

EV fleet

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

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

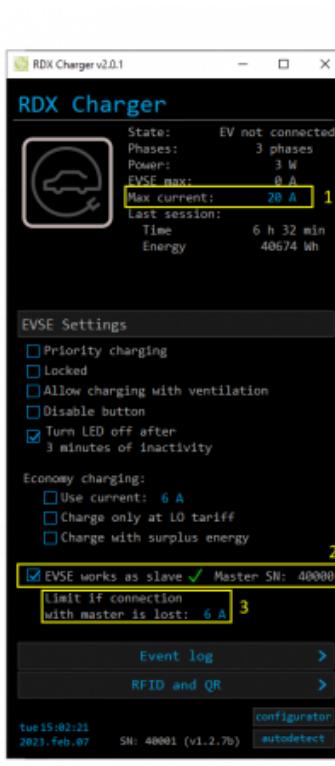
Note: If there is no grid power sensor, master charger enables limiting of complete ev fleet by virtual grid power sensor.



Only one RDC charger is master in ev fleet !

Procedure to set RDC Charger as slave is as follows:

- [RDC Charger](#) → set Max current (1)
- RDC Charger → enable “EVSE works as slave” (2) Master SN presents serial number of master charger, it will appear once connection is established.
- RDC 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 RDC Charger (5)



System settings

autodetect

HEMS SN: 40001 (v1.2.7b)

✓ eStore SN: 16853 enable

✗ HQ Home SN: enable

✗ Virtual grid PS: enable

Internal temperature: 23,5°C

IP address: 192.168.0.124
 Obtain an IP address automatically (DHCP)
 Use the following IP address (static IP)
 IP address: 192.168.0.124
 Subnet mask: 255.255.255.0
 Default gateway: 192.168.0.1
 DNS server: 8.8.8.8

long-press

Dynamic Load Management

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

Enable cluster slave connection

Master current limit			
L1	L2	L3	
Used current limit:	0	0	0
MAX current limit:	0	0	0

Limit if connection with master is lost

Enable limiting from cloud

Cloud current limit			
L1	L2	L3	
Used current limit:	3200	3200	3200
MAX current limit:	3200	3200	3200

Limit if connection with cloud is lost

Power [W]

Total	L1	L2	L3	
Grid	7424	2541	2320	2563

Current [A]

L1	L2	L3
11,1	10,9	11,2

Voltage [V]

L1	L2	L3
230	230	230

Phase order

L1 L2 L3

Priority

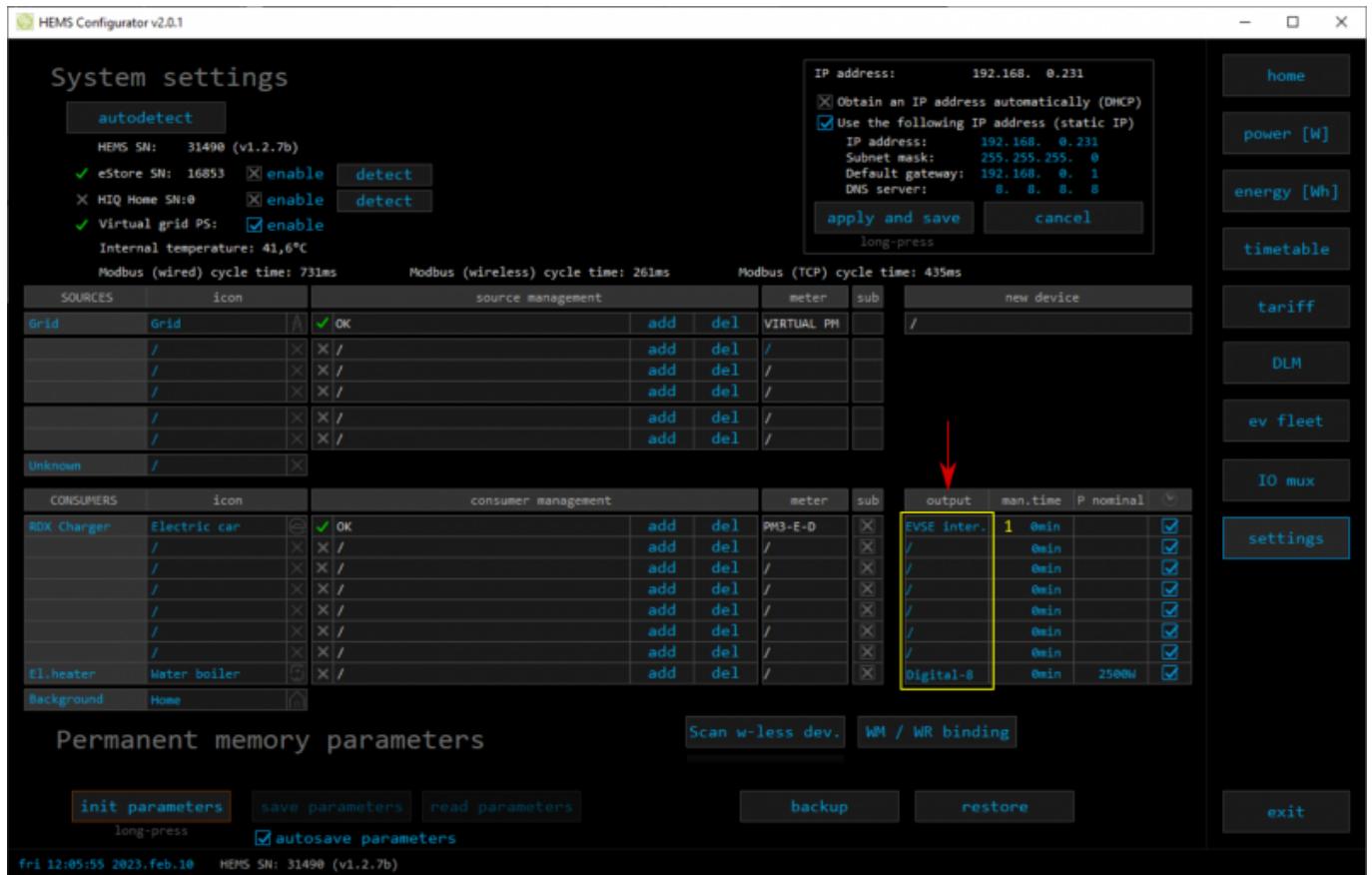
|--|

5

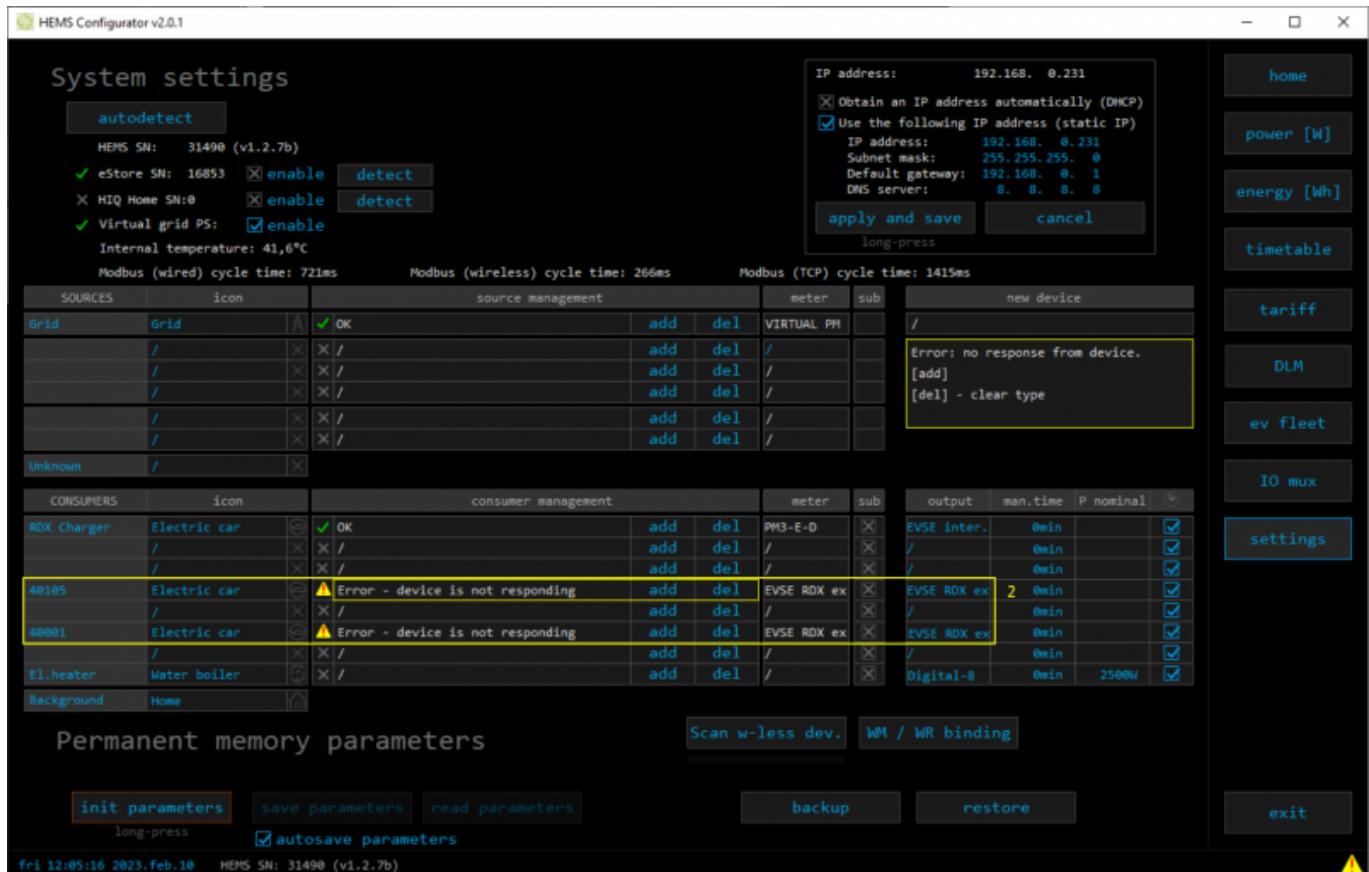
RDX Charger	Power [W]	Current [A]	Voltage [V]	Phase order	Priority
Oil radiator	0	0	0	L1 L2 L3	No limiter

Procedure to set RDC Charger as master is as follows:

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



- **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 → 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 RDC 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 v2.0.1

Dynamic Load Management

Grid current limit [A]

	L1	L2	L3
Used current limit:	20	20	20
MAX current limit:	20	20	20

3

Enable cluster slave connection

Master current limit:	0	0	0
Limit if connection with master is lost:	0	0	0

Enable limiting from cloud

Cloud current limit:	3200	3200	3200
Limit if connection with cloud is lost:	3200	3200	3200

Phase order

1	Priority
L1 L2 L3	4

Power [W]

Total	L1	L2	L3	
Grid	8739	3159	2780	2800
RDX Charger	389	389	0	0
40105	8350	2770	2780	2800
40001	0	0	0	0
El.heater	0	0		
Background	0	0	0	0
GRID FREQUENCY [Hz]	0,00			

Current [A]

L1	L2	L3	
Grid	13,7	12,1	12,3
RDX Charger	1,7	0,0	0,0
40105	12,0	12,1	12,3
40001	0,0	0,0	0,0
El.heater	0,0		
Background	0,0	0,0	0,0

Voltage [V]

L1	L2	L3	
Grid	230	230	230
RDX Charger	228	0	0
40105	231	232	233
40001	231	234	231
El.heater	230		
Background	0,0	0,0	0,0

Phase order

1	Priority
L1 L2 L3	4

Priority

1	Priority
L1 L2 L3	5

IO mux

settings

exit

fri 12:30:48 2023.feb.10 HEMS SN: 31490 (v1.2.7b)

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

HEMS Configurator v2.0.1

IO mux

Wireless relay WR-1 output function

act.	status	output function	out mode
WR 1	×	/	normal
WR 2	×	/	normal
WR 3	×	/	normal
WR 4	×	/	normal
WR 5	×	/	normal
WR 6	×	/	normal
WR 7	×	/	normal
WR 8	×	/	normal

HEMS input and output function (wired connection)

input/output function	out mode
QX0 Digital-1	normal
QX1 Digital-2	normal
QX2 Digital-3	normal
QX3 Digital-4	normal
IO12 HP 1 channel 0	normal
IO13 Linker reset	normal
IO14 /	normal
IO15 /	normal
IX0 Toggle consumer-1	normal
IX1 Toggle consumer-2	normal
IX2 Toggle consumer-3	normal

Slave device IP address

Device	IP address	SN
Grid	0.0.0.0	0
	0.0.0.0	0
	0.0.0.0	0
	0.0.0.0	0
	0.0.0.0	0
	0.0.0.0	0
RDX Charger	0.0.0.0	0
	0.0.0.0	0
	0.0.0.0	0
40105	192.168. 0.189	40105
	192.168. 0.213	0
40001	192.168. 0.124	40001
	0.0.0.0	0
El.heater	0.0.0.0	0

Heat pump control mode

	Off	Reduced	Normal	Increased	Increased + add. heater	Enter number of channels
Heat pump 1	×	×	✓	✗	✗	/
Heat pump 2	×	✗	✓	✗	✗	/
Heat pump 3	×	✗	✓	✗	✗	/
Heat pump 4	✗	✗	✓	✗	✗	/

exit

fri 12:07:13 2023.feb.10 HEMS SN: 31490 (v1.2.7b)

- HEMS Configurator → ev fleet:

(7) master RDC Charger,

(8) connected slave RDC Charger with enabled control by master (green tick) and

(9) connected slave RDC Charger with disabled control (red X) → master can not control it! To enable control, run RDC Charger app on slave charger and enable “EVSE works as slave”.

