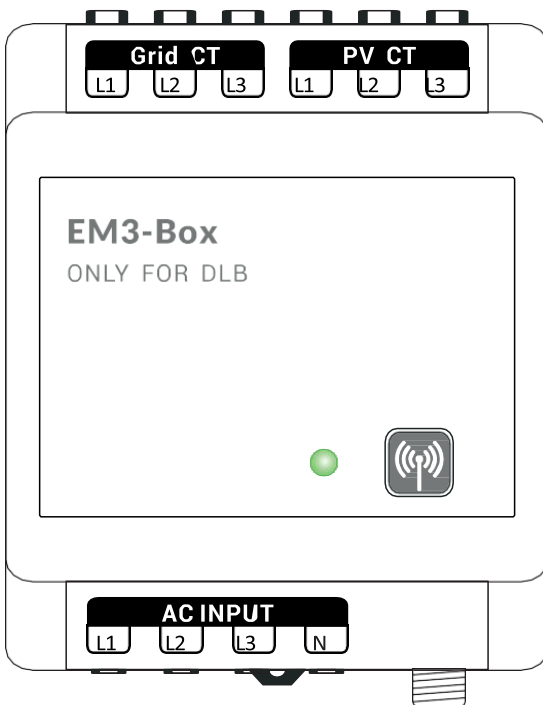




IGLU EM3

Dynamic Load Balancing Box User Manual

Ver 1.0

For the latest IGLU EM3 documents in all supported languages, visit: <https://iglutech.eu/en/>

Warning

Before using IGLU EM3 dynamic load balancing box, carefully read and follow all instructions and warnings provided in the user manual and in the documents related to Kallik Home.

Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death, or can damage the EV Charging system or attached power conversion systems, potentially rendering them inoperable.

PRODUCT SPECIFICATIONS

All specifications and descriptions contained in this document are verified to be accurate at the time of printing. However, because continuous improvement is a goal at IGLU TECH, we reserve the right to make product modifications at any time.

The images provided in this document are for demonstration purposes only. Depending on the product version and market region, details may appear slightly different.

ERRORS OR OMISSIONS

To communicate any inaccuracies or omissions in this manual, please send an email to: info@iglutech.eu



ELECTRONIC DEVICE: DO NOT THROW AWAY

Proper disposal of device is required. Refer to your local regulations for disposal requirements.

IGLU TECH UAB 2026. All rights reserved.

All information in this document is subject to copyright and other intellectual property rights of IGLU TECH UAB, and its licensors. This material may not be modified, reproduced, or copied, in whole or in part, without the prior written permission of IGLU TECH UAB, and its licensors. Additional information is available upon request. The following are trademarks

All other trademarks contained in this document are the property of their respective owners and their use herein does not imply sponsorship or endorsement of their products or services. The unauthorized use of any trademark displayed in this document or on the product is strictly prohibited.

CONTENT

1. Product Information.....	3
Model number definition.....	3
Specifications	4
2. Operation	5
Overview.....	5
LED indicators.....	5
Button.....	5
Setting display.....	6
Status display	8
3. Installation	9
4. Fault Handling	10

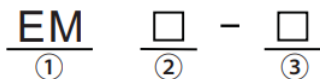
1. Product Information

IGLU EM3 dynamic load balancing box, can be used for Kallik Home EVE series AC EV Charger, or other chargers compatible with EM3 Box. When the EV Charger works simultaneously with other household appliances, EM3 Box can maintain the dynamic balance of the total household current, ensure household safety and avoiding overloading of the grid.

If PV CT is installed, EM3 Box can achieve multiple modes of use for both the grid and PV.

- **PV Mode:** Almost no electricity is obtained from the grid.
- **Min+PV Mode:** Minimal grid power and solar energy to meet the minimum 6A charging requirement for EV
- **Fast Mode:** Charge the EV as fast as possible based on the load of the grid and the current setting of the charging station.

Model number definition



	Classification	Symbol	Meaning of the symbol
1	Basic type	EM	DLB Box
2	Series model	3	RF / 6-CTs (max.)
3	Number of CTs	06	3-phase Normal Mode
			3-phase PV mode

NOTE: The device is supplied with 6 CT sensors as part of the standard package.

- 3 CT sensors are used to measure the current of the household three-phase electrical grid.
- 3 CT sensors are used to measure the currents of the three-phase solar power plant connection (if a solar power plant is installed).

Specifications

Electrical Specifications	
Phase Number	3 - phase
Rated Voltage	AC110V~240V/400V
Input Frequency	50/60 Hz
Standby power consumption	<1W

Function and Accessory	
LED indicators	Yes
RF wireless distance	120m
RF wireless frequency	868/915MHz (Standard 868MHz)
Current collection	Split Core Current Transformer (CT)
Max. measurable current	100A
Wi-Fi/Bluetooth/Ethernet	No

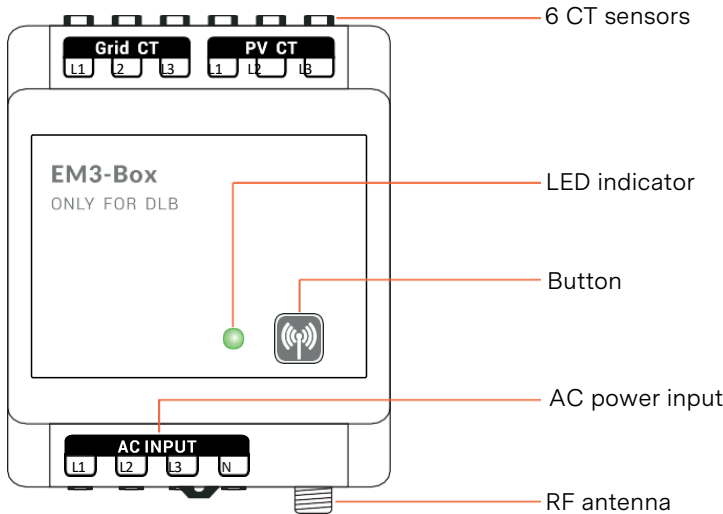
Working environment	
Protection degree	IP65
Operation temperature	-25°C~55°C
Relative humidity	≤95%RH
Operating elevation limit	≤2000m
Cooling	Natural air cooling

Mechanical parameters	
CT cable	1m (Standard configuration)
RF antenna cable	1m (Standard configuration)
Control box	HxWxD=95 x 80 x 56 mm
Weight	≤0.8kg (6 CTs)
CT's hole diameter	16mm
Installation	Top-hat rail (width 35mm)
Colour & Material	White; ABS

Standard & Certificate	
Certificate	CE,RoHS

2. Operation

Overview



LED indicators

Status	Communication Status	Matching Mode	Fault Mode
Indicator Light	 Flashing	 Flashing	 Flashing

Button

Button Description	
	Press the button to enter matching mode

Setting display

The settings need to be completed on the IGLU Kallik Home EVE series charging station.

Please refer to the Kallik Home user manual for the button operation of the LCD. After opening the settings menu, select "Load & Communication" (Fig.1), enable "Load Balancing", and enter the "EM3 Box" settings (Fig.2).

Fig.1

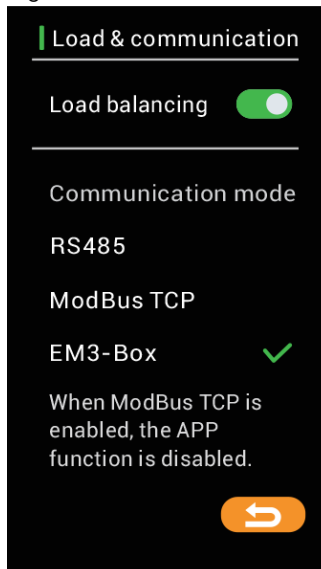
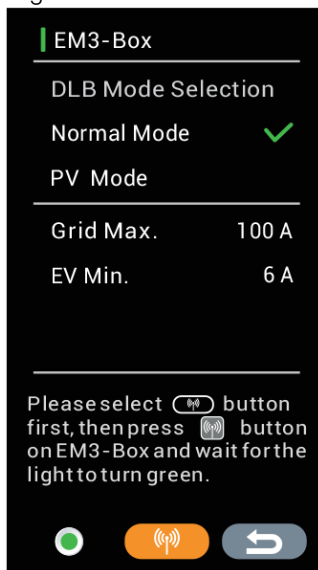


Fig.2



DLB Mode Selection

Normal Mode: Ensure that the total power of EV charging stations and other household appliances does not exceed the maximum power of the grid

PV Mode: In addition to Normal Mode function, detecting PV power is added to achieve different modes.

Grid Max: The maximum grid current must be set correctly. You can check the household circuit breaker or inquire with the power supply company.

During the charging process of the vehicle, the charger will control the charging current and only use 80% of the maximum grid current.

EV Min: Minimum charging current for electric vehicles (6-10A), suitable for both normal mode and PV mode.

EM3 Box and charging station matching

1. Set on the charging station to enable the  button on the Fig.2 page. The charging station will continuously search for EM3 Box and the orange light  will flash.
2. Press the  button on the EM3 Box, and the orange LED  will flash.
3. If the match is successful, the light  (Fig.2) will display green, and you can return to exit. EM3 Box will automatically exit matching mode.
4. If the match fails, please repeat steps 2 and 3.

Function selection of PV mode

When the charging station starts charging, switch to Status display. If the PV mode is enabled, Fig.4 will be displayed.

Pressing the  button of the charging station on this page will switch between PV / Min+PV / Fast.

In this mode, charging starts automatically as soon as the PV system delivers enough power. The charging power is continuously adjusted so that no power is drawn from the grid if possible. If the PV system no longer delivers enough power or if household consumption increases, charging is paused and continued later.

In contrast to PV mode, charging will not be interrupted. If the PV power does not meet the minimum charging power of the car (6A), it will be supplemented from the grid to continue charging.

If the PV power increases, the charging power will be correspondingly increased.

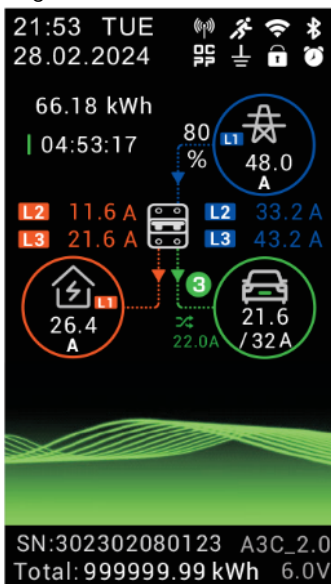
When the charging station operates in fast mode and is not greater than the maximum current of the power grid, the charging station will use the set maximum current for charging.

If the power of household appliances increases and the total current exceeds the maximum current of the power grid, the charging current will correspondingly decrease.

Status display

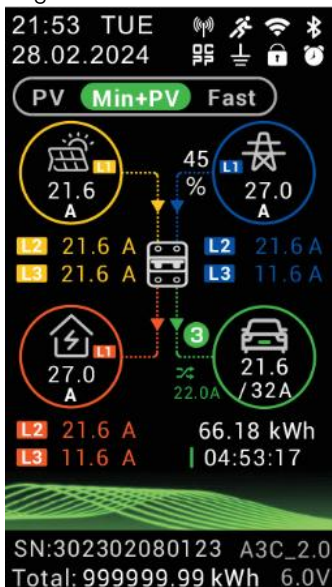
In the charging state, press the  button of the charging station to enter these pages. Display according to the corresponding configuration.

Fig.3



3-phase normal mode

Fig.4



3-phase PV mode

3. Installation

Please check your accessories



EM3 Box



Current Transformer



RF antenna

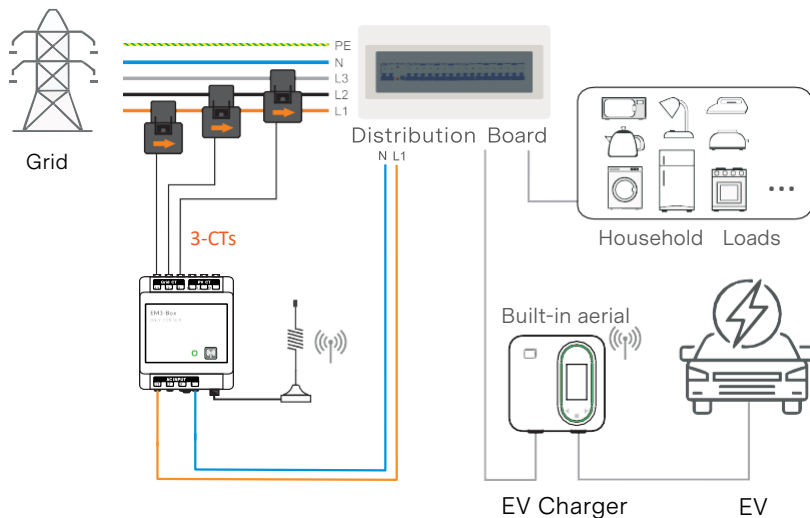
Installation Diagram

⚠ Before connecting the EM3 Box AC input power supply, please ensure that the power is cut off.

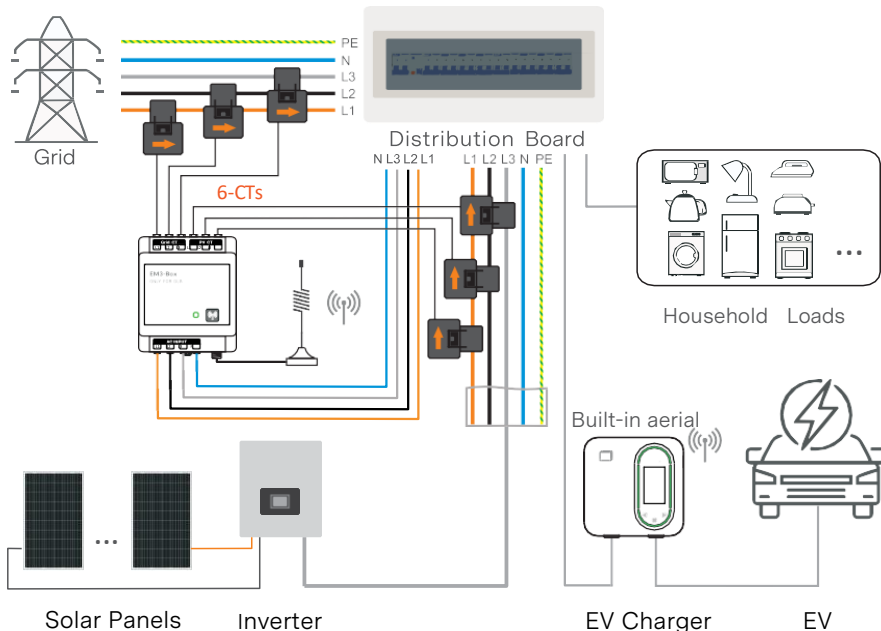
⚠ Please note the installation direction of the Current Transformer.

⚠ Please do not install the RF antenna inside the metal distribution board, otherwise it will affect the communication distance with the charging station.

3-phase Normal Mode



3-phase PV Mode



4. Fault Handling

The fault information and handling methods are as follows.

Fault Information	Handling method
Kallik Home LCD does not display EM3 Box option	- Check if the charging station version is correct, needs to have DLB function. - Check if the internal DLB communication module connection plug is loose
EM3 Box's LED light is not on	- Check if the external power input is correct. - Check if the screws of the L and N terminals are tightened
EM3 Box green light does not flash	The RF communication module inside EM3 Box is faulty and requires maintenance
Kallik Home cannot match EM3 Box	- Check the distance between them, RF communication distance is within 120m. - Check if the antenna of EM3 Box is inside the metal box, otherwise the signal will be blocked



UAB IGLU TECH
Ukmergės g. 364-6, LT-14188 Vilnius

Tel: +370 655 53277
E-mail: info@iglutech.eu

<https://iglutech.eu/en/>