DP Door-I Gate Opener

WIFI based remote gate control unit

User manual v2.0

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1 Basic information

A **DP Door-I Gate Opener** is an innovative device, designed to fulfil the modern request of comfortable environment. Using a local Wi-Fi network, it provides gate control functions on Smartphone platform through Internet connection.

Major advantages of this solution are:

- Controlling of the gate control unit from unlimited distance
  Using Smartphone application, start or stop the gate opening or closing
- Momentary sending the status change information as anything happens
  The „push notification" messages are sent on status change (CLOSED, OPENED, ERROR,...)
- Show the animated opening or closing of the gate in the application
  The device is monitoring the power of the door engine itself, thus synchronizing the application with the real gate moving.

Communication of the **DP Door-I Gate Opener** device with the application is made through Internet connection, therefore it is necessary to have Internet connection active on device and the Smartphone that is running the application also. The communication is encrypted with the AES-128 encoding.

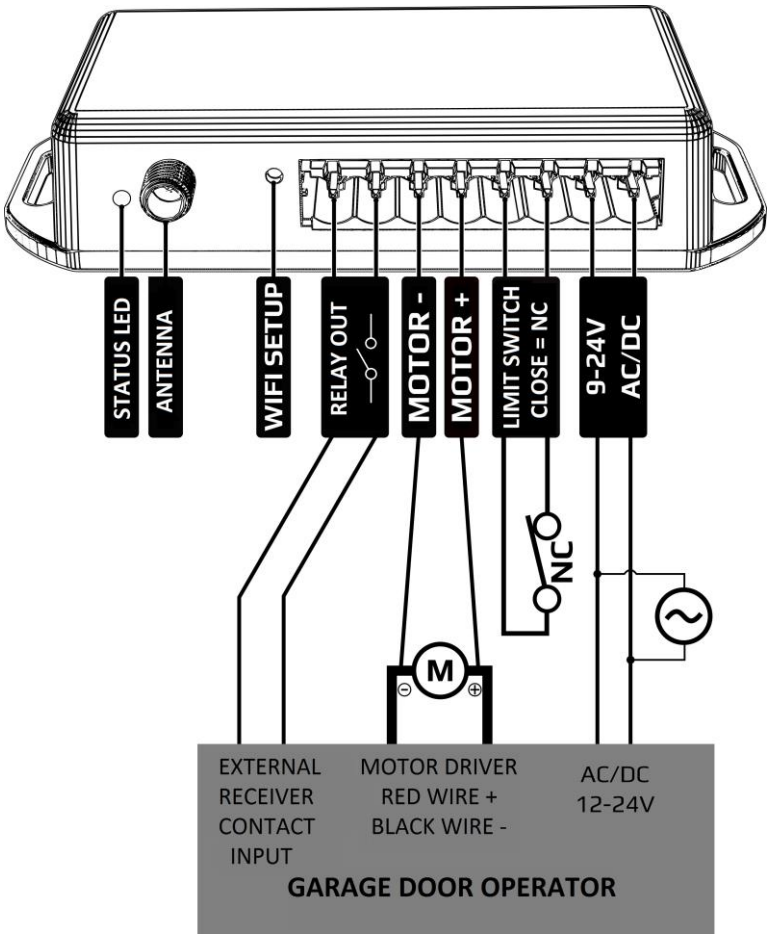
1.1 Advantages

- No SIM card and no additional monthly fee for network usage
- Unlimited number of users, signal recipients and distance
- Simple installation (no need for router setting)
- Control and monitor the gate on one platform

1.2 Operating

Device contains output terminals for a dry contact (relay output) with no contact by default (Normally Open type). On a start signal the output relay is energized for 1 second, providing a contact on output terminals for that time. This "contact signal" is convenient for „gate START/STOP/REVERSE" input of most gate drive control unit.
The MOTOR+ and the MOTOR- inputs are monitoring the voltage and polarity of the motor supply itself. This way, the information of direction for the gate moving is sent to the application. Also, the period of the applied voltage is also monitored, therefore the position of the gate is determined – for example, if the voltage was applied for shorter than the gate closing time, the gate did not close completely.
If the motor used for gate is not suitable for the **DP Door-I Gate Opener** input (if it is 230V AC Motor) then the isolated contact input (end contact 2) can be used to check the gate closed status. As a result of opening or closing the gate opener sends information to its users and this way makes the status of the garage door and who has opened or closed the gate visible.

2 Design and connection diagram



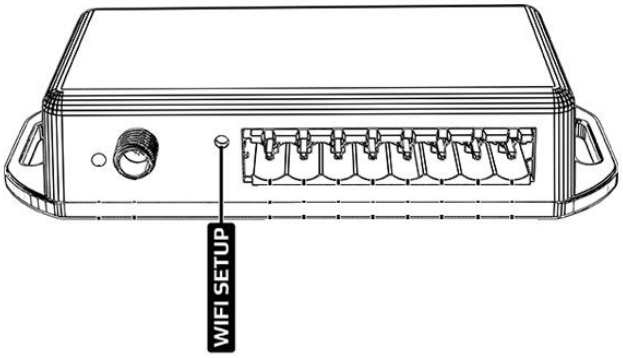
3 Settings

Settings necessary for operation needs to be done both on **DP Door-I Gate Opener** unit and on the smartphoone. For the operation continuous internet connecton is necessary so first the name and password of the local WIFI network needs to be set in the device.

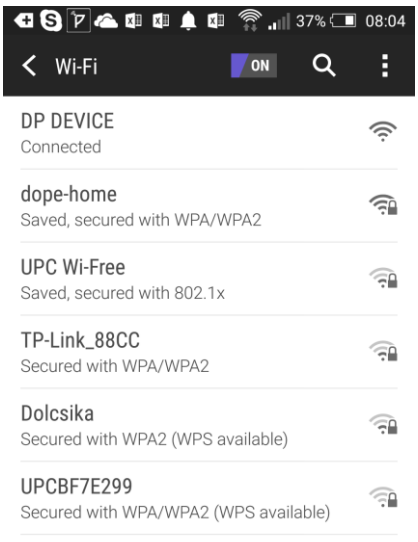
After this PULOWARE mobile application can be downloaded to the user's smartphone where further settings can be made. (3.2)

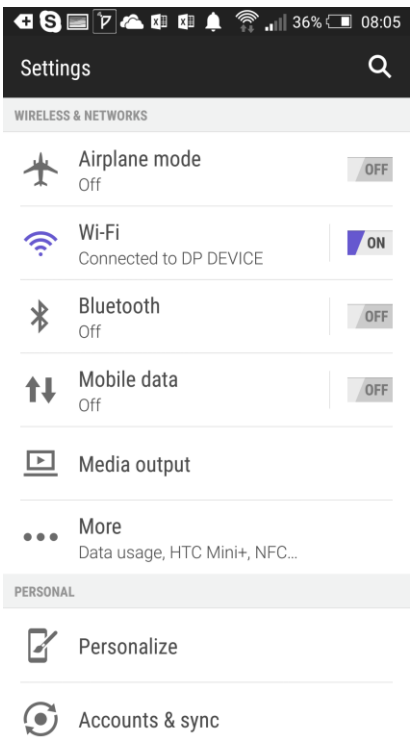
3.1 Setting the device Wi-fi connection of DP Door-I

For the setting it is necessary to reach **DP Door-I Gate Opener**'s own webpage, which can be done by shortly pressing the wifi setup button of the device:



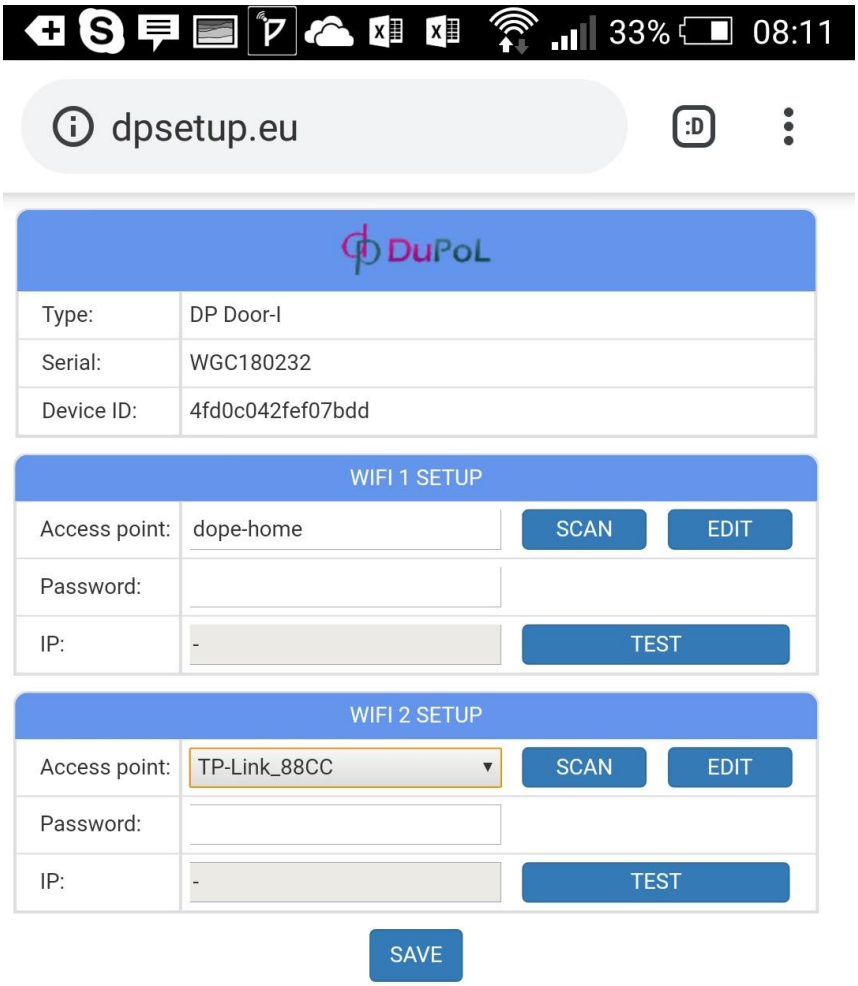
Press shortly the **WIFI SETUP** pushbutton and the green/red LED alternate blinking will be signaling that device is in „HOTSPOT" mode, it is transmitting a personal WI-fi network with **DP DEVICE** name.





Connect to DP DEVICE network. (Use any personal device (phone, tablet, PC) to connect to that wireless network.) After a successful connection open a web browser and enter a site name **dpsetup.eu**

> ⚠ **IMPORTANT NOTE:** it is important to disable mobile internet connection while settings on **dpsetup.eu** is in progress otherwise dpsetup.eu will open via mobile internet and this will hinder doing the necessary settings**.**



It is possible to set 2 separate WIFI connections and passwords – a primary and a "backup". These connections are alternate with each other: if WIFI1 connection disconnects it changes to WIFI2 and the other way around.

- At successful connection to **dpsetup.eu** you will see the Type, Serial number and Device ID of the device.
- By pressing **SCAN** button the access point can be selected (the wireless network)
- Password: enter the password of the wireless internet to be used
- After this, press **SAVE** and the device automatically connects to the network and the green LED will start blinking. (The same steps can be done in the field of WIFI2 as well.)

All other settings for the device operation are available in the smartphone application.

3.2 Setting the smartphone application

Download the PULOWARE CLIENT application from the below links:

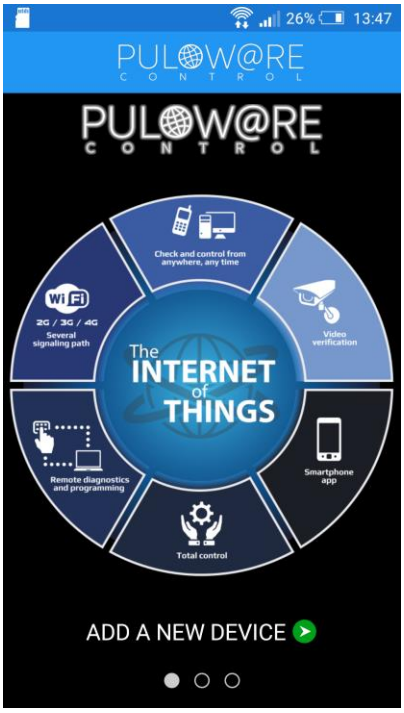
For Android: https://play.google.com/store/apps/details?id=com.puloware.app

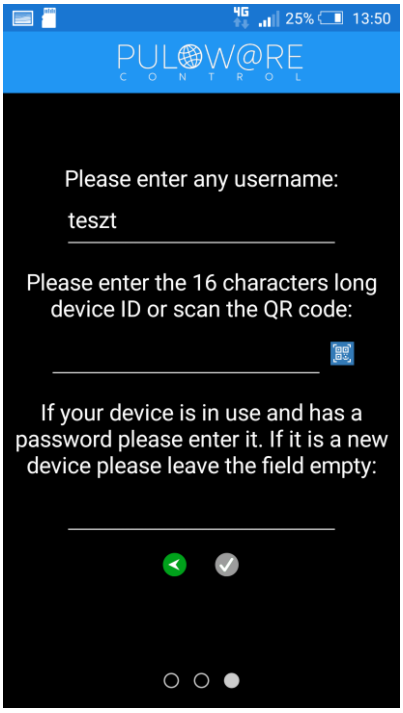
For iOS: https://itunes.apple.com/us/app/puloware-control/id1347808507

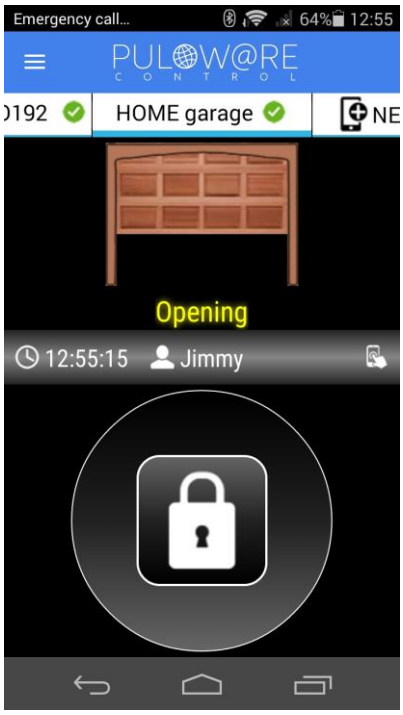
See the application icon:

When you start the application first time, a setup wizard requires an operator name to be entered. This name is used for identification in event list (who open the door and when?). After that, a device that you want to control with this application must be added, entering it's serial number. There are 2 ways to enter the serial number: a, manually b, by the QR code reader

This 16-digit combination of letters and numbers can be found on the sticker, placed on the bottom of device. After the number is typed in, or read-in by the QR code reader you can finish the setup. If you want to add more devices to the same application, use the „+" sign on the top of screen. This application can be used to handle more than one device, other devices (different device types as well) can be added within the same application.







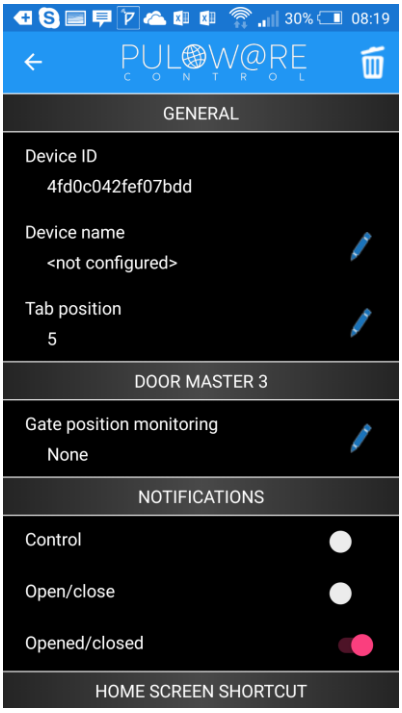
← MENU icon and NAME

← Device list which can be scrolled horizontally so further devices can be selected here

← Appearance of gate's status

← Time of Opening or Closing and the name of who has opened/closed it (operator's name)

← Control push button: it has to be pressed for at least 2 seconds for the control to start



← Trash icon: to delete the device from the application

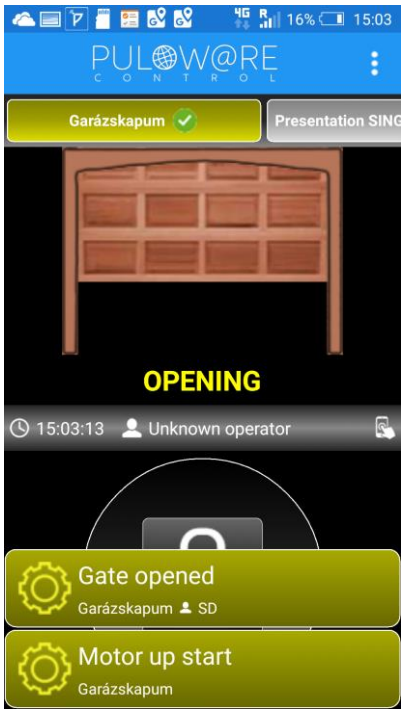
← The name of the gate

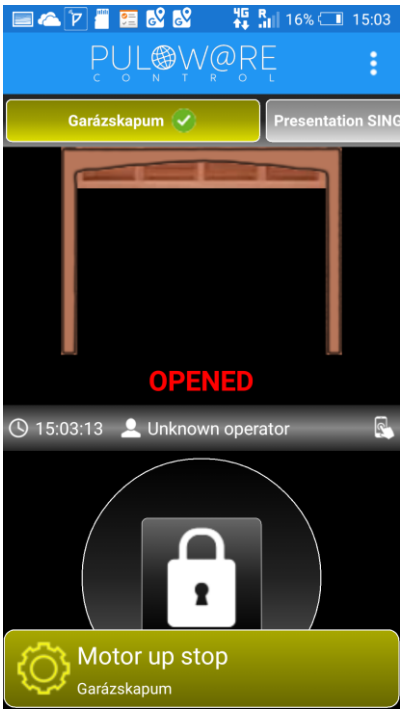
← Modifying the order in the event list of the main screen

← Monitoring the status of the gate: from the opening motor/engine or limit switch

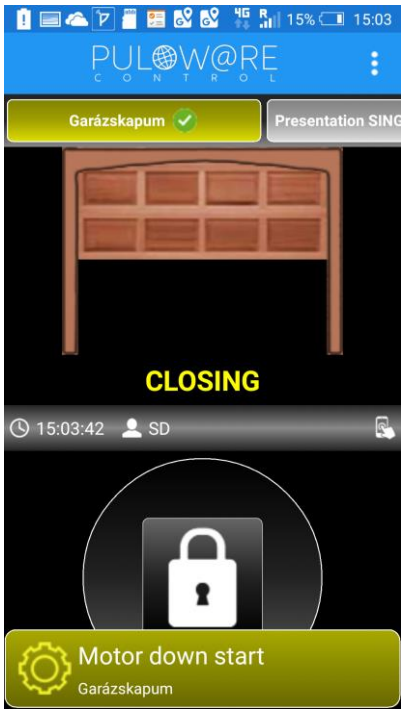
← Sending notifications about the given event (push messages)

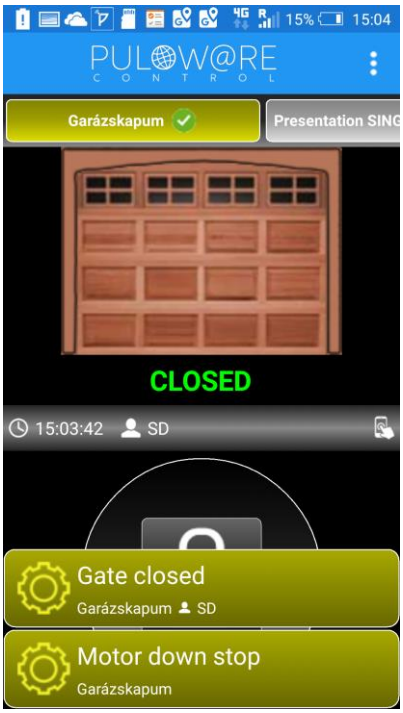
3.2.1 Process of opening





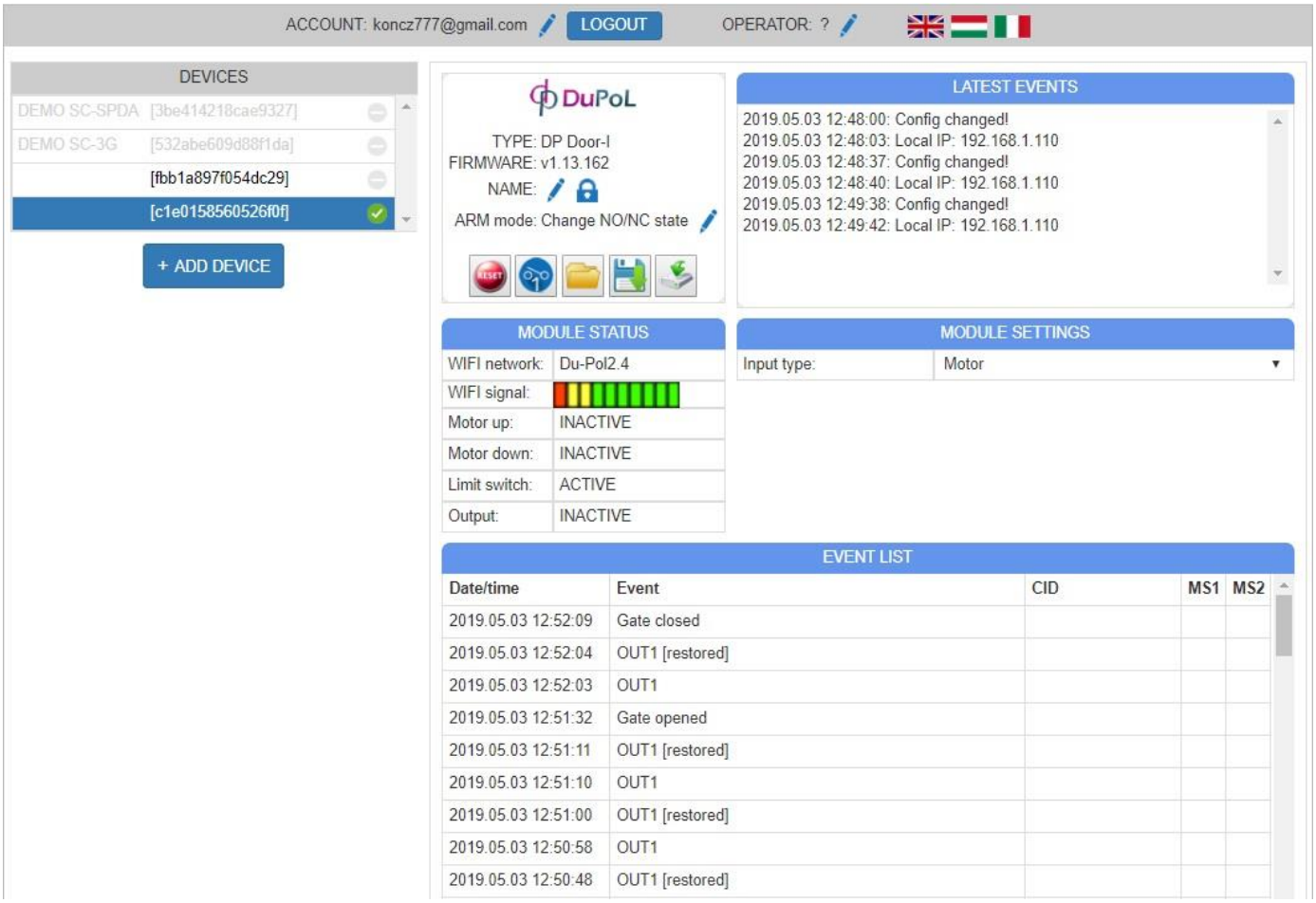
3.2.2 Process of closing





4 Advance settings

The communication of **DP Door-I Gate Opener** is IoT cloud base, so it is possible to monitor and check the device via the server: www.puloware.com. The use of the webpage requires registration. After entering the device ID of the device needs to be added to the list so that it can be seen on the server. After entering the below will be seen:

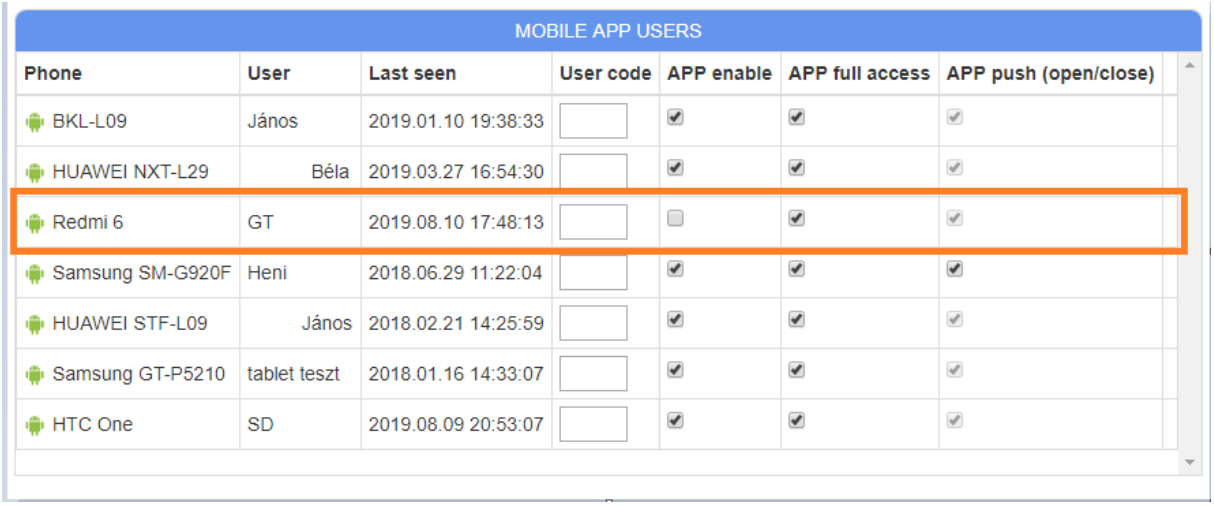


DEVICES: On the left coloumn the list of devices added to the account can be seen.

MODUL STATUS: During the time of the device's operation the motor's movement, direction and the status of the limit switch can be monitored and seen. Settings and modification of the settings are synchronised with the mobile application.

4.1 Modification of the gate opener's user's permissions

4.1.1 Prohibition of control at given users



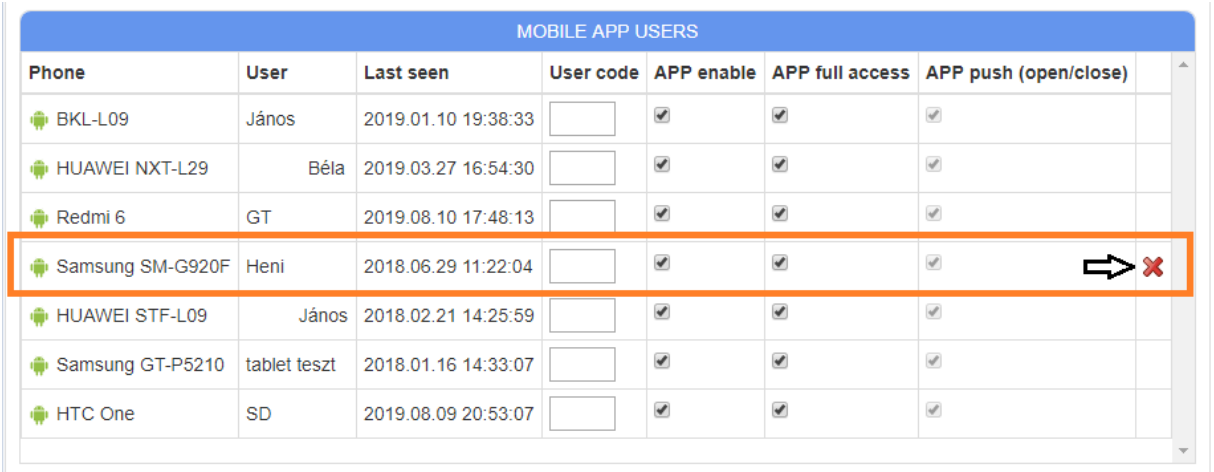
MOBILE APP USERS

Phone	User	Last seen	User code	APP enable	APP full access	APP push (open/close)
BKL-L09	János	2019.01.10 19:38:33		☑	☑	☑
HUAWEI NXT-L29	Béla	2019.03.27 16:54:30		☑	☑	☑
Redmi 6	GT	2019.08.10 17:48:13		☐	☑	☑
Samsung SM-G920F	Heni	2018.06.29 11:22:04		☑	☑	☑
HUAWEI STF-L09	János	2018.02.21 14:25:59		☑	☑	☑
Samsung GT-P5210	tablet teszt	2018.01.16 14:33:07		☑	☑	☑
HTC One	SD	2019.08.09 20:53:07		☑	☑	☑

Any user can be prohibited from the user list so that the he/she cannot control the gate. By opening the application the user can see the fact of opening/closing the gate, but he/she cannot operate the gate and does not receive any PUSH notification messages about other users' control.

The function is intended for temporary prohibition or suspension.

4.1.2 Delete of users



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HTC One	SD	2019.08.09 20:53:07		☑	☑	☑

The mobile phone of any user(s) can be deleted from the user list and this way the owner of the mobile phone will not have any access. Naturally, at a later time the telephone number can be registered again if it is necessary.

4.1.3 Limitation of user information (PUSH notification messages, event list)

MOBILE APP USERS

Phone	User	Last seen	User code	APP enable	APP full access	APP push (open/close)
BKL-L09	János	2019.01.10 19:38:33		☑	☑	☑
HUAWEI NXT-L29	Béla	2019.03.27 16:54:30		☑	☑	☑
Redmi 6	GT	2019.08.10 17:48:13		☑	☐	☐
Samsung SM-G920F	Heni	2018.06.29 11:22:04		☑	☑	☑
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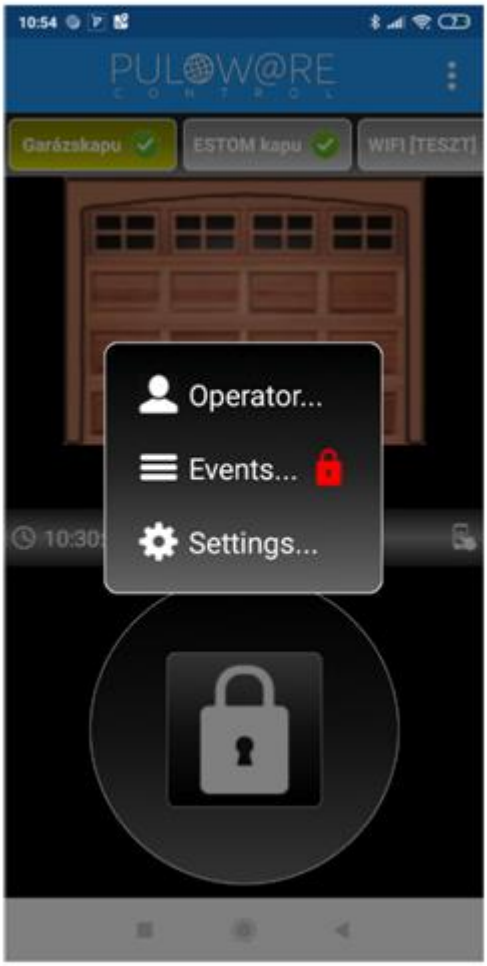
Samsung GT-P5210	tablet teszt	2018.01.16 14:33:07		☑	☑	☑
HTC One	SD	2019.08.09 20:53:07		☑	☑	☑

By setting limitation the user will have the only option of control but will not receive any PUSH notification messages, so he/she will not see other users' activities. The event list is forbidden so that he/she should not see and receive any information about others' activities.

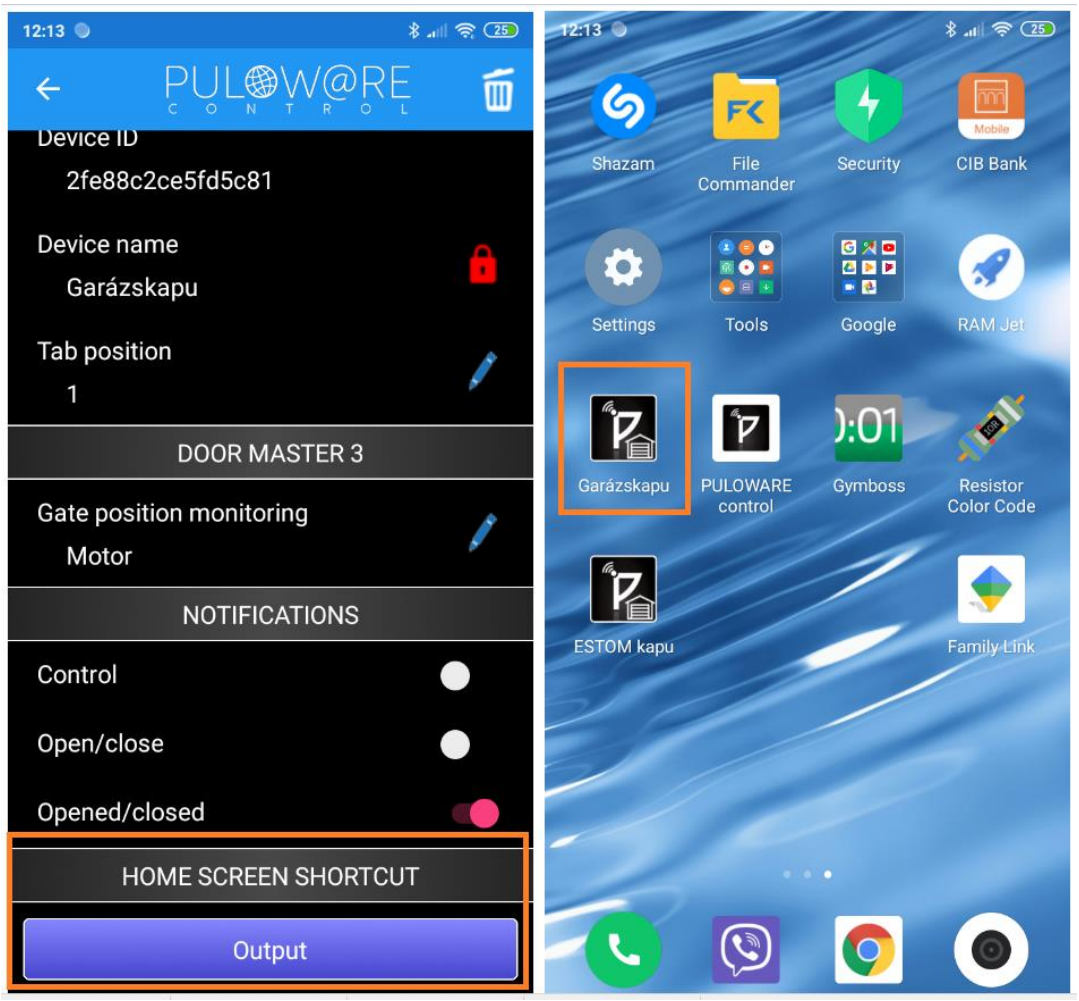


4.2 Creating command icons on Android

The system of Android allows that instead of starting the application (assigned to the WIFI device) the gate could be opened from fast command icons. By touching the command icon the control of the gate will immediately start but the application will not open.

They can be created in the setting menu.

Below the created icon the gate can be named.



4.3 Restore to factory state

If necessary, it is possible to delete all settings and connections from the device.

This can be done if the device is in idle state and there is stable internet connection, which is shown by the green led blinking.

For **restore WIFI SETUP** pushbutton needs to be pressed for 30 seconds, the status will signal the process of delete by red/green fast blinking and at last continuous red blinking will show that all connections and settings have been deleted.

5 Status signals

Status of the DP Door-I Gate Opener is displayed with LED lights, placed next to antenna, with following options:

Continuous RED	Setting is faulty or missong
Blinking RED	Connection to the wifi network is in progress
Blinking GREEN	Idle mode, stabile Internet connection
GREEN/RED alternate	HOTSPOT mode, setting in progress

6 Technical Specifications

Maximum power consumption	**100mA**
Operational frequency	**2.4 GHz**
WIFI protocol	**IEEE 802.11 b/g/n**
Reception sensitivity	**-98 dBm**
Transmitting power	**+20 dBm**
Antenna connection	**RP-SMA**
Relay capacity	**max. 2A @ max. 60V**
MOTOR voltage	**max. 24VDC**
Operational temperature	**-40…+85°C**
Size	**80x40x20mm**
Environmental protection	**IP40 (outside protection box is necessary)**

IMPORTANT NOTE: Environmental protection IP40 (outside protection box is necessary)

7 Content of the package

- DP Door-I wifi remote gate control unit
- Terminal block for cabelling
- WIFI antenna 2.4GHz 3dB
- Limit switch (reed relay + magnet + screws) with 3m cable
- User manual