MasterPower®
Unlimited power

Home EV Wallbox
P1/P2/P3

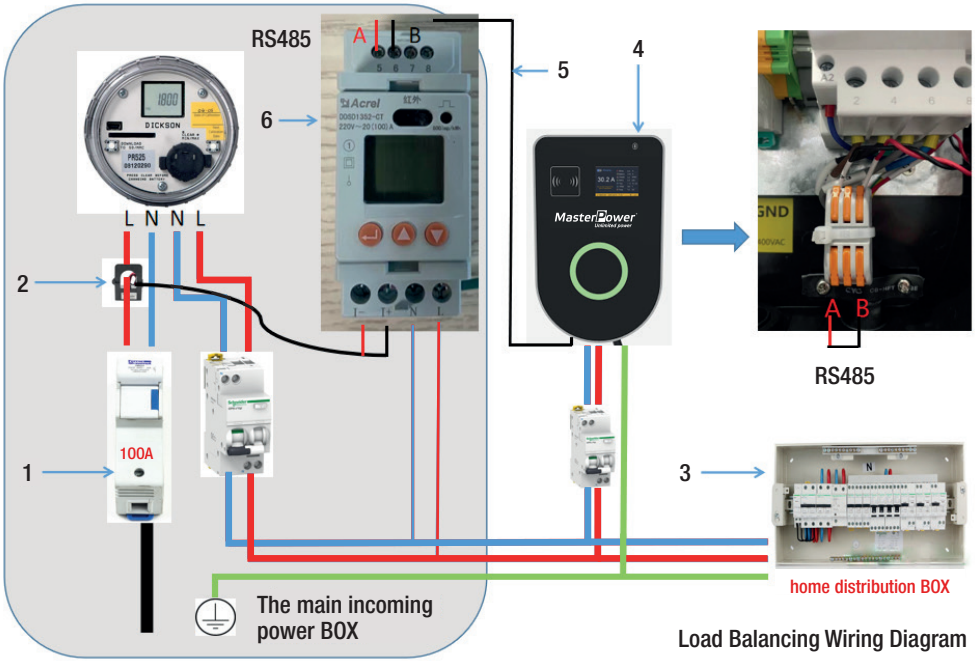
Loading Balancing
Setup Guide

Introduction

The loading balancing has been designed with ease of installation in mind. Its lightning-fast reaction time to overload currents coupled with the fact that EV charging station records the power and energy from the CT-Meter means you will improve on the safety of your installation while gaining insights into the energy usage of the property.

How it works

The Hypervolt works using a wired CT sensor which the installer must clip over the main incoming power feed into the property. Please refer to the wiring diagram < Load Balancing Wiring Diagram >



Load Balancing Wiring Diagram

1 Fuse rating/max incomer load.

2 CT sensor (MF-EV7.2kW-P1 CT Sensor only 1PC, MF-EV11kW-P2 or MF-EV22kW-P3 CT Sensor need 3PS).

3 Home distribution BOX.

4 EV Charging station (MF-EV7.2kW-P1/MF-EV11kW-P2/MF-EV22kW-P3).

5 2*0.5 mm^2 RS485 communication shielded twisted pair.

6 Meter

A. MF-EV7.2kW-P1 the Meter is DDSD1352-CT

Serial Number	Wiring Mark
I-	CT line black
I+	CT line red
N	N Input power line 22AWG 450V/750V 105°C
L	L Input power line 22AWG 450V/750V 105°C
5	RS485 A Shielded twisted pair cable 24AWG
6	RS485 B Shielded twisted pair cable 24AWG

B. MF-EV11kW-P2/MF-EV22kW-P3 the Meter is ADL400

Serial Number	Wiring Mark
IA-	CT A line black
IA+	CT A line red
IB-	CT B line black
IB+	CT B line red
IC-	CT C line black
IC+	CT C line red
UA	N Input power line 22AWG 450V/750V 105°C
UN	L Input power line 22AWG 450V/750V 105°C
21	RS485 A Shielded twisted pair cable 24AWG
22	RS485 B Shielded twisted pair cable 24AWG

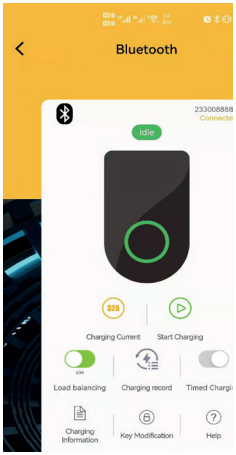
Your property will have a maximum allowed total power consumption that can be configured inside your EV charging station. Once installed and configured, the charger monitors this consumption in real-time. In the event that charging would cause you to exceed the pre-set limit, we will then reduce the EV charging rate in order to protect your electrical wiring and avoid blowing the fuse in your meter whilst continuing to charge your vehicle.

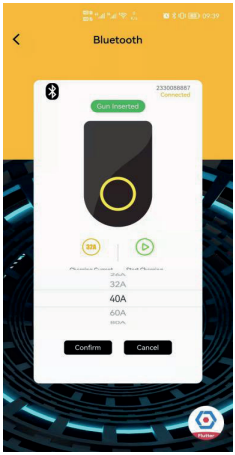
Wiring and Setting Up

CAUTION: make sure the EV Charging station is switched off and isolated from the mains before proceeding.
According to the Load Balancing Wiring Diagram, first pass the CT through the live wire of the main power line, then connect the CT wire to the access terminal of the electric meter, and then connect the electric meter and the charging pile together through the RS485 communication line.
Remember not to connect the direction of the RS485. On the contrary, the last meter needs to be connected to a 220VAC (± 20%) power supply.

APP Setting Up

Set your maximum overload current through the APP according to the fuse capacity of your household's total incoming line (The current set by the APP is less than the actual main input fuse current)





CT Installed	APP Load Balancing Enabled	Fuse Rating/ Max. Incomer Load	APP Setting
NO	NO	N/A	N/A
YES	NO	N/A	N/A
YES	YES	16A	10A
YES	YES	32A	26A
YES	YES	40A	32A
YES	YES	60A	40A
YES	YES	80A	60A
YES	YES	100A	80A
YES	YES	120A	100A
YES	YES	150A	120A

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