

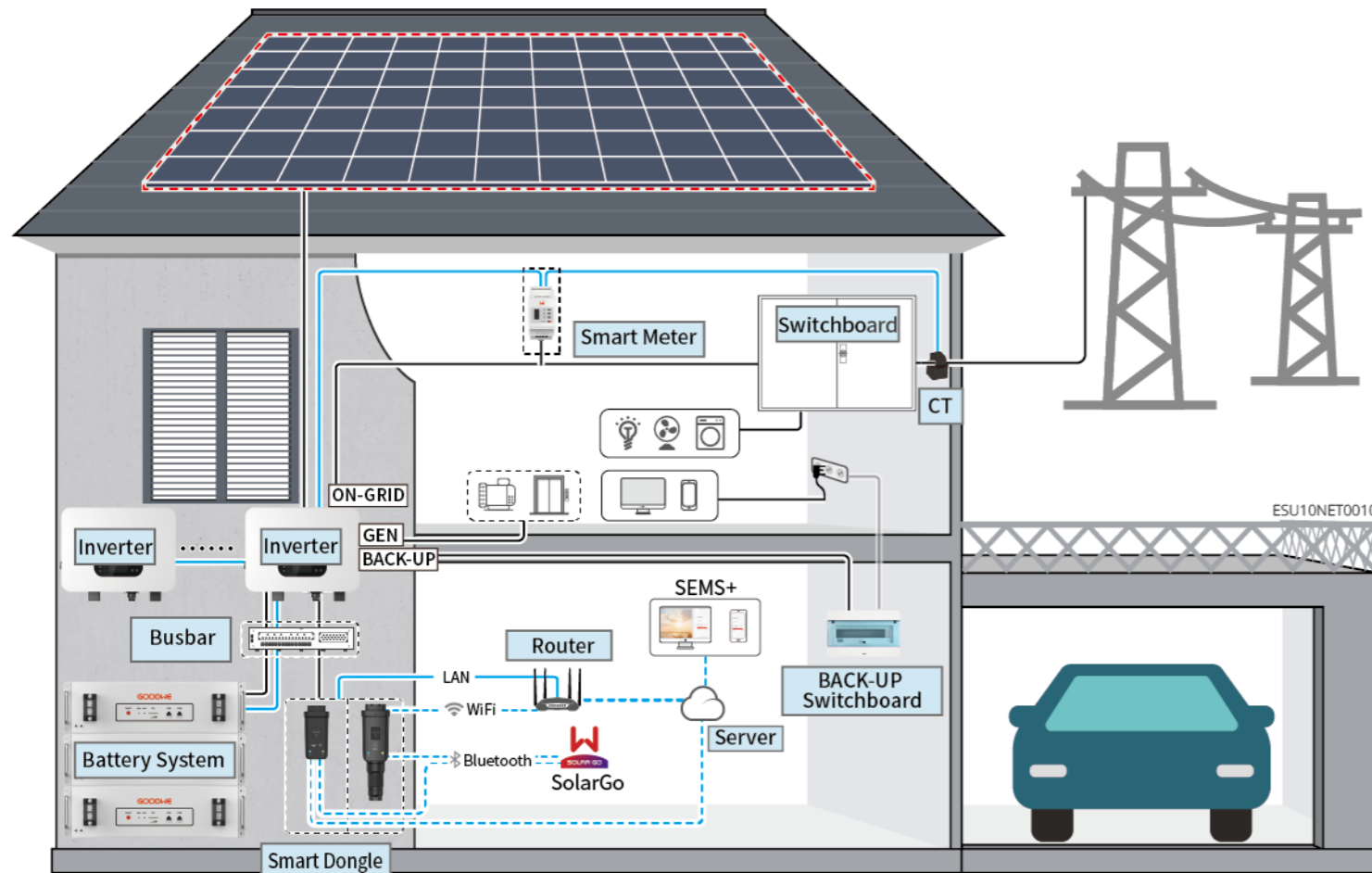
## ES Uniq 3.0-6.0kW Residential Smart Inverter Solutions Guide

V1.4-2026-03-10

### WARNING

The information in this quick guide is subject to change due to product updates or other reasons. This guide cannot replace the product labels or the safety precautions in the user manual unless otherwise specified. All descriptions in the manual are for guidance only.

### Scenario

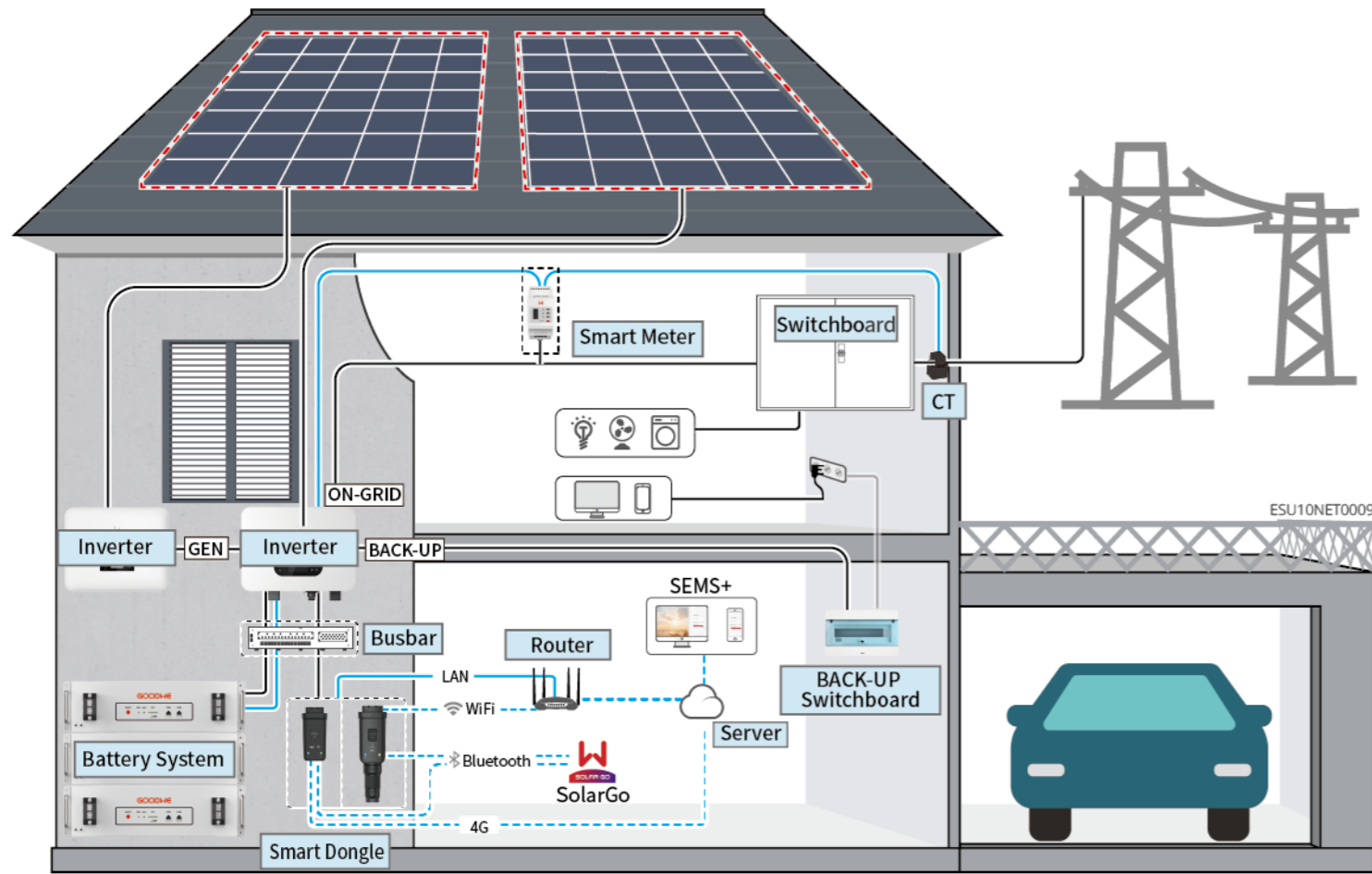


Device	Model	Description
Inverter	GW3000-ES-C10 GW3000-ES-C11 GW5000-ES-C10 GW6000-ES-C10	<ul style="list-style-type: none"> <li>When only one inverter is used in the system, it is supported to connect generator.</li> <li>When multiple inverters are used in the system, it is not supported to connect generator or large loads; a maximum of 6 inverters are supported to form a parallel system, and the Ezlink3000 is required in the parallel system.</li> <li>Requirements for parallel:                             <ul style="list-style-type: none"> <li>The software version of all inverters in the system is the same.</li> <li>The ARM software version of the inverter is 15.493 and above.</li> <li>The DSP software version of the inverter is 02.10 and above.</li> </ul> </li> </ul>
Battery system	LX A5.0-10	Battery systems of different models cannot be mixed and used together. Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.
	LX A5.0-30	
	LX U5.0-30	<ul style="list-style-type: none"> <li>Supports up to 30 units in parallel cluster in the same system.</li> <li>Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.</li> </ul>
	GW14.3-BAT-LV-G10	<ul style="list-style-type: none"> <li>Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.</li> <li>Supports up to 30 units in parallel cluster in the same system:                             <ul style="list-style-type: none"> <li>Products with SN code 25C and later default to supporting 30 units in parallel cluster.</li> <li>For products before 25C, if 30 units parallel cluster is required, please contact GoodWe aftersales service center to upgrade the firmware version.</li> <li>To view the product SN code, refer to SN Code Meaning.</li> </ul> </li> </ul>
	GW16.1-BAT-LVG10	<ul style="list-style-type: none"> <li>Supports up to 30 units in parallel cluster in the same system.</li> <li>Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.</li> </ul>
Lead-acid Battery		<ul style="list-style-type: none"> <li>Supports connection to lead-acid batteries of AGM, GEL, and Flooded types.</li> <li>The number of batteries that can be connected in series is calculated based on the voltage of lead-acid batteries, and the total voltage of batteries connected in series is not allowed to exceed 60V.</li> </ul>

Device	Model	Description
Busbar	BCB-11-WW-0 BCB-22-WW-0 BCB-32-WW-0 BCB-33-WW-0 (Purchase from GoodWe)	<ul style="list-style-type: none"> <li>Please select the busbar according to the charging/discharging capacity of the inverter, the load size, and the charging/discharging capacity of the battery in the system.</li> <li>BCB-11-WW-0: <ul style="list-style-type: none"> <li>» Used with LX A5.0-10, the battery system supports a maximum working current of 360A, working power of 18kW, and can connect to a maximum of 3 inverters, and 6 batteries.</li> </ul> </li> <li>BCB-22-WW-0: <ul style="list-style-type: none"> <li>» Used with LX A5.0-10, the battery system supports a maximum working current of 720A, working power of 36kW, and can connect to a maximum of 6 inverters, and 12 batteries.</li> <li>» Used with LX A5.0-30, the battery system supports a maximum working current of 720A, working power of 36kW, and can connect to a maximum of 6 inverters, and 6 batteries.</li> </ul> </li> <li>BCB-32-WW-0: <ul style="list-style-type: none"> <li>» Used with LX A5.0-10, the battery system supports a maximum working current of 720A, working power of 36kW, and can connect to a maximum of 6 inverters, and 15 batteries.</li> <li>» Used with LX A5.0-30, the battery system supports a maximum working current of 720A, working power of 36kW, and can connect to a maximum of 6 inverters, and 15 batteries.</li> <li>» Used with LX U5.0-30, the battery system supports a maximum working current of 720A, working power of 36kW, and can connect to a maximum of 6 inverters, and 8 batteries.</li> <li>» Used with GW14.3-BAT-LV-G10, the battery system supports a maximum working current of 720A, working power of 36kW, and can be connected to a maximum of 6 inverters, and 15 batteries.</li> <li>» When used with GW16.1-BAT-LV-G10, the battery system supports up to 720A working current, 36kW working power, maximum connection of 6 inverters, and 15 batteries.</li> </ul> </li> <li>BCB-33-WW-0: <ul style="list-style-type: none"> <li>» Used with LX U5.0-30, the battery system supports a maximum working current of 720A, working power of 36kW, and can be connected to a maximum of 6 inverters, and 15 batteries. When the number of batteries exceeds 8, two 600A fuses need to be connected in parallel.</li> </ul> </li> <li>Others: Please prepare busbar based on actual system power and current.</li> </ul>
Smart Meter	<ul style="list-style-type: none"> <li>Built-in Smart Meter (Standard)</li> <li>GMK110 (optional)</li> <li>GM330 (purchase from GoodWe)</li> </ul>	<ul style="list-style-type: none"> <li>Built-in Smart Meter: When the number of parallel inverters is <math>\leq 2</math> and the length of CT cable is <math>\leq 10</math> meters, the built-in meter can be used. Built-in smart meter: 10-meter wire CT, default CT ratio: 120A/40mA</li> <li>GMK110: When the length of the built-in CT cable of the inverter is not enough for connection to the switchboard, please connect an external GMK110 smart meter. CT is not supported for changing to other type, CT ratio: 120A/40mA.</li> <li>CM330: Supports purchasing from GOODWE or third-party, CT ratio requirement: nA/5A <ul style="list-style-type: none"> <li>nA: CT primary input current, n ranges from 200 to 5000.</li> <li>5A: CT Secondary input current.</li> </ul> </li> </ul>

Device	Model	Description
Smart Dongle	<ul style="list-style-type: none"> <li>WiFi/LAN Kit-20 (Standard)</li> <li>4G Kit-CN-G20 (Only for China)</li> <li>4G Kit-CN-G21 (Only for China)</li> <li>Ezlink3000 (purchase from GoodWe)</li> </ul>	<ul style="list-style-type: none"> <li>Please use the WiFi/LAN Kit-20, 4G Kit-CN-G20, 4G Kit-CN-G21 modules in single inverter system.</li> <li>In parallel system, the EzLink3000 must be connected to the master inverter. Do not connect any smart dongle to slave inverter. Ezlink3000 requires a firmware version of 05 or above.</li> </ul>

## Microgrid Scenario



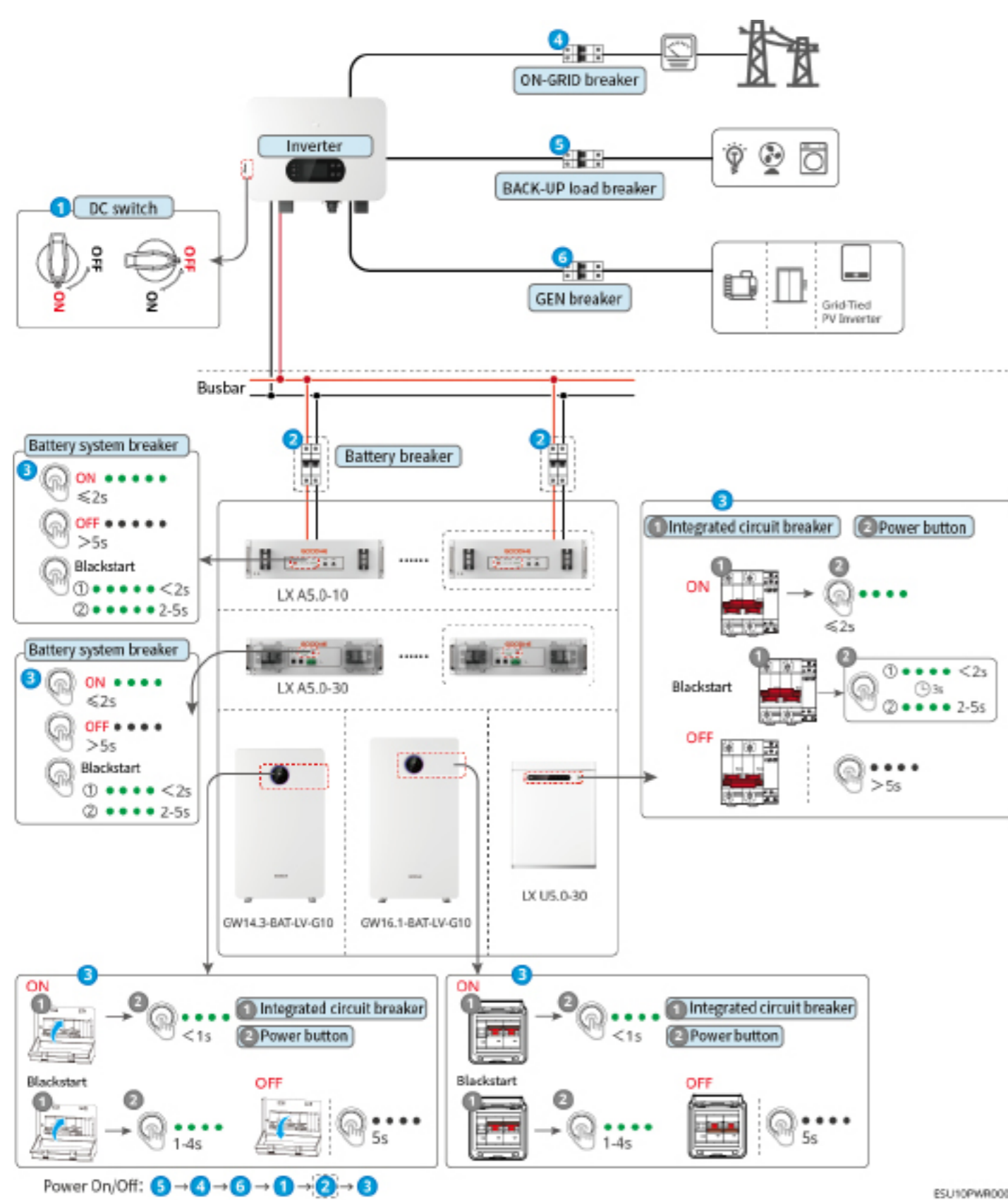
Device	Model	Description
Inverter	GW3000-ES-C10 GW3600-ES-C10 GW5000-ES-C10 GW6000-ES-C10	<ul style="list-style-type: none"> <li>In the microgrid system, parallelization is not supported by the inverter, and only a single inverter can be supported to use in the system.</li> <li>Requirements for parallel: <ul style="list-style-type: none"> <li>The ARM software version of the inverter is 15.493 and above.</li> <li>The DSP software version of the inverter is 02.10 and above.</li> </ul> </li> </ul>
Battery system	LX A5.0-10	<p>Battery systems of different models cannot be mixed and used together. Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.</p> <ul style="list-style-type: none"> <li>LX A5.0-10: Supports up to 15 units in parallel cluster in the same system.</li> <li>LX A5.0-30: Supports up to 30 units in parallel cluster in the same system</li> </ul>
	LX A5.0-30	
	LX U5.0-30	<ul style="list-style-type: none"> <li>Supports up to 30 units in parallel cluster in the same system.</li> <li>Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.</li> </ul>
	GW14.3-BAT-LV-G10	<ul style="list-style-type: none"> <li>Parallel cluster expansion is temporarily not supported between different models. For the same model, parallel cluster expansion is allowed within one year of purchase and use by the customer, and is not allowed after one year.</li> <li>Supports up to 30 units in parallel cluster in the same system: <ul style="list-style-type: none"> <li>Products with SN code 25C and later default to supporting 30 units in parallel cluster.</li> <li>For products before 25C, if 30 units parallel cluster is required, please contact GoodWe aftersales service center to upgrade the firmware version.</li> <li>To view the product SN code, refer to SN Code Meaning.</li> </ul> </li> </ul>
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Grid-Tied PV Inverter	-	<ul style="list-style-type: none"> <li>It's recommended to use grid-tied PV inverter sold in GOODWE, and is supported to use the third-party grid-tied PV inverter.</li> <li>When the microgrid system is in grid-tied mode, if power limitation control is required, make sure: <ul style="list-style-type: none"> <li>The hybrid inverter should be set in the grid-tied power limitation interface of the SolarGo APP, and the grid-tied inverters should be set according to the actual tools used.</li> <li>In order to ensure that the grid-tied inverters can continue to generate power, the output power of the hybrid inverters must be adjusted in the microgrid mode interface of the SolarGo APP.</li> </ul> </li> </ul> <p>Note: The output power control precision of different grid-tied inverters varies. Please set the grid-tied power limit control parameter value according to the actual situation.</p>

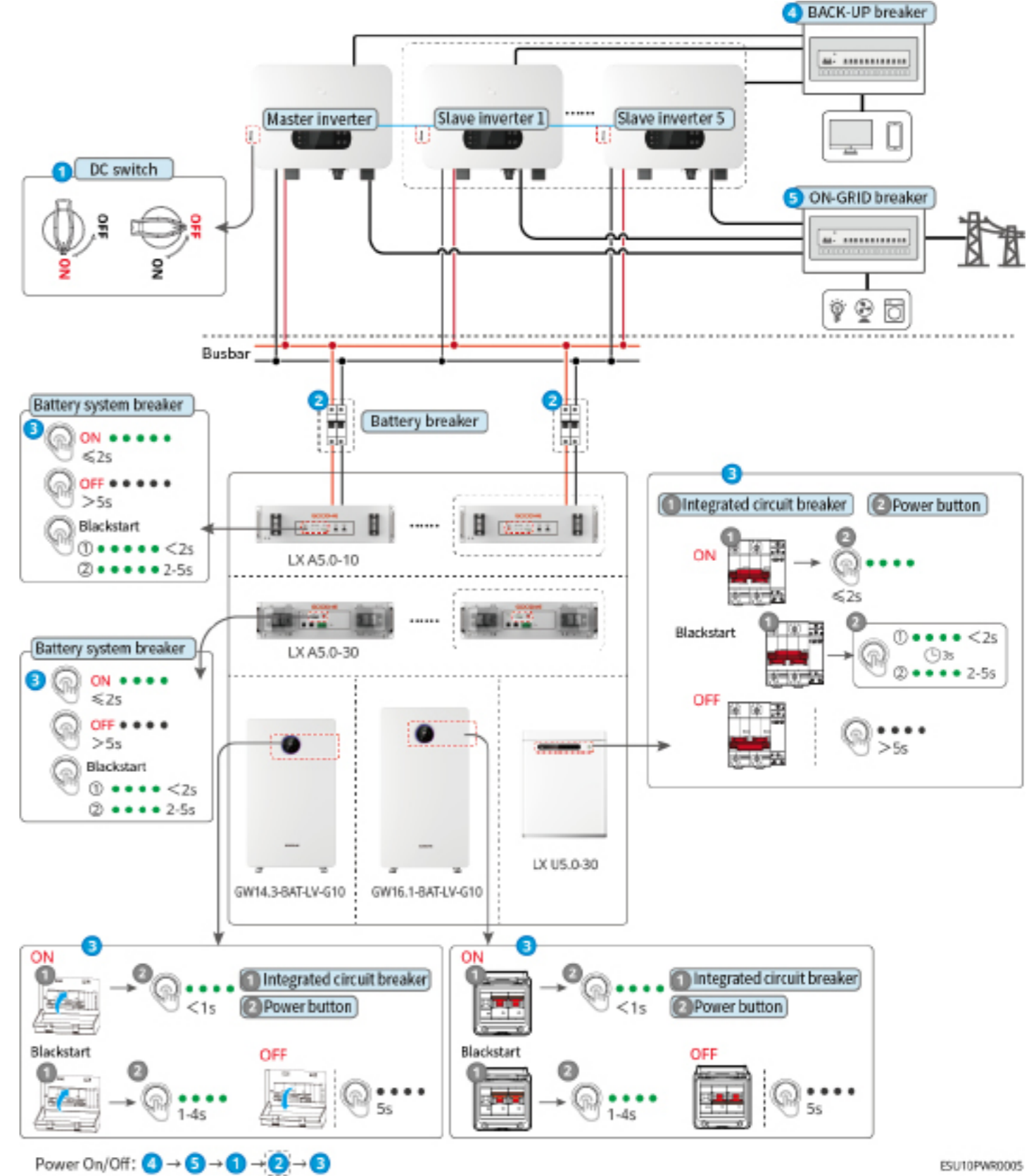
## 02 Power On/Off

### Single inverter system



ESU10PWR0006

### Multi-inverter system



ESU10PWR0005

### 03 Installations

Steps	1 Installation	2 PE	3 PV	4 Battery	5 AC	6 COM	7 Communication module
Inverter							4G Kit-CN-G20 4G Kit-CN-G21  WiFi/LAN Kit-20  Ezlink3000 
Tools	1 D: 80mm φ: 8mm 	M5 $\oplus$ 1.5-2N·m 	Recommend: A-2546B  	1 M8 $\oplus$ 5N·m  2 52mm 6-7N·m 	1 M5 $\oplus$ 1.5-2N·m  2 65mm 10N·m 	2 M4 $\oplus$ 1.5N·m  3 40mm 5-6N·m 	 

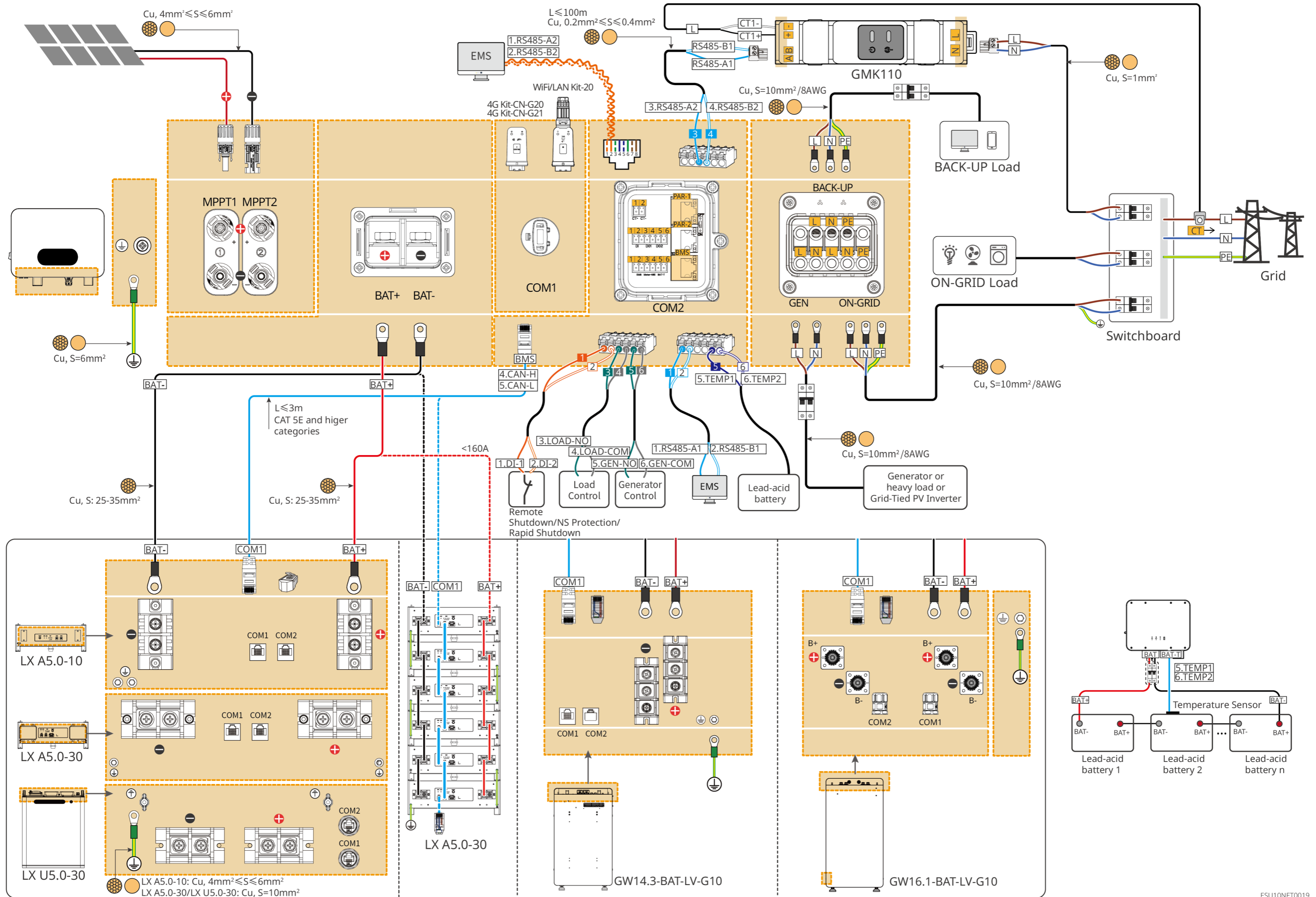
Steps	1 Installation							2 PE	3 Battery	4 COM
Battery	LX A5.0-10 	LX A5.0-30 	GW14.3-BAT-LV-G10 	LXU 5.0-30 	LX A5.0-10 	LX A5.0-30 	LXU 5.0-30 	LX A5.0-10 LX A5.0-30 LXU 5.0-30 GW14.3-BAT-LV-G10 	LX A5.0-10 LX A5.0-30 LXU 5.0-30 GW14.3-BAT-LV-G10 	LX A5.0-10/LX A5.0-30 GW14.3-BAT-LV-G10 LXU 5.0-30 
Tools	 M4 $\oplus$ 1.4N·m M6 $\oplus$ 6N·m	 2 M6 $\oplus$ 6N·m 3 M5 $\oplus$ 4N·m	 M4 $\oplus$ 1.4N·m M6 $\oplus$ 6N·m	 2 M6 $\oplus$ 6N·m 3 M4 $\oplus$ 1.4N·m	 1 M5 $\oplus$ 4N·m 2 M10 $\oplus$ 15N·m 3 M5 $\oplus$ 4N·m	 1 M5 $\oplus$ 4N·m 2 M10 $\oplus$ 15N·m 3 M5 $\oplus$ 4N·m	 1a D: 80mm φ: 8mm 1b D: 65mm φ: 13mm 2a ST5.5 $\oplus$ 10N·m 2b M10 $\oplus$ 10N·m 3 M5 $\oplus$ 2N·m	 1 M5 $\oplus$ 4N·m 2 M5 $\oplus$ 4N·m 3 M5 $\oplus$ 4N·m	 1 M6 $\oplus$ 6N·m 2 M8 $\oplus$ 12N·m 3 M10 $\oplus$ 15N·m	

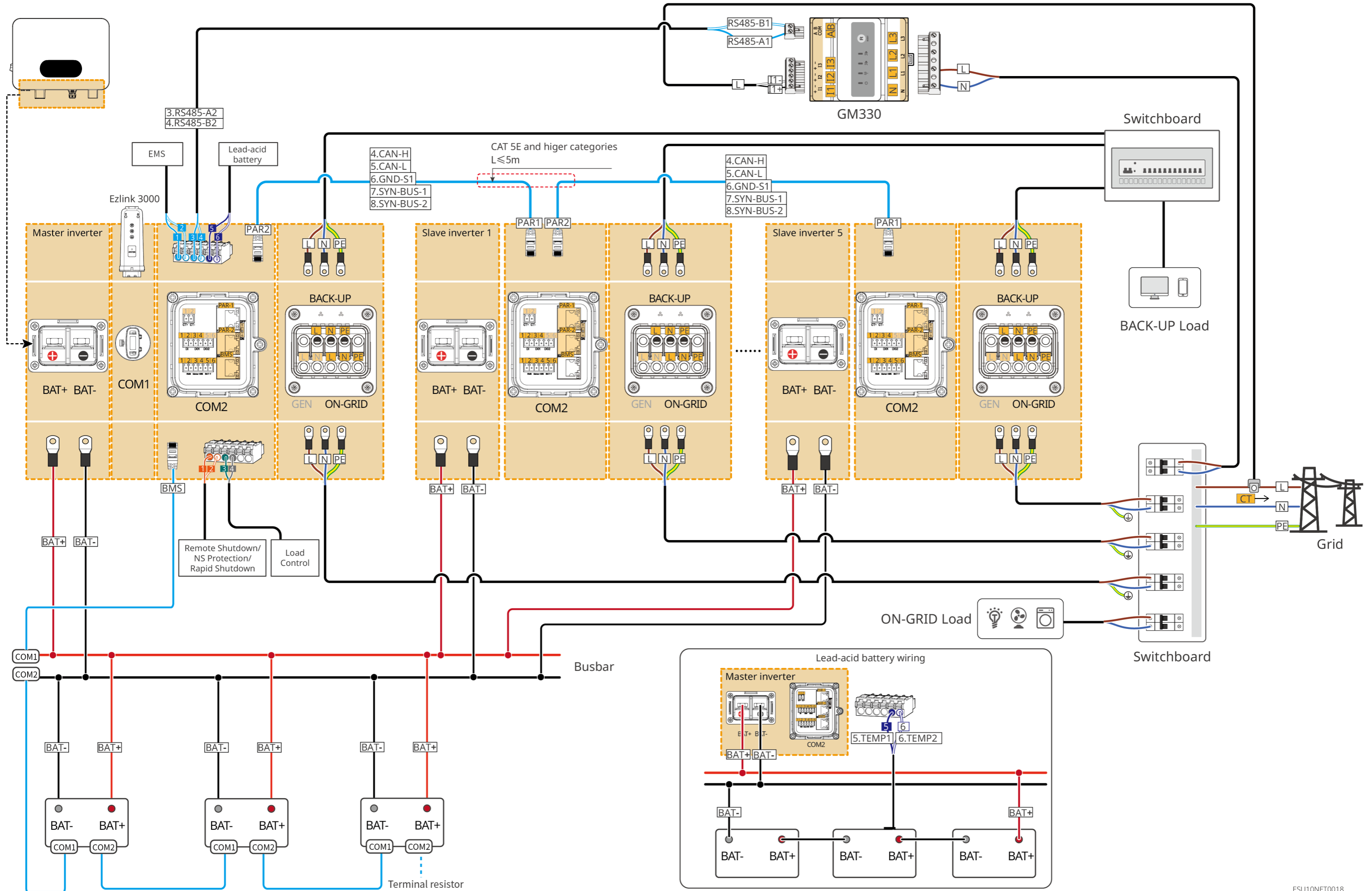
Steps	1 Installation	2 Cable Connections	3 Power	4 Commissioning
Smart meter	GMK110  GM330 	GMK110  GM330 	 AC breaker	  SolarGo APP  or SEMS+ App  SEMS+ WEB 

Steps	1 Installation		2 PE	3 Battery	4 COM
Battery GM16.1-80T/CP-002					
Tools					

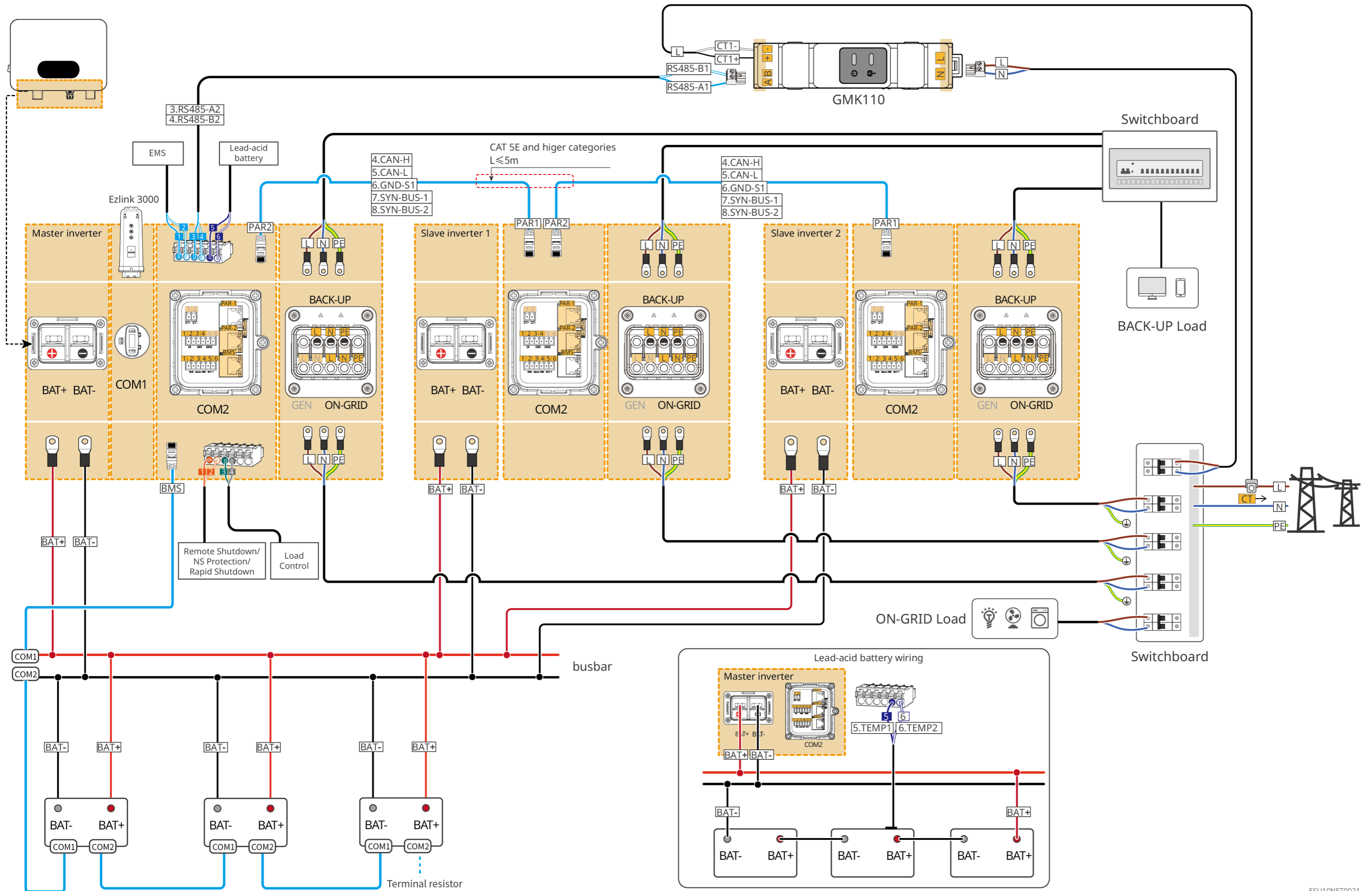
Steps	1 Installation		2 Cable Connections		3 Power	4 Commissioning
Smart meter	GMK110 	GM330 	GMK110 	GM330 	AC breaker 	→ SolarGo APP → SEMS+ App or SEMS+ WEB

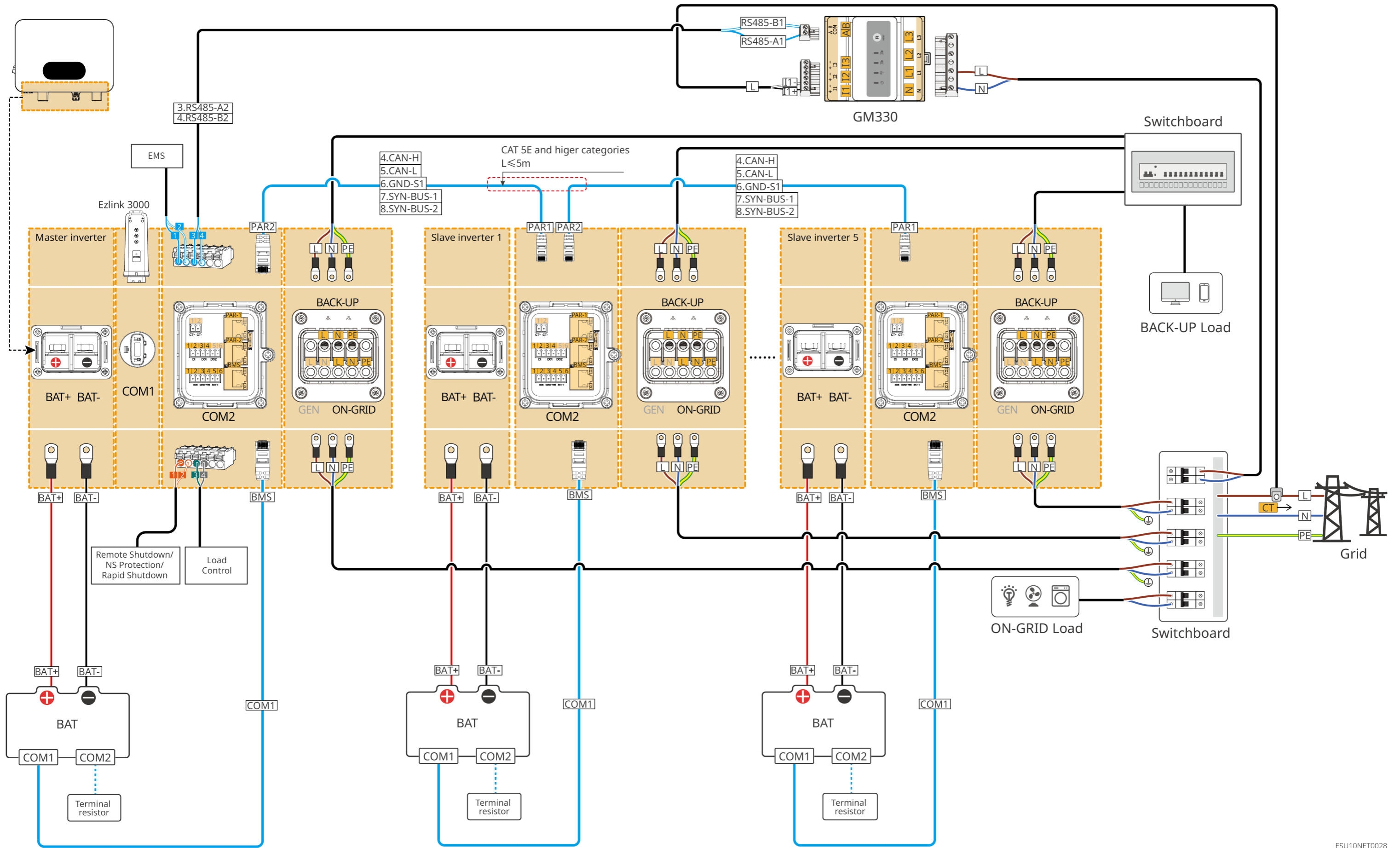


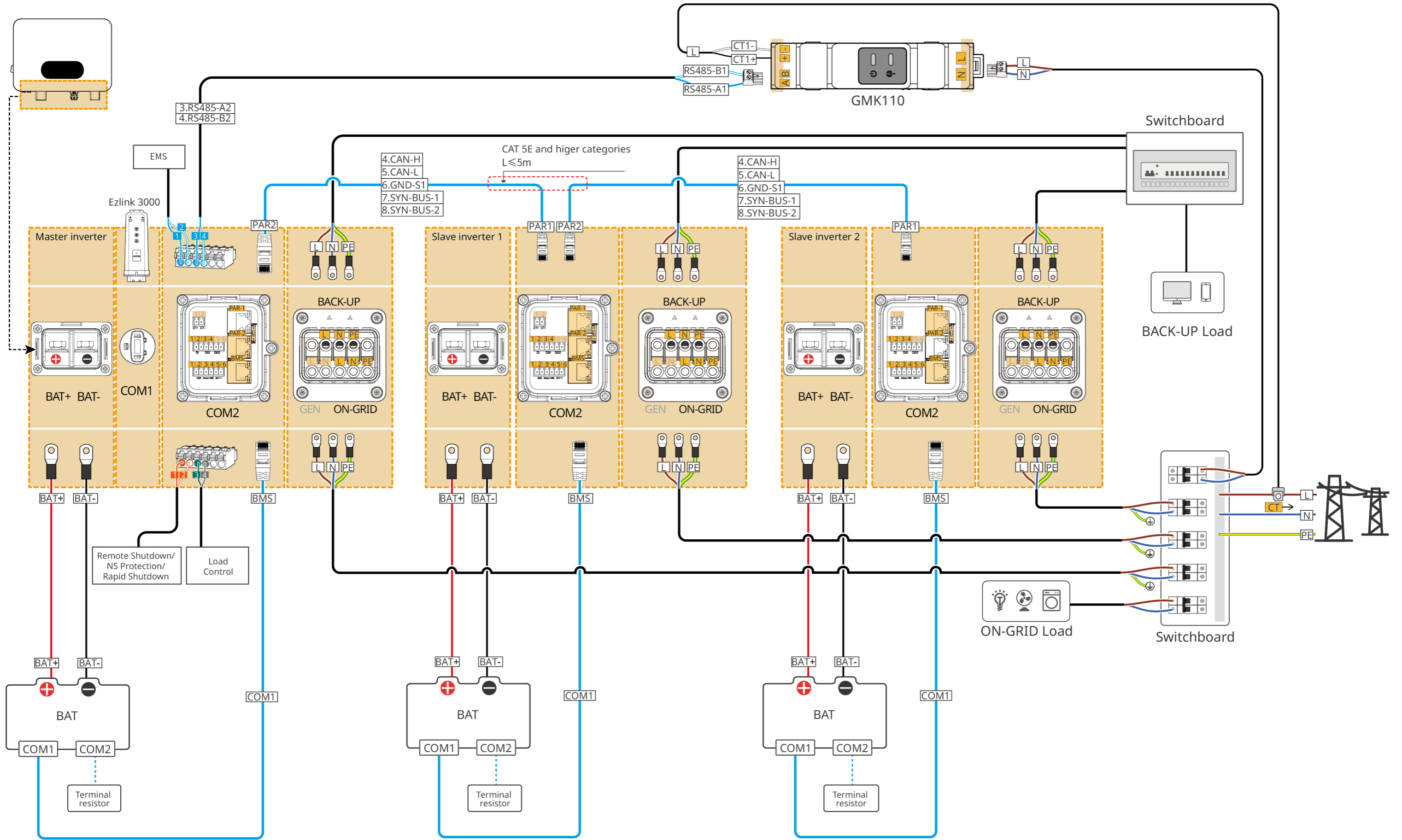




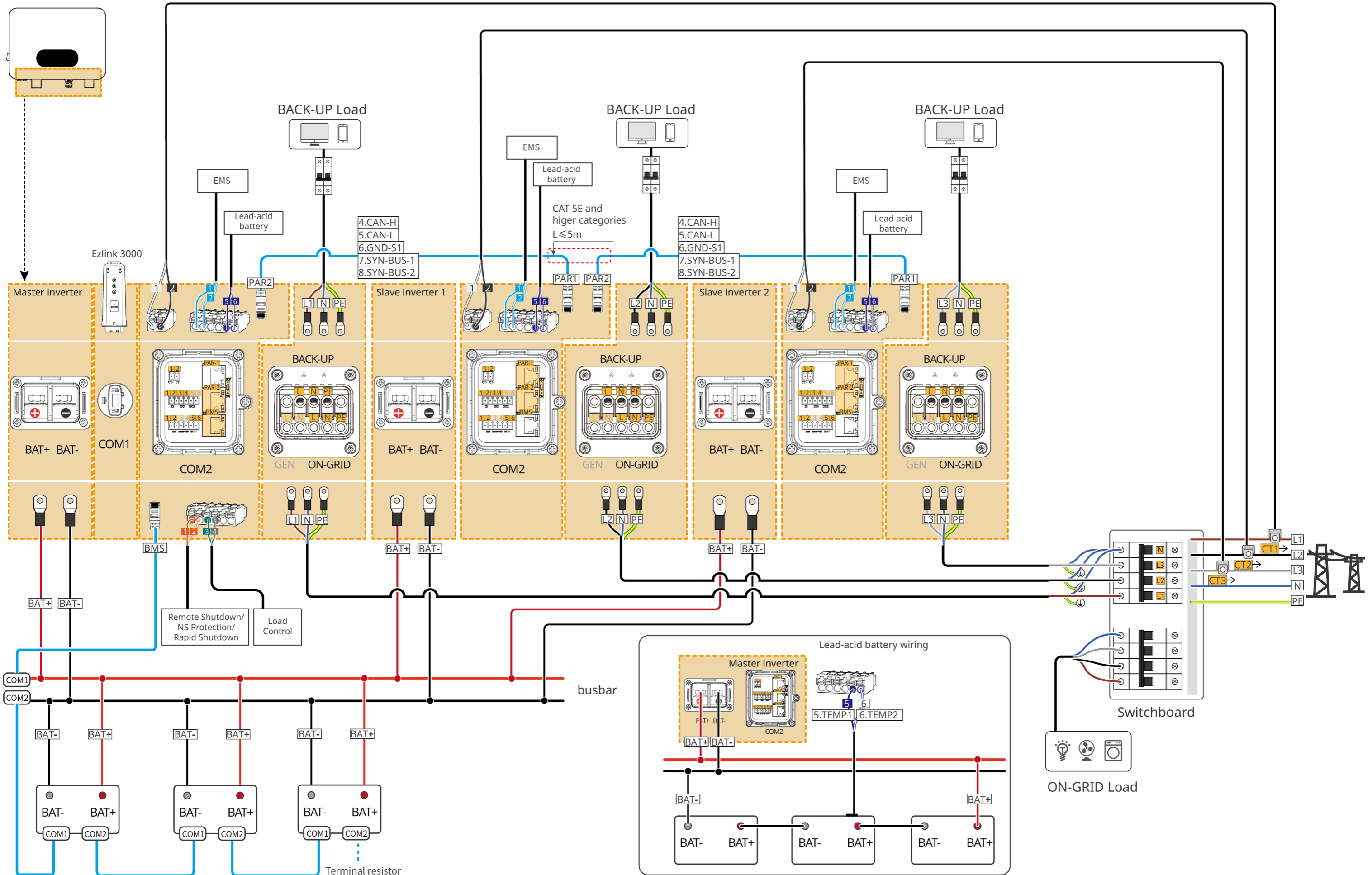
Battery Busbar Connection Mode: ES Uniq 3.0-6.0kW (parallel connected) + GMK110 + Ezlink3000



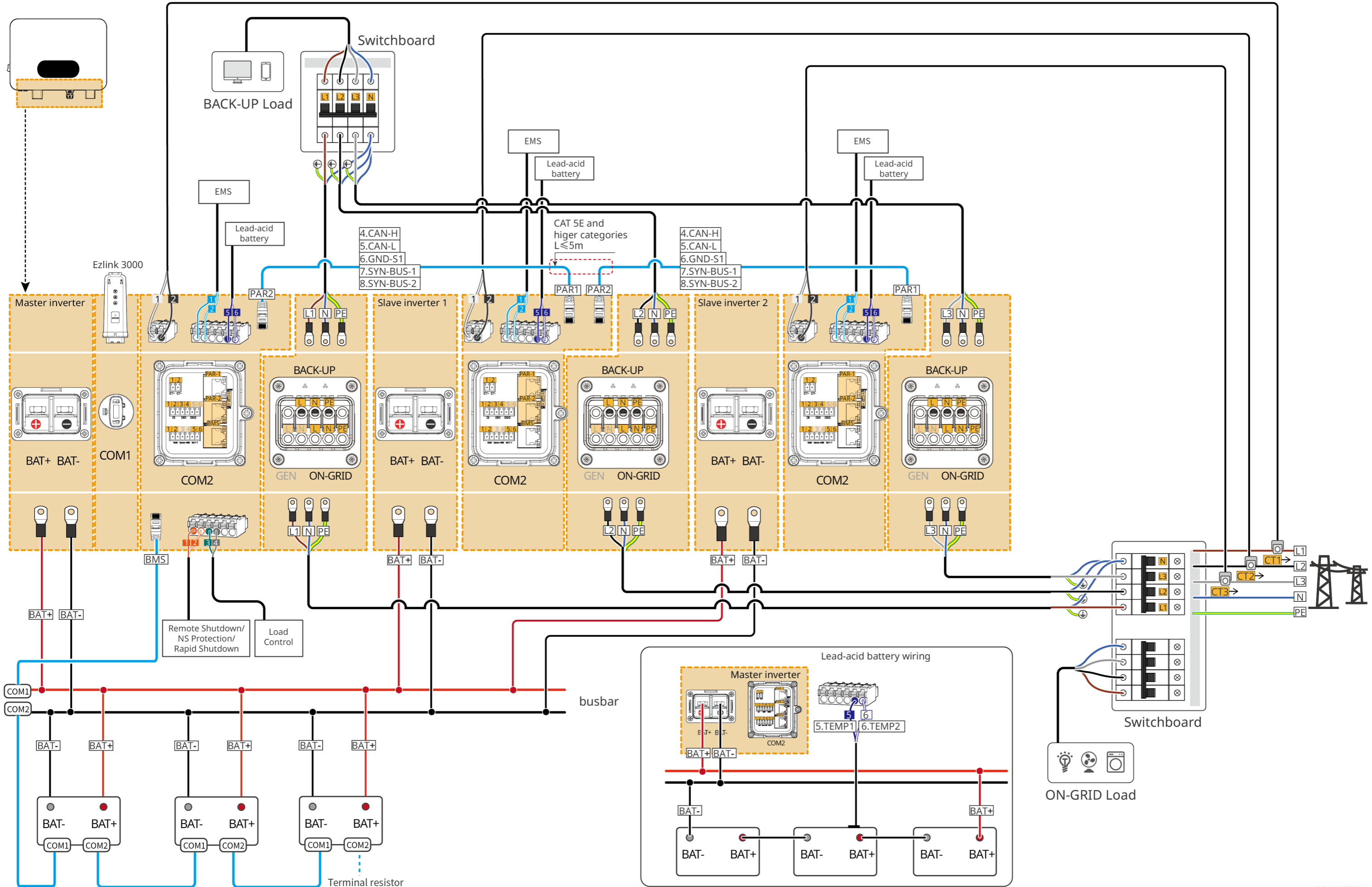




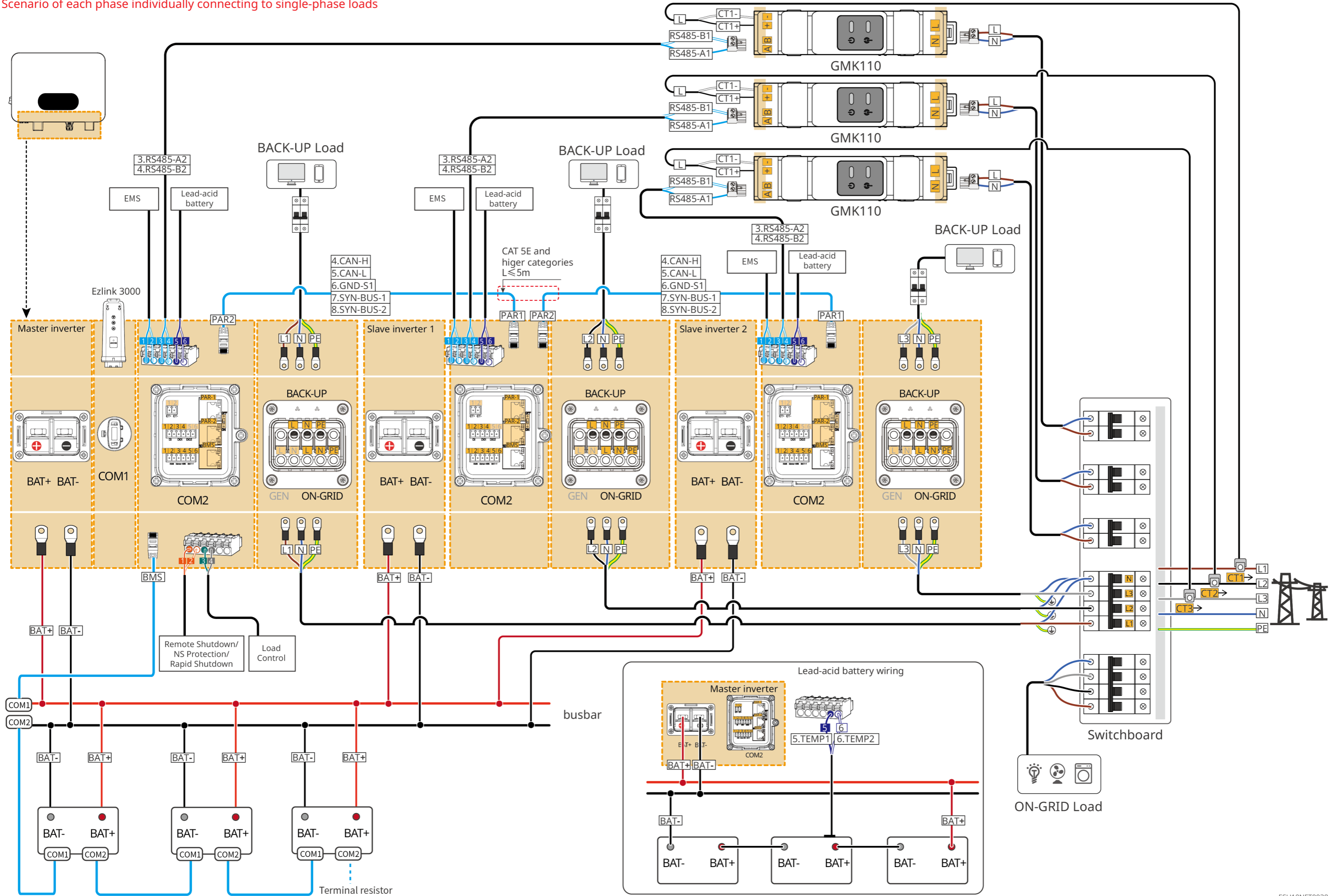
Three-Phase System: ES Uniq 3.0-6.0kW (parallel connected) + Built-in smart meter + Ezlink3000  
 Scenario of each phase individually connecting to single-phase loads



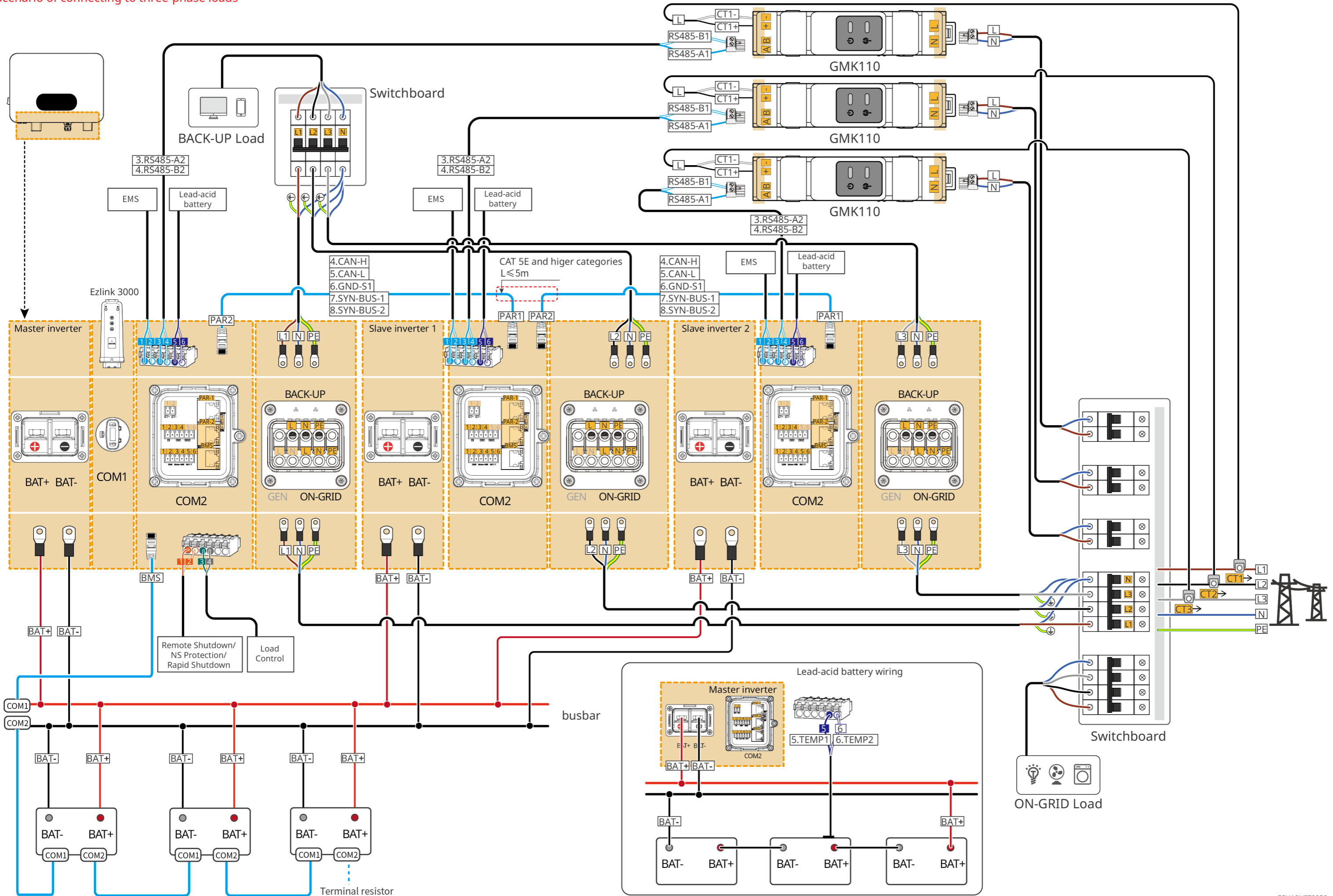
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 Scenario of connecting to three-phase loads



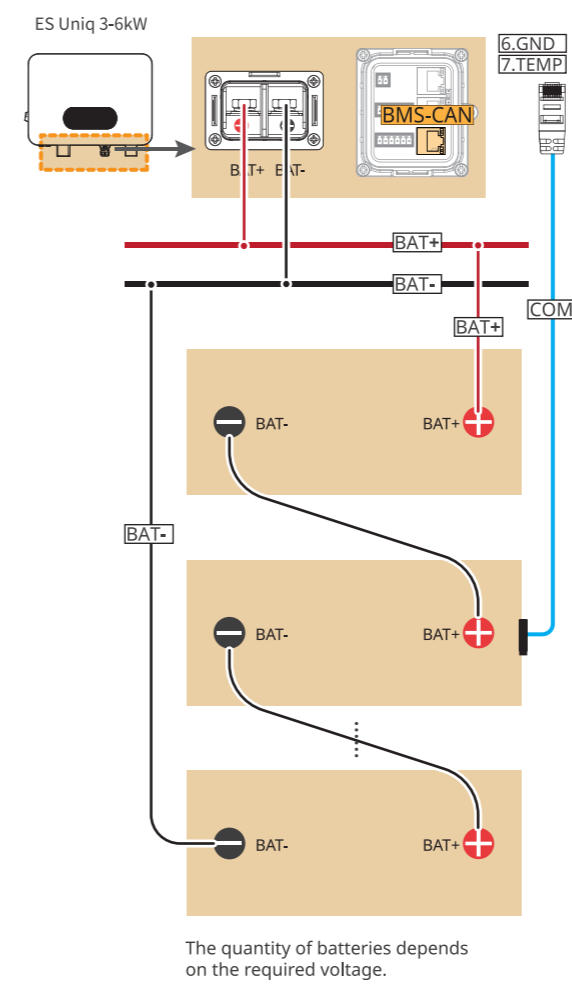
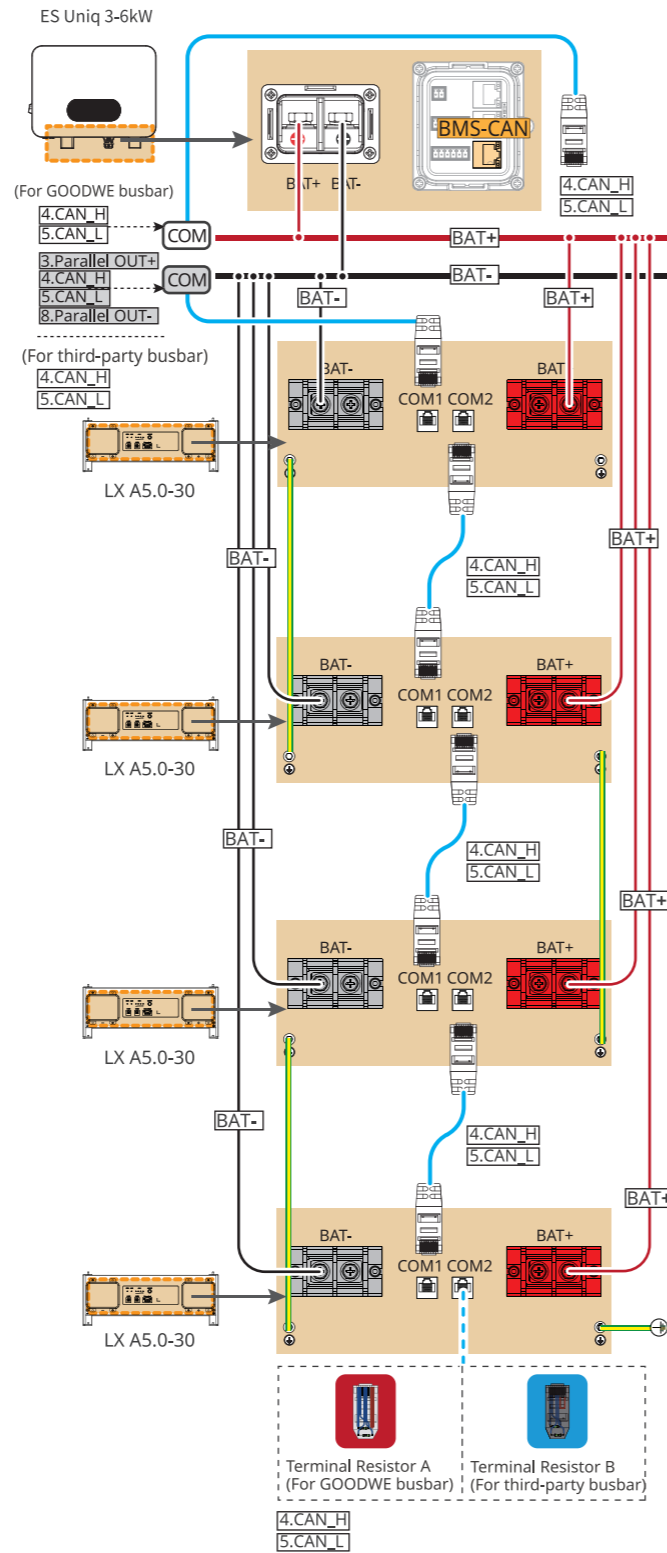
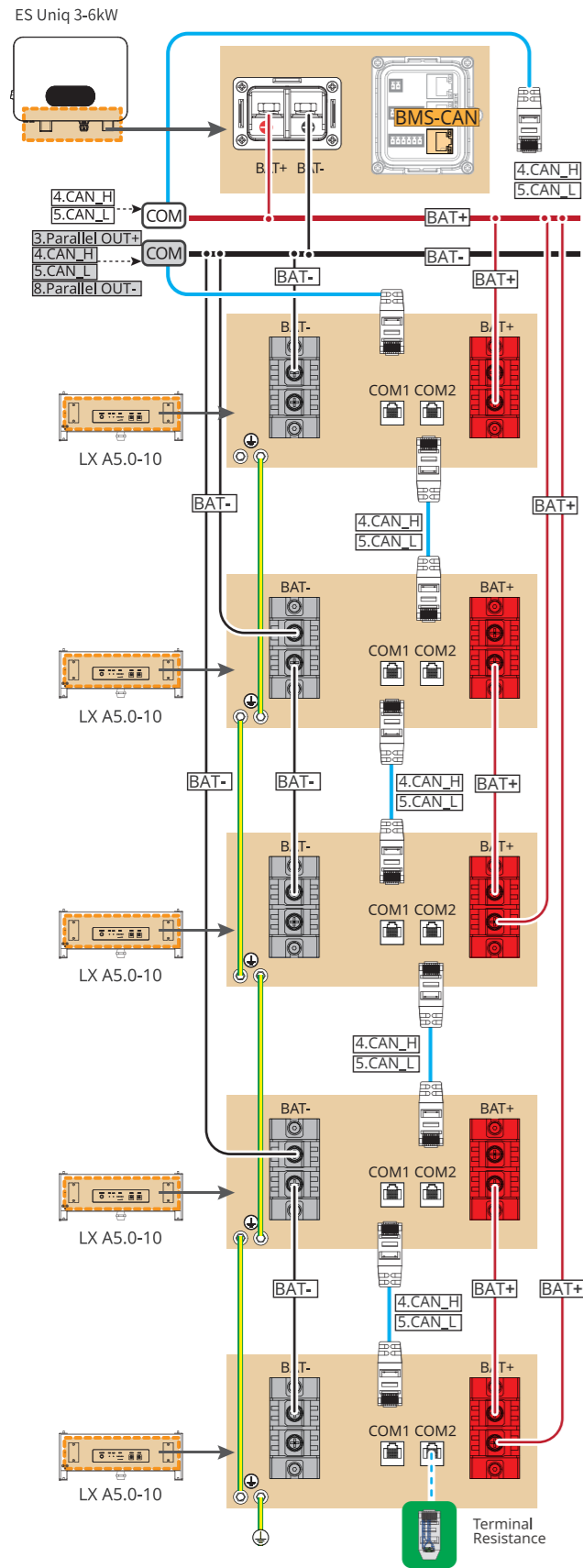
Three-Phase System: ES Uniq 3.0-6.0kW (parallel connected) + GMK110 + Ezlink3000  
 Scenario of each phase individually connecting to single-phase loads

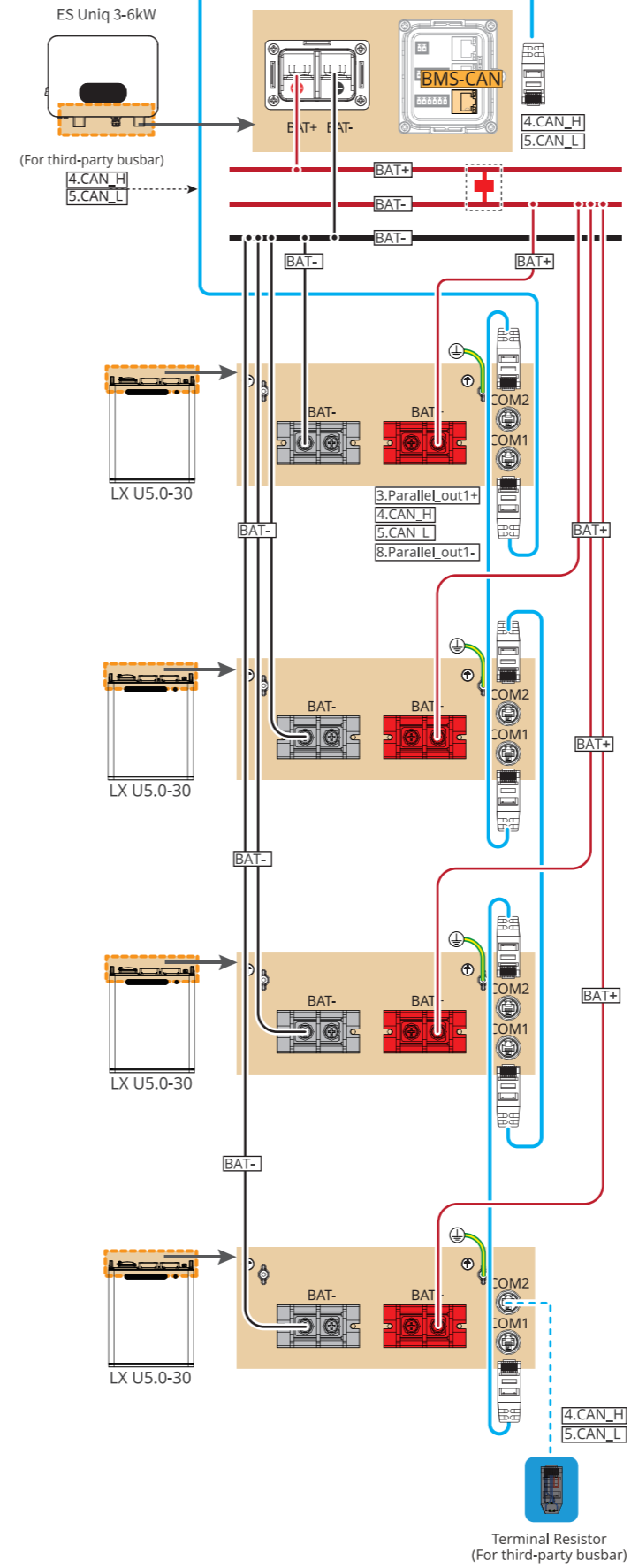
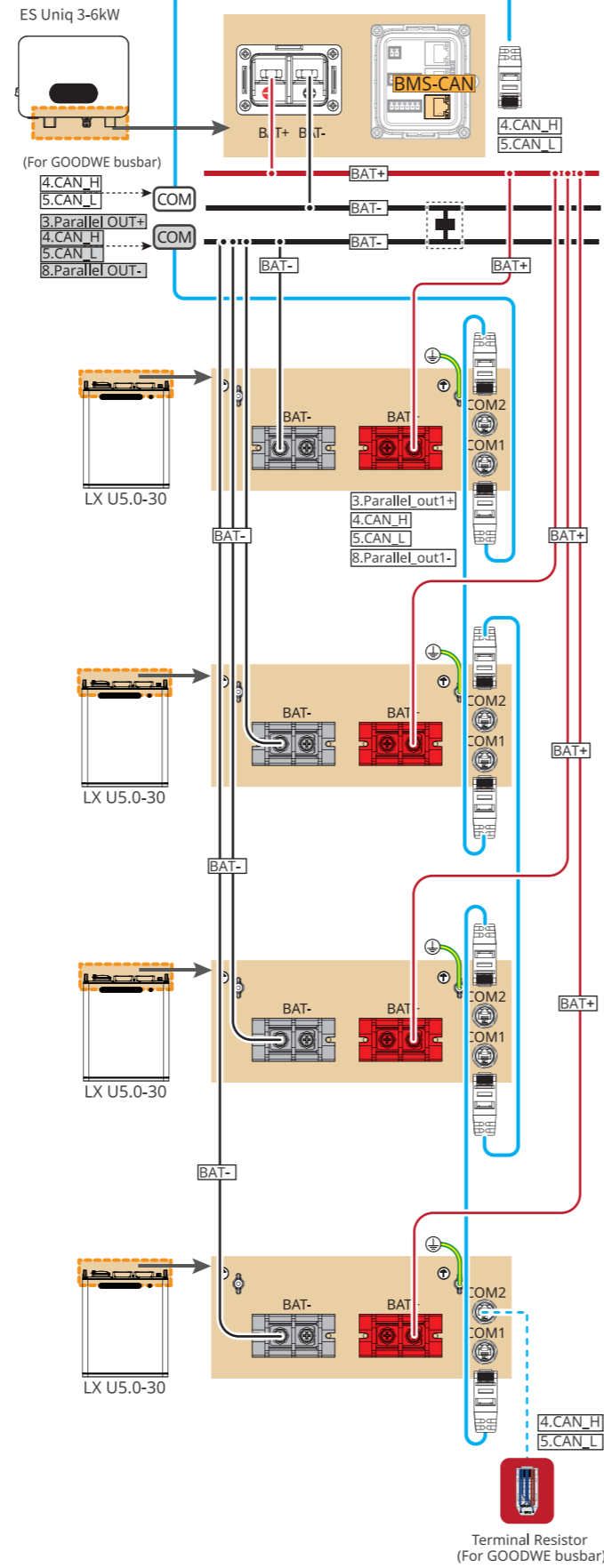
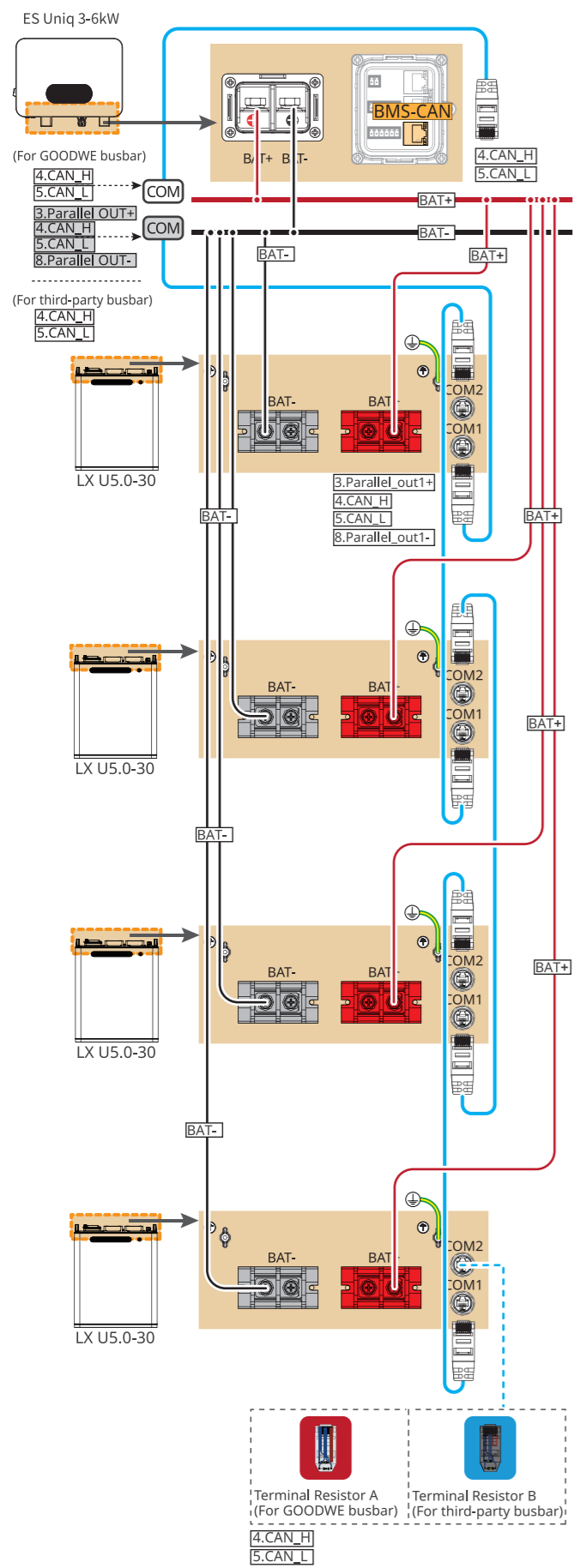


Three-Phase System: ES Uniq 3.0-6.0kW (parallel connected) + GMK110 + Ezlink3000  
 Scenario of connecting to three-phase loads



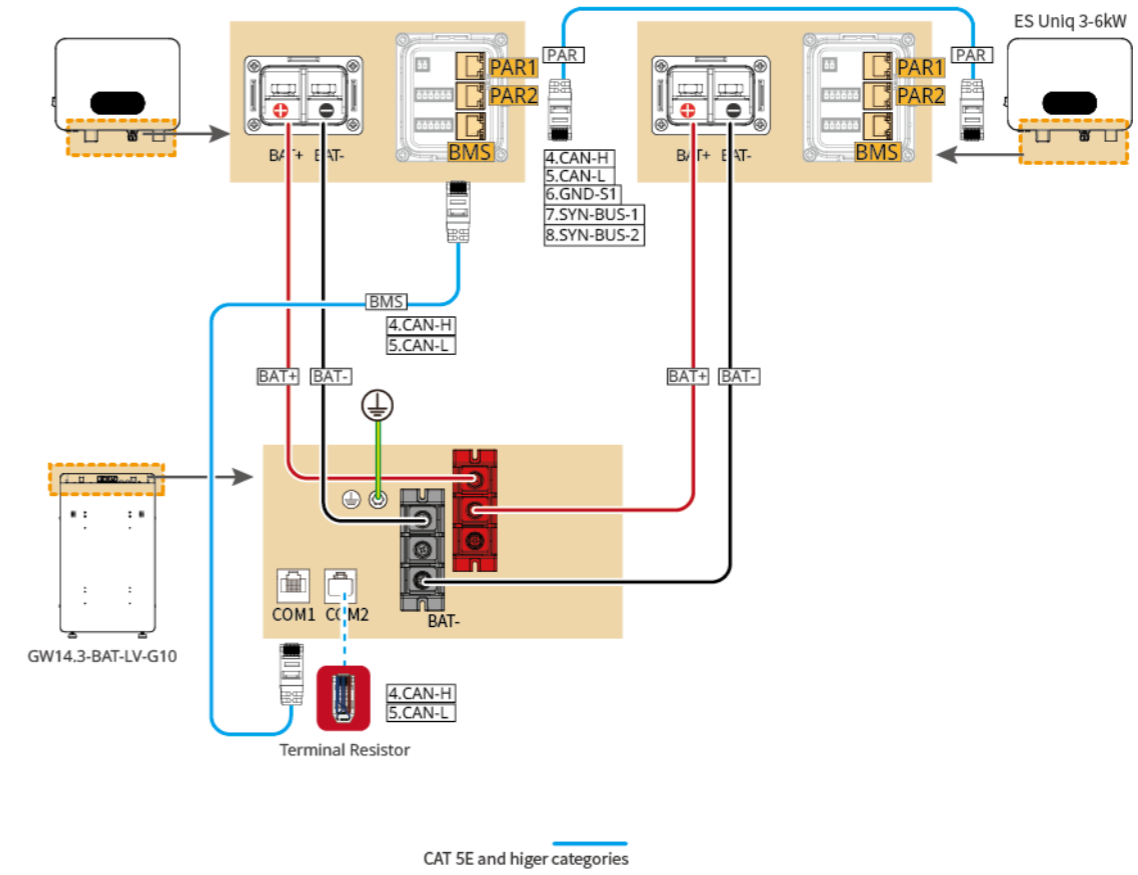
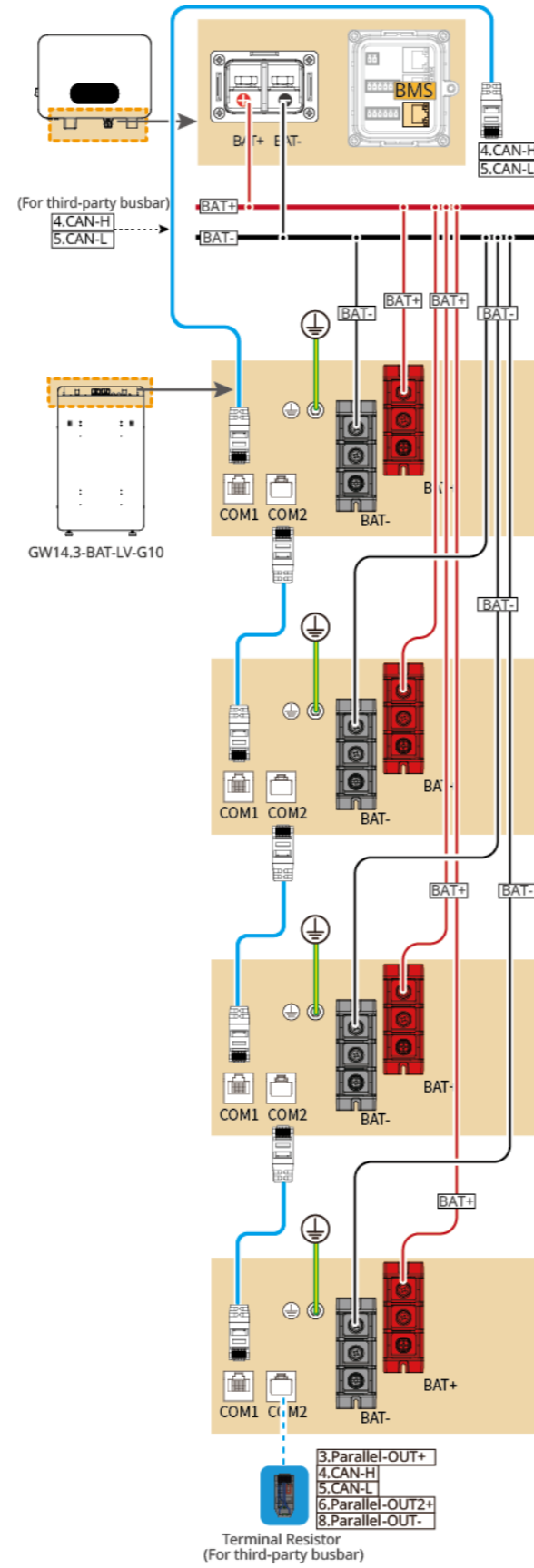
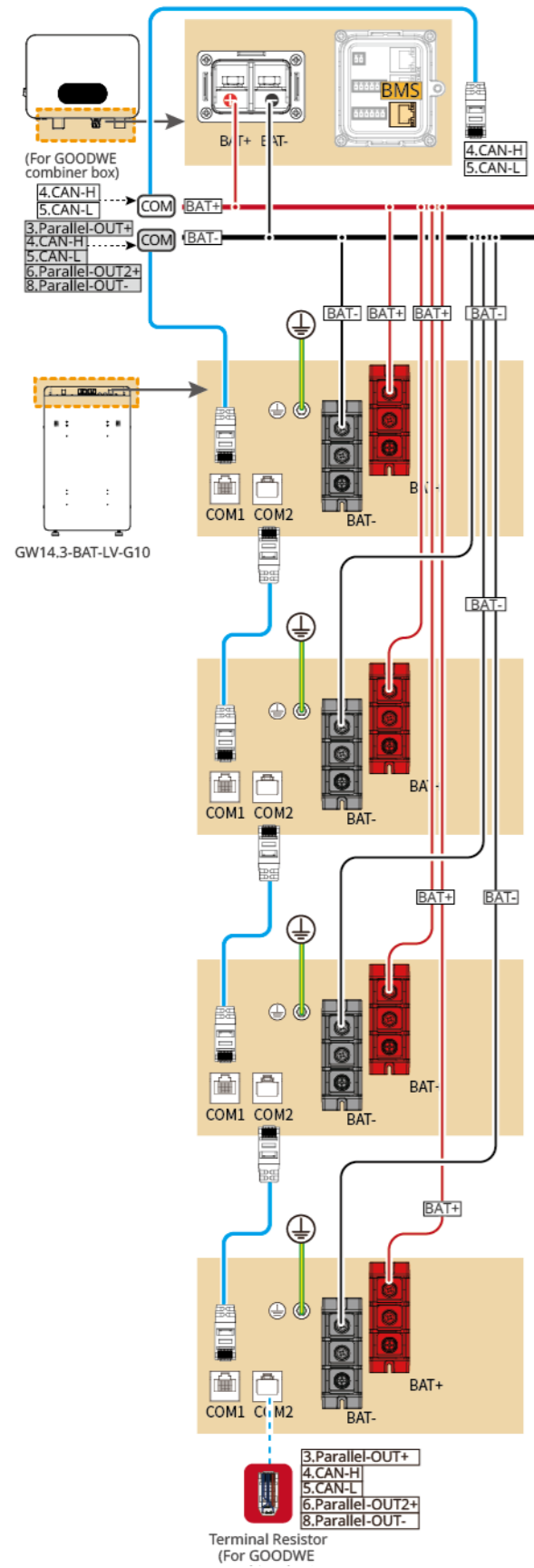
# Battery System Wiring Diagram



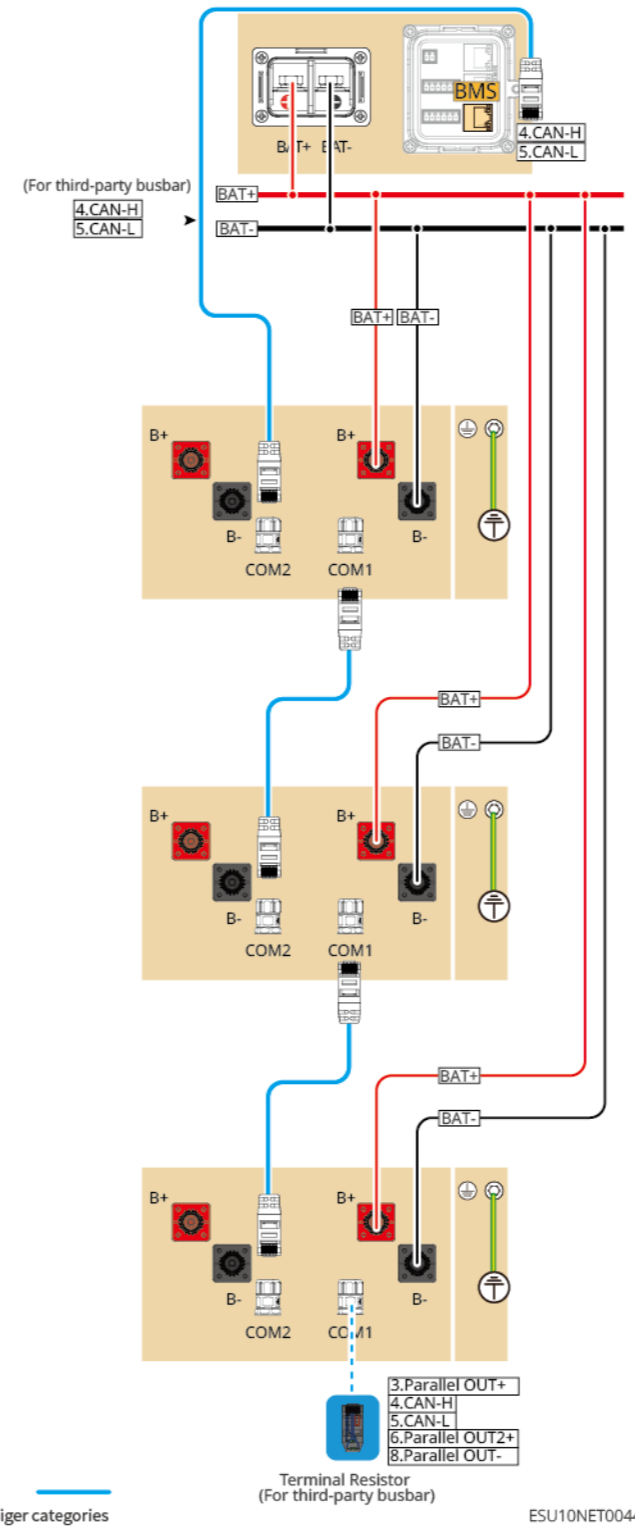
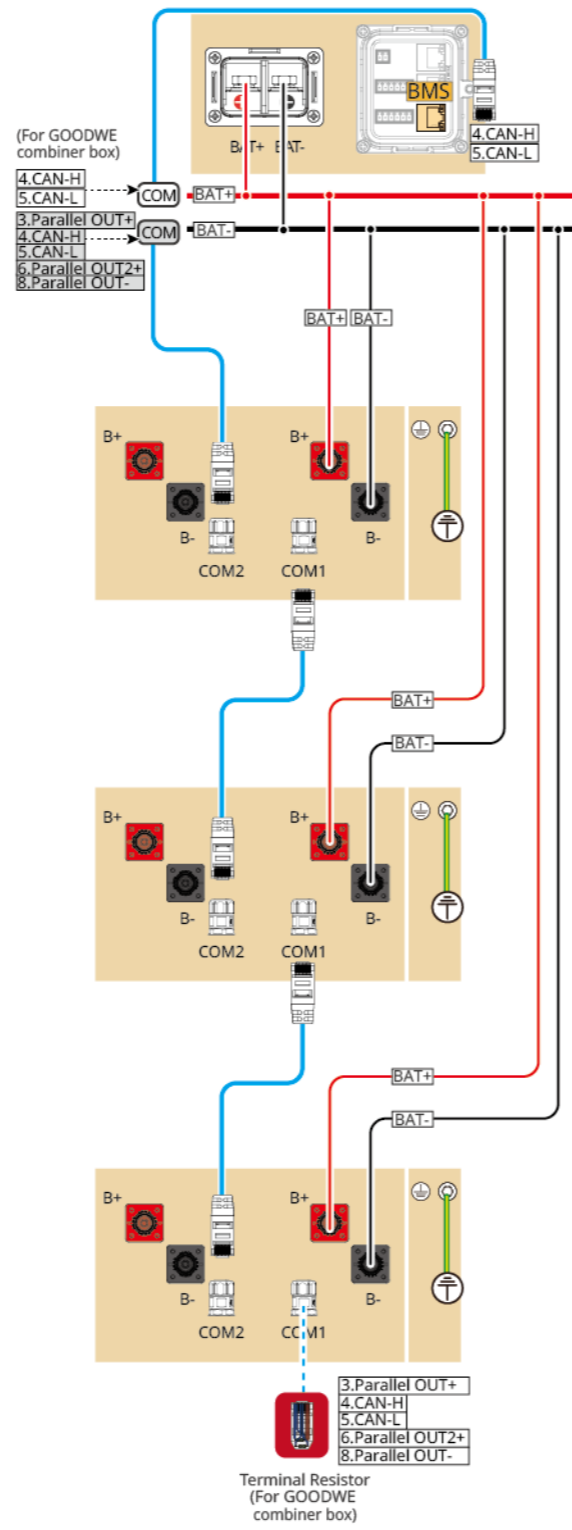
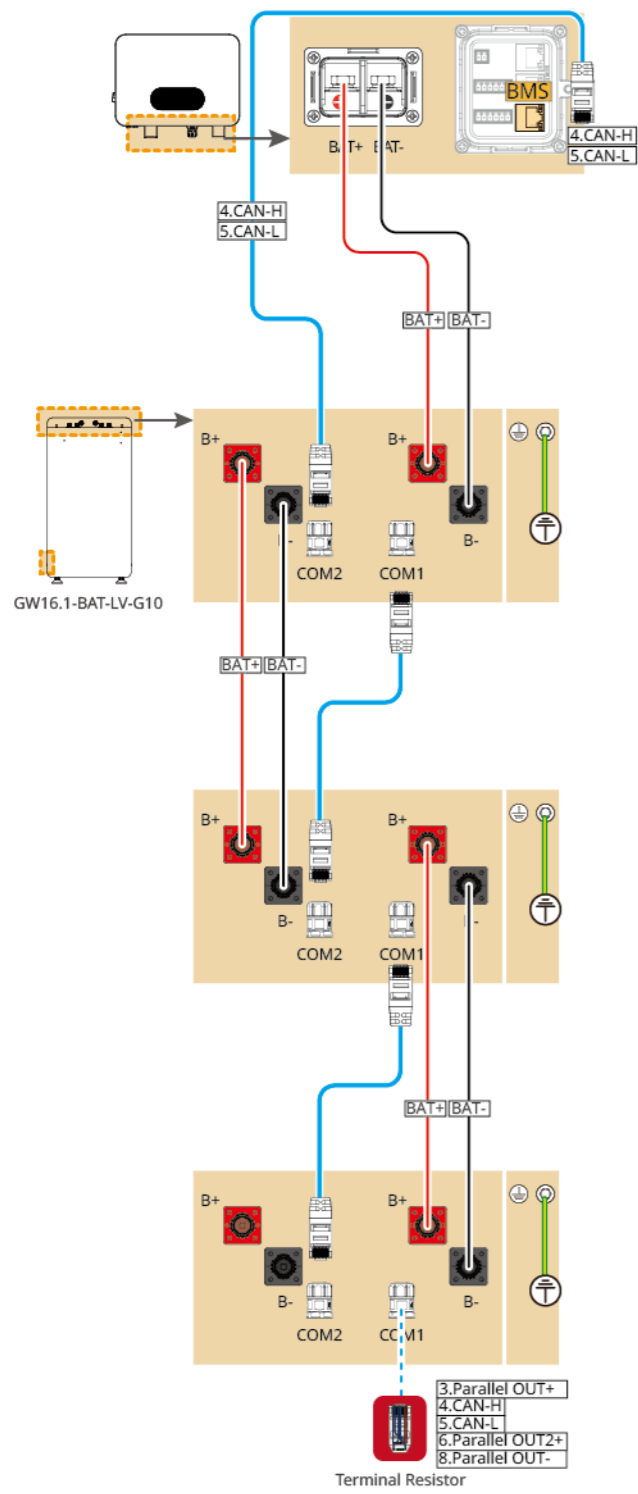


— CAT 5E and higher categories

ESU10NET0023



ESU10NET0026



## 05 Equipment Commissioning



SolarGo app



SEMS Portal app

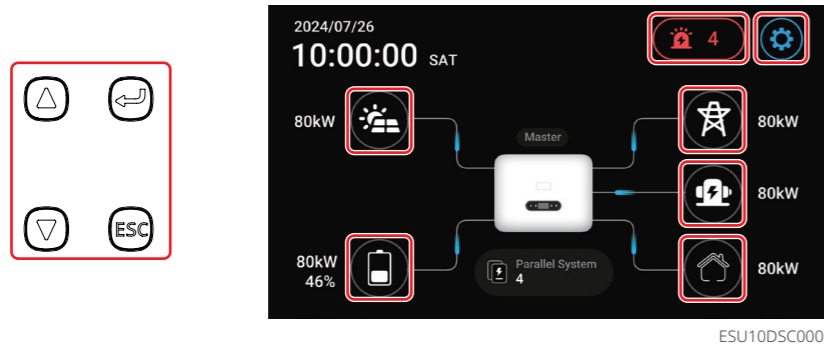
In parallel scenarios, the software version of SolarGo app should be 5.4.0 or above. Follow the prompts to connect the device.

### Quick Settings

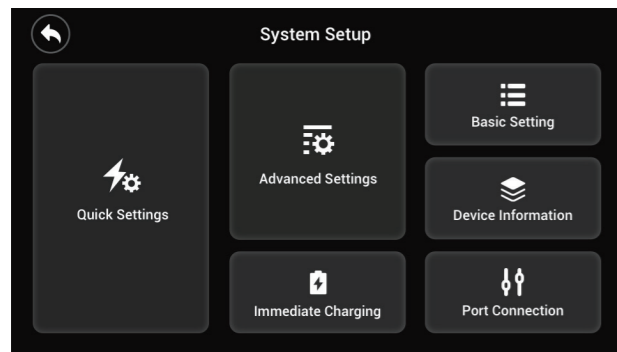
Method I: Tap **Home** > **Settings** > **Quick Settings** to complete quick settings step by step. Installer password: goodwe2010

Method II: Using LCD screen to finish quick settings. Click on the screen or use buttons to operate.

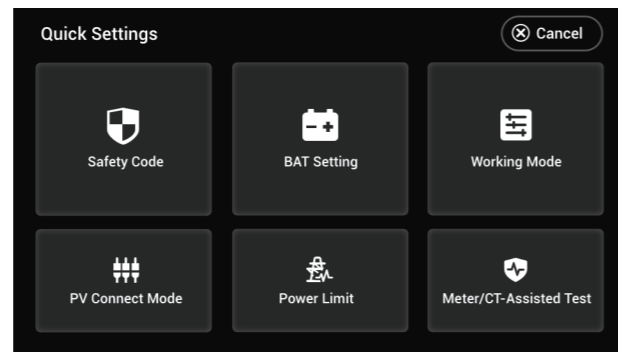
> **Quick Setting**, follow the prompts to complete inverter settings. Advanced function page initial password:1111



ESU10DSC0006



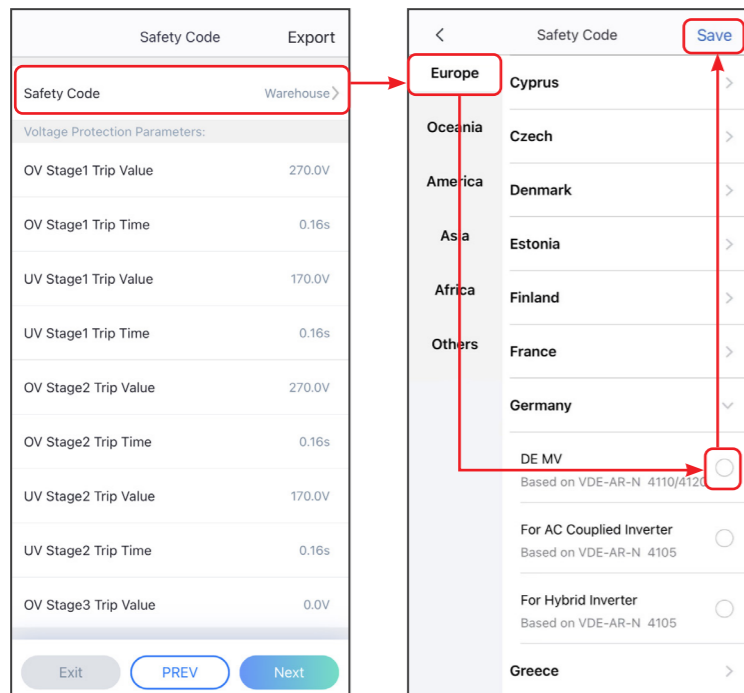
ESU10DN0007



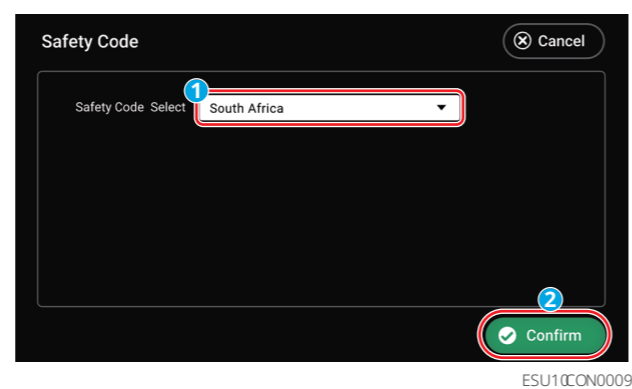
ESU10DN0008

### Setting Safety Code

#### Setting safety code via SolarGo APP

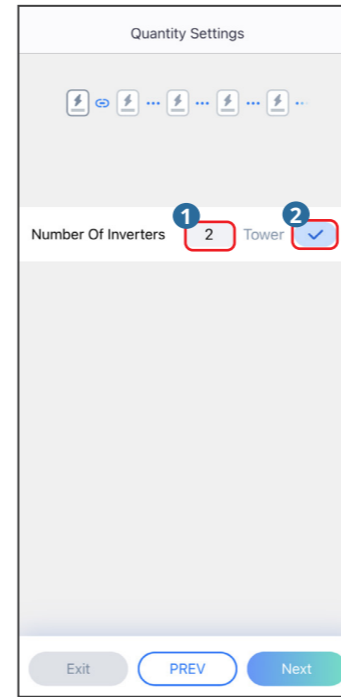


#### Setting safety code via LCD screen

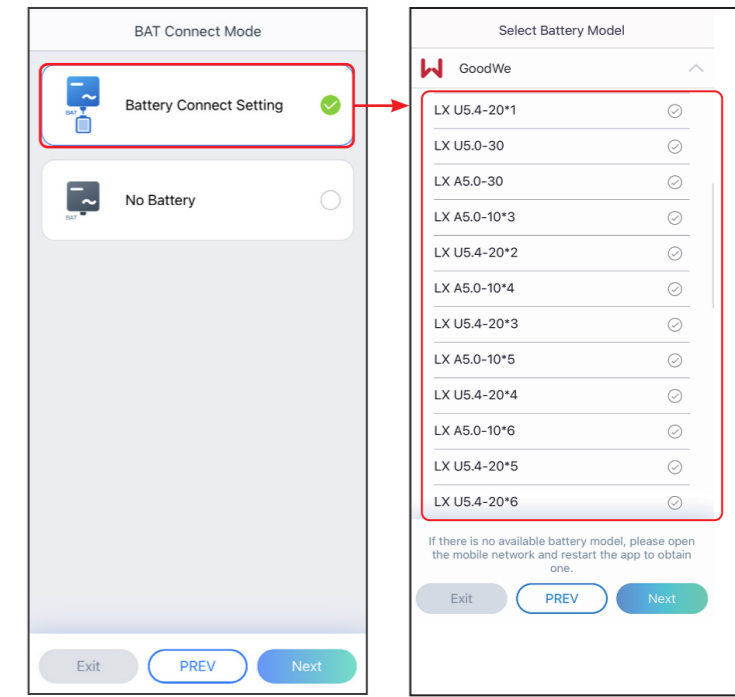


ESU10CN0009

### Setting Inverter Quantity (Only For Parallel Connections, APP only)

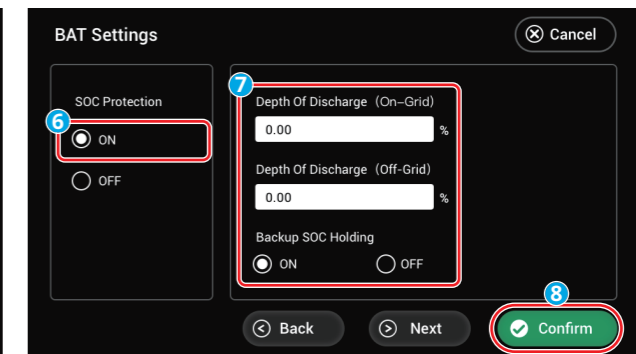
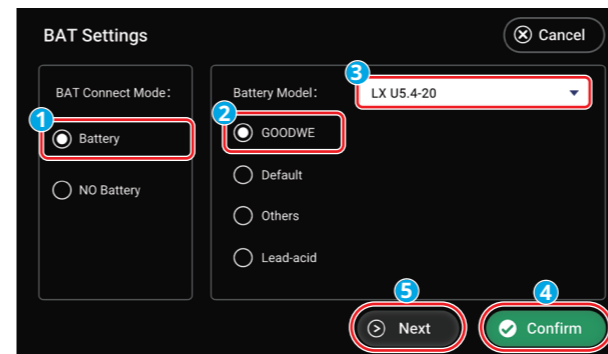


### Setting the BAT Connect Mode via SolarGo APP



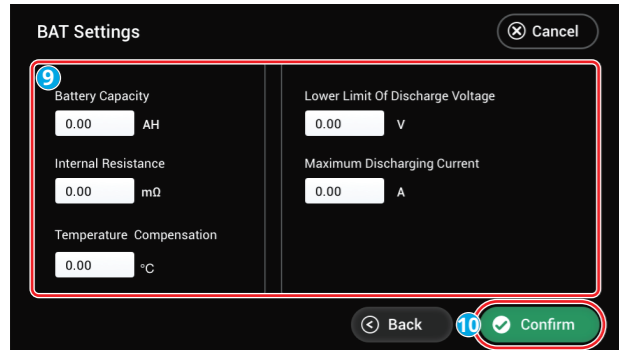
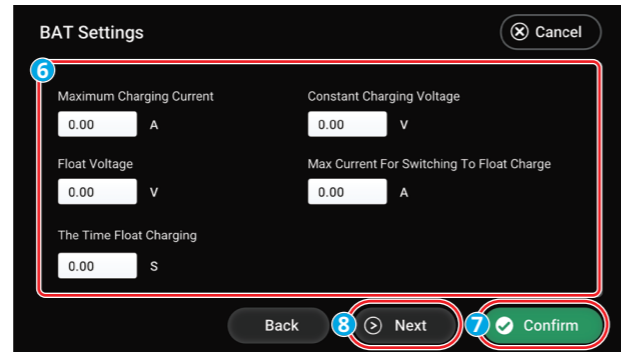
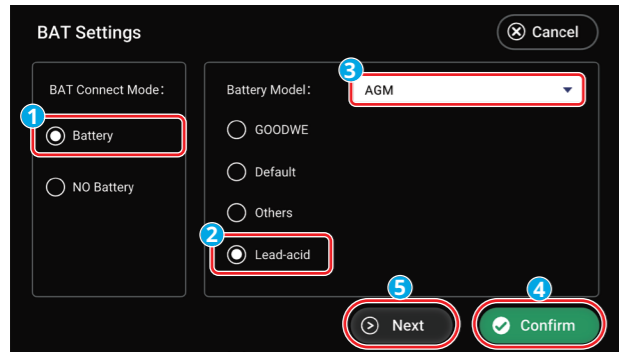
### Setting BAT parameter via LCD screen

#### Lithium battery



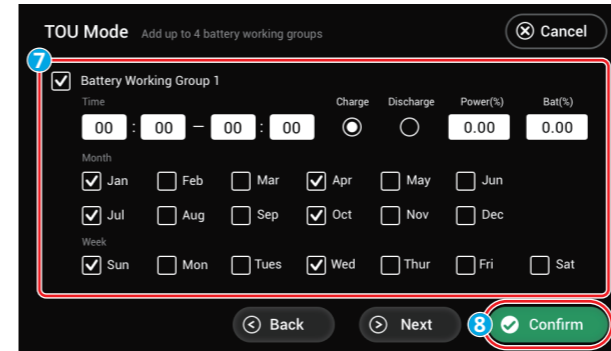
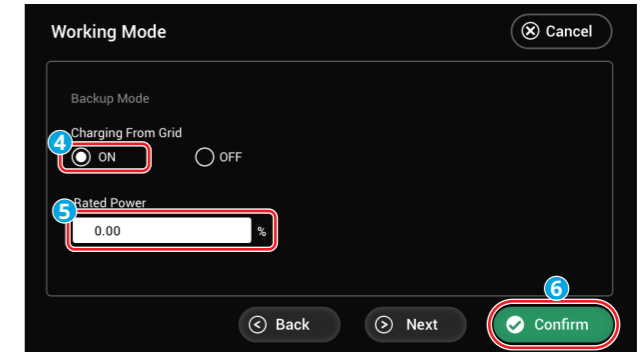
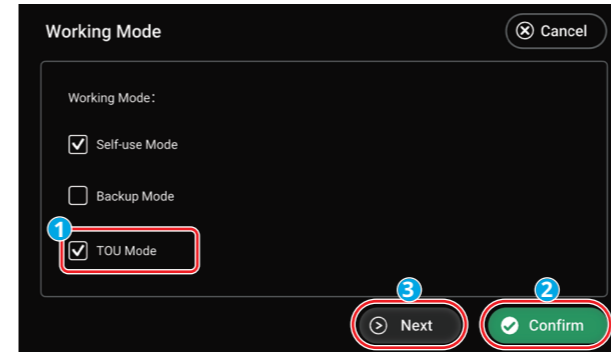
ESU10CN0010

Lead-acid battery



ESU10CN0011

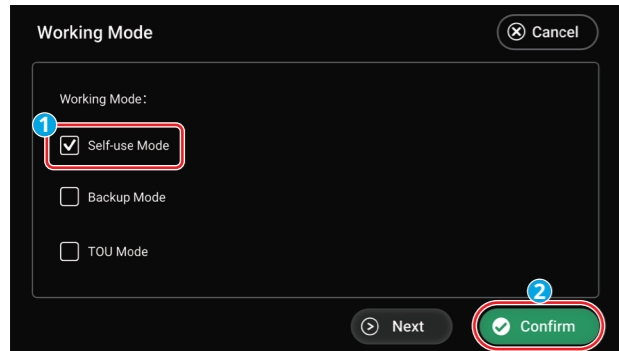
TOU Mode



ESU10CN0014

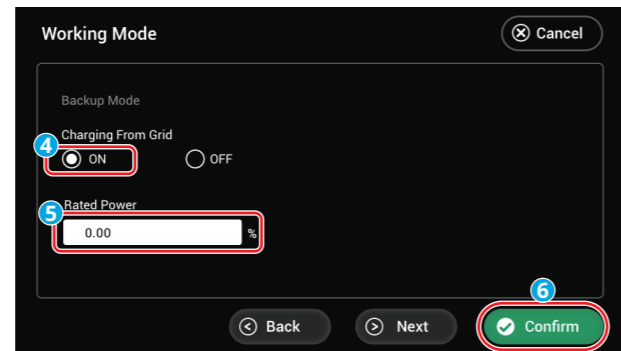
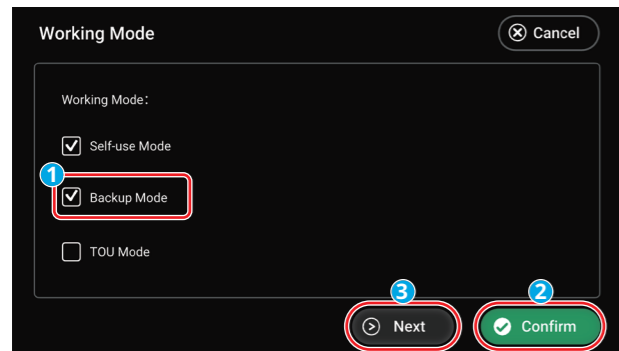
Setting working mode via LCD screen

Self-use Mode



ESU10CN0012

Back-up Mode



ESU10CN0018

## Setting working mode via SolarGo APP

**Self-use Mode**  
This model is suitable for high electricity prices, solar power grid electricity subsidies less or no subsidies, solar power is given priority to self-use, excess electricity to charge the battery, at night when there is no solar power, the use of batteries to power the load, improve the solar power system self-use rate, save electricity.

**Peakshaving**  
Start Time: 00:00  
End Time: 00:00  
Import Power Limit: 0.00  
Reserved SOC For Peakshaving: 0

**Working mode**  
Self-use Mode  
Peakshaving

**Self-use Mode**  
Depth Of Discharge (On-Grid): 60  
Depth Of Discharge (Off-grid): 60  
Advanced Settings

**Advanced Settings**  
Back-up Mode  
Economic Mode  
Smart Charging

**Depth Of Discharge (On-Grid):**  
The maximum depth of discharge of the battery when the system is working on-grid.

**Depth Of Discharge (Off-Grid):**  
The maximum depth of discharge of the battery when the system is working off-grid.

**BACK-UP Mode**  
Charging From Grid: On  
Rated Power: 0.0  
Grid charge: Open  
Backup SOC: 60%

**TOU Mode**  
Battery Working Mode Group1: 00:00-07:00  
Economic Mode  
PV: Charge battery in priority  
Battery Working Mode Group2: 08:00-16:00  
Economic Mode  
PV: Export to grid in priority

**Smart Charging Mode**  
Smart Charging Month  
Peak Limiting Power: 0.0  
Switch To Charge: On  
Charging Time: 00:00  
Switch to charge: Open (PV > Peak limiting power)

## Setting the Advanced Parameters

Tap **Home > Settings > Advanced Settings** to set the following functions.

### Setting DRED/Remote Shutdown/RCR

**Advanced Settings**  
DRED/Remote Shutdown/RCR  
Backup N And PE Relay Switch  
Battery Ports Busbar Connection  
Power Limit  
AFCI Test  
Battery Function Settings  
Safety Parameter

This function is disabled by default. To use the Remote Shutdown function, turn on this switch.

### Setting Battery Functions

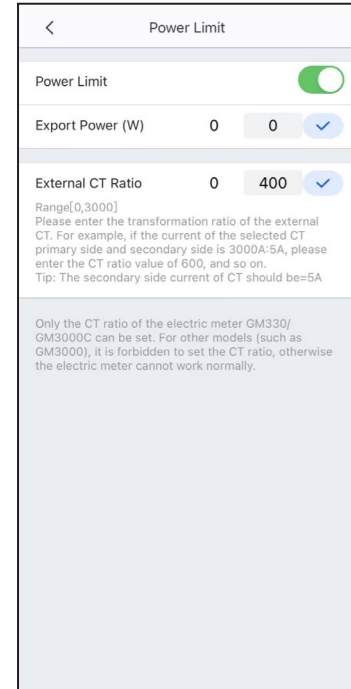
**Advanced Settings**  
DRED/Remote Shutdown/RCR  
Backup N And PE Relay Switch  
Battery Ports Busbar Connection  
Power Limit  
AFCI Test  
Battery Function Settings  
Safety Parameter

**Battery Function**  
SOC Protection  
Depth Of Discharge (On-Grid): 90  
Depth Of Discharge (Off-grid): 90  
Backup SOC Holding  
Immediate Charging: Charge Complete  
SOC For Stopping Charging: 65

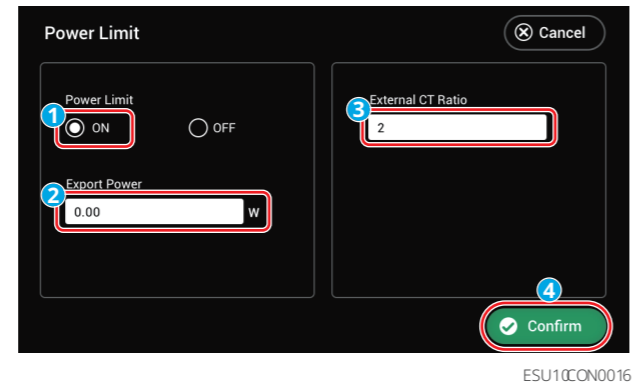
Through battery function settings, you can set parameters for battery connected in the system.

## Setting Power Limit

Tap **Home > Settings > Advanced Settings** to set the following functions.



## Setting power limit via LCD screen

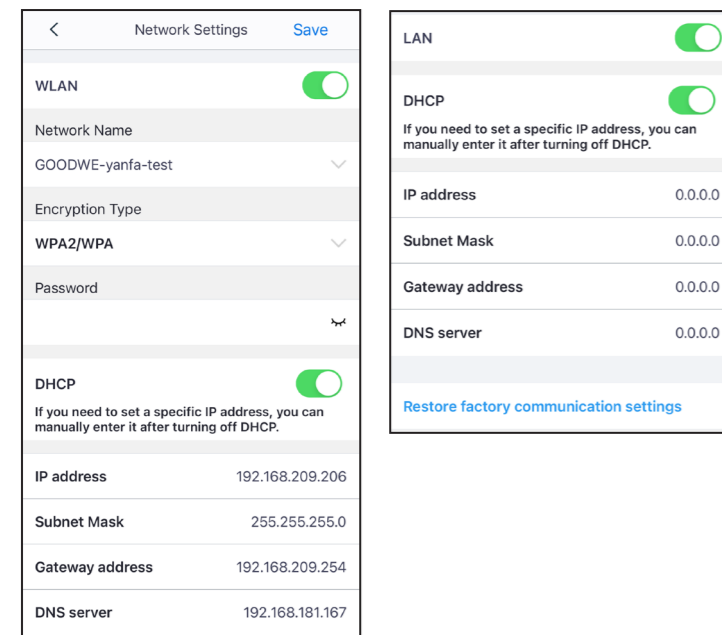


ESU10CN0016

## Configuring the Network

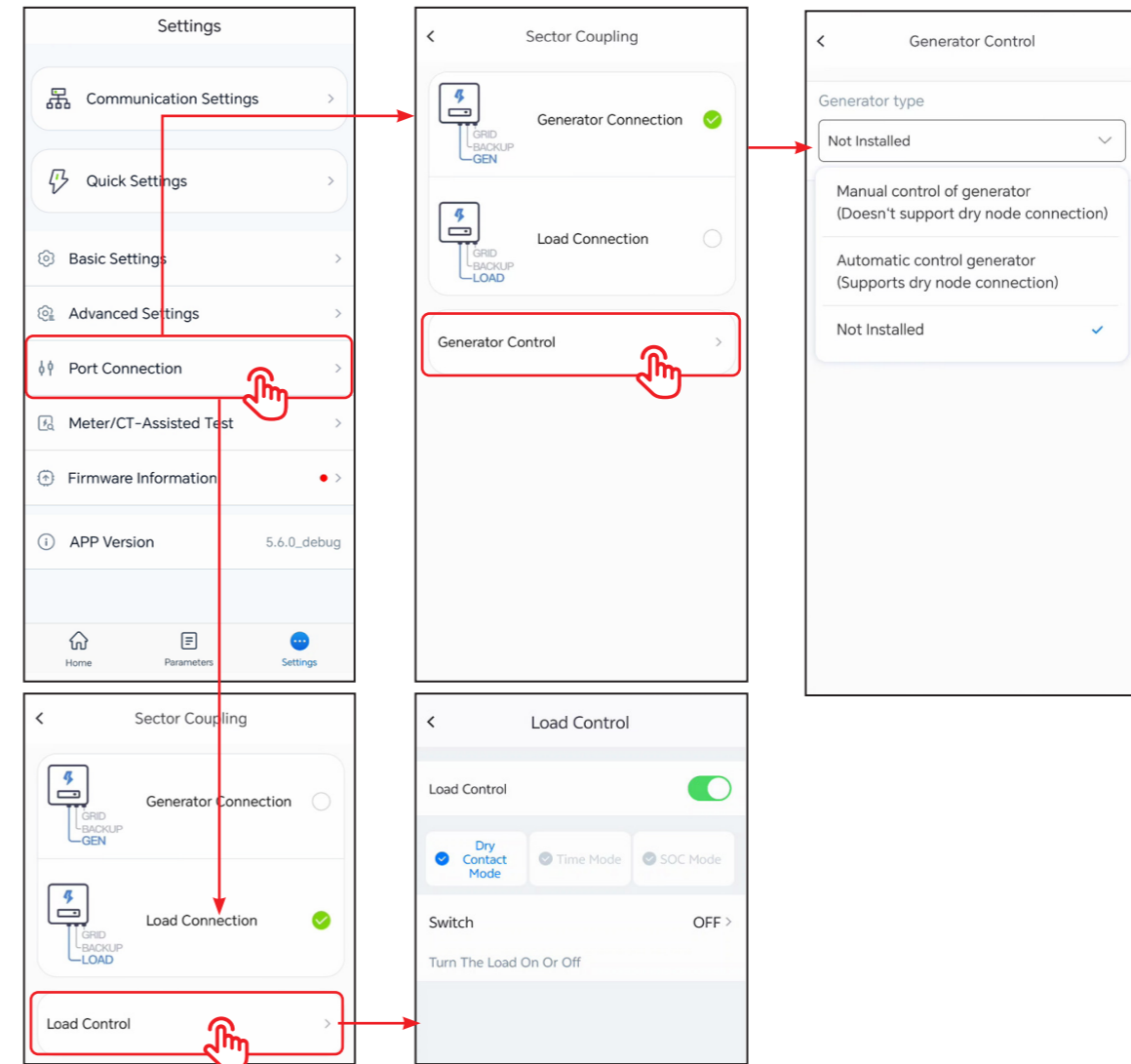
Tap **Home > Settings > Communication Setting** to set network parameters.

### WiFi/LAN Kit-20

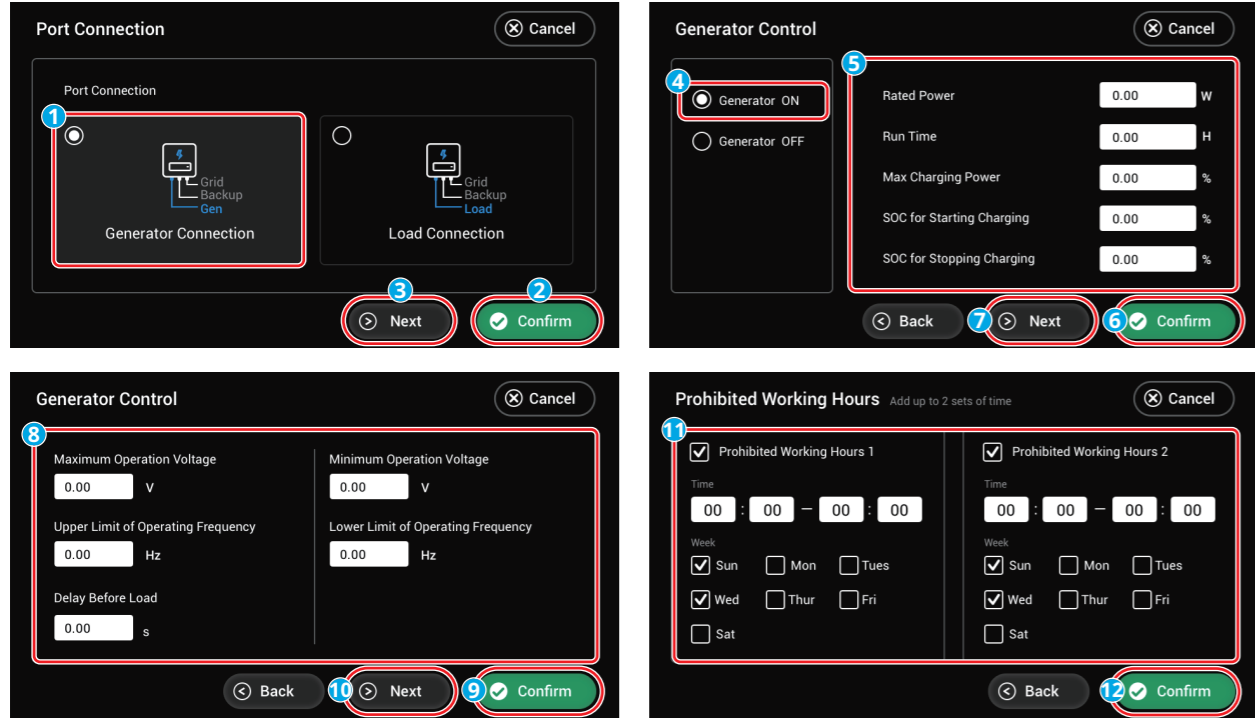


## Setting GEN port

Tap **Home > Settings > Quick Settings** to set parameters for generator or load.

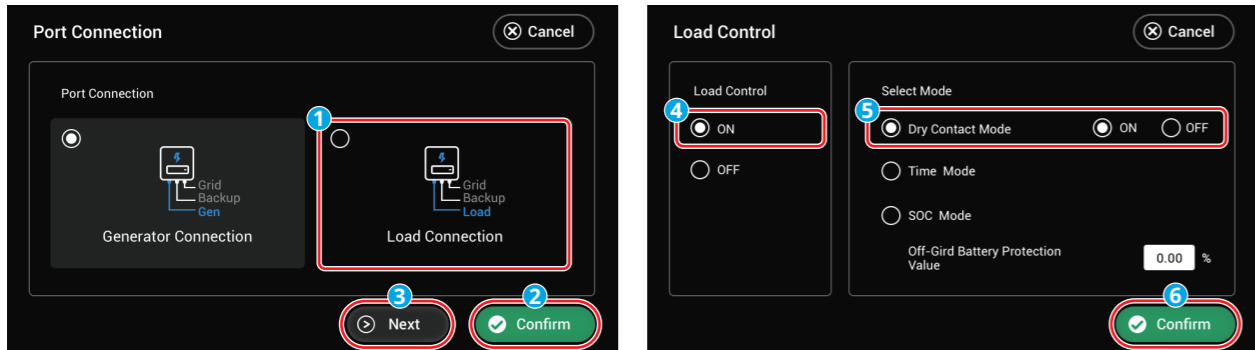


Settings generator parameters via LCD screen



ESU10CN0022

Settings Load Control via LCD screen



ESU10CN0023

Creating a Power Plant

Create power plants and add equipments via SEMS+ app.

