



Three-Phase Parallel Installation and Wiring Guide

This document describes the installation and wiring of a three-phase system using three single-phase HYXI Halo units.

Each Halo unit is connected to one phase of a three-phase system (L1, L2, L3), and all units are configured in the HYXI mobile app as a three-phase parallel system.

1. Three-Phase System Connection

Each Halo unit is a single-phase device. When three Halo units are installed in a three-phase system, connect the AC output of each unit to a different phase, while sharing the neutral conductor (N) and protective earth (PE):

- **Halo 1: L1 + N + PE**
- **Halo 2: L2 + N + PE**
- **Halo 3: L3 + N + PE**

The Halo units can be connected to the three-phase grid using either of the following methods (illustrated as below):

1. Direct connection to the distribution box

Connect each Halo unit directly to the distribution box through an independent dedicated branch circuit. Each branch circuit must be connected to a different phase.

2. Connection via dedicated sockets

Install three independent dedicated branch circuits from the distribution box, each terminating in a separate socket. Connect each socket to a different phase, and plug each Halo unit into the socket assigned to its corresponding phase.

Three-Phase System Connection with Halo (Single-Phase Devices)



Each Halo is a single-phase device. For three-phase operation, connect the AC output of each Halo unit to a different phase:

- Halo 1: L1 + N + PE
- Halo 2: L2 + N + PE
- Halo 3: L3 + N + PE

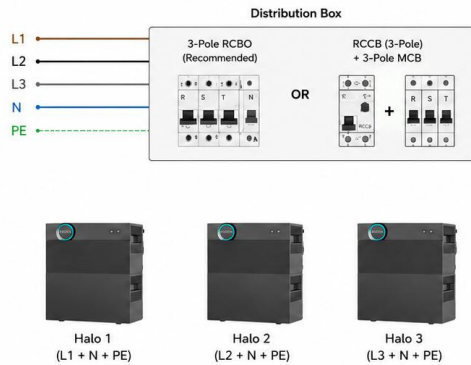
Note:

All Halo units share the same Neutral (N) and Protective Earth (PE), and must remain connected to the same phase during installation and operation.

Two Connection Options

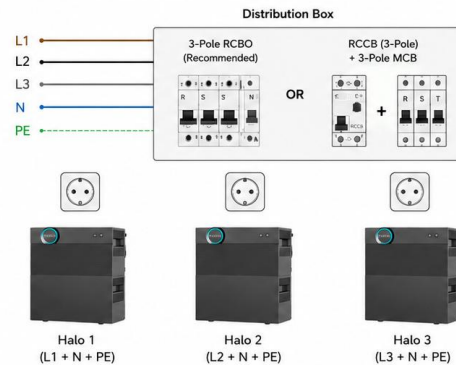
1 Direct Connection to Distribution Box

Connect each Halo unit directly to the distribution box via an independent dedicated branch circuit. Each branch circuit must be connected to a different phase.



2 Connection via Dedicated Sockets

Install three independent dedicated branch circuits from the distribution box, each terminating in a dedicated socket. Connect each Halo unit to the socket assigned to its corresponding phase.



Can RCBO or Circuit Breaker be three-phase?

- **RCBO:** Yes. A 3-pole RCBO is a common and recommended solution in Europe for three-phase systems.
- **Circuit Breaker (MCB):** Yes. Use a 3-pole MCB together with a 3-pole RCCB.



Note: Ensure that each branch circuit and socket (if used) is rated for at least 16A and complies with local wiring regulations.

Notes:

- Do not connect one Halo to two or three phase conductors at the same time;
- Do not bridge the GRID terminal of a Halo across L1 and L2, L2 and L3, or L1 and L3;
- Do not connect all three Halo units to the same phase and then configure them as a three-phase system in the app;
- Do not assign a phase in the app that does not match the actual on-site wiring;
- Do not connect the AC output of a single unit to multiple phases in an attempt to balance the phase loads.
- Ensure that each branch circuit and socket (if used) is rated for at least 16A and complies with local wiring regulations.
- Before you begin, check if your main distribution box is compliant with local regulations, which may require the following components: Bidirectional meter, main circuit breaker (MCB), SLS switch, and surge protection device (SPD). You may request a licensed electrician to evaluate and add the required components.
- You may use a Residual Current Circuit Breaker with Overcurrent Protection (RCBO) as an alternative to RCCB and circuit breaker for lower cost and easier wiring.
- If your distribution box does not have an SPD, it is recommended to add one to ensure safety.

Option 1: Direct connection to the distribution box

Each Halo unit is connected via an independent dedicated branch circuit. Provide three dedicated grid-connection branch circuits in the distribution board, one for each of L1, L2, and L3. Each branch circuit must have its own circuit breaker and residual-current protection device compliant with local requirements.

Wiring Structure:

L1 + N + PE → Protection Device(RCBO / RCCB + Breaker) → Halo 1

L2 + N + PE → Protection Device(RCBO / RCCB + Breaker) → Halo 2

L3 + N + PE → Protection Device(RCBO / RCCB + Breaker) → Halo 3

This is a hardwired installation. It provides a more secure connection and is better suited to higher-power applications or permanent installations.

Option 2: Connection via dedicated sockets

Run one dedicated three-phase, four-wire circuit (L1, L2, L3, and N, plus PE) from the distribution board through a three-phase circuit breaker and residual-current protection device. Then feed one socket from each phase:

Wiring Structure:

L1 + N + PE → Socket 1 → Halo 1

L2 + N + PE → Socket 2 → Halo 2

L3 + N + PE → Socket 3 → Halo 3

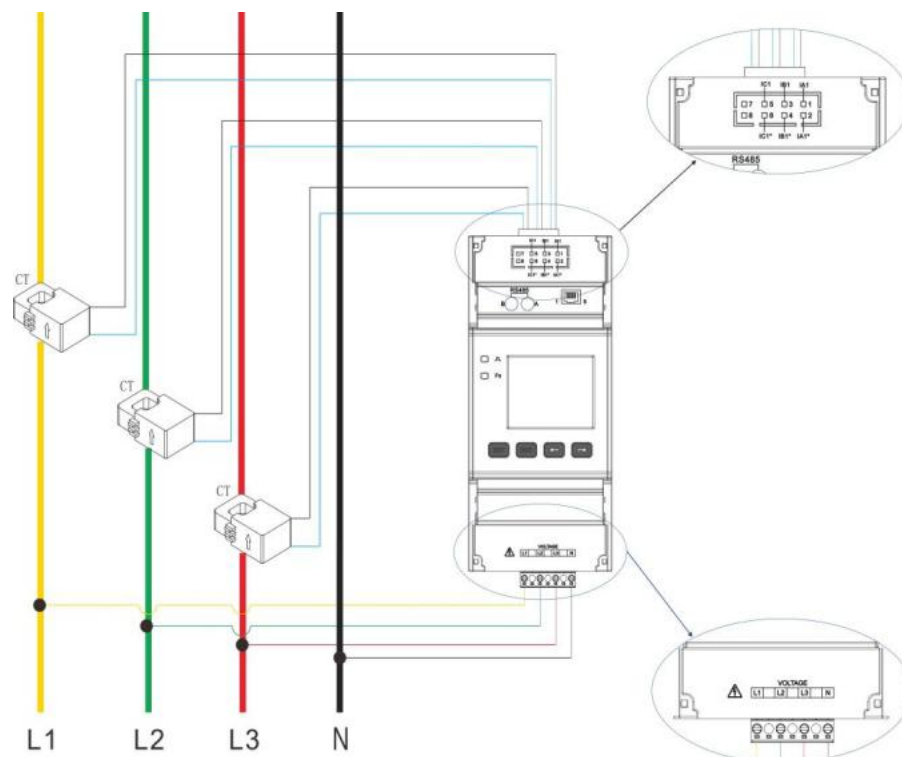
Notes:

- Each socket must be connected to a different phase and have independent L/N/PE conductors.

2. Three-Phase Smart Meter and CT Installation (Optional)

Connect power cables (L1, L2, L3, N) from the smart meter to the main panel. Install CTs on the grid cables. Make Sure the arrow on the CT rings are oriented towards the grid!

Clearly and individually label the three-phase voltage-sensing conductors, CT cores, and Halo branch circuits to prevent incorrect phase mapping during installation, commissioning, or maintenance.



Scan the QR code to access detailed installation instructions.



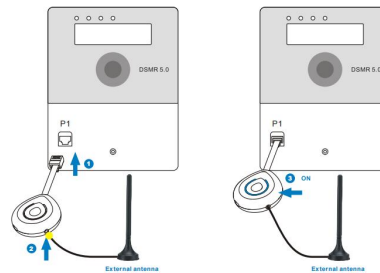
3. P1 Meter Installation (Optional)

1. Plug the P1 meter into the P1 port on the main meter.

2. Connect the antenna of the P1 collector.
3. The P1 meter is powered directly by the main meter. Check whether the P1 indicator light is on to confirm that it is powered properly.

Notes:

- An adapter is required when using a DSMR 4.0 meter.
- Install the antenna before use.
Communication range is up to 9 m under laboratory conditions and may vary by installation environment.
- To connect the Micro ESS to the P1 meter wirelessly, add the smart meter during device setup in the HYXI App. See Section 7.2 Use the HYXI App, for setup instructions.



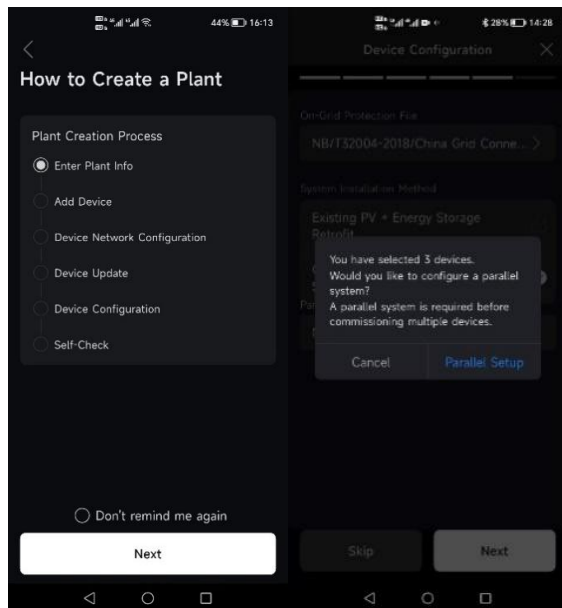
Scan the QR code to read all the instructions.



4. Three-Phase Parallel Setup in the App

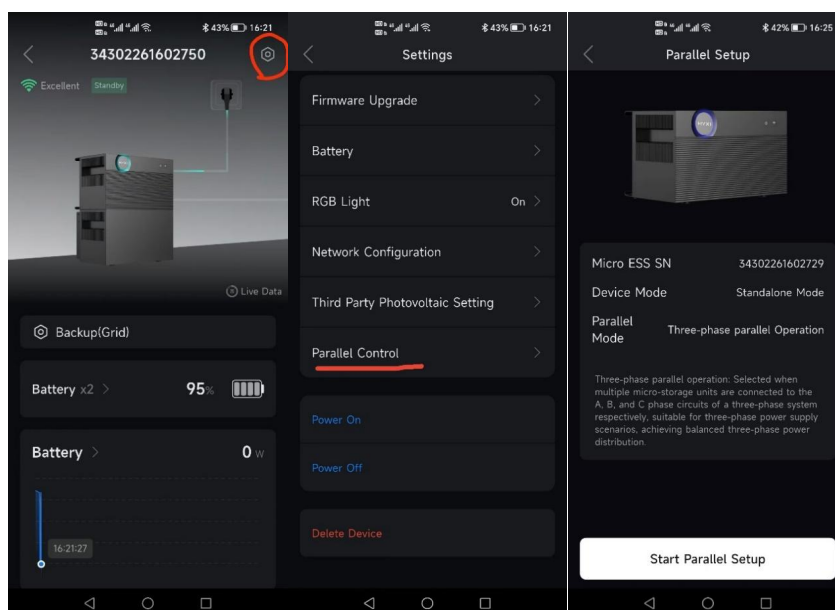
4.1 Configuring Three-Phase Parallel Operation for New Plant

Create the plant by following the on-screen instructions. At the final step of plant creation, a pop-up will ask whether you want to configure three-phase parallel operation. Tap "Parallel Setup" to proceed, or tap "Cancel" if it is not required.



4.2 Configuring Three-Phase Parallel Operation for an Existing Plant

Open the Device Settings screen. And Scroll down and select "Parallel Control" to start the setup.



Notes:

All the halo units and smart meter / P1 meter should connect to the cloud.