



vanadium redox flow battery

USER MANUAL

VRFB Battery webapplication

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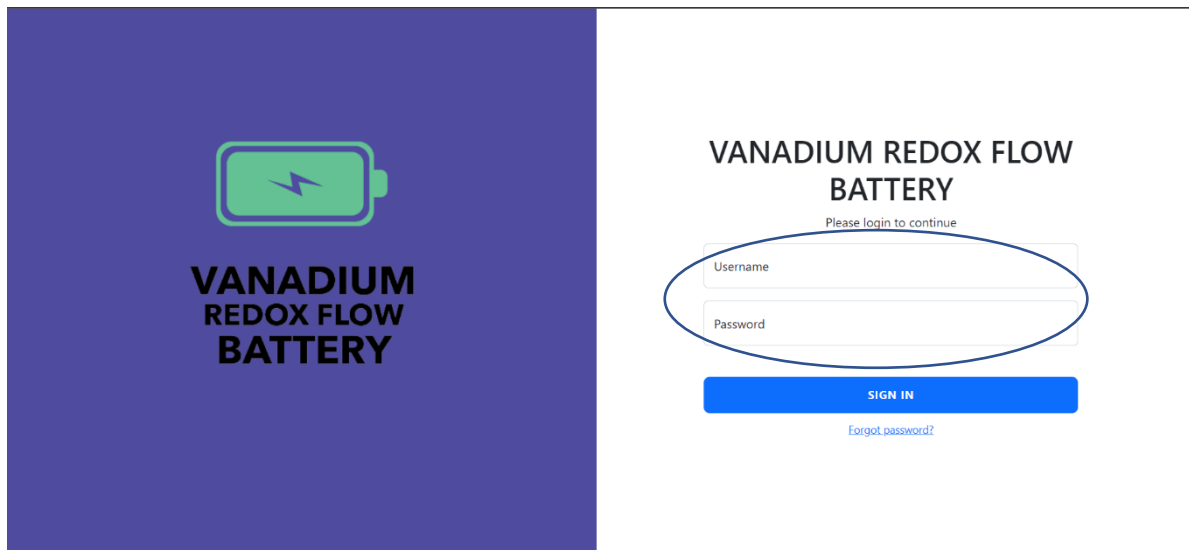
16-12-2022

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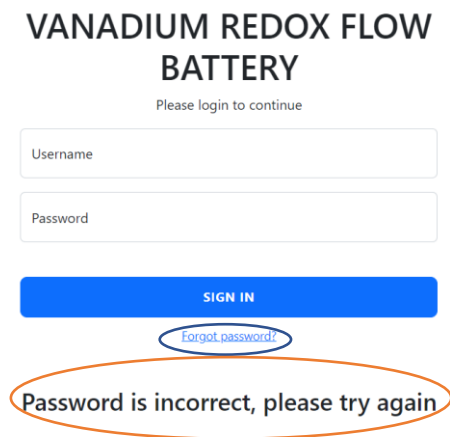
This manual is meant to show you how to use every aspect of the web application

2. Login page



(image 2.1)

When you go to the website you are greeted by this login page. If you don't have an account, ask your administrator to make you an account. If you have an account enter your username and password into their respective fields (image 2.1, highlighted in blue). When you have entered your username and password click on the blue 'sign in' button (image 2.1). If your username and password are correct you will be redirected to the home page (image 2.2). If your username and password are incorrect the page will tell you (image 2.2, highlighted in orange).



(image 2.2)

2.1 Password reset

If you forgot your password, you can click on the 'forgot password?' button (image 2.2, highlighted in blue).

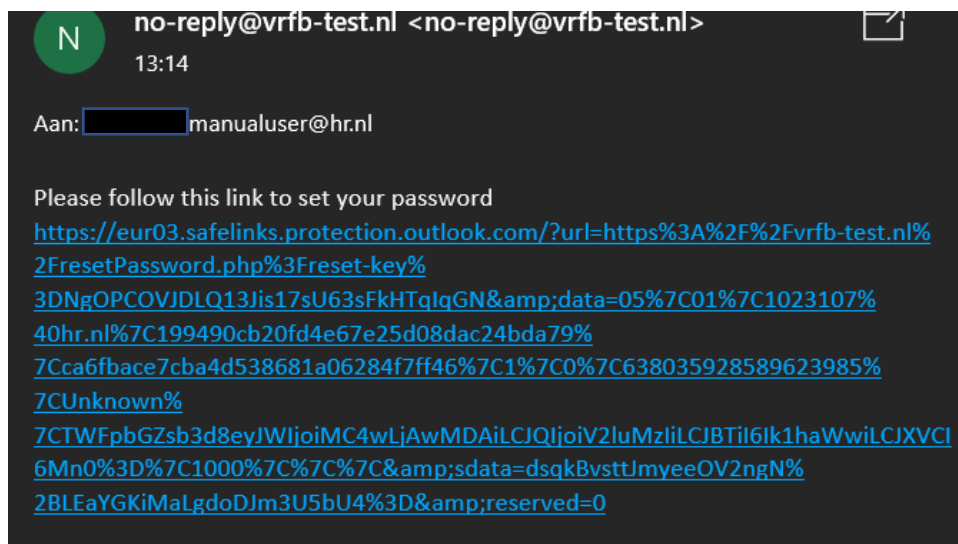
Password Reset

Please enter your email connected to your account, you will receive instructions for resetting your password

RESET PASSWORD

(image 2.3)

You will be redirected to this page. When you enter your mail address and click on the blue 'reset password' button (image 2.3), an email will be sent, if your mail address is registered.

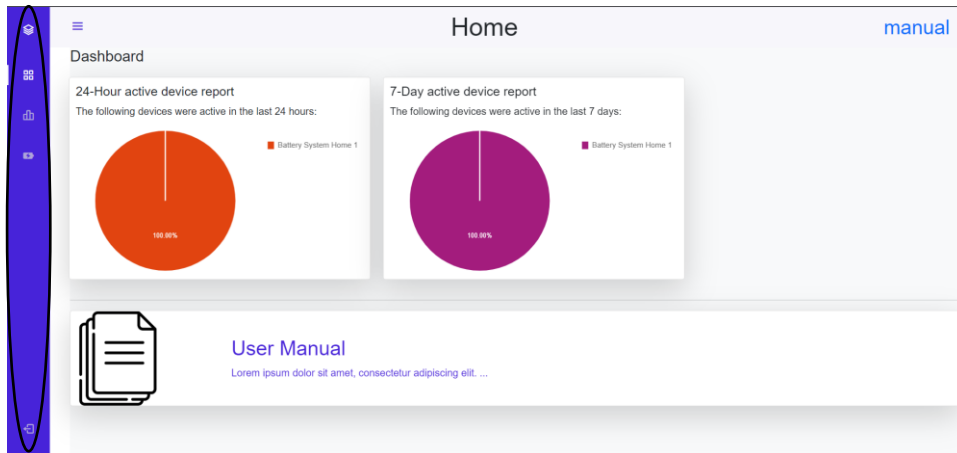


(image 2.4)

By clicking on the link provided in the email, you will be able to change your password.

3. Navigation bar

If your username and password are correct you will be redirected to the home page.



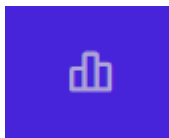
(image 3.1)

On the left of the screen there is a navigation bar (image 3.1, highlighted in black). The icons on this navigation bar are used to navigate through the web app.



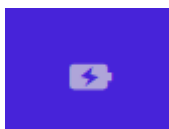
(image 3.2)

This is the icon for the home page



(image 3.3)

This is the icon for the measurements page.



(image 3.4)

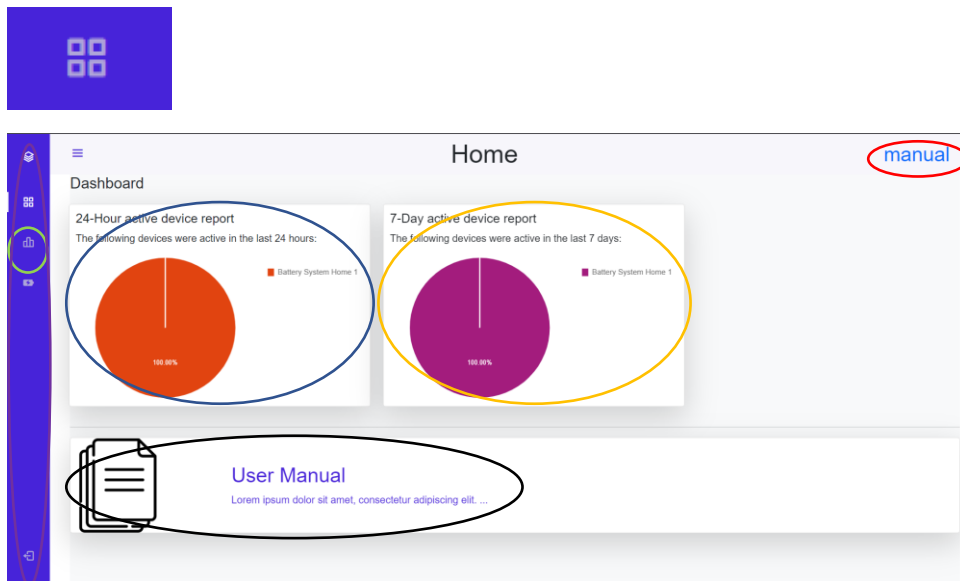
This is the icon for the devices page.



(image 3.5)

You can use this icon for signing out.

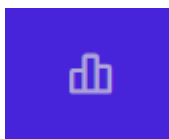
4. Home page

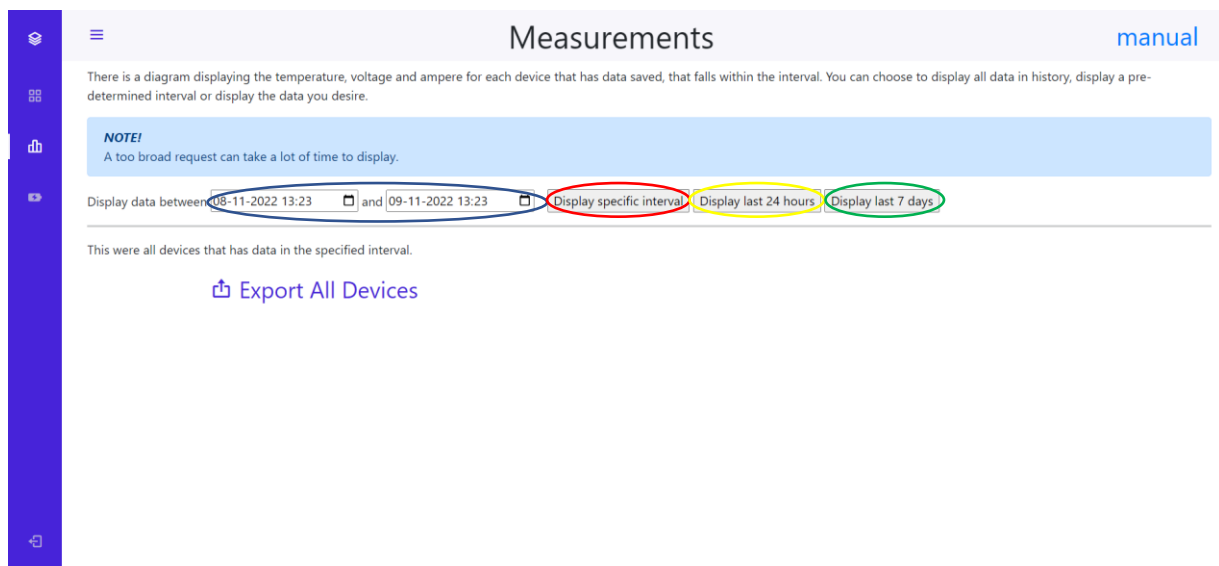
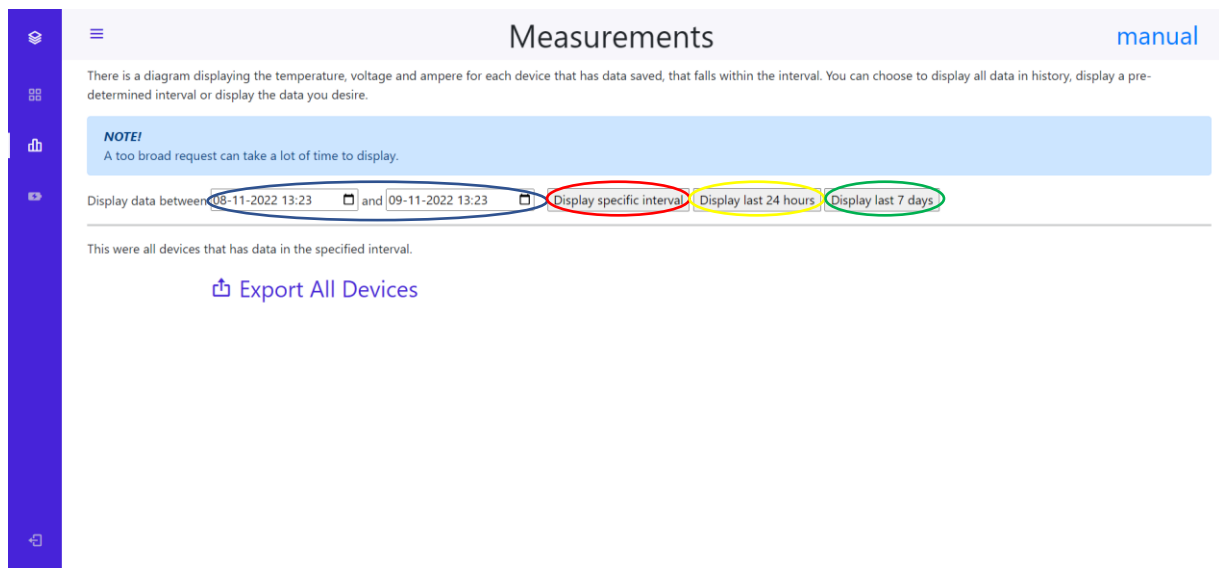


(image 4.1)

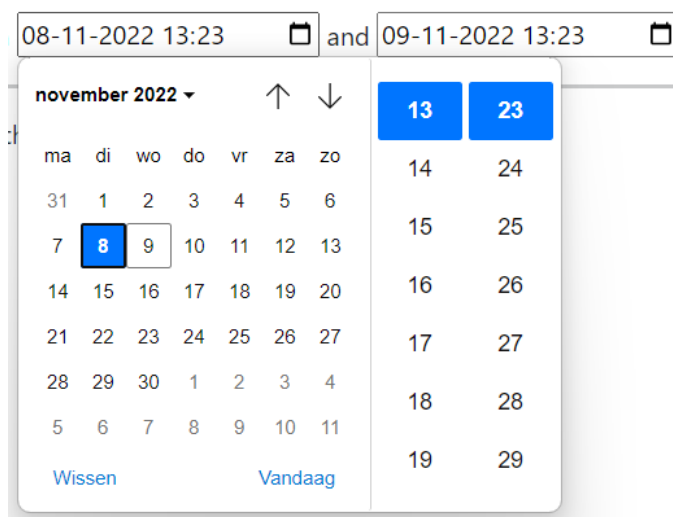
On the home page you will find two graphs. The '24-hour active device report' (image 4.1, highlighted in blue) will show you how many measurements a certain device has made in the last 24 hours. The '7-day active device report' (image 4.1, highlighted in yellow) will show you how many measurements a certain device has made in the last 7 days. If no measurements were taken in the last 24 hours or last 7 days these graphs will be empty. Also on this page you can find this user manual (image 4.1, highlighted in black). In the top right corner, your username will be displayed (highlighted in red). On the left of the screen there is a navigation bar (image 4.1, highlighted in purple). When you click on the measurements icon (image 4.1, highlighted in green), you will be redirected to the measurements page.

5. Measurements page



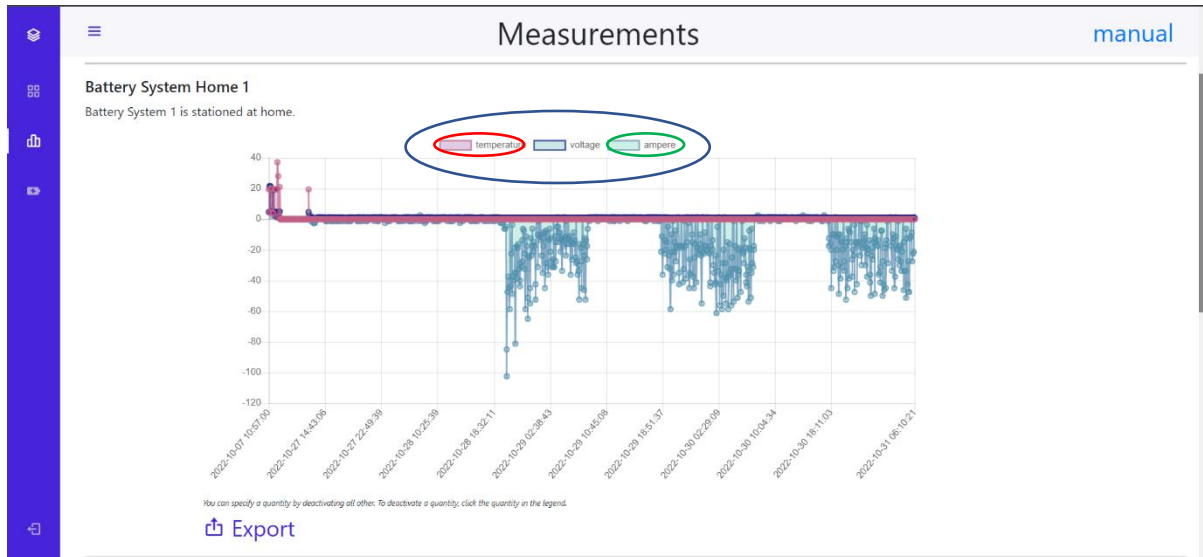


This is the page where you can see the data from the measurements. Firstly, you can choose the dates from which you want the data displayed. When you click on the date buttons (image 5.1, highlighted in blue) a screen will pop up (image 5.2) where you can choose a date.



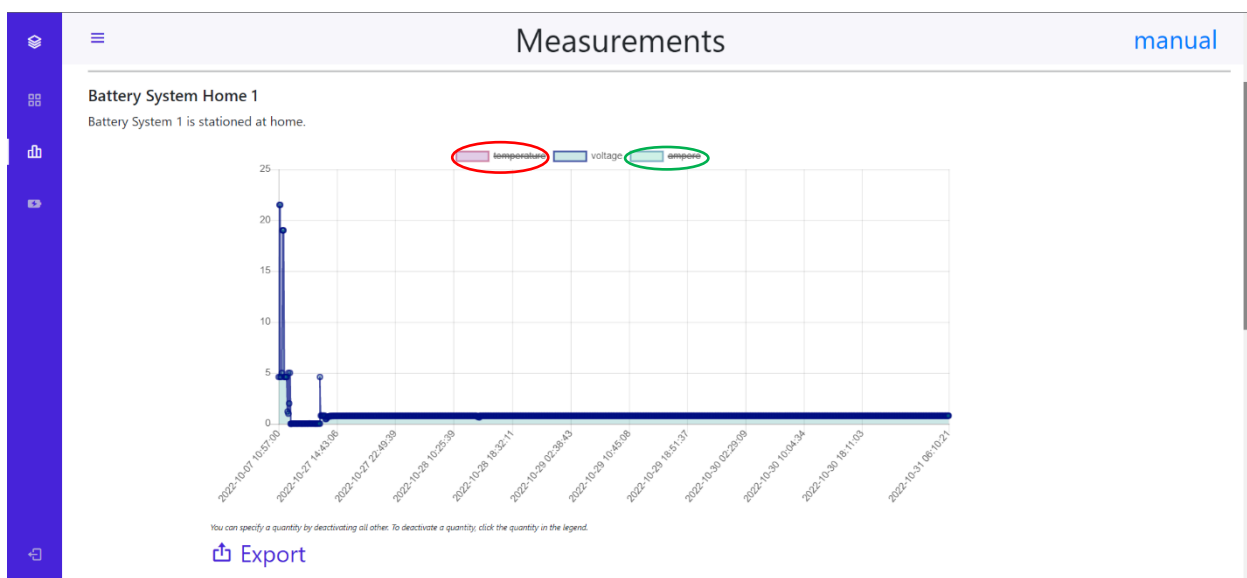
(image 5.2)

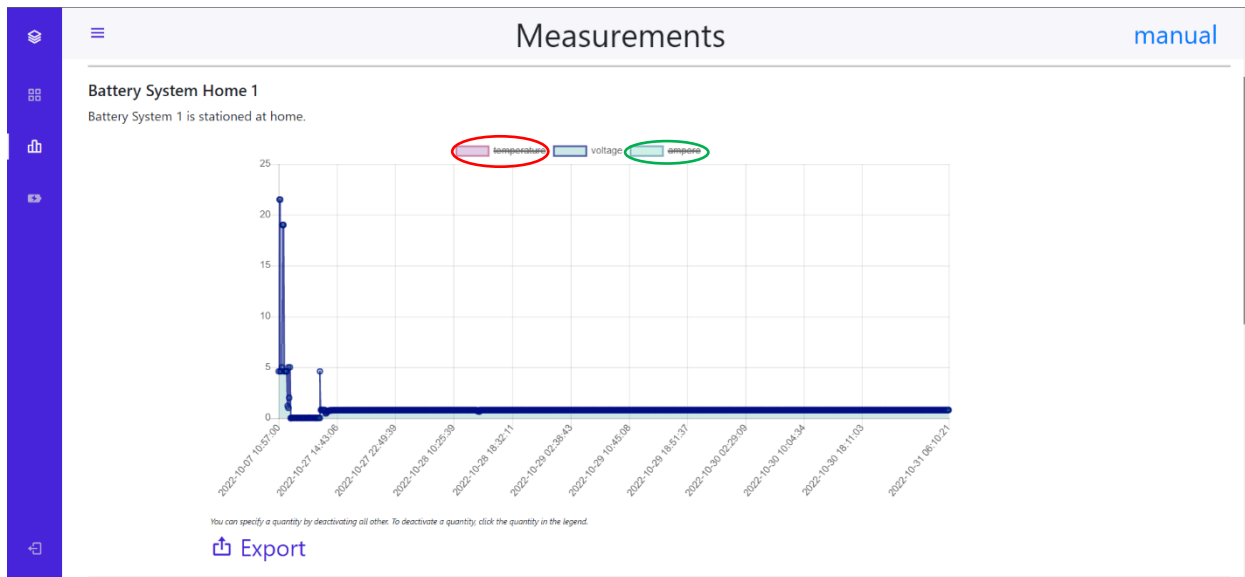
You can pick a date by clicking on the numbers. After you have chosen the dates, click on the 'display specific interval' button (image 5.1, highlighted in red). When you click on this button, graphs (image 5.3) will appear on the screen that will show you the requested data.



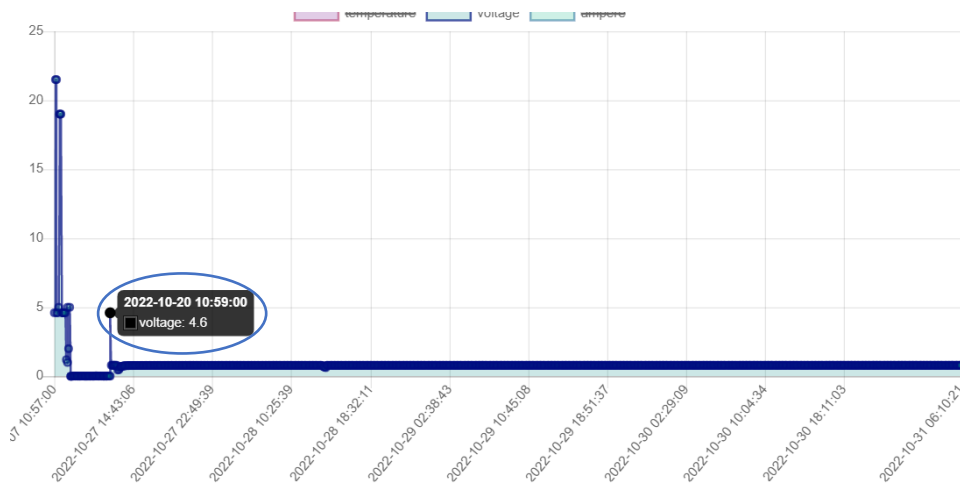
(image 5.3)

The measurements are coloured differently. You can see what measurement each colour represents by looking at the top of the graph (image 5.3, highlighted in blue). These parameters can be toggled on or off by clicking on the parameters on top (image 5.3, highlighted in blue) of the graph. So, if you only want to see one specific measurement, for example the voltage, you can click on temperature (image 5.3, highlighted in red) and ampere (image 5.3, highlighted in green). These two parameters will now be toggled off.





The parameters that are toggled off will have a stripe on them (image 5.4, highlighted in red and green). When you want to turn the parameter back on, you can click on it again, and it will appear in the graph. When you want to look at a specific measurement, you can hover your cursor on that specific measurement (image 5.5).



(image 5.5)

When your cursor is on the specific measurement, a screen will pop up (image 5.5, highlighted in blue) which tells you more specifically what the measurement is.

There are also buttons to request the data from the last 24 hours (image 5.1, highlighted in yellow) or from the last 7 days (image 5.1, highlighted in green). When you click on these buttons you do not have to choose a date. The buttons will automatically choose the right dates.

5.1 Downloading data

If you want to download the requested data, you can click on the export button (highlighted in blue) underneath the graph.



(image 5.6)

Note this is not the same button as 'export all devices' button (image 5.8, highlighted in yellow).

When you click on this export button, the web app will automatically download the requested data as a csv file on your computer.

measurment_id	device_id	time	voltage	temperatu	ampere
7	1	2022-10-07 10:57:00	4.6	19.4	
9	1	2022-10-07 10:57:00	21.5	4.3	
8	1	2022-10-07 10:57:00	21.5	4.3	
6	1	2022-10-07 10:57:00	4.6	19.4	
5	1	2022-10-07 10:57:00	4.6	19.4	
11	1	2022-10-07 10:57:00	5	20	
4	1	2022-10-07 11:00:00	19	4	
3	1	2022-10-07 11:00:00	19	4	
2	1	2022-10-07 11:00:00	19	4	
17	1	2022-10-07 11:12:00	4.6	19.4	
66	1	2022-10-07 11:12:00	4.6	19.4	2
67	1	2022-10-07 11:12:00	4.6	19.4	2
16	1	2022-10-07 11:12:00	4.6	19.4	
65	1	2022-10-07 11:12:00	4.6	19.4	
1	1	2022-10-10 02:28:20	1.2	37.1	
10	1	2022-10-10 09:09:09	5	28	
15	1	2022-10-10 10:10:10	1	1	
14	1	2022-10-10 10:10:10	2	2	
12	1	2022-10-10 10:10:10	5	21	
13	1	2022-10-10 10:10:10	0	0	
18	1	2022-10-14 14:26:53	0	0	
19	1	2022-10-14 14:35:27	0	0	

(image 5.7)

The downloaded file will look like this (image 5.7). If you want to download the data from all the devices, you can click on the 'export all devices' button (image 5.8, highlighted in yellow) at the bottom of the screen.

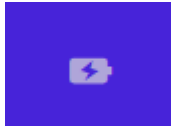
This were all devices that has data in the specified interval.



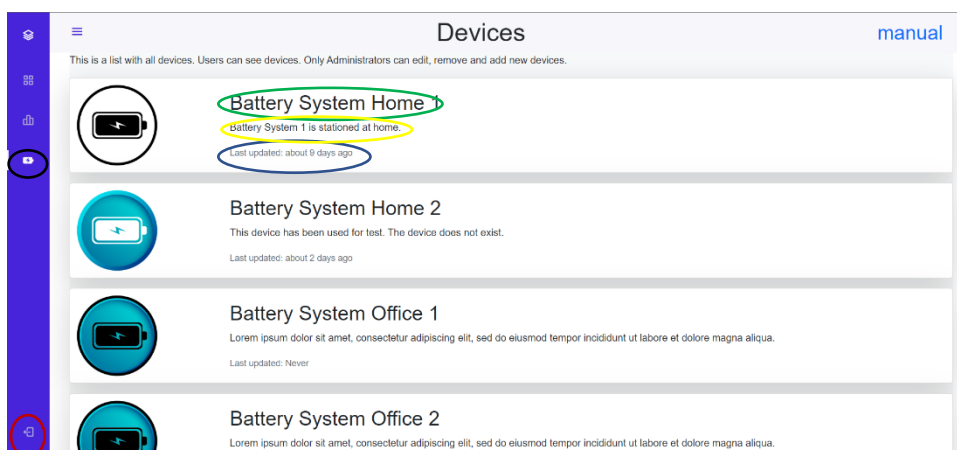
(image 5.8)

By clicking on this button, you will download all available data on the database. The downloaded file should look the same as the picture above.

6. Devices page



Next, we are going to have a look at the devices page. You can navigate to this page by clicking on the devices icon (image 6.1, highlighted in black).

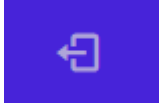


(image 6.1)

On this page you can see all the registered devices. The devices all have different names (image 6.1, highlighted in green) and descriptions (image 6.1, highlighted in yellow). Also on this page you can

see, when the last measurement was sent (image 6.1, highlighted in blue). If you want to add a new device, please contact the administrator.

7. Signing out



When you are done you can sign out by clicking on the sign out button (image 6.1, highlighted in red) on the bottom of the navigation bar. After you have successfully logged out, you will be redirected to the login page (image 2.1).

Change Log

Versie	Datum	Wijziging
1	29-11-2022	Eerste versie
2	16-12-2022	Tweede versie. Feedback van opdrachtgever verwerkt, door tekst duidelijker te maken.