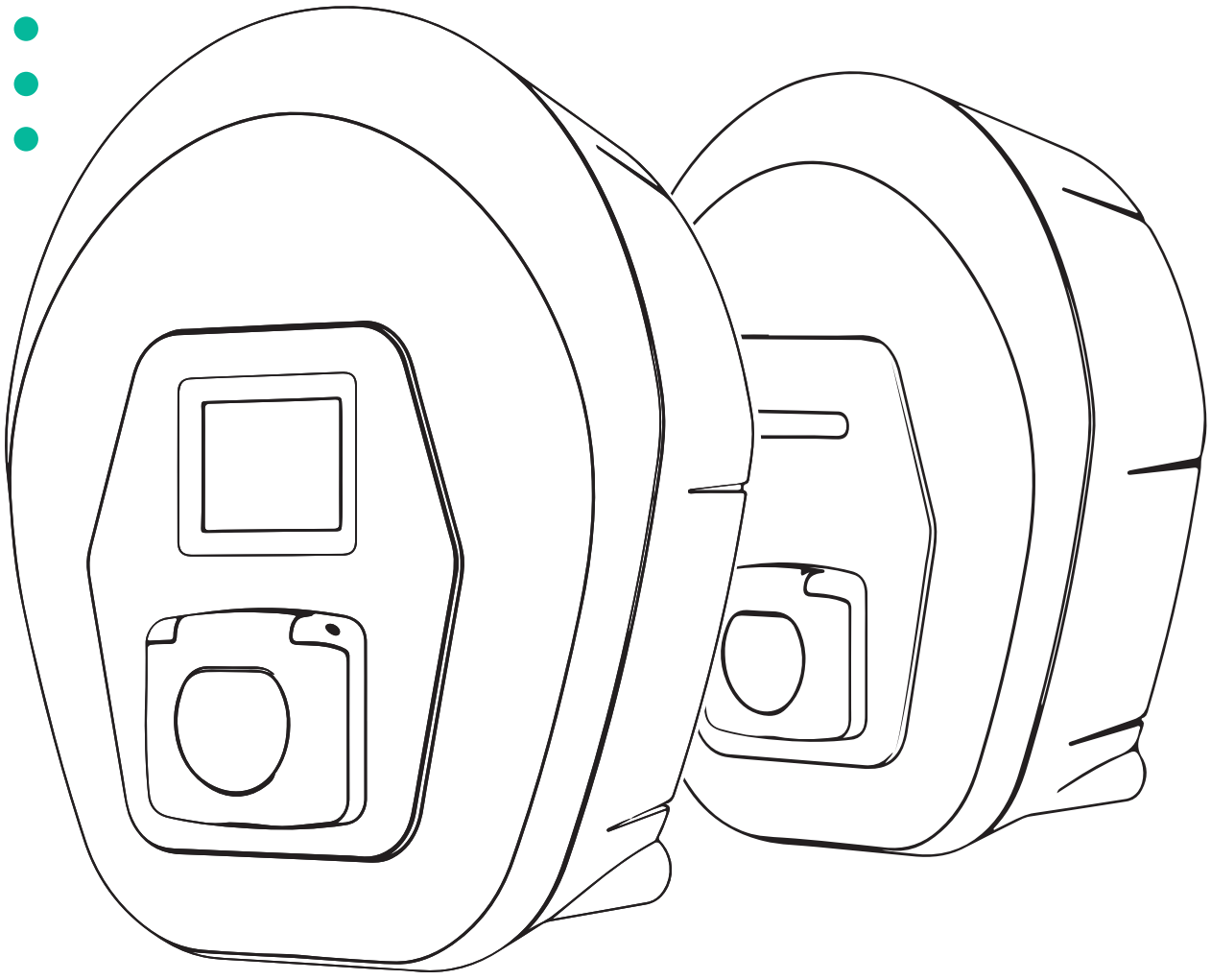
EN

eSolutions
Free2move



Installation manual - Annex

Advanced functionalities setup

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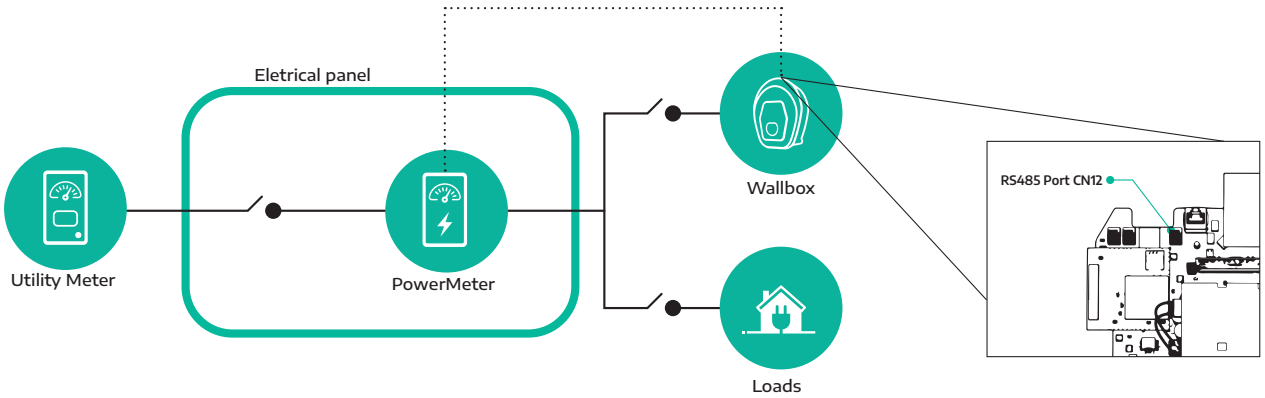
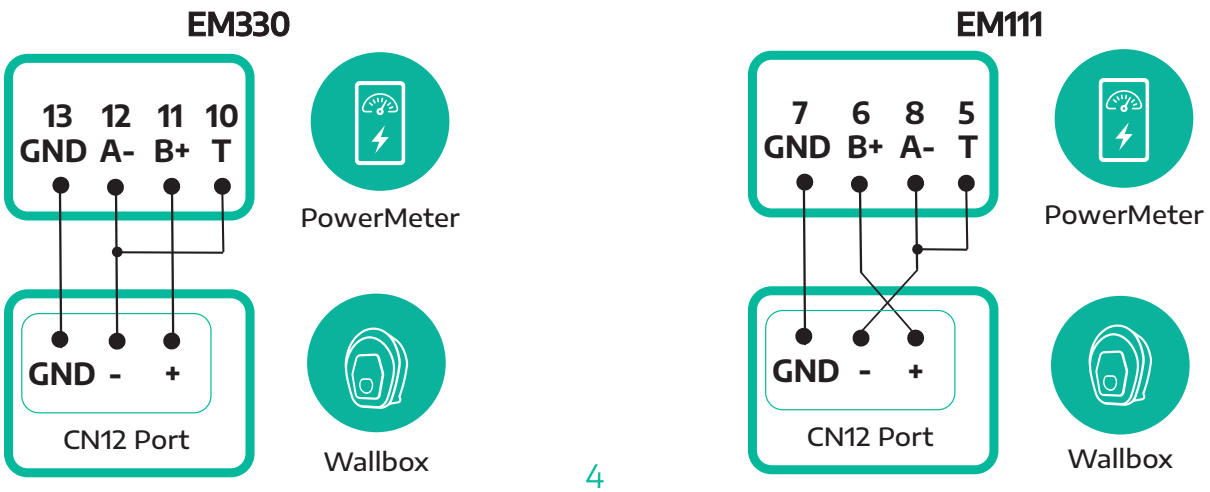
2. DPM 2.0 INSTALLATION

During the installation always refer to the meter installation manual included in the package.

1. Place the Power Meter provided after the main utility meter and before the split power



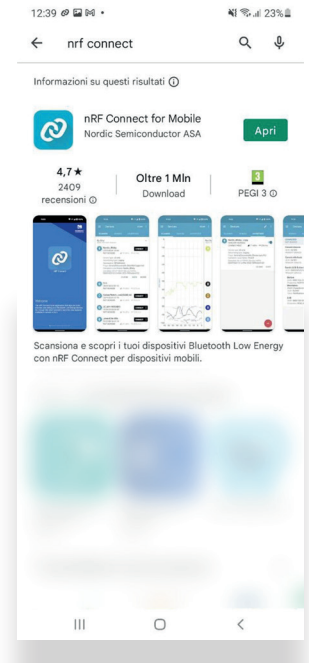
2. For the three-phase or single-phase electrical connection, refer to the dedicated meter installation manual included in the Power Meter package.
3. Feed the Modbus communication cables through the wallbox box sheath (C). Suggested cable: STP class 5E, 0.5 mm^2 section.
4. If included connect the Current Transformers as indicated in the meter installation manual, paying attention to drawn through the clamp the line according to the direction indicated on the sensor. The neutral cable must not be drawn through the clamp.
5. Use the following order for connecting the communication cables from the PowerMeter to the Wallbox. Starting from left on the wallbox RS485 output port CN12

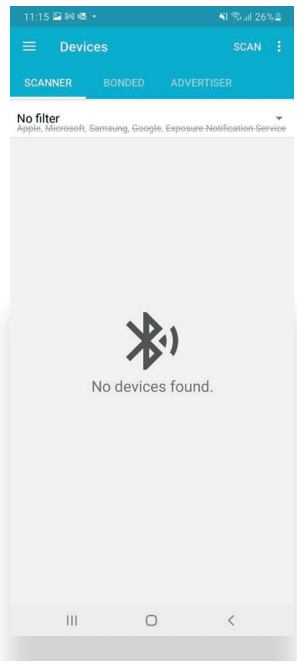


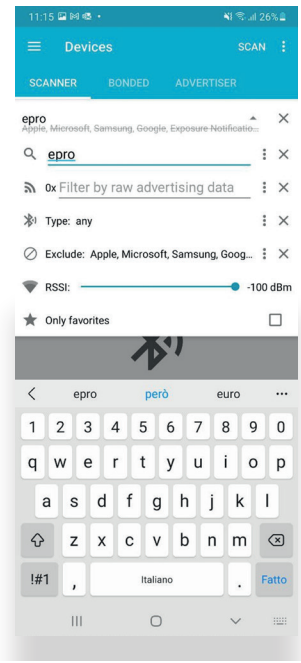
3. PROCEDURE

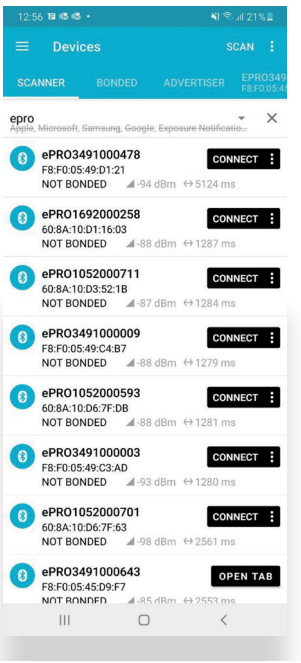
The preliminary steps for the next operations are the following:

1. Download and Install the application nRF Connect on your smartphone. F2meS suggests using an Android operating system
2. Open nRF Connect and Set a filter (e.g. “ePro”) in order to see only eProWallboxes in the homepage
3. Select Scan on the top right corner to identify the eProwallbox to be connected via Bluetooth through its Bluetooth name
4. Once connected to the desired eProwallbox, select Unknown Services to begin with the configuration

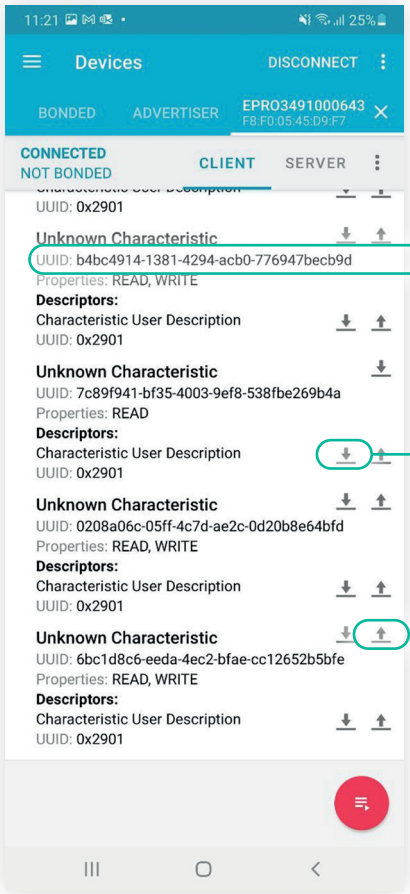








5. The Unknown Services contains all the parameters that can be written and read through Bluetooth



The UUID is associated to a specific functionality

By clicking on the down arrow the specifics of the parameters will be displayed

By clicking on the up arrow a new command can be set through Bluetooth

3.1 Energy meter Configuration

1. When powering up the Power Meter for the first time, tap&hold for 1.5 second, the central display button, at the bottom, until the display shows the page where to insert the password, initially set to 0000.
   You can edit each value using left or right display button and confirm each time by tap&holding the central display button.
2. For the three-phase Power Meter only, the system mode: **3Pn**
3. To configure the Power Meter, tap&hold the left display button and set:
   a. **Modbus address: 1**
   b. **BaudRate: 38.4 kbps**
   c. **Parity bit: Even**
4. Set the model of Power Meter installed on **nRF Connect** app:
   Parameter: DPM_TYPE
   This field allows to select the Power Meter model installed
   UUID: f0f924f8-34ce-4f1d-9791-b1b19ff3ffe4
   TYPE: Uint8, select UINT8 on the app
   VALUE:
   00 → FINDER 3ph (212)
   01 → FINDER 1ph (210)
   02 → GAVAZZI EM330DINAV53HS1X
   03 → GAVAZZI EM111DINAV51XS1X
5. If installed, set the Transformer Ratio KI on **nRF Connect** app:
   Parameter: TRANSFORMER_RATIO_KI
   This value allows to set the Current Transformer ratio according to the installed sensors. The value on the app is expressed in Hexadecimal
   UUID: 0c8d04fc-247c-4119-ab10-77ad3779310c
   TYPE: Uint32, select UINT32 on the app
   VALUE: Set the Transformer Ratio KI according to the values printed on the sensor.

   E.g. 100/5 → **KI = 20 (Hex value → 14)**
   150/5 → **KI = 30 (Hex value → 1E)**

3.2 DPM

a. DPM PMAX

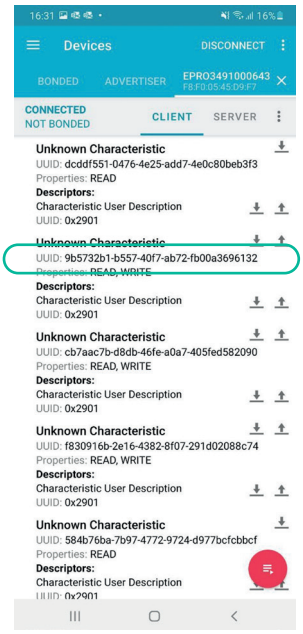
Parameter: DPM_PMAX

This field contains the contractual power expressed in Watt

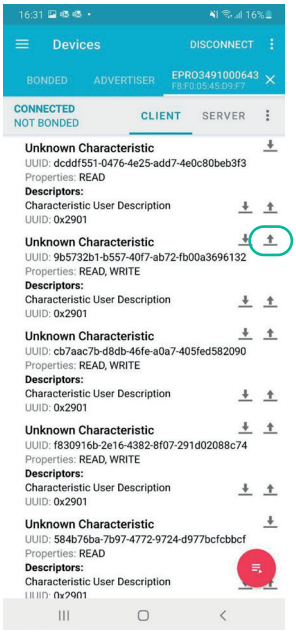
UUID: b4bc4914-1381-4294-acb0-776947becb9d

TYPE: Uint32, select UINT32 on the app

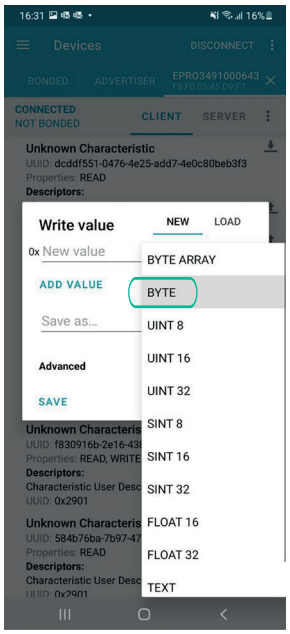
VALUE: min value 0, max value 70000



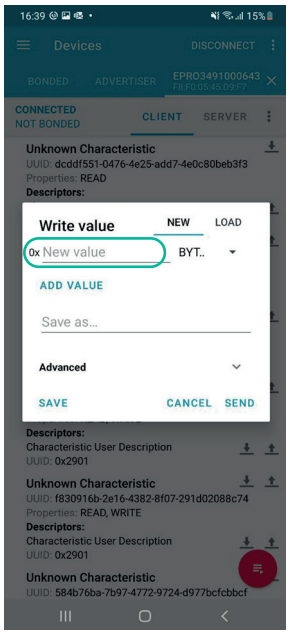
1. Identify the **UUID** of the DPM Pmax parameter



2. Click on the **up arrow** next to the Unknow characteristic

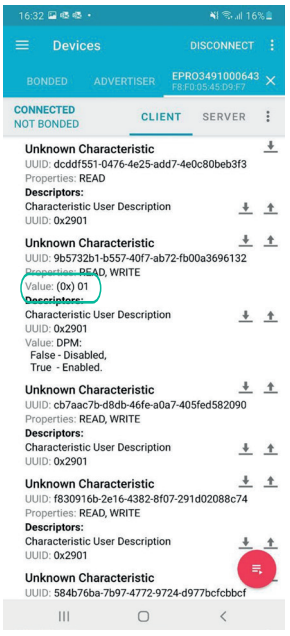


3. Select **UINT32**



4. In "New value" field insert the contractual power value, expressed in Watt, from 0 to 70000.

Then click **SEND**



5. The new value will appear on the main page, expressed in bytes

b. DPM ENABLING

Parameter: DPM_ENABLED

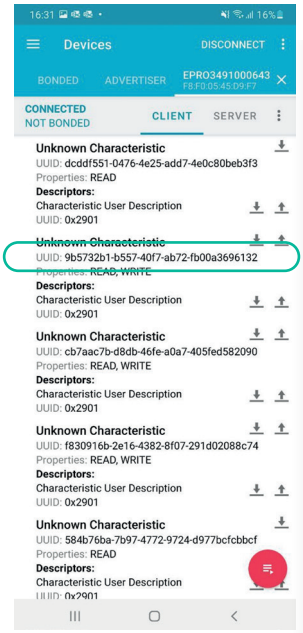
This feature enable the DPM functionality

UUID: 9b5732b1-b557-40f7-ab72-fb00a3696132

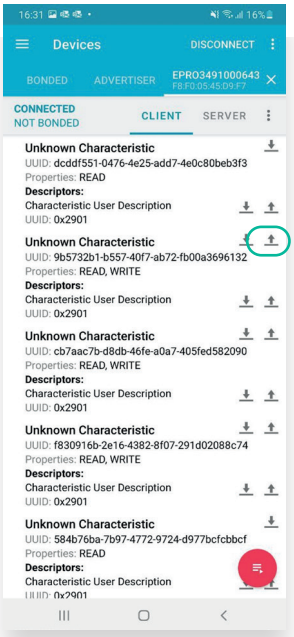
TYPE: Boolean, select BYTE on the app

VALUE: 01 enabling, 00 disabling

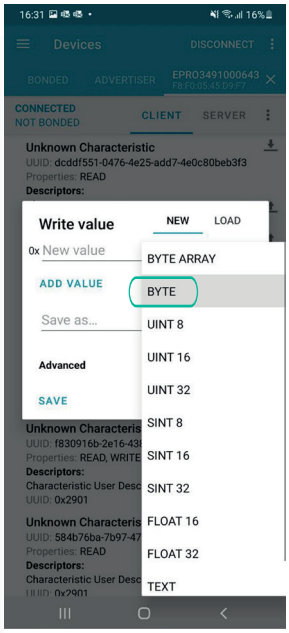
C. At the end of the process, to make the changes effective, restart the wallbox



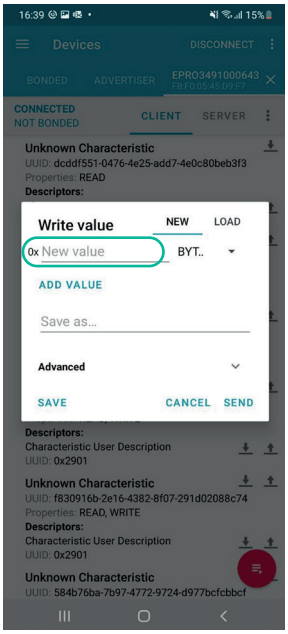
1. Identify the **UUID** of the DPM Enabling parameter



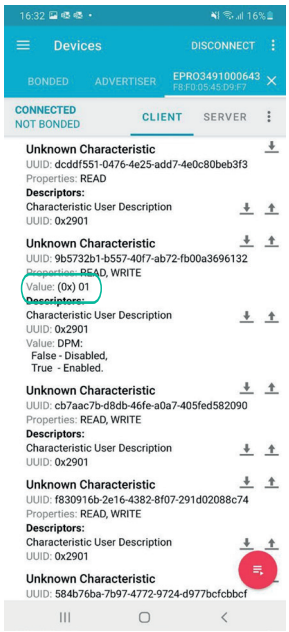
2. Click on the **up arrow** next to Unknow characteristic



3. Select **BYTE**



4. In "New value" field insert:
01 to ENABLE
00 to DISABLE
Then click **SEND**



5. The new value will appear on the main page

3.3 LOAD UNBALANCE

a. Load unbalance enabling

Parameter: LOAD_UNBALANCE_ENABLED

This function enables the load unbalance settings

UUID: aa29e099-f9dc-40a4-8612-afbb78c612df

TYPE: boolean, select BYTE on the app

VALUE:

00 → FALSE, disabled

01 → TRUE, enabled

b. Load unbalance current

Parameter: LOAD_UNBALANCE_CURRENT

This value defines the max allowable phases current unbalance expressed in mA

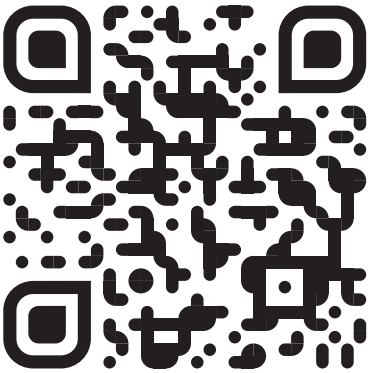
UUID: f9217d22-b703-4a2a-a565-38662afc1a9c

TYPE: Uint32, select UINT32 on the app

VALUE:

0 → Min value

32000 → Max value, in mA



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