

FIMER FLEXA AC Wallbox EV Charger

Intelligent EV Charging with HEMS



The Combined Energy HEMS (Home Energy Management System) supports integration with the FIMER FLEXA AC Wallbox range of EV chargers

HEMS integration enables intelligent management of EV charging including solar charging and cost optimisation.

This document describes the differences between the different versions of the FIMER FLEXA AC Wallbox products, how they are connected to the HEMS, and technical considerations for installation.

First Step - Update Firmware on the FIMER FLEXA AC Wallbox

Using *MyFIMERwallbox* App



**MyFIMERwallbox
iPhone App**

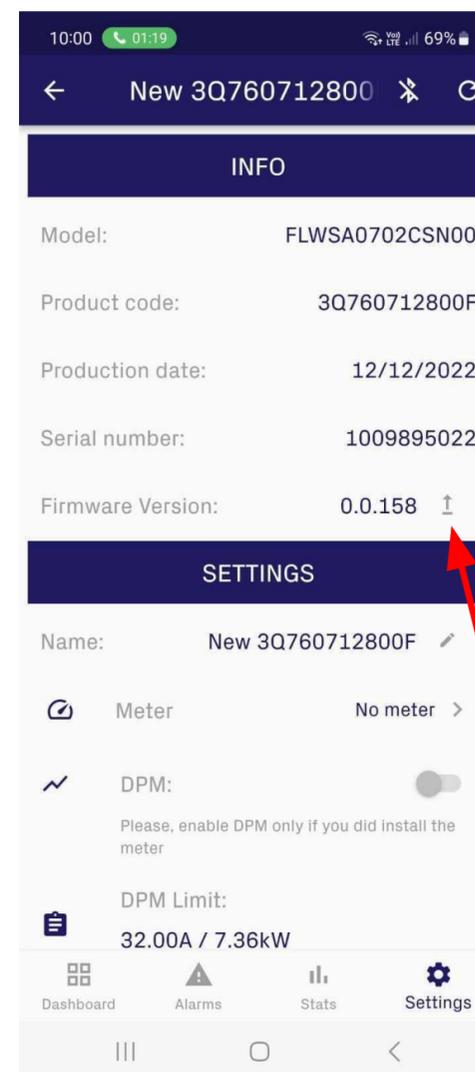


**MyFIMERwallbox
Android App**

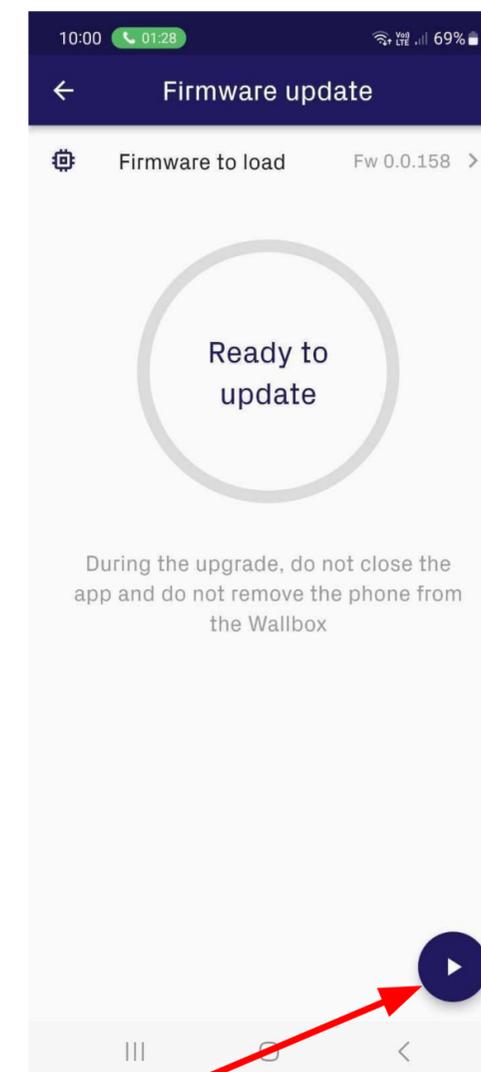
**1 - Install
MyFIMERwallbox App**



**2 - Use QR to
Connect to Charger**



**3 - On Charger information page, tap
the update icon to access the
firmware update screen, then press
the play button and choose the
newest firmware from the list**



FIMER FLEXA AC Wallbox EV Charger

Two Options: Stand Alone and Future Net



Stand Alone

- RS485 connection (*No Ethernet*)
- Available in single phase (7.4kW) or three phase (22kW) model
- Full HEMS integration



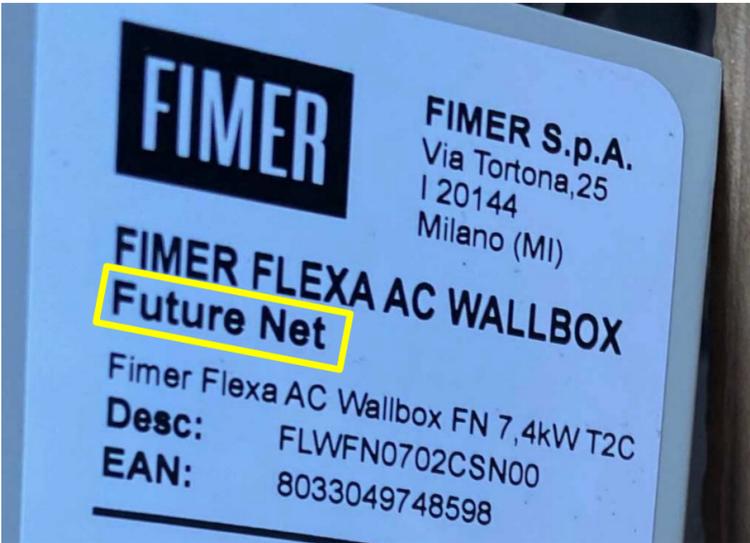
Future Net

- Ethernet connection (*No RS485*)
- Available in single phase (7.4kW) or three phase (22kW) model
- Full HEMS integration

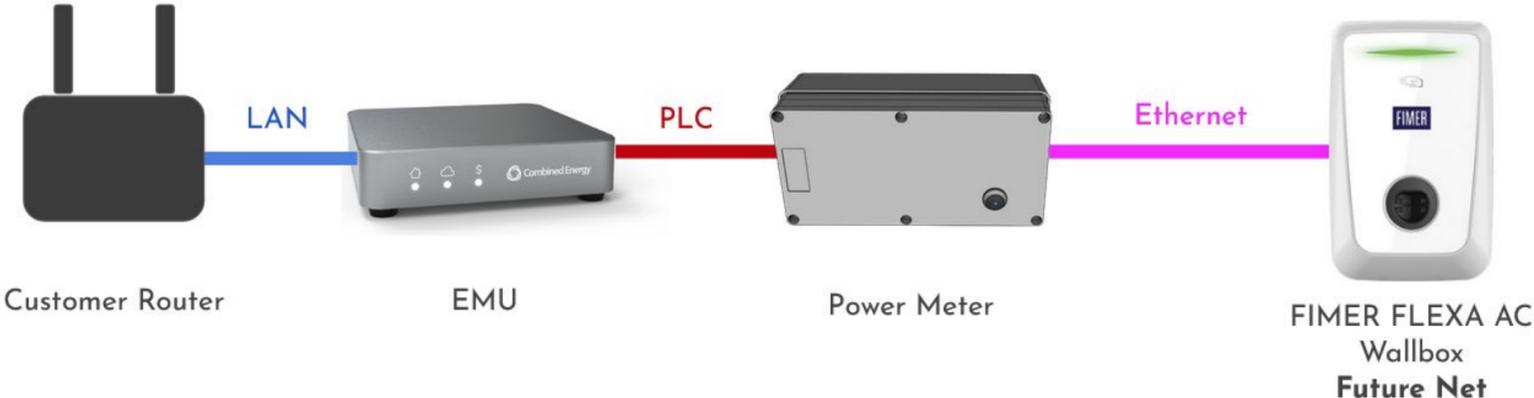
There is no difference between the Stand Alone and Future Net option in terms of HEMS integration/features.

The Future Net model has additional features for integration with commercial billing platforms but these are rarely needed for residential installs.

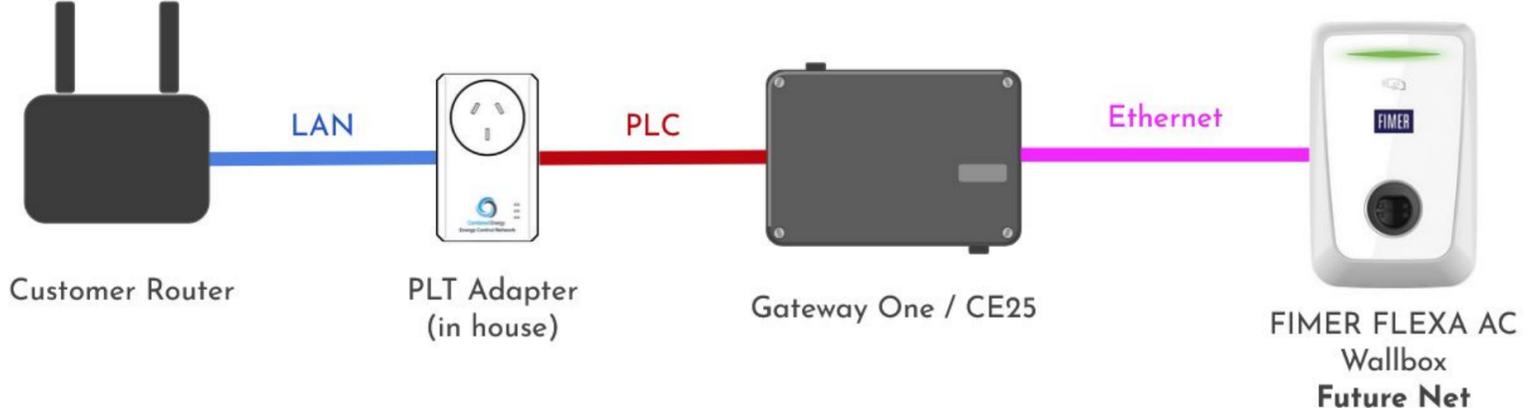
Future Net (Ethernet) Version HEMS Connection



With CET Energy Management Unit (EMU)



With CET Gateway One (CE25)



Future Net (Ethernet) Version

Enable *Standalone Mode* using MyFIMERwallbox app



**MyFIMERwallbox
iPhone App**

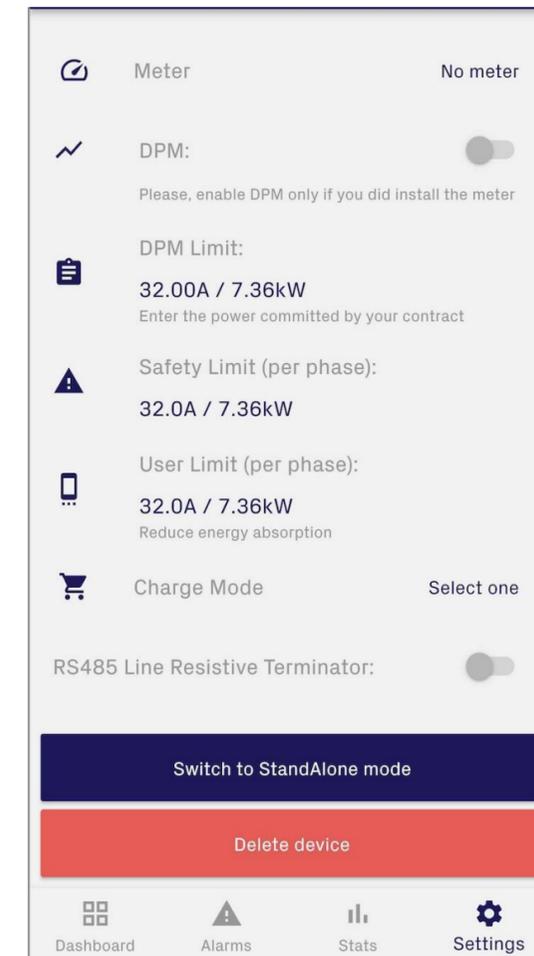


**MyFIMERwallbox
Android App**

**1 - Install
MyFIMERwallbox App**



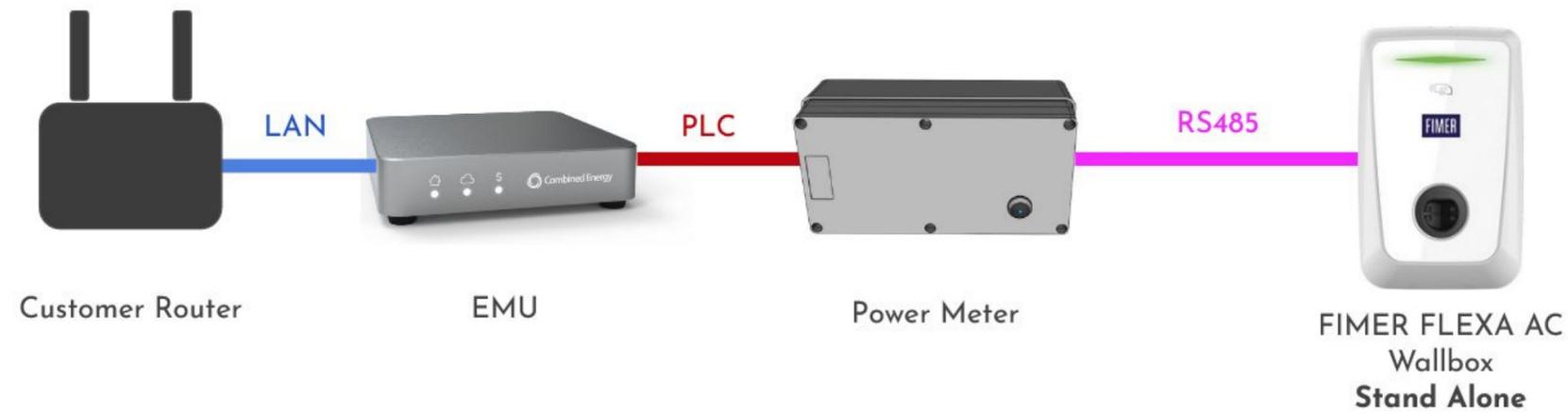
**2 - Use QR to
Connect to Charger**



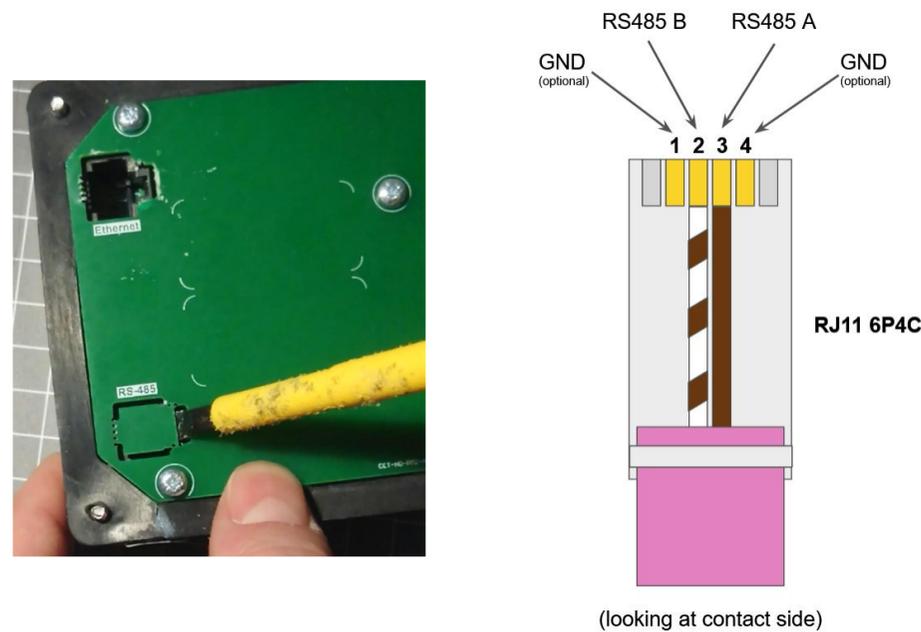
**3 - Set the charger to
Standalone Mode to
enable HEMS control
(if not set already)**

Stand Alone (RS485) Version HEMS Connection (EMU Systems)

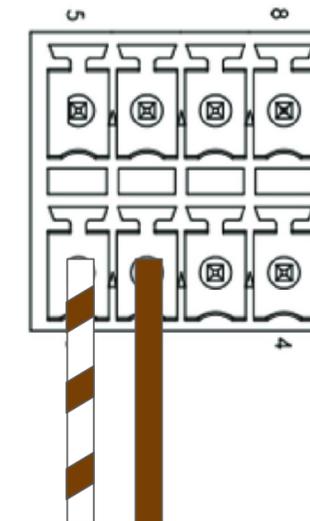
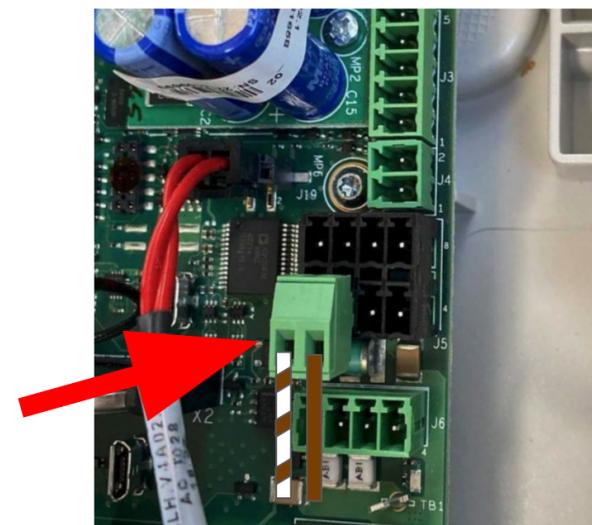
With Energy Management Unit (EMU)



Power Meter RS485 Termination



FLEXA AC Wallbox RS485 Termination

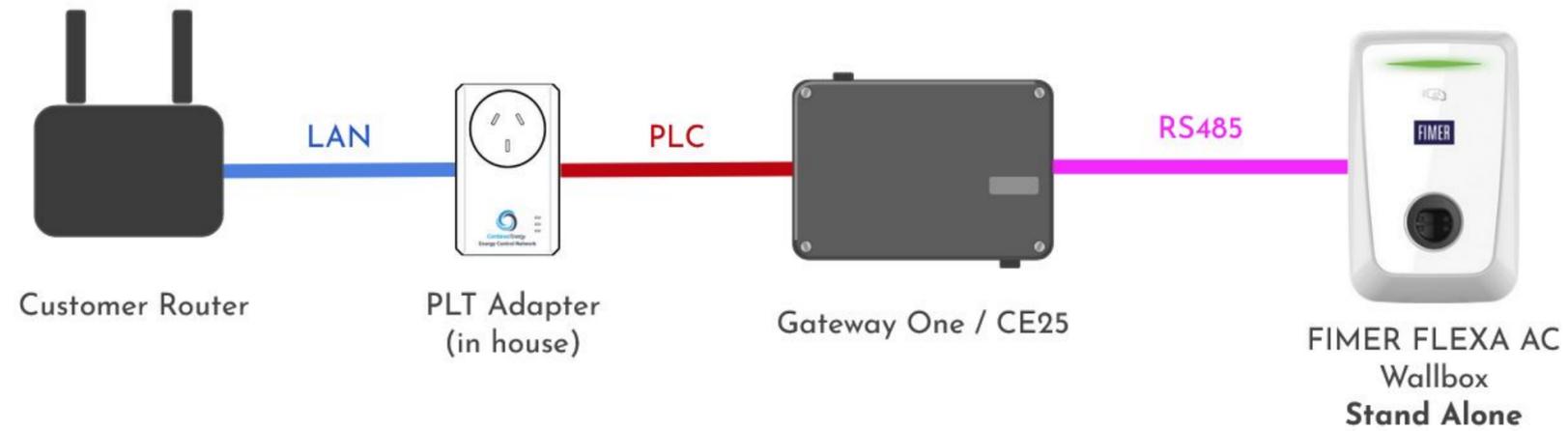


Pin 2 = DATA A
Pin 1 = DATA B

Important: Enable RS485 Termination via FIMER App (see page 9 for details)

Stand Alone (RS485) Version HEMS Connection (CE25 Systems)

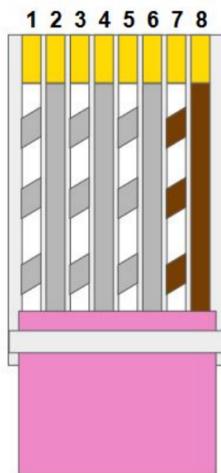
With CET Gateway One (CE25)



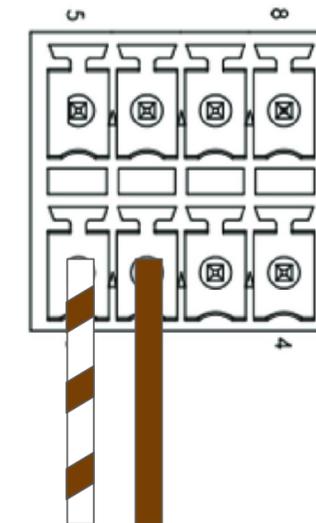
Gateway RS485 Termination



Gateway Expansion Bus



FLEXA AC Wallbox RS485 Termination

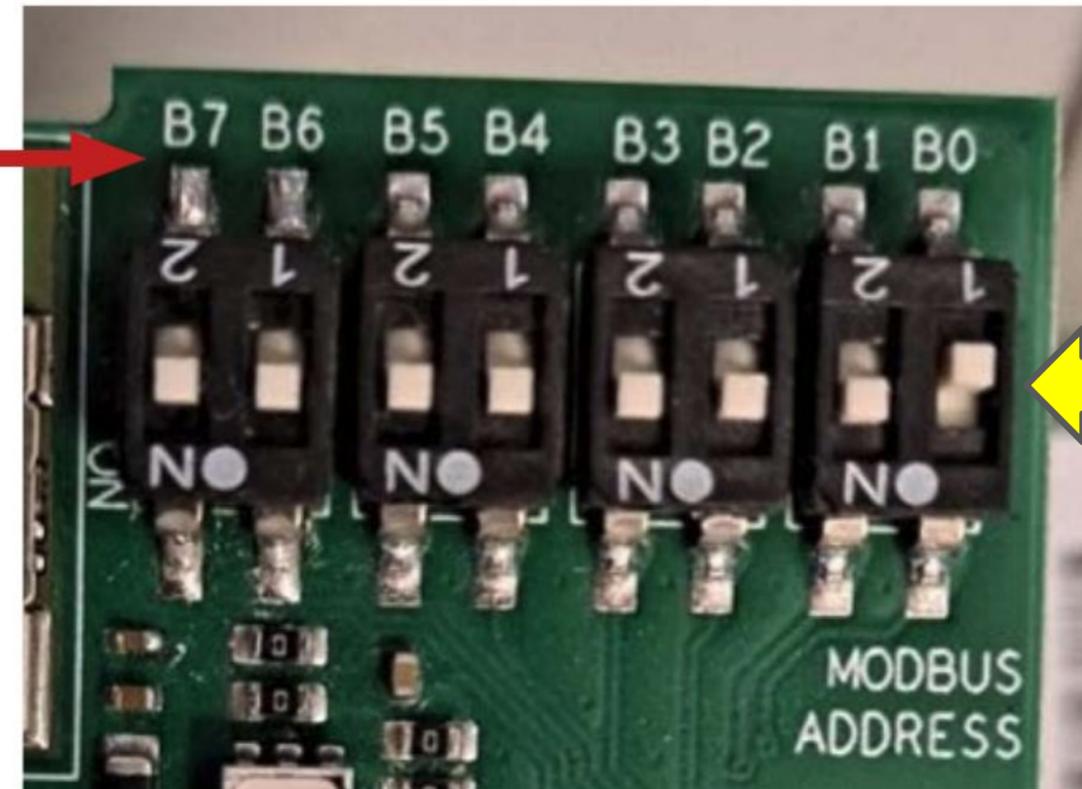
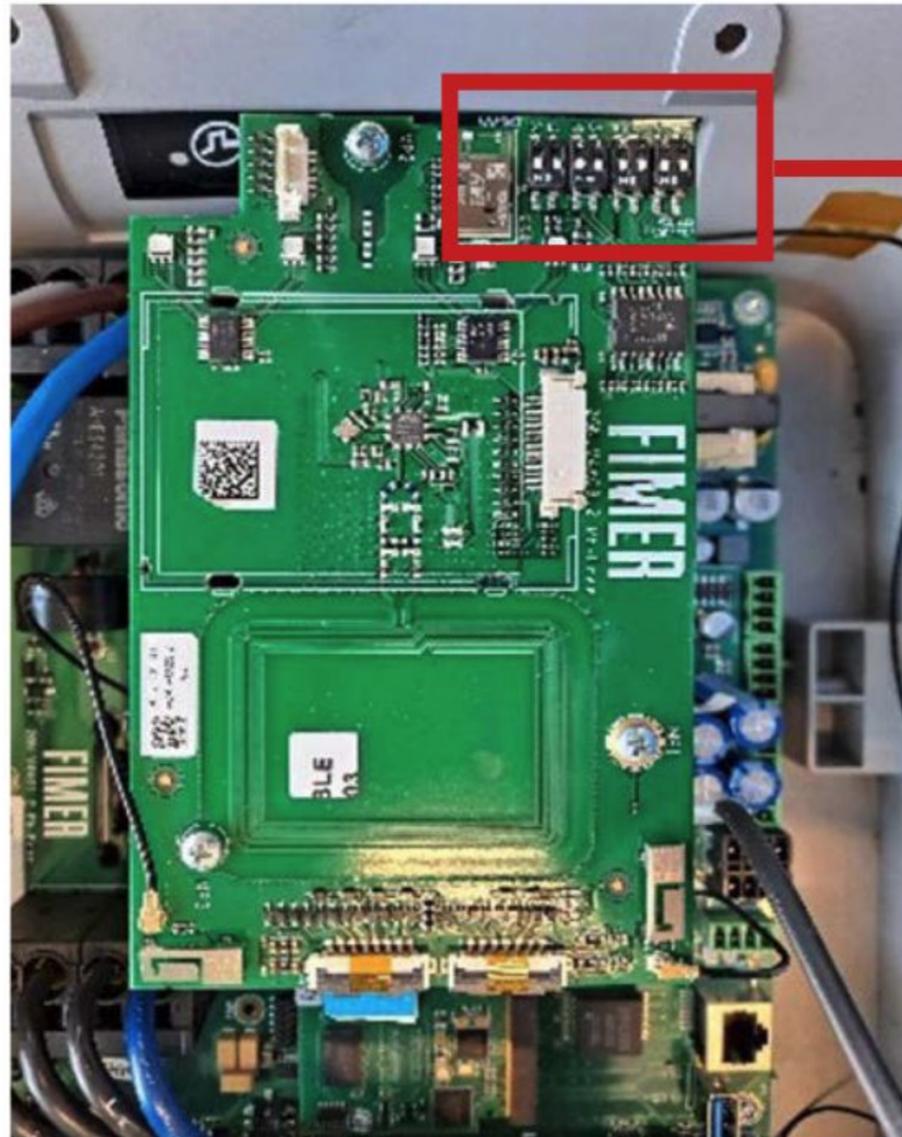


Pin 2 = DATA A
Pin 1 = DATA B

Important: Enable RS485 Termination via FIMER App (see page 9 for details)

Stand Alone (RS485) Version

Check Modbus Address is set to 1



All DIP switches should be ON except for B0
This will select Modbus address 1.

Stand Alone (RS485) Version

Enable Termination Resistor via *MyFIMERwallbox* App



**MyFIMERwallbox
iPhone App**

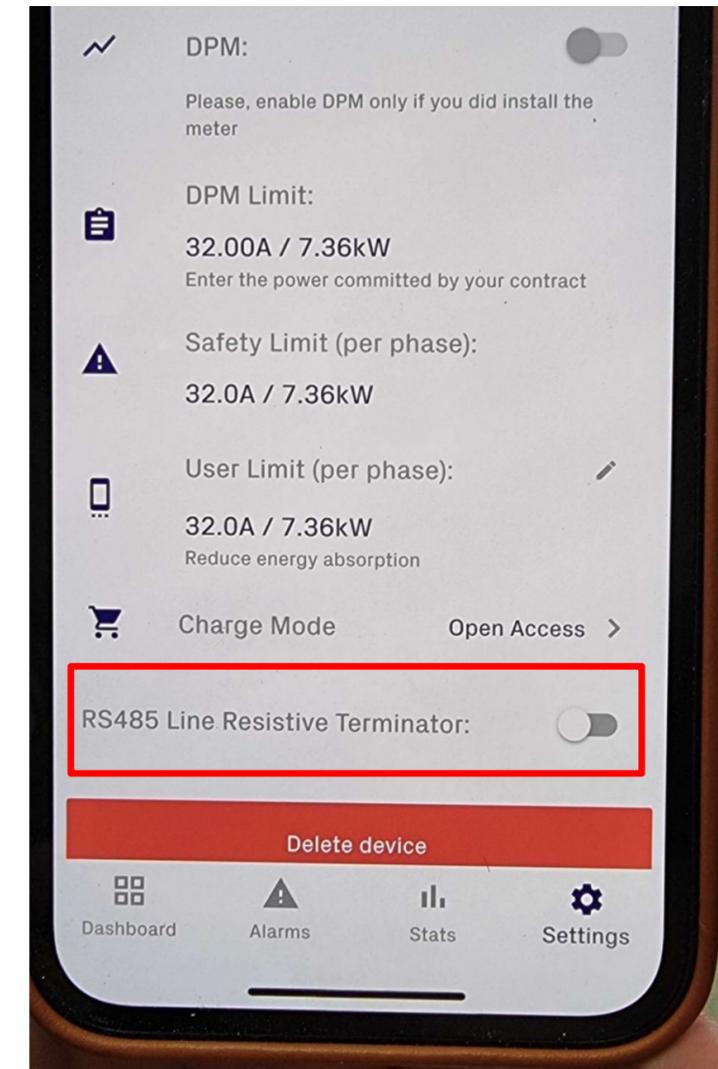


**MyFIMERwallbox
Android App**

**1 - Install
MyFIMERwallbox App**



**2 - Use QR to
Connect to Charger**



**3 - On Settings page, enable "RS485
Line Resistive Terminator"**

**This step is only required for Stand Alone
(RS485) Wallbox EV Chargers**

Single Phase vs. Three Phase Chargers

Considerations for solar charging



The **minimum charging current** for EV Chargers like the FIMER FLEXA AC Wallbox is **6A per phase**:

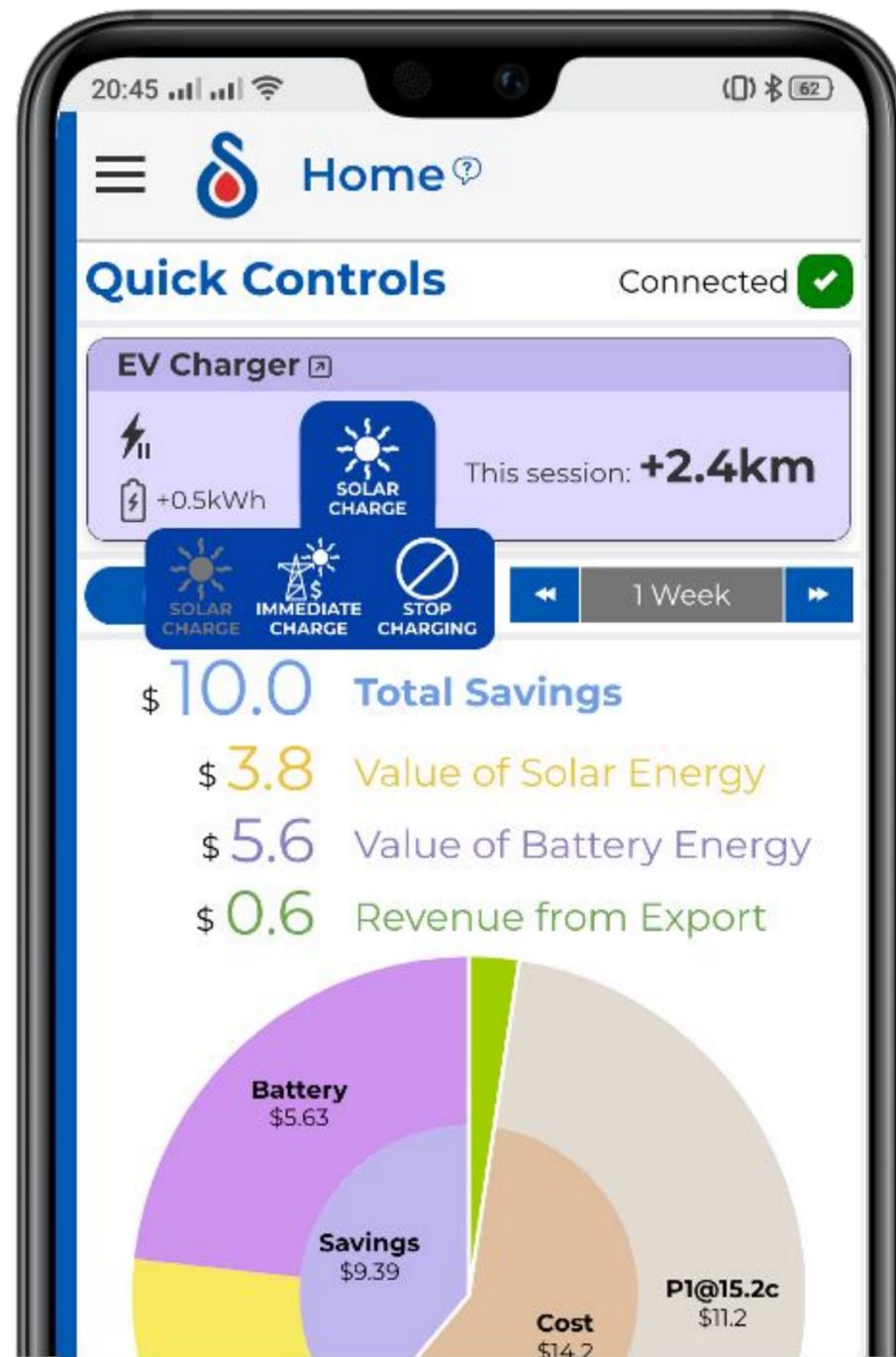
That means the minimum charging power is:

- For Single-Phase Chargers: **1.4kW**
- For Three-Phase Chargers: **4.1kW**
- If the customer is expecting to charge their EV using Solar only, this may be difficult to achieve with a three-phase charger: the Solar would need to be producing at least 4.1kW to cover the minimum charging power.

See next slide for a workaround...

FIMER FLEXA AC Wallbox EV Charger

Combined Energy *atHome* web app controls



The customer can set the EV Charger mode from the **Quick Controls** section of the Home page.

Current supported modes are:

- **Immediate Charge** (i.e. always ON)
- **Solar Charge** (charge only when there is sufficient excess solar)
- **Stop Charging**