

Technical File

The Electric Vehicles (Smart Charge Points) Regulations 2021

This document is the technical file for the following charge point:

Charge point make:	eProWallbox
Charge point model:	F2ME.EPROSCYYXXX, F2ME.EPROSLYYXXX, F2ME.EPROSEYYXXX, F2ME.EPROSFYYXXX, F2ME.EPROTCYYXXX, F2ME.EPROTLYYXXX, F2ME.EPROTEYYXXX, F2ME.EPROTFYYXXX YYXXX refer to aesthetic customizations not relevant for compliance to this regulation
Software version at point of sale:	2.8.1
Seller: Person responsible for compliance with the Regulations	Free2move eSolutions UK Ltd St Matthews House Quays Office Business Park, Conference Avenue, Portishead, United Kingdom, BS20 7LZ
Manufacturer(s): If different to seller	Free2move eSolutions S.p.A. Piazzale Lodi, 3 - 20137 Milan - Italy
Last update to technical file:	14/12/2022

Description of the smart charge point

eProWallbox makes advanced functionalities easy. Covering all Mode 3 operating functionalities, it is a flexible charging system operating up to 7,4 kW in single-phase configuration and up to 22 kW in three-phase configuration; designed to work as standalone smart device or with several assets in parallel, eProWallbox is ideal both for premium B2C customers and for EV fleet Charging Stations

eProWallbox:

- Provides for cellular connectivity 4G/LTE and Wi-Fi and shall be provided with RJ45 port for Ethernet connection.
- Implement an ad-hoc communication protocol over BLE for authentication monitoring and setup purposes.
- Implement Communication architecture based on TCP/IP specification for OCPP functionalities over Wi-Fi, 4G/LTE or Ethernet alternatively, allowing the eProWallbox to communicate with the backend management platform.
- Support open protocol OCPP 1.6 JSON for communication between Electric Vehicle, EV Charger and CSMS.
- Enables the user authentication through a RFID card system, compliant to ISO/IEC 14443 and NFC compatible.
- Integrates a universal digital platform to enable and manage authentication, payment, monitoring, remote diagnosis, maintenance and software updates for reliable asset management and payment control
- Integrates an external adhesive antenna, to apply a wall, connected via a coaxial connector to the eProWallbox, shall be included to improve the performance of the internal antenna.
- Using an external Energy Meter that provides a feedback on the current values, Dynamic Power Management (DPM) feature is allowed, based on home auxiliaries and contract power.

Operating manual

Copy of operating manual as available at point of sale can be found <i>(cross as appropriate)</i> :		Attached to this document (hard copy)
		Attached to this document as a digital file (soft copy)
	X	Available online via hyperlink (soft copy)
Link if available online:	https://www.esolutions.free2move.com/document-library/	
Version of file received at point of sale if available online:	1.0	

Technical solutions implemented to meet the requirements of the Regulations

Smart functionality

Requirement	Technical solution adopted to meet the requirement
Charge point is able to send and receive information via a communications network	Yes. OCPP 1.6 JSON over LTE and WiFi, Modbus RTU for local communication with CEM.
Charge point is able to respond to signals or other information received by it by: <ul style="list-style-type: none"> Increasing or decreasing the rate of electricity flowing through the charge point Changing the time at which electricity flows through the charge point 	Yes. It is possible to modulate power draw.
Charge point is capable of using this functionality to provide demand side response services, including response DSR services	Yes. It is possible for a CEM to send set points over a local Modbus RTU connection (Interface B) according to DSR needs.
Charge point has at least one user interface, incorporated in the charge point or otherwise made available to the owner	Yes. The eProWallbox has a display for HMI and can be monitored and configured via a dedicated mobile application.

Electricity supplier interoperability

Requirement	Technical solution adopted to meet the requirement
Charge point is configured such that it will not cease to have smart functionality if the owner changes their electricity supplier	Yes

Loss of communications network access

Requirement	Technical solution adopted to meet the requirement
Charge point is configured such that, in the event it ceases to be connected to a communications network, it will remain capable of charging an electric vehicle	Yes. The device can be configured in a standalone mode (no connection to an OCPP Central System is even attempted), plus it can locally authorize sessions via its Authorization Cache when connected to an OCPP Central System and losing connectivity.

Safety

Requirement	Technical solution adopted to meet the requirement
<p>Charge point is configured such that it will not allow a relevant person to carry out a specified operation where to do so would or may result in a risk to the health or safety of persons.</p> <p>“Relevant persons” means the owner, or an end-user of the relevant charge point who is not the owner.</p> <p>“Specified operation” means:</p> <ul style="list-style-type: none"> • Overriding the default mode of charging during the default charging hours • Overriding the provision of demand side response services • Overriding the random delay 	<p>Yes. The maximum power draw for safety reasons is configured via a hardware knob by the installer, who must be a qualified professional. End users will not be allowed to exceed such a constraint in any operating condition.</p>

Measuring system

Requirement	Technical solution adopted to meet the requirement
<p>On each occasion it is used, the charge point measures or calculates:</p> <ul style="list-style-type: none"> • The electricity it has imported or exported (in watt-hours or kilowatt-hours) 	<p>Yes, On-board meter available (not MID certified)</p>

<ul style="list-style-type: none"> The amount of time for which it is importing or exporting electricity 	
<p>The charge point is configured such that the owner can view the information in reference to:</p> <ul style="list-style-type: none"> Any occasion on which it was used to import or export electricity within the past 12 months Any month within the past 12 months The entirety of the last 12-month period 	Confirmed
<p>The charge point is configured such that it can:</p> <ul style="list-style-type: none"> On each occasion it is used, measure or calculate every one second the electrical power it has imported or exported (in watts or kilowatts) Provide this information via a communications network 	<p>Yes, on-board meter has an Analog frontend working at 8kHz.</p> <p>Via MODbus it possible to send the information provided by the MID meter. Yes Via OCPP</p>
<p>The charge point is configured such that:</p> <ul style="list-style-type: none"> The figures measured or calculated are accurate to within 10% of the actual figure Any inaccuracies are not systematic 	Calibration of internal integrated meter guarantees a 3% accuracy on energy measuring.

Off-peak charging

Requirement	Technical solution adopted to meet the requirement
<p>The charge point:</p> <ul style="list-style-type: none"> Has pre-set default charging hours which are outside of peak hours Offers the owner the opportunity to accept, remove, or change the default charging hours on first use Offers the owner the ability to change, remove, or set default 	<p>Yes, the fleet manager via CPMS can set and modify charging profile, keeping into the consideration peak hours. User can perform the same modifications via App.</p>

<p>charging hours any time after first use</p> <p>unless the charge point is sold with a DSR agreement, configured to comply with the requirements of this agreement, and details of the agreement are included in the statement of compliance</p>	
<p>The charge point is configured:</p> <ul style="list-style-type: none"> • To charge a vehicle during the default charging hours (if any), unless the owner overrides the default mode of charging during this time • Such that the owner can override the provision of demand side response services 	<p>Yes, the user is able to modify and cancel the off-peak hours setting</p>

Randomised delay

Requirement	Technical solution adopted to meet the requirement
<p>The charge point is configured such that it must operate, at each relevant time, with a delay of random duration up to 600 seconds, determined to the nearest second each time</p>	<p>Possible via eSolutions charging APP</p>
<p>The charge point is configured such that the maximum duration of this delay can be remotely increased to up to 1800 seconds if required</p>	<p>Possible via eSolutions charging APP</p>
<p>The charge point is configured such that the random delay will not operate where:</p> <ul style="list-style-type: none"> • The owner or another relevant end-user has manually overridden it • An equivalent random delay has already been applied to the operation of the relevant charge point 	<p>Possible via eSolutions charging APP</p>



<ul style="list-style-type: none">The charge point is responding to a response DSR service	
--	--

Security

Enforcement undertaking for the compliance to the schedule 1 upon evaluation from by OPSS

Test reports

Name of test	Date of test	Outcome	Certificate attached to file?	Notes (e.g., did test occur via third party?)
IT22KVZD 001	15/11/2022	Compliance to “The Electric Vehicles (Smart Charge Points) Regulations 2021” except for “schedule 1”	No	Test Report Issued by TUV Rheinland.