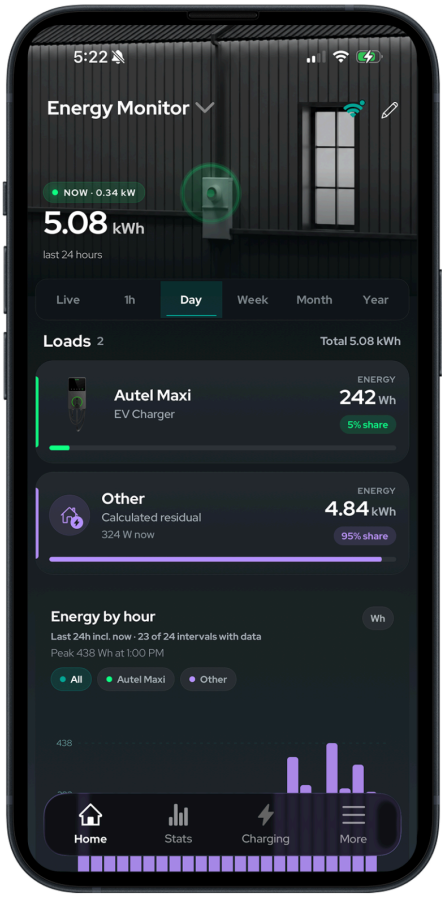
NeoCharge

NeoCharge Energy Monitor <> EMS Setup Guide

OCPP Energy Management System – Pairing and Commissioning

For use by licensed electricians and qualified installers



This guide covers the software and network setup required to pair the NeoCharge Energy Monitor with an OCPP-compatible EVSE (e.g. Autel MaxiCharger) to form a fully functional Energy Management System (EMS). Complete the hardware installation (see the Energy Monitor Electrical Installation Guide) before beginning the EMS pairing between the Energy Monitor and the Autel charger.

Overview

The NeoCharge Energy Monitor manages the EV charger over OCPP — a digital/network protocol (WiFi or Ethernet) that enables charger control, fail-safe behavior, and energy telemetry. This is a software/network connection, not an in-line power connection.

This guide pertains specifically to an EMS setup using the Autel MaxiCharger.

The setup runs in seven steps:

Step 1	Install the Autel EVSE — wired and powered on
Step 2	Connect the EVSE to the Autel app over Bluetooth and START the firmware update (can take up to 10 minutes)
Step 3	Install the Energy Monitor hardware while the EVSE firmware updates — photograph the Energy Monitor back label
Step 4	Pair the charger to the NeoCharge app (copy OCPP fields from NeoCharge into the Autel app)
Step 5	Connect the Energy Monitor to the NeoCharge app and get it on the homeowner's local WiFi network
Step 6	Pair the Energy Monitor and EVSE to form the EMS (using the installer PIN on the EM label)
Step 7	Plug in and charge — verify both devices read the same current

Need help?

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Step 1: Install the Autel EVSE

Install, wire, and power on the Autel EVSE per the manufacturer's installation manual. The charger must be powered on before Step 2 — install the charger first so its firmware update (the longest wait in this process) can run independently while you complete the rest of the installation.

Confirm before proceeding:

- Autel EVSE is installed, wired, and powered on
- Homeowner's phone is available — required for app-based setup

Step 2: Connect EVSE to Autel App and Start the Firmware Update

The EVSE must be connected to the EV charger's OEM app and running the latest firmware before it can be paired to NeoCharge. Firmware updates can take up to 10 minutes — start the update now, then move straight to Step 3 and install the Energy Monitor hardware while it runs.

Using the homeowner's phone:

1. Download the Autel Charge app from the App Store or Google Play
2. Open the app and create or log into an Autel account
3. Enable Bluetooth on the phone and stand near the EVSE
4. In the Autel app, add the EV charger by following the on-screen prompts to connect to the charger over Bluetooth, and then join it to the home WiFi network
5. Check for a firmware update and start it now if available.

ⓘ **The Bluetooth pairing range is typically 10–30 feet. The homeowner's phone should be within a short distance of the charger during Bluetooth setup.**

⚠ **IMPORTANT: Do not power off the main breaker while the EVSE is updating.**

Use the Autel update time for Step 3 prep (unbox the Energy Monitor, plan placement, remove panel cover screws). If the update is still running when you're ready to shut off the main breaker, wait for it to finish first.

Step 3: Install the Energy Monitor Hardware

Complete the Energy Monitor hardware installation per the NeoCharge Energy Monitor Electrical Installation Guide (panel work, current sensors, wire harness, antenna or Ethernet).

View NeoCharge Energy Monitor Hardware installation Guide

https://getneocharge.com/pages/neo-em-install-guide

⚠ **IMPORTANT: Before closing the electrical panel, photograph the label on the back of the NeoCharge Energy Monitor. You will need the installer PIN and serial number printed on this label in Step 6.**

Confirm before proceeding:

- NeoCharge Energy Monitor is mounted and powered (LED indicator is on)
- Panel cover is back on and power to the home is restored
- Photo of the Energy Monitor back label has been taken
- EVSE firmware update has completed and the charger has rebooted (check the Autel app)

Step 4: Connect the Autel EVSE to the NeoCharge App (OCPP)

This step links the charger to the NeoCharge platform by entering the OCPP server credentials from the NeoCharge app into the Autel app. The electrician performs this step using the homeowner's phone.

On the homeowner's phone:

1. Open the NeoCharge app. If not yet downloaded, scan the QR code on the Getting Started Guide or visit the App Store / Google Play
2. Create or log into the homeowner's NeoCharge account
3. Tap Add Device > OCPP Charger and follow the prompts to generate OCPP credentials
4. The app will display the following fields — copy them exactly one at a time: OCPP Server URL, OCPP Charge Point ID, OCPP Password (if shown)

Switch to the Autel app:

1. Navigate to the connected charger's settings
2. Find the OCPP configuration section (sometimes listed as "Cloud" or "Server Settings")
3. Enter the OCPP Server URL, Charge Point ID, and Password exactly as shown in the NeoCharge app
4. Save the settings — the charger will reboot and attempt to connect to the NeoCharge platform

> ⓘ **After saving, allow 60–90 seconds for the charger to reconnect. A solid or slowly blinking status LED typically indicates a successful cloud connection. Refer to the EVSE manufacturer's guide for LED status codes.**

Step 5: Connect the Energy Monitor to the NeoCharge App

The Energy Monitor must be connected to the homeowner's local network (WiFi or Ethernet) and registered in the NeoCharge app before the EMS can be formed.

On the homeowner's phone:

1. In the NeoCharge app, tap Add Device > Energy Monitor
2. Scan the QR code on the Energy Monitor (or enter the serial number manually)
3. Follow the in-app prompts to connect the Energy Monitor to the local WiFi network or confirm the wired LAN connection
4. Wait for the app to confirm the device is online — this may take 60–90 seconds

Step 6: Pair the Energy Monitor and EVSE to Form the EMS

With both devices registered in the NeoCharge app, you can now pair them together to activate Energy Management System (EMS) control.

You will need:

- The installer PIN printed on the back label of the Energy Monitor (photographed in Step 3)
- The homeowner's phone with both devices visible in the NeoCharge app

In the NeoCharge app:

1. Navigate to the Energy Monitor device page
2. Tap Set Up EMS or Pair Charger
3. Select the EVSE from the list of available devices
4. When prompted, enter the installer PIN from the Energy Monitor back label
5. Confirm the pairing — the app will link the two devices and apply the EMS configuration
6. The installer will confirm the service/panel rating and charging limits during in-app setup

> ⓘ **The installer PIN is required to prevent unauthorized changes to the Energy Management System. Once pairing is complete, EMS settings are locked and can only be modified using this PIN.**

Step 7: Verify — Plug In and Charge

Perform a live charging test to confirm the EMS is operating correctly. Both the Energy Monitor and the EVSE should report matching current readings.

Verification steps:

1. Plug the charger into the EV and initiate a charging session
2. In the NeoCharge app, the Energy Monitor and EVSE will compare readings to ensure that both are properly synchronized and calibrated.
3. In the Autel app (or NeoCharge app EVSE view), check the current reported by the charger
4. Readings should match within ±1 A (or 5%). If readings differ significantly, recheck current sensor orientation (CT clamp 'Load/Breaker' label, or Rogowski coil directional arrow) and port assignments per the Electrical Installation Guide.

Setup Complete

Once the live current readings are confirmed, the NeoCharge EMS setup is complete. The Energy Monitor will now manage the EVSE dynamically — adjusting charging current in real time based on whole-home energy consumption to prevent panel overload.

Hand off to homeowner:

- The homeowner can monitor energy usage and charging sessions in the NeoCharge app
- EMS settings are now locked — the installer PIN is required for any future adjustments
- Advise the homeowner to keep their NeoCharge app updated for the latest features and firmware

Advice and expected behavior:

- Charging may slow when the home is under heavy load (that's the EMS working)
- Changing the WiFi network/password later requires re-onboarding both devices.

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