

Wallbox WBX-EM112

Wallbox Power Boost Single-Phase Dynamic Load Management Module EM112 User Manual

Model: WBX-EM112 | Brand: Wallbox

1. INTRODUCTION

The Wallbox Power Boost EM112 is a dynamic load management module designed to optimize the charging of your single-phase Wallbox charger. It intelligently controls the charging power based on the available electrical capacity of your installation, preventing overloads and ensuring stable operation of your main power supply.

This module continuously measures the total power consumption of your home in real-time. By setting the maximum current of your main electrical board, the EM112 calculates the remaining available power and adjusts the charging current supplied to your Wallbox charger accordingly. This dynamic adjustment ensures that your electric vehicle charges efficiently without tripping the main circuit breaker.

2. KEY FEATURES

- **Reference:** WBX-EM112
- **Compatibility:** Compatible with Wallbox Copper single-phase chargers.
- **Color:** Grey
- **Voltage:** 230 V
- **Protection Rating:** IP51 – resistant to water droplets.
- **Display:** LCD display with backlight.
- **Interface:** Integrated touch keypad.
- **Mounting:** Designed for DIN rail mounting.
- **Functionality:** Integrated meter for real-time consumption measurement.

3. PRODUCT OVERVIEW



Figure 3.1: Front view of the Wallbox Power Boost EM112 module. This image displays the module's front panel, featuring the LCD screen for readings and the integrated touch keypad for navigation. The connection terminals are visible at the top and bottom.



Figure 3.2: Angled view of the Wallbox Power Boost EM112 module. This perspective highlights the compact design of the module and its suitability for DIN rail installation, with visible mounting clips on the side.

4. INSTALLATION AND SETUP

4.1. General Installation Guidelines

- The management module is designed for DIN rail mounting within your electrical distribution board.
- It must be installed on the main power supply line of your electrical panel.
- Ensure all connections are secure and comply with local electrical codes.
- Installation should be performed by a qualified electrician.

4.2. Wiring Diagram

Schéma de câblage de la borne Wallbox monophasée et module de gestion de charge dynamique EM112

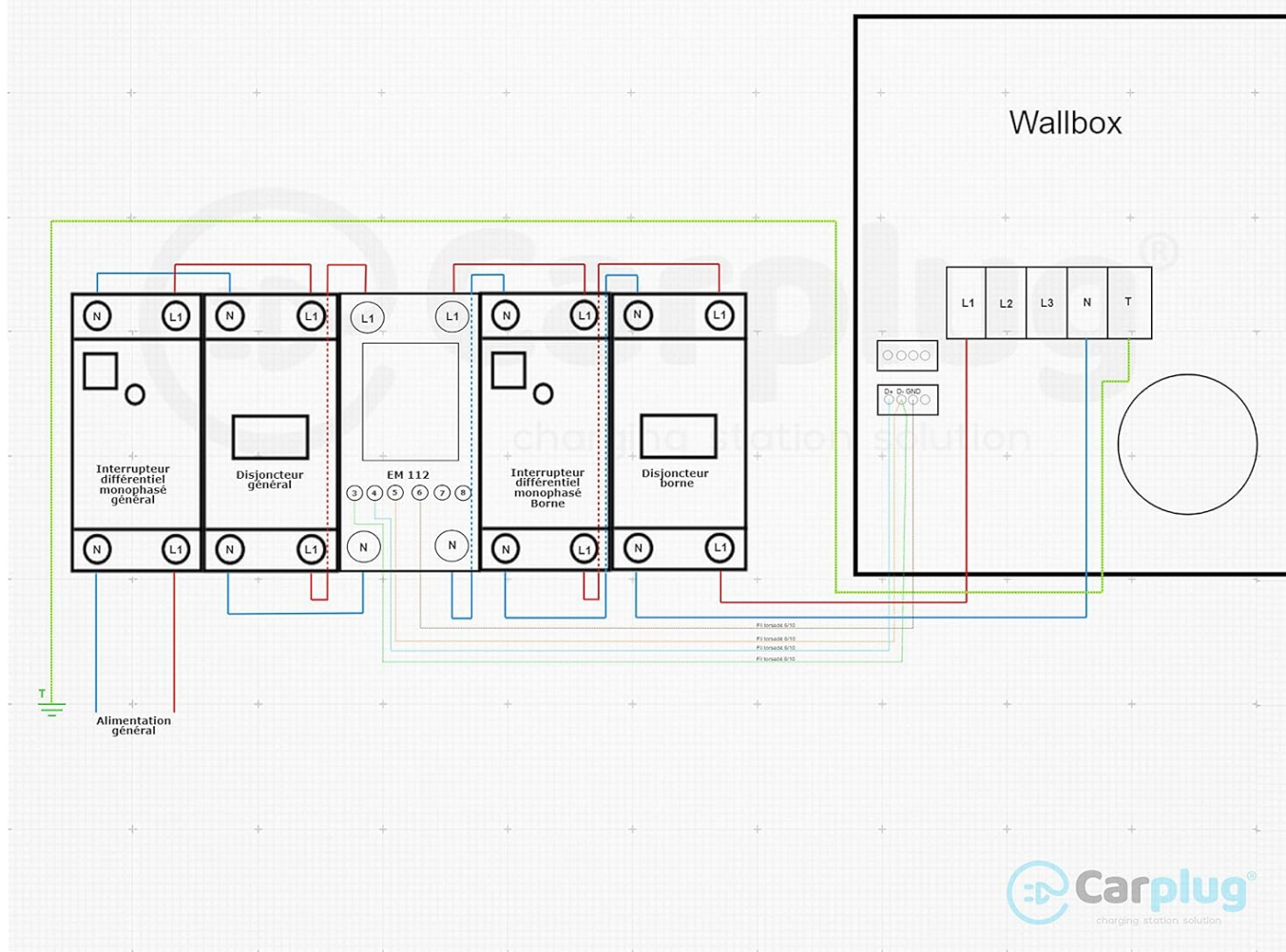


Figure 4.1: Wiring diagram for the single-phase Wallbox terminal and EM112 dynamic load management module. This diagram illustrates the correct electrical connections between the general power supply, the EM112 module, and the Wallbox charger, including circuit breakers and differential switches.

The module requires connection with 4 x 6/10 twisted cables. It connects to all terminals for the Wallbox charger, ensuring seamless communication and power management.

5. OPERATING PRINCIPLE AND APPLICATION EXAMPLE

The Wallbox Power Boost EM112 module prevents your main circuit breaker from tripping during EV charging by dynamically adjusting the charging current. It achieves this by continuously monitoring your home's total power consumption.

The only required setting is the maximum current capacity of your main electrical board (e.g., 40 A). The module then calculates the difference between this maximum capacity and the current power consumed by your home. The Wallbox charger will then be continuously supplied with the maximum available current without exceeding your installation's limit.

Example Scenario:

Consider a single-phase installation with a 40 A main circuit breaker. If your Wallbox Copper charger is connected to a dedicated line, there's a high probability of the main breaker tripping if the charger attempts to draw more power than available.

With the EM112 module installed:

- If your home is currently consuming 17 A, the Wallbox charger will be supplied with 23 A (40 A - 17 A).
- If your home is consuming less than 5 A, the charger will be powered at 32 A (40 A - 5 A, but limited to 32 A, which is the maximum charging current of the Wallbox).

This dynamic adjustment ensures optimal charging speed while maintaining the stability of your electrical installation.

6. SPECIFICATIONS

Attribute	Value
Manufacturer	WALLBOX
Brand	Wallbox
Model	WBX-EM112
Manufacturer Reference	WBX-EM112
Voltage	230 V
Protection Rating	IP51
Dimensions (approx.)	5 x 8 x 4 cm
First Available Date	February 21, 2020

7. MAINTENANCE

The Wallbox Power Boost EM112 module is designed for minimal maintenance. Regular checks should include:

- **Visual Inspection:** Periodically inspect the module for any signs of physical damage, loose connections, or discoloration.
- **Cleaning:** If necessary, gently wipe the exterior of the module with a dry, soft cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off before cleaning.
- **Connection Integrity:** Ensure all wiring connections remain tight and secure. If any connections appear loose, consult a qualified electrician for re-tightening.

No user-serviceable parts are inside the module. Any internal issues or repairs should be handled by authorized service personnel only.

8. TROUBLESHOOTING

If you encounter issues with your Wallbox Power Boost EM112 module, refer to the following common problems and solutions:

8.1. Charger Not Receiving Power or Tripping Breaker

- **Check Main Breaker:** Ensure the main circuit breaker for your home and the dedicated circuit breaker for the Wallbox charger are in the ON position.

- **Verify EM112 Connections:** Confirm that the EM112 module is correctly wired according to the installation diagram (Figure 4.1) and that all connections are secure.
- **Review EM112 Settings:** Ensure the maximum current capacity set in the EM112 module matches your main electrical board's capacity. Incorrect settings can lead to premature tripping.
- **Consult Wallbox Charger Manual:** Refer to your specific Wallbox charger's manual for its own troubleshooting steps.

8.2. Incorrect Readings on EM112 Display

- **Check Wiring:** Incorrect wiring of the current transformers or voltage inputs can lead to inaccurate readings. Verify all wiring against the diagram.
- **Module Reset:** Power cycle the EM112 module by turning off and on the main breaker to which it is connected.

If the problem persists after attempting these steps, contact Wallbox customer support or a qualified electrician.

9. WARRANTY AND SUPPORT

For information regarding the warranty period and terms for your Wallbox Power Boost EM112 module, please refer to the warranty documentation provided with your purchase or visit the official Wallbox website.

For technical support, installation assistance, or any other inquiries, please contact Wallbox customer service through their official channels. You can typically find contact information on the Wallbox website or in your product packaging.

Wallbox Official Website: wallbox.com

