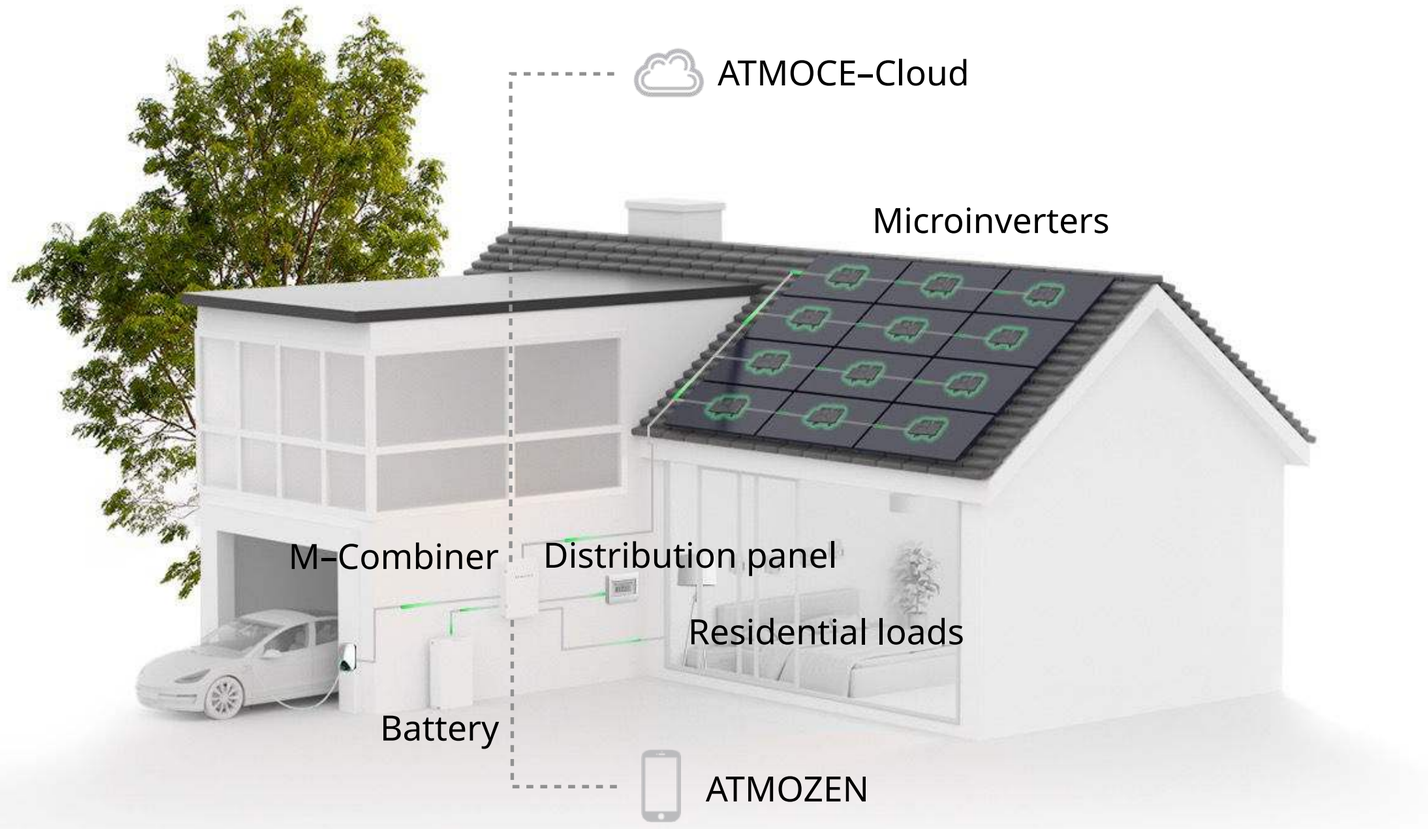
ATMOZEN APP

ATMOCE System Introduction

The single–phase M–Combiner (MC100) is an integrated management and power equipment that ensures the proper connection of microinverters, batteries and loads, and achieves grid connection. By integrating a smart energy controller M–Gateway (MG100), the combiner can manage the system performance and the devices above. The combiner communicates with the ATMOCE–Cloud and ATMOZEN APP , allowing users to learn about the energy production and consumption in their homes.

The system includes the following:

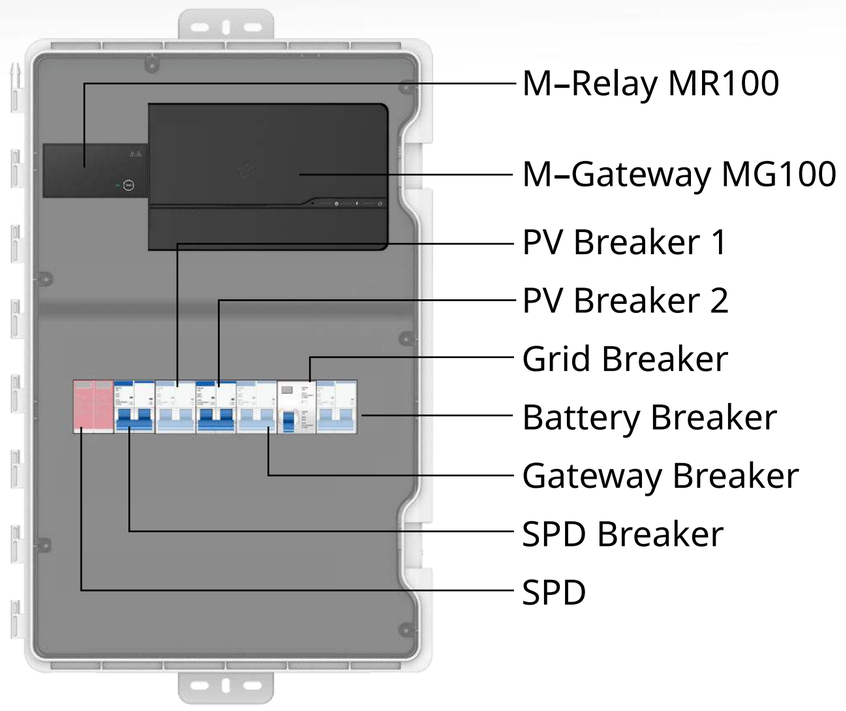
- MI-series Microinverter
- M–Combiner
- Grid (distribution panel)
- ATMOCE–Cloud & ATMOZEN
- Battery (Optional)
- AC EV charger (Optional)
- Heat pump or other residential loads (Optional)



Pre–installation

a. What's in the MC100

Refer to the figure on the right for pre–installed components in the MC100.



b. Check the grid voltage

The MC100 should connect to a single–phase grid. Measure the AC voltages at the point of connection to confirm that they are within the ranges.

Phase setup		Voltage range
Single–phase	L to N	184 to 276 Vac

c. Prepare the cables

To properly set up the system, it is necessary to select the appropriate cables. The table below shows the recommended cable requirements. You can replace the PV breaker with one rated at 25A and select the cables that meet the local electrical code requirements.

Connection		Recommendation
Microinverter	Power cable	2.5 to 6 mm^2, 2–core
Grid	Power cable Consumption CT signal cable	6 to 10 mm^2, 3–core Provided by ATMOCE
Battery	Power cable CAN cable	6 to 10 mm^2, 3–core 0.25 to 0.75 mm^2, 3–core
Device	Control cable ETH cable	0.25 to 0.75 mm^2, 3–core 802.3, Cat 6 UTP ethernet cable
Router	ETH cable	802.3, Cat 6 UTP ethernet cable

NOTE:

- When connecting the cables to the M–Combiner, you must cover the cable ends by using the proper cold–press terminal provided in the package.
- When stripping the cable, remove approximately 12 mm of the insulation layer from the power cable and 8mm of insulation layer from the communication cable.

d. Prepare the tools and materials

Tools: screwdriver, wire stripper, wire crimper, diagonal cutter, torque wrench, electrical drill, hole cutter with pilot, tape measure, multimeter, marker, etc.

Materials: wall anchors (Φ10) and screws (M8), corrugated protective pipe, cold–press terminal, tie wrap, etc.

e. Select how the device connects to the Internet

You can connect the combiner to the Internet through Wi–Fi and Ethernet.

- Ethernet connection: please use 802.3, Cat 6 UTP ethernet cable.
- Wi–Fi connection: install the M–Combiner within 10 meters from the router to ensure stable Wi–Fi signal.

f. Download the ATMOZEN APP

You can download the app from Google Play or Apple App Store.

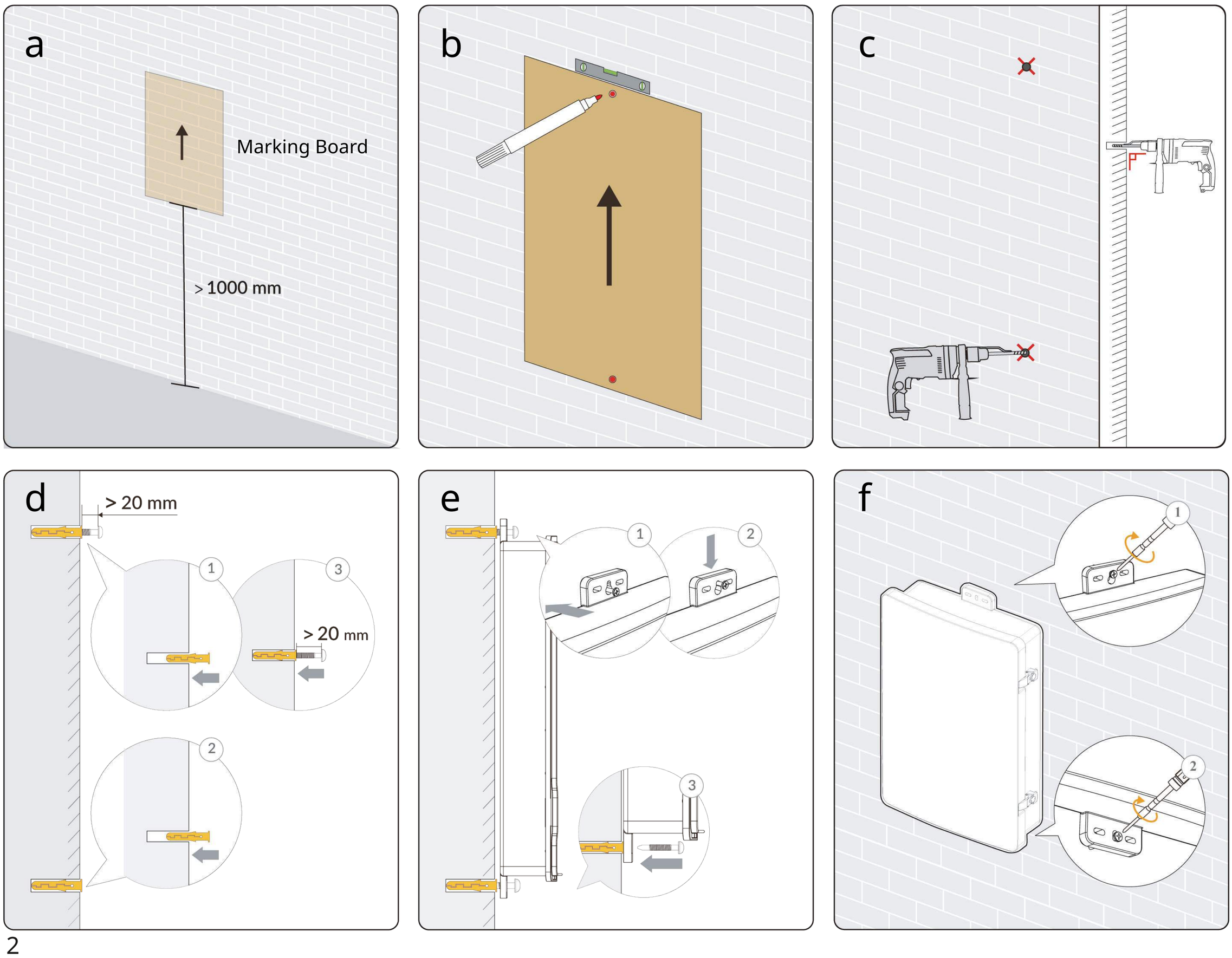
Installation

1. Mount the M–Combiner

a. Use a tape measure to locate the marking board on the wall. It should be at least 1,000 mm vertically from the floor.
b. Use the spirit level to check that the board is level, then make two marks on the wall.
c. Drill at the two marks by using an electric drill with a bit (Φ10).
d. Insert the wall anchors (along with the guide) in to the holes, and then insert the M8 screw into the TOP hole but do not completely tighten it.
e. Hang the top mounting tab on the screw, and then insert the screw into the bottom hole.
f. Tighten the M8 screws by using a Phillips #2 screwdriver with a torque of 9–14 N·m.

NOTE:

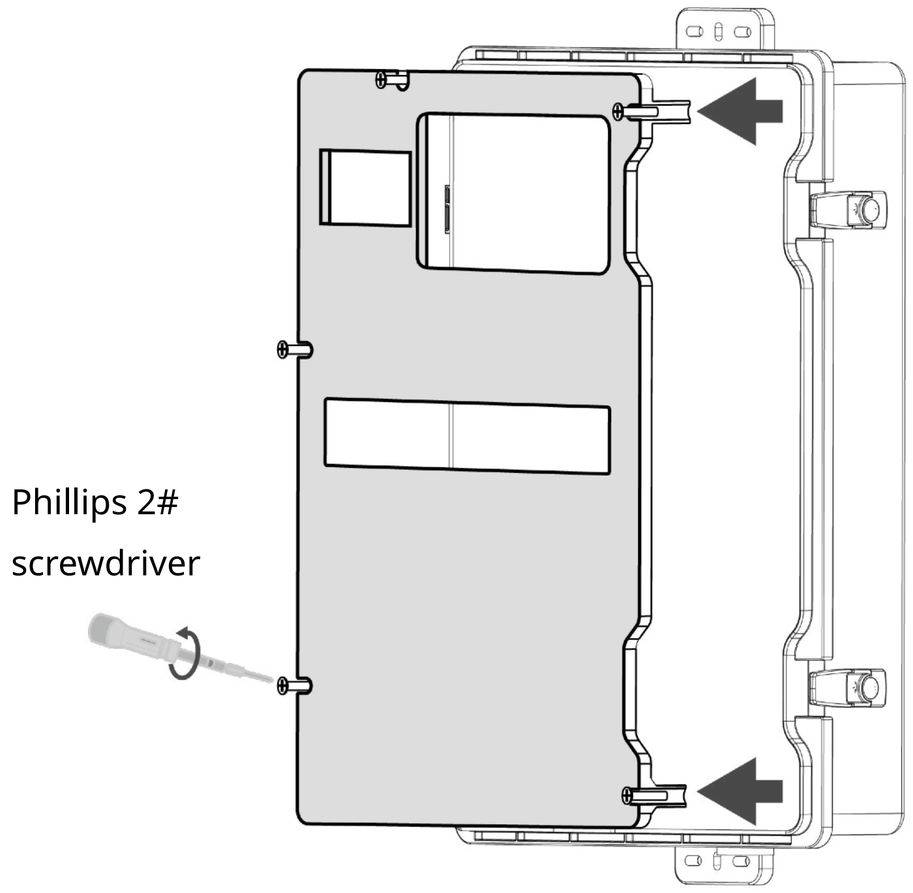
- Do not expose the M–Combiner to direct sunlight, unless installing a sunshade.
- The signal cable of the consumption CT is 5 meters long. Therefore the M–Combiner must be installed closed to the distribution panel.



2. Remove the protective panel

a. Open the combiner door.

b. Use a Philips 2# screwdriver to remove the protective panel.



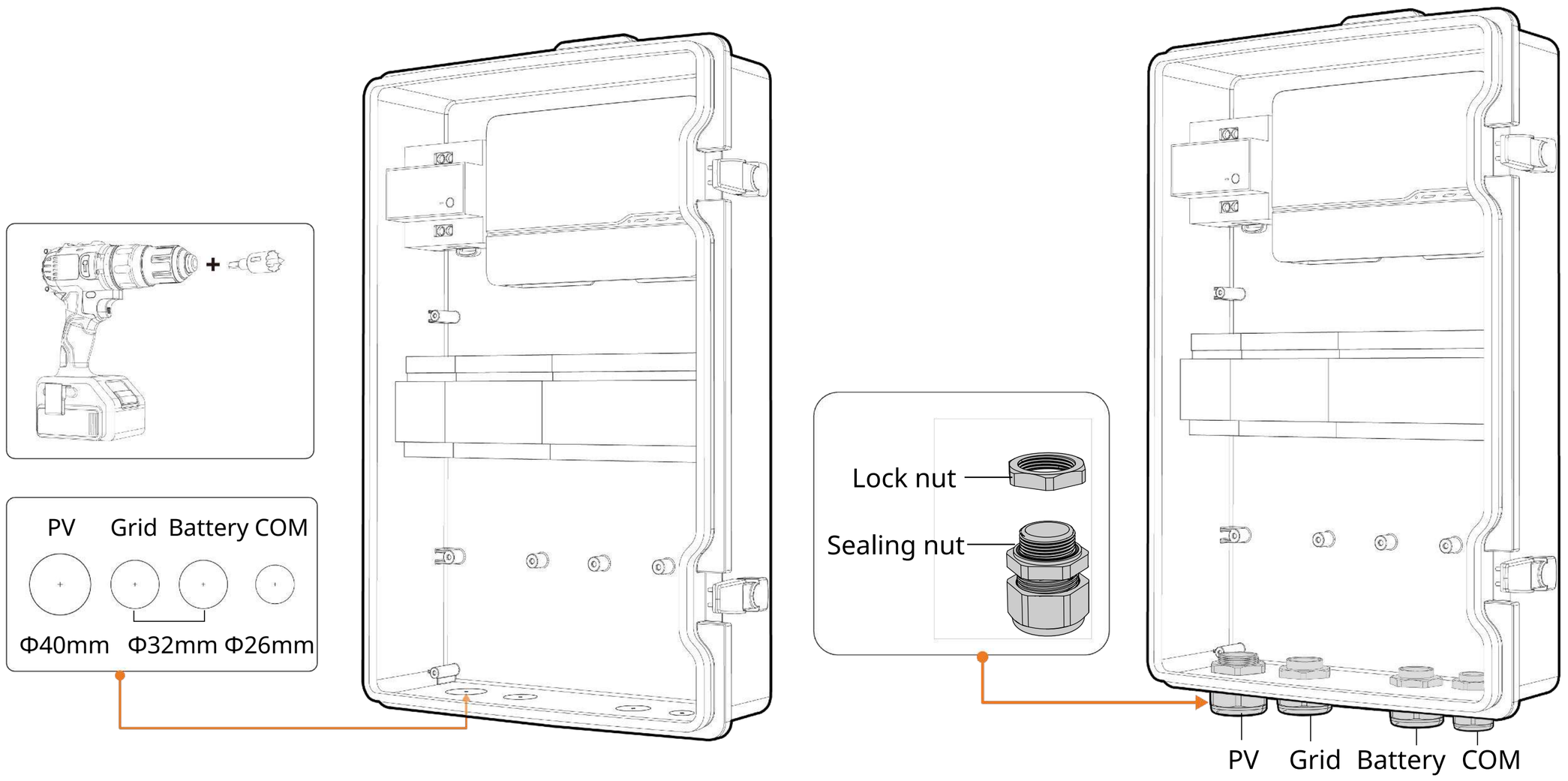
3. Drill on the M–Combiner

a. Use the electrical hole cutter with a pilot drill bit to drill holes. The drilling area and recommended cable outlets can be found at the bottom of the MC100.

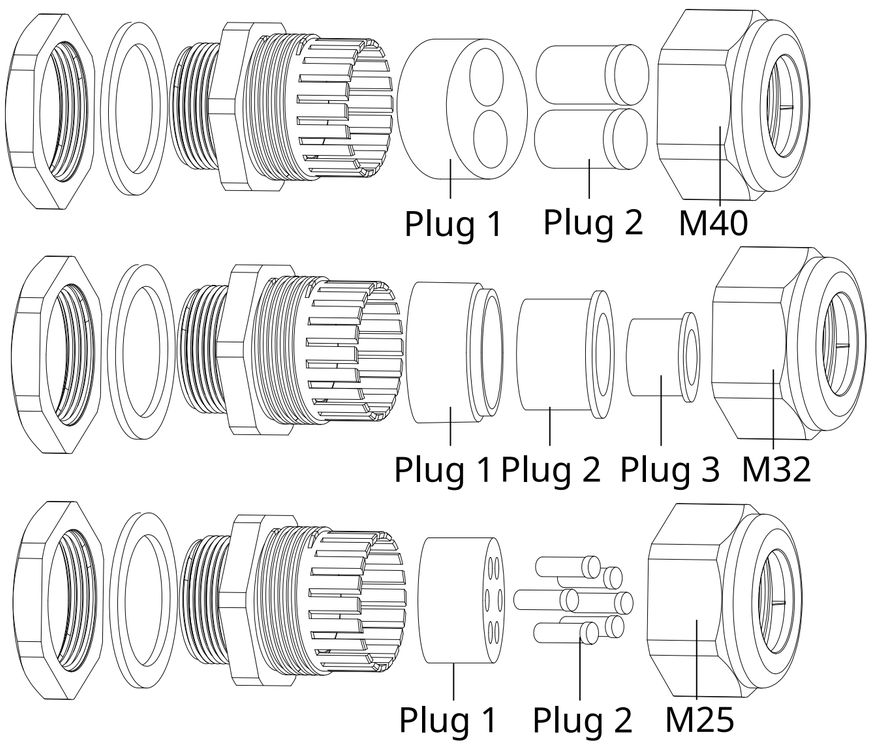
b. Install the rain–tight fittings to the holes. Several waterproof glands can be found in the package.

NOTE:

- Ensure that the edge of the holes do not exceed the indicated circle.



c. Tighten the lock nuts of the glands with a torque of 4–5 N·m and the sealing nuts with a torque of 7–7.5 N·m.



Function	Item	Recommended wire diameter
PV	Plug 1	2 × 2.5 to 3 × 4 mm²
	Plug 2	Cover the unused cable holes on plug1
Battery/Grid	Plug 1 + 2	3 × 6 to 3 × 10 mm²
	Plug 3	Remove the plug 3
COM	Plug 1	1) Battery CAN cable: 0.25-0.75mm², 3-Core 2) Consumption CT signal cable 3) Router ETH cable : 802.3 Cat6 UTP
	Plug 2	Cover the unused cable holes on plug1

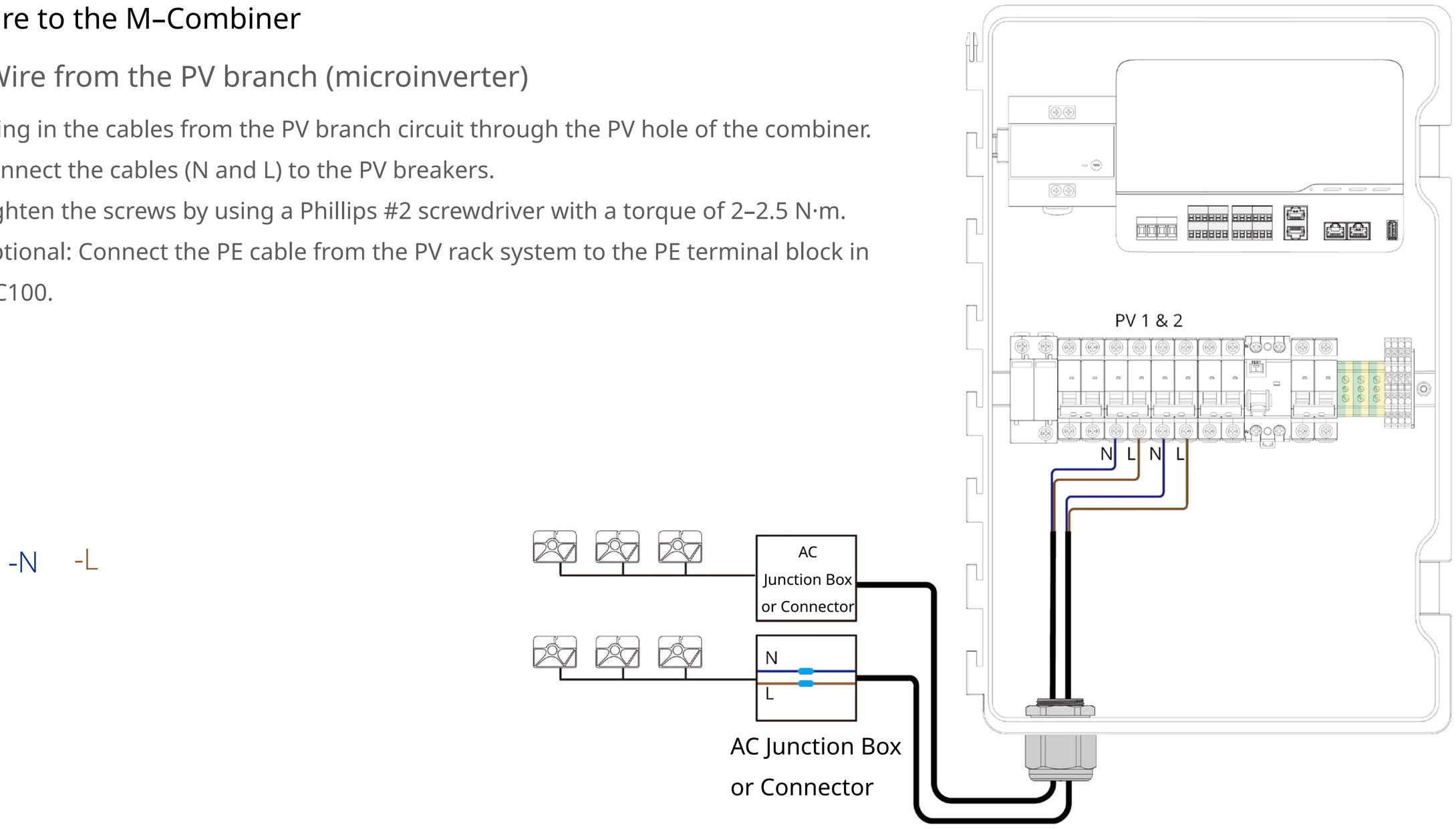
NOTE:

- Wire size values are provided for reference. Cable selection shall comply with local regulations and installation conditions.

4. Wire to the M–Combiner

4.1 Wire from the PV branch (microinverter)

a. Bring in the cables from the PV branch circuit through the PV hole of the combiner.
b. Connect the cables (N and L) to the PV breakers.
c. Tighten the screws by using a Phillips #2 screwdriver with a torque of 2–2.5 N·m.
d. Optional: Connect the PE cable from the PV rack system to the PE terminal block in MC100.



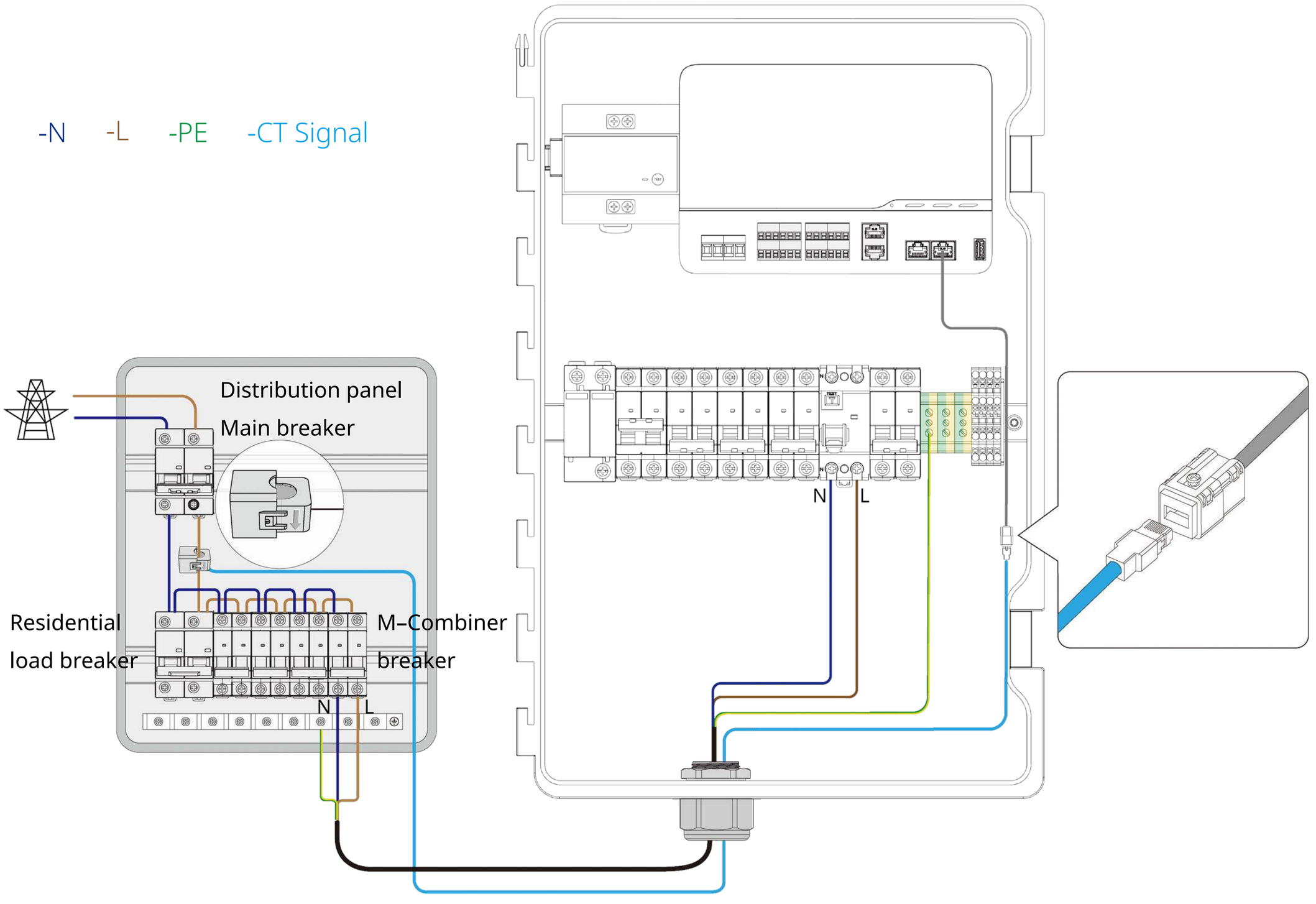
4.2 Wire from the distribution panel (grid)

Section A. Wire the power cables

a. Bring in the cables from the distribution panel through the grid hole of the combiner.
b. Connect the cables (N and L) to the grid breaker and connect the ground cable to the PE terminal block as shown.
c. Tighten the screws by using a Phillips #2 screwdriver with a torque of 3.5–4 N·m.

NOTE:

- Ensure that the cable sequence (N and L) of the breaker in the MC100 is consistent with that of the M–Combiner breaker and main breaker in the distribution panel.



Section B. Wire the consumption CTs

a. Install the consumption CTs for electricity metering. You can find the CTs in the combiner.

b. To install the CTs, perform the following steps:

- Connect the CT signal cable to the reserved RJ45 terminal as shown above.
- Locate the arrow on the CT label and clamp the CT with the "L" label on the L cable. The CT arrow must point away from the grid.

NOTE:

To guarantee the correct measurement of home energy consumption, the following items must be complied with:

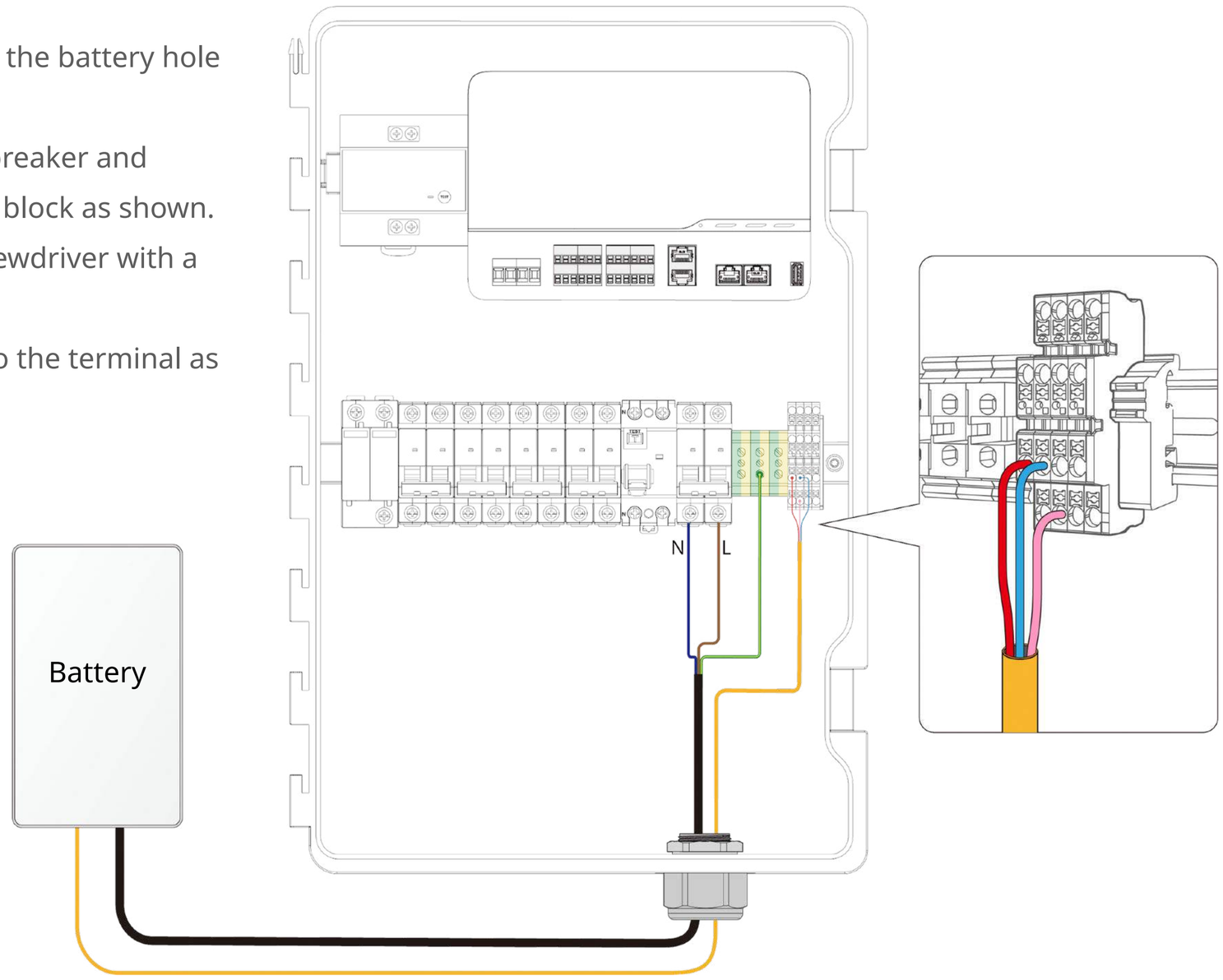
- The CTs' arrows must point away from the grid.
- Ensure that the CT with 'L' label is installed on the same power line as the L cable of the grid breaker in the M–combiner.

4.3 (Optional) Wire from the battery

a. Bring in the cables from the battery through the battery hole of the combiner.
b. Connect the cables (N and L) to the battery breaker and connect the ground cable to the PE terminal block as shown.
c. Tighten the screws by using a Phillips #2 screwdriver with a torque of 2–2.5 N·m.
d. Connect the CAN COM cable of the battery to the terminal as shown in the right figure.

-N -L -PE -CAN–COM

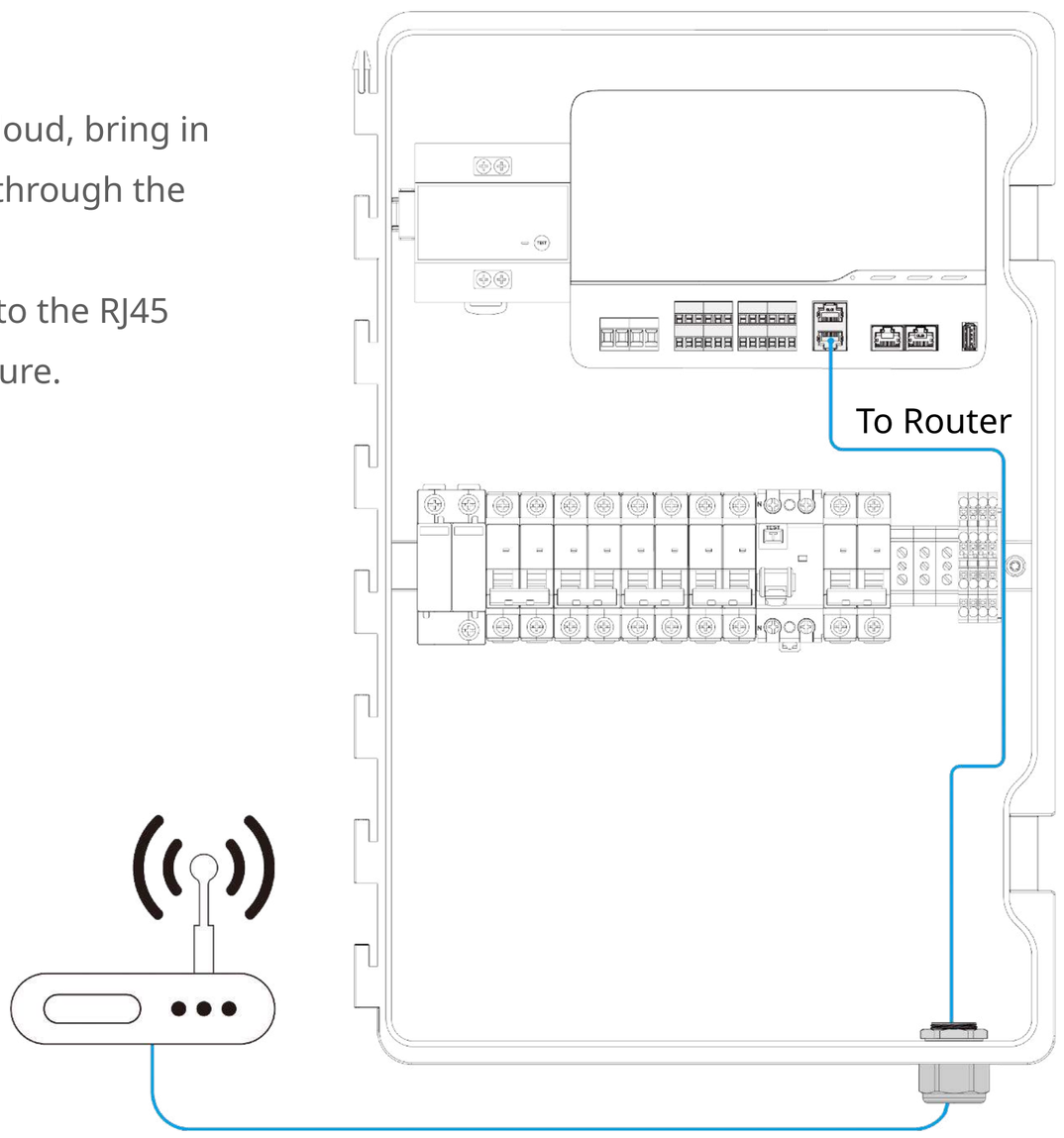
-CAN–L -CAN–H -CAN–GND



4.4 (Optional) Wire from the router

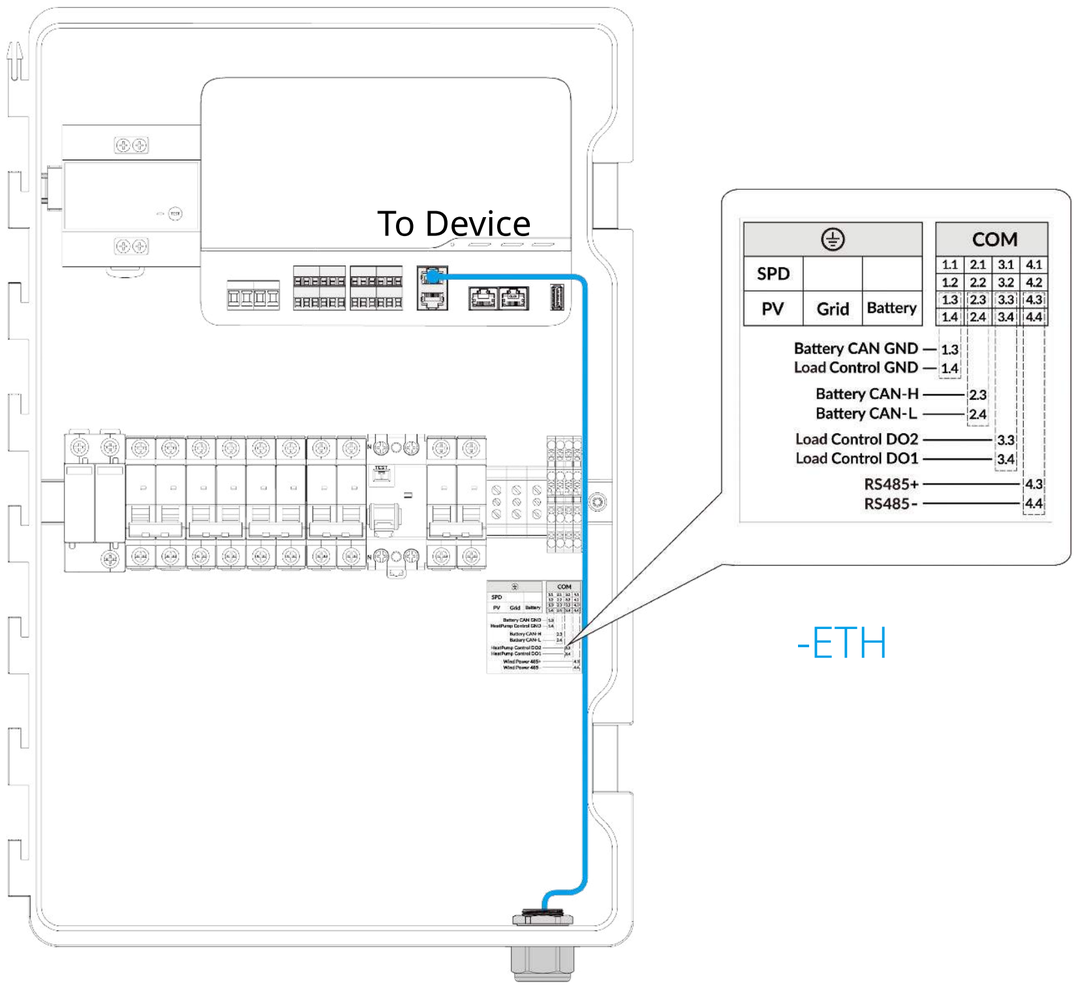
a. When you use ETH to connect to ATMOCE–Cloud, bring in the cable from the home broadband router through the COM hole of the combiner.
b. Connect the 802.3 Cat 6 UTP ethernet cable to the RJ45 terminal in the combiner as shown in the figure.

-ETH



4.5 (Optional) Communication interface

a. The MC100 supports ETH, RS485 and DO CTRL interfaces, etc. Connect the cables from the devices to the communication terminal block as the wire diagram in the combiner.



NOTE:

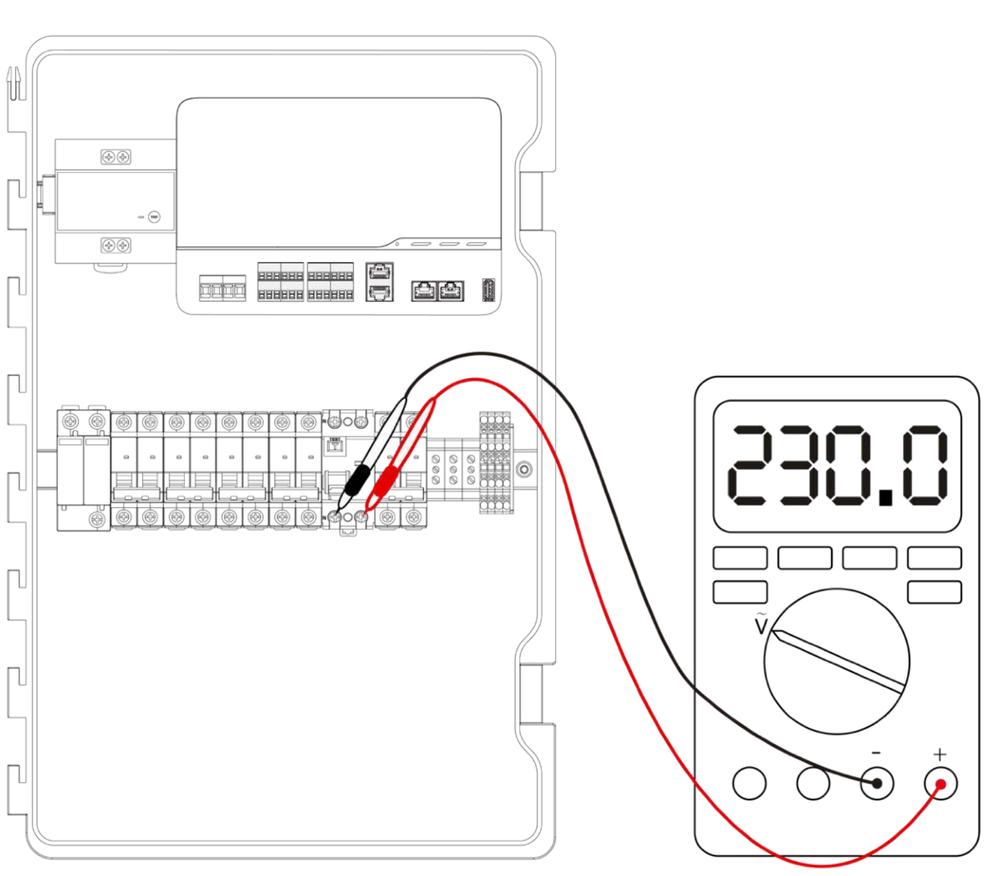
- M–Gateway supports more flexible and smart control by integrated communication interfaces. Refer to "M-Gateway User Manual" for more information.

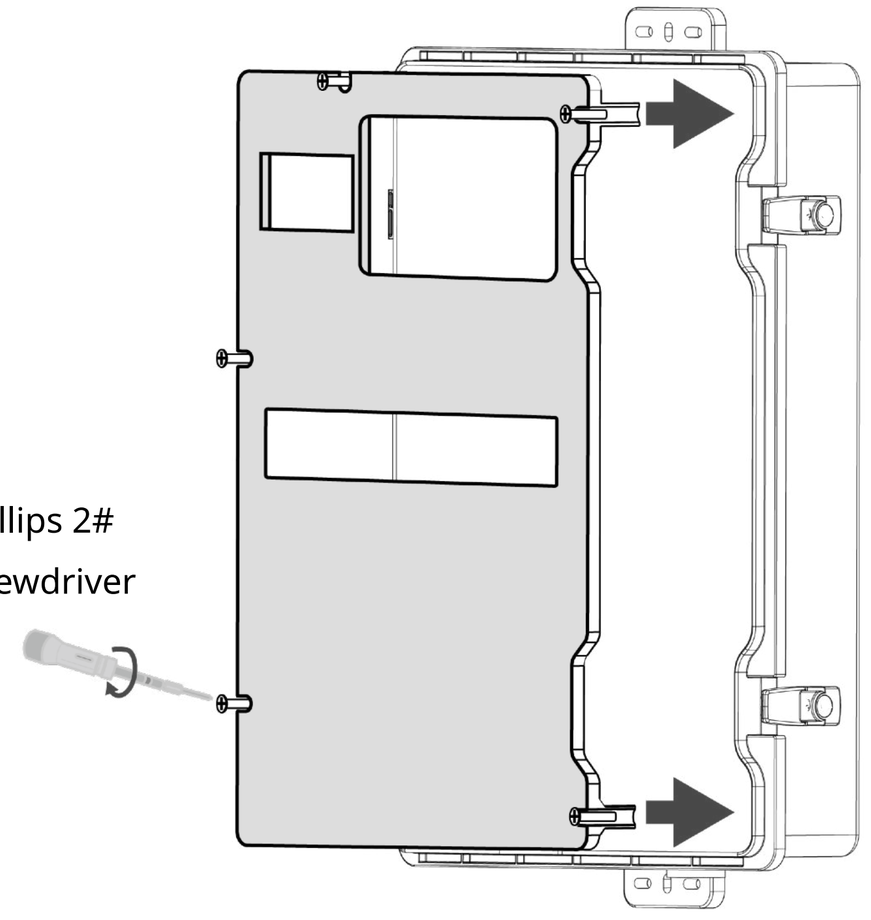
5. Power on the system

a. Turn on the main breaker and M–Combiner breaker in the distribution panel.
b. Use the multimeter to measure the voltage between the N pole and L pole of the grid breaker as shown in the figure.
c. If the voltage value is approximately the nominal phase voltage, e.g. 220 V, 230 V and 240 V, re–install the protective panel.
d. Turn on the grid and other breakers in the combiner, and the LEDs on the MG100 will be on.

NOTE:

- If the voltage value is outside the range (184 to 276 V), do not switch on the grid breaker inside the combiner. Check the cable connection to avoid damaging the device and voiding the warranty.





6. Activate the system

a. Log in to the ATMOZEN APP on your mobile phone and follow the deployment guide in the app to activate the system.
b. After the system is activated, all LEDs will be solid green.

7. Close the M–Combiner

a. Close the door of the MC100.

Rev. 1.0.1 Data subject to change.
© 2026 ATMOCE HOLDING B.V. All rights reserved.
support@atmoce.com | +31 20 241 6207
ATMOCE HOLDING B.V. | Rokin 92-96, 1012 KZ Amsterdam, the Netherlands