**Robotina d.o.o.**
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# 1. Commissioning

Strictly follow Safety instructions!

## 1.1. Mounting

Mount RDX Charger (EVSE), PM1-E-D & PM3-E-D power sensor as well as WM-1 & WR-1 to a suitable place. For more details, please read Hardware.

## 1.2. Wiring

Connect EVSE to the home LAN. Wire WM-1 module with power sensor and WR-1 relay with device (e.g. heat pump, el. radiator). For more details, please read Wiring.

## 1.3. Configuration

Install and run RDX Charger on your PC. Use **autodetect** button to discover EVSE in local network. Enter **names**, choose **icons** for all sources and consumers. Add WM-1 and WR-1 module by running **WM / WR binding** and press **Scan w-less dev.** for power sensors and wireless relay.

### 1.3.1. Setting device management features

For each consumer we can set:

- **sub**: mark device as a submeter if device is not part of internal network and/or is not connected as intended by default. Energy division for this device will be ignored.
- **man. time**: the time is in minutes for the manual override. It serves to ensure that the user can ensure a minimum validity of the manual switchover.
- **P nominal**: nominal power in watts used for consumers without power sensor. It ensures energy consumption calculation while in active mode.
- **timetable checkbox**: enable or disable the timetable for each device.

### 1.3.2. Enable power sensor from compatible systems

HEMS will automatically detect compatible

- battery systems **eStore** and
- home automation systems **HIQ Home**

which are in the same local network.

Only the first system is detected, if there is more than one it is necessary to enter the NAD number of the desired system manually.

if **eStore** is **enabled**, HEMS will read:

- **grid** power-sensor
- power-sensor for the **first PV Plant** and
- power-sensor of the **first storage** system

From the **enabled HIQ Home** system, HEMS will automatically read the **grid** power-sensor.

### 1.3.3. Internet access

RDX Charger is connected to the internet via IOT-L2-2 linker.

### 1.3.4. Digital output

RDX Charger is supporting up to 8 digital outputs by WR-1 module (WR 1..WR 8).

- HEMS Configurator → settings page, define digital output for consumer (e.g. Digital-2 & Digital-3),

- HEMS Configurator → home page, toggle ON/OFF states for digital-2 and digital-3.

**Note**: Nominal power **P nominal** is suitable for consumer(s) without connected power sensor. It is used for consumed energy calculation during active mode.

### 1.3.5. IO mux

HEMS Configurator → IO mux page allows setting of output types for WR-1 module(s):

- WR 1 → to Router reset, when conditions for router reset are met, WR 1 module will change relay state (turns ON/OFF router wired to WR module),
- or when WR 5 → Digital-2, it means that change of digital2 (consumer 2) reflects on WR 5 relay state.

### 1.3.6. Permanent memory

HEMS Configurator → settings page → save paramenters
After parameters modification, it is necessary to save changes to the permanent memory since at startup RDX Charger always reads parameters from the permanent memory.



### 1.3.7. Backup / restore to PC

HEMS Configurator allows you to backup and restores all parameters to PC.

### 1.3.8. Phase alignment and limiter settings

Under limiter page set correct phase order to align phases of each device. Set correct main fuse limit [A] to protect the main grid fuse from over current. Check devices that can be managed by limiter and set correct limiter priority. Choose from no limiter, limit last, limit second, limit first. Max expected device current consumption is dynamically calculated and does not need to be set. In case device is an EV charging station, manually set max current for this device.