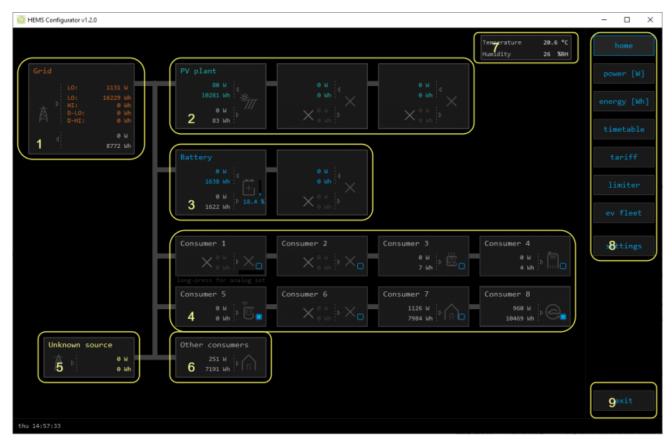
HEMS v1.2.2 Configurator

Last 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 grid	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

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[]	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 sourc	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 a	nd humidity	
	Temperature	Temperature in ^o C
	Humidity	Humidity in % RH
8. Page navigatio	n	
	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

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HEMS Configurator v1.2.0									- 0
		_	_						_
				Grid D-HI	PV plent			Unknown source	
	1140			GC10 0-H1	9 78			unknown source	
					PLANT				
		Gitter Dorn			TOTAL	1218	 STORAGE SOLL		timetable
e-2	0				0			0	
PV plant	0 0	9 9			a		 0	 0	
Battery	0 0				9 9			9	
Other consumers 2	58 241				9 17				
Consumer 1									
Consumer 3	0 0	9 9			8 8			0	
	0 0				9 9				
	0 0				8 8				
Consumer 6 Consumer 7 11									
	32 1132 60 899				8 9 8 1 61			0	
Companier o 9	10 033				8 I DI			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								Ň	
						TOTAL:	28148				
Grid	8772										
PV plant	83									0	
Battery	1622		8		9	1289				0	
	1										
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

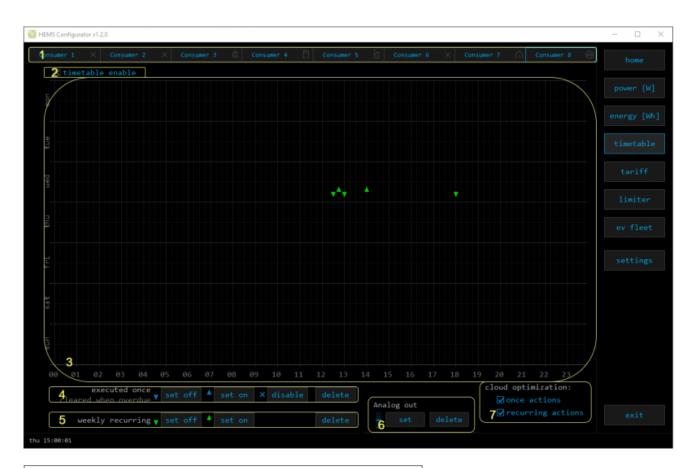
6. Reset all

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

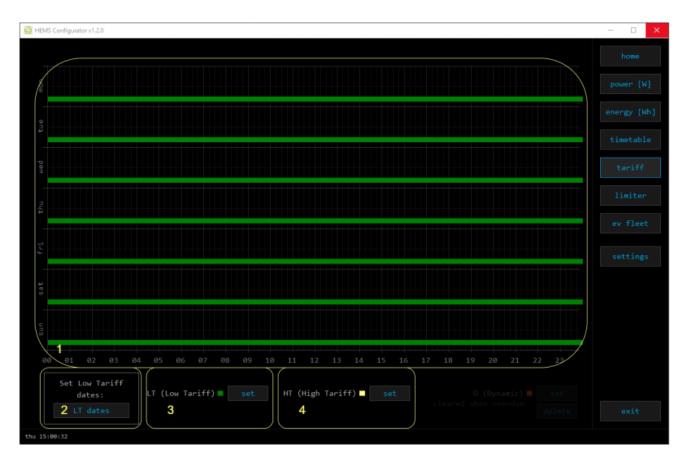
When enabled (checked) cloud optimization is enabled.

¹ only for Consumer 1

tariff

Weekly tariff timetable for grid energy per tariff distribution.

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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 I	LO tariff date	5 —		×
	Set	LO ta	riff da	ates	
/		LO tari	ff date		
	day	month	day	month	
	88	80	80	88	
	80	80	80	80	
	80	80	80	80	
	88	80	80	88	
	80	80	80	80	
	80	80	80	80	
	80	80	80	80	
	88	80	80	80	
	80	80	80	80	
	80	80	80	80	
	81	80	80	80	
	80	80	80	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

HEMS Configurator v1.2.0															- 0
	(POW	ER [W]		6	rrent [A]		Un Vn	ltage [V]			Curr	ent limit	- FA1	
	Tota			13			L3			L3	Phase order	L1		L3	
srid	A 11	2 1105	42	-26	4.8	0.4	-1.8	231	233	234	L1 L2 L3	6	20	20	
V plant		90		-90			-1.0			234	B				
												1 Pri	iority	HAX [A]	
attery	Ē.														
	×														
_															
onsumer 1															
															ev fleet
				0	0.0	0.0	0.0			234				4	
	D			0			0.0			233				8	
	16			0			0.0			0				2	
			42	-11		0.3	-2.1	23		234	1152 13 12 13 11	7		20	
Consumer 8	9	976 2 130		16	4.2	0.0	0.0	231		234	L2 L3 L1	No :		32	
ther consumers	2	130		48	.3	0.4	-0.8	<u> </u>			\square				
GRID FREQUENCY [Hz] 56	9,00														
	ō														

1. Consumer managemen	nt				
Turn consumers on or off					
2. Power					
Total power and power for e	each 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 n	nain grid fuse				
7. Status, priority and cu	irrent 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, lim 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

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

1. EV charging station management						
Turn EV station on or off						
2. EV vehicle status						
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					

neet	

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io mux

Overview and configuration of input/output ports IO mux

HEMS Configurator	1.2.2			- 0
IO mux				
and month				
-				
	Select input/output type	out mode		
	0 Digital-1	normal		limite
Q		normal		
Q		normal		
Q		normal		
		normal		
		normal		
	14 /	normal		
		normal		
D		normal		
D		normal		
_ II	2 Toggle consumer-3	normal 2		
12:42:38				
Selec	t input/output type	out mode		

	Select input/output type	out mode
QX0	Digital-2	
QX1	Digital-5	
QX2	Digital-3	normal
QX3	Digital-6	normal
I012	Temperature sensor	normal
I013		normal
1014		normal
1015		normal
IX0	Enable consumer-1	normal
IX1	Toggle consumer-2	normal
IX2	Toggle consumer-3	normal

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 to QX0 (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

Easy and intuitive system setup.

Configurator v1.2.3									- 🗆 X
System settings autodetect HEMS: c20171 (v1.2.3) estore: c17456 enable									home power [W] energy [Wh]
X HIQ Home: c0 X enable detect									
X Virtual grid PS: Reable 1 Modbus cycle time: 4638 ms 2									
SOURCES icon source management	Υ		meter	sub		new devic	:e		
Grid Grid \Lambda 🗸 🕶	add		PM3-E-D		1				tariff
/ Хик.	add	del	PM1-E-D in	X					
/ × × /	add		1	X					limiter
	add		1	\times					limiter
Battery 🗍 🗸 OK.	add		eStore	\mathbf{X}					
$\times \times \times$	add		1	\times					ev fleet
					9			ting	
CONSUMERS icon consumer management			meter	sub	output	man.time	P nominal	0	IO mux
Washing machine	add		1	\mathbf{X}	Digital-1			\mathbf{X}	
tan de la serie 🖊 en la serie de la X 🗙 🖊 en la serie de	add		1	\times	Digital-2			×	settings
/ Х И К.	add		PM3-E-D	\mathbf{X}	Digital-3			×	Ľ
Heat-pump 💽 🗸 OK.	add		PM1-E-D	X	Digital-4			X	
Wireless plug G × / Socket ∅ ✓ 0K	add add	del del	/ PM3-I-D	X	/	0 min 0 min		X	
Electric car	add		EVSE NOON	R	/ EVSE MOON	0 min 0 min		X	
Electric car	add		INCH clust	X	INCH clust			X	
3 Hone 4 5	16		7	8	10				
Permanent memory parameters init parameters save parameters read parameters long-press @ autosave parameters		12	backup		res	tore			
fri 11:25:32									

1. System settings

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

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Status	Status O	K, Warning, Error, Detected				
5. Device message						
source and consumer	Source or consumer power-sensor management					
management	message Messages regarding source or consumer power-sensor					
6. Device configuration						
	add	Associate new power-sensor to source or consumer				
Configuration	del Disassociate power-sensor from source or consume configure it as new power-sensor					
7. Device type						
meter	Source or consumer power-sensor type					
configuration	in/ex	Power plant connection ¹				
8. Submeter option		·				
sub	Check if this power meter or device is not part of internal circuit. Energy division for this device is ignored and outlined in blue border.					
9. Wireless settigs						
new device	Power-sensor configured as new one detected or wireless module configuration ²					
Wireless setting	Setting up wireless modules: pairing, adding and delete the wireless modules and setting repeater level					
10. Device output						
output	Select consumer output type					
output	<<>>	Set repeater level ³				
man. time	Managed consumer manual override timer					
P nominal	Enter consumer's power in Watts. It is disabled if there is assigned power sensor to this consumer.					
clock	Enable timetable					
11. Permanent memory parameters						
[init parameters]	Init all parameters to default values					
[save parameters]	Save all parameters to permanent memory					
[read parameters]	Read all parameters from permanent memory					
[] autosave parameters	Parameters will be automatically saved to permanent memory in 15 minutes after last parameter change					
12. Backup / Restore to PC						
[backup]	Backup 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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