

# Dynamic Load Management

RDC Charger supports power consumption (current draw) control to prevent circuit breaker tripping (overloading).

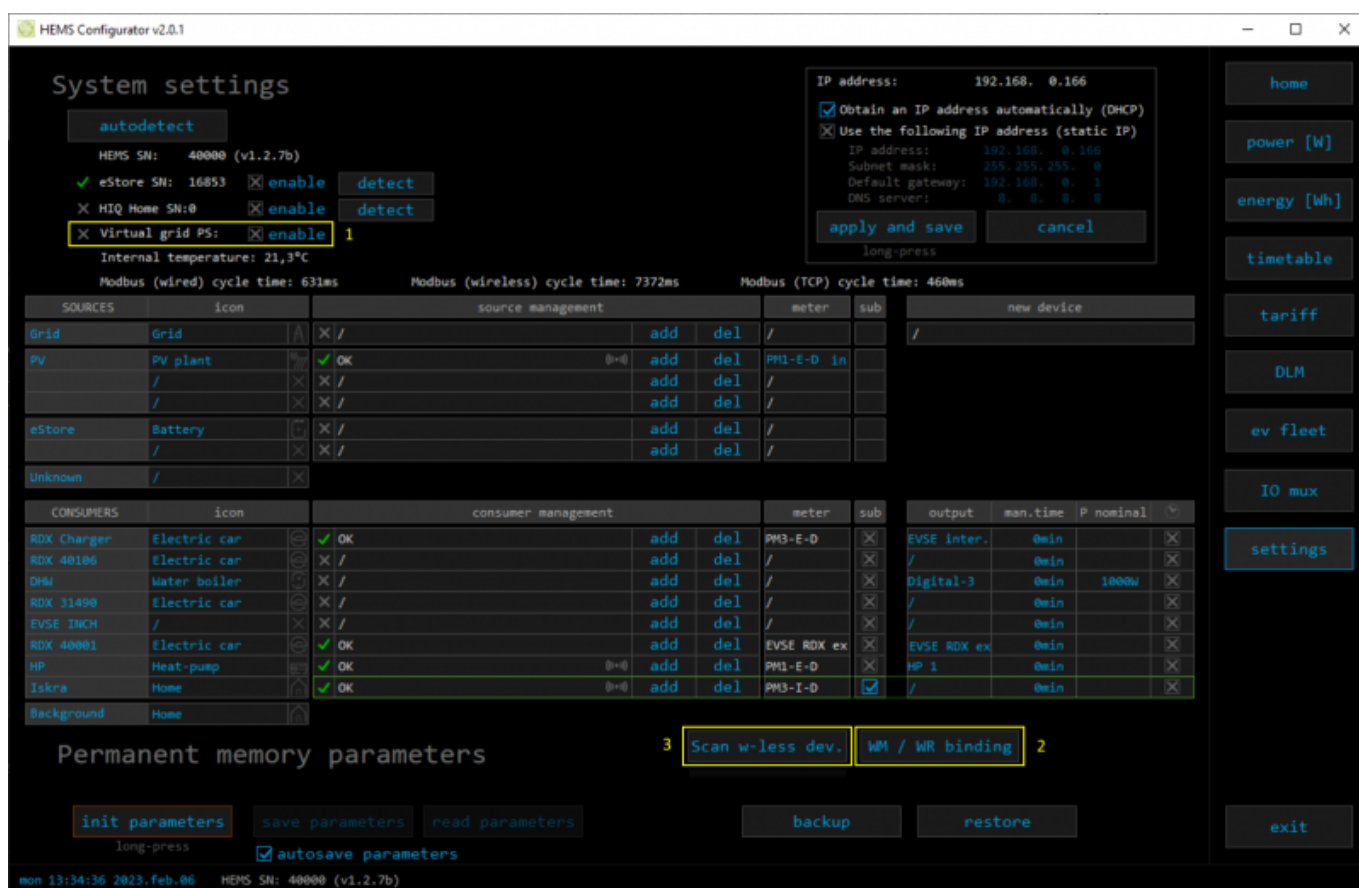
Overloading causes multiple high-energy appliances working at the same time, such as an oven, dishwasher, heat pump and EV charging.

RDC Charger monitors a current draw by appliances and in real time allocates (limits) available capacity allowing them to run without overloading.

**NOTE:** Power sensor must be mounted so that it can measure power & current on grid (power supply for home/facility).

Procedure to activate Dynamic Load Management is as follows:

- [HEMS Configurator](#) → settings → Virtual grid PS must be disabled (1)
- Wire [PM1-E-D](#) or [PM3-E-D](#) to [WM-1](#) module (set address to 150 or use default address 149)
- [HEMS Configurator](#) → settings → select WM/WR pairing button and follow [WM/WR pairing instructions](#) (2) (3)



- Power sensor is detected. Add it to grid position (4)

System settings

autodetect

HEMS SN: 40000 (v1.2.7b)

✓ eStore SN: 16853  enable detect

✗ HIQ Home SN:0  enable detect

✗ Virtual grid PS:  enable

Internal temperature: 21,3°C

Modbus (wired) cycle time: 639ms Modbus (wireless) cycle time: 8096ms Modbus (TCP) cycle time: 465ms

SOURCES	icon	source management	meter	sub	new device
Grid	Grid	add del	PM3-E-D	/	PM3-E-D detected
PV	PV plant	add del	PM1-E-D	In	New PM3-E-D detected. [add] - associate [del]
eStore	Battery	add del	/	/	
Unknown	/	add del	/	/	

CONSUMERS	icon	consumer management	meter	sub	output	man.time	P nominal
RDX Charger	Electric car	add del	PM3-E-D	✗	EVSE inter.	0min	✗
RDX 40106	Electric car	add del	/	/	/	0min	✗
DHW	Water boiler	add del	/	✗	Digital-3	0min	1000W ✗
RDX 31490	Electric car	add del	/	✗	/	0min	✗
EVSE INCH	/	add del	/	✗	/	0min	✗
RDX 40001	Electric car	add del	EVSE RDX ex	✗	EVSE RDX ex	0min	✗
HP	Heat-pump	add del	PM1-E-D	✗	HP 1	0min	✗
Iskra	Home	add del	PM3-I-D	✓	/	0min	✗
Background	Home						

Permanent memory parameters

init parameters save parameters read parameters

autosave parameters

backup restore

exit

mon 13:35:01 2023,feb,06 HEMS SN: 40000 (v1.2.7b)

- Power sensor configured successfully (5)

System settings

autodetect

HEMS SN: 40000 (v1.2.7b)

✓ eStore SN: 16853  enable detect

✗ HIQ Home SN:0  enable detect

✗ Virtual grid PS:  enable

Internal temperature: 30,0°C

Modbus (wired) cycle time: 626ms Modbus (wireless) cycle time: 7114ms Modbus (TCP) cycle time: 452ms

SOURCES	icon	source management	meter	sub	new device
Grid	Grid	add del	PM3-E-D	5	/
PV	PV plant	add del	PM1-E-D	In	
eStore	Battery	add del	/	/	
Unknown	/	add del	/	/	

CONSUMERS	icon	consumer management	meter	sub	output	man.time	P nominal
RDX Charger	Electric car	add del	PM3-E-D	✗	EVSE inter.	0min	✗
RDX 40106	Electric car	add del	/	/	/	0min	✗
DHW	Water boiler	add del	/	✗	Digital-3	0min	1000W ✗
RDX 31490	Electric car	add del	/	✗	/	0min	✗
EVSE INCH	/	add del	/	✗	/	0min	✗
RDX 40001	Electric car	add del	EVSE RDX ex	✗	EVSE RDX ex	0min	✗
HP	Heat-pump	add del	PM1-E-D	✗	HP 1	0min	✗
Iskra	Home	add del	PM3-I-D	✓	/	0min	✗
Background	Home						

Permanent memory parameters

init parameters save parameters read parameters

autosave parameters

backup restore

exit

Fri 14:32:21 2023,feb,03 HEMS SN: 40000 (v1.2.7b)

- HEMS Configurator → DLM, enter allowed current value of grid fuses (6)
- make sure to configure correct phase order (7), otherwise dynamic load management may not

work properly

- select limiter priority for RDC Charger (8): no limiter, limit last (last to be limited), limit second, limit first (first to be limited)

**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
Limit if connection with master is lost:	0	0	0

**Enable limiting from cloud**

Cloud current limit:	L1	L2	L3
Limit if connection with cloud is lost:	3200	3200	3200

	Total	Power [W]			Current [A]			Voltage [V]			Phase order	Priority
		L1	L2	L3	L1	L2	L3	L1	L2	L3		
Grid	13920	4620	4640	4660	20,0	20,0	20,3	230	230	230	L1 L2 L3	7
Oil charger	13920	4620	4640	4660	20,0	20,0	20,3	231	232	233	L1 L2 L3	Limit first
Oil radiator	0	0	0	0	0,0	0,0	0,0	230	230	230	L1 L2 L3	Limit last
Chiller	0	0	0	0	0,0	0,0	0,0	0	0	0	L1 L2 L3	No limiter
Background	0	0	0	0	0,0	0,0	0,0	229	0	0	L1 L2 L3	No limiter

GRID FREQUENCY [Hz] 0,00

mon 15:30:00 2023.feb.06 HEMS SN: 40105 (v1.2.7b)