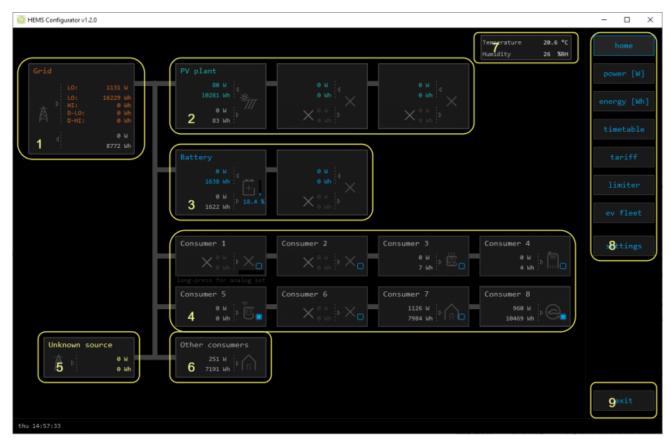
HEMS v1.2.3 Configurator

Latest version of HEMS Configurator can be found under download folder.

home

Basic system overview.



1. Grid							
	From grid	Tariff (LO, HI, D-LO, D-HI) and power from grid in W					
>	From grid	Imported energy by tariff in Wh					
	To arid	Power exported to grid in W					
<	To grid	Exported energy in Wh					
2. Plants	•						
<	Produced	Produced power in W and energy in Wh					
>	Consumed	Consumed power in W and energy in Wh					
3. Storage system	S						
<	Sourced	Power in W and energy in Wh sourced from storage (battery)					
>	Stored	Power in W and energy in Wh stored (to battery)					
bargraph and % ¹	SOC	Battery State Of Charge					
4. Consumers	-						
>	Consumed	Consumed power in W and energy in Wh					

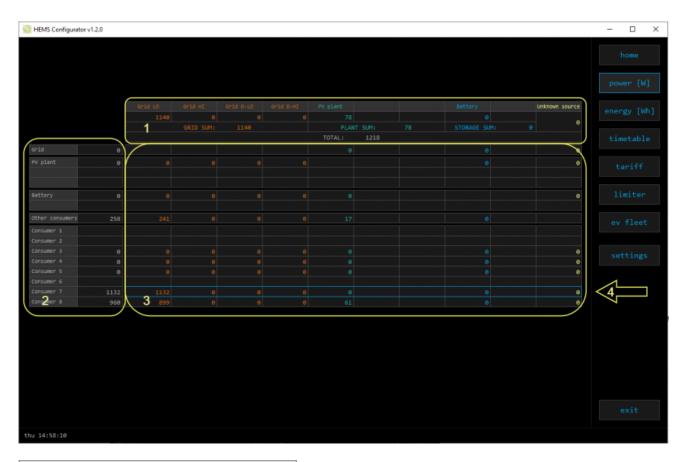
12.14		
[]	Status	Output status for managed consumers
bargraph ²	Analog out	Analog output value
click	Toggle	Click in frame toggles managed consumers output
long-press ²	Set analog	Long press on first consumer pops-up dialog for analog value set
5. Unknown source	e	
>	Sourced	Power in W and energy in Wh from unknown source
		all differences caused by power-sensor inaccuracy
6. Other consume	rs	
>	Consumed	Consumed power in W and energy in Wh by other (not measured) consumers
7. Temperature ar	nd humidity	
	Temperature	Temperature in ^o C
	Humidity	Humidity in % RH
8. Page navigation	ì	
	Home	Home screen
	Power [W]	Power screen
	Energy [Wh]	Energy screen
	Timetable	Timetable screen
	Tariff	Tariff screen
	Limiter	Limiterscreen
	EV fleet	EV fleet screen
	IO mux	IO mux screen
	Settings	Settings screen
9. Exit	·	
	Exit	Close appliction

¹ only for eStore

² only for first managed consumer

power

Overview of current power distribution by source / consumer.



- 1. Sourced power
- Sourced power for each source
- Sums per source type

Total of all sourced power

2. Consumed power

Power for each consumer

3. Power distribution

Partial distributed power

4. Submeter (Blue outline)

Power meter is not part of internal circuit

	Grid LO			rid D-HI	PV plant		Battery		Unknown source	
	1140			8	78			8	9	
					PLANT	SUM:				
2					TOTAL	1218				timetable
s- 2 e	ð				0			0	0	
PV plant @	9 0	0	0	8				0	0	
Battery g	9 0			9	9					
ther consumers 258	5 241	0	0	8	17			0		
Consumer 2 Consumer 3 g										
Consumer 3 g				8	0				0	
Consumer 5 g				8	6			8	6	
	-									
Consumer 7 1132	2 1132			8	6			8	0	
Consumer 8 966	899	0		8	1 61			0		

1. Sourced power distribution

How sourced power is consumed by each consumer

2. Consumed power distribution

Who sources consumed power

energy

Energy overview of a given time distributed by sources / consumers.

🔯 HEMS Configurator v	/1.2.0										- 🗆 X
	ſ	Grid LO	Grid HI	Grid D-LO	Grid D-HI	PV plant		Battery		Unknown source	energy [Wh]
		1								ľ.	
						TOTAL:	28148				
Grid	8772										
PV plant	83									0	
Battery	1622		8		9	1289				0	
Other consumers	7191										
Consumer 1											
Consumer 2											
Consumer 3	7									0	
Consumer 4	4									0	
Consumer 5	Θ									0	
Consumer 6		~									
Consumer 8	7984	3 7984								2	4
	10469		0	0	0	3418		628			7
Energy since: sun	00.00.0000	88:88:88									
)									
								,			
									6nes	et all	
thu 14:59:21											

- 1. Sourced energy
- Sourced energy for each source
- Sums per source type

Total of all sourced energy

2. Consumed energy

Energy for each consumer

3. Energy distribution

Partial distributed energy

4. Submeter (Blue outline)

Power meter is not part of internal circuit

5. Energy since

Date and time since energy is recorded

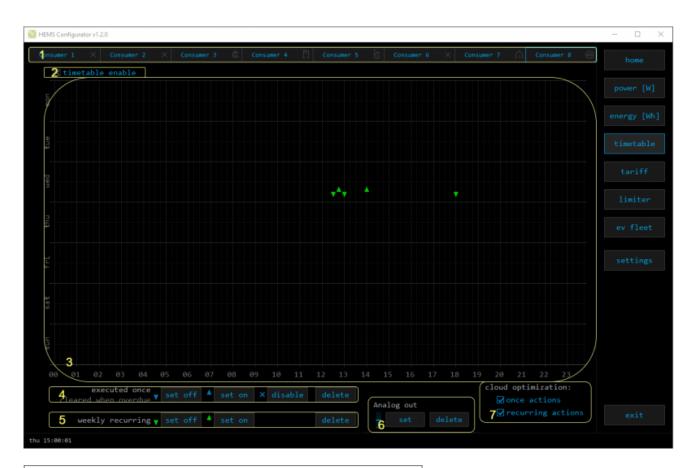
6. Reset all

Long-press to reset all energy counters

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timetable

Weekly timetable for managed consumers.



1. Managed load menu

Switch between managed loads

2. Enable checkbox

When un-checked timetable is not executed

3. Events grid

Events displayed in weekly grid (15 min resolution)

Click to select time and set event by clicking buttons below

4. Once actions (top priority timetable actions)

Actions are executed and then automatically cleared.

"Disable" action will just disable recurring action.

5. Recurring actions (low priority actions)

Actions are executed each week.

6. Analog out ¹

Action to set analog output. Analog actions are recurring.

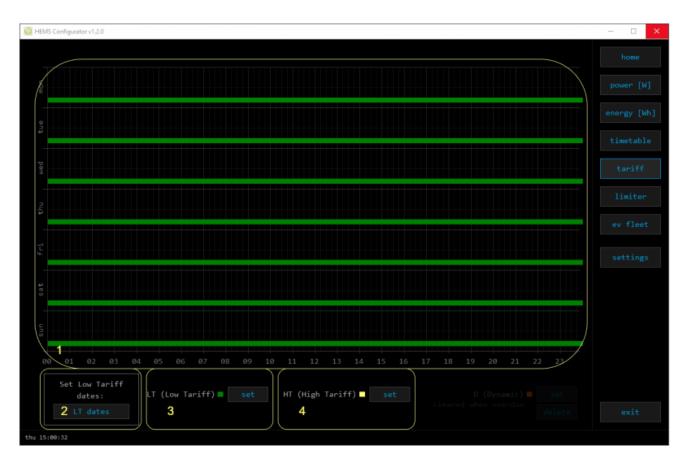
7. Cloud optimization

When enabled (checked) cloud optimization is enabled.

¹ only for Consumer 1

tariff

Weekly tariff timetable for grid energy per tariff distribution.



1. Tariff grid

Graphical weekly timetable with tariffs.

Click to select term, click-and-drag to select multiple terms.

2. Low tariff dates

Set low tariff dates for holidays.

3. Low tariff

Set low tariff for selected terms.

4. High tariff

Set high tariff for selected terms.

lo tariff dates

Holiday dates when tariff is low

(C) I	HEMS - Set l	LO tariff date	5 —		×
	Set	LO ta	riff da	ates	
/		LO tari	ff date		
	day	month	day	month	
	88	80	88	80	
	80	80	80	80	
	80	80	80	80	
	88	80	88	80	
	80	80	80	80	
	80	80	80	80	
	80	80	80	80	
	88	80	88	80	
	80	80	80	80	
	80	80	80	80	
	61	80	80	80	
	80	88	8	80	
	2Use ea	ster mond	ays (Roma	n Catholio	c)
		ex	it		

1. Date table

Up to 24 days when tariff is low on holiday

2. Use easter mondays

Use preprogrammed roman-catholic easter monday holidays

limiter

Overview and configuration of limiter

POMER [W] Current [A] Voltage [V] Phase order Current limit [A] Current [A] Phase order Current limit [A] L1 L2 L3 L3 L2 L3 L3 L3 L2 L3 L3 <thl3< th=""><th>HEMS Configurator v1.2.0</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>- 0</th></thl3<>	HEMS Configurator v1.2.0															- 0
POMER [W] Current [A] Voltage [V] Phase order Current limit [A] Current [A] Phase order Current limit [A] L1 L2 L3 L3 L2 L3 L3 L3 L2 L3 L3 <thl3< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></thl3<>																
Total L1 L2 L3 L1 L2 L3 L1 L2 L3 Phase order L1 L2 L3 L3 <th></th> <th></th> <th></th> <th></th> <th></th> <th>_</th> <th></th> <th></th> <th>_</th> <th></th> <th></th> <th></th> <th>_</th> <th></th> <th></th> <th></th>						_			_				_			
Total L1 L2 L3 L1 L2 L3 Phase order L1 L2 L3 reid 1122 1166 42 -26 4.6 0.4 -1.8 231 233 234 L1 L2 L3 L1 L2 L3 L3 L1 L2 L3 L3 L3 L3 L3 L3 L4 L4 L3 L4 L3 L3 L3 L3 L3 L4 L4 L4 L4 L3 L4 L4 <thl4< th=""> L4 <thl4< th=""></thl4<></thl4<>			POWER	1 FW1		Cu	rrent [A]		Vo	ltage [V]			Cur	rent limi	t FAT	
v plant -90 -90 -1.0 234 U3 attery X I Priority MAX (A) timetal attery X I Priority MAX (A) timetal answer 1 I I Priority MAX (A) timetal answer 2 I I Image: Conserver 2		Total										Phase order	L1 _			
v plant -90 -90 -90 -1.0 234 L3 Limit timetal attery 1 Priority MAX (A) Limit first attery 1 Priority MAX (A) Limit first Limit first 4 1 Imit first 4	rid	A 112	1106	42	-26	4.8	0.4	-1.8	231	233	234	L1 L2 L3	<u>,6</u>	20	20	
attery Image: 1 model Image: 2 mode	V plant	ý	1		-98			-1.0			234					
attery																
attery x <td></td> <td>! Pr</td> <td>iority</td> <td>MAX [A]</td> <td>taniff</td>													! Pr	iority	MAX [A]	taniff
onsumer 1 0	attery	Ē														
onsumer 1 0		X														
onswer 2 0<	_	_														
misurer 2 0	nsumer 1															
Onsumer 3 O 0 0 0 0 0 0 0 0 0 0 0 234 L2[L3]L1 Limit first 4 Limit second 8 Onsumer 4 0																ev fleet
onsumer 4 0 0 0 0.0 233 L3 Limit second 8 onsumer 5 0 0 0.0 0.0 0 0 0 13 Limit second 2 111 152 153 152 153 152 153 152 153 152 153 152 153 152 153 152 153 152 153					0	0.0	0.0	0.0			234				4	
onsumer 6 0 1129 1101 42 -11 4.7 0.3 -2.1 234 233 234 1152/1.3 17 1imiter 20 onsumer 8 960 976 0 16 4.2 0.0 0.0 251 235 234 1.152/1.3 17 1imiter 20 ther consumers 2.0 130 42 48 0.0 0.4 -0.8 251 235 234 1.21.3/L1 No limiter 32 RID FREQUENCY [Hz] 50.00 8 0.4 -0.8 0.4 -0.8 0.4		0 (0			0.0			233				8	
ansumer 7 1129 1101 42 -11 4.7 0.3 -2.1 233 234 1152 12 17 1imiter 20 ansumer 8 968 976 0 16 4.2 0.0 0.0 231 235 234 12 13 12 160 1imiter 32 ther consumers 220 130 42 48 0.6 0.4 -0.8 0.4 <		16 (0			0.0			0				2	
ther consumers 22 130 42 48 03 0.4 -0.8																
ther consumers 22 130 42 48 03 0.4 -0.8									234			L152 L3	7			
RID FREQUENCY [Hz] 50,00		966	976	_	16	4.2		_	231	235	234	12/13/11	, No		32	
	ther consumers	22			48	626	0.4	-0.8								
	RID FREQUENCY [Hz] 50	9,09 <mark>0</mark>														
		0														

1. Consumer managemen	t						
Turn consumers on or off							
2. Power							
Total power and power for e	ach phase						
3. Current							
Current for each phase							
4. Voltage							
Voltage for each phase							
5. Phase order							
	er for grid power sensor and then set for other powers nging grid phase order will NOT apply to phase order of other						
6. Current limit							
Current limit threshold for m	ain grid fuse						
7. Status, priority and cu	rrent setpoint						
<u>▲</u> ▲	Yellow status when limiter is enabled and active. Green status when enabled and not active						
Priority	Device priority group (no limiter, limit last, limit second, limit first)						
Max [A]1	Device expected current draw						
8. Grid frequency							

Grid frequency measured on grid power meter sensor

¹ parameter is dynamically set for all devices, except for the EV charging stations

ev fleet

Overview and configuration of EV charging stations

HEMS Configurator v1.2	2.0				- 🗆 ×
1				Consumer 8	
				7	
÷ ÷				f f	
2					
				Paused (EVSE) Phase L2	ev fleet
3				EV [A]: 0 MAX [A]: 32	
				Last session: 0 W	
4				11465 Wh 044 h 59 min	
low Snip					
fri 08:56:42					

1. EV charging stat	tion management				
Turn EV station on or	⁻ off				
2. EV vehicle statu	S				
GREY	Stand by				
RED	Error				
YELLOW	Charging paused				
BLUE	Charging				
GREEN	Charging ended				
3. EV charging stat	tion status				
Status	Status of EV charging station				
Phase detection	Detection of utilized phases				
EV [A]	EV charger max allowed current				
MAX [A]	User set MAX charging current				
3. EV charging ses	sion				
Power	Actual power draw				
Energy	Energy delivered to EV				
Duration Session charging duration					

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io mux

Overview and configuration of input/output ports IO mux

	2			- 0
) mux				
	Select input/output type	out mode		
QXB QX1	Digital-1 Digital-2	normal normal		
QX1 QX2	Digital-3	normal		
QX3	Digital-4	normal		
1012	Tenperature sensor	normal		
1013	Linker reset	normal		
1014	/	normal		
1015		normal		
IX0	Toggle consumer-1	normal		
DX1	Toggle consumer-2	normal		
IX2	Toggle consumer-3	normal 2		

1. Select input/output type

On the left side there are defined MC controller (MC-230) ports to which could be assigned MC-230 functions (digital, linker reset, router reset, etc).

Default settings are for e.g. QX0 \rightarrow digital 1 while digital 1 is defined for consumer 1 (settings page). It could be changed in a way to define new function role to QX0 port e.g. for linker reset

If it is selected Enable consumer at input IX0,IX1 or IX2 it means that dedicated consumer will be managed (ON/OFF) by input signal on IX0,IX1 or IX2. For example, thermostat signal is wired to IXO port and via IO mux defined "Enable consumer 1" to IX0. While thermostat is active, it is consumer 1 active as well and vice versa.

Limitations: one temperature sensor is allowed, one consumer could be managed by one input only

2. out mode

Managed consumer input/output mode (normal or inverted)

settings

EMS Configurate	or v1.2.3												– 🗆 🗙
System	n settir	ngs											
✓ HEMS:	c20171 (v	1.2.3)											
✓ eStore	e: c17456	√ enable	detect										
× HIQ Ho		X enable											
		Xenable	1										
	s cycle time: 4		2	Í									
SOURCES	icon	$-\infty$		source management	Ύ		meter	sub		new device			
Grid	Grid	- A 🗸	ок		add		PM3-E-D		1				
	1	× 🗸	ок.		add		PM1-E-D in	X					
		\times ×	1		add		1	X					limiter
		$\times \times$	1		add		/	\mathbf{X}					limiter
		- E 🗸	ок.		add		eStore	\mathbf{X}					
		\times ×	/		add		/	\times					
		\times							9			ting	
CONSUMERS	icon			consumer management			meter	sub	output	man.time	P nominal	0	
	Washing machin	ne 🛛 🖂 🗙	/		add		1	\mathbf{X}	Digital-1		5000 W	\mathbf{X}	
		- × ×	/		add		1	$ \mathbf{X} $	Digital-2			$ \mathbf{X} $	
			ок.		add		PM3-E-D	X	Digital-3			×	
		200	ок.		add		PM1-E-D	X	Digital-4			×	
			/		add add	del del	/ PM3-I-D	X	/			X	
	Electric car		ок ок.		add	del	EVSE NOON	X	/ EVSE MOON	0 min 0 min		X	
			OK.		add		INCH clust	X	INCH clust			X	
3	Hone	- 4			6		7	8	10				
					~			U					
	nent mei arameters		parameter								٦		
						12							
11		🗹 autosa	ve parameters										
fri 11:25:32													

1. System settings [autodetect] Click to find HEMS in local network eStore serial number (automatically detected or can be C.... entered manually). When checked HEMS will read Grid, first plant and first eStore [] enable Storage directly from eStore (so there is no need to duplicate power-sensor). [detect] eStore address is cleared and new eStore can be detected. HIQ Home serial number (automatically detected or can be с.... entered manually). When checked HEMS will read Grid power and energy from **HIQ Home** [] enable HIQ Home (so there is no need to duplicate power-sensor). HIQ Home address is cleared so new can be detected. [detect] Check if system is without main grid power meter. Energy, Virtual grid PS [] enable power and currents are calculated from other power meters. 2. Modbus cycle time Time in ms for modbus communication to complete reading of all Modbus cycle time connected devices. 3. Sources and Consumers settings table SOURCES Source name icon Source icon 4. Device status Status Status OK, Warning, Error, Detected

5. Device message								
source and consumer	Source o	r consumer power-sensor management						
management	message	Messages regarding source or consumer power-sensor						
6. Device configuration	l							
	add	Associate new power-sensor to source or consumer						
Configuration	del	Disassociate power-sensor from source or consumer & configure it as new power-sensor						
7. Device type								
meter	Source o	r consumer power-sensor type						
configuration	in/ex	Power plant connection ¹						
8. Submeter option								
sub		this power meter or device is not part of internal circuit. livision for this device is ignored and outlined in blue border.						
9. Wireless settigs								
new device Power-sensor configured as new one detected or wireless modul configuration ²								
Wireless setting		ip wireless modules: pairing, adding and delete the wireless and setting repeater level						
10. Device output	-							
	Select consumer output type							
output	<<>>	Set repeater level ³						
man. time	Manageo	consumer manual override timer						
P nominal		nsumer's power in Watts. It is disabled if there is assigned ensor to this consumer.						
clock	Enable ti	metable						
11. Permanent memory	, parame	ters						
[init parameters]	Init all pa	arameters to default values						
[save parameters]	Save all	parameters to permanent memory						
[read parameters]	Read all	parameters from permanent memory						
[] autosave parameters		ers will be automatically saved to permanent memory in 15 after last parameter change						
12. Backup / Restore to	PC							
[backup]	Backup a	all parameters to PC ⁴						
[restore]	Restore	all parameters from PC backup ^₄						

¹ only for the first power plant

² wireless setting must be enabled

³ only for wireless modules and wireless setting must be enabled

⁴ older versions of backup files may be used. Any unsuccessfully backed or restored parameters will be displayed but operation will end successfully if you use **continue**.

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