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 FLEXAAC 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







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÷	New	3Q760
		INF
Model:		
Produc	t code:	
Produc	tion da	te:
Serial r	number	
Firmwa	tre Vers	ion:
		SETTIN
Name:		New 30
	Meter	
~	DPM:	
	Please, e meter	enable DPM (
Ê	DPM L	imit: A / 7.36k\
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1 - Install MyFIMERwallbox App

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





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





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

Future Net (Ethernet) Version HEMS Connection









With CET Energy Management Unit (EMU)

Future Net (Ethernet) Version Enable Standalone Mode using MyFIMERwallbox app



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	Uninstall	Enable	
	<i>MyFIMER</i> Androi	<i>wallbox</i> d App	



1 - Install *MyFIMERwallbox* App 2 - Use QR to Connect to Charger



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	Weter		No meter
~	DPM:		
	Please, enable DPM o	only if you did ir	nstall the meter
æ	DPM Limit:		
8	32.00A / 7.36k Enter the power com	N mitted by your	contract
Δ	Safety Limit (pe	r phase):	
	32.0A / 7.36kW		
-	User Limit (per p	ohase):	
Ņ	32.0A / 7.36kW Reduce energy absor	ption	
.	Charge Mode		Select one
RS485	5 Line Resistive Ter	minator:	
	Switch to Star	ndAlone mode	Э
	Delete	device	
	A	th	\$
Dashbo	ard Alarms	Stats	Settings

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









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

With CET Gateway One (CE25)





Gateway RS485 Termination





Stand Alone (RS485) Version Check Modbus Address is set to 1



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



Stand Alone (RS485) Version Enable Termination Resistor via *MyFIMERwallbox* App



	MyFIMER FIMER Spa	wallbox	
Uninst	tall	Enable	
	<i>MyFIMERwa</i> Android A	<i>llbox</i> pp	



1 - Install *MyFIMERwallbox* App

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

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



~	DPM:
	Please, enable DPM only if you did install the meter
ė	DPM Limit:
8	32.00A / 7.36kW Enter the power committed by your contract
A	Safety Limit (per phase):
	32.0A / 7.36kW
-	User Limit (per phase):
Ü	32.0A / 7.36kW
	Reduce energy absorption
Ξ.	Charge Mode Open Access >
RS485 I	Line Resistive Terminator:
	Doloto dovice
	Delete device
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3 - On Settings page, <u>enable</u> "RS485 Line Resistive Terminator"

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...



Single Phase vs. Three Phase Chargers Considerations for solar charging



PN: CSG SC363

It is possible to work around this constraint using a three-phase changeover switch.

A three position, three pole switch can be used:

- Position 0: OFF
- Position 1: Only one phase connected to charger
- Position 2: All three phases connected to charger

In this way, the changeover switch can also perform the required isolation switch function.

This work around has been approved by FIMER



FIMER FLEXA AC Wallbox EV Charger Combined Energy *atHome* web app controls



page.

Current supported modes are: **Immediate Charge** (i.e. always ON) Solar Charge (charge only when there is sufficient excess solar) • Stop Charging



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