Starter Kit – From delivery to first charge guide

Revision AA

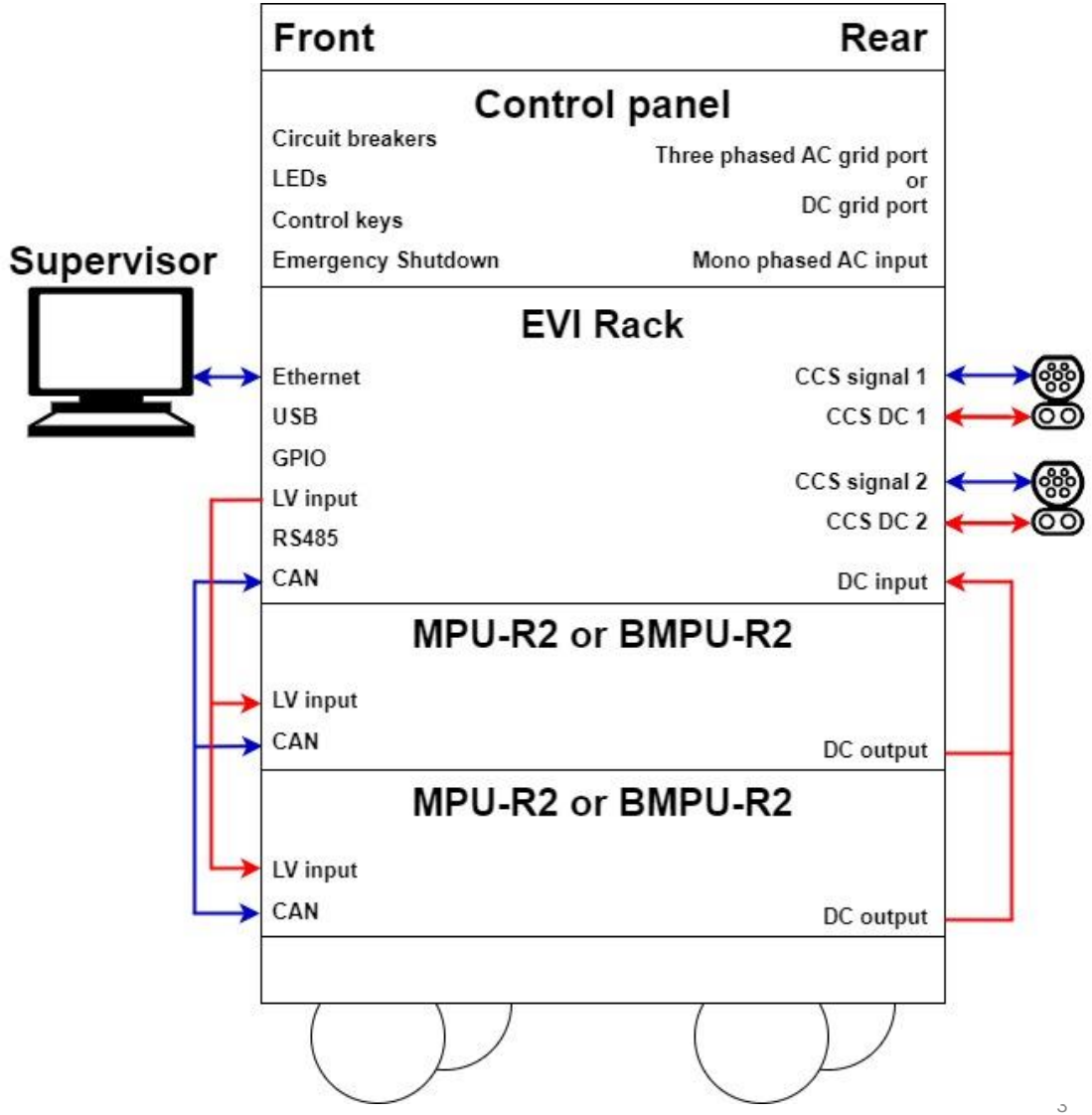
Table of content

Starter Kit presentation

- Starter kit is a modular mobile cabinet designed to reduce the time between delivery of SECC and power module equipment and the first safe and successful charge of an Electric Vehicle

- It features:
  - 2 CCS charge points
  - 2 power units
  - Equipment to serialize, parallelize, or manage independently the power units on the charge points
  - SECC boards

- Starter kit is available in 4 configurations:
  - SK-V1G-AC (AC grid, charge only)
  - SK-V2G-AC (AC grid, charge and V2G)
  - SK-V1G-DC (DC input, charge only)
  - SK-V2G-DC (DC input, charge and V2G)



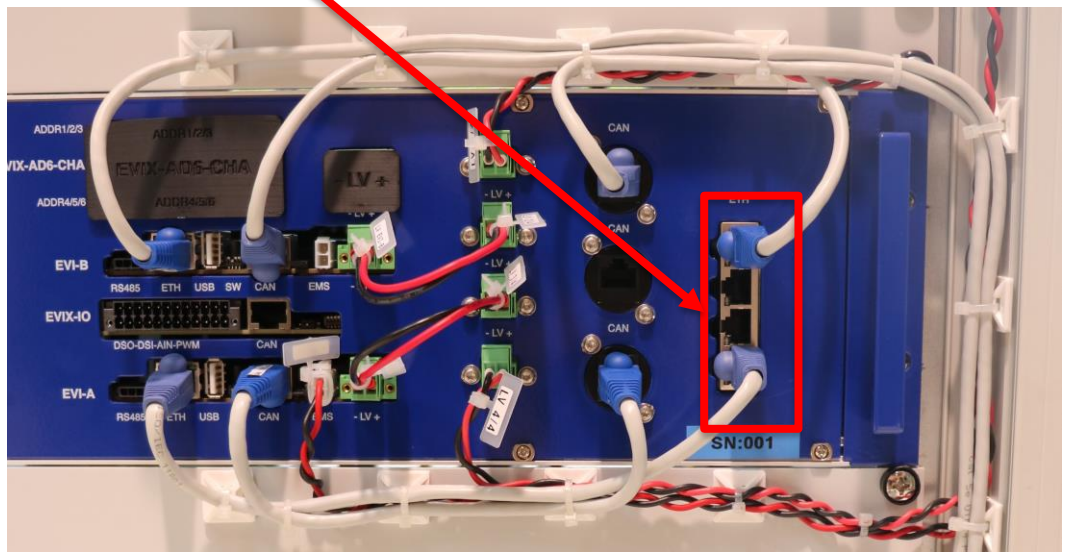
Credentials request

- Watt & Well shall send an e-mail with a onetimesecret link
- This link provides a user name and password for the Graphical User Interface (GUI)
- This link can only be accessed once

Connection to the EVI GUI

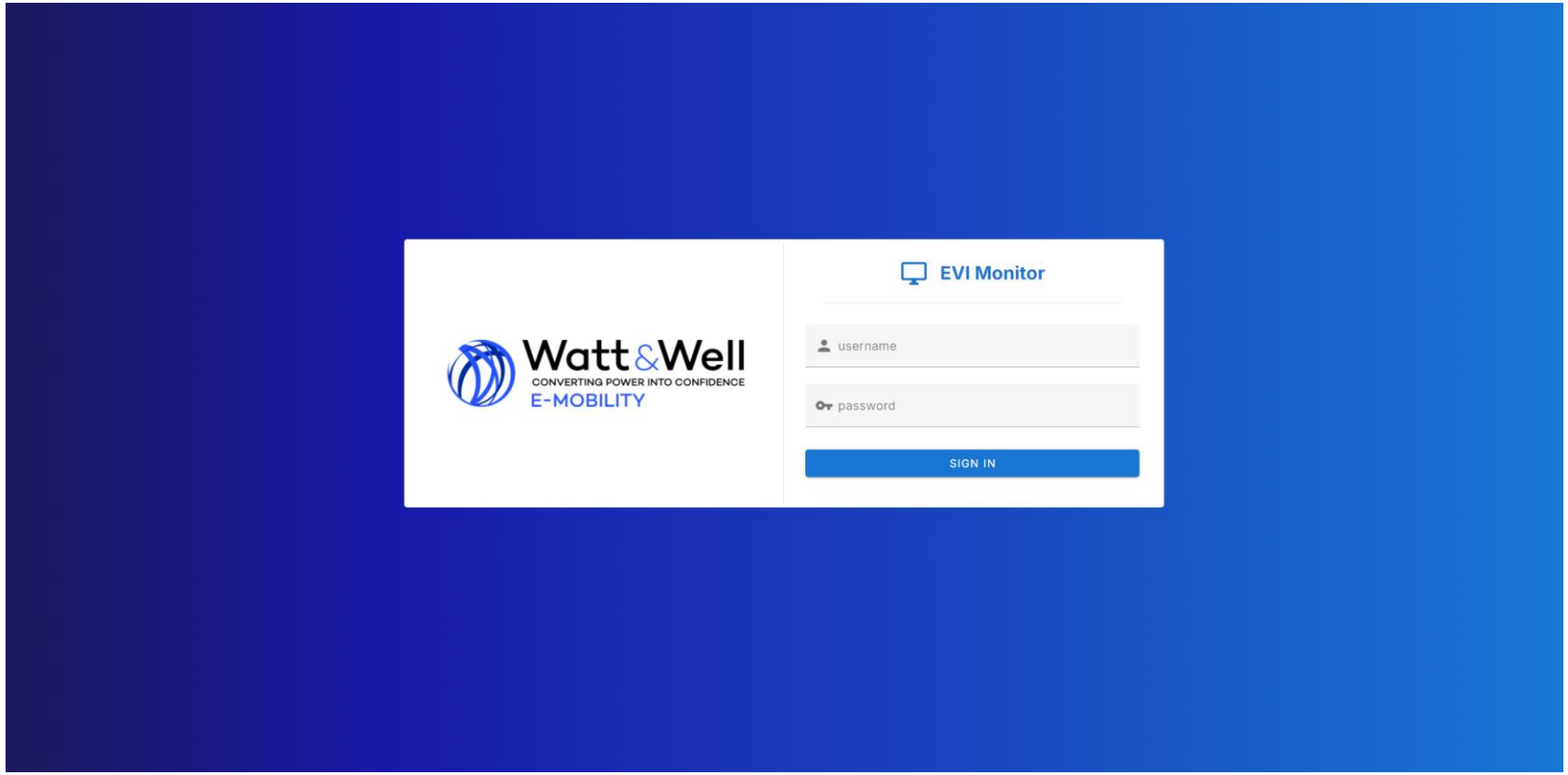
- Set IPv4 of PC ethernet port to the 192.168.137.XXX/24 network, take any id (xxx) except 11 (address of EVIA), 12 (address of EVIB) and 100 (reserved for debug)

- Connect the computer on the Ethernet switch of the Starter Kit:



Connection to the EVI GUI

- Go to the following address in your navigator: http://192.168.137.11:8333
- You will be transferred to the page shown below to enter the login and password:



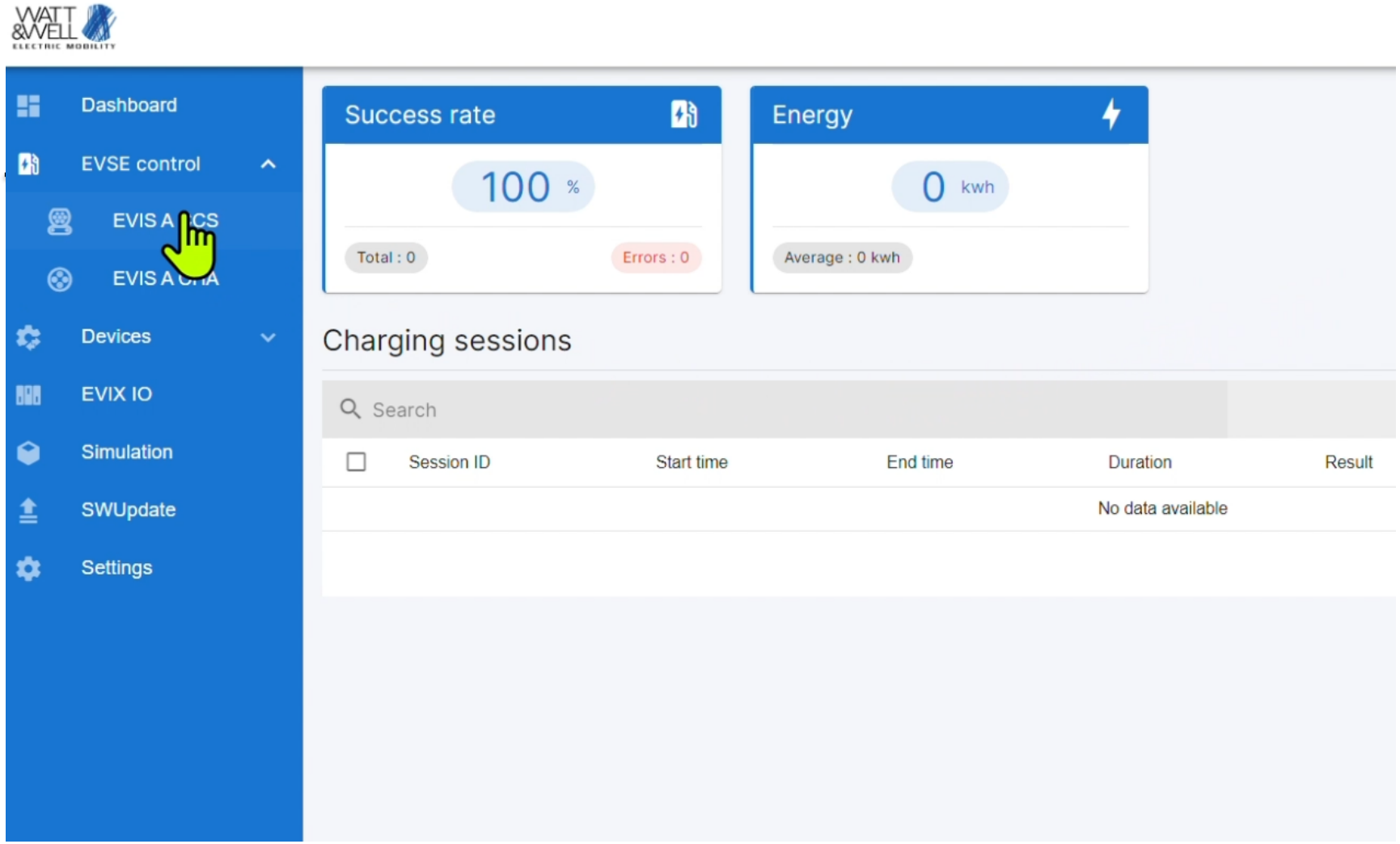
Supervisor view

- Click on EVIS A:

This allows to manage the CCS 1 charge point (tag on the CCS plugs).

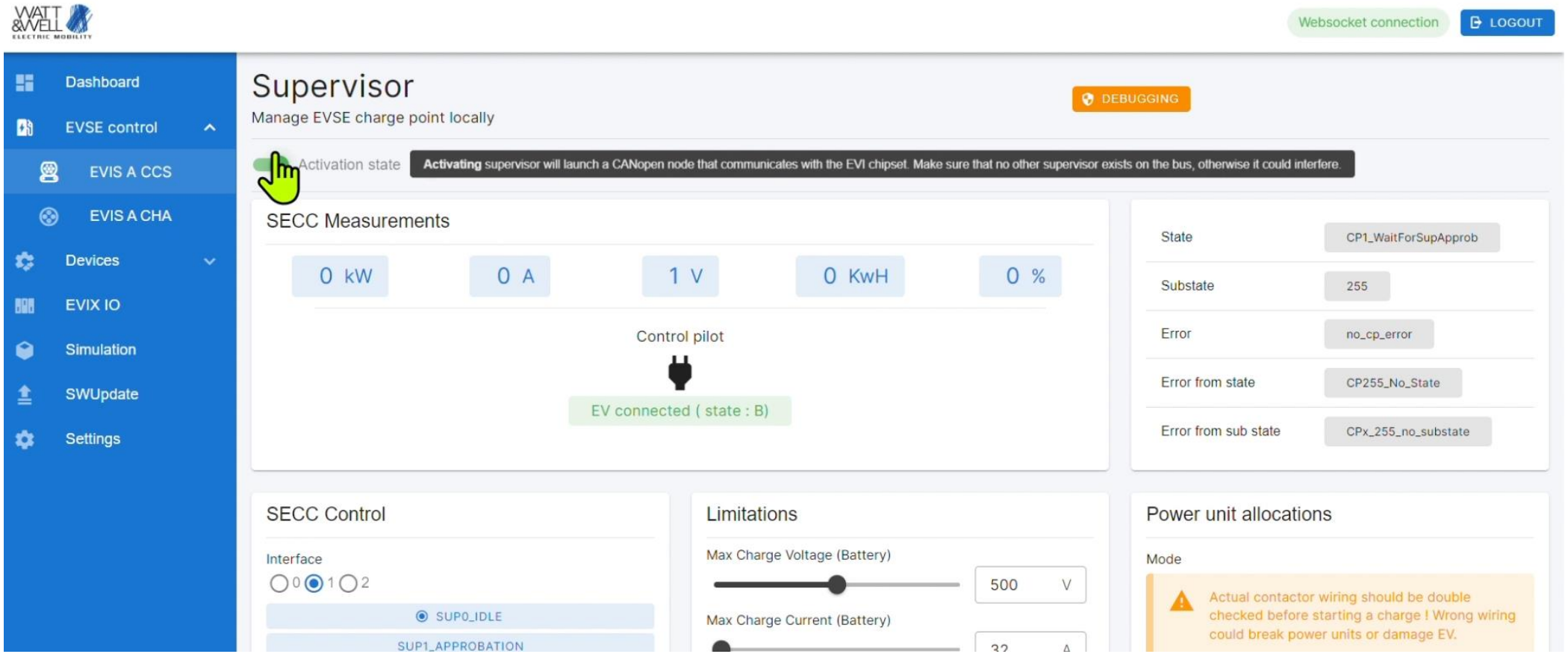
To manage the CCS 2 charge point, you will have to open a new GUI window, with the IP address of EVIS B.

More information is available in the user guide.



Supervisor view

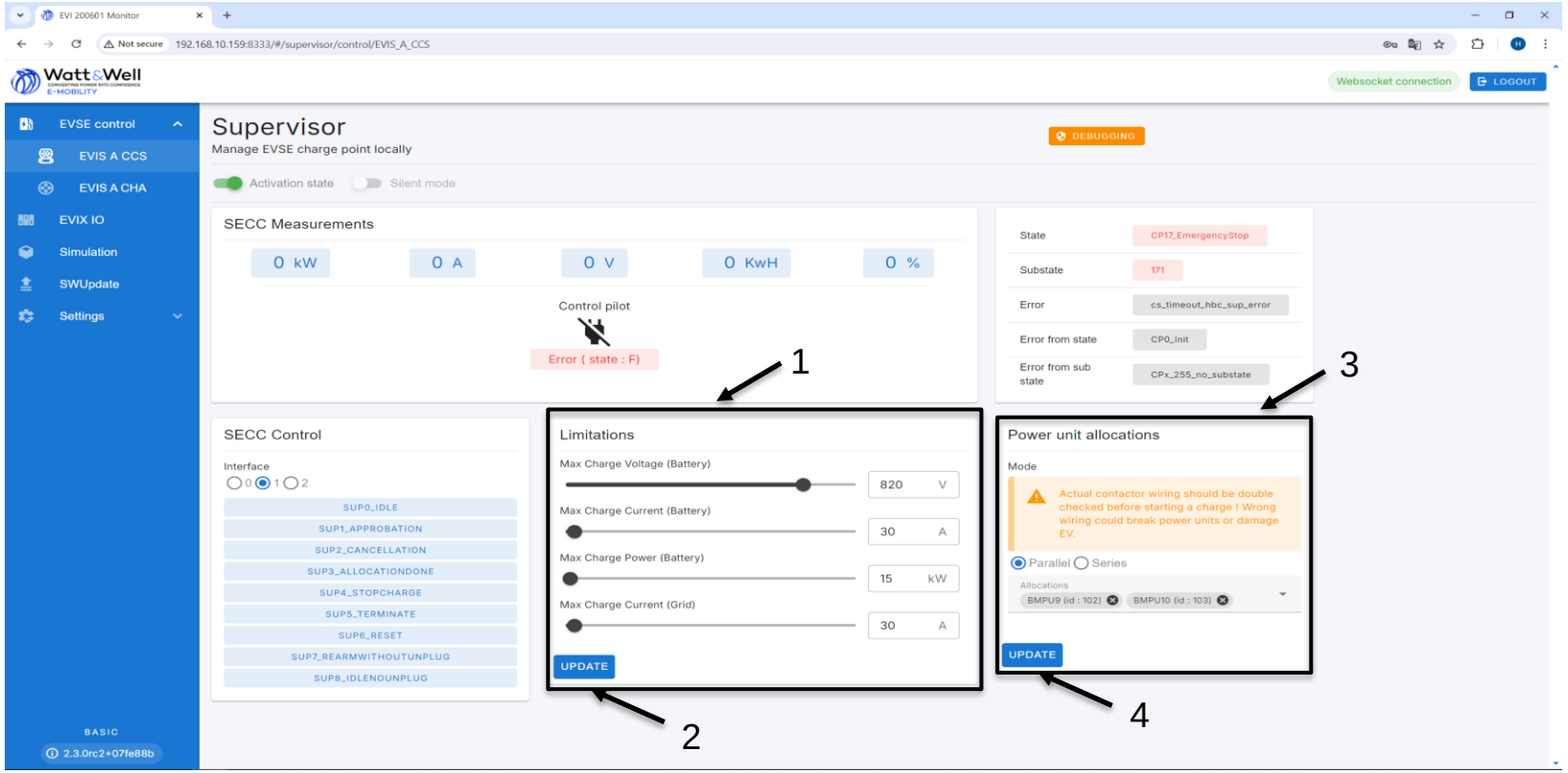
- If the Supervisor view is greyed, please click on the “activation state” slider



Supervisor view

- This view allows users to set limitations and power units allocations

- Press update after filling each section:
  - 1) Fill limitations
  - 2) Press update
  - 3) Then fill the allocations
  - 4) Press update



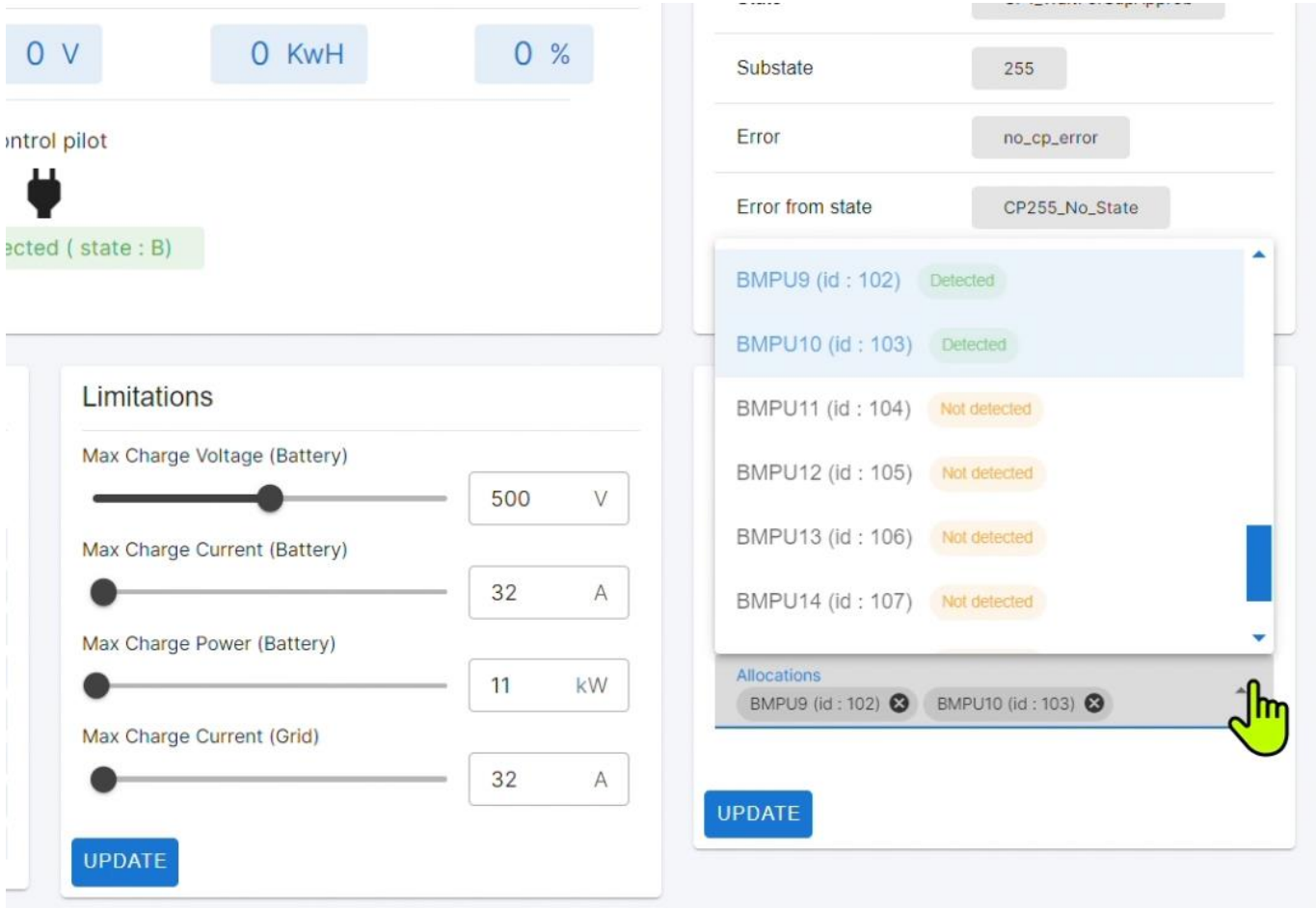
Supervisor view - Limitations Overview

	SK-VIG-AC		HV SK-V2G-AC		HV SK-VIG-DC		HV SK-V2G-DC		
PARAMETER	VALUE		VALUE		VALUE		VALUE		UNITS
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
Max charge current (grid)	0	63	-32	32	0	100	-64	64	A
Max charge voltage (battery)	200	920	150 (G2V) ; 250 (V2G)	1000		920	150	1000	V
Max charge current (battery)		100	-64	60		100	-64	60	A
Max charge power (battery)		44	-22	22		60	-22	22	kW

Supervisor feature configuration - Power Unit allocations

- Parallel configuration (1 to 2 PUs):
  - Allocate the PUs through the drop-down list regardless of the PU IDs
  - If you are allocating a single PU, use this configuration

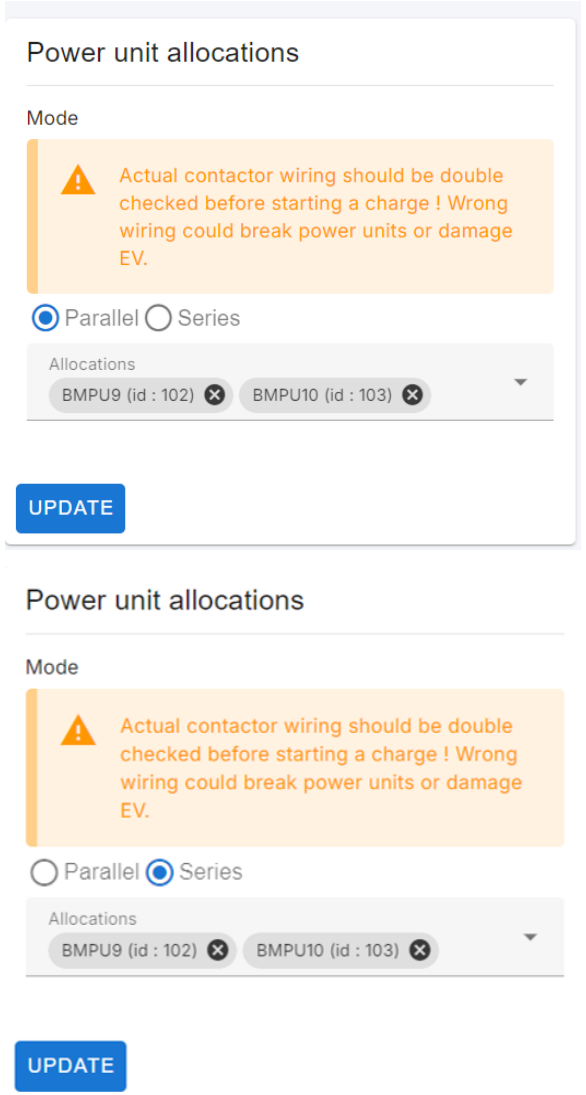
- Serial configuration (2 PUs):
  - You MUST have two PUs
  - The PU addresses MUST follow each other
  - You MUST allocate the even numbered ID first, as shown on the right
  - In the SK-V1G-AC, SK-V1G-DC and SK-V2G-DC configurations of the Starter Kit, the PUs should never be serialized.



Supervisor feature configuration - Power Unit allocations

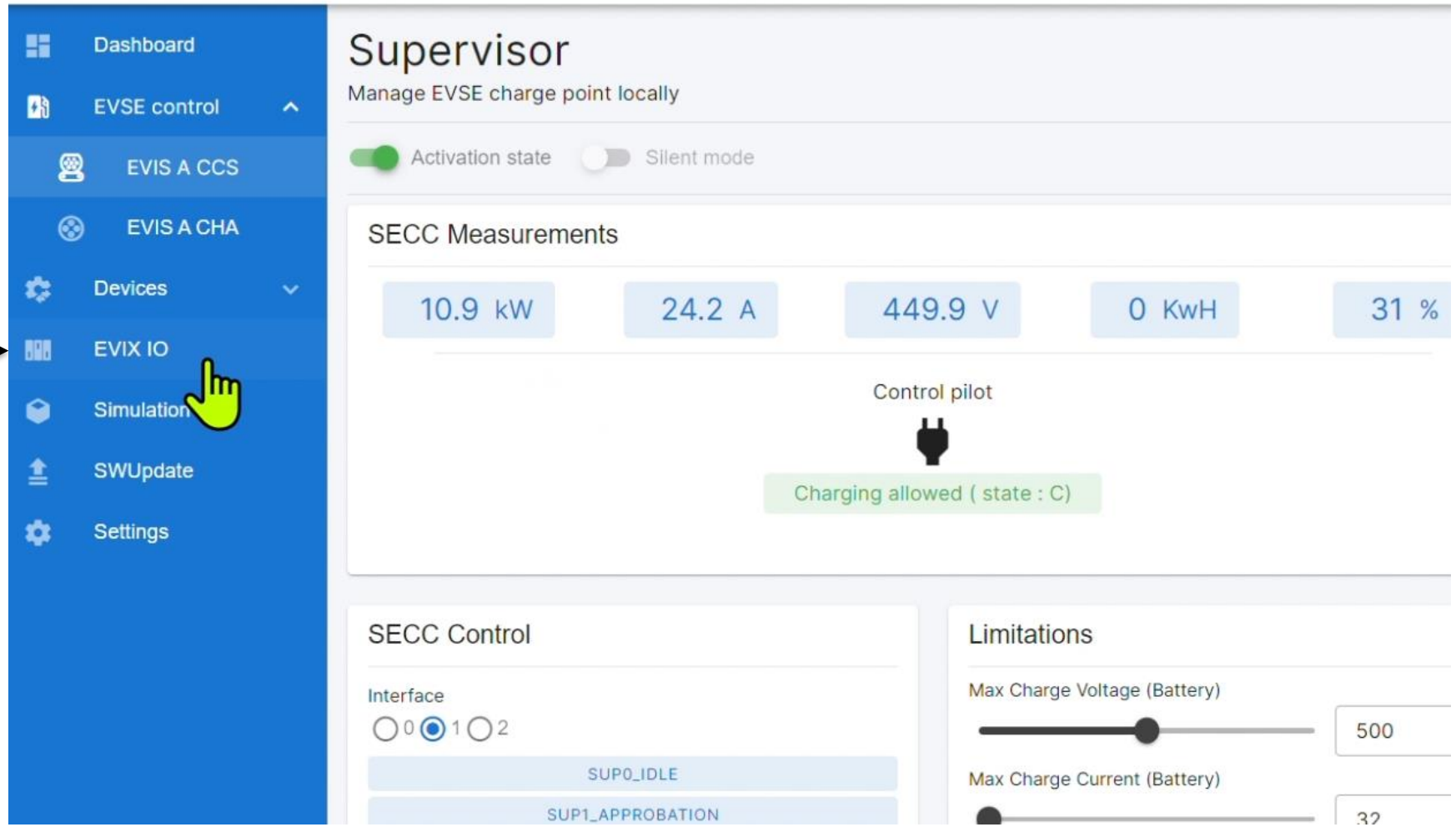
- Be careful not to allocate a power units to both charge points.

- Once power allocation is done, it is required to manage the contactors included in the Starter Kit thanks to the EVIX-IO view:
  - Power unit (PU) allocation and configuration (series/ parallel) must match the contactor management
  - Watt & Well provides .json configuration files for setting this up.



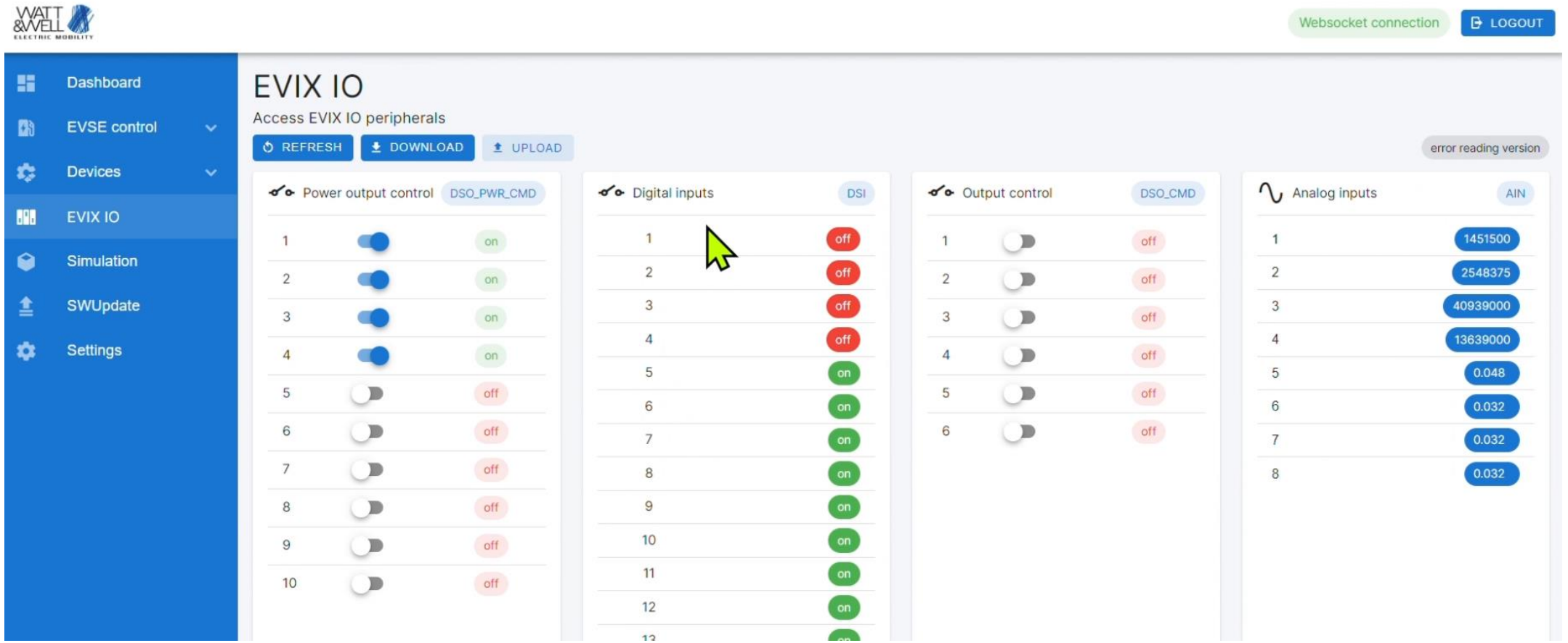
EVIX-IO view

- Click on EVIX IO:



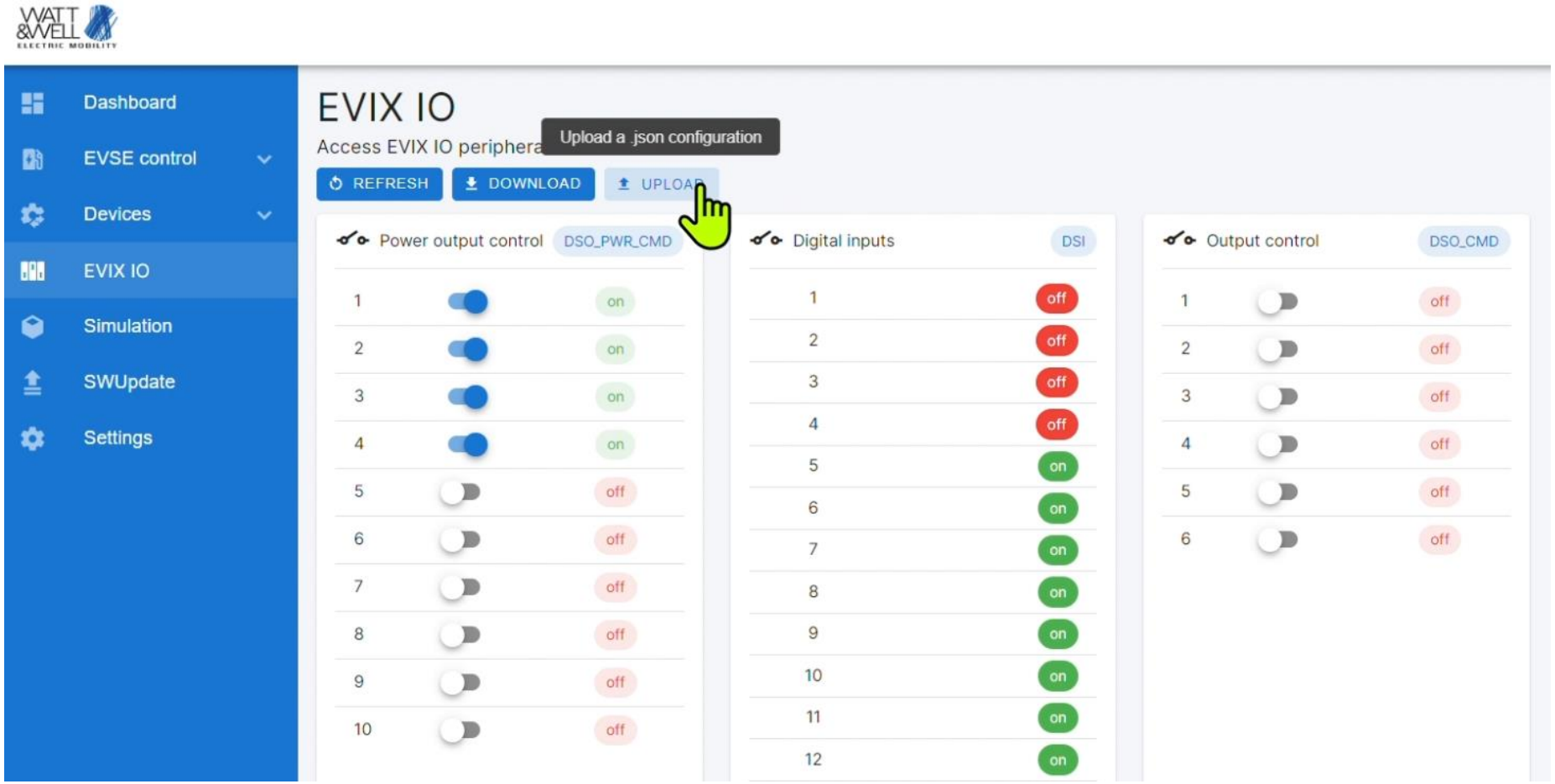
EVIX-IO view

- This view grants access to contactor management and other GPIO



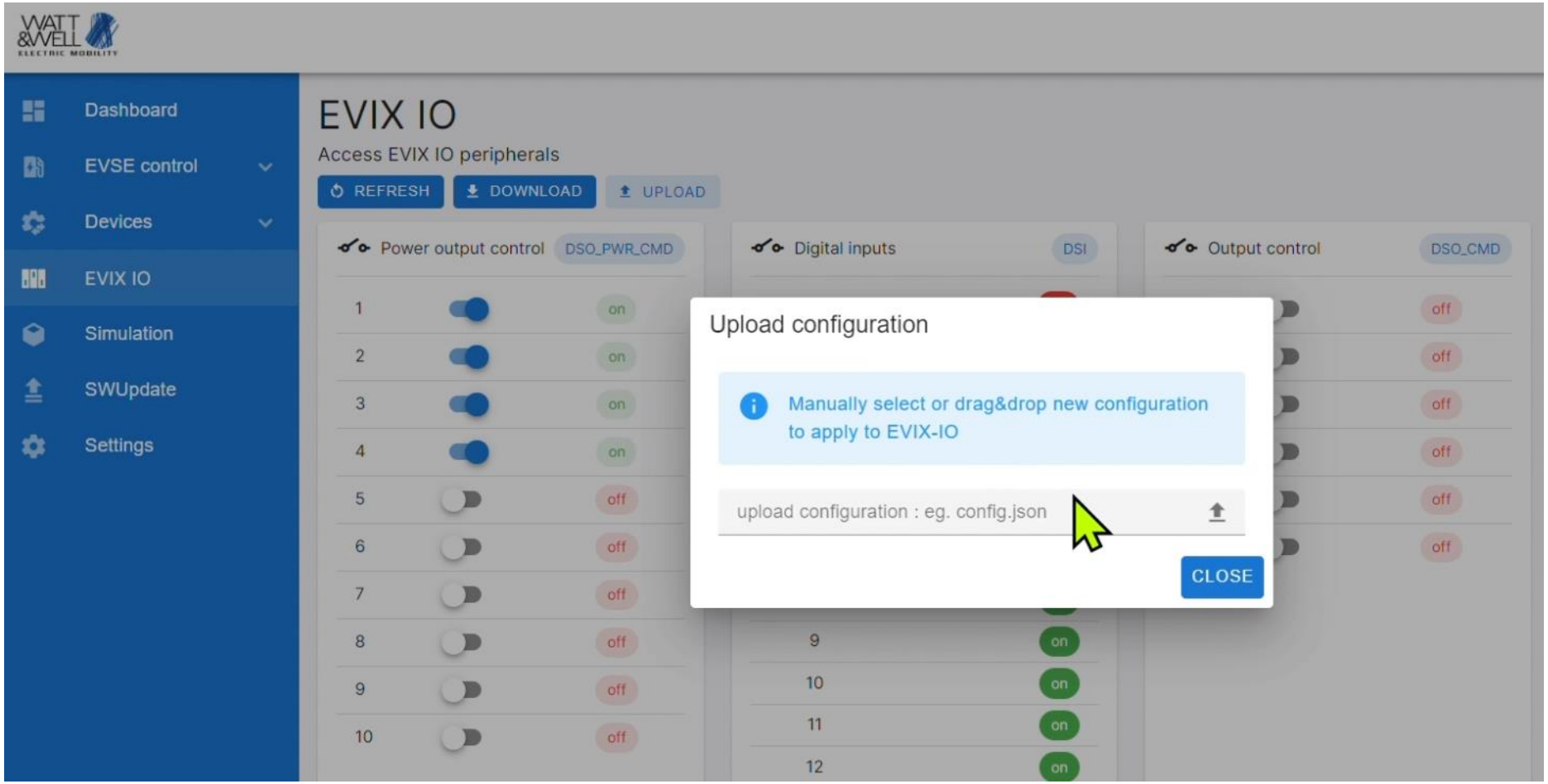
EVIX-IO view – contactor management

- Click on the upload button to upload the configuration for series or parallel use of the PUs
- This will open a pop-up window



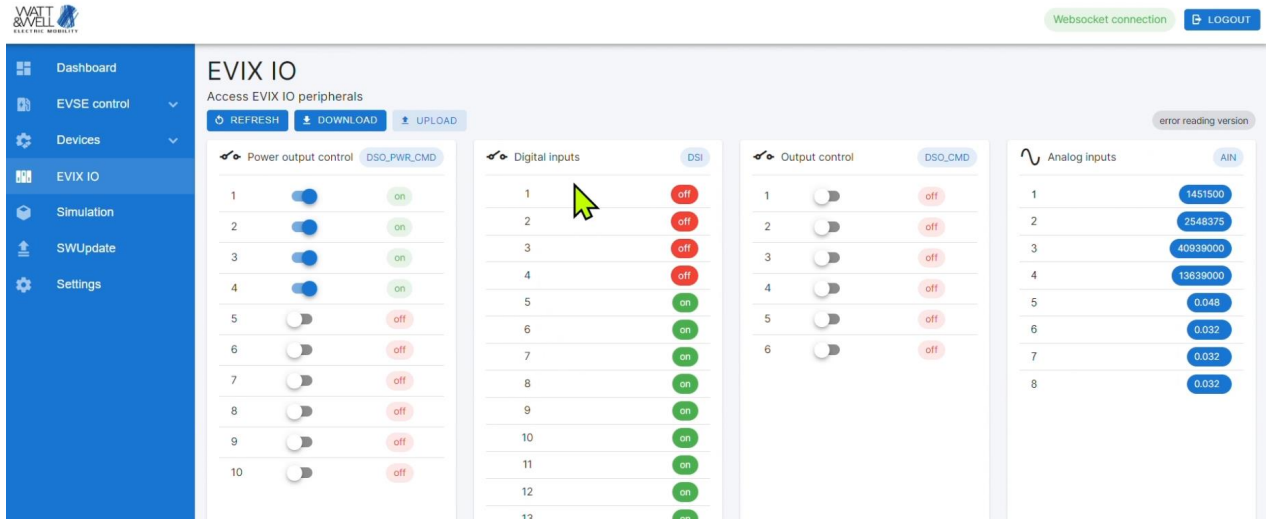
EVIX-IO view – contactor management

- The .json files provided by Watt & Well can be drag&dropped in this window
- Please chose the configuration file corresponding to the previously chosen PU allocation.



EVIX-IO view

- For more advanced management of contactors and other peripherals, please consult:
  - the Starter Kit Datasheet
  - the Starter Kit User Manual
  - the GUI user guide
- It is possible to launch a charge session once the contactor configuration is set up.



Single output

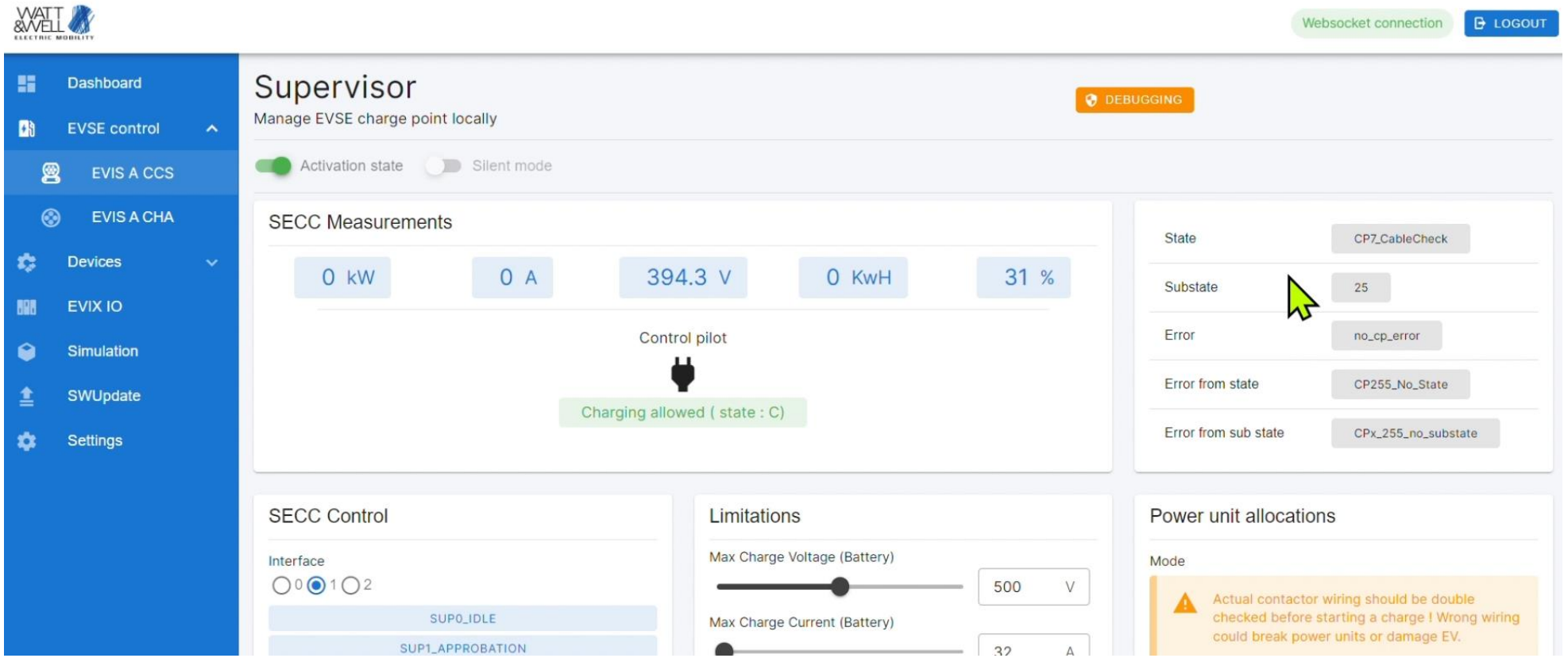
Ouput	Configuration	DSO_PWR_1 = K1	DSO_PWR_2 = K2	DSO_PWR_3 = K3	DSO_PWR_4 = K4	DSO_PWR_6 = K9	DSO_PWR_7 = K5	DSO_PWR_8 = K6	DSO_PWR_9 = K7	DSO_PWR_10 = K8
CCS1	Parallel	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
CCS1	Series	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
CCS1	PU1	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCS1	PU2	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
CCS2	Parallel	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON
CCS2	Series	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
CCS2	PU1	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
CCS2	PU2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

Dual output

CCS1 PU	CCS2 PU	DSO_PWR_1 = K1	DSO_PWR_2 = K2	DSO_PWR_3 = K3	DSO_PWR_4 = K4	DSO_PWR_6 = K9	DSO_PWR_7 = K5	DSO_PWR_8 = K6	DSO_PWR_9 = K7	DSO_PWR_10 = K8
PU1	PU2	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
PU2	PU1	OFF	OFF	ON	ON	OFF	ON	ON	OFF	OFF

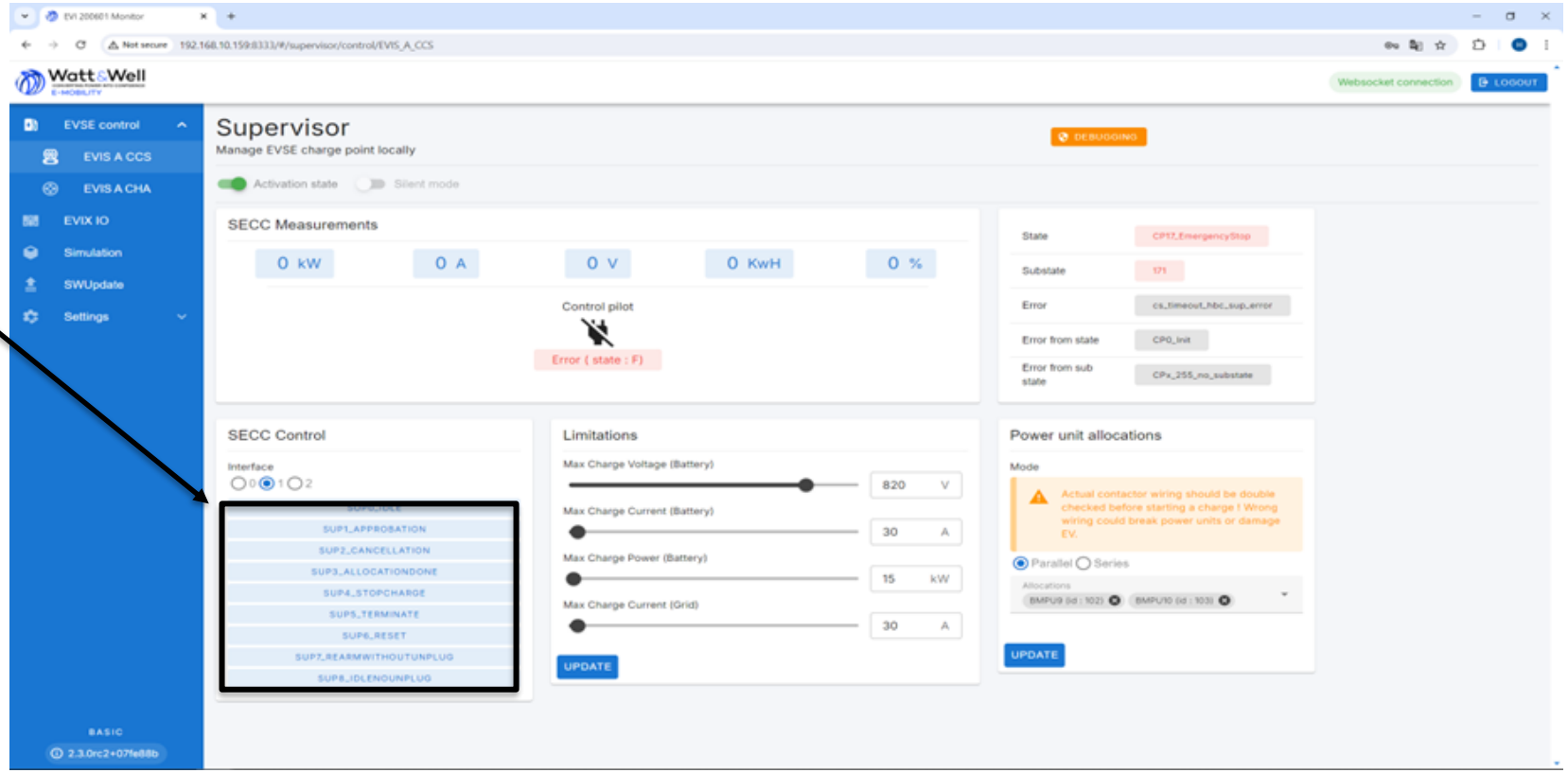
Charge launching

- Click on EVSE Control and EVIS CCS A to return on the supervisor view:



Charge launching

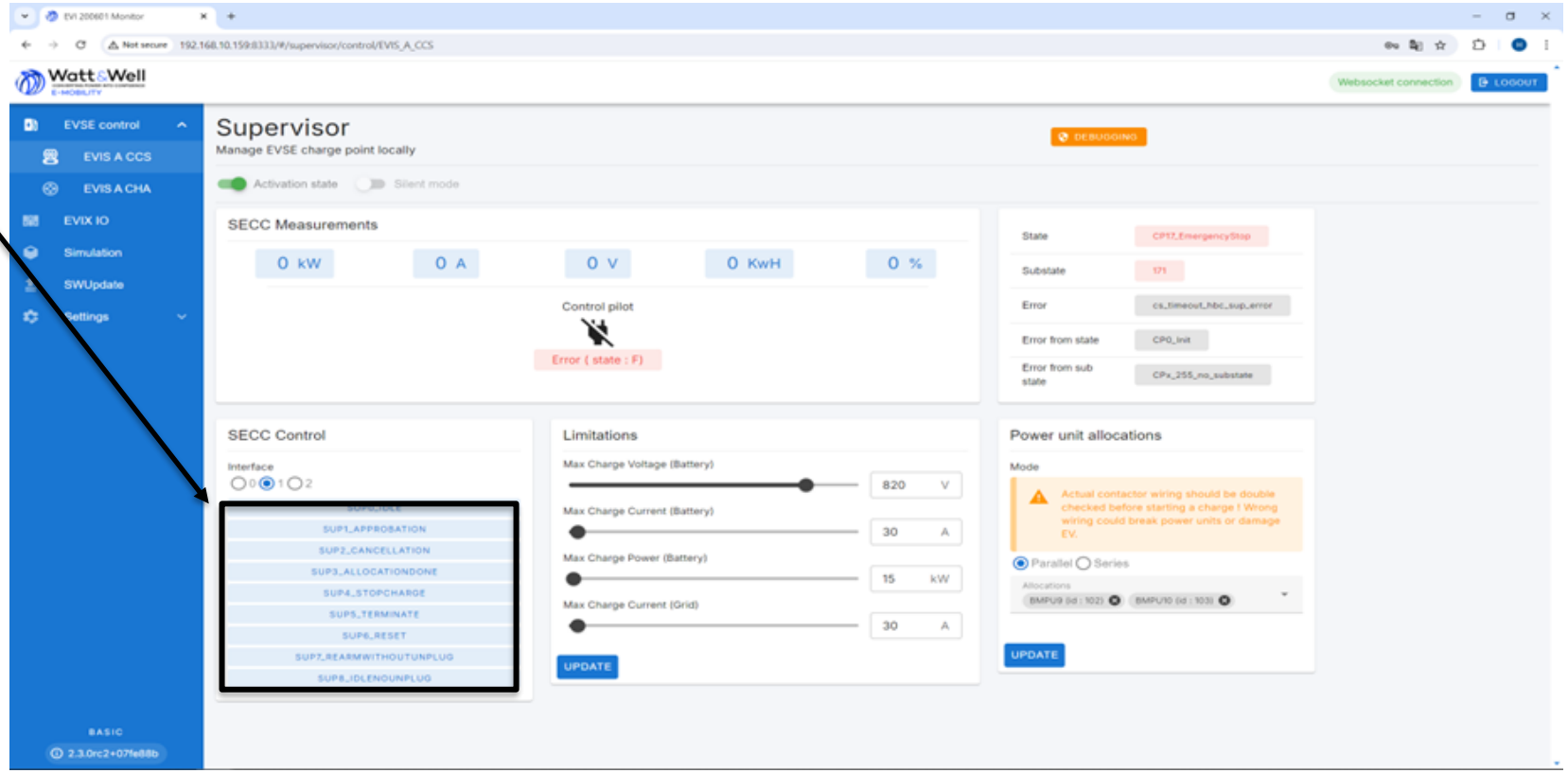
- After setting all the relevant data, a charge can be launched
- The SECC control section includes SUP_RequestCode buttons



Charge launching

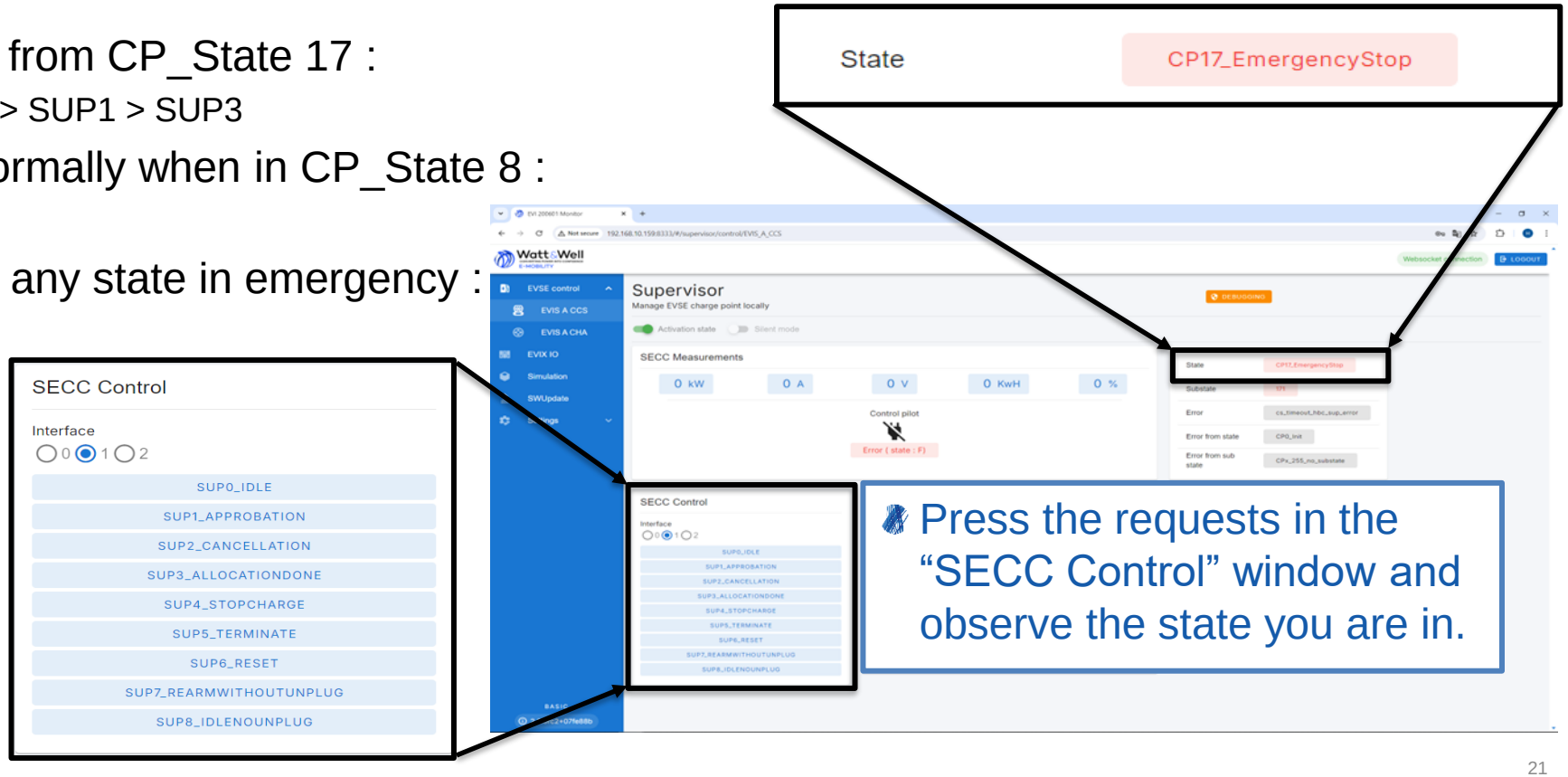
- These request buttons allow to launch charges by following the state machine of the EVI, as described in next slides and detailed in the EVI Technical Reference manual (available on demand).

- After plugging the CCS1 plug in an electric vehicle, everything is set up for a first charge session.



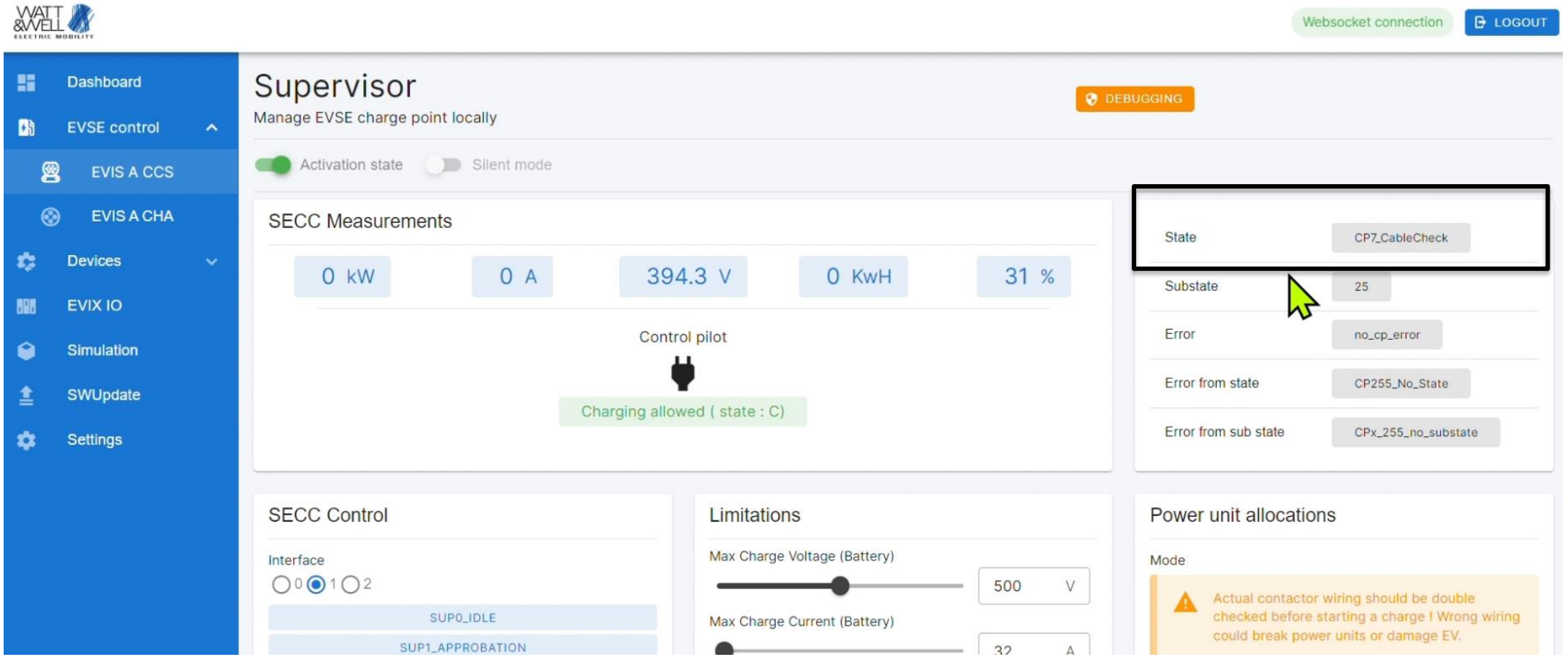
Charge launching

- As a generic guideline, after setting up all parameters treated in the previous slides :
  - To launch a charge from CP_State 1 :
    - Send SUP1 > SUP3
  - To launch a charge from CP_State 17 :
    - Send SUP6 > SUP0 > SUP1 > SUP3
  - To stop a charge normally when in CP_State 8 :
    - Send SUP4 > SUP5
  - To stop a charge at any state in emergency :
    - Send SUP2



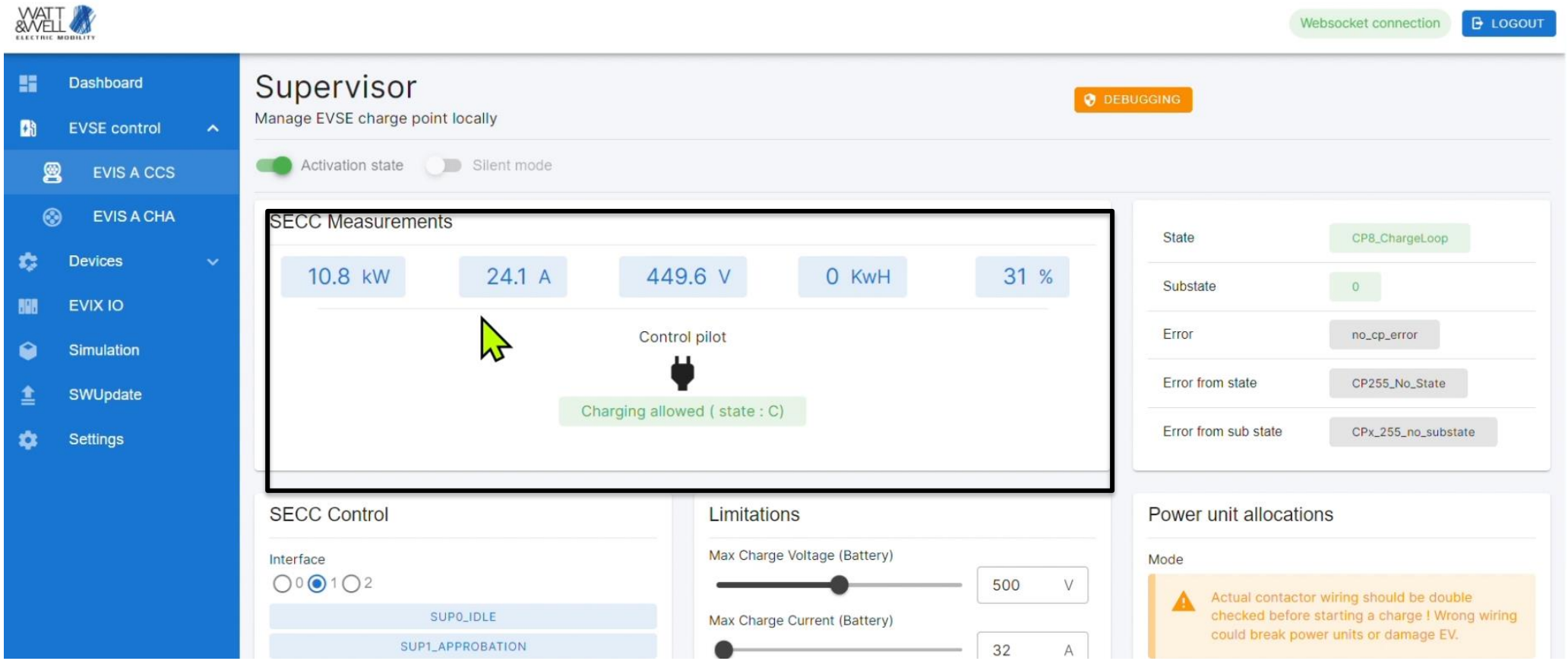
Charge launching

- The system should go into cable check state before charging:



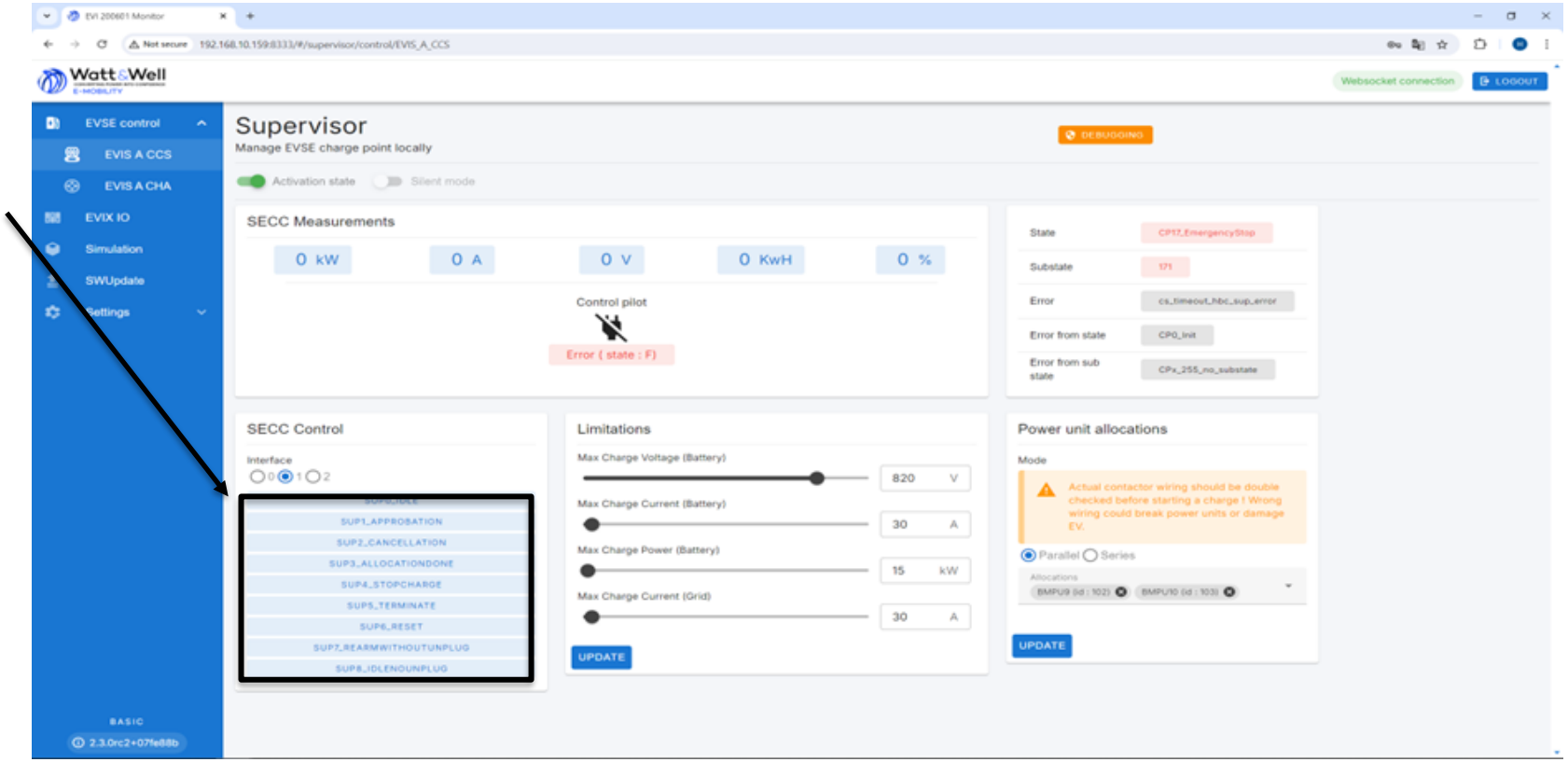
Charge launching

- Charging measurements appear in the SECC Measurements section:



End of charge

- To end the charge, please click on the SUP4_STOPCHARGE button of the SECC control section.
- Once the charge is over, please unplug the CCS1 plug from the electric vehicle.



Thank you for purchasing our product