

EV fleet

RDX charger supports connection of up to 8 RDX Chargers - EV fleet.

In such configuration only one RDX Charger (master) is in charge of other connected chargers (slave). Master RDX Charger monitors:

- current draw by other slave chargers and in real time allocates (limits) available capacity allowing them to charge without overloading,
- data from slaves such as power, energy & settings and synchronize them with cloud service, therefore no need for extra **IOT linker** on slave RDX Charger.

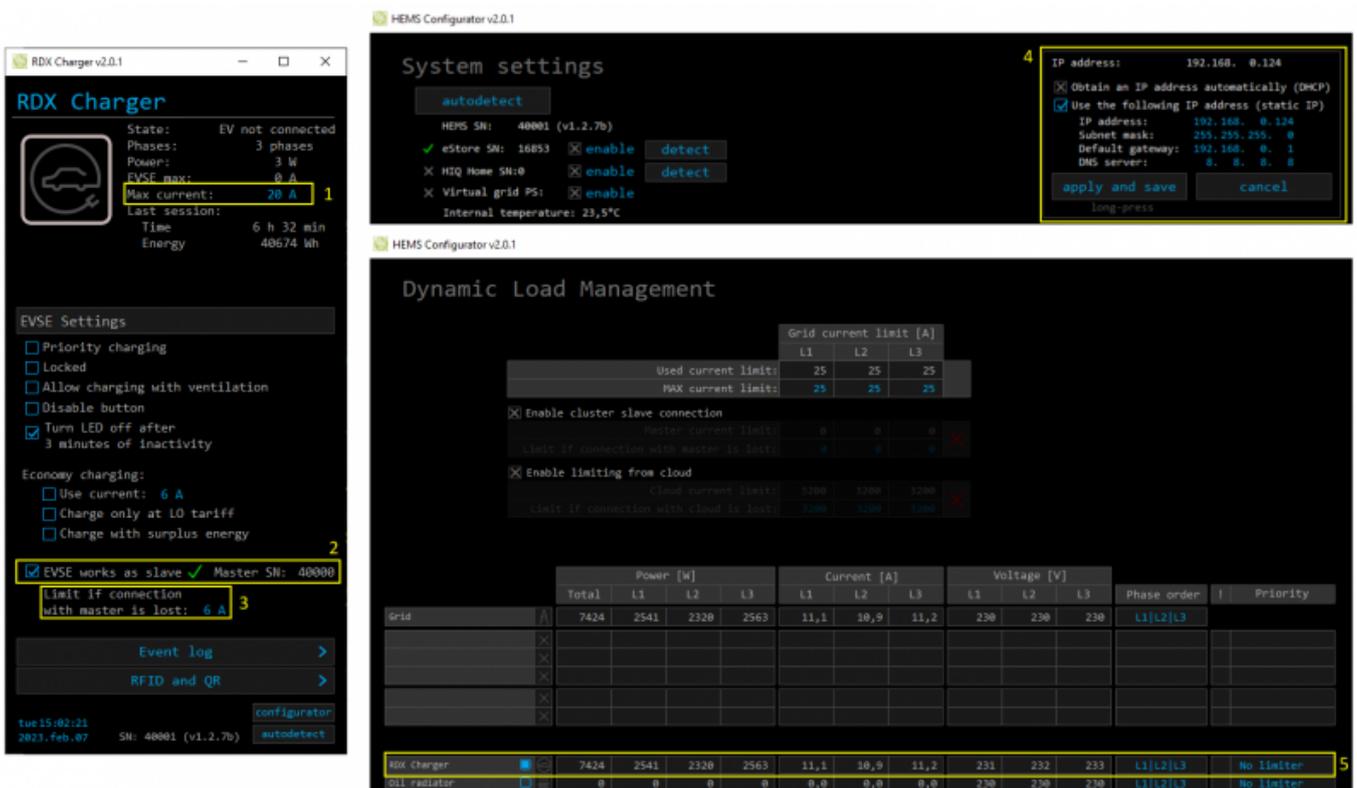
Note: If there is no grid power sensor, master charger enables limiting of complete ev fleet by virtual grid power sensor.



Only one RDX charger is master in ev fleet !

Procedure to set RDX Charger as slave is as follows:

- **RDX Charger** → set Max current (1)
- **RDX Charger** → enable “EVSE works as slave” (2) Master SN presents serial number of master charger, it will appear once connection is established.
- **RDX Charger** → set current if connection with master is lost (3)
- **HEMS Configurator** → settings → set static IP (it's recommended) (4)
- **HEMS Configurator** → limiter → set “No limiter” for RDX Charger (5)



The screenshots illustrate the configuration process for an RDX Charger as a slave in an EV fleet. The RDX Charger interface shows the 'Max current' set to 20 A (1), 'EVSE works as slave' checked (2), and 'Limit if connection with master is lost' set to 6 A (3). The HEMS Configurator interface shows 'System settings' with a static IP address of 192.168.0.124 (4) and 'Dynamic Load Management' with 'No limiter' selected for the RDX Charger (5).

Grid current limit [A]			
	L1	L2	L3
Used current limit:	25	25	25
MAX current limit:	25	25	25

Power [w]				Current [A]			Voltage [v]			Phase order	Priority	
Total	L1	L2	L3	L1	L2	L3	L1	L2	L3			
Grid	7424	2541	2320	2563	11,1	10,9	11,2	230	230	230	L1 L2 L3	
Max Charger	7424	2541	2320	2563	11,1	10,9	11,2	231	232	233	L1 L2 L3	No limiter
Oil radiator	0	0	0	0	0,0	0,0	0,0	230	230	230	L1 L2 L3	No limiter

Procedure to set RDX Charger as master is as follows:

- HEMS Configurator → settings → output column → select “EVSE RDX external” at desired position (1). Note that “EVSE inter.” is reserved and can't be changed!

The screenshot shows the HEMS Configurator v2.0.1 interface. The main window is titled "System settings" and includes sections for "autodetect", "SOURCES", "CONSUMERS", and "Permanent memory parameters".

In the "CONSUMERS" section, there is a table with columns: icon, source management, meter, sub, output, man.time, and P nominal. The "RDX Charger" row is highlighted, and a red arrow points to the "output" column, which contains the text "EVSE inter.". The "output" column for other rows contains "Digital-8".

icon	source management	meter	sub	output	man.time	P nominal
Grid	OK	VIRTUAL PH	/	/	/	/
/	X /	/	X	/	0min	✓
/	X /	/	X	/	0min	✓
/	X /	/	X	/	0min	✓
/	X /	/	X	/	0min	✓
/	X /	/	X	/	0min	✓
/	X /	/	X	/	0min	✓
/	X /	/	X	/	0min	✓
El.heater	X /	/	X	Digital-8	0min	2500W ✓

The "Permanent memory parameters" section includes buttons for "init parameters", "save parameters", "read parameters", "backup", and "restore". There is also a checkbox for "autosave parameters" and a "long-press" indicator.

- HEMS Configurator → settings → enter name and select icon (2). Message “Error - device is not responding” may appear as IP address is not defined yet.

HEMS Configurator v2.0.1

System settings

autodetect

HEMS SN: 31498 (v1.2.7b)

✓ eStore SN: 16853 enable

✗ HIQ Home SN:0 enable

✓ Virtual grid PS: enable

Internal temperature: 41,6°C

Modbus (wired) cycle time: 721ms Modbus (wireless) cycle time: 266ms Modbus (TCP) cycle time: 1415ms

IP address: 192.168. 0.231

Obtain an IP address automatically (DHCP)

Use the following IP address (static IP)

IP address: 192.168. 0.231

Subnet mask: 255.255.255. 0

Default gateway: 192.168. 0. 1

DNS server: 8. 8. 8. 8

long-press

SOURCES	icon	source management	meter	sub	new device
Grid	Grid	✓ OK			VIRTUAL PH
/	/	add del	/	/	/
/	/	add del	/	/	/
/	/	add del	/	/	/
/	/	add del	/	/	/
/	/	add del	/	/	/
Unknown	/				

Error: no response from device.
[add]
[del] - clear type

CONSUMERS	icon	consumer management	meter	sub	output	man.time	P nominal
RDX Charger	Electric car	✓ OK	PM3-E-D	✗	EVSE Inter.	0min	<input checked="" type="checkbox"/>
/	/	add del	/	✗	/	0min	<input checked="" type="checkbox"/>
/	/	add del	/	✗	/	0min	<input checked="" type="checkbox"/>
/	/	add del	/	✗	/	0min	<input checked="" type="checkbox"/>
40105	Electric car	⚠ Error - device is not responding	EVSE RDX ex	✗	EVSE RDX ex	2	0min <input checked="" type="checkbox"/>
/	/	add del	/	✗	/	0min	<input checked="" type="checkbox"/>
40001	Electric car	⚠ Error - device is not responding	EVSE RDX ex	✗	EVSE RDX ex	0min	0min <input checked="" type="checkbox"/>
/	/	add del	/	✗	/	0min	<input checked="" type="checkbox"/>
El.heater	Water boiler	✗ /	/	✗	Digital-8	0min	2500W <input checked="" type="checkbox"/>
/	/	add del	/	✗	/	0min	<input checked="" type="checkbox"/>
Background	Home						

Permanent memory parameters

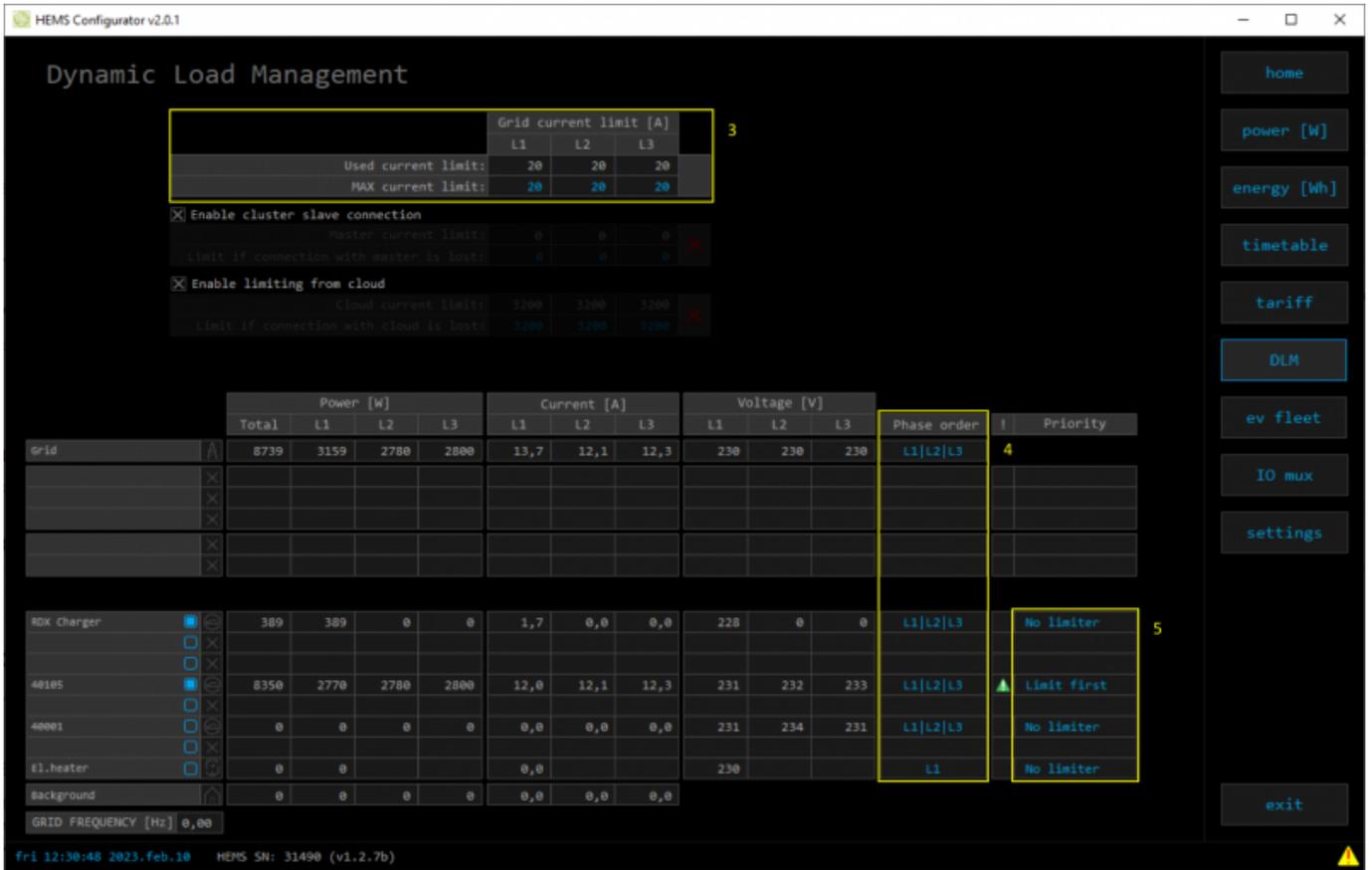
Scan w-less dev. WM / WR binding

long-press

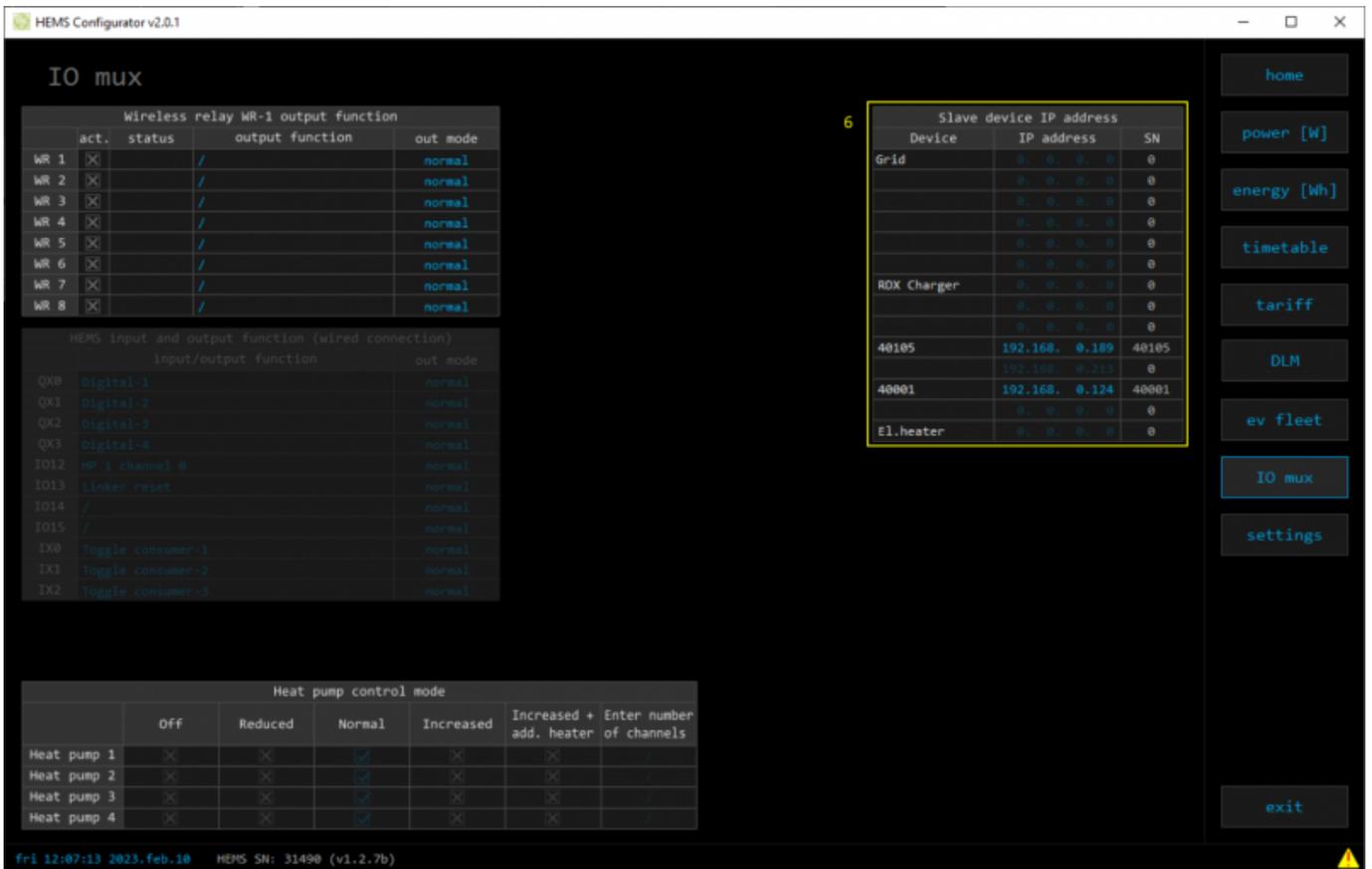
autosave parameters

Fri 12:05:16 2023.feb.10 HEMS SN: 31498 (v1.2.7b)

- HEMS Configurator → limiter:
- (3) enter allowed current value of grid fuses in case of connected grid power sensor, or max current limit of complete ev fleet if there is virtual grid active
- (4) make sure to configure phase order for grid and RDX Chargers correct as dynamic load management may not work properly. **Double check!**
- (5) select limiter priority for chargers: no limiter, limit last (last to be limited), limit second, limit first (first to be limited)



- HEMS Configurator → IO mux → enter IP address of slave RDX Charger (6). Serial number (SN) will be listed automatically once connection is established.



- HEMS Configurator → ev fleet:

- (7) master RDX Charger,
- (8) connected slave RDX Charger with enabled control by master (green tick) and
- (9) connected slave RDX Charger 3 phases with disabled control (red X) → master can not control it! To enable control, run RDX Charger app on slave charger and enable “EVSE works as slave”.

