PX703

Touch Panel 10"

User manual

Table of Contents

Manufacturer reserves the right to make modifications in order to improve device operation.

1   Description

A PX703 Touch Panel 10" has been created for communication with the PX340 / PX340+ and PX710 / PX710+. From the level of touch panel you can manage configurations that were previously uploaded to the controller.

From the device you can:

- turn on and off scenes and programs,
- trigger events,
- display statuses,
- modify master value.

To be able to communicate with the controller directly from the touch panel, it is necessary to create user accounts with appropriate access rights and the appropriate controller configuration via the PxDesigner application (description of creating the configuration was placed in the PxDesigner manual available on the manufacturer's website).

Touch Panel 10" can be powered by 12 – 24V DC voltage, in addition it has the ability to power PoE (Power over Ethernet) in IEEE 802.3af standard, which allows you to power the device via twisted pair without using an external power supply while transferring data.

The PX703 is equipped with a 10.1" TFT IPS capacitive touchscreen display with a resolution of 1280 x 800px. The display is designed to work with up to 10 touch points.

The device has a plastic and aluminum housing, has been designed for flush mounting (wall installation).

2   Safety conditions

PX703 Touch Panel 10" is a device powered with safe voltage 12 – 24V DC or with the use of PoE (Power over Ethernet) in IEEE 802.3af standard, however, during its installation and use it is essential to follow the below safety rules:

1. The device may only be connected to 12 – 24V DC or PoE in IEEE 802.3af standard with current-carrying capacity compatible with technical data.
2. All the conductors should be protected against mechanical and thermal damage.
3. In the event of damaging any conductor, it should be replaced with a conductor of the same technical data and attestation.
4. All repairs and connections of outputs can only be made with cut off power supply.
5. PX703 should be strictly protected against contact with water and other liquids.
6. All sudden shocks, particularly dropping, should be avoided.
7. The device cannot be turned on in places with humidity exceeding 90%.
8. The device cannot be used in places with temperature lower than +2°C or higher than +40°C.
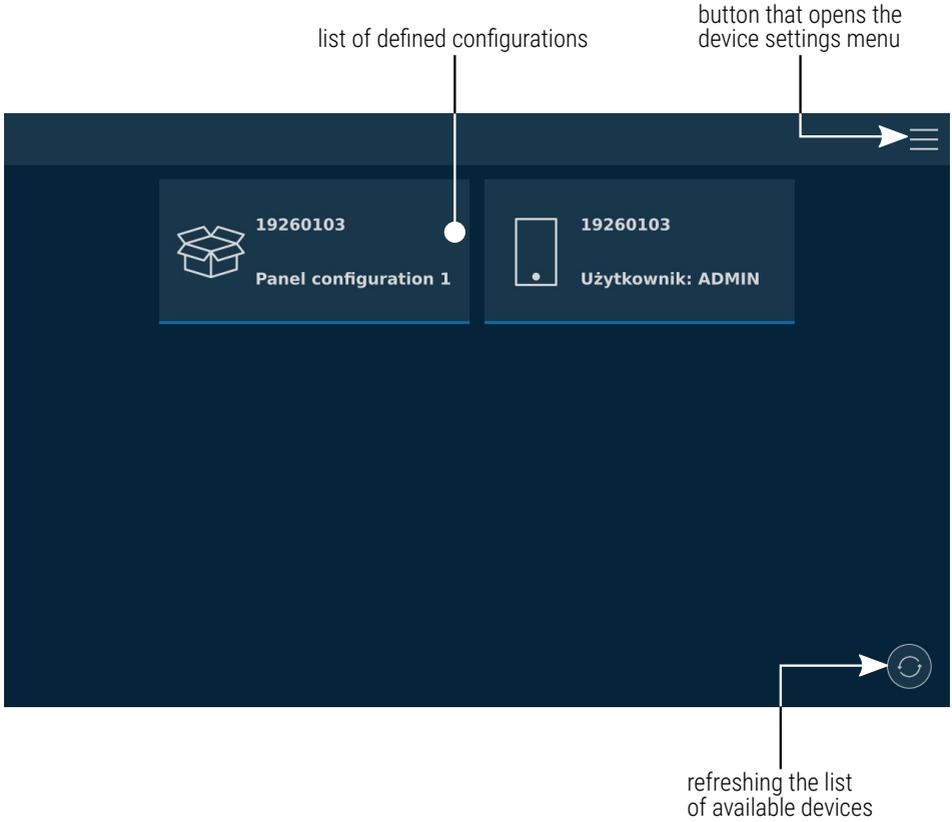
9. Clean with damp duster only.

3   Connectors and control elements

<u>Back of the device:</u>

12 - 24V DC
power supply

Ethernet
(PoE) connector

USB port

+ −

recovery mode button
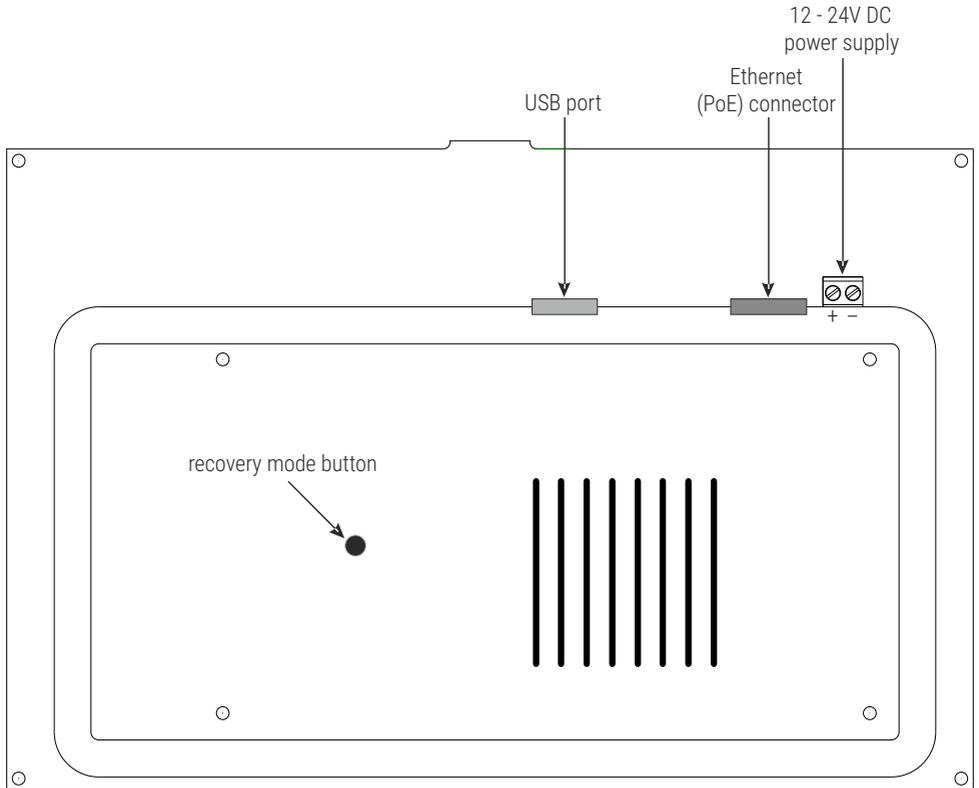
4   Start of operation

After starting, the panel displays the start page with a list of available configurations:

list of defined configurations

button that opens the device settings menu

refreshing the list of available devices

NOTE! List can be edited in the *Configurations* menu (see section 5.1. Configurations).

The colors on the tiles determinate the connection status:

- **blue** – the user is logged in to the controller and the configuration has been downloaded from the controller to the PX703 – you can open the configuration and control it,
- **red** – a connection has been established with the device, but it was interrupted. To reconnect to the device, wait ~10 seconds until the list of drivers available on the network is refreshed.
- **yellow** – the device is in the network and the connection has been established, but the wrong username or password is entered in the *Configurations* menu.
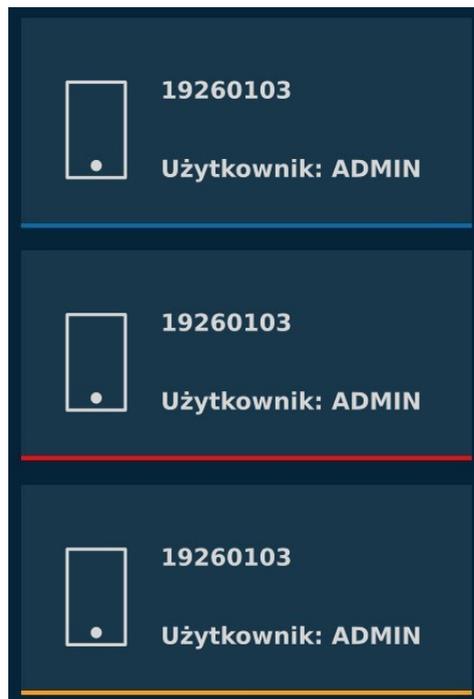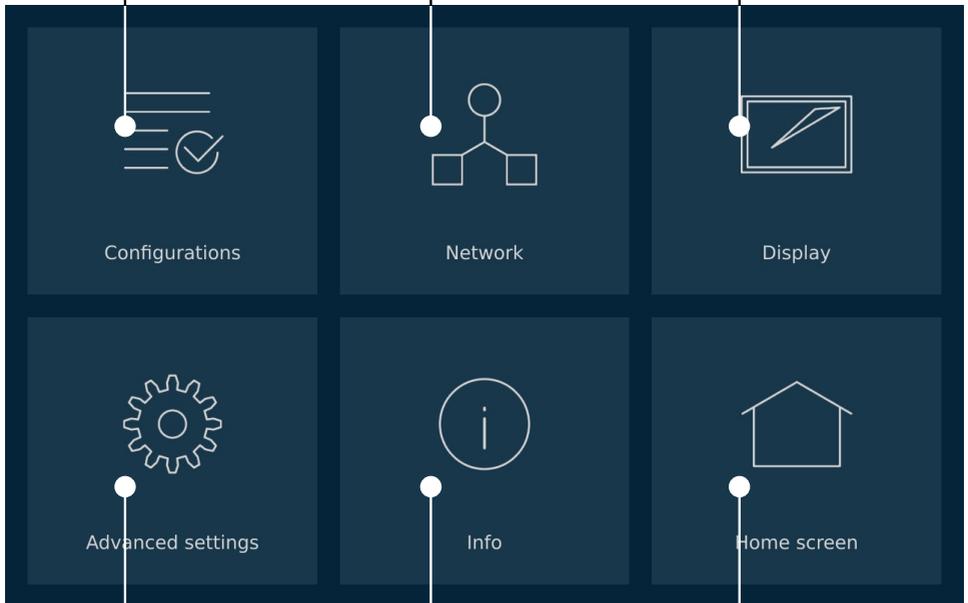
5   Device menu

After entering the menu, a window containing the following tiles will appear:

configuration management   network settings   display settings

Configurations   Network   Display
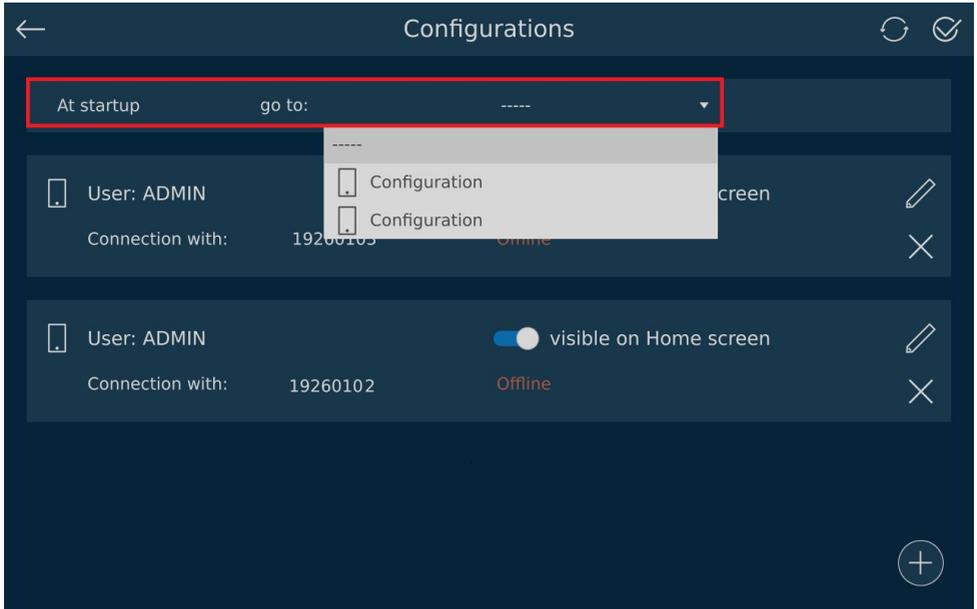
Advanced settings   Info   Home screen

administrative tools   information about   return to main window
                              the device and manufacturer

5.1   Configurations

The configuration that is selected in the *At startup go to* field is treated as the default and is started when the device is turned on, if the driver is available.


NOTE! All changes made must be saved using the button ⍽ located in the upper right corner of the screen.
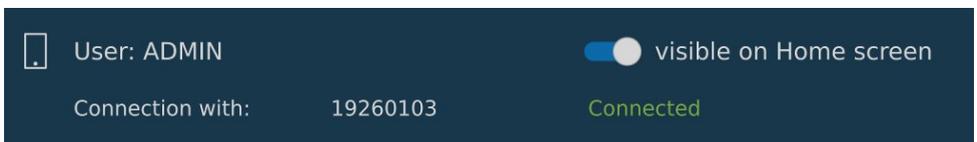
By selecting the slider *visible on the Home screen*, the user defines which configuration is to be displayed in the main window of the touch panel.
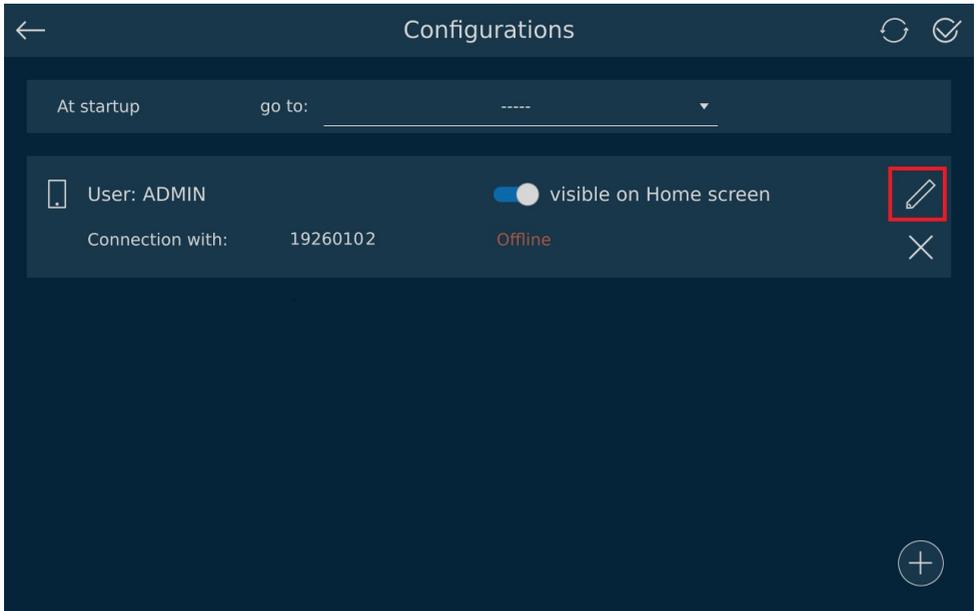
5.1.1 Configuration – Smartphone

To add a configuration (driver), click the *Configurations* tile and then select the button ﹢ in the lower right corner of the screen.
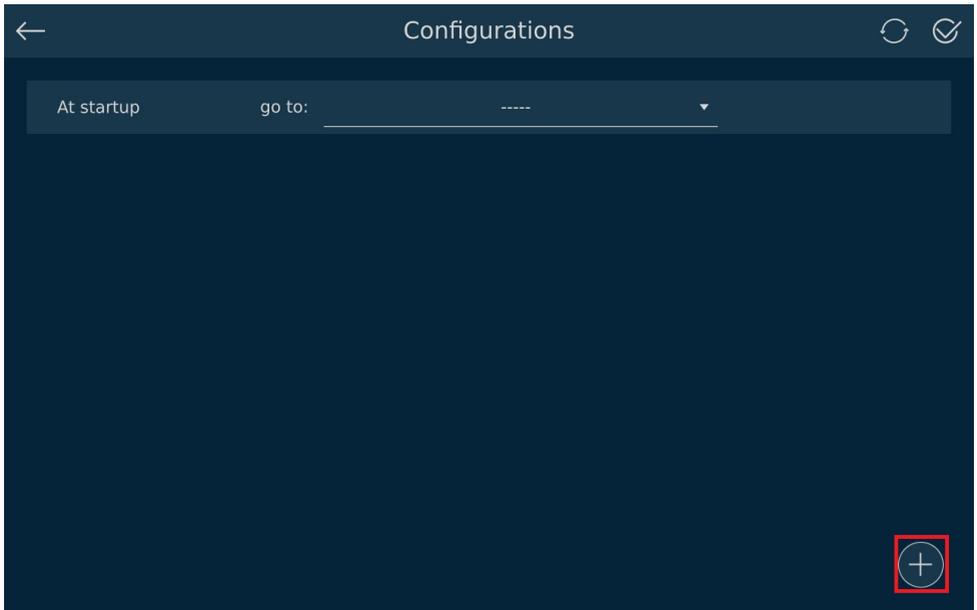
The smartphone configuration is marked with the icon ▯.

To edit the configuration (controller), press the button ✏.

At startup   go to: -----

User: ADMIN   visible on Home screen

Connection with: 19260102   Offline

After selecting this field, the user will be redirected to a new dialog box where you need to enter serial number of the controller, name of the user who will connect to the device and his password.

←	Edit	☑

Smartphone mode

Connected with: 19260103

User: ADMIN
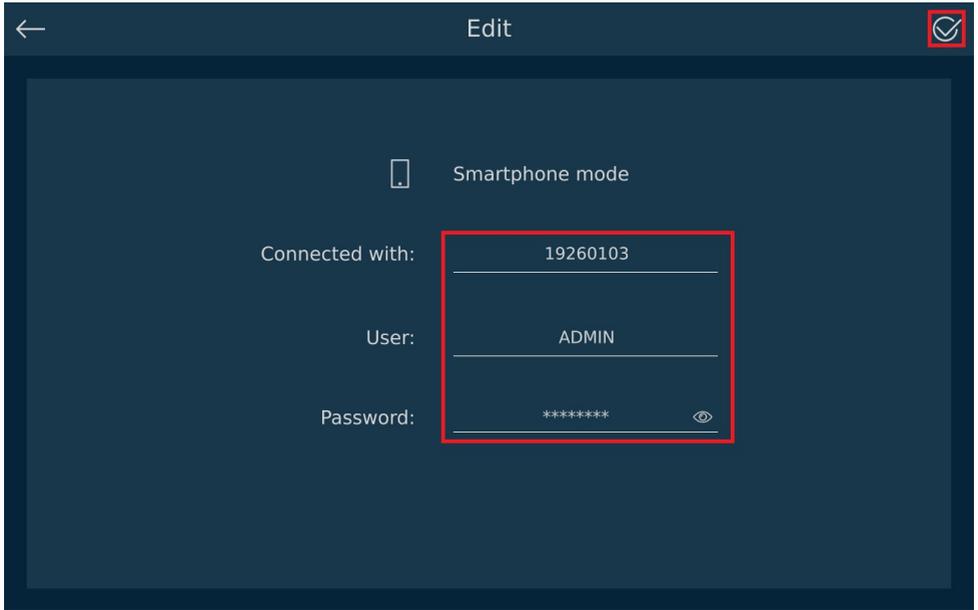
Password: ********   👁

After entering the login details for the controller, press the save changes button ☑ located in the upper right corner of the screen.
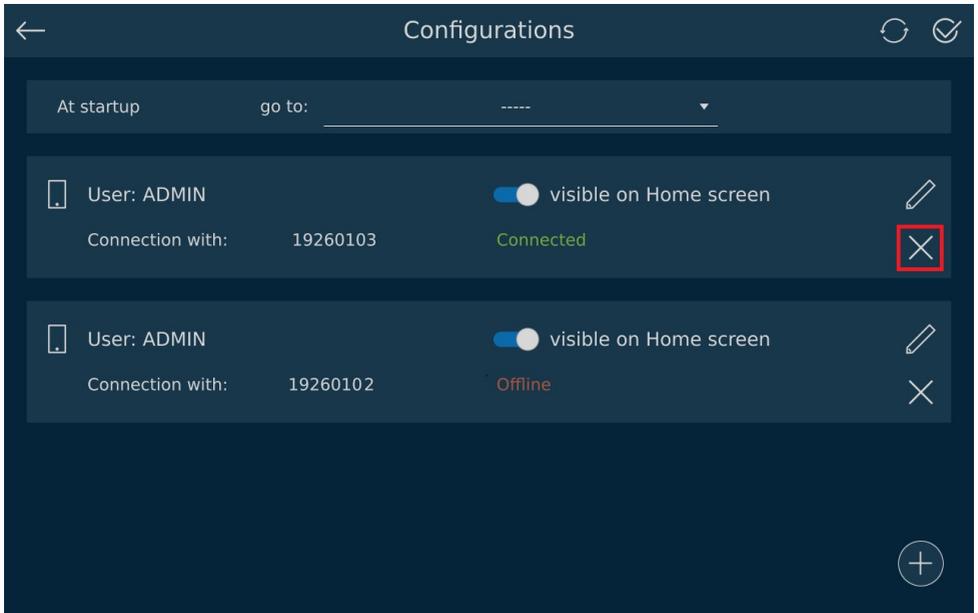
To connect to the controller, select the *Refresh* ↻ button, if the serial number and user data (login and password) are correct, a green inscription *connected* will appear. If PX703 cannot connect to the controller, a red inscription *Offline* will appear.
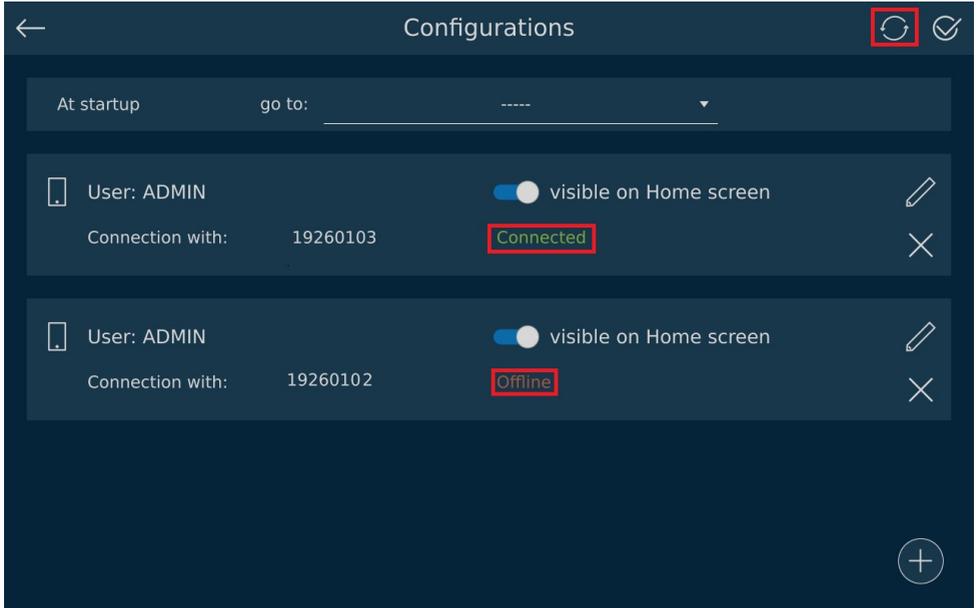
Meaning of statuses:

- Connected – login and password are correct, the controller is in the same network as the panel (everything works correctly),
- Connected – incorrect login or password (the controller is visible on the network, but the panel cannot log in to it),
- Offline – incorrectly entered controller serial number or network connection problem (incorrect network configuration, controller and panel are in a different network).

To delete a configuration, click the button ✕ on the right side of the configuration window that you want to delete.

←	Configurations	↻ ☑

At startup   go to: ----- ▼

| 🔲 User: ADMIN | 🔵 visible on Home screen | ✎ |
| Connection with: 19260103 | Connected | ✕ |

| 🔲 User: ADMIN | 🔵 visible on Home screen | ✎ |
| Connection with: 19260102 | Offline | ✕ |

   ⊕

You can also remove all configurations by selecting the *Advanced settings* tile and then *Clean Configurations* (see section 5.4. Advanced settings).

5.1.2 Setup – Graphical configuration

The touch panel configuration is automatically added to the panel immediately after it is sent from the PxDesigner program to the controller and PX703.

When sending the configuration from the application, the user defines the controller to which it is to be sent, selects the *Touch Panel* configuration and selects the controller serial number and enters the touch panel password (by default "*admin*") to which the panel is to connect.
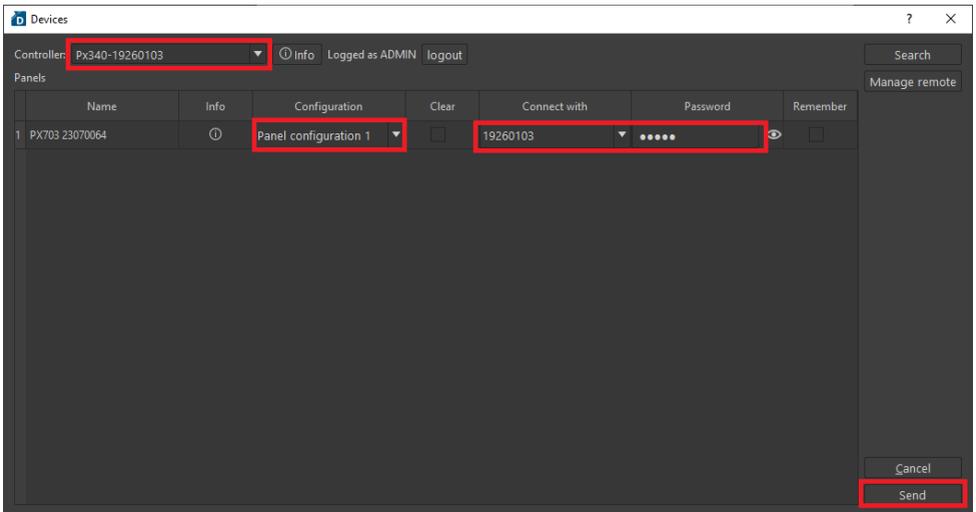
The touch panel configuration is marked with the icon ⬚.

19260103

Panel configuration 1

⬚ Panel configuration 1:   🔵 visible on Home screen

Connection with: 19260103   Connected

NOTE! If the user deletes the touch screen configuration, it can only be added by sending the configuration to the controller and touch panel again.

If the configuration sent to the panel and to the controller contains more than one panel layout, the user can select / change this layout.

←   Configurations   ↻ ✓

At startup   go to: ⬚ Panel configuration 1   ▼

⬚ Panel configuration 1:   🔵 visible on Home screen   ✎

Connection with: 19260103   Connected   ✕

5.2 Network

After selecting the network settings, a window will appear in which you can enter the network settings manually or enable automatic addressing (DHCP).

If the connection is active, the green circle indicating the connection status lights up with the *Ethernet* inscription. Red circle indicates a connection problem, such as an unconnected Ethernet cable.

NOTE! When making any changes to the settings, save them by clicking the button ⊘ in the upper right corner of the screen, you can also exit without saving them by selecting the button ← in the upper left corner of the screen.

a) DHCP enabled – all networks settings are downloaded automatically
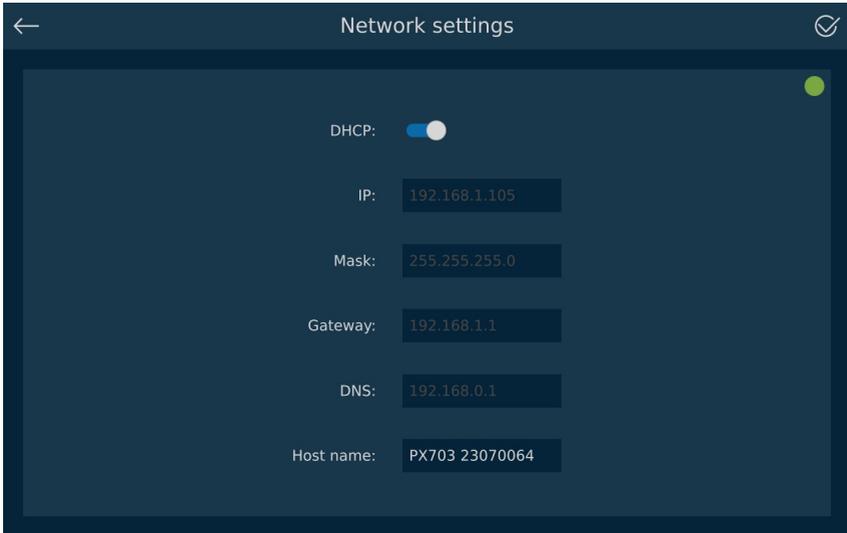
b) DHCP off – network settings are set manually
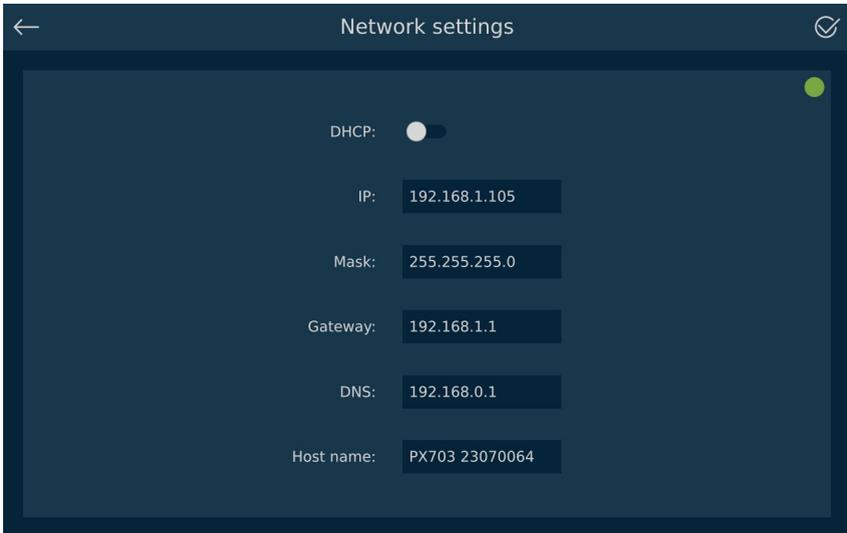
NOTE! Pleas note that PX703 must be on the same network as the drivers to connected to.

5.3 Display

The *Display* tile is responsible for changing the screen brightness, screen saver settings (on / off, brightness to be set and the time after which the brightness change will be introduced). This menu is also responsible for changing the interface language (Polish / English).
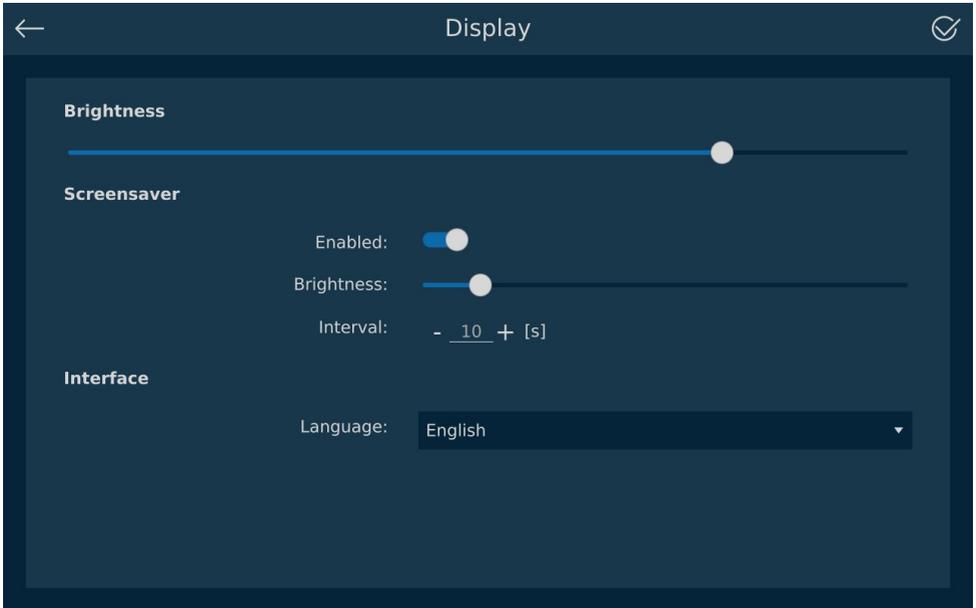
NOTE! When making any changes to the settings, save them by clicking the button ⊘ in the upper right corner of the screen, you can also exit without saving them by selecting the button ← in the upper left corner of the screen.
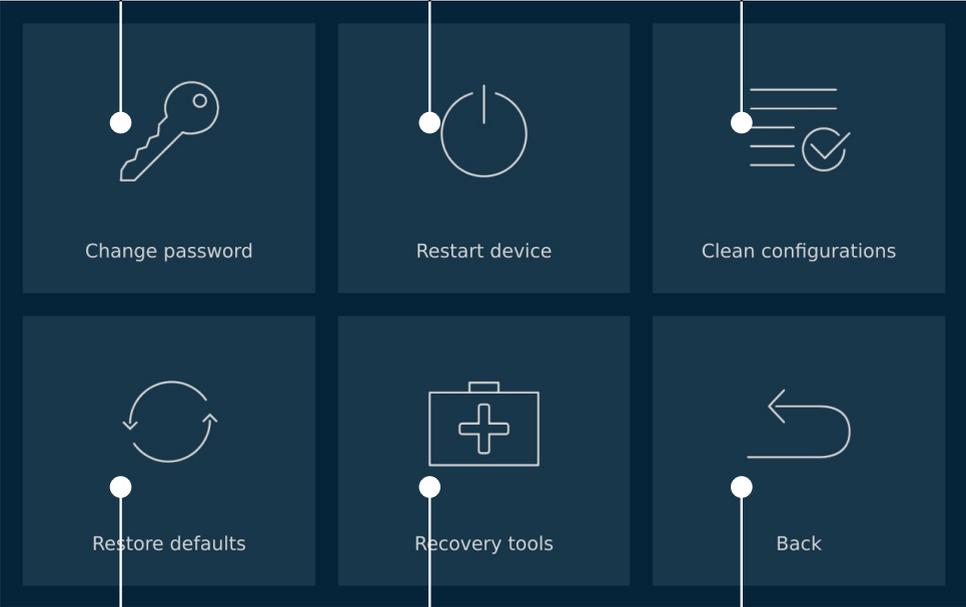
5.4 Advanced settings

The *Advanced settings* tab looks like this:

change password
(access to all settings)

reboot the PX703 device

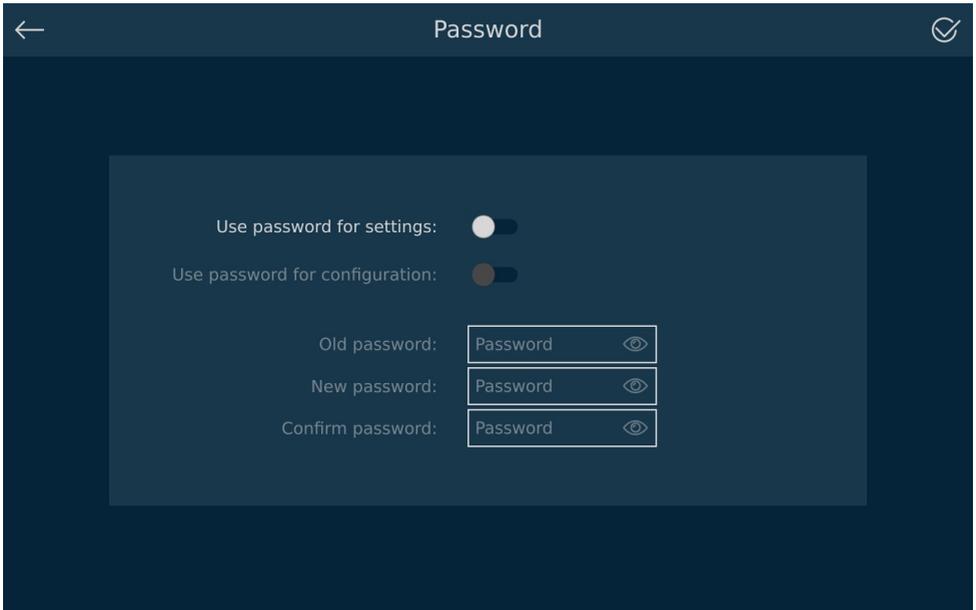deleting all configurations saved
in the device's memory

Change password	Restart device	Clean configurations
Restore defaults	Recovery tools	Back

factory defaults

recovery tool

return to main menu

5.4.1 Change password

It allows you to create or change an existing password to edit settings in PX703.

To protect the settings with a password, slide the switch *Use password*, enter the current password. The default password for devices with a system version below 1.0.38 is "*admin*", for newer versions it is the serial number of the device. Then enter the new password twice. Selecting the *Use password for configuration* option will block the selection of configuration in the main window – entering a password will be required.

NOTE! If the user has updated the system from a version older than 1.0.38, the default password is "*admin*". However, after a factory reset, in version 1.0.38 or later, the password becomes the device's serial number.

To disable password protection, simply turn off the *Use password* option (the password will not be removed, only the option protecting the settings will be disabled).

The password is changed after entering the password used so far and entering the new password twice.

NOTE! When making any changes to the settings, save them by clicking the button ⊘ in the upper right corner of the screen, you can also exit without saving them by selecting the button ← in the upper left corner of the screen.
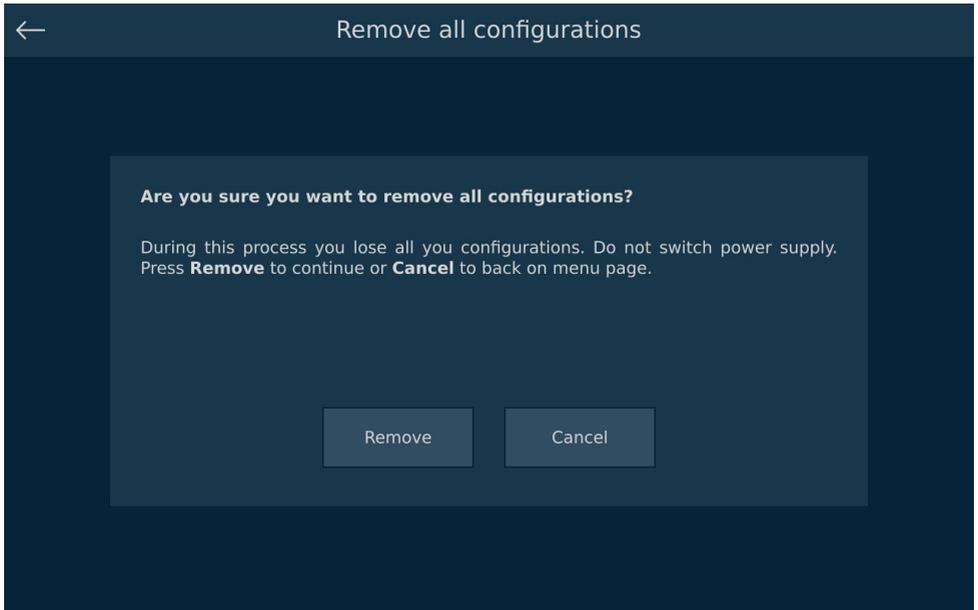
5.4.2 Restart device

Restarts your device (your device will prompt you with an "*Are you sure?*" message). If you select *Yes*, your device will restart.
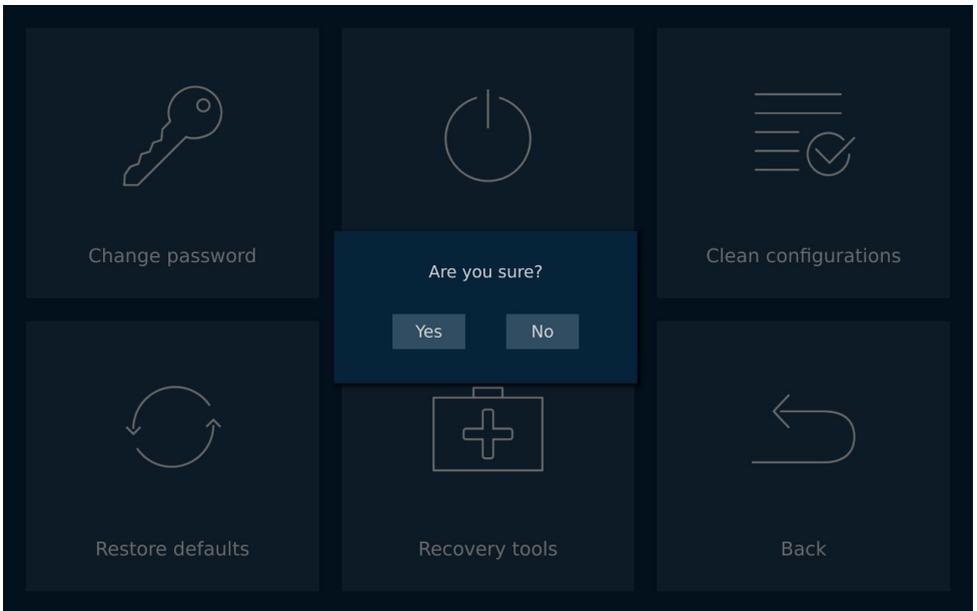
5.4.3 Clean configurations

Deletes all configurations saved in the device's memory (the device displays the message *"Are you sure you want to remove all configs?"*). When you select *Remove*, all configurations will be deleted.
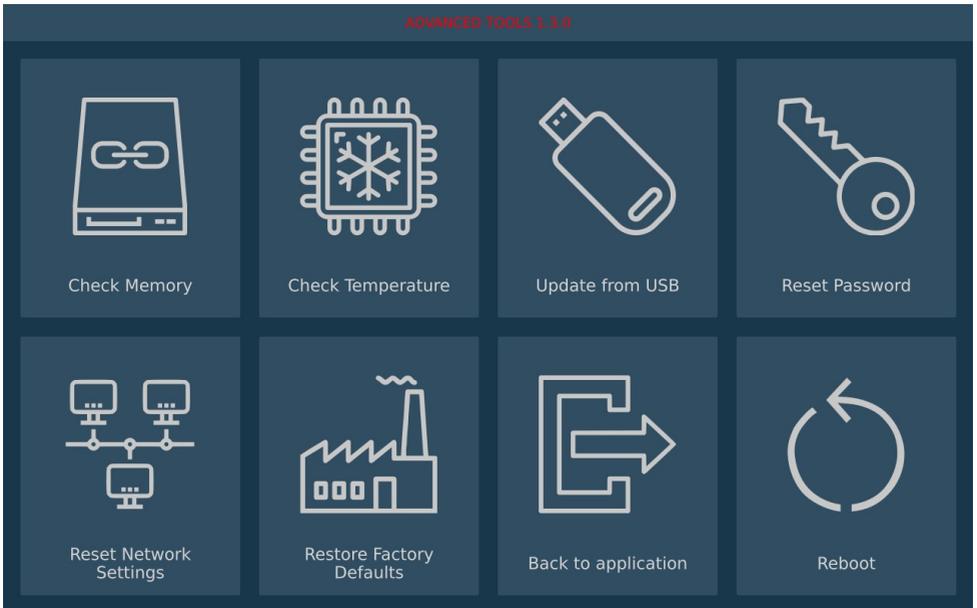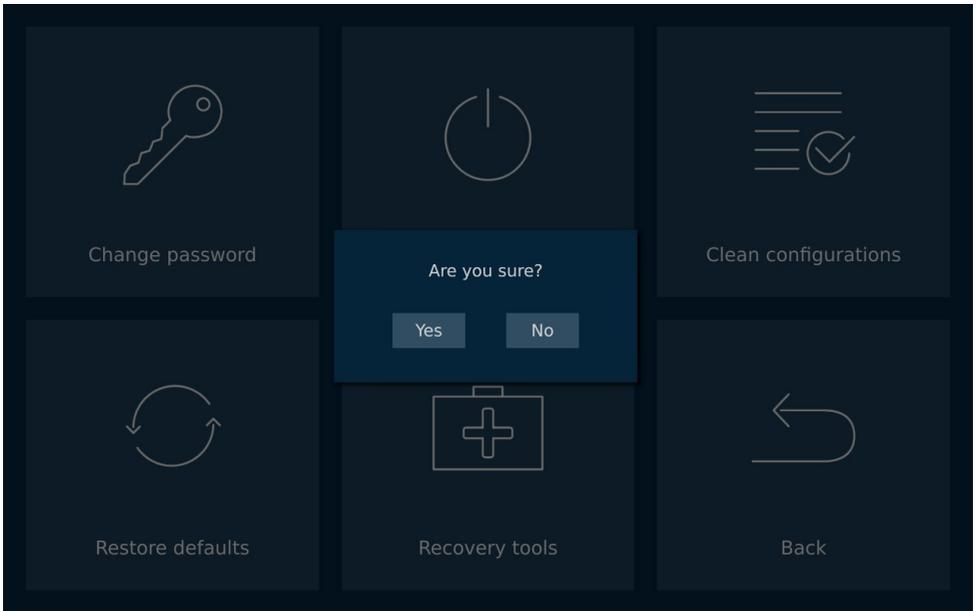
5.4.4 Restore defaults

Resets the device to default settings (the device displays the message *"Are you sure you want to restore to defaults settings?"*). When you select *Restore*, all settings will be reset to factory defaults.
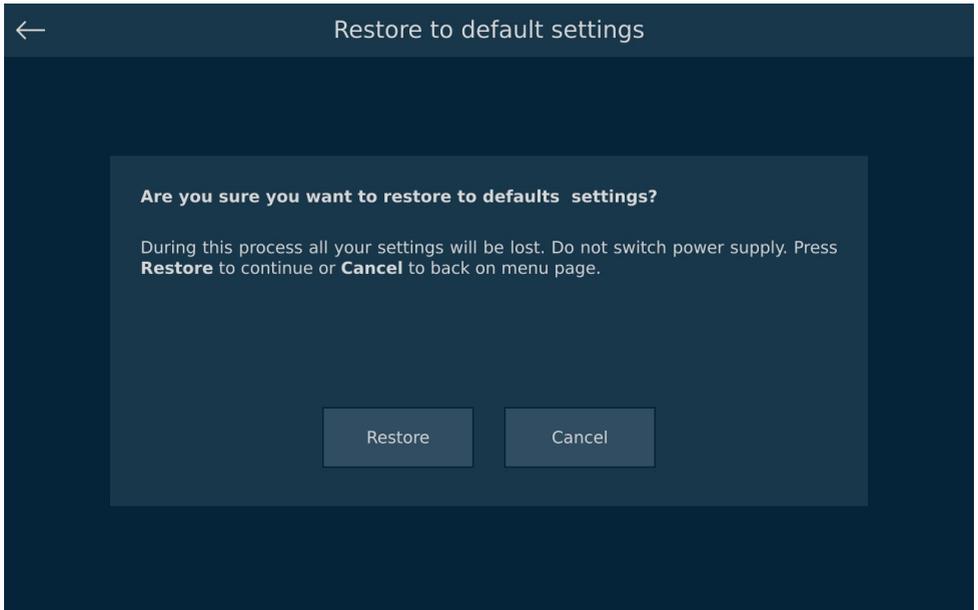
5.4.5 Recovery tools

Goes to the next menu (the device displays message *"Are you sure?"*).

Change password

Are you sure?

Yes   No

Clean configurations

Restore defaults

Recovery tools

Back

ADVANCED TOOLS 1.3.0

Check Memory

Check Temperature

Update from USB

Reset Password

Reset Network Settings

Restore Factory Defaults

Back to application

Reboot

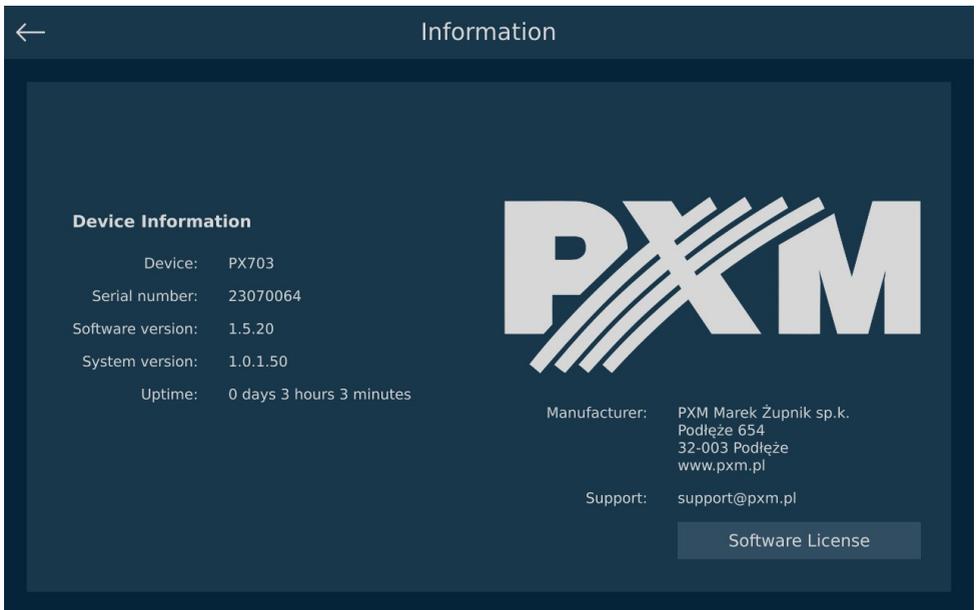The Recovery Tools menu includes the following options:

- *Check Memory*,
- *Check Temperature*,
- *Update from USB*,
- *Reset Password*,
- *Reset Network Settings*,
- *Restore Factory Defaults*,
- *Back to application*,
- *Reboot*.

NOTE! A detailed description of the function can be found in point 7. Recovery button.

5.5 Info

When you click the *Info* tile, a window will appear containing:

- Device – device name,

- Serial number,

- Software version,

- System version,

- Device operating time,

- Manufacturer information.

5.6 Admin tools – PxDesigner

From system version 1.x.x.x the user can configure PX703 parameters from the PxDesigner application. To do this, select *Connect* in the upper right corner.
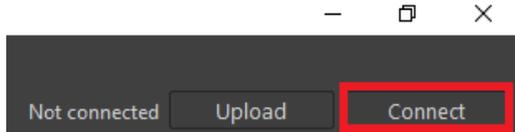
NOTE! If the application is connected to any controller, you must disconnect (click *Disconnect*).

A new dialog box will appear where you need to select the panel you want to connect to, enter the touch screen username ("*ADMIN*") and password (serial number) or choose the default values and click *Login*.
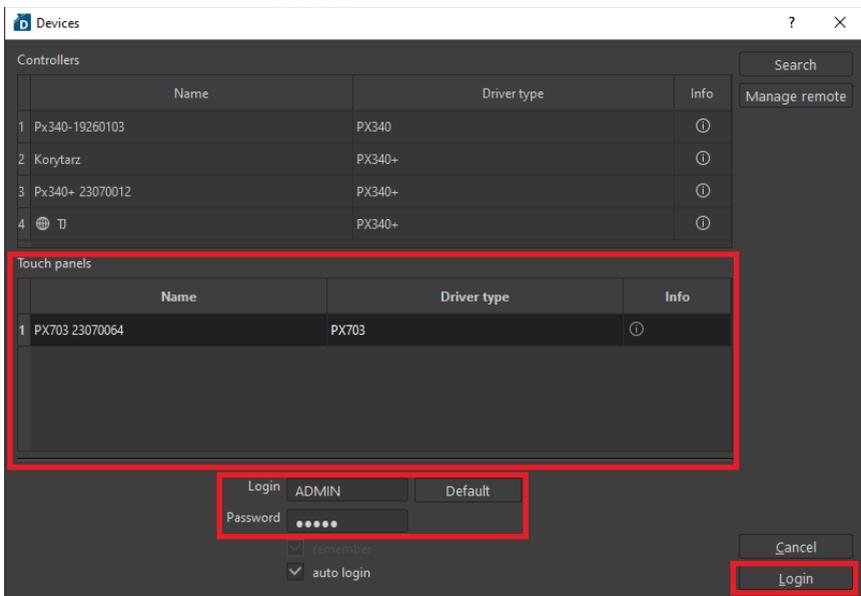
After successfully logging in, another dialog box will appear, <u>in which the user can:</u>

- change device name,
- change administrator password,
- configure display brightness and screensaver,
- change the panel interface language,
- change network settings,
- update your device (*Upgrade*),
- download configuration (*Download*),
- restore factory settings (*Clear all*).

6   Structure of the application window

The touch panel can connect to the controller <u>in two ways:</u>

- by downloading a configuration prepared for smartphones from the controller,
- by a user-designed and uploaded graphic configuration.

6.1   Smartphone configuration

After selecting the driver from the main panel window, the control screen opens. <u>The application window consists of the following items:</u>
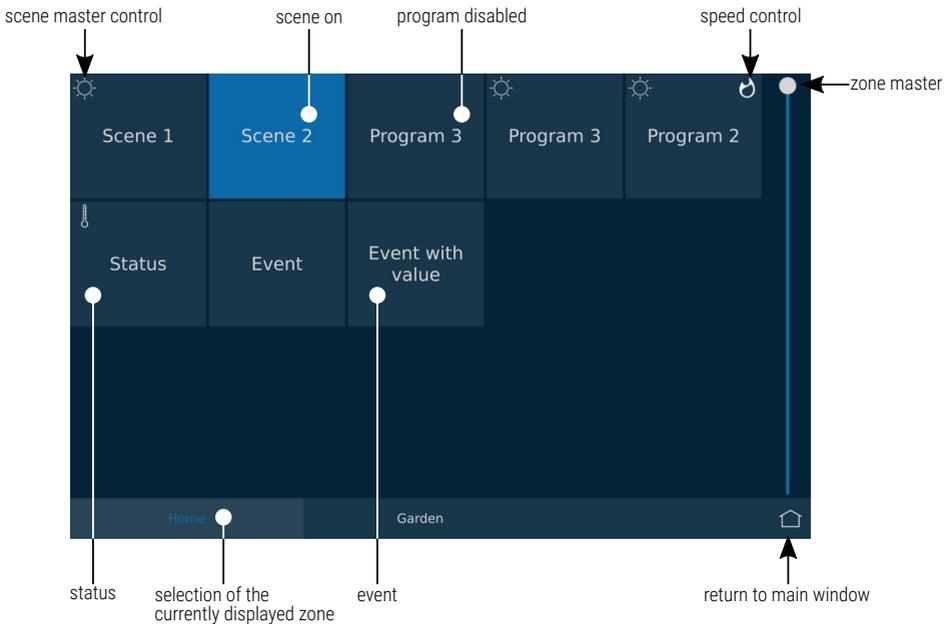
NOTE! The tile order can be edited in the smartphone application.

Configuration sent to the device consists of zones (displayed in PX703 as separate desktops) to which the given user has access. After selecting the controller fro the main menu, Touch Panel 10" downloads the configuration for the logged in user (selected in the *Configurations* menu).

The following items are assigned to each:

- scenes,
- programs,
- events,
- statuses.

Each item is displayed as a tile. Scenes, programs and statuses have two states – enabled (blue) and disabled. Event tiles do not have a state, but they can activate the state of another object (scene, program, status, show).

The zone master slider allows for controlling the brightness of all currently enabled items in the zone (can be deactivated in the PxDesigner application). To move between zones, select a different zone at the bottom of the program window. Clicking the tile starts / deactivates the item. However, clicking the icon on the tile (☼ / ♨ / ▥) changes it into a "circular" slider and gives the opportunity to change the value of the scene master, program, program speed or event value.

6.1.1 Scene

Scene can be masterable – you can modify its master when the symbol ☼ is displayed in the upper left corner.

Clicking on a scene switches its state. The tile color indicates the currently state of the scene (navy blue when it is disabled and blue when it is enabled). The scene for which the master parameter can be changed is indicated by the symbol ☼. Clicking on ☼ changes the tile into a "circular" slider.
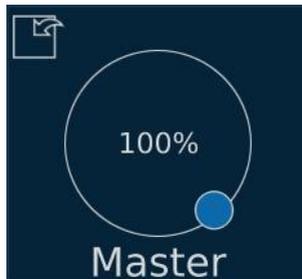
Exiting the scene master edit is possible after clicking the icon 🔄.

6.1.2 Program

For a program, you can control the master ☼ value and speed ⭘. Clicking the program tile switches its state (on / off). The tile color indicates the currently state of the scene (navy blue when it is disabled and blue when it is enabled). Clicking the icon in the upper right or left corner will turn the tile into a "circular" slider (*Master* ☼ or *Speed* ⭘).
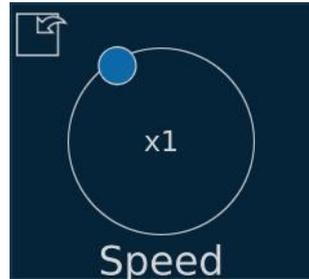
6.1.3 Status

Displayed as a tile that does not respond to clicking. The tile color indicates the current state of <u>the selected status of the controller:</u>

- navy blue, when it is disabled,
- blue, when it is enabled.

6.1.4 Events

Event with no value:

Tile which sends an appropriate event to the controller every time it is pressed on. The tile is highlighted when it is clicked.

Event with value:

Clicking the icon ⬛ displays a "circular" slider on which you can select the value to be sent to the device.

NOTE! The sent value to the device in the event of an event opposed to change of scene or program master is sent after selecting the set value with the slider and releasing it – the change is not smooth.

6.2 Graphical configuration

Starting from system version 1.x.x.x, the user has the ability to create a completely personalized *Touch Panel* configuration using the PxDesigner application. The user can add their own background, configure subsequent pages and freely arrange fully customizable:

- buttons,
- clocks,
- controls,
- indicators,
- sliders
- static widgets.

Sample configurations:
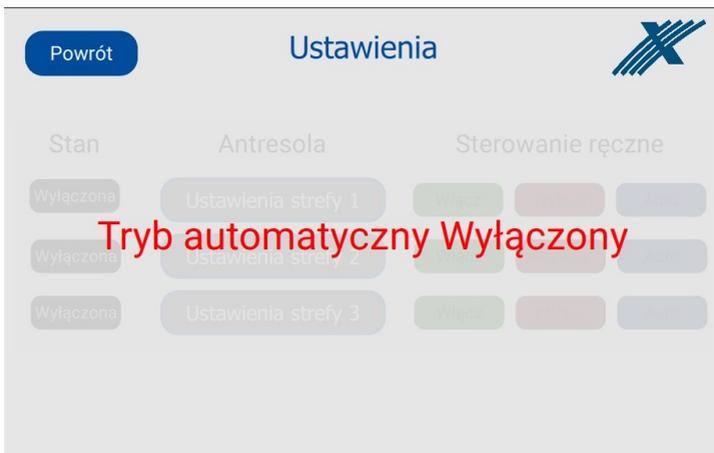
Podgląd sterowania

PXM

AUTOMATYKA   AUTOMATYKA   AUTOMATYKA

WYŁĄCZONE   100%   WYŁĄCZONE   100%   WYŁĄCZONE   100%

HALA   KORYTARZ   ANTRESOLA

Antresola

Strefa 1 wyłączona

Strefa 2 wyłączona

Strefa 3 wyłączona

Ustawienia

Pokazy

KOPALNIA SOLI WIELICZKA

Pasterka

Turystyczne

Msza Święta

Porządkowe

Wieczna lampka

Zaawansowane

Wstecz

Uni-Flood

WHITE WARM   WHITE NEUTRAL   WHITE COLD

NOTE! To exit the configuration to the main window, "pull down" the top bar on the touch screen and select the button ⌂ (from version 1.6.4 you need to swipe from top to bottom with two fingers).


On the top beam you can:

- ⌂ – go to the main screen (exit configuration),
- ⧘ – change user – if the new user does not have permissions for the current page – it will take you to the home page,
- ⟵ – log the user out – if the page we are currently on requires any permissions – it will take us to the home page.

7 Recovery button

To enable *Recovery* mode, hold down the button located on the back in the center of the device while starting the device.
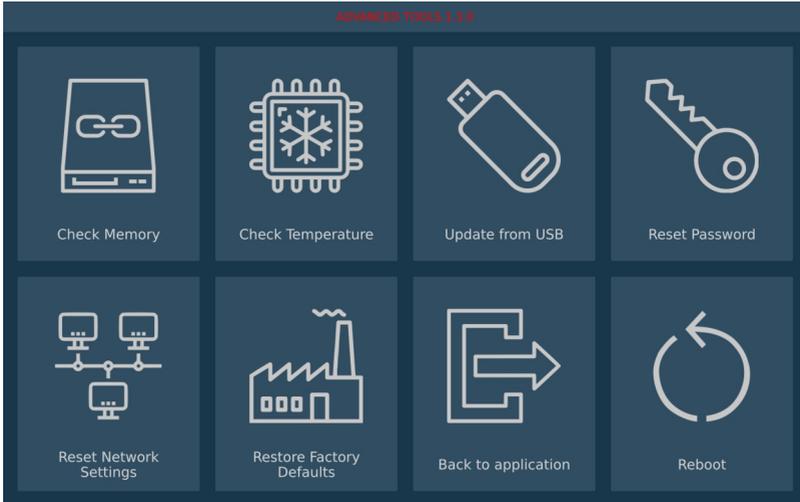

After activating this mode, a window will open where the user can:

- check the device's memory,
- check the processor temperature,
- update the device from a USB drive,
- restore the default password (for devices with system versions below 1.0.38, this is "*admin*," for newer versions, this is the device's serial number),
- restore network settings (DHCP enabled),
- reset the entire device to factory settings,
- return to the application,
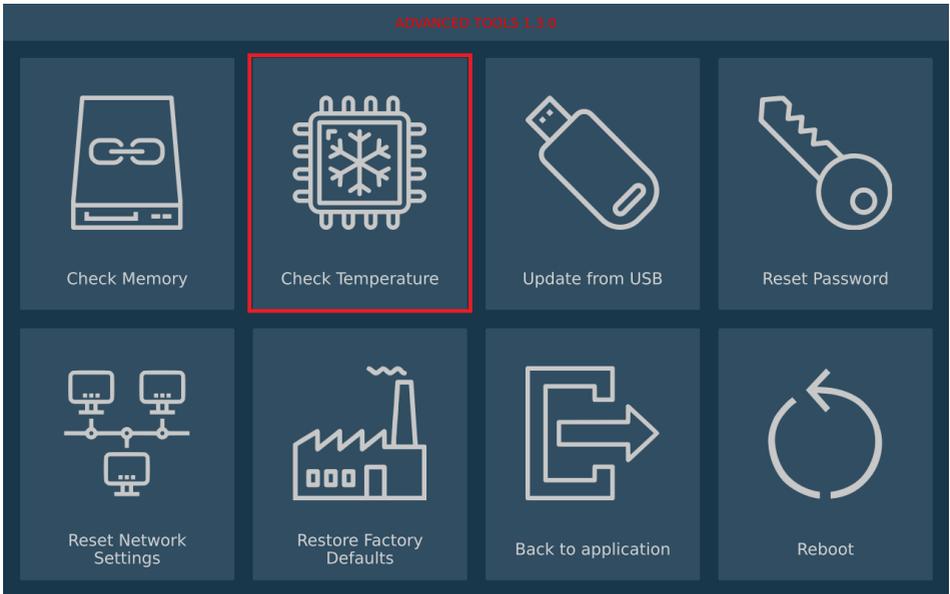- restart the device.

7.1 Check Memory
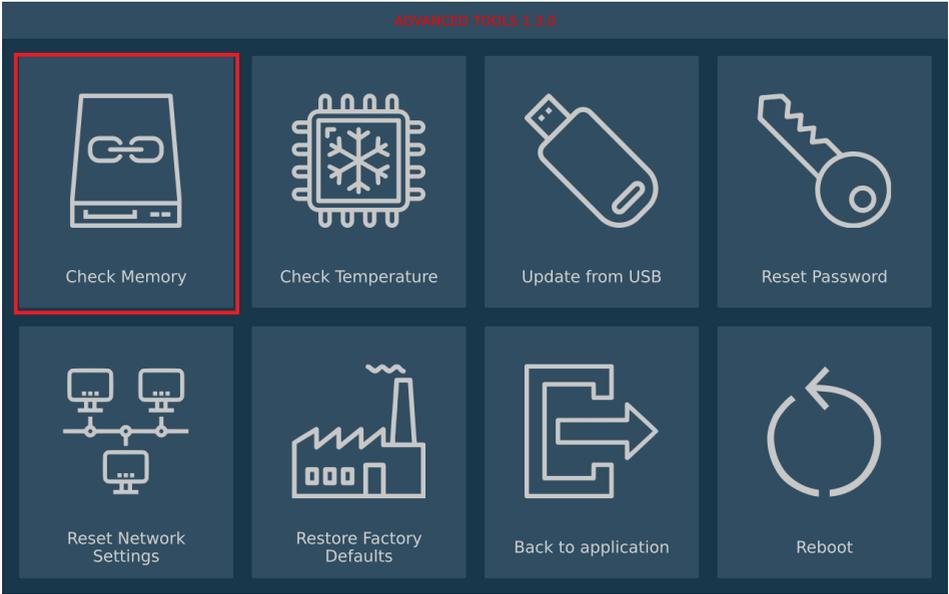
Selecting this option will verify the correct operation of the built-in memory.
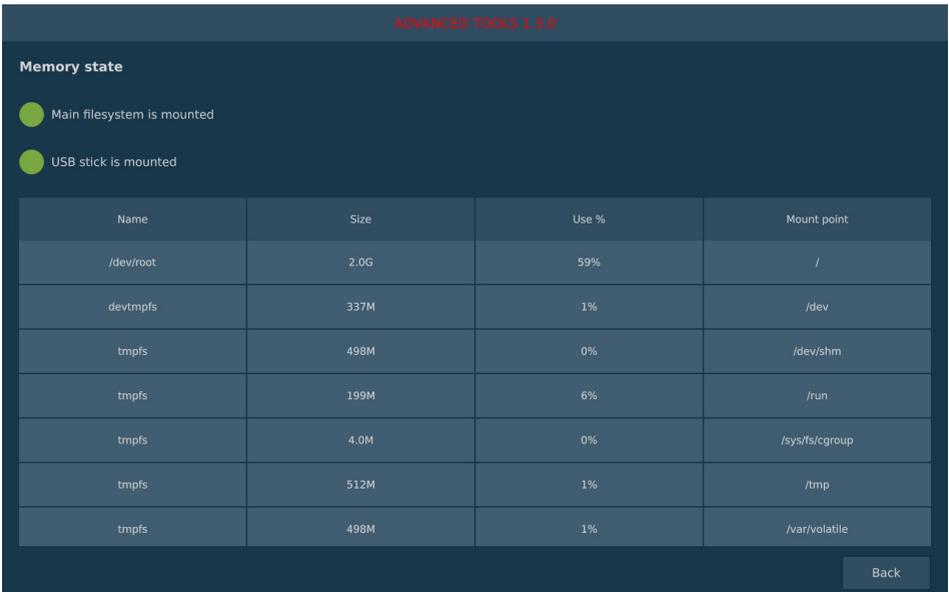
7.2   Check Temperature

Checking the processor temperature.
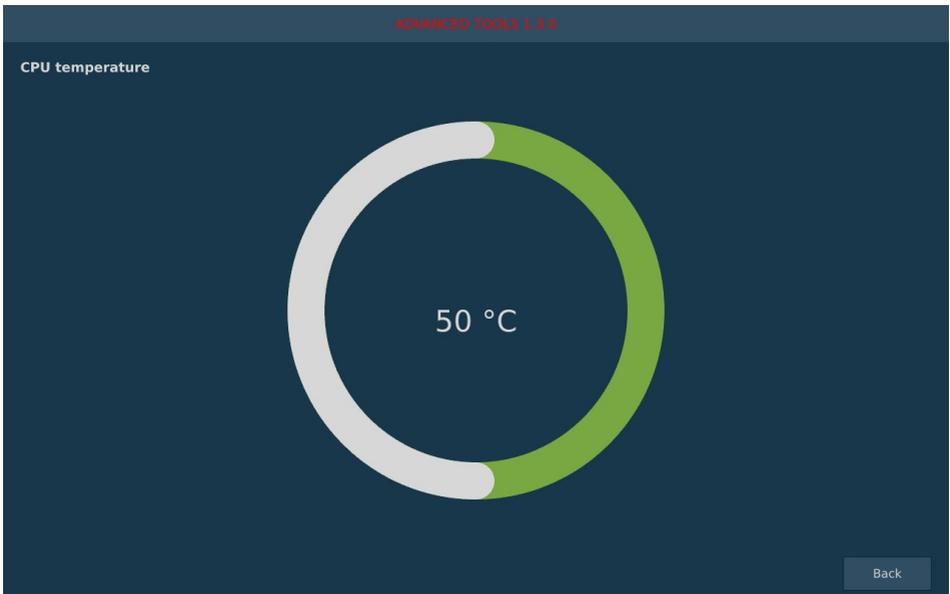
7.3 Update from USB

The user can update the device via USB, to do this, download the latest version of the system from the manufacturer's website ([pxm.pl](pxm.pl)) and upload it to a portable memory.

When selecting this option, you must select the portable memory and then the system update file.
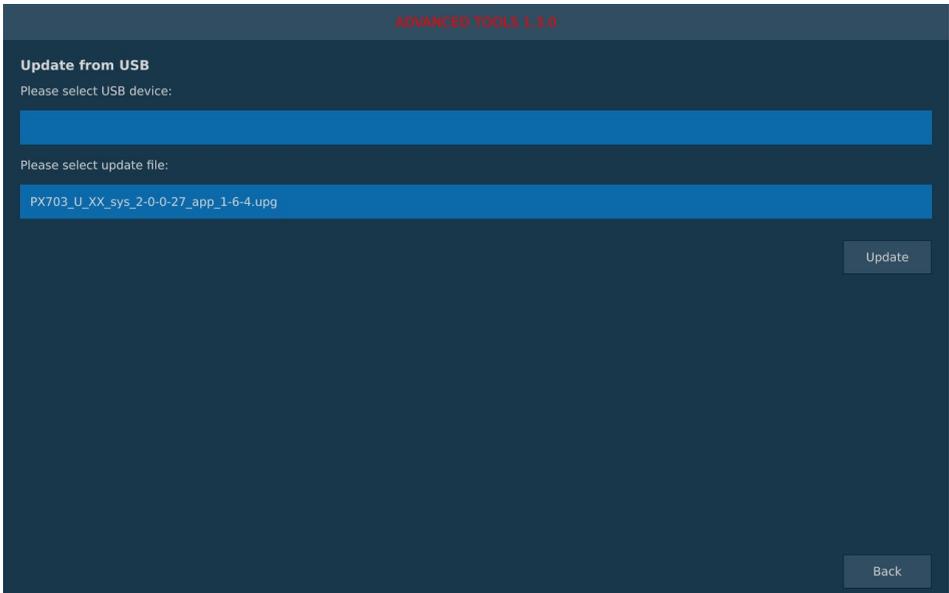
7.4 Reset Password
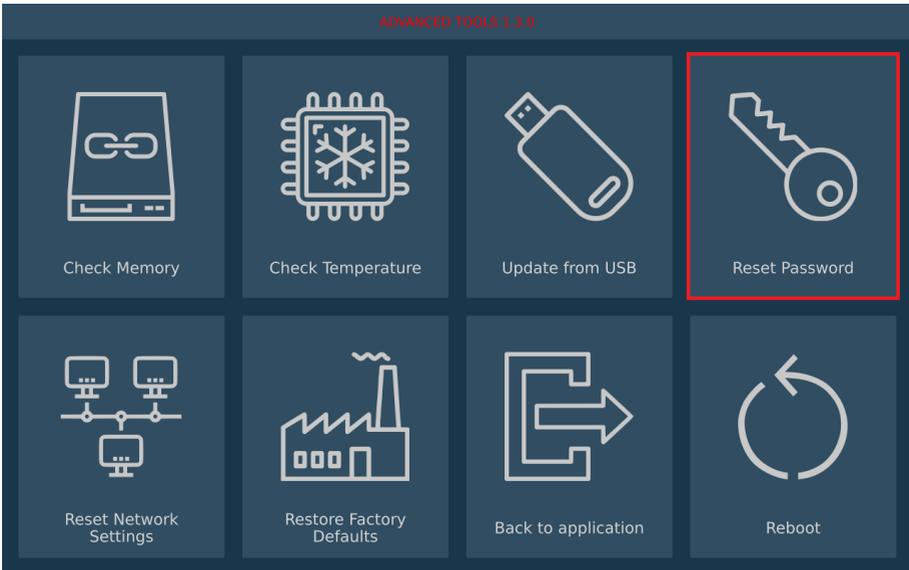
Resetting the password and restoring it to the default one (for devices with system version below 1.0.38 it is "*admin*", for newer versions it is the device serial number).

7.5 Reset Network Settings

Check Memory	Check Temperature	Update from USB	Reset Password
Reset Network Settings	Restore Factory Defaults	Back to application	Reboot
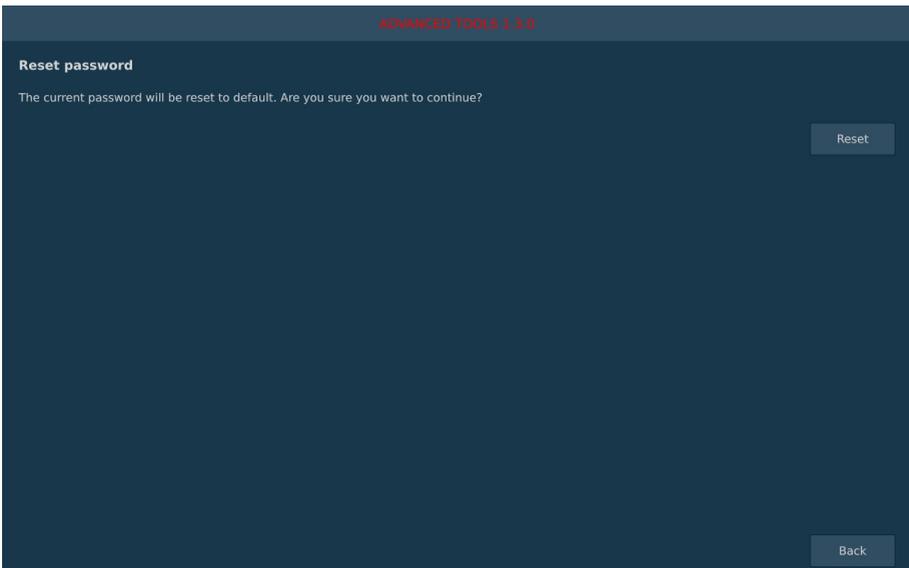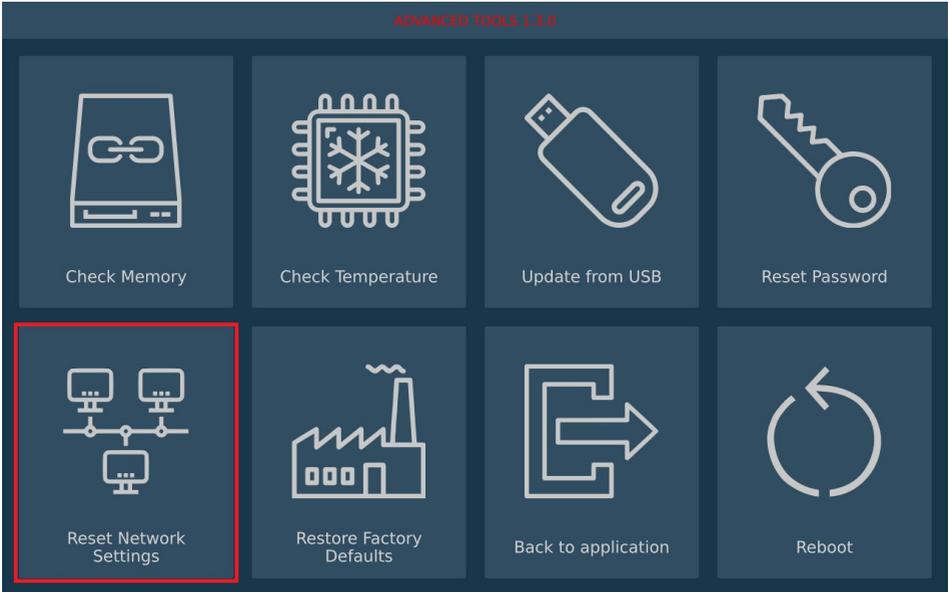
Restoring network settings will enable DHCP.

Reset network settings

The current network settings will be reset to default. Are you sure you want to continue?

Current data:

DHCP: DHCP
IP: 192.168.0.110
Gateway: 192.168.0.1
Mask: 255.255.255.0
DNS1: 8.8.8.8
DNS2: 8.8.8.8

Reset

Back

7.6 Restore Factory Defaults

Check Memory	Check Temperature	Update from USB	Reset Password
Reset Network Settings	Restore Factory Defaults	Back to application	Reboot
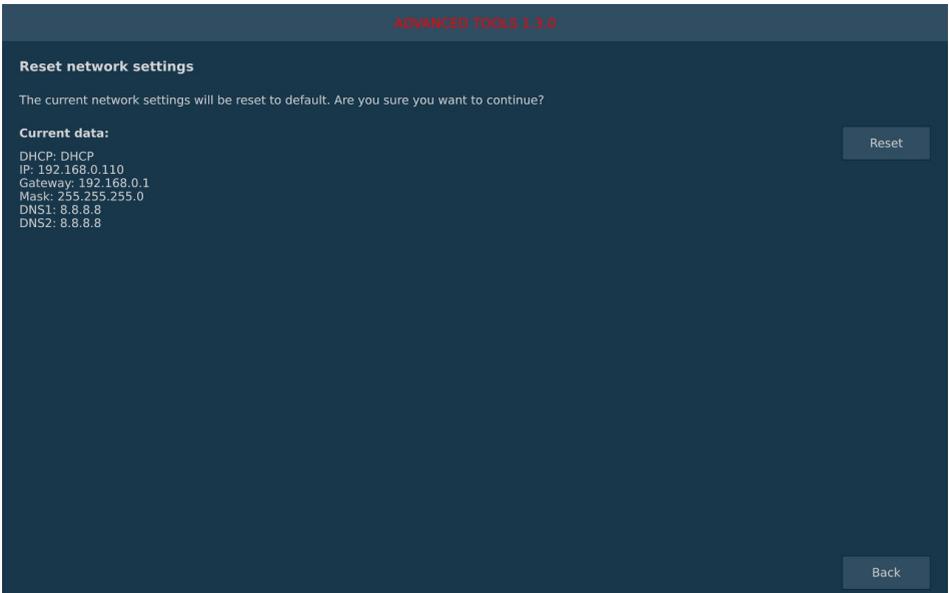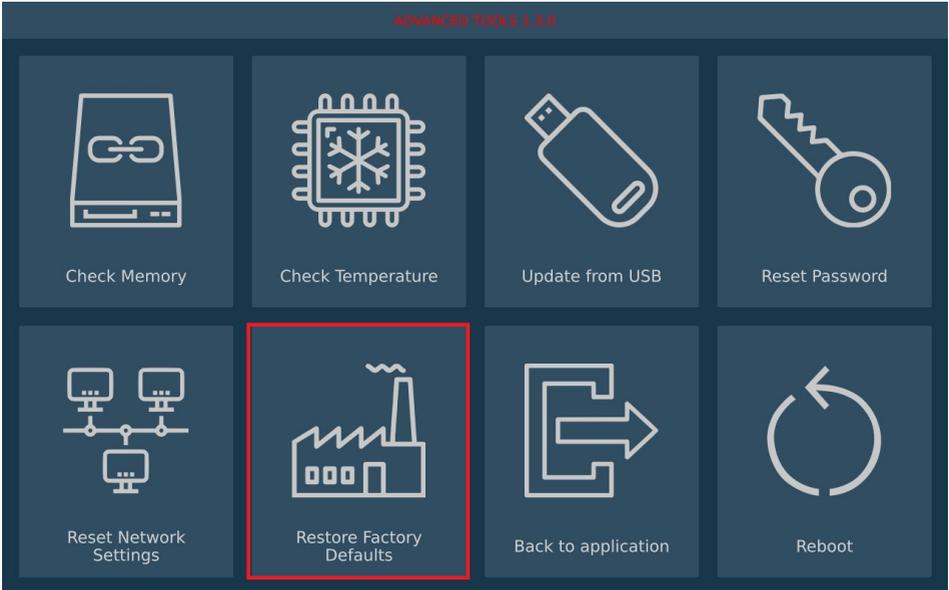
Full factory reset including resetting the entire application.

Reset Factory Defaults

The device will be restore to factory defaults. All settings will be lost. All data in the internal memory will be deteted. Are you sure you want to continue?

Reset
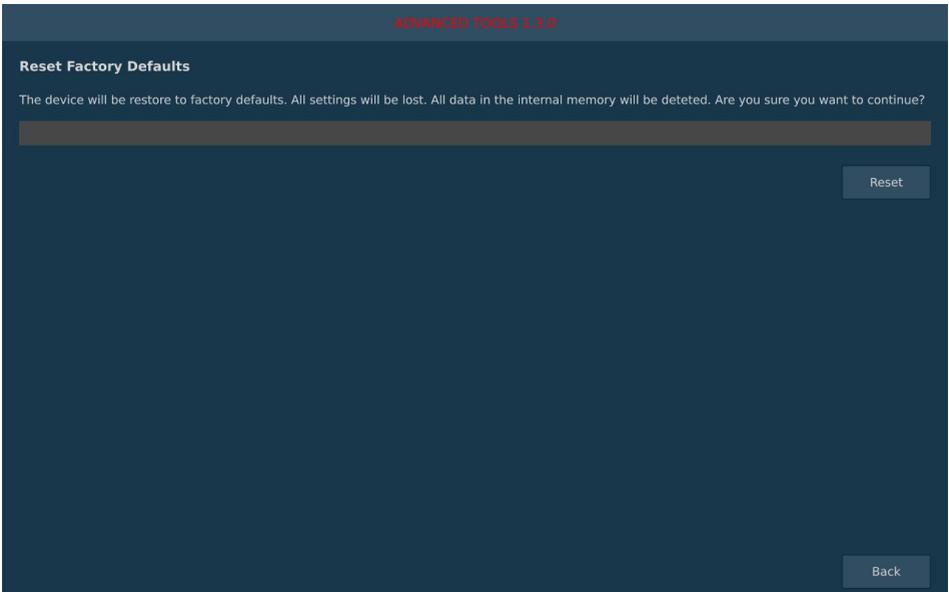
Back

7.7   Back to application
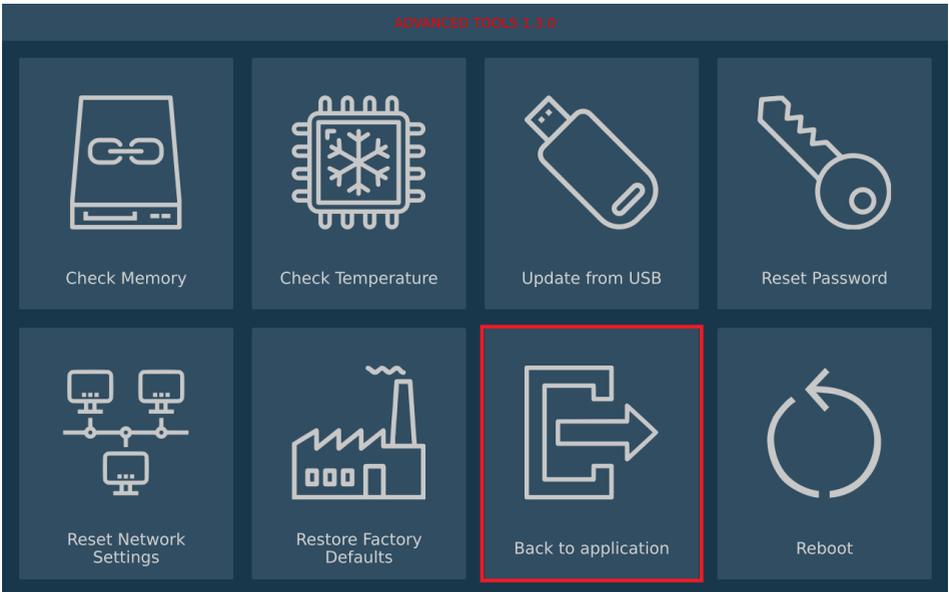
Exit *Recovery* mode to the device's main window.

7.8   Reboot

Exit *Recovery* mode and restart the device.

8   Update

Touch panel updates <u>may include:</u>

- system update,
- application update,
- system and application update.

NOTE! Update files available on the manufacturer's website will be described accordingly.

8.1   Update from PxDesigner application

To install the update from the PxDesigner application, your device must have version 1.x.x.x. installed. The system update to version 1.x.x.x is described in section 8.3. Update version 0.x.x.x.
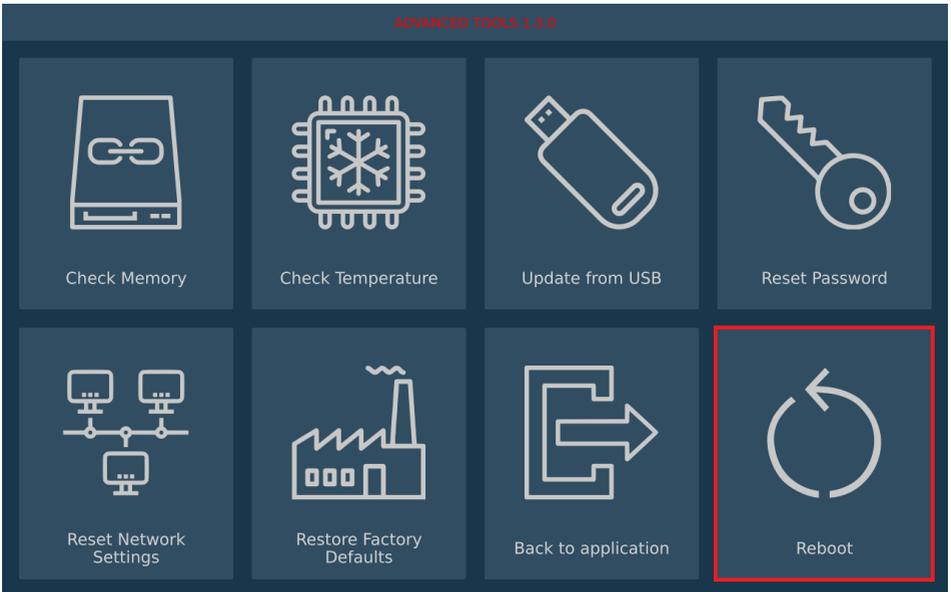
At the very beginning, the user needs to connect to the panel, to do this, click *Connect* in the upper right corner of the PxDesigner application.
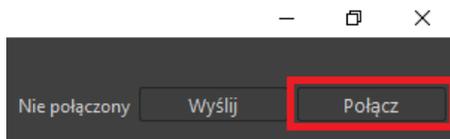
NOTE! If the application is connected to any controller, you must disconnect (click *Disconnect*).

Then select the touch panel you want to update, fill in your login details (or select *Default* – unless your username and password have been changed) and click *Login*.
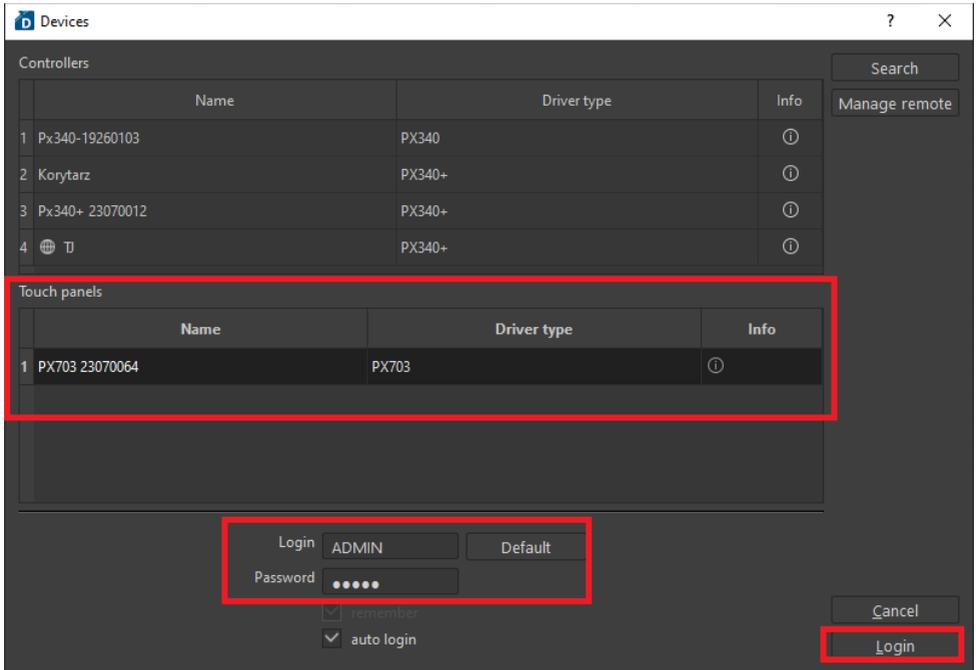
A new dialog box will open where you should select *Upgrade*.

PX703 - Admin Tools

Name:	PX703 23070064	Change
Serial number:	23070064	
ADMIN password:	Change	

LCD Brightness:
Screensaver: ☐ active
After: 10 s
Brightness:
Interface: English ▾ | Save changes

MAC:	f8:dc:7a:5e:b7:c4	
IP:	192.168.1.105	
Mask:	255.255.255.0	
Gateway:	192.168.1.1	
DNS:	192.168.0.1	
DHCP:	✔ ON	Save changes

System version:	1.0.1.50	Upgrade
Software version:	1.5.20	

Configuration:	Download	Clear all

Close and logout

The user can then choose whether the update should be *Auto update* – downloaded from the Internet, or from a file on the local disk – *Update from file*. The update file can be downloaded from the manufacturer's website (http://pxm.pl/).
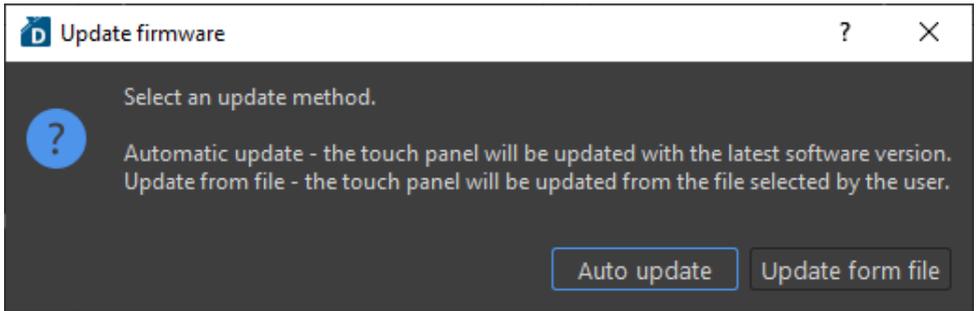
If the *Auto update* option is selected, a dialog box will indicate the progress of the update download.
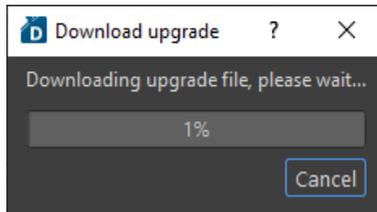
After downloading the update file or selecting a previously downloaded file from your local disk, the update will be performed. Once completed, the PX703 will restart.
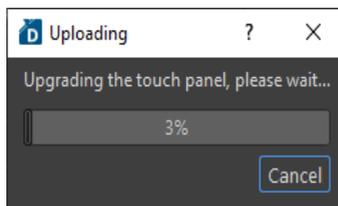
8.2 Update from USB

In order to update the firmware, prepare a USB stick formatted in NTFS or FAT32 and <u>follow the steps below:</u>

1. The *sysupgrade.upg* file should be uploaded to a pendrive.
2. Unplug the PX703 from the power source or click the *Restart device* tile in the *Advanced Settings* menu.
3. Insert the memory stick into the USB socket.
4. Connect the Touch Panel to the power supply.
5. The update will start automatically.
6. After update is completed, a message will be display instructing you to disconnect the pendrive.
7. Then the device will reboot automatically.

NOTE! For devices with system version below 1.x.x.x, you must first perform a system update, described in chapter 8.3. Update version 0.x.x.x.

NOTE! The *sysupgrade.upg* file is available for download from the manufacturer's website (<u>http://pxm.pl/</u>).

8.3 Update version 0.x.x.x

If an old system version (0.x.x.x) is installed on the panel, the user can perform the system update procedure to version 1.x.x.x.

NOTE! After switching to system version 1.x.x.x all data from the panel will be deleted.

In the new system the user will gain:

- updating the panel from the PxDesigner application (8.1. Update from PxDesigner application),
- protection of the configuration in case of subsequent updates (will not be deleted),
- ability to create a completely personalized configuration using the PxDesigner application.

NOTE! Once you have upgraded to a 1.x.x.x system, you will not be able to revert to a 0.x.x.x system.

To update the system from version 0.x.x.x to 1.x.x.x, prepare a flash drive formatted in NTFS or FAT32 and <u>follow these steps:</u>

1. The file *firmware_0.1.113.bin* should be uploaded to a pendrive and renamed to *firmware.bin*.
2. Unplug the PX703 from the power supply.
3. Insert the memory into the USB port.
4. Connect the Touch Panel to the power supply.
5. The update will start automatically.
6. Once the update is complete, a message will appear asking you to disconnect the flash drive.
7. The device will then reset itself.
8. The *firmware_1.0.17.bin* file should be uploaded to the pendrive, renamed to *firmware.bin* and repeat steps 2 to 7.
9. After updating the system to version 1.0.17, you should upload the latest version of the system downloaded from the manufacturer's website, upload it to a pendrive, changing the name to *sysupgrade.upg*, and then perform steps 2 to 7 (or update from the PxDesigner 8.1. Update from PxDesigner application).

NOTE! The file *firmware_0.1.113.bin* and *firmware_1.0.17.bin* can be downloaded from the manufacturer's website (http://pxm.pl/).

9   Montage

After mounting the box in the wall, you can proceed to install the screen.

First, connect the cabling, and then apply
the PX703 to the box with its upper part, so
that the tooth protruding from the screen
enters the hole in the metal box.
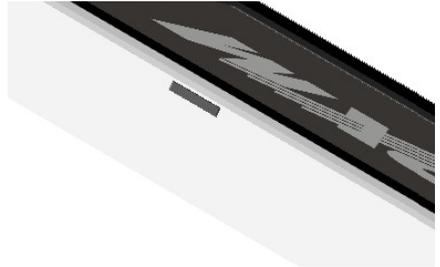
Then, paying attention to the fact that the tooth is in the hole, press the bottom of the screen towards the metal housing until you hear a characteristic click.

The screen mounded in this way is ready for use.
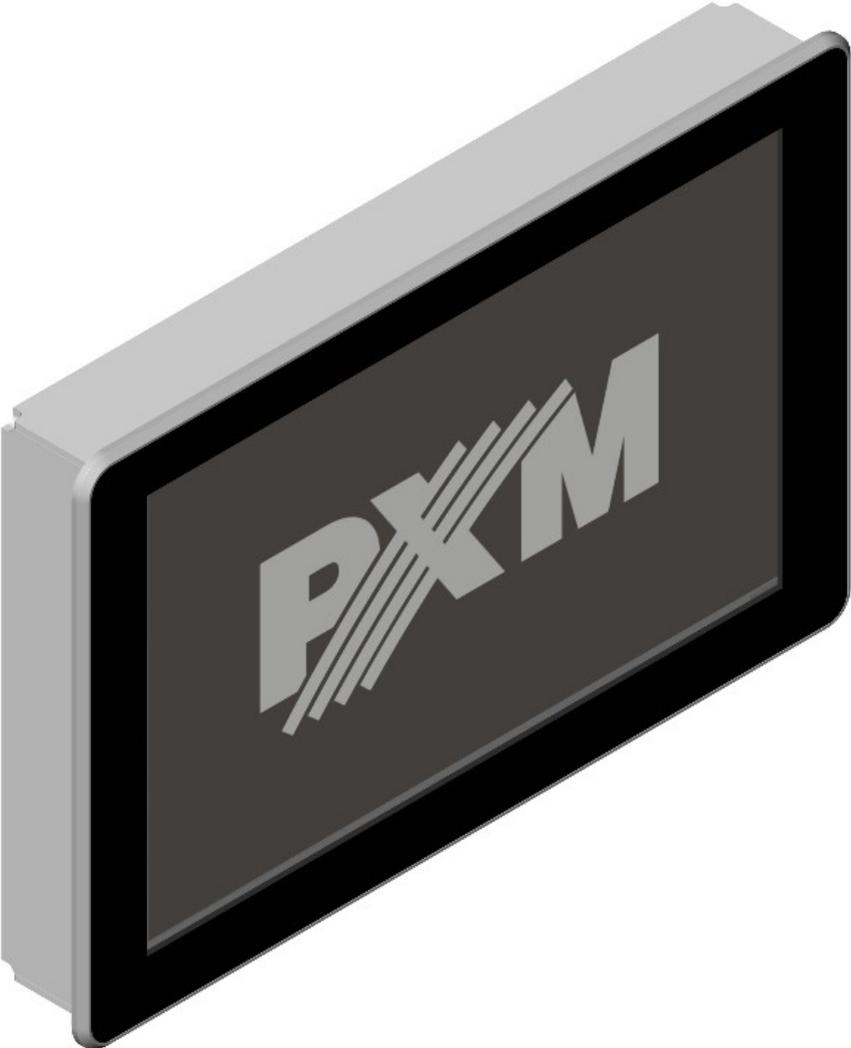
In order to dismantle the screen, insert the included angle into the hole under the screen and press it firmly.

When the metal angle is inserted under the screen and pressed down, swing the bottom of the screen down and pull it towards you.

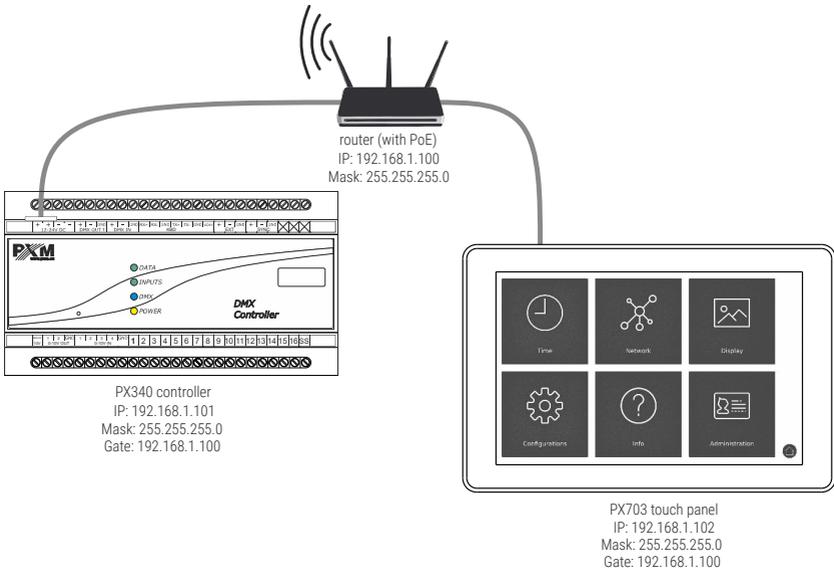# 10 Connection scheme

a) connecting the device to external power supply and to a router with DHCP server enabled

12 - 24V DC
power supply

router with DHCP
server enabled (without PoE)

PX340 controller
with DHCP server enabled

PX703 touch panel with
DHCP enabled
(power from an external power supply)
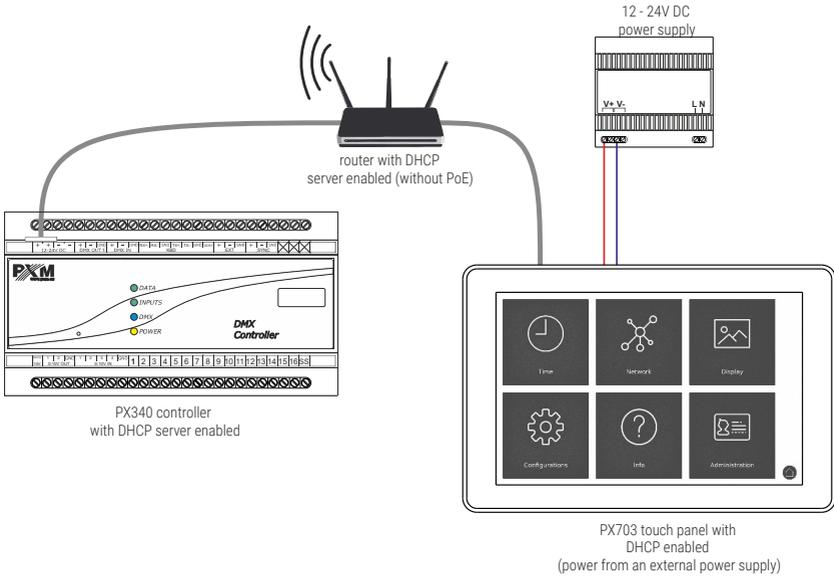
b) connecting the device to a router with the DHCP server disabled (static IP addresses) using PoE power supply in IEEE 802.3af standard

router (with PoE)
IP: 192.168.1.100
Mask: 255.255.255.0

PX340 controller
IP: 192.168.1.101
Mask: 255.255.255.0
Gate: 192.168.1.100

PX703 touch panel
IP: 192.168.1.102
Mask: 255.255.255.0
Gate: 192.168.1.100

11 Dimensions
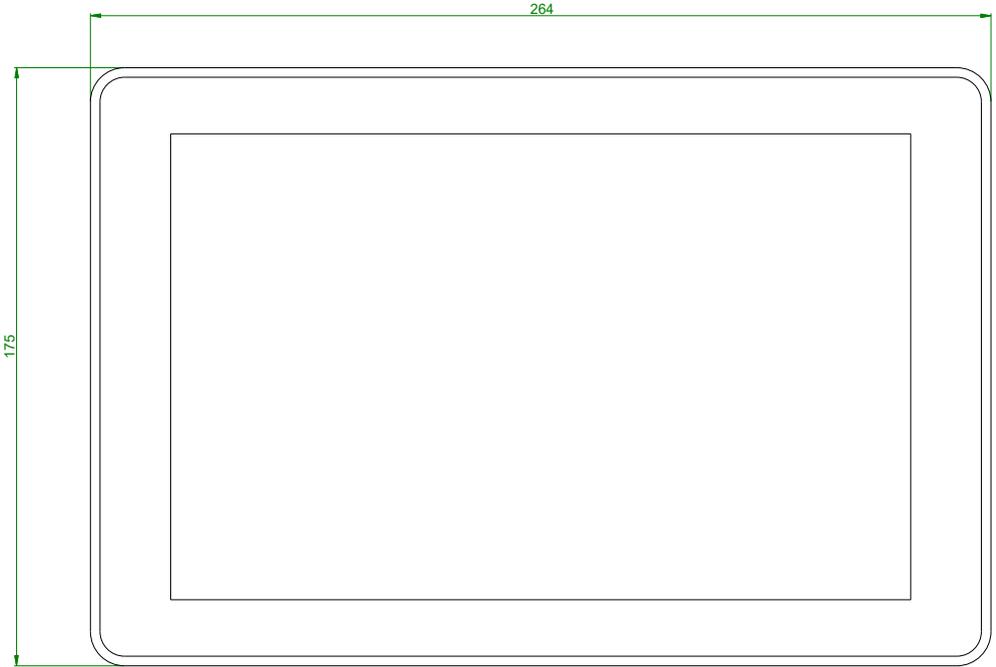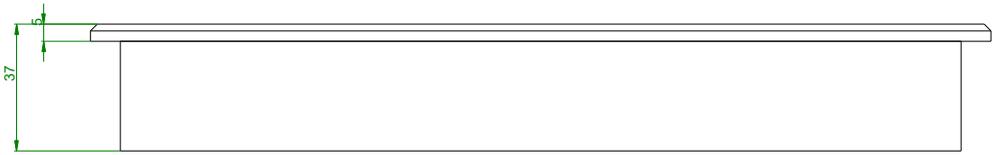
12 Technical data

type	PX703
display	TFT IPS 10.1" 16:9 capacitive (up to 10 touch points)
screen resolution	1280 x 800px
power supply	12 – 24VDC or PoE (Power over Ethernet IEEE 802.3af)*
housing	aluminum / plastic
connectors	1 x USB 1 x Ethernet (PoE)
buttons	1 x recovery button
DHCP protocol support	yes
max. current consumption	11W
weight	1.1kg
dimensions	length: 264mm width: 175mm depth: 37mm

* - it is recommended to use only one type of power supply at a time (12 – 24V DC or PoE)

DECLARATION OF CONFORMITY

PXM Marek Żupnik spółka komandytowa
Podłęże 654, 32-003 Podłęże

we declare that our product:

Product name: Touch Panel 10"

Product code: PX703

meets the requirements of the following standards, as well as harmonised standards:

PN-EN IEC 63000:2019-01	EN IEC 63000:2018
PN-EN 61000-4-2:2011	EN 61000-4-2:2009
PN-EN IEC 61000-6-1:2019-03	EN IEC 61000-6-1:2019
PN-EN IEC 61000-6-3:2021-08	EN IEC 61000-6-3:2021

and meets the essential requirements of the following directives:

2011/65/UE **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment
Text with EEA relevance.

2014/30/UE **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast)
Text with EEA relevance.

PXM
Marek Żupnik spółka komandytowa
32-003 Podłęże, Podłęże 654
NIP 677-002-54-53

mgr inż. Marek Żupnik.