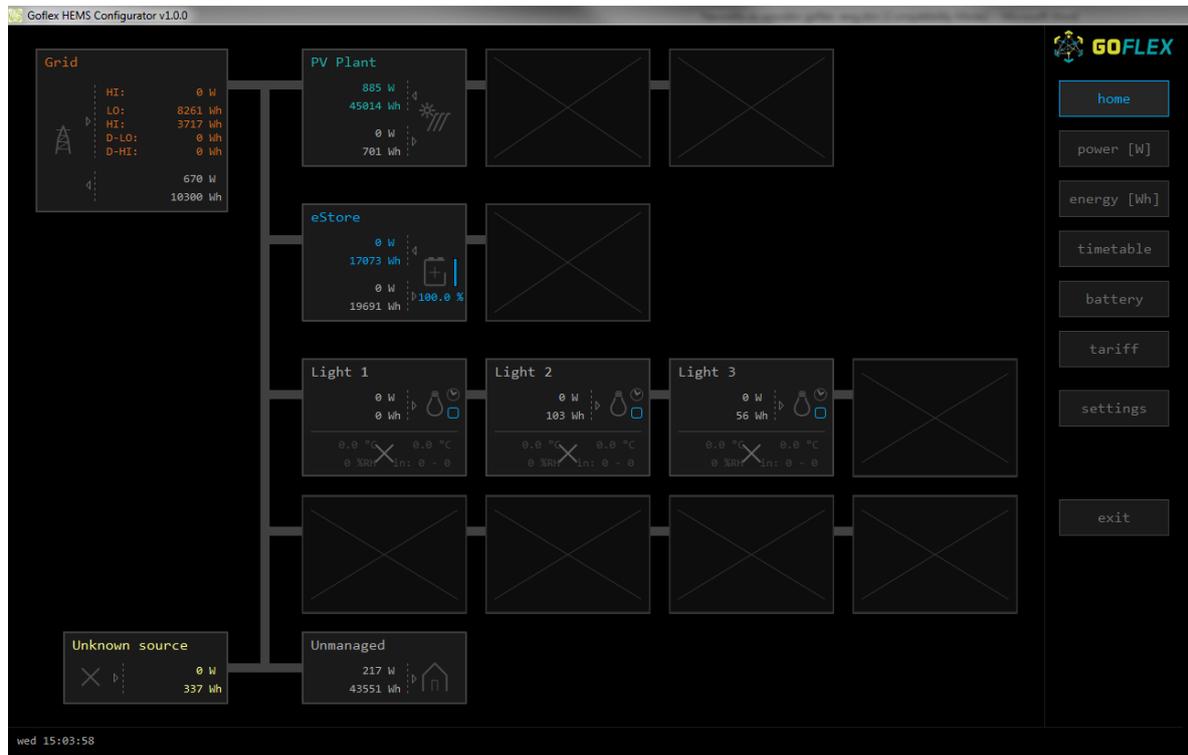


GoFlex HEMS Configurator

HW setup guide



Document	HW setup guide
Version	01
Type	project documentation - GoFlex
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I. Before start

- All HW has to be wired and powered as specified in electrical diagrams provided by Robotina:

<https://app.box.com/folder/49556955497>

- Before start with SW configuration have to be all HW verified with table in attachment "Equipment validation".

II. Preparing the PC

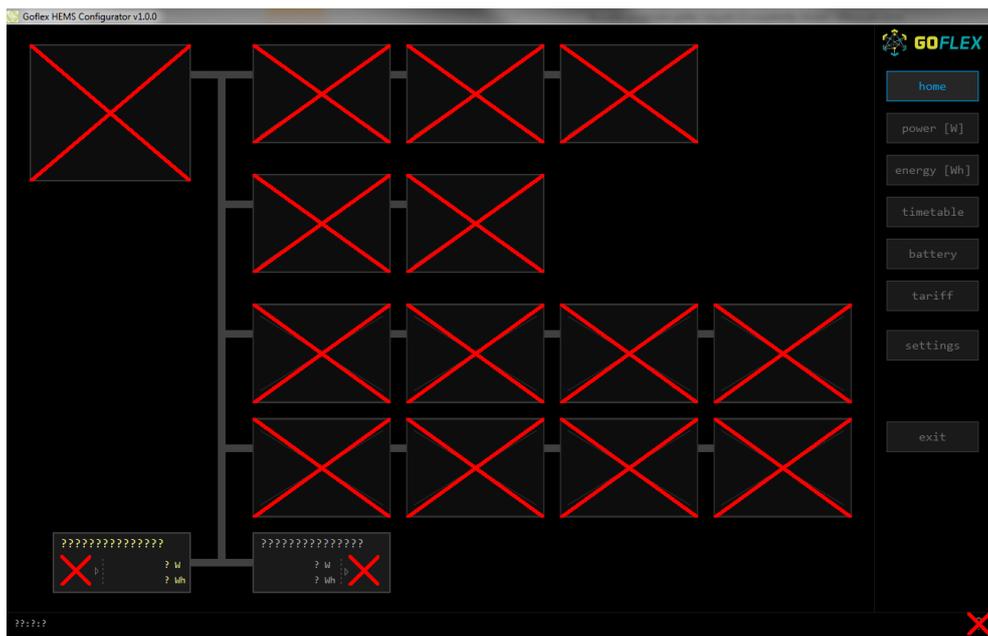
- Download Goflex HEMS configurator from Robotina wiki page:

http://wiki.hiq-home.com/doku.php?id=hiq_energy:goflex_hems:downloads

- Connect your computer in a LAN network (connection with router is mandatory).
- Run "Goflex HEMS Configurator v1.0.0.exe"

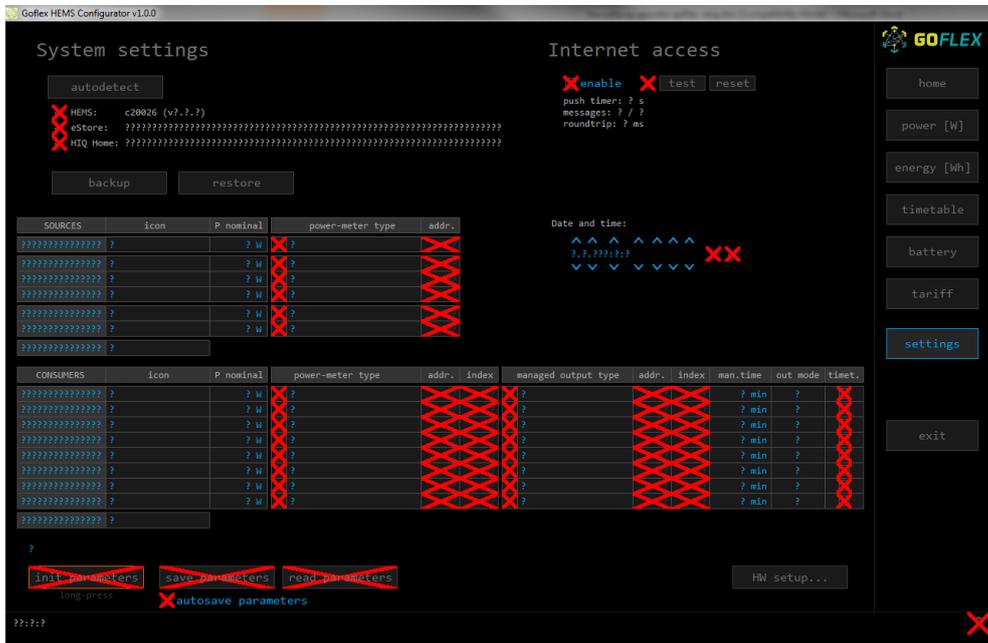
⚠ Checking point

- At this point you should see the screen as below:



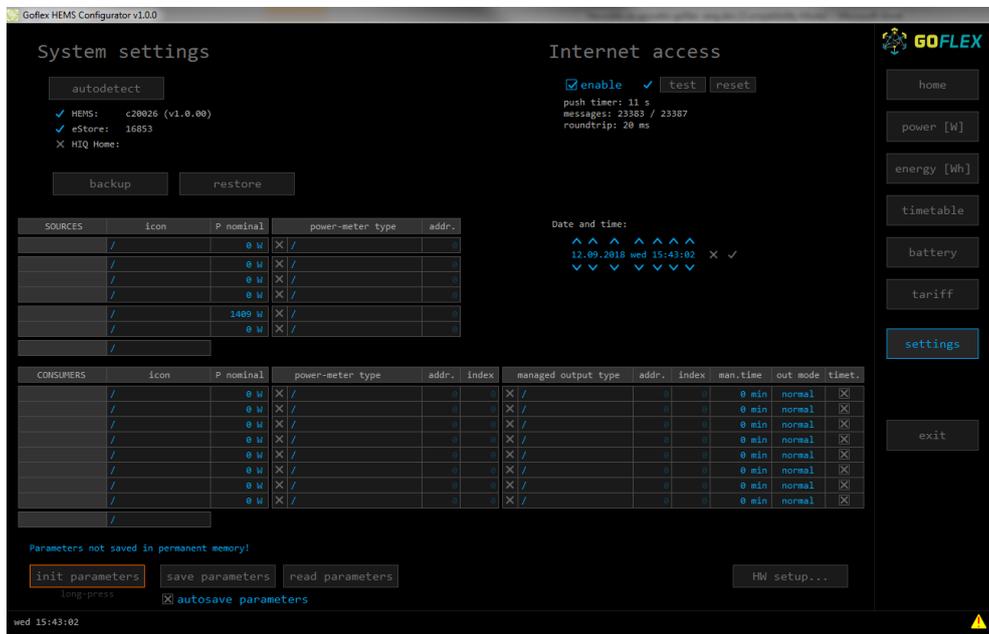
III. Connecting to controller

- Continue to page "Settings" and press "Autodetect". In a pop-up window select founded controller and confirm it with ok.



⚠ Checking point

- After the connection is established will red Xes disappear and you can start with configuration.

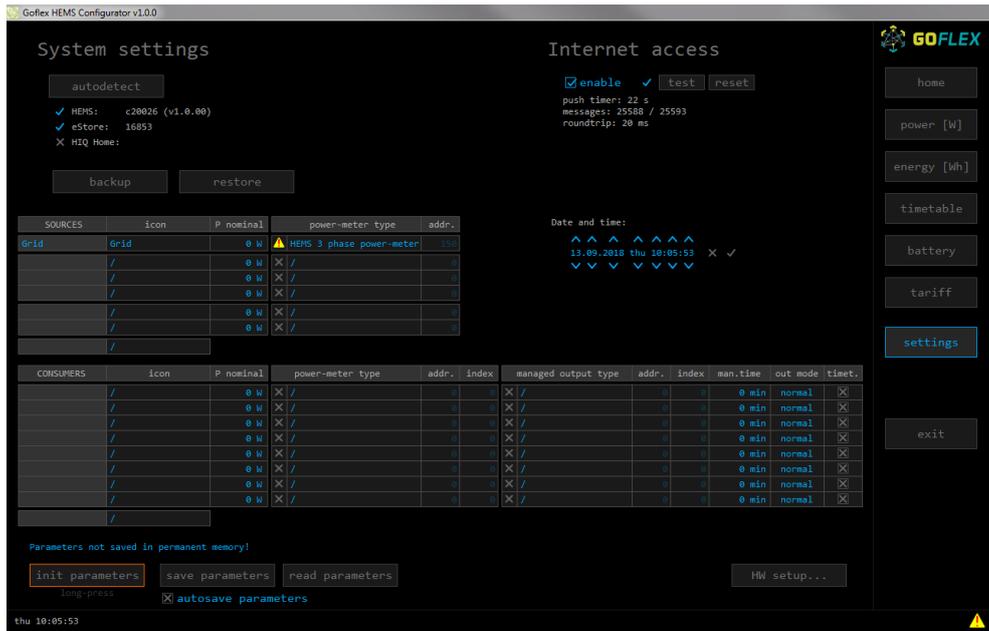


IV. "Home screen" configuration

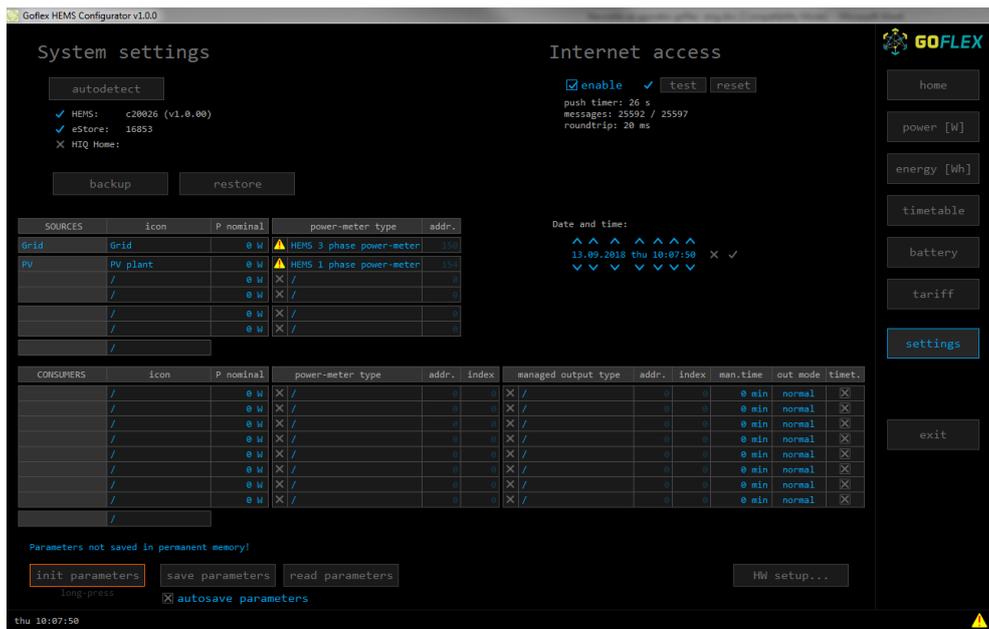
- Click on a box under the text "Sources" and write "Grid"
- Click on a slash under the text "icon" and choose "Grid"
- Click on box under the text "power meter type" and based on installed HW in a pop-up window select between single power meter and tree phase power meter

⚠ Checking point

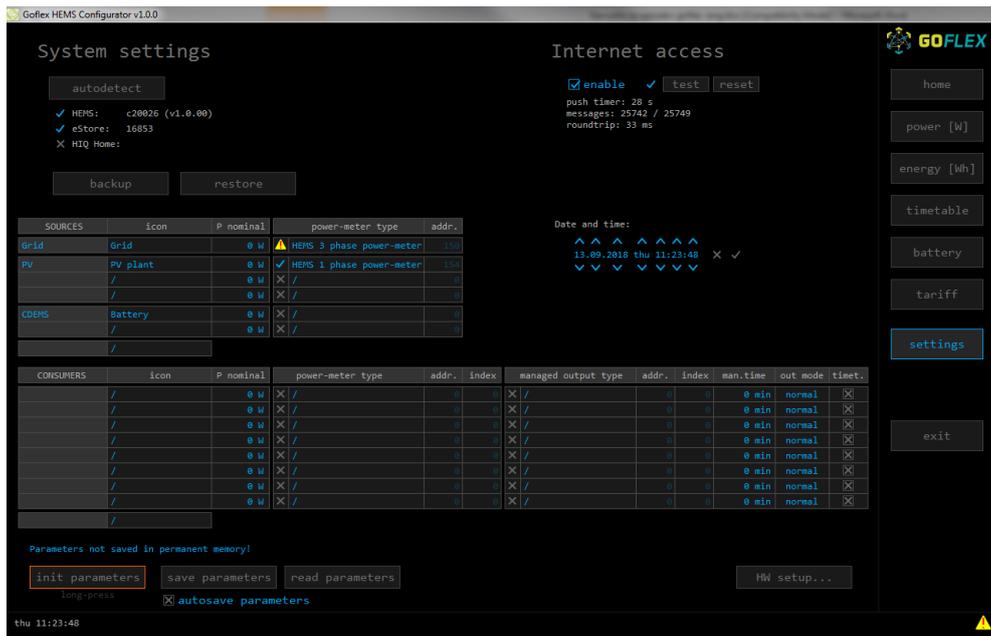
At this point you should see the screen as below:



- **Adding PV power meter:** click on the boxes in a second row and add PV plant as an additionally source.

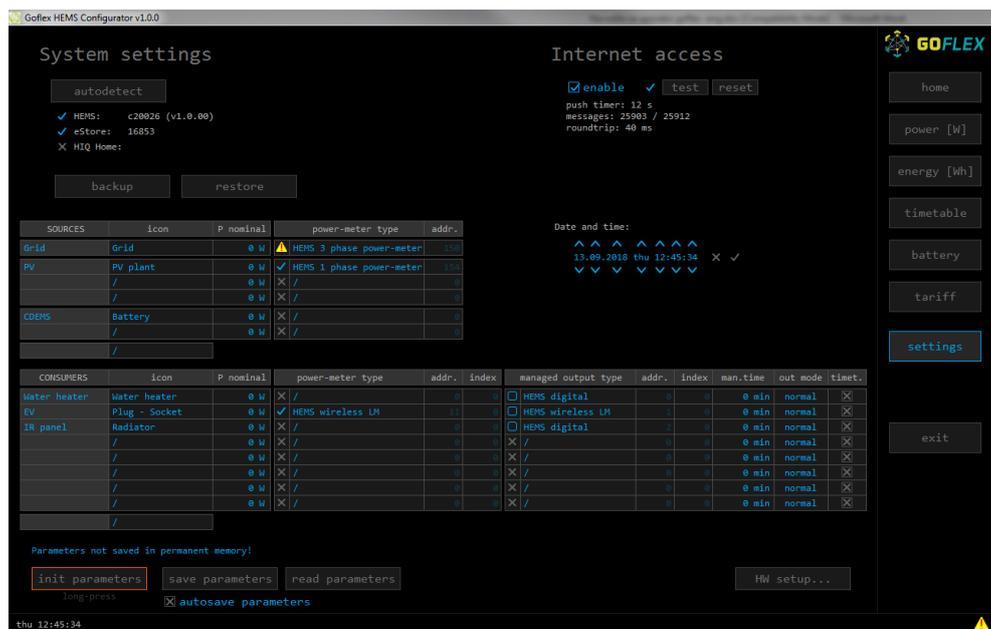


- **Adding CDEMS:** click on the boxes in fifth row and add CDEMS plant as a battery system.



- **Adding Consumers:**
- Below “Consumer” click and name all consumer that are under the HEMS control
- Proceed with selecting icons for specific load
- Where consumer is controlled by a wireless device click on a box under “Power-meter type” and chose “HEMS Wireless LM”.
- Under “managed output type” select between:
 - o “HEMS digital” for loads that are controlled with digital outputs from controller
 - o “HEMS Wireless LM” for wireless accessories (socket, relay)

⚠ Checking point

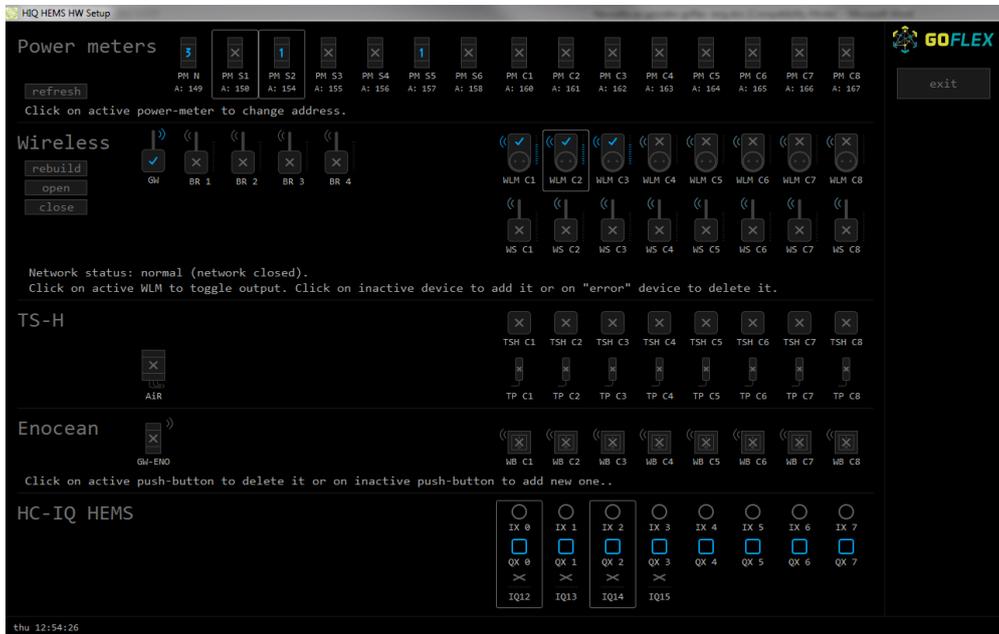


V. Addressing accessories

- In a “settings page” click on “HW Setup”

⚠ Checking point

- On top of Configurator will appear “HiQ HEMS HW Setup” menu



- **Power meters:**
- In case of more than one power meter:
 - o connect first only one power meter
 - o set address as described below
 - o continue with a second one

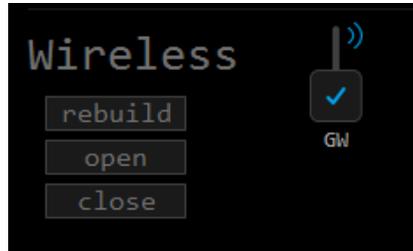
Setting address:

- Click on power meter “A: 149”.
- Change address to “A: 150” or “A: 154” (for a second power meter)
- In case of trouble follow the text under “refresh” button

- **Wireless devices:**
- Click on “rebuild” button and follow the instruction under the button “close”.

⚠ Checking point

- Gateway icon has to be as shown below. If not follow the text under button “close”



- Adding wireless devices:

- Procedure is same for all wireless devices:
 - o restart device from the power supply
 - o press and hold small button on device until the red light turns on.
 - o in a configurator click on a smart plug icon (also valid for smart relays)
 - o Important notice:
When we add sockets or relays, we have to take into consider order on consumer list:
WLM C1 -> First consumer
WLM C2 -> Second consumer

CONSUMERS	icon	P nominal	power-meter type	addr.	index
Light 1	Light	200 W	✓ HEMS wireless LM	10	0
Light 2	Light	300 W	✓ HEMS wireless LM	11	0
Light 3	Light	200 W	✓ HEMS wireless LM	12	0
	/	0 W	✗ /	0	0
	/	0 W	✗ /	0	0
	/	0 W	✗ /	0	0
	/	0 W	✗ /	0	0
	/	0 W	✗ /	0	0

Unmanaged	Home						
WLM C1	WLM C2	WLM C3	WLM C4	WLM C5	WLM C6	WLM C7	WLM C8

- **Adding temperature sensors**

- Address of temperature sensors has to be done manually on device as described below:



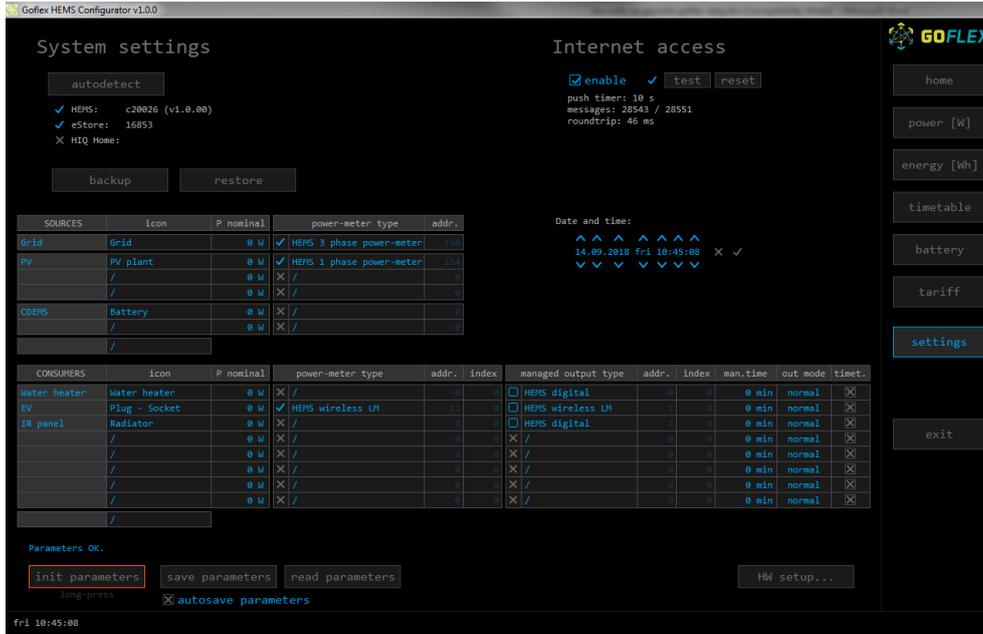
The diagram shows a black rectangular device with a green internal panel. A black antenna with purple signal waves is attached to the top. A grey plug-in power supply is connected to the bottom of the device. The device is mounted on a wall, as indicated by the 'on wall' label in the table below.

TDI-WN-W	on wall
1, 2 (from top)	Digital input 1
3, 4	Digital input 2
5, 6	NTC temperature probe input 1
7, 8	NTC temperature probe input 2
+, -	Plug-in power supply
DIP setting	Address setting: [1=lsb, 8=msb]
	- sensor 1, address 60 = 0011 1100
	- sensor 2, address 61 = 1011 1100
	- sensor 3, address 62 = 0111 1100
	- sensor 4, address 63 = 1111 1100
	- sensor 5, address 64 = 0000 0010
	- sensor 6, address 65 = 1000 0010
	- sensor 7, address 66 = 0100 0010
	- sensor 8, address 67 = 1100 0010

VI. Before leaving

- After the configuration is done go back to “settings” page and click on “Save parameter”
- Check if there is no “exclamation” sign in the right bottom corner
- Verify system with “System validation” enclosed in attachment.

Checking point

- If everything is done correctly sign “


The screenshot shows the Goflex HEMS Configurator v1.0.0 interface. The main window is divided into several sections:

 - System settings:** Includes an "autodetect" button and a list of system components:
 - HEMS: c20026 (v1.0.00) [checked]
 - eStore: 16853 [checked]
 - HIQ Home: [unchecked]
 Below this are "backup" and "restore" buttons.
 - Internet access:** Includes an "enable" checkbox (checked), "test", and "reset" buttons. It also displays network statistics: "push timer: 10 s", "messages: 28543 / 28551", and "roundtrip: 46 ms".
 - Date and time:** A digital clock showing "14.09.2018 fri 10:45:08" with up/down arrows for adjustment.
 - SOURCES Table:**

SOURCES	icon	P nominal	power-meter type	addr.
Grid	Grid	0 W	<input checked="" type="checkbox"/> HEMS 3 phase power-meter	154
PV	PV plant	0 W	<input checked="" type="checkbox"/> HEMS 1 phase power-meter	154
	/	0 W	<input checked="" type="checkbox"/> /	0
	/	0 W	<input checked="" type="checkbox"/> /	0
CDEMS	Battery	0 W	<input checked="" type="checkbox"/> /	0
	/	0 W	<input checked="" type="checkbox"/> /	0
 - CONSUMERS Table:**

CONSUMERS	icon	P nominal	power-meter type	addr.	index	managed output type	addr.	index	man.time	out mode	timet.
Water heater	Water heater	0 W	<input checked="" type="checkbox"/> /	0	0	<input type="checkbox"/> HEMS digital	0	0	0 min	normal	<input checked="" type="checkbox"/>
EV	Plug - Socket	0 W	<input checked="" type="checkbox"/> HEMS wireless LM	11	0	<input type="checkbox"/> HEMS wireless LM	1	0	0 min	normal	<input checked="" type="checkbox"/>
IR panel	Radiator	0 W	<input checked="" type="checkbox"/> /	0	0	<input type="checkbox"/> HEMS digital	2	0	0 min	normal	<input checked="" type="checkbox"/>
	/	0 W	<input checked="" type="checkbox"/> /	0	0	<input checked="" type="checkbox"/> /	0	0	0 min	normal	<input checked="" type="checkbox"/>
	/	0 W	<input checked="" type="checkbox"/> /	0	0	<input checked="" type="checkbox"/> /	0	0	0 min	normal	<input checked="" type="checkbox"/>
	/	0 W	<input checked="" type="checkbox"/> /	0	0	<input checked="" type="checkbox"/> /	0	0	0 min	normal	<input checked="" type="checkbox"/>
	/	0 W	<input checked="" type="checkbox"/> /	0	0	<input checked="" type="checkbox"/> /	0	0	0 min	normal	<input checked="" type="checkbox"/>
 - Buttons:** "init parameters", "save parameters", "read parameters", "HW setup...", and "exit".
 - Status:** "Parameters OK." and "autosave parameters" (checked).
 - Footer:** "fri 10:45:08".

VII. Support

- Please visit <https://app.box.com/folder/49556955497>
 - HEMS Electrical diagram
 - Data sheet – HEMS controller
 - Data sheet – Home Linker
 - Data sheet – Power meter
 - Data sheet – ZigBee gateway
 - Data sheet – Smart socket
 - Data sheet –Temperature sensor
 - Data sheet – CDEMS

- Or check Robotina wiki page:
http://wiki.hiq-home.com/doku.php?id=hiq_energy:goflex_hems:hardware

ATTACHEMENT: Equipment validation

No.	Objective	Test procedure	Acceptance Criteria	Test equipment	Test result
1	HEMS Equipment validation	HEMS is connected as specified in electrical diagram provided by Robotina.	Power light on power supply module is ON	Visual check	
2			Power light on HEMS Controller is ON	Visual check	
3			Power light on Home Linker is ON	Visual check	
4			Power light on Power meter is ON	Visual check	
5			Power light on ZigBee Gateway is ON	Visual check	
6			Power light on Smart socket is ON	Visual check	
7			Power light on Temperature sensor is ON	Visual check	
8	CDEMS Equipment validation	Turn CDEMS main switch ON	Power light on CDEMS controller is ON	Visual check	
9		Push button on the battery front	Power light on CDEMS battery is ON	Visual check	

ATTACHEMENT: Graphic interface validation

No.	Objective	Test procedure	Acceptance Criteria	Test equipment	Test result
1	Graphic interface validation	Run "HEMS CONFIGURATOR"	All pages fully functional	HEMS CONFIGURATOR	

ATTACHEMENT: System validation

No.	Objective	Test procedure	Acceptance Criteria	Test equipment	Test result
1	HEMS Data integrity and collection	Power meter – readings are done automatically, no additional action is needed	Energy and power displayed in HEMS CONFIGURATOR are equal to values displayed on power meter screen	HEMS CONFIGURATOR	
2		Smart Socket – readings are done automatically, no additional action is needed	Energy and power measurement are displayed in HEMS CONFIGURATOR	HEMS CONFIGURATOR	
3		Temperature & Humidity sensor – readings are done automatically, no additional action is needed	Temperature and humidity measurements are displayed in HEMS CONFIGURATOR	HEMS CONFIGURATOR	