HIQ UNIVERSE

HIQ Universe is a cloud service that enables:

- An overview of current power consumption
- An overview of the history of electrical power and energy consumption and production
- An overview and control of connected devices

Access point: https://my.hiq-universe.com

HIQ Universe Log-in

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	Smart spaces		
	Username or email		
	Password		
	Password		
	Stay signed in		
	Sign in		
	Forgot your password?		
	Create new account		
	Terms, Privacy		

Log in with your username or email and password to see your HIQ Universe subscription dashboard.

To reset forgotten password click on "Forgot your password?"

To create new account click on "Create new account".

Create HIQ Universe account

HIQ Universe Create new account X	+			- 🗆	×
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	Create new account				
	Choose your username				
	Your first name and last name				
	Email address				
	UTC+2:00 Africa/Blantyre				
	Create a password				
	Confirm your password				
	I'm not a robot				
	Accept Terms and Conditions				
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In the appropriate fields, enter:

- Username
- First and Last name
- E-mail address
- Timezone
- Password

Click on "I'm not a robot"

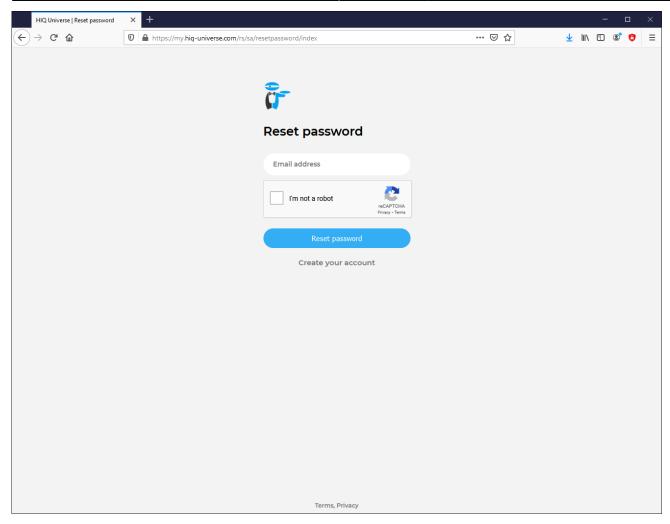
Accept Terms and Conditions.

Click on Create account.

A confirmation link will be sent to your email address.

Proceed to "HIQ Universe Log-in" screen.

Reset forgotten password



In the appropriate field, enter email address.

Click on "I'm not a robot"

Click on "Reset password".

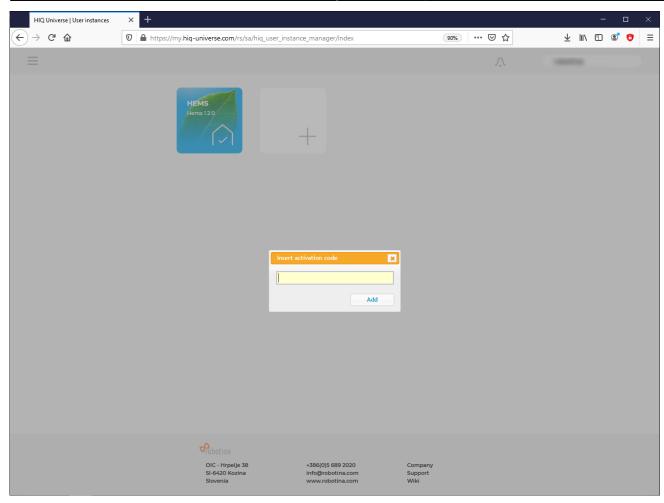
You will receive email with password reset link.

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HIQ Universe Reset password	× +		- 🗆 ×
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	Terms, Privacy		

Enter new password and click on "Save new password".

Proceed to "HIQ Universe Log-in" screen.

Add HEMS controller

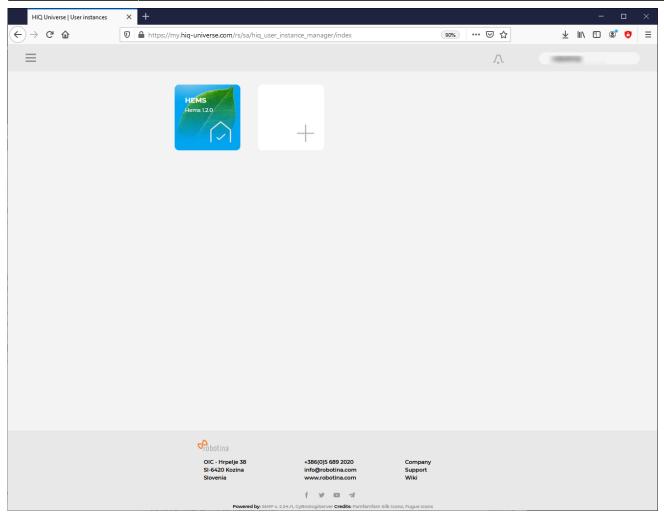


Enter HEMS activation code from "HEMS Quick Set-Up Guide" found in HEMS box.

user r	lame
email	
passv	rord
	ACTIVATION CODE SN-0012345A-85212FC25-685D-BEBE

HIQ Universe subscription dashboard

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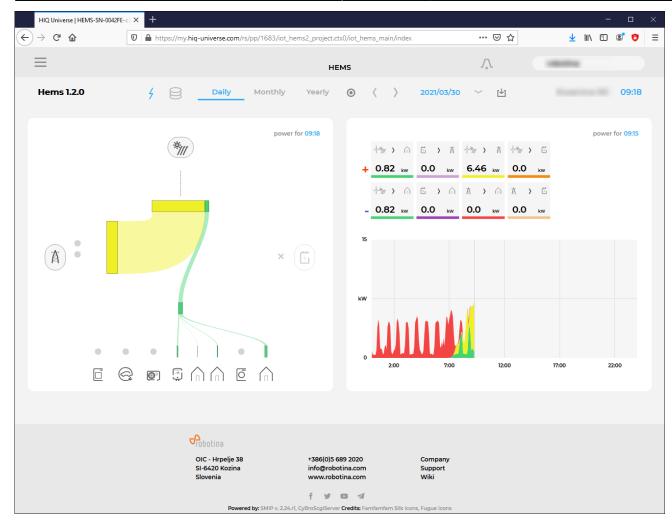
You will see tiles for all your subscribed HIQ Universe devices and services.

Go to Main HEMS view by clicking on HEMS tile or

add new HEMS device by clicking on blank tile with + sign.

"User profile set-up" is invoked by clicking on user name on top right.

Main HEMS view



Main HEMS page consists of 3 sections:

- "Title and view selection row" at the top
- "Power flow chart" on left side
- "Power and energy time-plot" on right

Title and view selection row

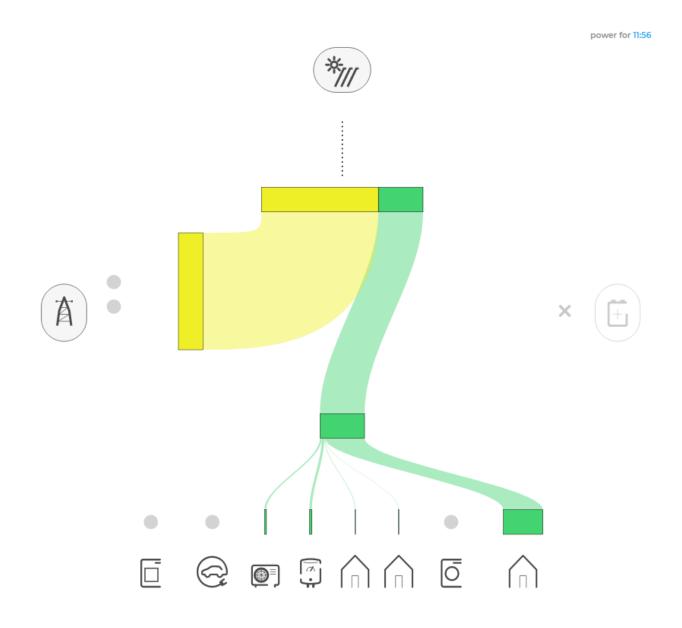
Hems 1.2.0	4 8	Daily	Monthly	Yearly	۲	$\langle \rangle$	2021/03/30	\sim	[↓]	09:18

From the left:

- Application name → HEMS name
- Lighting icon → time-plot displays energy or power
- Currency icon → time-plot overlays currency graph
- Daily → time-plot displays power
- **Monthly** → time-plot displays energy per day
- Yearly → time-plot displays energy par month
- **Target icon** → time-plot go to now
- < \rightarrow time-plot goes to previous term
- > \rightarrow time-plot goes to next term
- Date → Select term for time-plot

- **Download icon** → Download "csv" data for displayed time-plot period
- Location of HEMS installation
- Time at HEMS installation site.

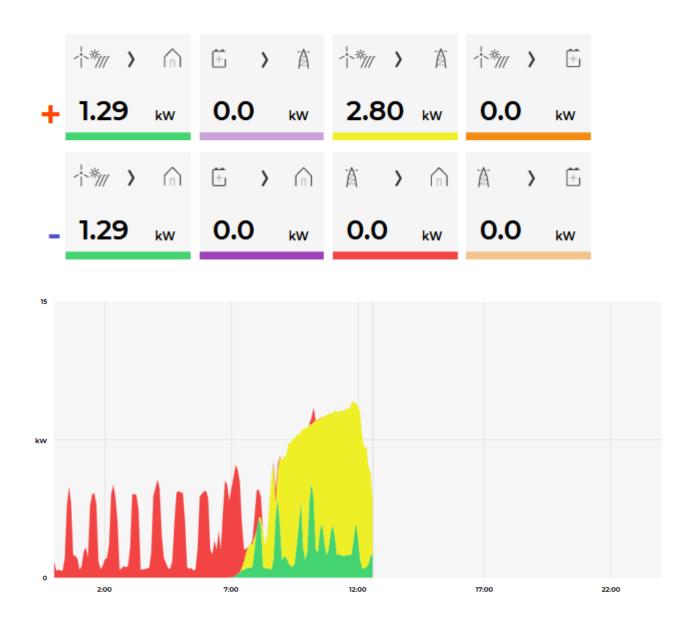
Power flow chart



Displays actual power flow with:

- Power sources (Local PV, wind, co-generation plants) at top
- Grid (divided by tariffs) on left side
- Storage (battery) systems on right side and
- **Consumers** on bottom.

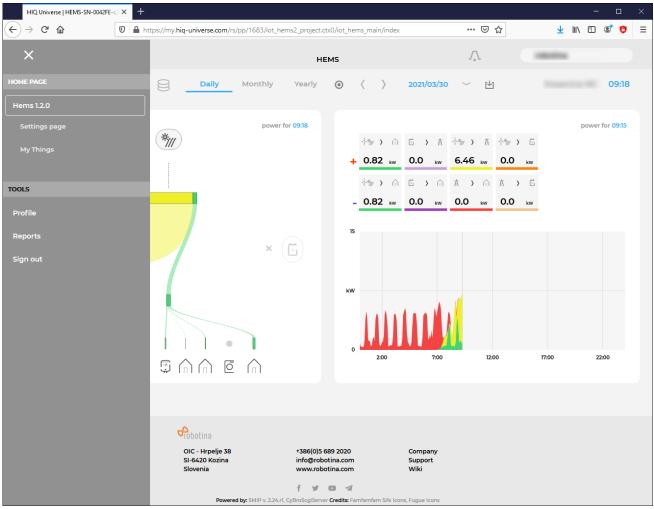
Unused items are soft greyed out with X. Items without actual power are displayed as dots. Clicking on a devices displays current power flow for selected device.



On bottom is time-plot for selected time period (in title row). By clicking on time plot a term for legend display is selected. Above there is power/energy legend.

Side menu





Side menu is activated by clicking menu icon (three horizontal lines at top-left). Menu items are dynamically created so they can be different for each user. Typical menu items from top:

- Home page → section with all your subscribed HIQ Universe devices and services
 - Hems 1.2.0 → "Main HEMS view"
 - Settings page → "HEMS settings"
 - My Things → "My Things"
- **TOOLS** → section with general site tools
 - Profile \rightarrow "User profile set-up"
 - Reports→ "System reports"
 - \circ Sign out → Log off from HIQ Universe

HEMS settings

HIQ Universe Setti	ings page 🛛 🗙	+			_		×
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Settings page							
Device							_
HEMS-SN-0042FE-c30567- Dorniz-Wiki							
MC serial number	?						
Device name	Hems 1.2.0						
Location							
Location name							
Location latitude							
Location longitude							
Time Zone	UTC+2:00 Europe	/Ljubljana 🗸					
-							
Energy price							
Currency	Euro	~					
Low tariff price (€/kWh)		0.122					
High tariff price (€/kWh)		0.122					
Feed-in tariff price (€/kWh)		0.122					

Basic settings and info about HEMS.

Sections:

- Settings:
 - Device serial number
 - Device name
 - Location name and coordinates, timezone
- Energy price: per tariff energy price
- Timeplots range: ranges for various timeplots
- Share your device: manage device sharing guest accounts

My Things

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Consumers							^
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Power: 181	W Power:	27 W	Power:	325 W	Power:	o w	
Settings	✓ Settings	~	Settings	~	Settings	~	
History	~ History	~	History	~	History	~	
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Power: 135	5	ow	Power:	ow	State: Phases: Power: EVSE max: Max current Last session Energy:	Available 3 phases 0 W 20 A t: 20 A	
Settings	✓ Settings	~	Settings	~	Settings	¥	
History	✓ History	~	History	~	History	~	
Production and grid			· · · · · · · · · · · · · · · · · · ·		·		^
PV	> Grid	>					^
Power: 7728	Voltage L1: Voltage L2: Voltage L3: Voltage L3: Frequency: 5 Tariff: Current L1: Current L2:	225 V 226 V 230 V 50.02 Hz LO -11.8 A -11.8 A -11.3 A					
	Settings	~					
History	~ History	~					
Storage							^
-							
Sensors							^

My Things GUI could be accessed within the HiQ Universe platform by clicking the My Things item within the main menu. Individual devices are presented as a group of cards, divided on four groups:

• Consumers

- Up to 8 consumers
- On/Off control
- $\circ\,$ Overview of energy and status
 - Settings:
 - Manual override (Minute countdown of manual control until cloud can perform optimizations again)
 - Cloud optimizations with timetable
 - Current limiter with priorities
 - History:

- Power overview
- Production and grid
 - Overview of grid and up to 3 other energy sources
- Storage
 - Overview of up to 2 battery sources
- Sensors
 - $\circ\,$ Supported for temperature and humidity sensor

Consumers

Polnilnica 🔺 >

	State:	Available
\frown	Phases:	3 phases
()	Power:	0 W 0
$\langle \gamma \rangle$	EVSE max:	20 A
	Max current:	20 🖨 🗛
	Last session:	0 h 0 min
	Energy:	0 Wh

Settings	^
Manual override:	0
Smart	grid
Cloud optimization:	\checkmark
Smart grid status:	Idle
Enabled:	from: 0 🗸 : 0 🗸
	to: 0 🗸 : 0 🗸
Max duration:	15 🗸 min
Max request:	1 🗸
Suspend time:	15 🗠 min
Current l	imiter
Limiter priority:	limit first 🗸 \min
History	^
History Span Date	^
	^
Span Date	Phase L1: 0 W Phase L2: 0 W Phase L3: 0 W
Span Date Day 2021/03/31	Phase L1: 0 W
Span Date Day 2021/03/31	Phase L1: 0 W Phase L2: 0 W Phase L3: 0 W

Consumers present devices, that consume electric energy. Within the group of Consumers, the first card present a general consumption of the object - a background consumption. The following

Last update: 2021/11/12 15:06 en:hems_v1_2_0:universe http://wiki.hiq-universe.com/doku.php?id=en:hems_v1_2_0:universe&rev=1636729568 items present real controllable devices, such as EV charger, Heat pump, wireless socket, etc. An example of a device is shown in the following image.

The form of a card of each consumer is composed of the general part, history and settings part.

General part contains:

- Name of a device, which can be changed by user.
- Icon (button) enables toggling the device operation state (Switch on / Switch off).
- **State** label contain the information of device operation state.
- **Phases** label contain the information of EV utilized phases.
- **Power** label contain the information of device consumption power in watts.
- EVSE max label contains EVSE max charging current,
- Max current label is user desired max charging current, which can be changed by user.
- Last session label contains the information of charging duration and energy.

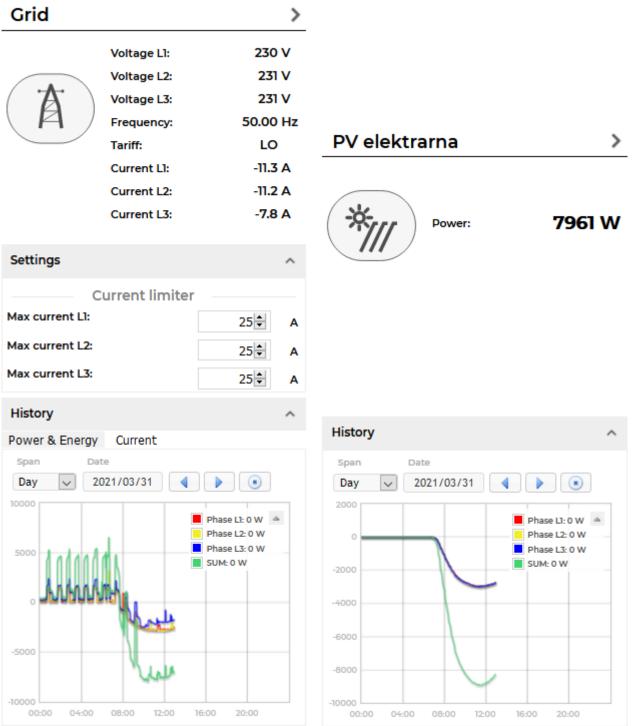
Settings:

- **Manual override** are minutes after switch on/off button is pressed that the smart-grid service is not allowed to switch on/off the device.
- Cloud optimization enables or disables smart grid service.
- Smart grid status label shows smart grid operation state with the following states:
- **Enabled** section specify the temporal range between **from** and **to** in the form of *hh:mm*, in which the device is allowed to be switched off from according to the smart-grid service. If **from** is larger than **to**, then temporal range is the opposite. If **from** and **to** are equal, then the smart-grid service is enabled 24 hours a day.
- **Max duration** setting limits the duration of time, the smart-grid service switches off (activates) the device. After smart-grid service activates the device, the device will deactivate (switch back on) after max-duration minutes at the latest.
- **Max request** setting limits the maximum daily activations from the smart-grid service.
- **Suspend time** presents the time in minutes, which has to pass between two activations (between the stop of one activation and start of another).
- Limiter priority setting can be no limiter, limit last, limit second and limit first. If DCL is enabled and inactive a green warning icon is displayed on the card. If DCL is active the icon turns yellow and if DCL is disabled there is no icon on the card. Limit first is a group of devices that are dynamically regulated first if the main grid current is over the preset threshold. If main grid current is still over the preset threshold, regulating other groups will follow with limit second and after that with limit last.

History:

• **History** part shows historical consumption of a device. The temporal range can be selected as daily, weekly, monthly or yearly. Daily and weekly range shows power consumption in watts, while monthly and yearly range shows energy consumption in kilowatt-hours. The interface enables time-frame selection and time-frame alignment to current time.

Production and grid



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Producers present devices or systems that produce electrical energy. Example of such devices are solar power plant, wind power plant, diesel generator and others. An example on the following figure shows solar power plant.

General part contains:

Last update: 2021/11/12

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- Name of a plant, which can be changed by user.
- Icon represent the type of producer.
- Voltage represents voltage of the grid.
- Frequency represents frequency of the grid.
- Tariff represents active tariff of the grid.

- **Current** represents current of the grid.
- **Power** label contain the information of device production power in watts.

Settings:

• **Dynamic Current Limiter** represents grid current threshold. The DCL will manage devices to keep the current under this threshold. Settings are per phase.

History:

• **History** part shows historical production of a device. The temporal range can be selected as daily, weekly, monthly or yearly. Daily and weekly range shows power production in watts, while monthly and yearly range shows energy production in kilowatt-hours. The interface enables time-frame selection and time-frame alignment to current time. Grid has additional current history.

Storage

Battery	y	
		charging 164 W
History		^
Span	Date	
Day 🗸	2020/09/25	
400		Discharging 0 W 🔺 Charging 0 W
300		
200		
100		
0	0 08:00 12:00	16:00 20:00

Storage present battery as shown in an example figure on the left.

General part contains:

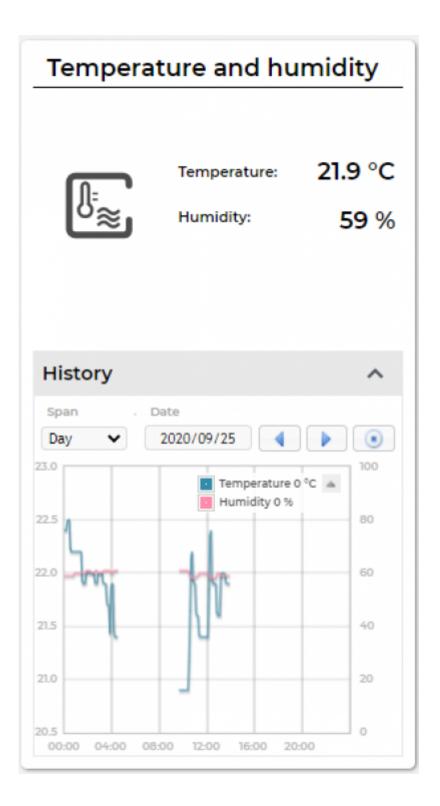
- **Name** of a battery, given by the user.
- **Icon** representing the battery.
- **Power** label contain the information of charging or discharging power in watts.

History:

• **History** part shows historical charging or discharging power of a device. The temporal range can be selected as daily, weekly, monthly or yearly. Daily and weekly range shows

power charging or discharging in watts, while monthly and yearly range shows energy charged or discharged in kilowatt-hours. The interface enables time-frame selection and time-frame alignment to current time.

Sensors



Sensors present devices or systems that measure various quantities, such as temperature, humidity. The left figure represent a combined temperature and humidity sensor.

General part contains:

- Name of a sensor, which can be changed by user.
- **Icon** represent the type of sensor.
- Temperature label contain the information of temperature measurement in °C.
- **Humidity** label contain the information of relative humidity in %.

History:

• **History** part shows historical sensor measurements. The temporal range can be selected as daily, weekly, monthly or yearly. The interface enables time-frame selection and time-frame alignment to current time.

User profile set-up

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Basic information					
Username					
Created					
Previous login					
Last login					
Last password change Use language	English	~			
Profile					
Main realm		~			
Full name					
Email address					
Timezone	UTC+0:00 WET	~			
Save changes Password Old password New password Repeat password					
Change password Persistent logins	Last login From IP	Delete			
No persistent logins					*

Basic information section:

- Username
- Created date and IP
- Previous and last login date and IP
- Last password change date and IP
- User language

Profile section:

- Main realm display
- Full name, email address and timezone edit fields

Password:

• Fields for password changing

Persistent logins:

• Data of access from persistent logins

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System generated reports can be found here.

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