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# **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		
		Imported energy by tariff in Wh		
<	To grid	Power exported to grid in W		
		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	3. Storage systems			
<	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	4. Consumers			
>	Consumed	Consumed power in W and energy in Wh		

<sup>-</sup> http://wiki.hiq-home.com/

Last	update:	2021	/11	/30	09.16
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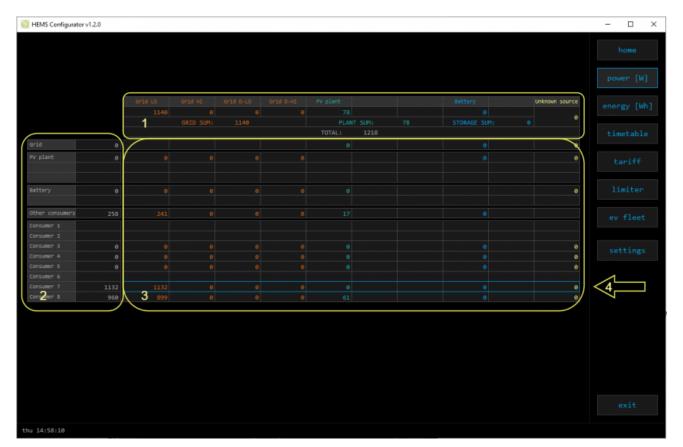
[]	Status	Output status for managed consumers		
bargraph <sup>2</sup>	Analog out	Analog output value		
click	Toggle	Click in frame toggles managed consumers output		
long-press <sup>2</sup>	Set analog	Long press on first consumer pops-up dialog for analog value set		
5. Unknown source	5. Unknown source			
>	Sourced	Power in W and energy in Wh from unknown source		
Accumulate also all differences caused by power-sensor inaccuracy				
6. Other consume	ers			
>	Consumed	Consumed power in W and energy in Wh by other (not measured) consumers		
7. Temperature a	nd humidity			
	Temperature	Temperature in <sup>o</sup> C		
	Humidity	Humidity in % RH		
8. Page navigatio	8. Page navigation			
	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		

 $<sup>^{\</sup>scriptscriptstyle 1}$  only for eStore

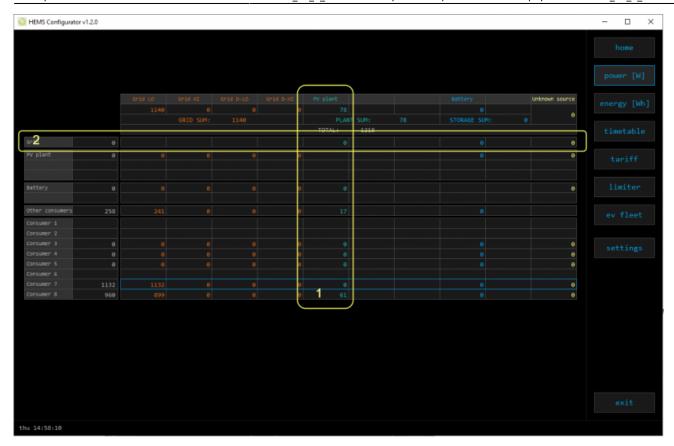
<sup>&</sup>lt;sup>2</sup> only for first managed consumer

# 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



### 1. Sourced power distribution

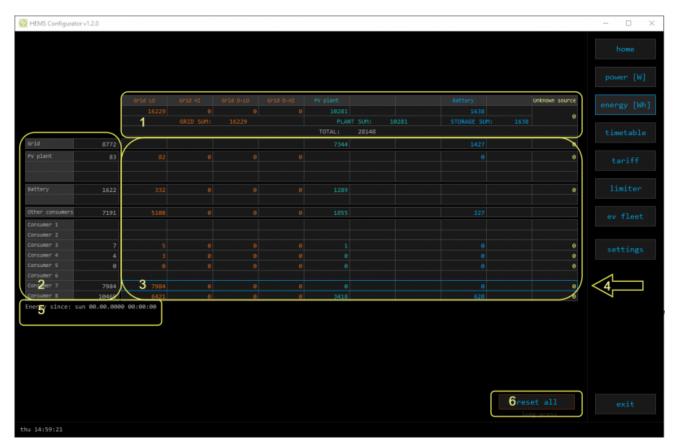
How sourced power is consumed by each consumer

## 2. Consumed power distribution

Who sources consumed power

# energy

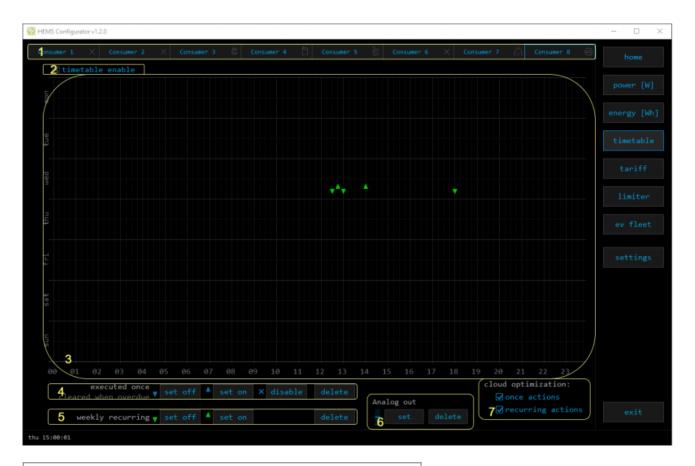
Energy overview of a given time distributed by sources / consumers.



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

### 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.

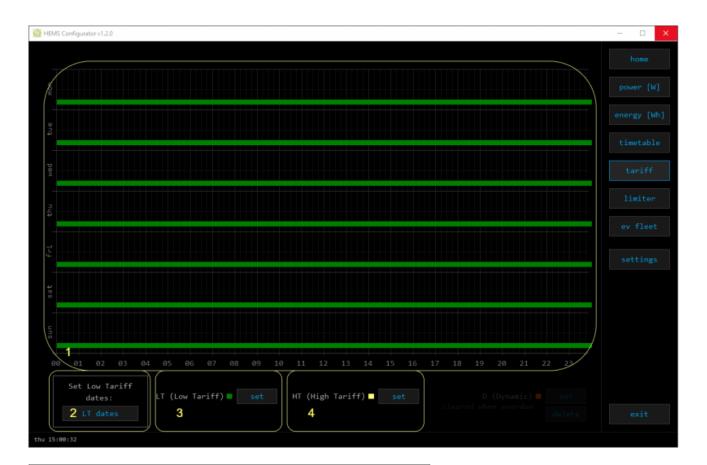
### 7. Cloud optimization

When enabled (checked) cloud optimization is enabled.

<sup>&</sup>lt;sup>1</sup> 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.

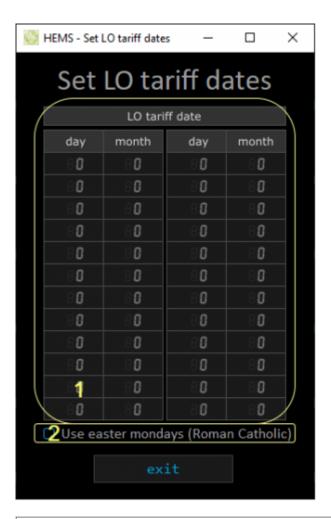
## 4. High tariff

Set high tariff for selected terms.

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# lo tariff dates

Holiday dates when tariff is low



### 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



### 1. Consumer management

Turn consumers on or off

#### 2. Power

Total power and power for each phase

### 3. Current

Current for each phase

### 4. Voltage

Voltage for each phase

### 5. Phase order

First set correct phase order for grid power sensor and then set for other power sensors/devices. NOTE: changing grid phase order will NOT apply to phase order of other connected devices!

#### 6. Current limit

Current limit threshold for main grid fuse

### 7. Status, priority and current setpoint

7. Status, priority and carrent sceponit		
<b>A A</b>	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] <sup>1</sup>	Device expected current draw	

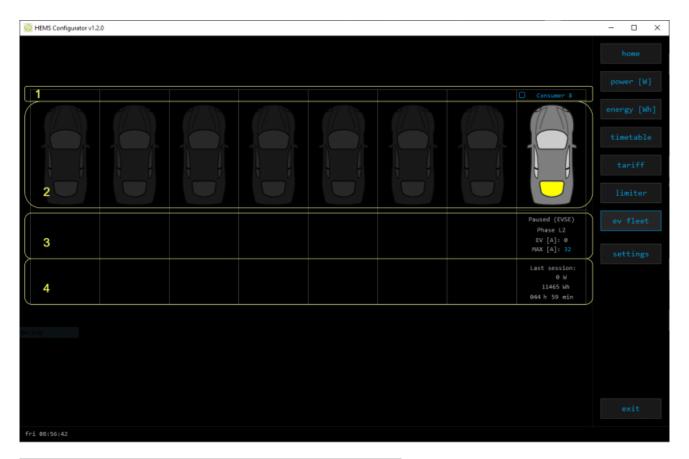
### 8. Grid frequency

Grid frequency measured on grid power meter sensor

<sup>1</sup> parameter is dynamically set for all devices, except for the EV charging stations

# ev fleet

Overview and configuration of EV charging stations

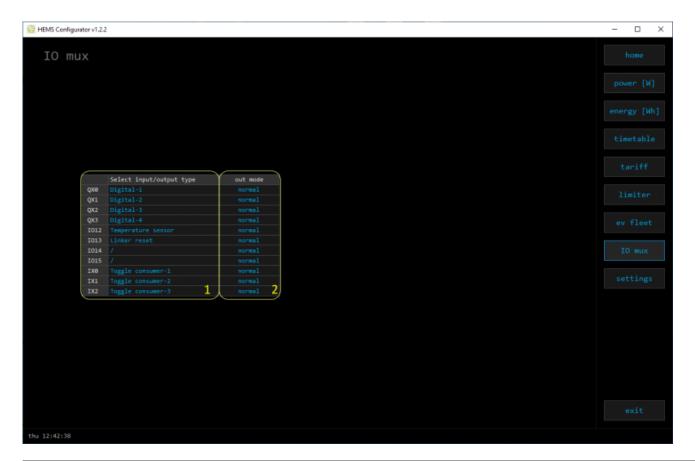


1. EV charging station management			
Turn EV station on or off			
2. EV vehicle status			
GREY	Stand by		
RED	Error		
YELLOW	Charging paused		
BLUE	Charging		
GREEN	Charging ended		
3. EV charging station status			
Status	Status of EV charging station		
Phase detection	Detection of utilized phases		
EV [A]	EV charger max allowed current		
MAX [A]	User set MAX charging current		
3. EV charging session			
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



### 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.  $QXO \rightarrow digital \ 1$  while digital 1 is defined for consumer 1 (settings page). It could be changed in a way to define new function role to QXO 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)

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# settings



1. System settings				
[ autodetect ]		Click to find HEMS in local network		
eStore	c	eStore serial number (automatically detected or can be entered manually).		
	[] 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		
	c	HIQ Home serial number (automatically detected or can be entered manually).		
HIQ Home	[] 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	Grid power sensor refresh time in ms			
3. Sources and Consum	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 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 consumer & configure it as new power-sensor		
7. Device type				
meter	Source o	or consumer power-sensor type		
configuration	in/ex	Power plant connection <sup>1</sup>		
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 <sup>2</sup>			
Wireless setting	Setting up wireless modules: pairing, adding and delete the wireless modules and setting repeater level			
10. Device output				
outnut	Select co	onsumer output type		
output	<b>&lt;&lt;&gt;&gt;</b>	Set repeater level <sup>3</sup>		
man. time	Manage	d 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	, parame	eters		
[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 PC⁴			
[restore]	Restore all parameters from PC backup⁴			

<sup>&</sup>lt;sup>1</sup> only for the first power plant

<sup>&</sup>lt;sup>2</sup> wireless setting must be enabled

<sup>&</sup>lt;sup>3</sup> only for wireless modules and wireless setting must be enabled

<sup>&</sup>lt;sup>4</sup> 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**.

Last update: 2021/11/30 09:16

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