Product manual | 18.03.2025

ABB-free@home®

M2249-2x

ABB OneTouch 7

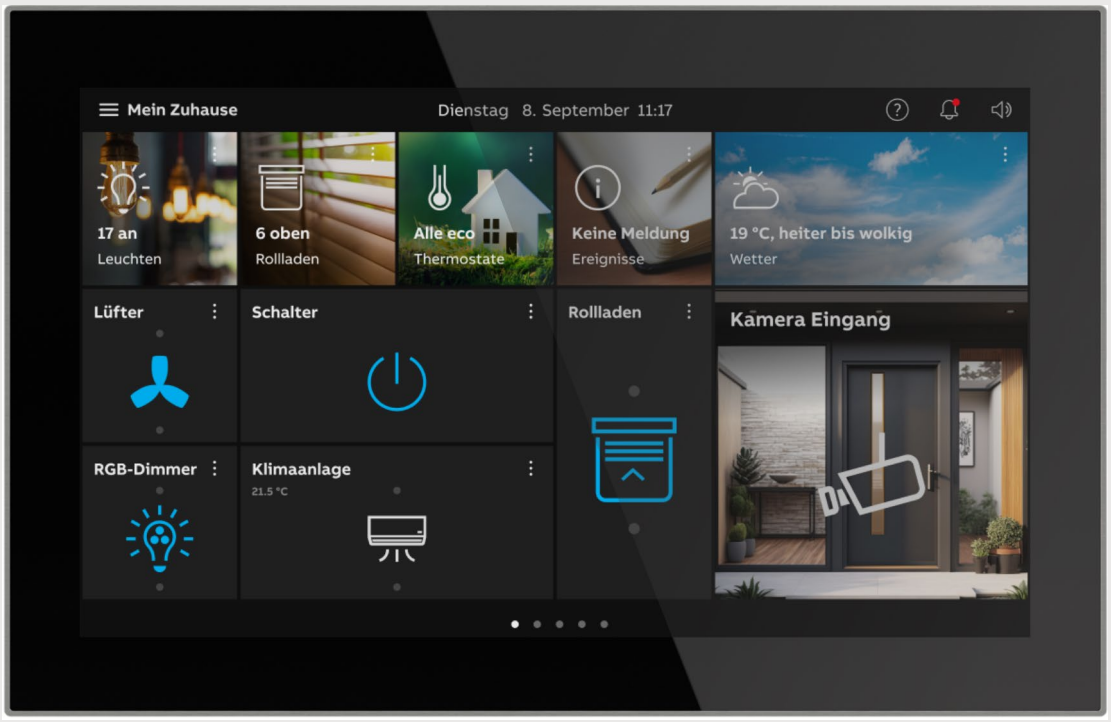


Table of contents

1. Notes on the instruction manual

Please read through this manual carefully and observe the information it contains. This will assist you in preventing injuries and damage to property and ensure both reliable operation and a long service life for the device.

Please keep this manual in a safe place.

If you pass the device on, also include this manual along with it.

ABB accepts no liability for any failure to observe the instructions in this manual.

If you require additional information or have questions about the device, please contact ABB or visit our Internet site at:

https://new.abb.com/en

2. Safety

The device has been constructed according to the latest valid regulations governing technology and is operationally reliable. It has been tested and left the factory in a technically safe and reliable state.

However, residual hazards remain. Read and adhere to the safety instructions to prevent hazards of this kind.

ABB accepts no liability for any failure to observe the safety instructions.

2.1. Information and symbols used

The following Instructions point to particular hazards involved in the use of the device or provide practical instructions:

Danger

Risk of death / serious damage to health

– The respective warning symbol in connection with the signal word "Danger" indicates an imminently threatening danger which leads to death or serious (irreversible) injuries.

Warning

Serious damage to health

– The respective warning symbol in connection with the signal word "Warning" indicates a threatening danger which can lead to death or serious (irreversible) injuries.

Caution

Damage to health

– The respective warning symbol in connection with the signal word "Caution" indicates a danger which can lead to minor (reversible) injuries.

Attention

Damage to property

– This symbol in connection with the signal word "Attention" indicates a situation which could cause damage to the product itself or to objects in its surroundings.

NOTE

This symbol in connection with the word "Note" indicates useful tips and recommendations for the efficient handling of the product.

This symbol alerts to electric voltage.

2.2. Intended use

The ABB OneTouch 7 is a touch panel which can be freely programmed.

It is suitable for the following applications:

– Setting up a ABB-free@home® wireless system (by using the internal System Access Point)

– Integration into an existing ABB-free@home® system (connection to an external System Access Point) via WiFi or LAN.

The touch panel can be used as terminal device (indoor video station) for communication with the ABB-Welcome® outdoor stations. The use as door communication system is only possible only with components of the ABB-Welcome® system.

The device is intended for the following:

- Operation according to the listed technical data
- Installation in dry interior rooms
- Use with the connecting options available on the device

The intended use also includes adherence to all specifications in this manual.

2.3. Improper use

Each use not listed in Chapter 2.2 “Intended use“ on page 7 is deemed improper use and can lead to personal injury and damage to property.

ABB is not liable for damages caused by use deemed contrary to the intended use of the device. The associated risk is borne exclusively by the user/operator.

The device is not intended for the following:

- Unauthorized structural changes
- Repairs
- Outdoor use
- The use in bathroom areas
- Insert with an additional bus coupler

2.4. Target group / Qualifications of personnel

2.4.1. Operation

No special qualifications are needed to operate the device.

2.4.2. Installation, commissioning and maintenance

Installation, commissioning and maintenance of the device must only be carried out by trained and properly qualified electrical installers.

The electrical installer must have read and understood the manual and follow the instructions provided.

The electrical installer must adhere to the valid national regulations in his/her country governing the installation, functional test, repair and maintenance of electrical products.

The electrical installer must be familiar with and correctly apply the "five safety rules" (DIN VDE 0105, EN 50110):

1. Disconnect
2. Secure against being re-connected
3. Ensure there is no voltage
4. Connect to earth and short-circuit
5. Cover or barricade adjacent live parts

2.5. Cyber security

The industry faces intensifying cyber security risks. In order to increase stability, safety and robustness of its solutions, ABB has formally established cyber security robustness testing as part of the product development process.

The following measures are prerequisite for the safe operation of your system. ABB accepts no liability for non-observance.

Access control and limitation

The careful isolation of the system against unauthorized access is the basis for every protective concept. Only authorized persons (fitter, caretaker, tenant) are allowed physical access to the IP network or bus system and its components. This also includes the device described in this instruction manual.

The best possible protection of the IP or network media (WLAN) and the transfer nodes must be guaranteed already during planning and installation. Sub-distributions with fieldbus devices must be lockable or be in rooms to which only authorized persons have access.

Bus cabling

- The ends of the bus cables must not be visible, i.e. they must not project out of walls or channels, either inside or outside of the building.
- Bus cables in outdoor areas or in areas with limited protection represent an increased safety risk. The physical access should be made exceptionally difficult.

IP Network

The local network represents a sensitive component for safe communication. That is why unauthorized access to the local network should be prevented. The normal safety mechanisms for IP networks are to be used, e.g.:

- Safe encryption of wireless networks
- Use of complex passwords and protection of these against unauthorized persons
- Physical access to network interfaces (Ethernet interfaces) and network components (router, switches) should only be possible in protected areas.
- Separation of cable-bound and wireless networks (networks should not share the same network).
- MAC filter (table with certified device addresses)

Connection to the Internet or the local IP network

To prevent improper use, no router ports from the Internet into the building network or home network are to be opened to the ABB OneTouch 7. A VPN tunnel is suitable for safe remote control.

The stable and reliable function of the device also depends on the reliability of the local IP network to which the server is connected. For this reason additional network components are to be used to repel the DoS attacks (denial of service) from the Internet. Such attacks can overload the local IP network or the individual components and make them inaccessible.

The encryption of your networks with WPA2/CCMP or WPA3 is recommended. Deactivate the WIFI function when your device is not used.

Communication protocols

The communication protocol distinguishes between the local network and the Internet network. When using userdefined or unsafe protocols, safety measures should be taken against the connected safety risks.

Safety of user accounts

Set a strong access password during initial commissioning. Use passwords that you have received from the administrator only for the first login.

Regularly change your access password. Select a long and complex password without a recognisable pattern.

Keep passwords secret and use a password manager with a two-factor login as memory aid.

Data protection

A detailed overview for data protection is available in the following weblink:

- https://new.abb.com/privacy-policy/en

Additional information on data protection is available in our data protection portal. There you can clarify and report additional data protection matters. You gain access to our data protection portal via the following link:

- https://new.abb.com/privacy

Updates

The device supports various update options. A detailed overview is available in Chapter 10.6.11 “System settings - Software update“ on page 99.

Take note of announcements for new upgrades. Perform an upgrade as soon as possible when safety upgrades are affected.

Backup / Restoration

The user can backup / restore device settings. To perform the backup the user must enter a password. This password is used as safety key to encrypt the backup information. If the user wants to restore the device settings via a backup file, he must first enter the defined password so that the backup information can be decrypted.

Solutions for protection against malware

The product is not susceptible to malware, because a user-defined code cannot be executed on the system. The only option of updating the software is the update of the firmware. Only a firmware signed by ABB is accepted.

Transfer of the installation / decommissioning of the device

If you are transferring the installation or decommissioning the device, remove the device from all access options and ensure that your user data are deleted by resetting to the factory settings.

2.5.1. Ports and services for supporting the main functionality

To support the main functionalities of the device, communication via specific ports and services must be possible in your local network. Contact your network administrator to set up, if necessary, the appropriate port sharing.

Attention!

Enabling the port increases the risk of cyber attacks.

– Assign only necessary enabling.
– Regularly check if all port sharing is still required and adjust them if necessary.

In the following table the TCP and UDP services listed on the device are summarized:

Port	Service	Purpose
5222	TCP	Service for XMPP client.
5269	TCP	Xmpp server
5060/TCP	SIP	Port 5060/TCP is used by SIP Server Flexisip/0.5.0 (sofia-sip-nta/2.0). SIP (Session Initiation Protocol) is a communication protocol for the introduction of communication sessions between systems. The protocol is used mostly in IP telephony networks / systems to set up, control, and finish sessions between two or more systems.
5060/UDP	SIP	Port 5060/UPD is used by SIP Server Flexisip/0.5.0 (sofia-sip-nta/2.0).
5061/TCP	SIP-TLS	Port 5061/TCP is used by SIP Server Flexisip/0.5.0 (sofia-sip-nta/2.0). The use of SSL encryption makes the encryption of communication sessions possible.
50602/UDP	SIP	Is used by SIP server STUn.
2222/TCP	Private	Is used for b2bsip.
2224/TCP	Private	Is used for b2bsip.
8277/TCP	Private	Is used for internal process communication of safety storage components. This port is limited only for local access by iptables.
Random Port/UDP	Private	The random UDP port is used for the communication of b2bsip.

Network performance

Type	Value
Ethernet	100 Mbps (148,800 packets/s)
ARP	20 Mbps (29,760 packets/s)
ICMP	100 Mbps (148,800 packets/s)
IP	60 Mbps (89,280 packets/s)

2.6. Safety instructions

Danger - Electric voltage!

Electric voltage! Risk of death and fire due to electric voltage of 100 … 240 V.

Dangerous currents flow through the body when coming into direct or indirect contact with live components. This can result in electric shock, burns or even death.

- Work on the 100 … 240 V supply system may only be performed by authorised and qualified electricians.
- Disconnect the mains power supply before installation / disassembly.
- Never use the device with damaged connecting cables.
- Do not open covers firmly bolted to the housing of the device.
- Use the device only in a technically faultless state.
- Do not make changes to or perform repairs on the device, on its components or its accessories.
- Keep the device away from water and wet surroundings.

Caution! - Risk of damaging the device due to external factors!

Moisture and contamination can damage the device.

- Protect the device against humidity, dirt and damage during transport, storage and operation.

3. Information on protection of the environment

3.1. Environment

Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

– The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2012/19/EU WEEE and 2011/65/EU RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006).

4. Product Overview

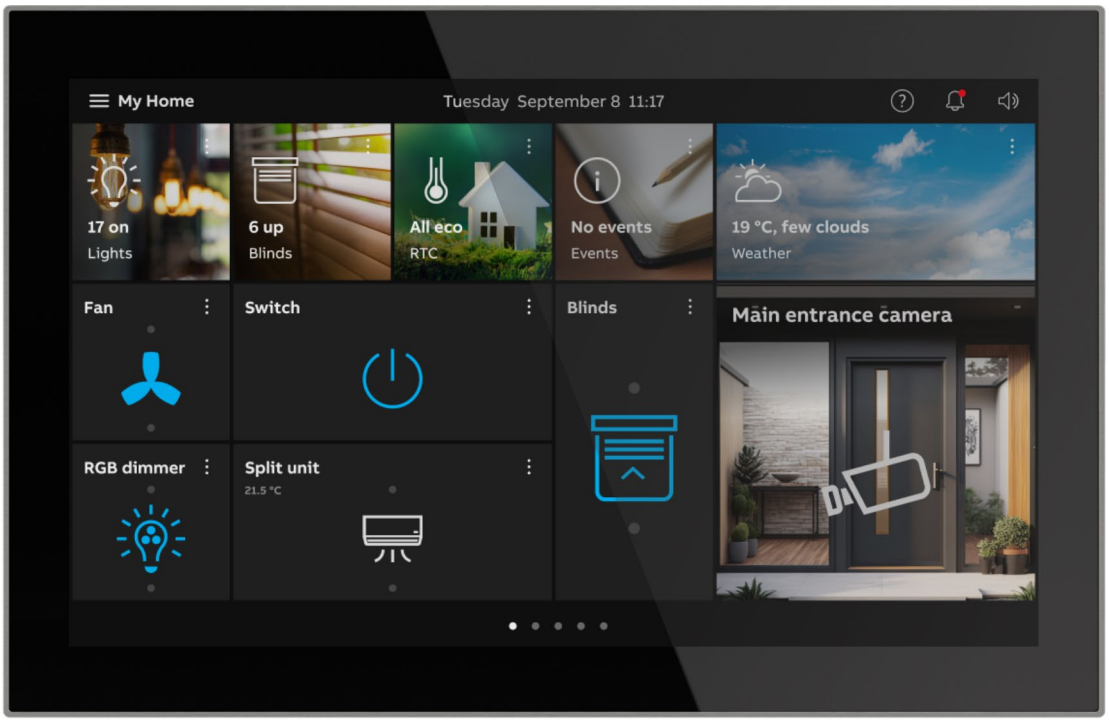


Fig. 1: Product overview

The ABB OneTouch 7 serves as indoor video station for the ABB-Welcome® door communication system and the display and operation of free@home functions. The ABB OneTouch 7 can also be used as independent System Access Point for setting up a ABB-free@home® wireless system. It has a capacitive touchdisplay with a resolution of 1024 x 600 (IPS display).

The touch panel is linked with the wireless free@home devices and the ABB-Welcome® bus. The audio/video signals are transmitted and the power for the device is supplied via the ABB-Welcome® 2-wire system controller or via a separate 24V/DC power adaptor (CP-D 24/2.5). This means that at least one ABB-Welcome® system controller or one additional power supply is to be provided to ensure the power supply for the touch panel.

If the touch panel is connected with an external ABB-free@home® System Access Point via Wifi or LAN (with the LAN adapter 5249C), the configuration of the external System Access Point is taken over (e.g. the number of the control elements). If the touch panel is connected with the ABB-Welcome® bus, the configuration is made via the rotary switch on the rear side of the touch panel (see chapter 6.6.1 “Connection, installation and addressing“ on page 29).

For the integration in a ABB-free@home® system, the commissioning is carried out via the Web-based user interface of the System Access Point. For the configuration, the range of functions of the ABB-free@home® Next App is available. The device can also be used for the display of fault and alarm messages.

4.1. Scope of supply

The panel is included in the scope of supply.

The connection with the ABB-Welcome® bus is established by means of the enclosed bus connection terminal. The connection with the ABB-free@home® System Access Point is made via WLAN.

The special mounting boxes are not included in the scope of supply:

– Surface-mounted box for Busch-OneTouch 7" and IP Touch Lite 7" (42491S-x)

– Flush-mounted box for Busch-OneTouch 7" and IP Touch Lite 7" (42491F)

The necessary power supply depends on the application (with or without integration into ABB-Welcome® 2-wire) and is not included in the scope of delivery.

Depending on the application, the following devices can be used for the power supply:

– M230x-xx System controller

– 83300-500 System controller

– 24 V power supply unit (z.B. CP-D 24/2.5)

4.2. Additional necessary components

- Power adapter for the 20 - 32 V DC (SELV) auxiliary power supply (power supply of device) or the central control system ABB-Welcome® (no additional power supply is necessary in this case).
- Associated flush-mounted installation box or surface-mounted installation box (if the device is not mounted on the associated flush-mounted installation box).

4.3. Overview of types

Article no.	Product name	Colour	Display diagonal
M2249-2B	ABB OneTouch 7, black	Black	17.78 cm (7“)
M2249-2W	ABB OneTouch 7, white	White	17.78 cm (7“)

Table 1: Overview of types

4.4. Functional overview

The following table provides an overview of the possible functions and applications of the device:

Functions	Applications
▪ Switching ▪ Dimming ▪ Venetian blind control ▪ RGBW operation ▪ Fan control (step switch) ▪ Split Unit operation ▪ Scene control ▪ Room temperature controller (RTC) ▪ Audio control ▪ PS charger	▪ Door communication ▪ Fault and alarm messages ▪ Internal RTC ▪ Ledvance lamps and socket outlets ▪ Air quality measurement

Table 2: Overview of functions

4.5. Device overview

Device overview (front side)

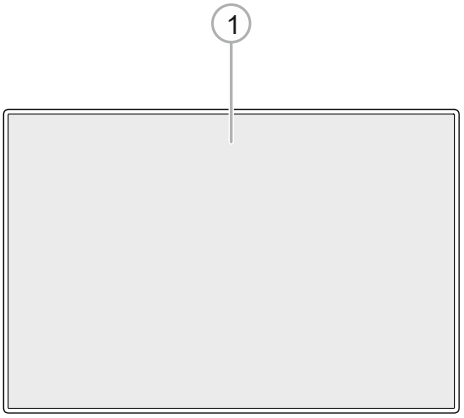


Fig. 2: Device overview ABB OneTouch 7 front side

Pos.	Description
[1]	Touch screen

Device overview (rear side)

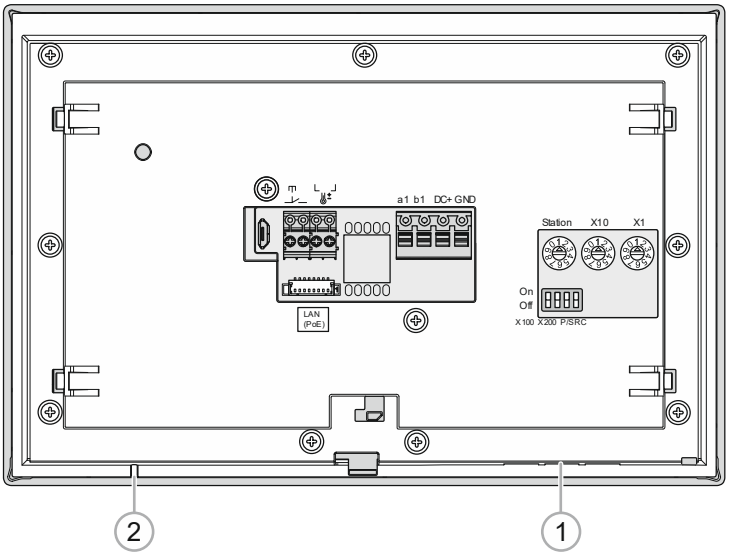


Fig. 3: Device overview ABB OneTouch 7 rear side

Pos.	Description
[1]	**Loudspeaker**
[2]	**Microphone**

5. Technical data

Designation	Value
Rated voltage	24 VDC
Mains supply	20 V - 30 V DC
Standby operation	24 V DC, 300 mA
Nominal voltage	24 V DC, 400 mA
ABB-Welcome® bus voltage	21 V - 32 V DC
Energy consumption (power input) ▪ maximum ▪ standby	 < 12 W < 1.5 W
Power consumption ▪ Incoming call ▪ Setup ▪ Doorbell	 420 mA 400 mA 130 mA
Single-wire clamps	2 x 1.0 mm^2 - 2 x 1.4 mm^2
Fine-wire clamps	2 x 0.5 mm^2 - 2 x 1.8 mm^2
Display resolution	1024 x 600 pixel (HD)
Aspect ratio	16:9
Colour resolution	16 million colours
Display size	7" (17.78 cm)
Viewing angle ▪ horizontal ▪ vertical	 75° 75°
Background illumination	LED
Maximum brightness	±240 cd/m^2
Service life cycle	±20 000 h (at maximum brightness of > 125cd/m^2)
Touch technology – Calibration	Capacitive Automatic
PoE standard	IEEE 802.3 af
Wireless (WL)	
Transmission protocol	free@home wireless
Transmission frequency	2400 ... 2483 MHz
Maximum transmission power WL (wireless)	< 15 dBm

Designation	Value
WLAN	
WLAN standard	IEEE 802.11 a/b/g/n/ac 802.11 b/g/n 2412 ... 2462 MHz (for USA) 2412 ... 2472 MHz (for Europe)
WLAN frequency range	802.11a/n/ac: 5150…5250 MHz 5250…5350 MHz 5470…5725 MHz 5725…5850 MHz (for United States)
Maximum transmission power, WLAN	< 20 dBm
Operating temperature	0°C - +45°C
Storage temperature	-25°C - +70°C
Commissioning Parameter setting: Programming (free@home)	Via SAP-S-1-84, SAP-S-2,SAP/S.3 from Firmware V3.1.0

Table 3: Technical data

5.1. Dimensional drawings

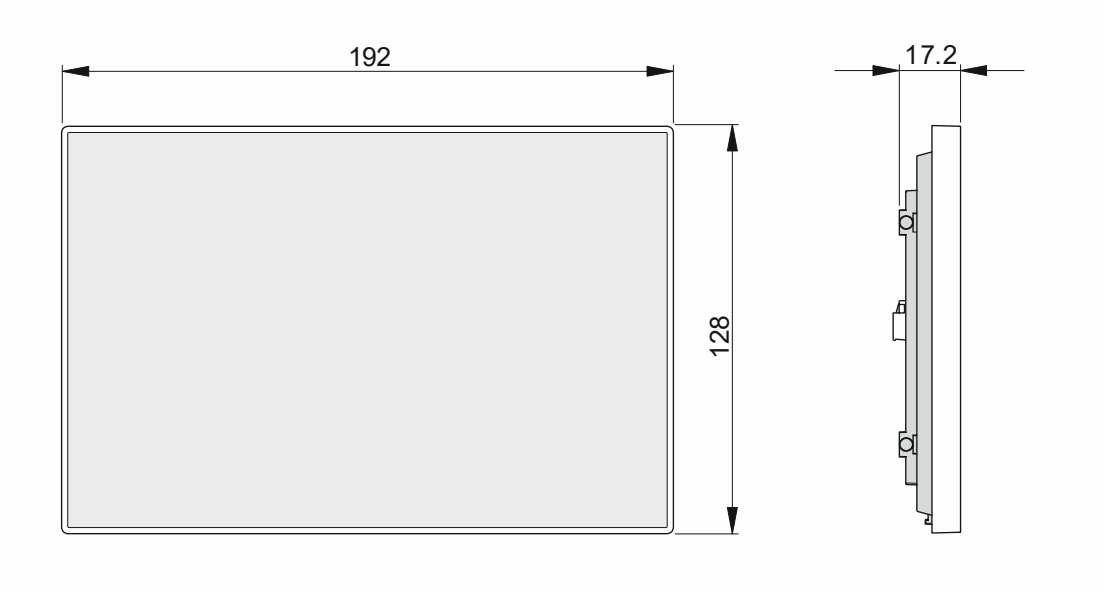


Fig. 4: Dimensions

All dimensions are in millimetres.

The installation height of the device is 14 mm.

The installation depth is 10 mm.

Notice

The dimensions of the associated flush-mounted installation boxes (not included in the scope of supply) are as follows:

- Dimension for flush-mounting (H x W x D): 108 x 178 x 52 mm
- Dimension for hollow wall mounting (H x W x D): 123 x 188 x 14 mm

The dimensions of the surface-mounted installation box (not included in the scope of supply) are as follows:

- (H x W x D): 123 x 188 x 14 mm

5.2. Circuit diagrams

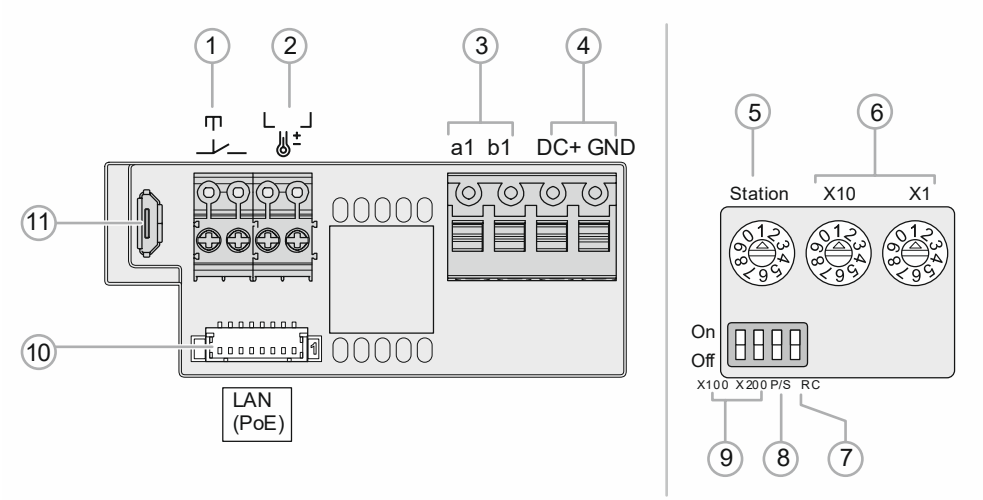


Fig. 5: Electrical connection
(rear side of device)

Pos.	Function
[1]	**Doorbell connector**
[2]	**Temperature sensor connection** (E.g. PT100)
[3]	**ABB-Welcome® bus connection**
[4]	**Connection for local power supply**
[5]	**Outdoor station selector switch** Setting the address of the default outdoor station
[6]	**Indoor station selector switch** Selector switch X10 sets tens digits, selector switch X1 sets ones digits, DIP switches X100 and X200 set hundreds digits.
[7]	**Switch terminal resistor** In video installations or mixed audio and video installations, the switch must be set to "RC on" on the last device of the line (ON=RC on).
[8]	**Primary/subsidiary function switch** Only one indoor station in each apartment can be specified as "Primary" (ON=Primary).
[9]	**DIP switch (analogue to [6])**
[10]	**Is used as LAN connection when an adapter cable is connected.**
[11]	**Micro USB connection of emergency/engineering access**

Table 4: Function of connection

6. Connection, installation / mounting

6.1. Planning instructions

Notice

Planning and application instructions for the system are available in the system manuals for ABB-Welcome® and ABB-free@home®. These can be downloaded via https://new.abb.com/en or https://abb.com/freeathome.

6.2. Safety instructions

Danger - Electric voltage!

Risk of death due to electrical voltage of 100 … 240 V during short-circuit in the low-voltage conduit.

– Low-voltage and 100 … 240 V conduits must not be installed together in a flush-mounted box!

6.3. Requirements for the electrician

Danger - Electric voltage!

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect
  2. Secure against being re-connected
  3. Ensure there is no voltage
  4. Connect to earth and short-circuit
  5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the type of supply network (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

6.4. Preparatory steps

- Terminate all branches of the wiring system with a connected bus device (e.g., indoor station, outdoor station, system device).
- Do not install the central control system directly next to bell transformers and of other switched voltage supplies (avoidance of interference).
- Do not install the cores of the system bus together with 100 - 240 V cores.
- Do not use joint wires for the connecting cables of door openers and wires of the system bus.
- Avoid bridges between different wire types.
- Use only two wires for the system bus in a four-core or multi-core cable.
- During looping, never install the incoming and outgoing bus within a wire.
- Never install the internal and external bus within a conduit.

6.5. Mounting / dismantling

6.5.1. Installation sites

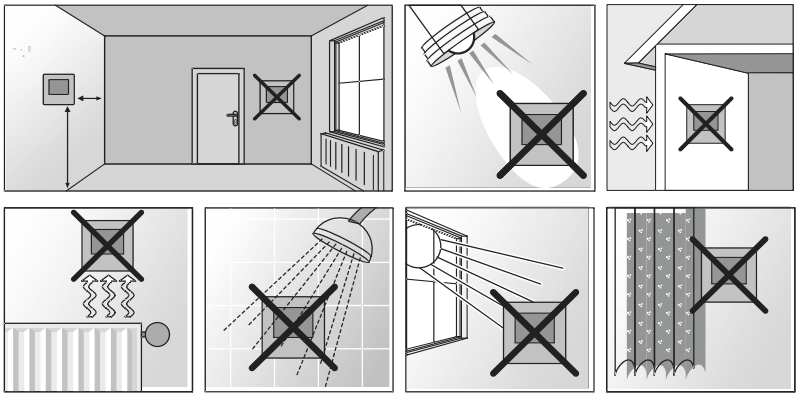


Fig. 6: Installation sites

- When selecting the installation location, ensure that there is a distance to sources of heat or cold.
- Heat or cold sources influence the function of the internal temperature sensor.
- The device should be mounted on a wall opposite the heat source. The distance to side walls or door frames should be at least 50 cm. The distance to the floor should be about 150 cm.
- Do not mount the device on an exterior wall. Low outside temperatures have an effect on the temperature regulation.
- The device must not come into direct contact with liquids.
- Do not mount the device in direct sunlight, near radiators, windows, light sources or behind curtains.

Mounting height

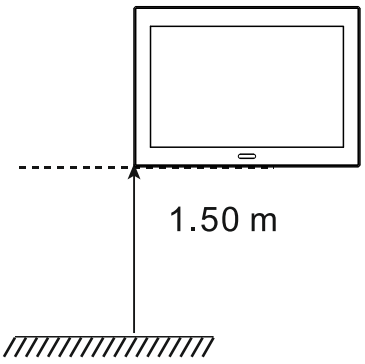


Fig. 7: Mounting height

- The mounting height is 1.50 m.

6.5.2. Mounting

The device is suited for flush-mounted and surface-mounted installation.

The following mounting versions are possible:

- in Flush-mounted box for Busch-OneTouch 7" and IP Touch Lite 7" (42491F)
  - Mounting in solid wall, see chapter 6.5.3 “Mounting in flush-mounted installation box in solid wall“ on page 26

    For this, part of the box must first be inserted flush-mounted.
  - Mounting in hollow wall, see chapter 6.5.4 “Mounting in flush-mounted installation box in hollow wall“ on page 27
- in Surface-mounted box for Busch-OneTouch 7" and IP Touch Lite 7" (42491S-x)
  - Mounting directly on the wall, see chapter 6.5.5 “Mounting with surface-mounted installation box“ on page 28
  - Mounting with Table stand (83506-500), see chapter “Mounting with table stand“ on page 28

Notice

The installation boxes are not part of the scope of supply.

Detailed information about installation is available in the enclosed installation instructions for the installation boxes.

6.5.3. Mounting in flush-mounted installation box in solid wall

Installation on the basis of the instructions on the enclosed plastering template:

Notice

See mounting instructions on the enclosed plaster and drilling template.

First the bottom part of the flush-mounted installation box must be pulled off and installed flush-mounted.

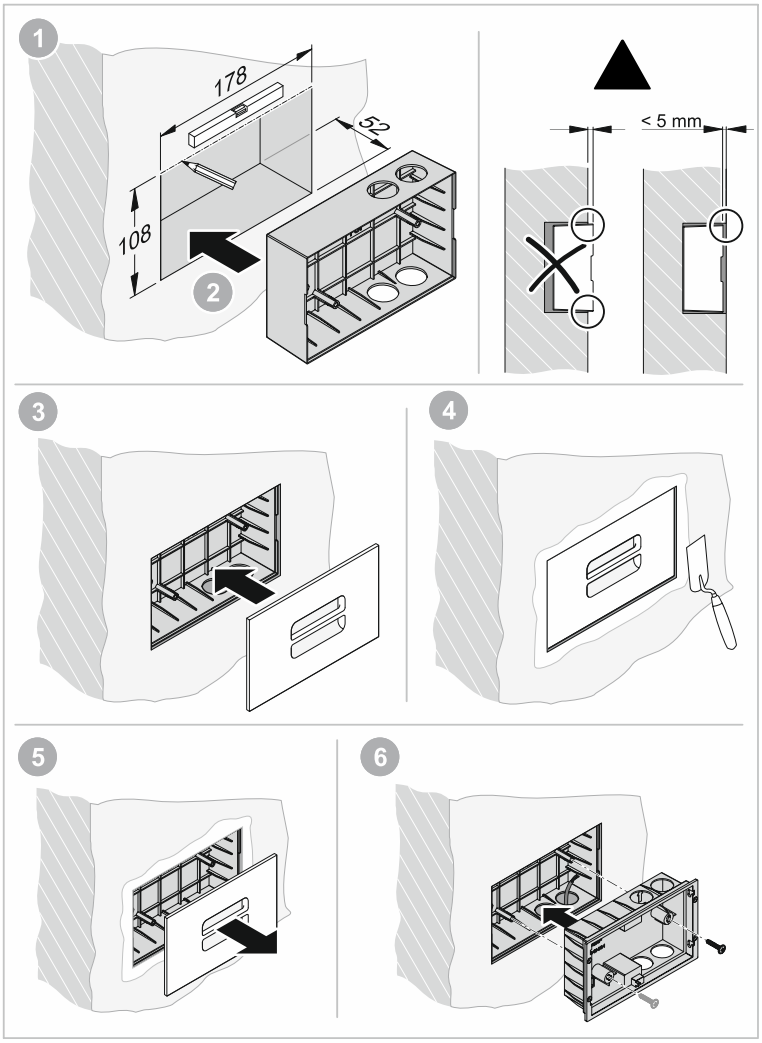


Fig. 8: Mounting in solid wall

Installation on the basis of the instructions on the enclosed drilling template:

Continue with Chapter 6.6 “Electrical connection“ on page 29 and Chapter 6.6.3 “Installation“ on page 31.

6.5.4. Mounting in flush-mounted installation box in hollow wall

Installation on the basis of the instructions on the enclosed drilling template:

Notice
See mounting instructions on the enclosed plaster and drilling template.
The bottom part of the flush-mounted installation box is not required here.

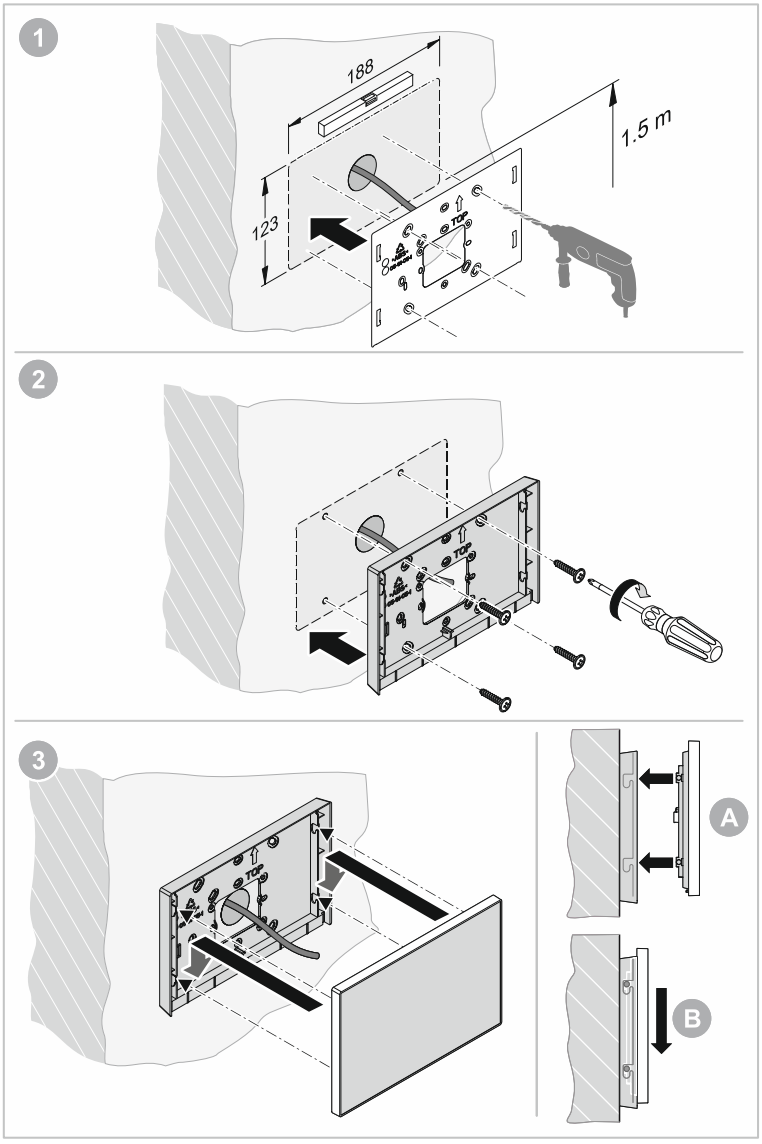


Fig. 9: Mounting in hollow wall

Continue with Chapter 6.6 “Electrical connection“ on page 29 and Chapter 6.6.3 “Installation“ on page 31.

6.5.5. Mounting with surface-mounted installation box

First, the surface-mounted installation box must be installed according to the following specification.

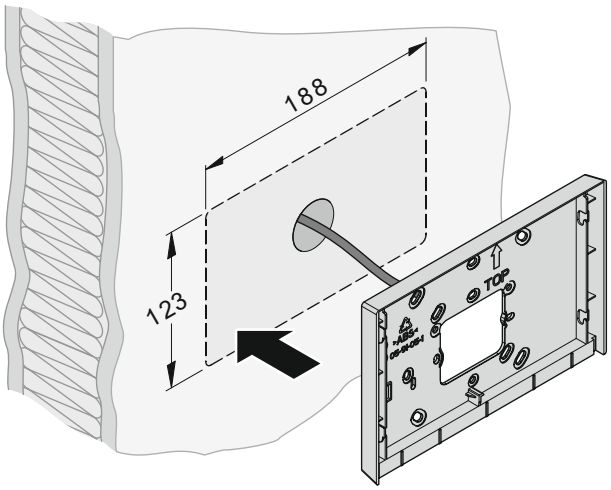


Fig. 10: Installation of surface-mounted installation box

Notice
For additional information see the enclosed mounting instructions for surface-mounted installation box.

Continue with Chapter 6.6 “Electrical connection“ on page 29 and Chapter 6.6.3 “Installation“ on page 31.

Mounting with table stand

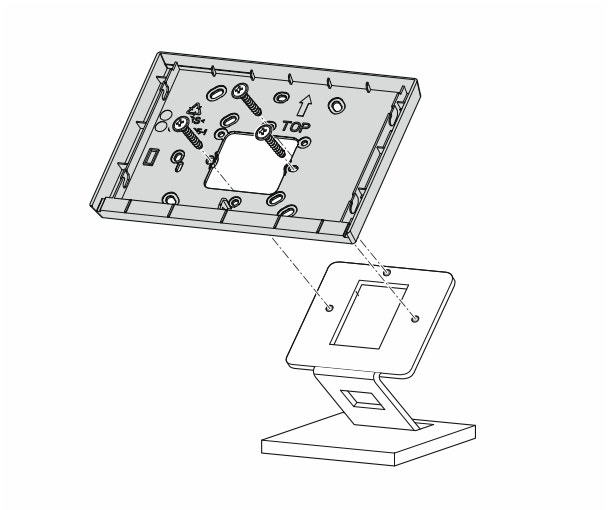


Fig. 11: Mounting with table stand

Continue with Chapter 6.6 “Electrical connection“ on page 29 and Chapter 6.6.3 “Installation“ on page 31.

6.6. Electrical connection

6.6.1. Connection, installation and addressing

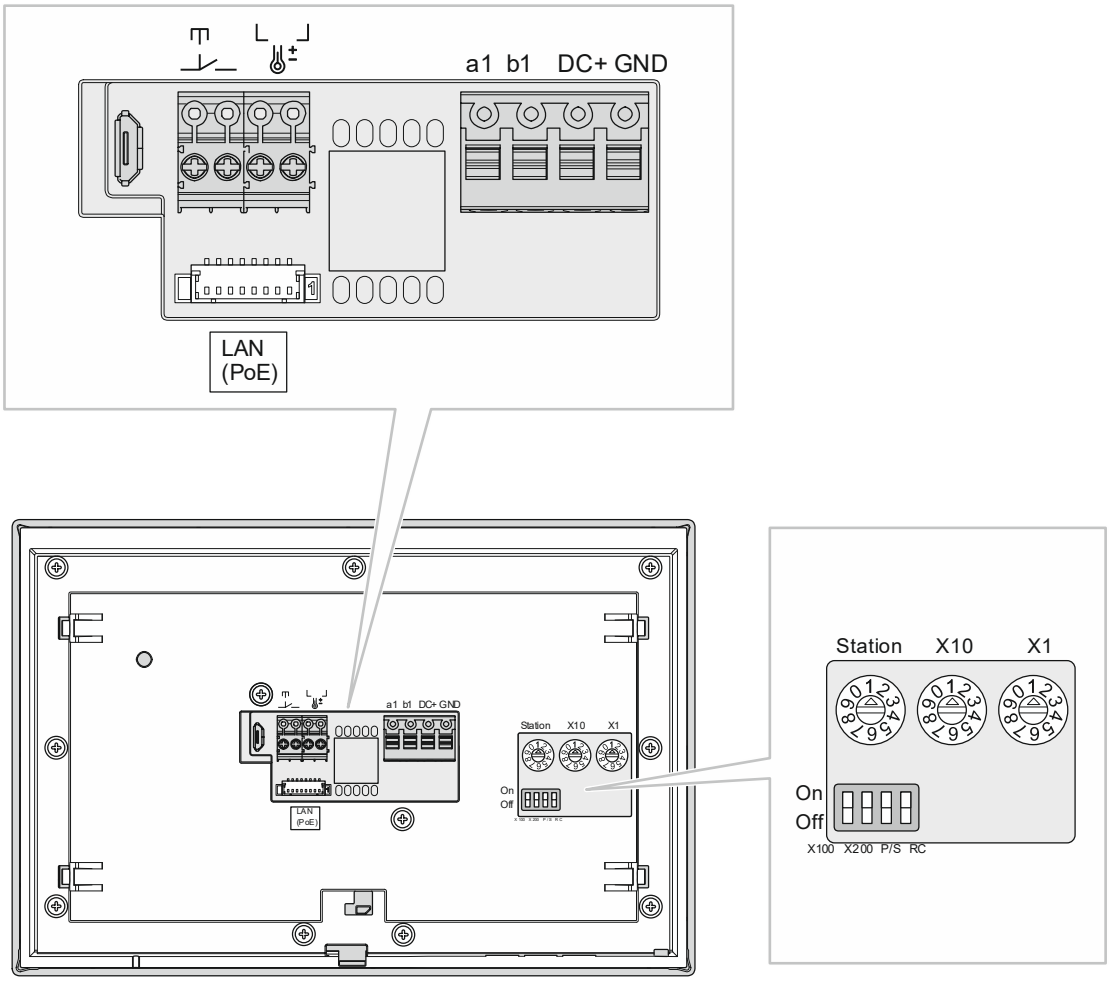


Fig. 12: Overview of connections / switches

The connections, the switches and the terminal resistor are located on the rear of the ABB OneTouch 7.

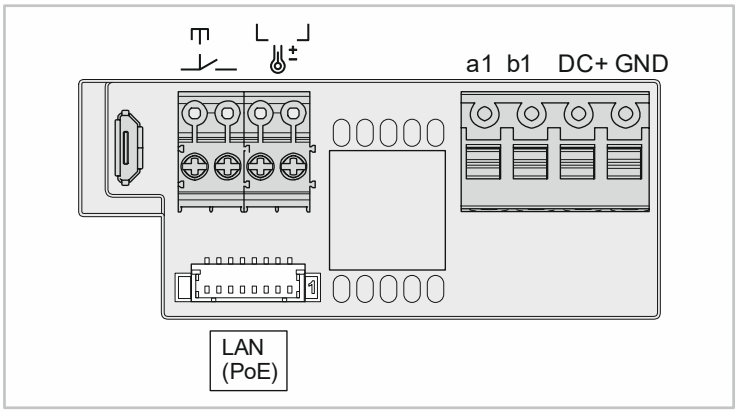


Fig. 13: Overview of connections

1. Connect the device according to the graphics (see chapter 5.2 “Circuit diagrams“ on page 21).

Notice
If the touch panel is connected via WLAN, an additional power supply is to be provided.

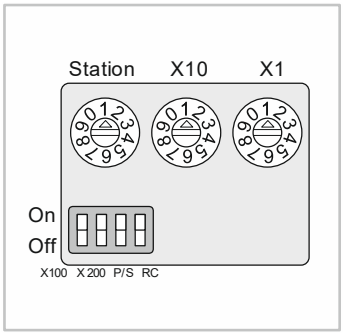


Fig. 14: Overview of switch / terminal resistor

2. Set the address of the preferred outdoor station and the address of the indoor station via the rotary switches on the rear of the housing (see chapter 12 “Addressing“ on page 103).
3. Set the primary / subsidiary function and the terminal resistor via the switches on the rear of the housing (see chapter 10.6.14 “Primary/subsidiary function switch“ on page 101).

6.6.2. External power supply

If the panel is not operated via ABB-Welcome®, an external power supply is required. The device can be operated with the power supply named in the following:

- CP-D 24/2.5 (Power supply for up to five panels possible)

Notice

- For ABB-Welcome® you always require a system controller 83300-500 and under certain circumstances an auxiliary power supply 83310-500.
- You can supply up to five panels with current via a single power supply, but then you require a separate power supply for the outdoor station. Alternatively, each panel can be connected to its own power supply.
- If the touch panel is connected via WLAN, an additional power supply is to be provided.

6.6.3. Installation

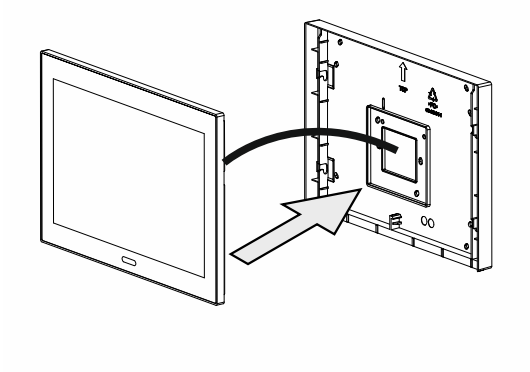


Fig. 15: Attaching the device (example illustration)

1. Attach the device on the installation box.

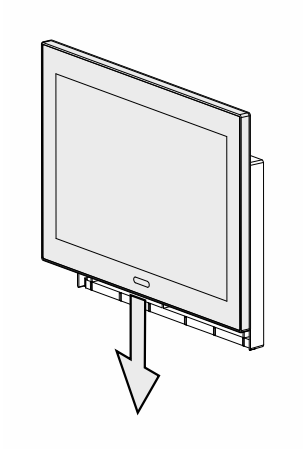


Fig. 16: Latching the device (example illustration)

2. Push the device downward until the bottom clamp latches in.

The device is now fully mounted.

6.7. Dismantling

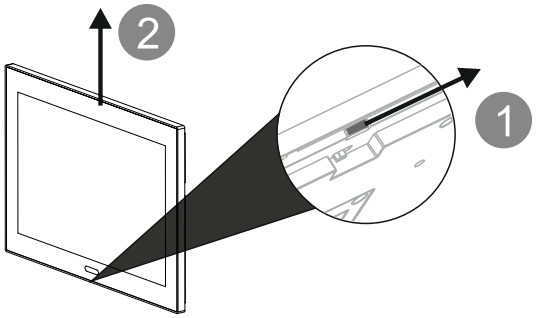


Fig. 17: Loosening the clamp of the device

1. Push the slider on the bottom side of the device to the right.
   – The clamp is loosened.
2. Push the device upwards and then pull it off toward the front.

7. Initial commissioning of the device with the internal System Access Point

During initial commissioning of the device, first the general device settings must be made.

1. Specify the panel language.
2. Agree to the licensing terms.
3. Tap on "Next".
4. Agree to the OSS licensing terms.
5. Tap on "Next".

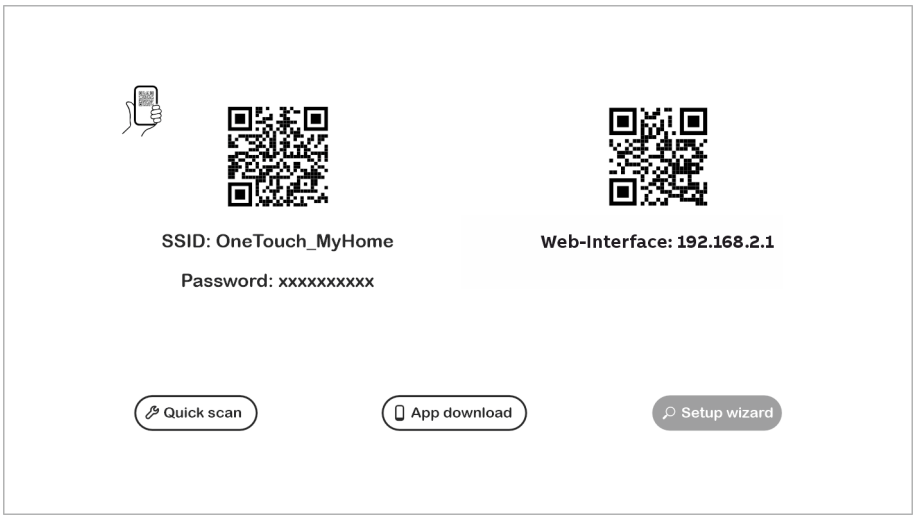


Fig. 18: Initial commissioning

6. If the internal System Access Point of the panel is used, a direct connection with the Access Point mode (internal WLAN) can be established. The System Access Point is commissioned via the web interface of the ABB OneTouch 7 System Access Point.

   The search for wireless devices can be started via the "Quick scan" button.

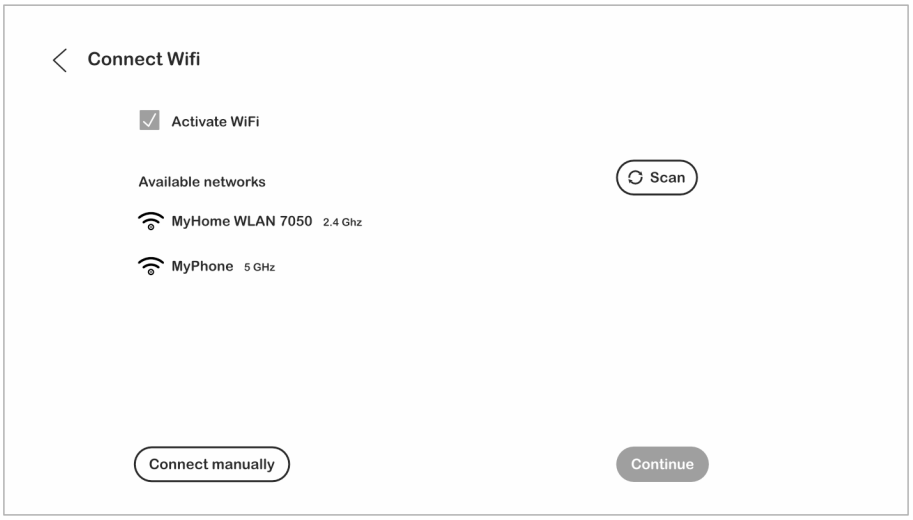


Fig. 19: Selecting home network

7. Set up connection to the home network if desired.
8. Tap on "Next".

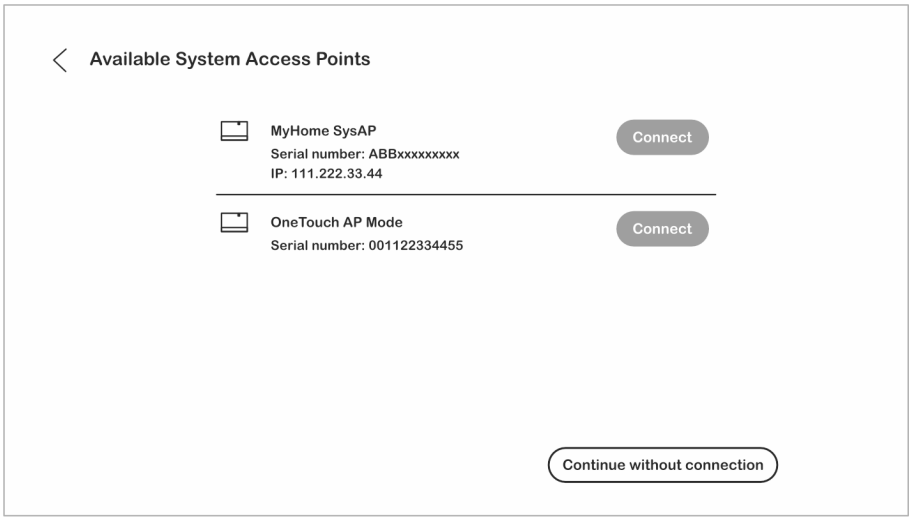


Fig. 20: Selecting System Access Point

9. Now a selection of all System Access Points found in the system appears.
   - Selection of the internal System Access Point
   - Selection of an internal System Access Point

     After a brief time the device ABB OneTouch 7 is added as additional participant to the existing free@home system and the internal System Access Point is deactivated.

     For additional information see chapter 8 “Commissioning with external System Access Point“ on page 35.
   - Selection of "Continue without connection"

     The The internal System access Point of the ABB OneTouch 7 is activated. If wireless devices were already read into the system previously, they will be added to the installation. The commissioning of the internal System Access Point is made via the web interface of the System Access Point.

8. Commissioning with external System Access Point

The steps described in the following refer to initial commissioning with ABB-free@home® or ABB-free@home® + ABB-Welcome® and are made directly in ABB OneTouch 7. Ensure that you have already carried out the steps from Chapter 7 “Initial commissioning of the device with the internal System Access Point“ on page 33 up to sub-point 9.

1. Change to the web-based surface of the external System Access Point.
2. The notification center opens.
   – The panel must be authenticated in the notification center.

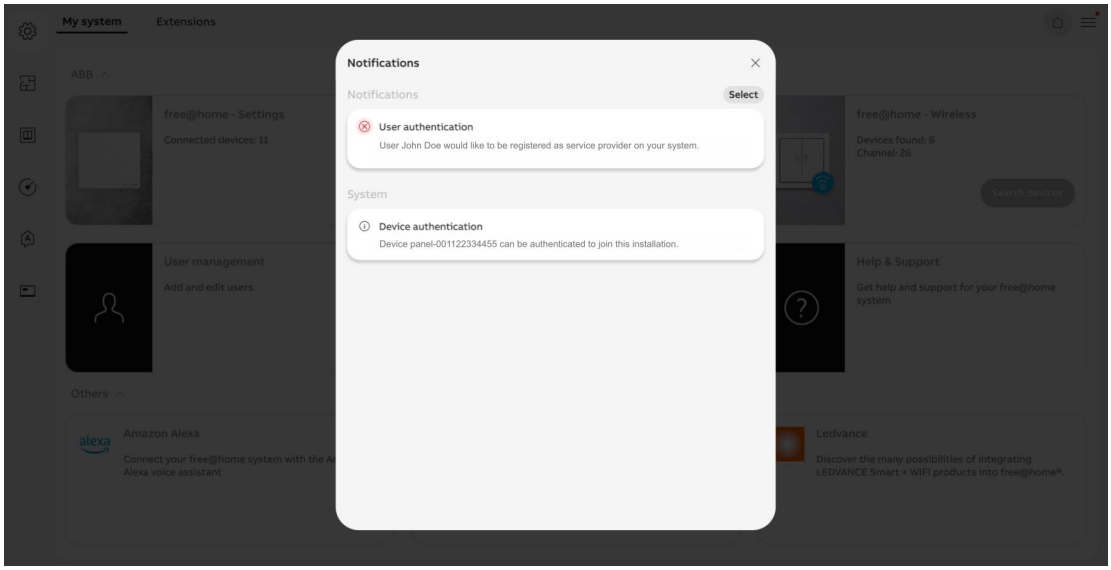


Fig. 21: Authentication

3. Tap on the system message "Device authorization" in the notification center.
4. Then tap on the message.
   – The dialogue "Authenticate device" opens.

Fig. 22: Authenticating device

5. Confirm the authentication with "Yes".
   – Then the panel is listed in the "System settings" in the area "Info" > "free@home".

After a while the panel is listed as new device in the device list in the System Access Point". The additional configuration is available in Chapter 9 “Configuration via ABB-free@home®“ on page 37.

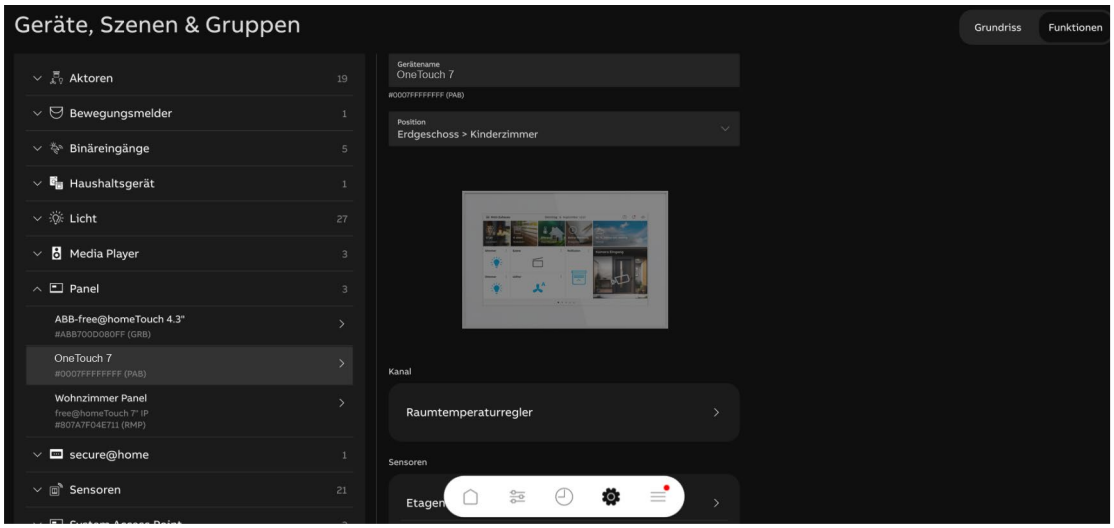


Fig. 23: Panel in device list

9. Configuration via ABB-free@home®

Configuration of the device is carried out via the web-based interface of the System Access Point. It is assumed that the basic commissioning steps of the overall system have already been carried out. Knowledge about the basic functions of the commissioning software of the System Access Point is assumed.

The System Access Point establishes the connection between the free@home Bus wireless participants and the smartphone, tablet or PC. The System Access Point is used to identify and program the participants during commissioning. The link of the ABB OneTouch 7 with the System Access Point is made during the course of initial commissioning (see chapter 7 “Initial commissioning of the device with the internal System Access Point“ on page 33).

The devices can be parameterised for the use of additional functions.

Notice

The configuration is taken over fully automatically when the device is commissioned via WLAN with the System Access Point 2.0 in combination with ABB-free@home®.

Notice

General information about commissioning and parameterization is available in the ABB-free@home® system manual.

9.1. Allocation of devices and definition of channels

The devices integrated into the system must be identified, i.e. they are allocated to a room according to their function and are given a name.

The allocation is carried out via the web-based user interface of the System Access Point or the ABB-free@home® Next App.

9.1.1. Add device

1. Tap on the switch icon (menu devices, scenes and groups) at the left edge of the screen.
   – The "Building plan" opens.
2. Tap on the round plus icon at the bottom right [1].
   – Menu "Select component" opens.

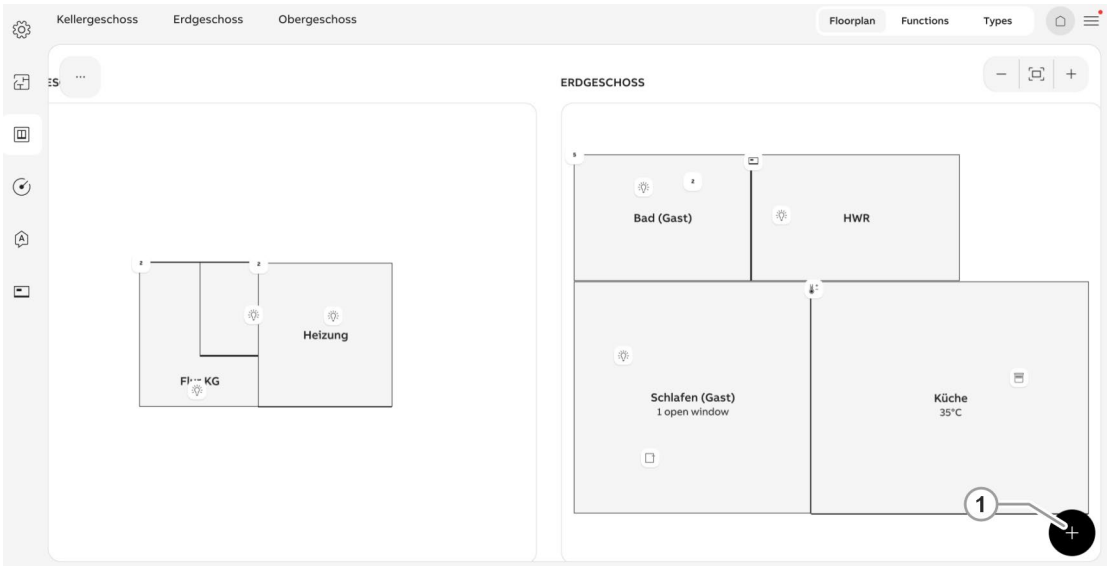


Fig. 24: Opening the building plan and list of components (example illustration)

3. Tap on the desired characteristic in the list of components.
   – The menu with the available devices, functions and actuators opens.
4. Select the desired device and pull it into the floor plan via drag-and-drop.

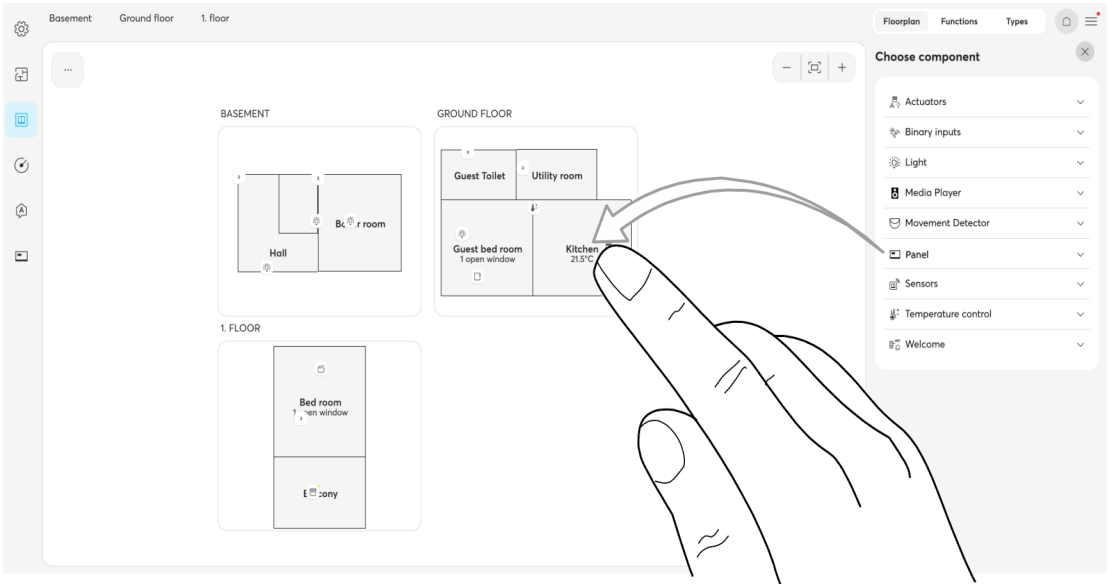


Fig. 25: Pulling the device out of the menu bar (example illustration)

If you pull a new device into a room via drag-and-drop, a pop-up window opens in which all devices that are located in the system are listed and which have not been allocated to a room. The devices are suitable respectively for the selected application.

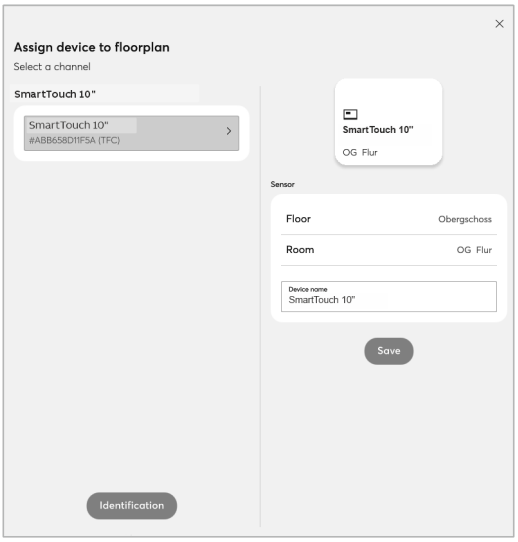


Fig. 26: Pop-up window with the suitable devices (example illustration)

Identification

The device can be identified via the serial number.

Identification via serial number

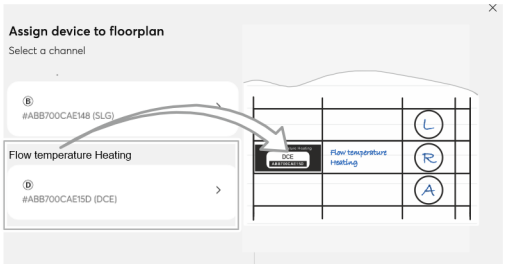


Fig. 27: Identification via serial number (example illustration)

- Compare the serial number and the short ID of the identification label, which is glued on the device plan, with the numbers and IDs in the list. This is how the searched for device and possibly the searched for channel are identified.

Specifying a name

1. Enter a name in text field under which the device is to be displayed later, e.g. "Living room panel").
2. Tap the "Save" button to take over the adjustments.
   – This takes over the entry.

9.2. Setting options per channel

General settings and special parameter settings can be made for each channel.

The settings are made via the web-based user interface of the System Access Point.

Select device

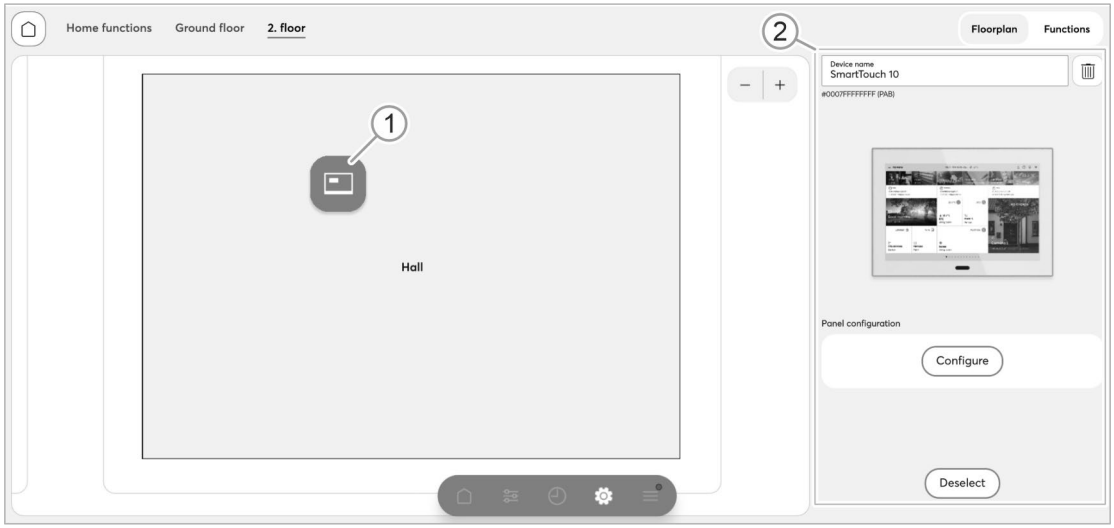


Fig. 28: Selecting device

1. Select the device icon [1] in the floor plan of the working area view.
   – The setting options (name, linkage to panel configuration) for the respective panel are displayed in the list view [2].

9.2.1. Parameter settings of panel

Open overview of devices

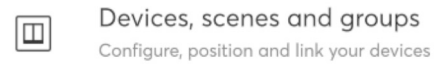


Fig. 29: Devices, scenes and groups

1. Select "Devices, scenes & groups" via the main menu or the page menu in the user interface of the System Access Point.
   – The "Building plan" opens.

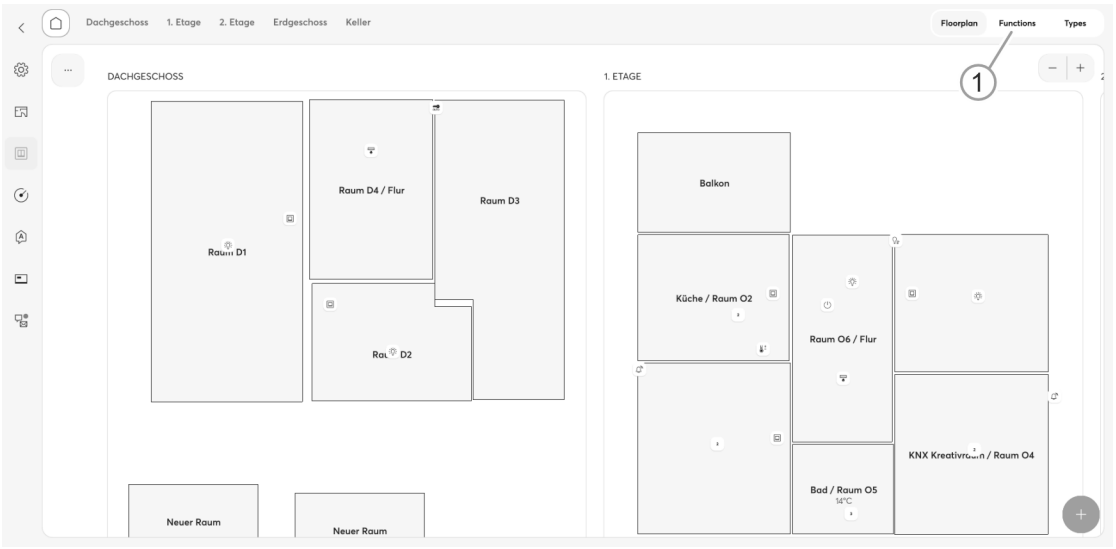


Fig. 30: Open overview of devices (example illustration)

2. Select the "Functions" button [1].
   – The overview of devices opens.
   – Here you can view all devices that are located in your ABB-free@home® system. The overview page displays information about the device name and the position of the respective device.

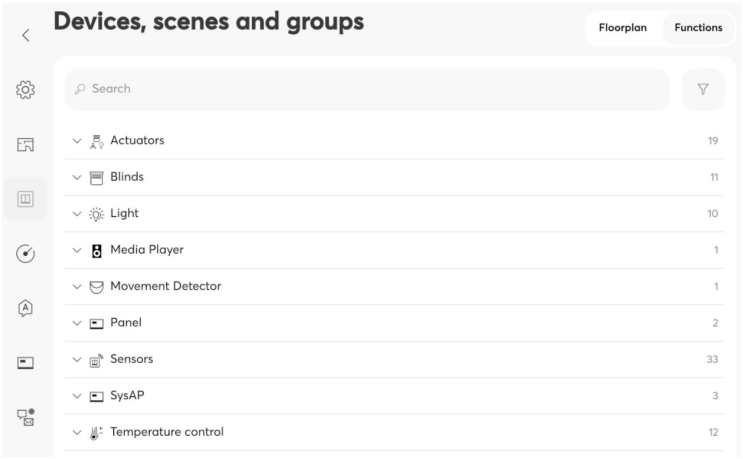


Fig. 31: Overview of devices (example illustration)

3. Tap on a device category.
   – The list of available devices opens.

4. Tap on the device whose information you want to edit.
   – The information about the respective device is displayed on the right in the device menu.

Information about the device name, the device position in the building and additional settings are illustrated in the device menu.

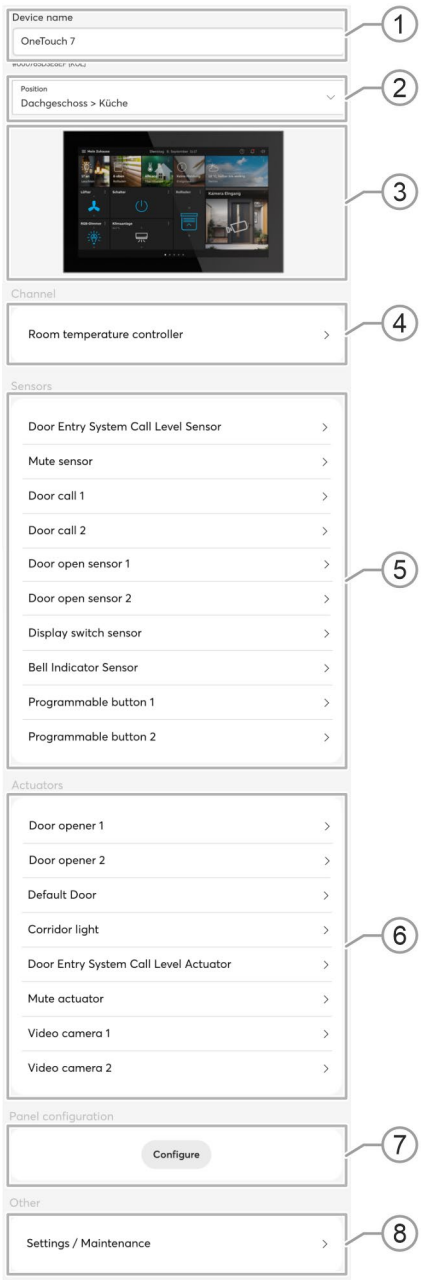


Fig. 32: Device menu

Pos.	Description
[1]	**Device name** An independent designation for the device can be allocated via the text field.
[2]	**Position** By tapping on the drop-down menu you can assign a position to the device in the building structure you defined (e.g. assignment to a room on a certain floor).
[3]	**Illustration** Here the device is illustrated.
[4]	**Channel** Here you reach the parameter settings of the channel. ▪ Channel – Opens the parameter setting of the channel for the internal room temperature controller.
[5]	**Sensors** Here you enter the parameter settings of the ABB-Welcome® sensors. Precise information about the ABB-Welcome® sensors is available in the ABB-Welcome® system manual.
[6]	**Actuators** Here you enter the parameter settings of the ABB-Welcome® actuators. Precise information about the ABB-Welcome® actuators is available in the ABB-Welcome® system manual.
[7]	**Panel configuration** In this menu the favourites page of the panel can be configured. Any number of actuators can be positioned on the panel.
[8]	**Other settings** Here you reach the general device settings. The authorisation can be configured and the device information such as the serial number and software version can be viewed. Also the device can be rebooted, read in or reset.

9.2.1.1. Parameter settings Channel

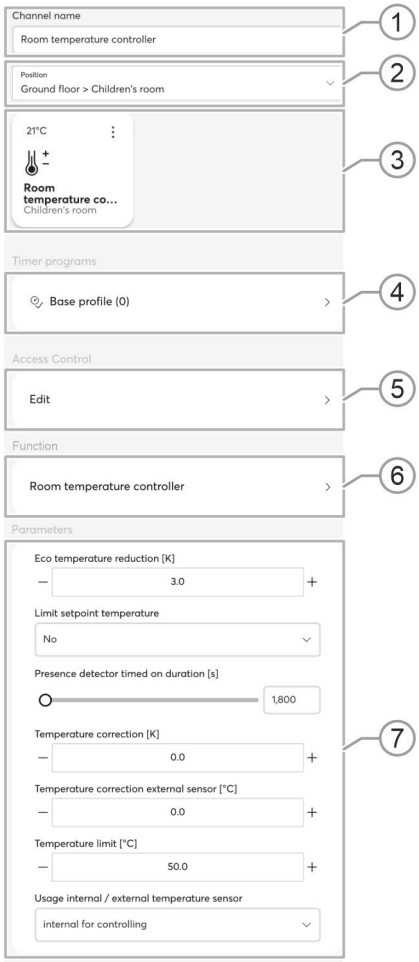


Fig. 33: Parameters of channel

Under the channel settings you can configure the settings described in the following.

Pos.	Description
[1]	**Device name** An independent designation for the device can be allocated via the text field.
[2]	**Position** By tapping on the drop-down menu you can assign a position to the device in the building structure you defined (e.g. assignment to a room on a certain floor).
[3]	**Room temperature controller control element** The internal room temperature controller can be set by tapping on the button. You can switch it on and off, set the actual temperature and specify the operating mode.
[4]	**Time programs** This overview displays all previously created time programs. The number after a time program indicates how often the actuator is used in this time profile. Select a time program for adding it to the actuator.

Pos.	Description	
[5]	**Authorizations** Menu item "Authorizations" is used to specify whether a user with installer authorization is required for the reconfiguration of the actuator. In addition, you can nevertheless assign users with read rights the authorization to switch this actuator.	
[6]	**Function** Defines the function of the channel.	
[7]	**Parameters**	
	Eco temperature reduction [K]	The −/+ buttons can be used to specify by how many degrees the temperature is to be reduced to when ECO mode is activated.
	Switch-off delay during absence [s]	If the ECO mode is deactivated by a movement detector, the switch-off delay can be specified here when the ECO mode is to be re-activated after the room is exited.
	Limit setpoint temperature	The following selection options are available for the limitation of the setpoint temperature: ▪ **No** – The setpoint temperature remains variable. ▪ **No** – The setpoint temperature range is limited and can neither drop below or exceed a specific temperature.
	Temperature correction [K]	Manual increase/reduction of the temperature value via the -/+ buttons to adjust a permanent temperature offset.
	Temperature correction of external sensor [°C]	Manual increase/reduction of the temperature value of the external sensor, to adjust a permanent temperature offset.
	Upper temperature limit [°C]	Fixing the maximum admissible temperature that is allowed to be measured by the external temperature sensor before the relay for the heating is switched off. The upper temperature limit is used, for example, to ensure that the floor temperature does not get too warm and cause damage to the floor covering.

Pos.	Description	
	Use of internal/external temperature reading	The following selection options are available for the temperature reading. ▪ **Internal for regulating:** – Use of the internal temperature sensor of the device for reading and regulating the room temperature. ▪ **External for regulating:** – Use of an external temperature sensor for reading and regulating the floor temperature. For this the external temperature sensor must be laid in the screed. ▪ **Internal and external for regulating:** – Use of the internal and an external temperature sensor for reading and regulating the room temperature. Both measured values are used to create an average value. For this the external temperature sensor must be installed behind a ventilated cover plate (e.g. 6541-xx). ▪ **Internal for regulating and external for limiting:** – Use of the internal and an external temperature sensor for reading temperature. The temperature is regulated via the internal temperature sensor. The external temperature sensor serves for limiting the temperature, generally the floor temperature (floor heating). As soon as the temperature measured on the external temperature sensor exceeds the set temperature, the relay is switched off. Heating stops.

9.2.1.2. Other settings

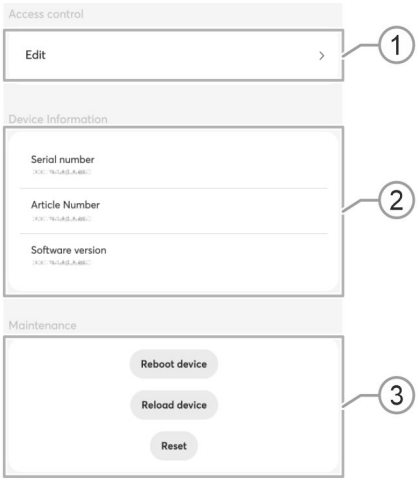


Abb. 34: Other settings

Under "Other settings" you can configure the settings described in the following.

Pos.	Description
[1]	**Authorizations** Menu item "Authorizations" is used to specify whether a user with installer authorization is required for the reconfiguration of the device. In addition, you can nevertheless assign users with read rights the authorization to switch this device.
[2]	**Information about the device** Listing of device information (device number, software version, etc.)
[3]	**Maintenance** You can start the device anew, read the device in again or reset it by tapping the respective buttons. ▪ Restart ▪ Read device in again ▪ Reset

9.3. Specifying or editing functions (buttons)

The settings are made via the panel configuration of the web-based user interface of the System Access Point.

The ABB OneTouch 7 has an automatic configuration for the synchronization with the System Access Point. At an existing IP connection all located devises are synchronized automatically with the ABB OneTouch 7. This allows all devices to be switched via the ABB OneTouch 7 without having to be added manually beforehand. One page of the panel can be configured manually in addition.

In the panel configuration of the web-based view of the System Access Point the buttons of the device can be freely equipped. All panels installed in the system can be selected.

Only panels are listed that have been previously positioned on the floor plan under commissioning step "Allocation"!

The allocated actuator channels can be positioned on the panel via drag-and-drop from the list view. After the confirmation the configuration is taken over and becomes visible on the device after a few seconds.

Notice
The configuration is taken over fully automatically when the device is commissioned via ABB-free@home®.

9.3.1. Creating functions

There are two options for accessing the panel configuration. First you need to change to the menu provided. Proceed as follows from the start page:

Version 1: Access via the building plan

1. Tap on the switch icon on the start (menu devices, scenes and groups) at the left edge of the screen.
   – The "Floor plan" opens.
2. Tap on the panel in the building plan whose information you want to edit.
   – A new window with the information about the selected panel opens.
3. Under menu item "Panel configuration" tap on the "Configure" button.
   – The "Panel configuration" opens.

Version 2: Direct access

1. Tap on the panel on the start page (panels and remote controls).
   – The "Panel configuration" opens.
2. On the screen edge at the top select the panel whose information you want to edit.

You can then perform the configuration of the panel in the panel configuration. You can add devices or functions either via the room view or the type view.

- In the room view (at the top right in the panel configuration under "Rooms") select the devices/functions according to their positioning in the building plan.
- In the type view (at the top right in the panel configuration under "Type") select the devices/functions according to their type. The devices/functions are grouped here according to type (e.g. lights, scenes, actions, etc.).

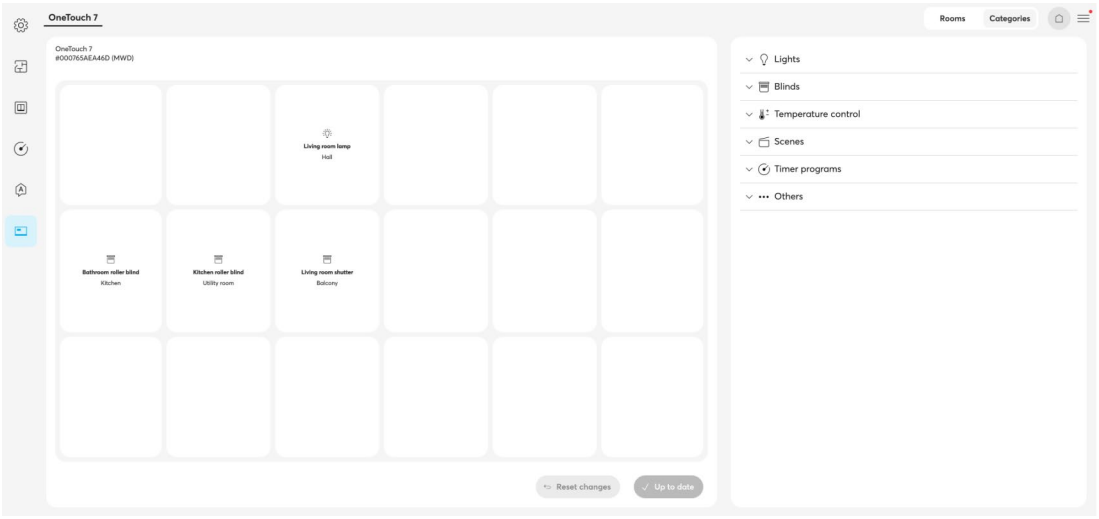


Fig. 35: Panel configuration (example illustration)

Actuators/group selection

1. Select a room in the bar at the right edge of the screen.
   – The actuators and groups contained in the selected room are displayed in the list view. The sequence is portrayed in the following by means of a room temperature controller.

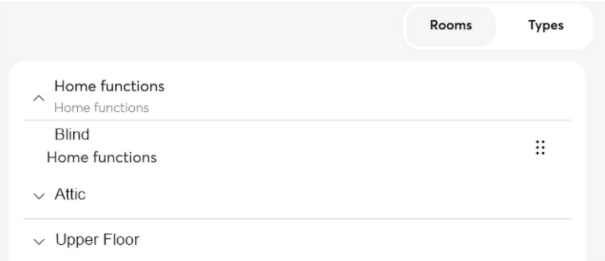


Fig. 36: Selection of actuators/groups (example illustration)

2. Select the room temperature controller by tapping on the points on the right side and pull the control element of the room temperature controller into the working area on the surface of the panel.

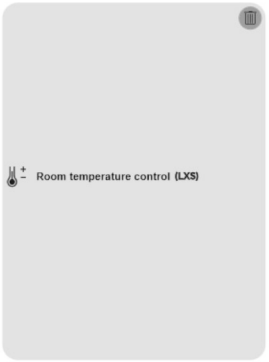


Fig. 37: Control element view (example illustration)

3. Continue in this way and position the desired functions on the monitor of the panel.
   – Additional buttons are always positioned under the previous button.
4. Confirm the adjustments with a click on the "Update panel" button.
   – The new configuration is sent to the panel. Then the new buttons are visible on the panel and can be used.

9.3.2. Changing functions

1. If several panels are available, first select the appropriate panel.
2. Tap on the panel that is to be re-configured.
   – If only the position of the function or of the control element is to be changed, then the function can be shifted onto a free area via drag-and-drop.
3. Tap on the drop-down menu on the right edge of the screen of the respective function to adjust the function method.

9.3.3. Removing functions

1. If several panels are available, first select the appropriate panel.
2. Tap on the panel that is to be re-configured.
3. Select the function (button) to be removed.
4. Tap on the rubbish bin icon at the top right edge of the tile to remove the function. As alternative you can remove it via the "Delete" button in the menu at the right edge of the screen.
   – The selected function (button) is deleted from the monitor.
   – A transmission to the panel is carried out via the "Update panel" button.

10. Operation

10.1. General control and display functions

After the device has been connected to the power supply, the boot-up process starts. Then the parameterized main operating page (homepage) is displayed. This is marked with a house in the page display.

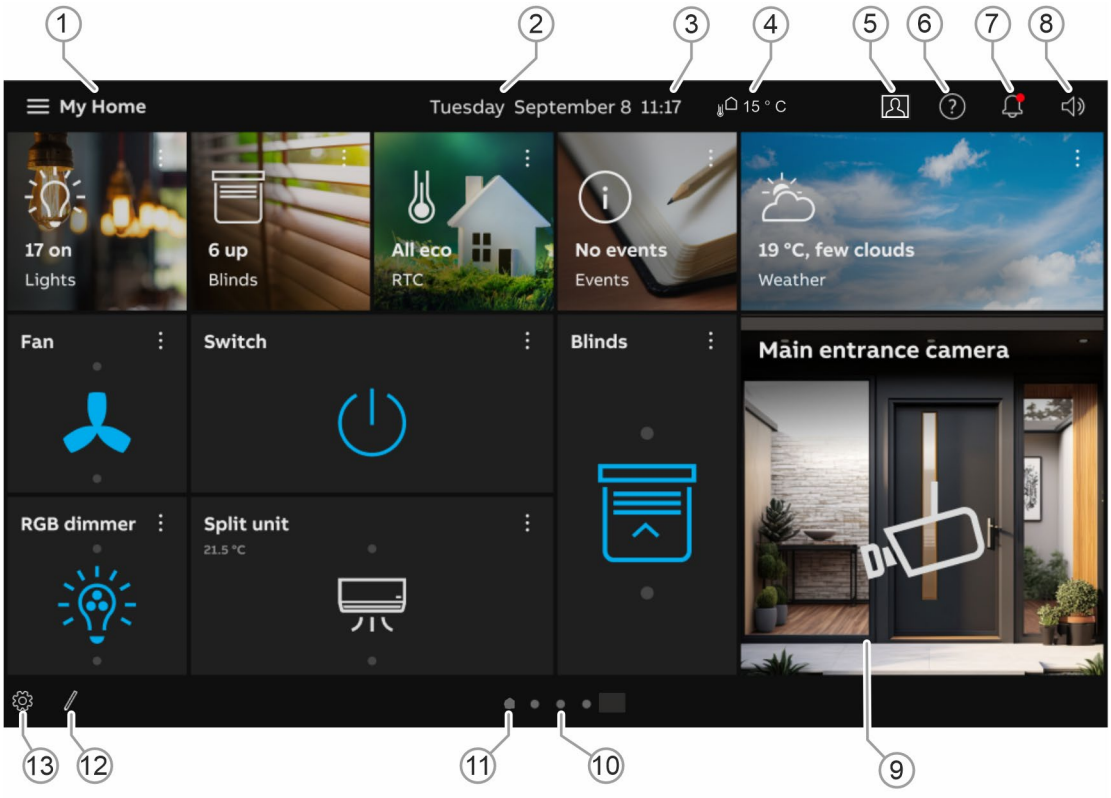


Fig. 38: Overview of operation

Pos.	Description
[1]	**Floors/rooms navigation** When parameterized, this can be used to call up the operating pages which have been allocated to the floors/rooms.
[2]	**Display of current time**
[3]	**Display of current date**
[4]	**Current room temperature** Is displayed after activation.
[5]	**Call-up of the outdoor station door communication**
[6]	**Show help for operation**
[7]	Notification function, see chapter 10.2 “Control elements“ on page 55.
[8]	Volume control / mute button, see chapter 10.2 “Control elements“ on page 55.

Pos.	Description
[9]	**Touch-sensitive user interface** Up to 18 functions can be positioned on the operating page. There is the option of controlling the entire system via the dashboard.
[10]	**Display of available operating pages**
[11]	**Callup of the main operating page**
[12]	**Editing function** ▪ The control elements on the dashboard can be freely adjusted via the editing function see chapter 10.2 “Control elements“ on page 55.
[13]	**Access to general settings**

- The individual operating pages can be called up by swiping the user interface (swiping to the right or left)
- The main operating page (homepage) is marked with a house icon
- The primary function is activated by tapping with three or more fingers

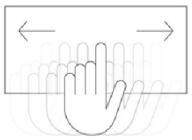
10.2. Control elements

Control elements are used to fulfil the basic functions such as "Switching", "Dimming", Blinds", "Scenes" and RTC. The elements can also contain switches, buttons and sliders.

Available are:

Button operation	Execution of function with a single press
Tapping operation	Execution of function by pressing and holding
Control operation	Shifting of a slider

Notice
Additional functions can be called up within some control elements (e.g. RTC) by swiping.



Specifying values

By swiping to the top or bottom , values, fan or dimming levels can be set on a control element.

Switching on/off

With a brief tap on the center or the icon of a control element it can be switched on or off.

Control element settings

Additional settings can be made by tapping on the three points at the top right edge of a control element.

10.2.1. Basic structures of control elements

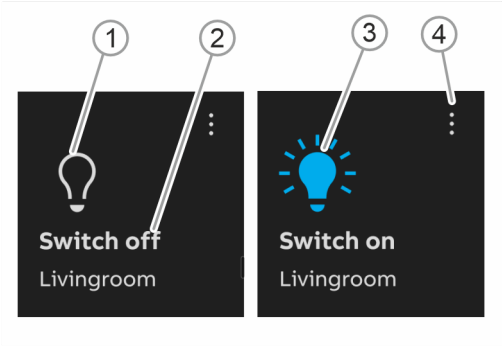


Fig. 39: Various statuses of the same control element

Pos.	Description
[1]	Name of device
[2]	**Device inactive** If the device is inactive, the button is displayed as follows: ▪ Type of button "icon" – During inactivity the button is displayed white.
[3]	**Device is active** If the device is active, the button is displayed as follows: ▪ Type of button "icon" – During activity the button is displayed blue.
[4]	Control element settings

10.2.2. Additional basic principles

Fig. 40: Basic principles

Function buttons of blind control elements can, for example, display the different stages of blinds by means of alternating icons (e.g. alternating visualisation in the icon).

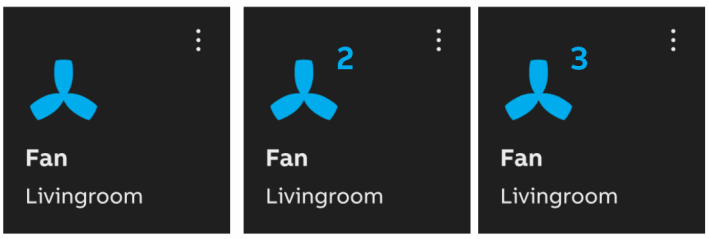


Fig. 41: Additional basic principles

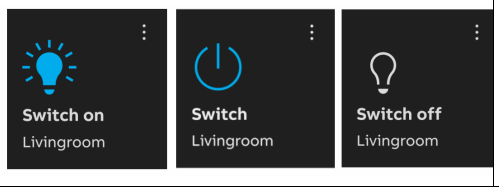
Default settings of steps or levels (e.g. dimming steps, fan speed levels) are, for example, shown with different icons and numbers. In the illustrated example, fan speed levels 1 - 2 are preset.

10.2.3. Adjustable control elements

Notice
The basic versions described here can be further adjusted.

Push-buttons (basic version)

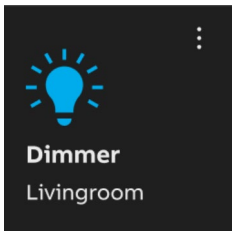
Simple switches can be implemented with push-buttons. This makes light switches or switches for simple switching processes based on push-buttons possible.

Control element	Status	Function
Switch		When operated, a changeover push-button sends out one of two values alternately and changes between two statuses (e.g. "On" and "Off").

Notice
The push-button control elements can be used for the operation of Ledvance lamps. If a Ledvance lamp is available in your ABB-free@home® system, this is transmitted automatically to the panel. Please note that these functions are only available in connection with ABB-free@home®.

Dimmer

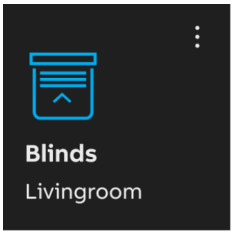
Dimmers can be used to implement convenient light switches with dimming functions.

Control element	Status	Function
Dimmer		The dimmer control element in its extended control settings has a button for stepwise dimming (lighter/darker) of lamps. The dimmer can be switched on/off via the icon. The icon changes according to the dimming status.

Notice
The dimmer control elements can be used for the operation of Ledvance lamps. If a Ledvance lamp is available in your ABB-free@home® system, this is transmitted automatically to the panel. Please note that these functions are only available in connection with ABB-free@home®.

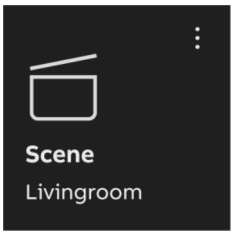
Blind (basic version can be further adjusted, e.g. with value display)

Blind control elements can be used to implement the activation of blinds, awnings, doors and other motor-driven actuators.

Control element	Status	Function
Blind		The blind control element in its extended control settings has a button for stepwise switching (up/down) of blinds. The icon can be used to stop and start the opening of the blind.

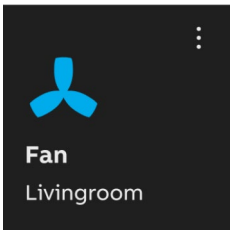
Scenes (basic version)

With control element "Scene" the user can start so-called scenes. Several actions can be combined in "Scenes" so that the user can create a certain light atmosphere with only one press of the button for example (several dimming actions).

Control element	Status	Function
Scene (List)		The control element "Scene (List)" has a pop-up button for calling up a list with different scenes. The list closes automatically after a few seconds if no selection has been made. The scene must be selected in the list. The selected scene is then started via the push-button.

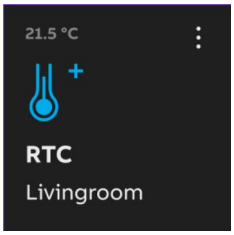
Fan switch

Fan switches (step switches) can be used to implement switching sequences. A step switch, so to speak, combines several push-buttons into one control element.

Control element	Status	Function
Fan switch (step switch)		Fan switch control element The version has two buttons top and bottom for calling up the next or previous step and via a button in the middle. By pressing the top/bottom button several times, one reaches a further step higher or lower. The button in the middle returns the step switch to the bottom step (= "Off"). The icon in the middle can be animated during adjusting. It is also possible to display the steps.

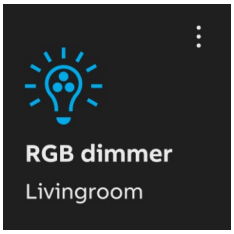
Room temperature controller (basic version)

Air conditioners can be controlled with the control element for room temperature controllers.

Control element	Status	Function
RTC control element (extension unit)		The current operating mode and the mode (e.g. "Heating") of the controller are displayed in the control element. Additional operating modes can be called up with swiping movements. Control is carried out via the buttons.

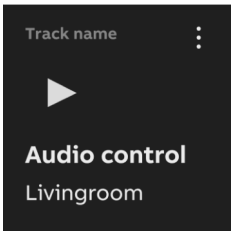
RGBW operation (basic version)

Specific settings can be made for corresponding lamps (LEDs, Philips Hue, etc.) with the RGBW control elements. For example, the colours can be changed or the warm-white component can be adjusted.

Control element	Status	Function
RGBW operation		The lamp is switched on or off with a press of the control element. It can also be used to make a preset. The value display indicates the brightness component. In line with the lamp types and presets, additional functions can be called up (in the example via the arrow), e.g. colour or white control.

Audio control (basic version)

All audio settings for connected audio devices can be easily controlled with the aid of this control element.

Control element	Status	Function
Audio control		Corresponding to the default settings, a variety of audio functions can be called up directly via the buttons. Lists can be opened via the arrow buttons

Split Unit Control

Split Unit control elements can be used to make settings for climate control devices. This, for example, allows the setpoint temperature to be adjusted in cooling mode.

Control element	Status	Function
Split Unit control element		The current operating mode and the mode (e.g. "Heating") of the controller are displayed in the control element. Additional operating modes can be called up with swiping movements. Control is carried out via the buttons.

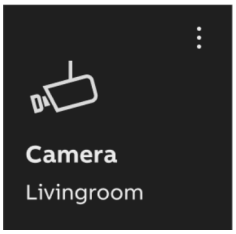
PS charger

Control elements for PS chargers can be used to make settings for vehicle energy stations as well as the charging status.

Control element	Status	Function
PS charger		The control element for PS chargers can be configured so that the functions of the vehicle energy station can be called up fast and carried out. Also information such as charging duration and speed as well as any problems can be displayed.

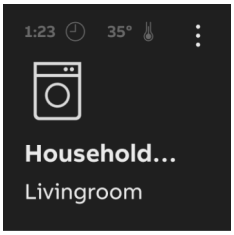
Camera

The camera control element can be used to open and control the camera surveillance.

Control element	Status	Function
Camera		The camera control element can be used to call up and carry out camera functions fast.

Home appliances

With home appliance control elements, connected home appliances can be activated.

Control element	Status	Function
Home appliances		The home appliance control elements display the current status of a linked appliance. If, for example, a washing machines was linked, the device displays the duration of the washing process and the temperature.

Timer

Timer programs can be activated or deactivated with timer control elements.

Control element	Status	Function
Timer		Timers can be activated and deactivated via control element. For this the timers must first be created and linked with the control element.

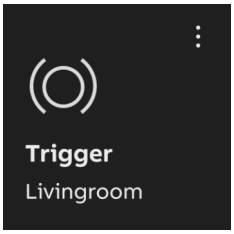
Action

Actions can be deactivated or activated with control elements for actions.

Control element	Status	Function
Action		Actions can be activated and deactivated via control elements for actions. For this the actions must first be created and linked with the control element.

Triggers

Triggers for certain actions or scenes can be linked with trigger control elements.

Control element	Status	Function
Triggers		Triggers for certain actions or scenes can be linked with trigger control elements. When actuating the control element, first the previously specified actions are triggered.

Air quality

Air quality control elements inform about the air quality in a room.

Control element	Status	Function
Air quality		Air quality control elements constantly transmit the status of the air quality that is determined with the measurement devices connected with the control elements.

10.3. Special functions

10.3.1. Editing

Different changes can be made to control elements via the "Edit" function. The "Edit" function can only be called up via the main operating page and the operating pages.

Moving / deleting control elements:

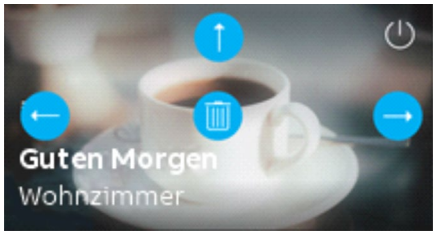
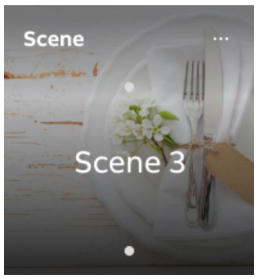


Fig. 42: Moving / deleting control element

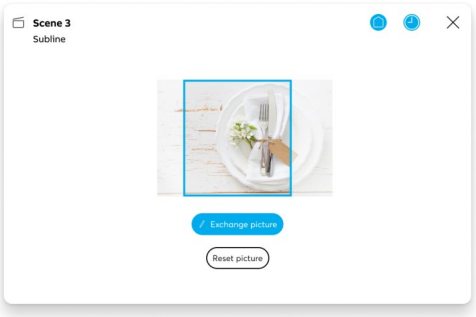
1. Tap on the pin icon at the bottom left edge of the screen.
2. Then tap on a control element.
3. Change the position via the arrow buttons
4. Delete the control element via the dustbin icon.

Notice
This function is available for control elements that have been stored on the dashboard as favourites.

Changing the background image of the control element



1. Tap on the corresponding control element.
2. Tap on the three points at the top right in the control element.
3. Changing the screen cutout.



4. Tap on the change picture button to upload a different graphic.
5. Select a picture from the available graphics.
   – The picture is uploaded.
6. If necessary, adjust the picture cutout.

Notice
This function is available for the "Scene" control element.

10.3.2. Adding control elements to the dashboard

Especially constantly used control elements can be added to the dashboard. In this way favourite control elements can be positioned centrally and made available via the dashboard. Devices can then be switched directly via the dashboard without the corresponding pages or rooms having to be called up. The take-up of control elements into the dashboard is carried out either via the commissioning software or directly via the device (see chapter 10.3.1 “Editing“ on page 64).

Adding control elements to the dashboard

1. Change to any operating page.
2. Select control element.
3. Tap on the three points at the top right.
4. Tap on the house icon.
5. Change to the dashboard.
   – The control element is now displayed on the dashboard.

Notice
A second dashboard page can be created by shifting the created elements of the first page to the right onto the second page.

10.3.3. Return to the previous page

The previous page can be opened again by swiping to the left.

10.4. Operating actions of the "Door communication" application

Via the door communication application different functions of the door communication can be used. This also includes:

- Video surveillance
- Video call
- Audio call
- Door opener

The call-up of the "Door communication" application is described in the following.

1. Call up the control element for the door communication on the corresponding operating page by tapping.

The basic setup of the application is almost identical for all applications. The following graphic provides an overview of the basic functions:

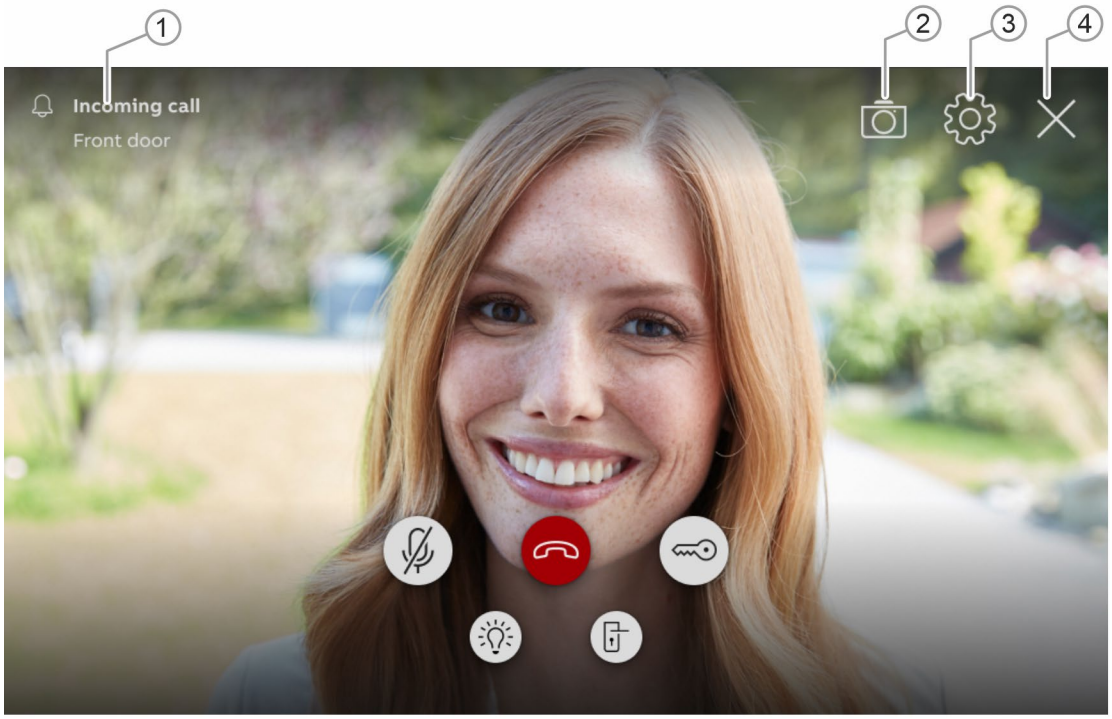


Fig. 43: "Door communication" operating actions

Pos.	Description
[1]	Designation of door communication function
[2]	Record screenshot
[3]	Perform panel settings (brightness, contrast, bell volume)
[4]	Exit door communication

Notice
The functions displayed on the panel always depend on the system configuration and the actuators available in the door communication.

10.4.1. Setting up of video surveillance

All areas in which a surveillance camera is available can be viewed via the control elements for video surveillance.

Notice
The panel supports communication protocols UDP and TCP/IP.

1. The function is called up by tapping on the control element of the respective surveillance camera.

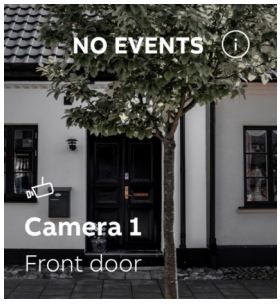


Fig. 44: Handset button

The name and the positioning of the respective surveillance camera are displayed on the control element. If no incidents occur, this is appropriately noted at the top right in the control element.

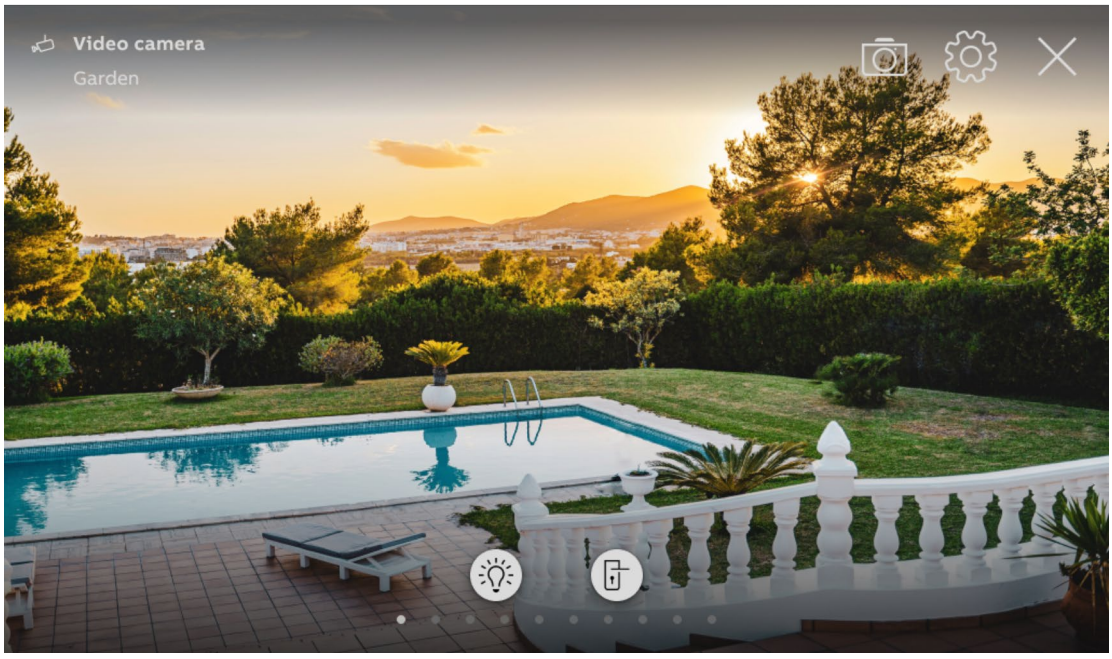


Fig. 45: Surveillance camera - current area

1. The current picture of the camera is displayed at the start of the video area.
2. A switch between the different cameras can take place via swiping over the points in the video area (swiping left and right).

If there is a person in a camera area, an audio or video connection can be established. In addition, the door opener can be actuated or the light switched.

10.4.2. Establishing a speech and video connection

As soon as a visitor presses the bell of a station, this is signalled on the panel as a bell call (Display of the telephone receiver icon in the monitor of the bell call). The device then changes automatically to the "Door communication" application.

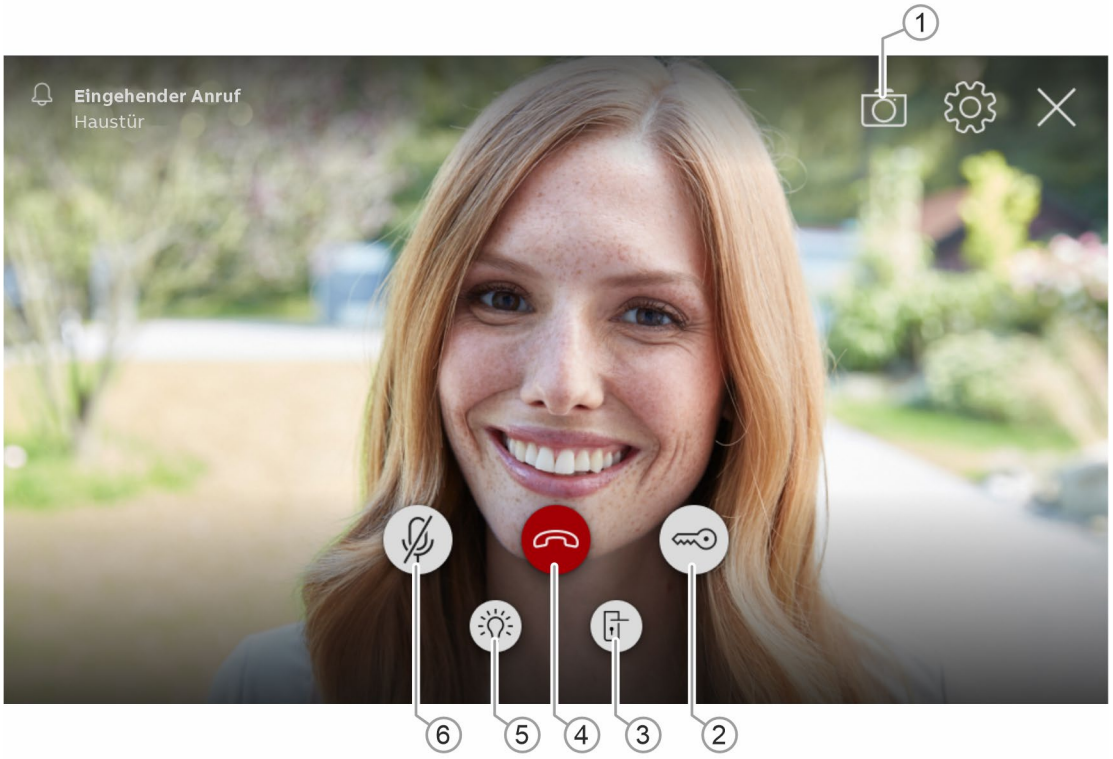


Fig. 46: Setting up the voice and video connection

Pos.	Description
[1]	**Creating a snapshot** Press during a call to store a snapshot in the local image storage.
[2]	**Pressing the door opener** Opening the door during a call.
[3]	**Pressing the door lock** Unlocking/locking the door during a call.
[4]	**Accepting/concluding a call**
[5]	**Light on/off**
[6]	Microphone Press during a call to mute the microphone.

Accepting calls (establishing speech and video connection)

Calls can be accepted with or without video. The acceptance of calls is described in the following:

1. The function is called up via the handset button [4].

The following functions are available while establishing the speech and video connection:

- Set the volume by tapping the toothed wheel icon (move the controller to the right or left).

If several outdoor stations or external cameras are connected:

- Select the camera from the list by swiping to the left/right.
  - The designation of the camera is then displayed.
  - The current picture of the camera appears in the video area.

2. The connection can be terminated by pressing the call button [4] again.

Notice
The application remains open for a certain time until it is closed automatically. If the time amounts to only 10 seconds, the expiring time appears in the camera image (video area).

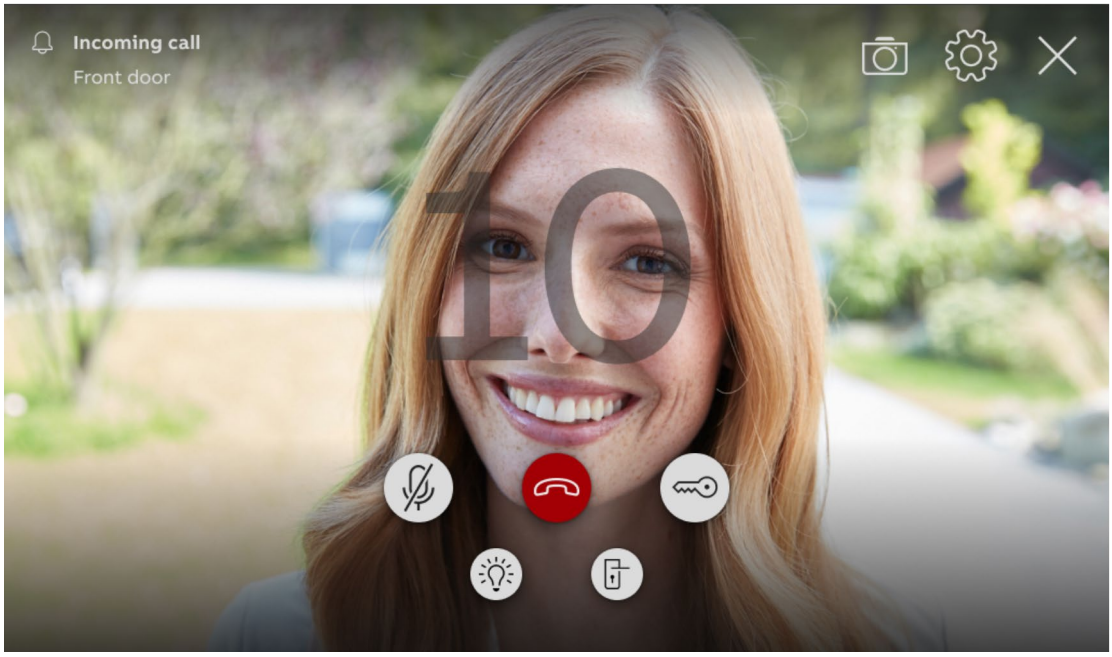


Fig. 47: Accepting a call

10.4.3. Opening the door

The door can be opened by touching the key icon [2] (see see chapter 10.4.2 “Establishing a speech and video connection“ on page 68) within an active audio or video call.

1. Tap on the key icon.
   - Door opener is actuated or the "Automatic door opener" is active.
   - The door opener is activated.

10.4.4. Activating mute (mite timer)

The call tone of the panel can be switched on and off. This setting has a time limit.

1. The function is called up via the bell button.

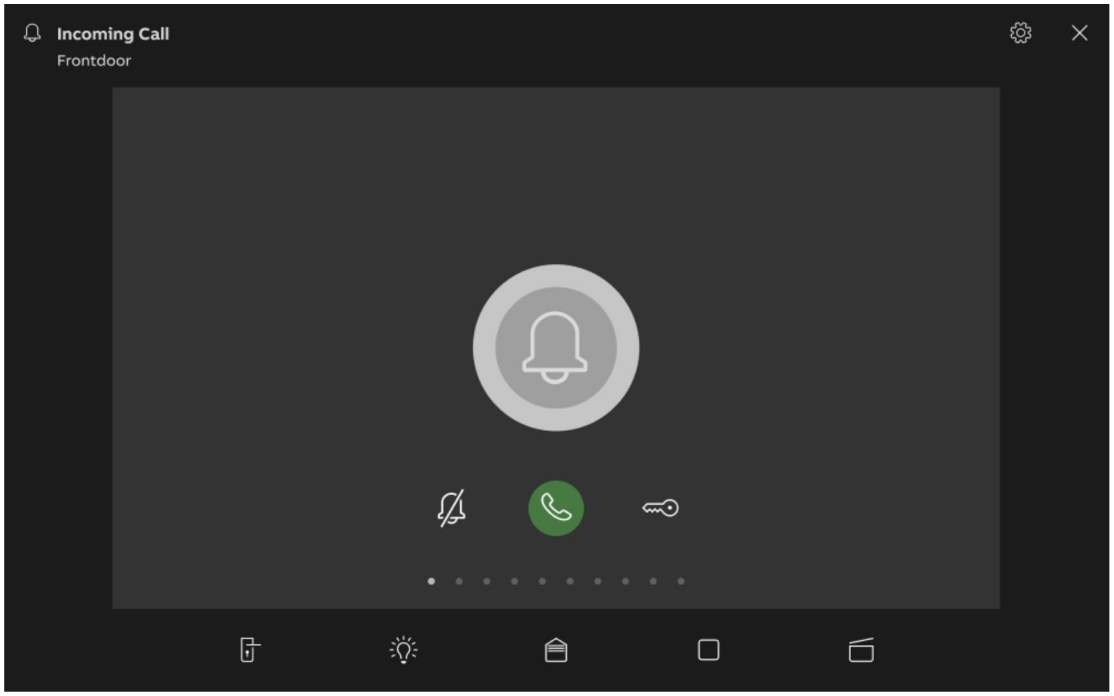


Fig. 48: Muting

For mute activation (mute timer) the following functions are available:

No call is pending:

- "Mute" button (bell icon) is actuated:
  - The ring tone of the panel is deactivated for a certain time. This is also indicated as icon in the bottom bar.
  - If calls are received during this time, only the video image is displayed.
  - Missed calls are recorded in the events and image storage.
  - The presets for this can be adjusted.

A call is pending, a speech connection is activated.

- "Mute" button (microphone icon) is actuated
  - The microphone of the device is switched off until the bell is pressed again.

Notice
The mute timer (settings) can also be called up via the bell icon at the top right edge of the screen of the dashboard.

10.4.5. Switching light

The lamp of the outdoor station can be switched via the lamp button.

1. The function is called up via the lamp button.
2. Press the lamp button for the following function ("Switch light" button actuated):
   – The "White lamp" icon is displayed.
   – The light contact on the System controller 83300-500 or on the Switch actuator, door/light 83330-500 is activated.

10.4.6. Events and image storage

The device records all events. When actuating the "History" button the last 100 events are displayed (previous events are overwritten).

Function

- The "Auto snapshots" function is activated in the settings for the door communication.
  – The bell icon with red dot in the top right corner signals a newly recorded snapshot.
  – The bell icon with red dot disappears when you call up the events and image storage.

Notice
When a speech connection is established, a snapshot can be created at any time by pressing the history button, even if the "Auto snapshot" function is not active.
  – The history button is only visible when the full-screen is reduced.

- For the function "Events and image storage / history" the following functions are available:
  – When the "Auto snapshots" function is activated in the settings for the door communication, a miniature view is displayed in the events list for missed calls.
  – Date, time and the type of the event are recorded together with the snapshot.
  – If no automatic snapshots are active, a different icon is displayed in place of the miniature view.
  – Individual entries or the entire list can be deleted at any time. For this, swipe the recording to the left. A dustbin icon appears next to the entries. This can be used to delete every single entry. Or all entries can be deleted via "Delete all".
  – Select an event by tapping on the corresponding entry.
  – Select single recordings by tapping on the corresponding entry. The list can be scrolled.

10.5. Control actions of additional applications

10.5.1. Notification Center

The panel offers protection and information via the notification center. You can view the call history and information about malfunctions or faults. Message contacts, sensors and their functionality can be monitored.

Notice
Depending on the parameterization, only certain functions are available in the application

The user can view the call history and messages via the notification center. This application can also be used to acknowledge and delete the messages.

The notification center is called up as follows:

1. Tap on the bell icon at the top right on the main operating page (homepage).
   – The application page with the call history and the notifications opens.

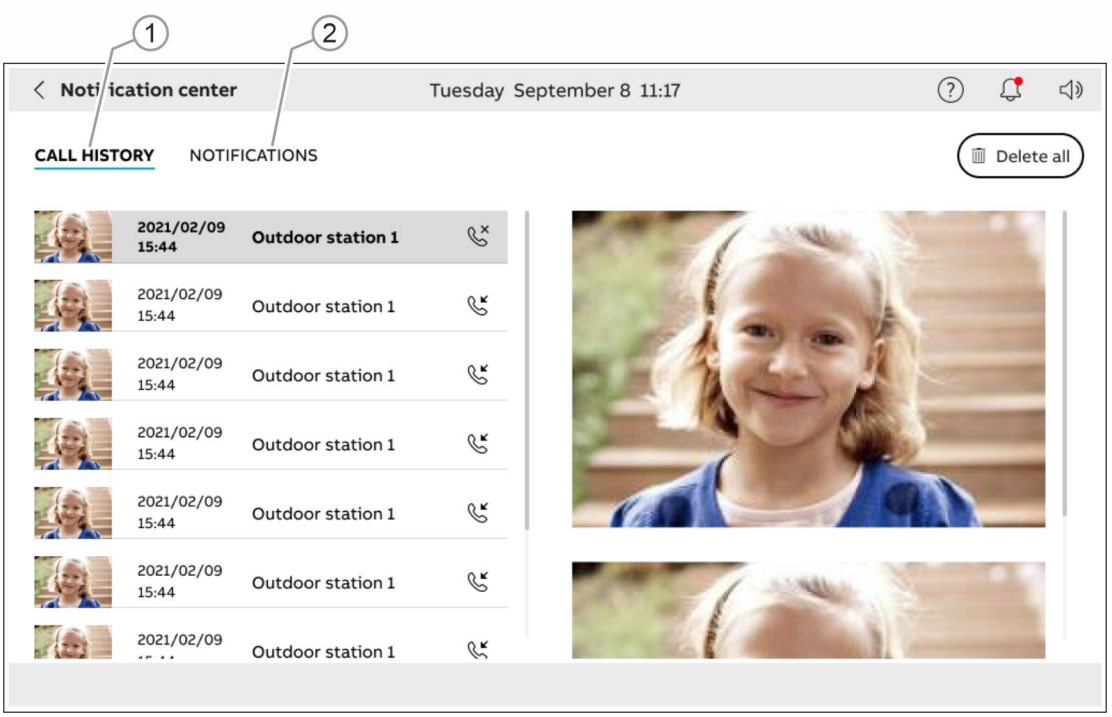


Fig. 49: Notification center

Pos.	Description
[1]	Call history
[2]	Notifications

Call history

All the latest calls accepted and made are shown in the call history. Also snapshots available in the call history are displayed.

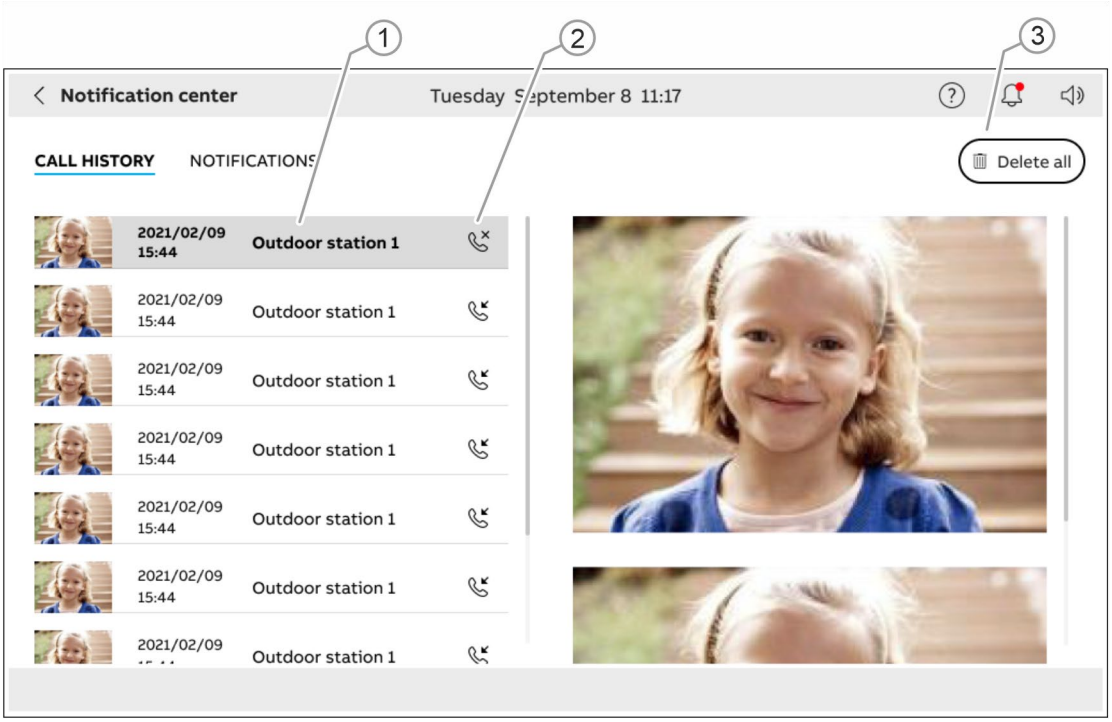


Fig. 50: Call history

Pos.	Description
[1]	Selected video call
[2]	Call status (missed, incoming, outgoing, internal, external call)
[3]	Deleting the entire call history

1. With the use of the functions described above, the calls can be viewed, archived and deleted within the call history.

Messages

Current and and archived messages can be displayed and edited in the notifications. There are different types of messages:

- Notice
- Alarm
- Error

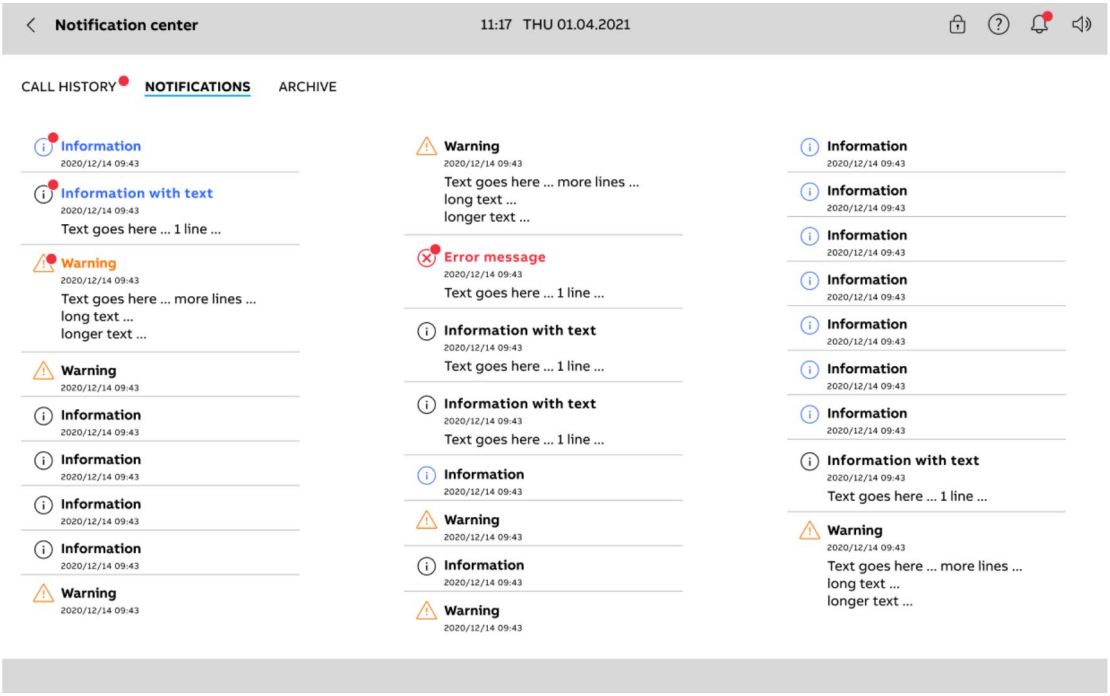


Fig. 51: Fault and alarm messages

Current notifications are marked with a red dot next to the warning icon.

1. The message text can be viewed by tapping on a message.

Deleting messages (notifications):

1. Select a message.
2. Messages can be deleted by swiping to the left.

10.5.2. Indoor air sensor

Display of air quality AQI (Air Quality-Index)

If an indoor air sensor has been added to the ABB-free@home® system (e.g. Control element xgang), the display of air quality can be called up via the dashboard of the ABB OneTouch 7.

The following values are determined by the AQI (Air Quality Index) sensors:

- CO_2 in ppm (parts per million / millionth) with an additional graphic display / evaluation of the CO_2 component in the room air
- VOC air quality
  (Volatile Organic compounds / volatile organic connections; VOC index values 0 - 500 A)
  with an additional graphic display / evaluation of the volatile organic connections in the room air.
- Humidity, relative humidity in % in the rooms.
- Temperature, current room temperature in °C.

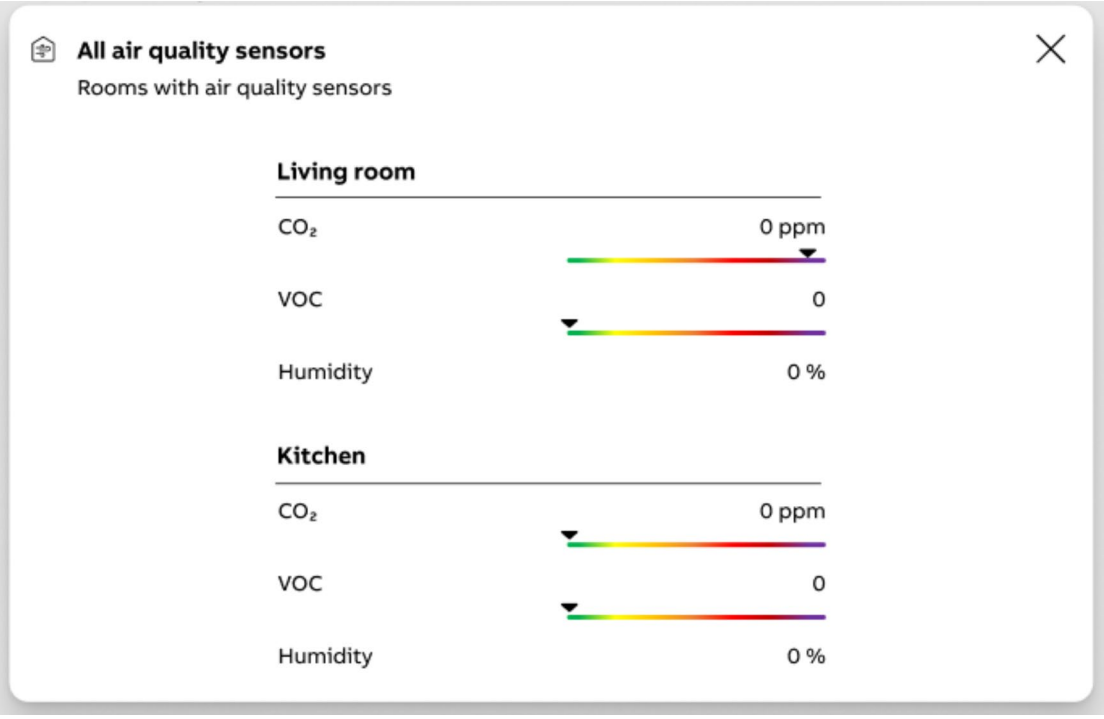


Fig. 52: Illustration of air quality (example illustration)

10.5.3. Radiator thermostat

The temperature can be regulated via radiator thermostats to a previously set value set value. Also frost protection and valve protection functions can be activated.

The ABB OneTouch 7 can be combined with a radiator thermostat as extension unit. If a radiator thermostat is available in ABB-free@home®, it is automatically transmitted to the ABB OneTouch 7. The RTC control elements can be used for the operation.

Notice
Note that this function is available only with the use of WLAN.

10.5.4. Ledvance lamps and socket outlets

If a Ledvance lamp or a Ledvance socket outlet is available in your ABB-free@home® system, they are transmitted automatically to the panel.

The switching and dimmer control elements can be used for the switching of Ledvance lamps.

Notice
More detailed information about the integration of Ledvance lamps and socket outlets is available in the brief manual "How the SMART+ WiFi Products of LEDVANCE can be integrated into ABB-free@home®".

10.6. System settings

Within the system settings general adjustments appropriate to the device can be made. These are described as follows.

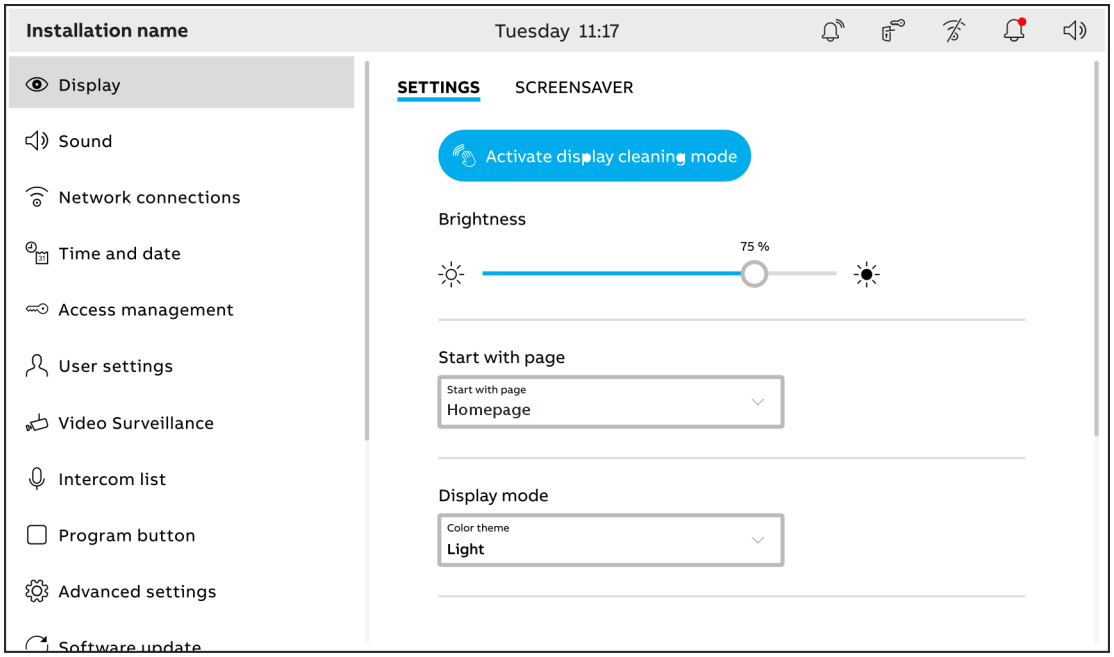


Fig. 53: System settings (example illustration)

The system settings are called up as follows:

1. Tap on the hamburger menu at the top left on the main operating page (homepage).
2. Then tap on the toothed wheel icon at the bottom left.
   – The system settings open.

The following areas become available:

Pos.	Designation	Description
[1]	**Display**	Setting the brightness of the display via the slider. Specifying a screensaver.
[2]	**Sound**	Specifying the volume for the following sounds: ▪ Click sound ▪ Warning sound ▪ Alarm tone of connection disturbance
[3]	**Network connections**	Adjustment of the network settings. Setup of access to the Welcome app and the MyBuildings Portal.
[4]	**Time and date**	Different time and date settings: ▪ Time ▪ Time zone ▪ Date ▪ Start of week
[5]	**Access management**	If it was specified in the commissioning software that the end user can change the PIN code directly on the device, this page then becomes visible. ▪ Here the PIN code levels can be specified and adjusted.
[6]	**User settings**	Here the following settings can be made: ▪ Language ▪ Sensors ▪ Reset settings
[7]	**Video surveillance**	Management of the IP and Welcome cameras (preview, positioning, etc.).
[8]	**Intercom list**	House telephones can be managed in the intercom list and enabled for the display on the dashboard (only available in connection with ABB-Welcome IP or ABB-Welcome® M).
[9]	**Program button**	Here the program button for the primary function is added and set.
[10]	**Extended settings**	Here settings for the door communication, building automation and a reset can be made.
[11]	**Software update**	Via this area the firmware is updated (see chapter 11 “Update“ on page 102).
	About	This page provides general and specific system information. Also the licensing terms can be called up.

10.6.1. System settings - Display

In the system settings under "Display", general settings such as screen brightness and the layout can be specified. Also a screen saver can be specified.

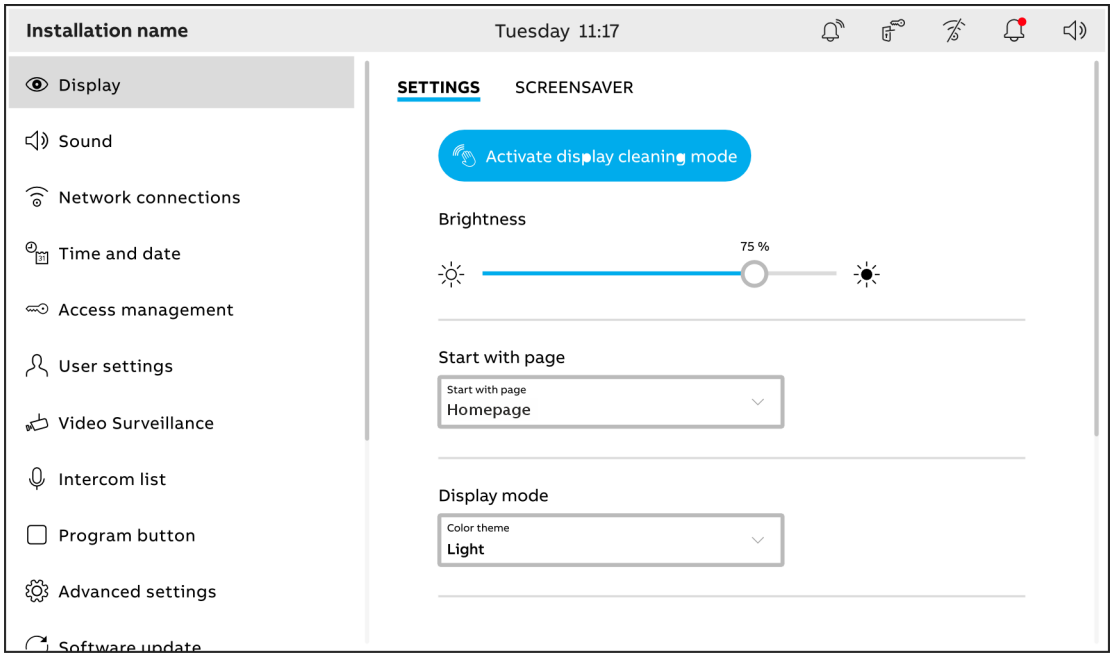


Fig. 54: Display - Settings

Activate display cleaning mode

To ensure that no function is triggered unintentionally during cleaning of the device, it can be disabled for a certain time. The cleaning blockage is activated with a press of the "Activate display cleaning mode" button. It is automatically deactivated after 30 seconds.

Adjusting the brightness

- The brightness of the display can be adjusted by moving the slider from left to right.
- By activating the checkbox "Adjust brightness automatically", the adjustment is made automatically in dependence of the ambient brightness.

Specifying the start page

1. The drop-down menu "Start with page" is used to specify whether the dashboard or the first homepage is to be used as start page.

Specifying the display mode

1. The drop-down menu "Colour scheme" is used to specify the colour scheme of the display (dependence on light, light theme, dark theme).
2. Step (1 - 5) can then be set with the slider below the menu.
3. The proximity function of the display is activated by activating checkbox "Use proximity sensor". Following this, the distance value must be specified (1 - 3).

If necessary, the appearance of the control elements can then also be specified. Here one can switch between a reduced and a detailed layout.

Setting the screen saver

A screen saver can be activated if the display is not used. Here you can select between a clock, slideshow and weather.

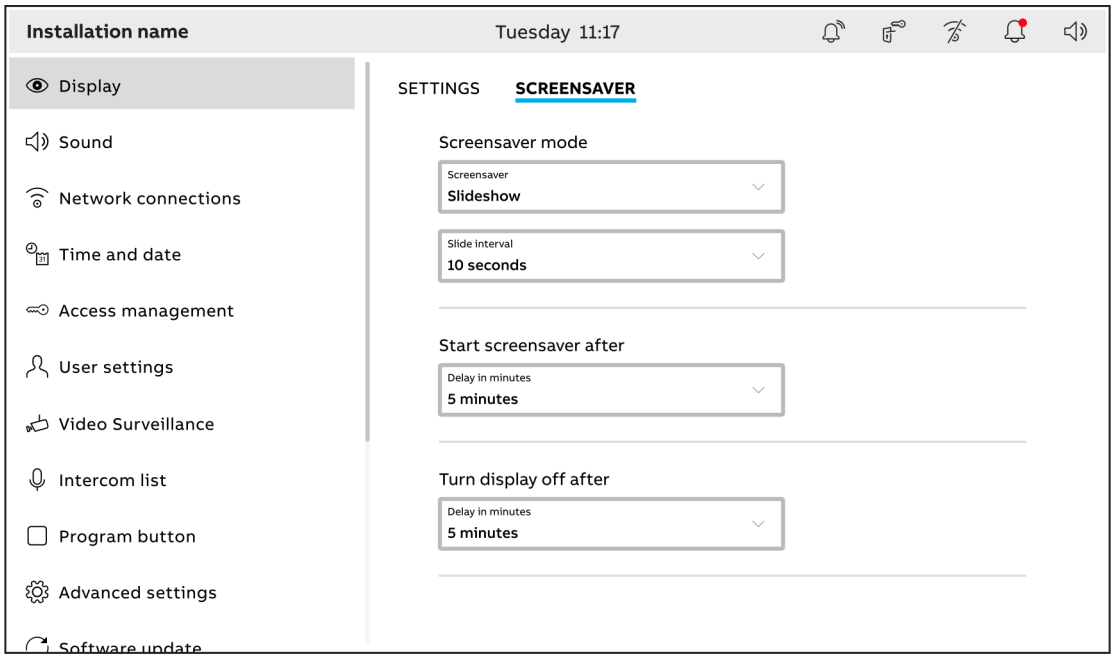


Fig. 55: Display - Screen saver

1. Specifying the type of the screen saver.
2. If required, a time delay up to the triggering of the screen saver can be set.
3. If required, a time delay up to the switch-off of the display can be set.
   – Activate the checkbox additionally when the display is to switch off already after a brief period.

Notice

If the weather display is used as screen saver, the data are called up out of the Internet. The weather data are called up via MyBuildings.

10.6.2. System Settings - Sound

In the system settings under "Sound", general settings and adjustments for click and alarm tones can be specified.

General

After activating the checkbox "Activate click sound", the percentage for click sounds can be specified with the slider.

Also the volume of the sounding alarm tones for connection faults can be specified via a slider.

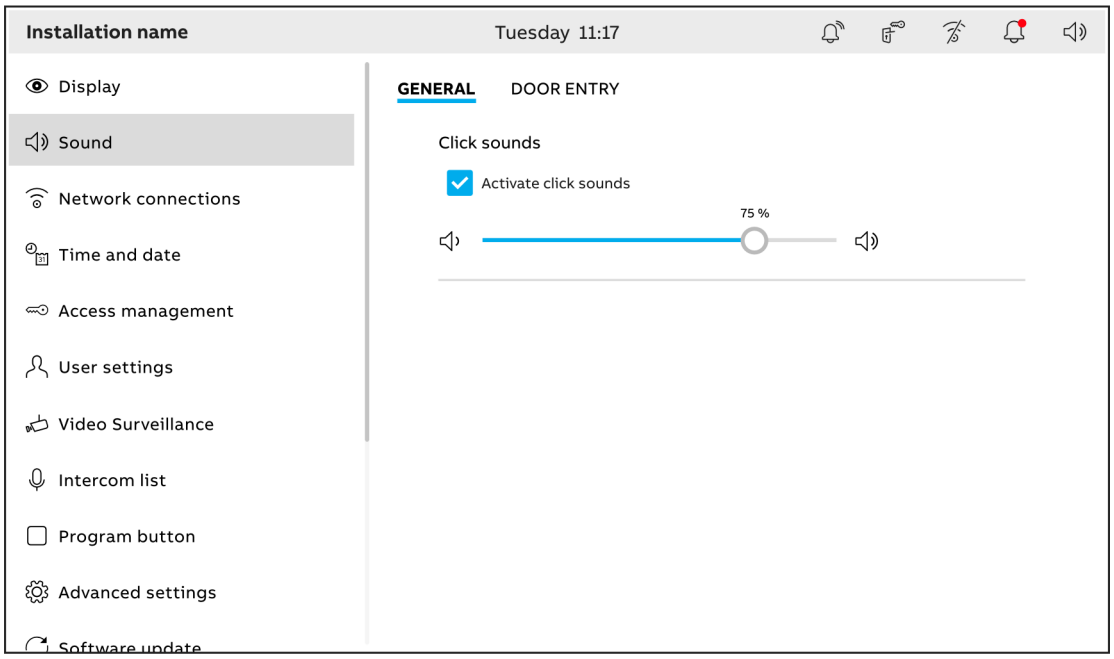


Fig. 56: Sound – General

Door communication

The volume of the bell sound of the door communication is set via the slider. After activating the "Repeat bell sound" checkbox, the bell sound is repeated during a call. A bell sound can be specified for each station.

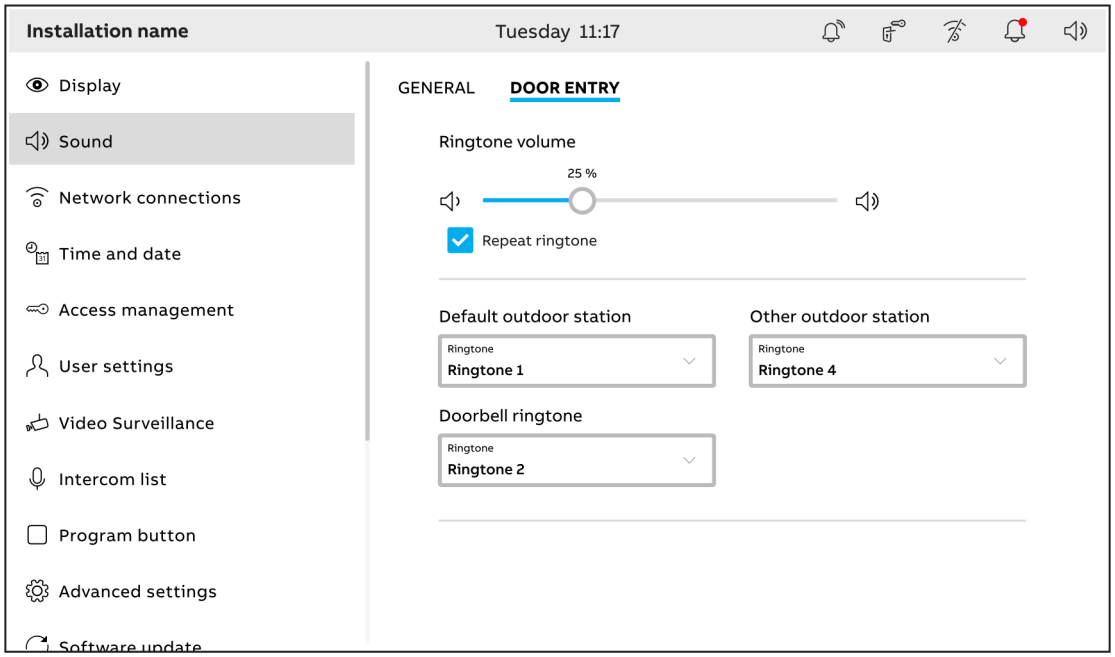


Fig. 57: Sound - Door communication

10.6.3. System settings - Network connections

System settings can be used to make adjustments to the network connections. In addition, a connection to the app and to the MyBuildings portal can be established.

The network connection can be established either via LAN or WiFi.

Establish LAN connection

1. Specify network type on "LAN".
2. When activating DHCP, enter the IP address, subnet mask, DNS and default gateway.

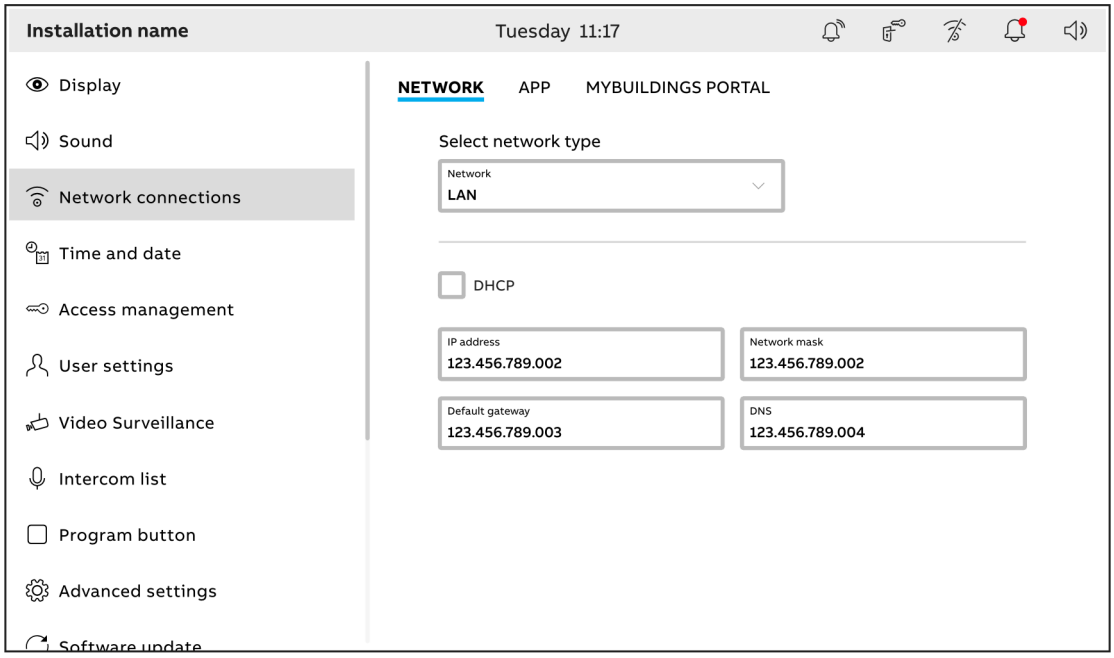


Fig. 58: Network connections - Network (LAN)

Establishing a WiFi connection

A WiFi connection can be established automatically or manually after activating the WiFi function.

1. Specify network type on "WiFi".
2. Establishing a network connection via "Connect manually" or automatically.
3. Scan for available networks.
4. When establishing a manual network connection, enter the SSID and the password.
5. Establish the connection with the "Connect" button.

Notice

If you are in a country with WLAN limitations (Taiwan, Israel, Japan), you can select this in the list below the available WLAN networks.

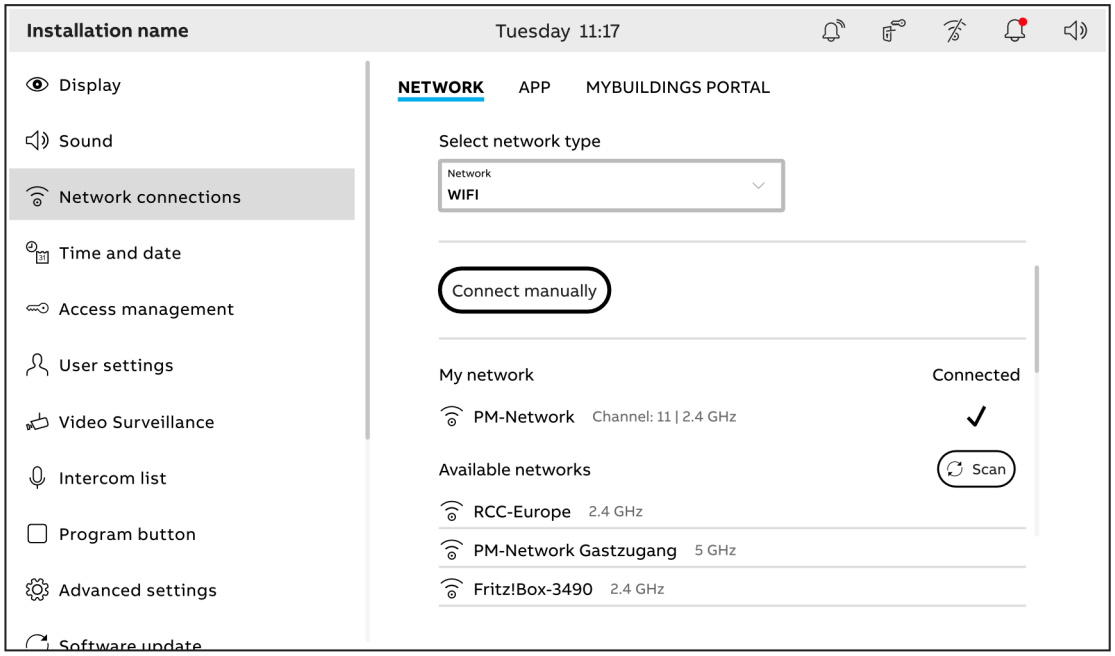


Fig. 59: Network connections - Network (WiFi)

Download the app

The app ABB-free@home® Next App can be downloaded by scanning the QR code in the App tab.

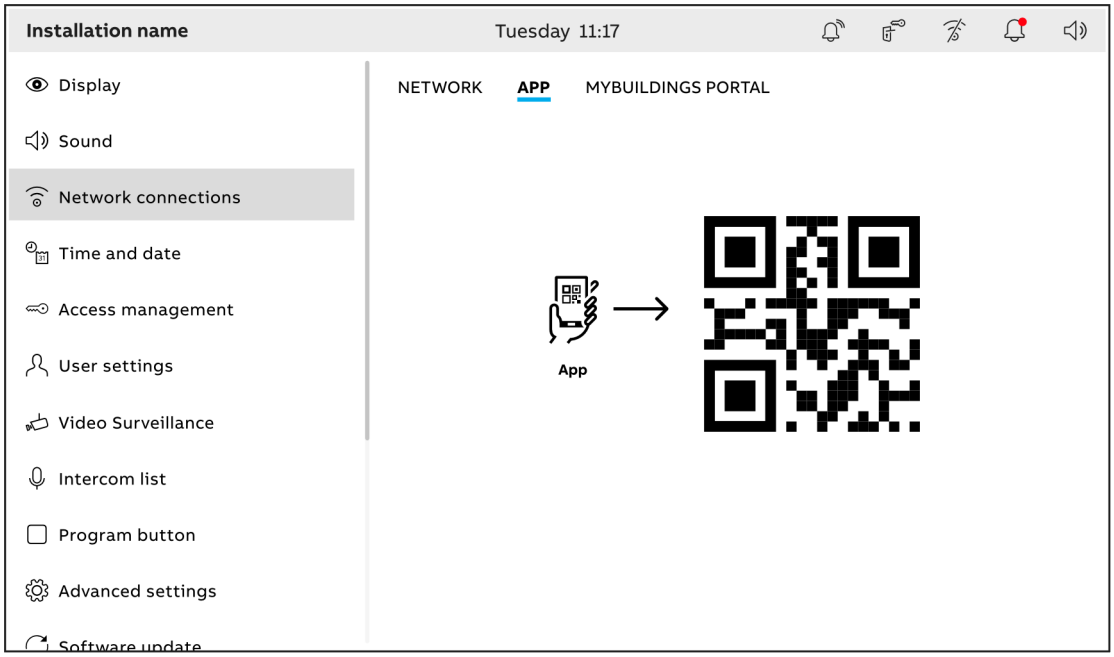
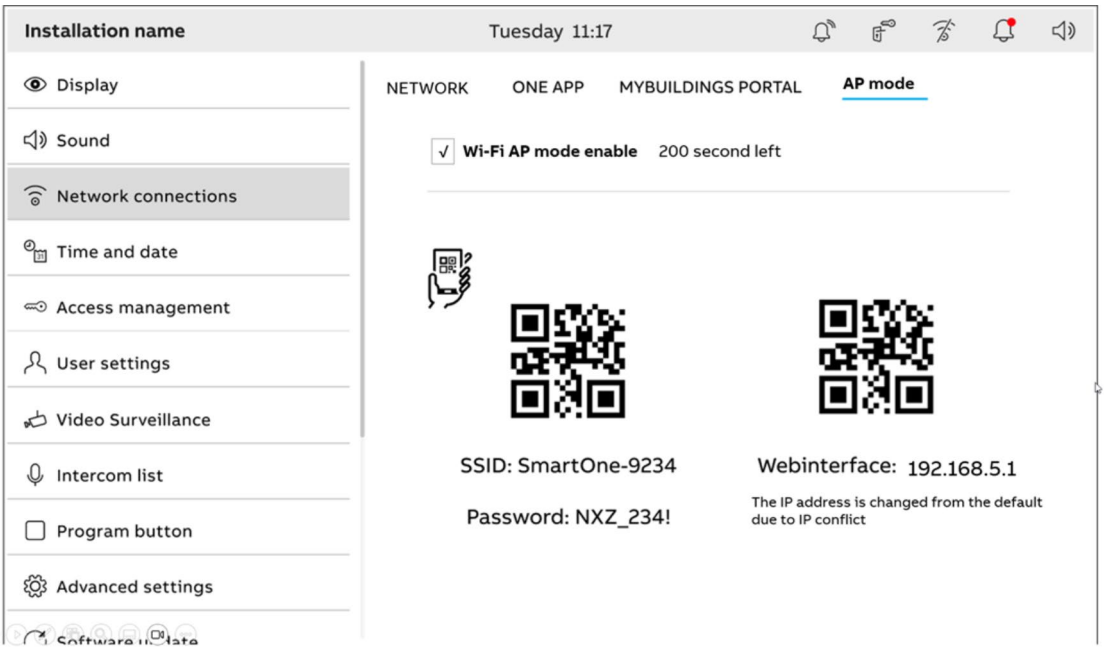


Fig. 60: Network connections - App

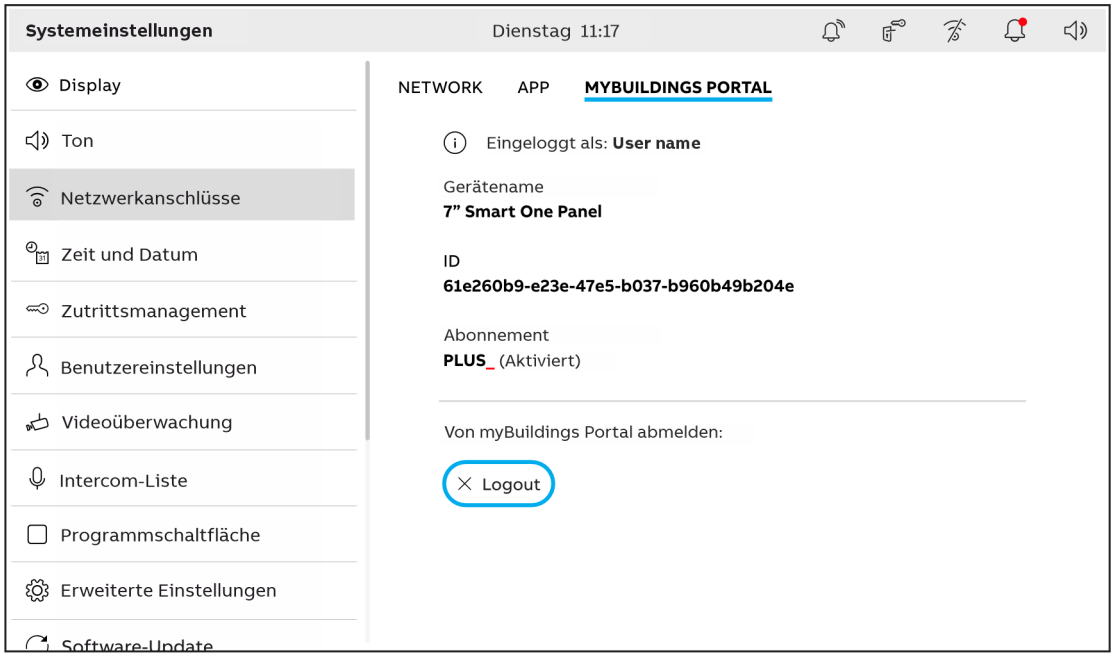
Then a connection with the web-interface of free@home can be established via the app tab by scanning the QR code.



Establishing a connection to the MyBuildings portal

For the remote access a connection must be established to the myBuildings portal.

1. Tap on "Log in" in tab MyBuildings.
2. Enter the login data.
3. Confirm with a tap on "Login".
   – A successful login is confirmed with the message "logged in as:". The name of the connected user and the name of the device are displayed in the overview.



10.6.4. System settings - Time and date

All relevant data can be specified in the time and data settings. Also an automatic time change can be defined.

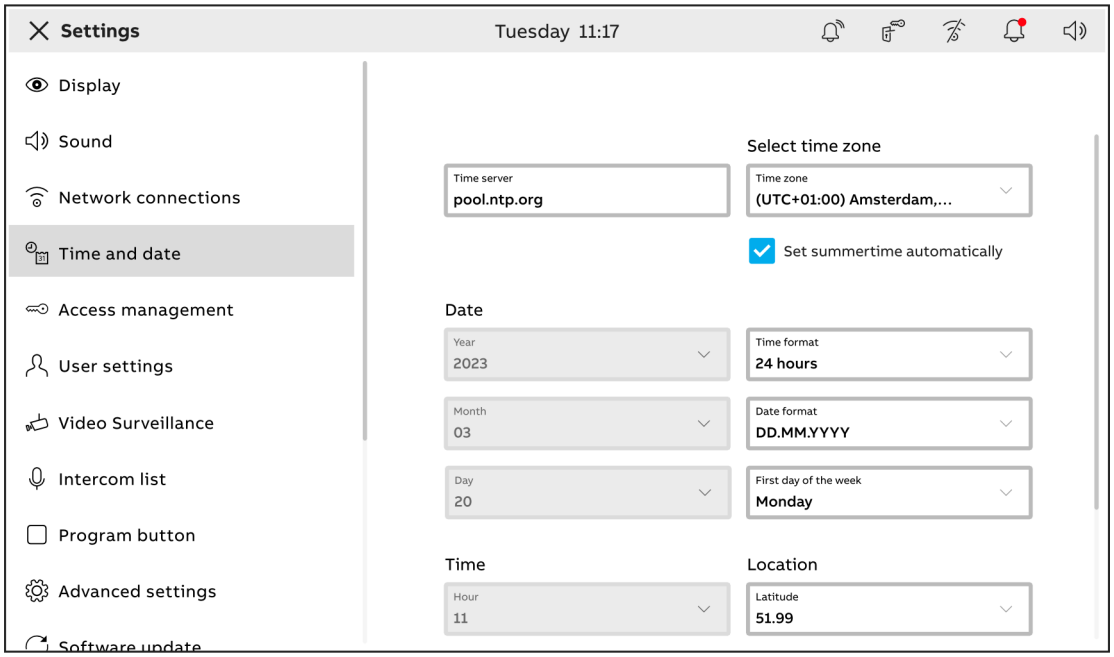


Fig. 61: Time and date settings

10.6.5. System settings - Access management

The settings of the access management make possible the specification of PIN codes for secured areas, outdoor stations and access modules. All available control mechanisms and devices are listed here and can be equipped with a PIN code.

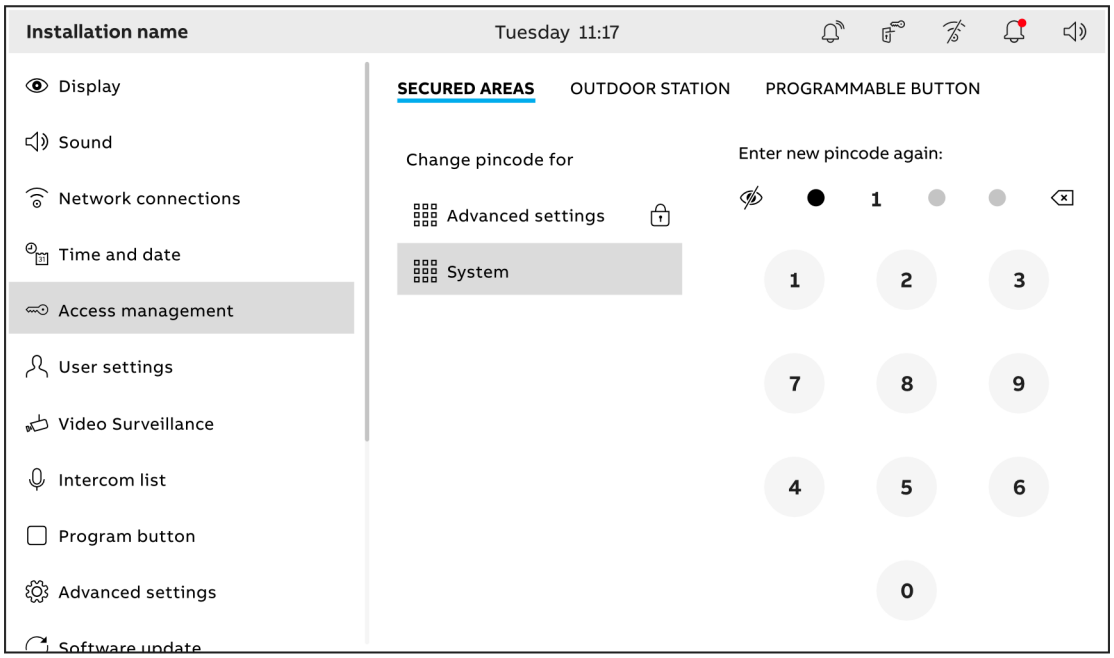


Fig. 62: Access management

Specifying a PIN code

1. Select an area for which a PIN code is to be assigned (e.g. extended settings).
2. Assign a PIN code in the menu in the screen area on the right.
3. Specify the PIN code by tapping on "Save".

Notice
The PIN code can be also newly assigned in this way.

Notice
The initial PIN code for the "Extended settings" area is "345678".

Resetting the PIN code

1. Separate the device briefly from the voltage source.
   – A restart is carried out.
2. After a restart, the "Reset advanced settings pincode" button is available for two minutes in menu "Access management".
   – The PIN-Code is reset to "345678" with a tap on the button.

10.6.6. System settings - User settings

The panel language and the function of sensors and door communication can be set within the user settings. Also the user settings can be reset.

Language and region

The language of the panel and the separators to be used can be specified via the "Language" tab. Here a selection can be made from the specified options within the drop-down menu.

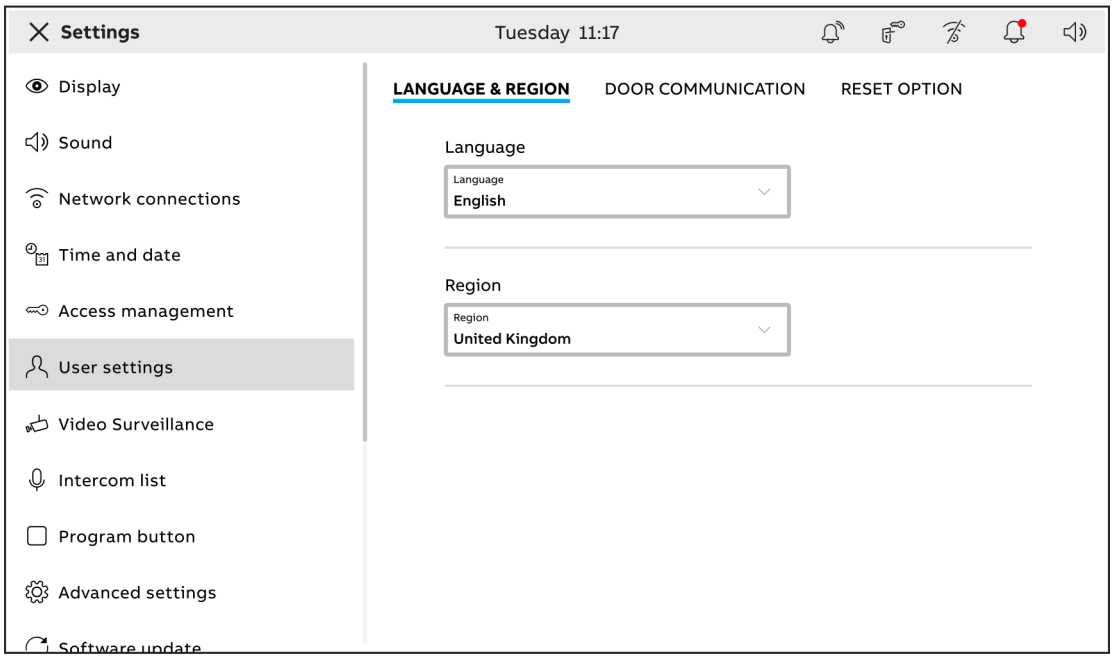


Fig. 63: User settings - Language and region

- **Language**

Options:	<Language>

The parameter is used to specify the language of the panel.

- **Region**

Options:	<Region>

The parameter is used to specify the region of the user. This information is required for the use of the Astro function.

Door communication

The "Door communication" tab can be used to specify how the system is to respond during the recording of snapshots and missed door calls.

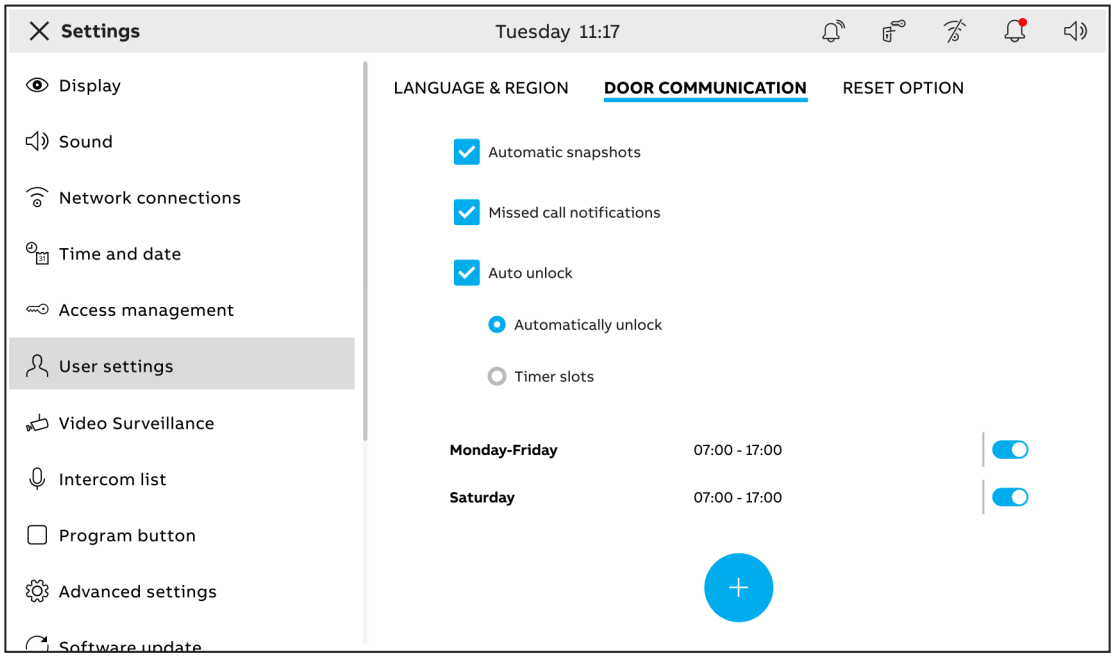


Fig. 64: User settings - Door communication

- **Automatic screenshots**

Options:	Deactivate
	Activate

When the checkbox is activated, the snapshots are taken automatically.

- **Missed call notification**

Options:	Deactivate
	Activate

When the checkbox is activated, notifications are sent automatically when door calls are missed.

- **Automatic unblocking**

Options:	Automatic unblocking
	Timer

When the checkbox is activated, the automatic unblocking of the door communication can be specified. Alternatively, a timer with a time window for automatic unblocking on certain weekdays and at specific times can be configured.

Reset option

The "Reset option" tab can be used to reset the settings assigned to a user. For this the "Reset settings" button must be tapped. Then the reset of the settings must be confirmed with "Yes".

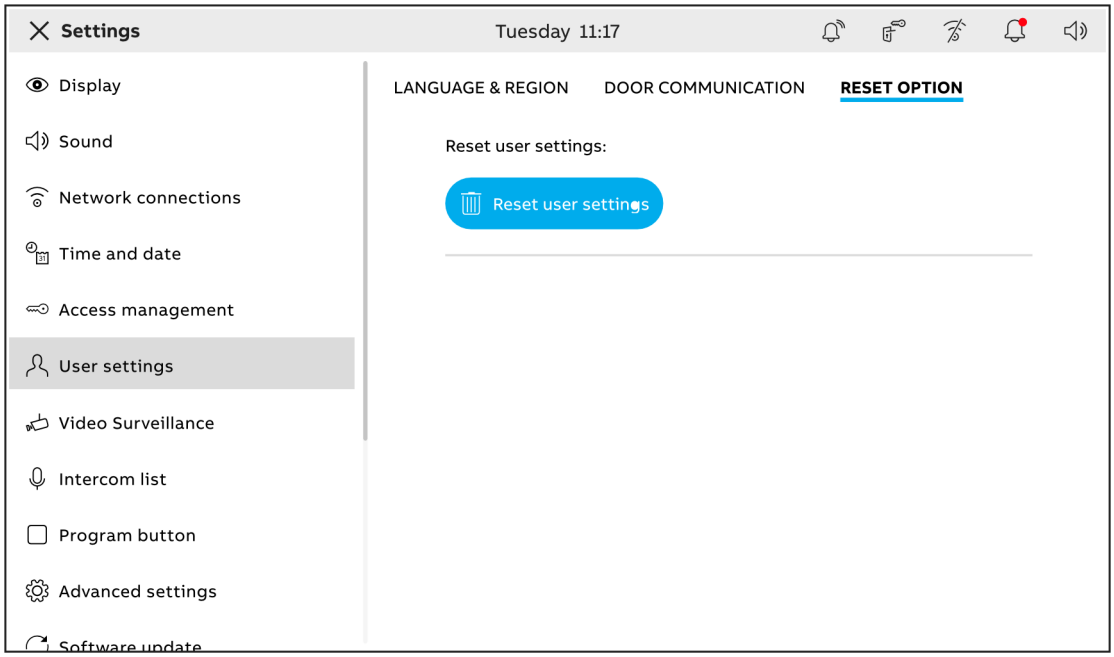


Fig. 65: User settings – Reset option

10.6.7. System settings - Video surveillance

New IP and Welcome cameras can be added and existing cameras can be managed in the video surveillance area.

Notice
The ABB OneTouch 7 only supports IP cameras of type ONVIF/RTSP. ONVIF is always set automatically.

Adding IP camera

A maximum of 10 IP cameras can be integrated via the IP camera tab. However, only one camera at a time can be monitored or used in the entire system. The system can be searched automatically for existing cameras. Cameras can also be integrated manually into the system.

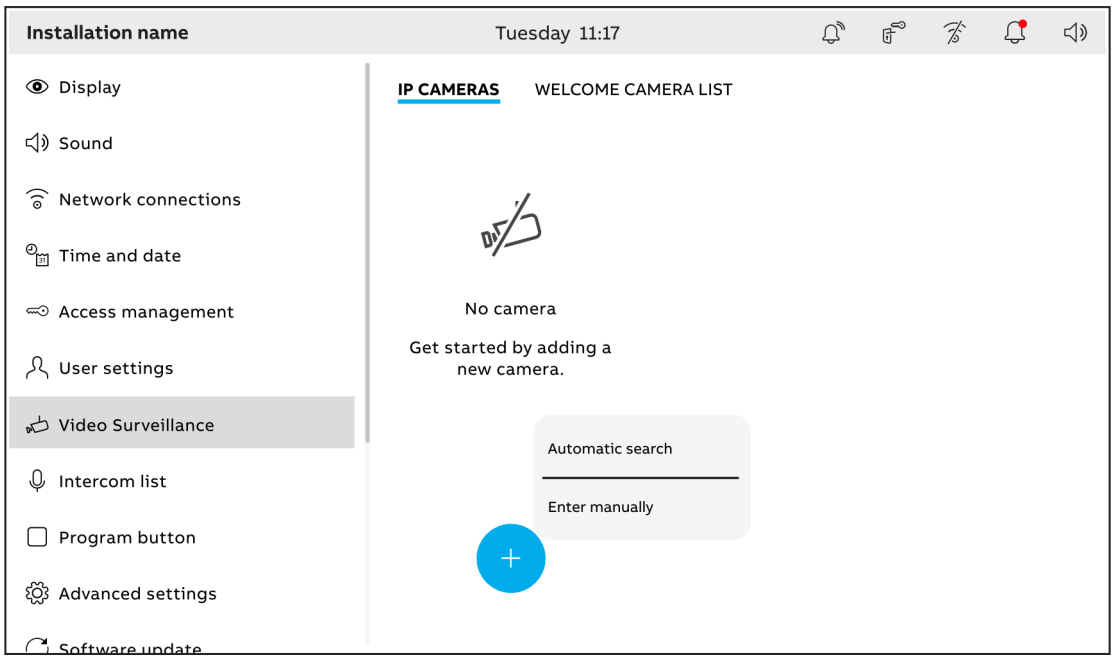


Fig. 66: Adding IP camera

1. Tap on the plus icon.
2. Select whether cameras should be searched for automatically or added manually.
   - Cameras that are found automatically are listed in the screen area on the right. Tap on the corresponding camera to select it.
   - Select the camera protocol for the manually added camera, and enter the RTSP-URL as well as the user name and the password.
3. Then add the camera via "Add".

4. Then name the camera and position it accordingly. If necessary, add a preview image via the "Create preview image" button.

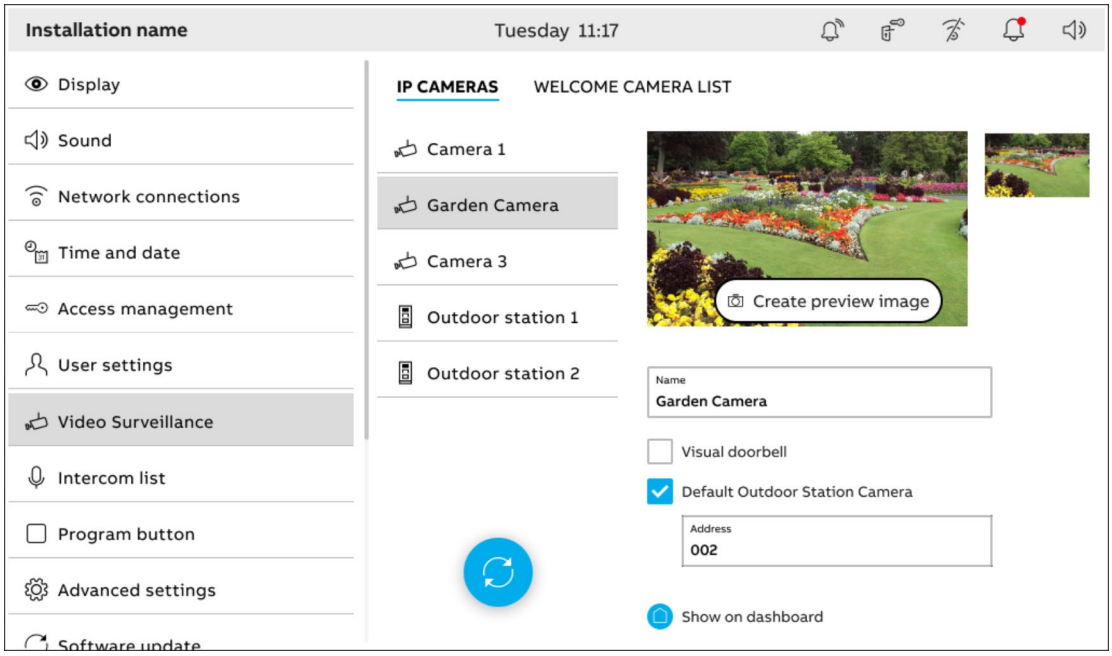
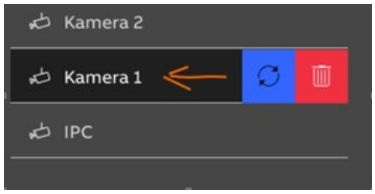


Fig. 67: Managing IP cameras

Deleting IP camera

Integrated IP cameras can be deleted via the IP camera tab. The system can be searched automatically for existing cameras.



1. Select a camera in the camera list.
2. Visualise the camera menu by swiping to the left on the menu entry of the affected camera.
3. Tap on the rubbish bin icon next to the camera to delete it.

Managing Welcome cameras

Cameras can be managed via the "Welcome camera list" tab. The system can be searched automatically for existing cameras. In addition, a camera name, the positioning and a preview on the dashboard can be specified.

1. Tap on the update button.
2. Select a camera from the overview list.
3. Then name the camera and position it accordingly. If necessary, add a preview image via the "Create preview image" button.
4. Tap on the house icon to add the camera to the dashboard.

10.6.8. System settings Intercom list

In the intercom list area new intercom functions for internal house calls can be added.

Adding an intercom

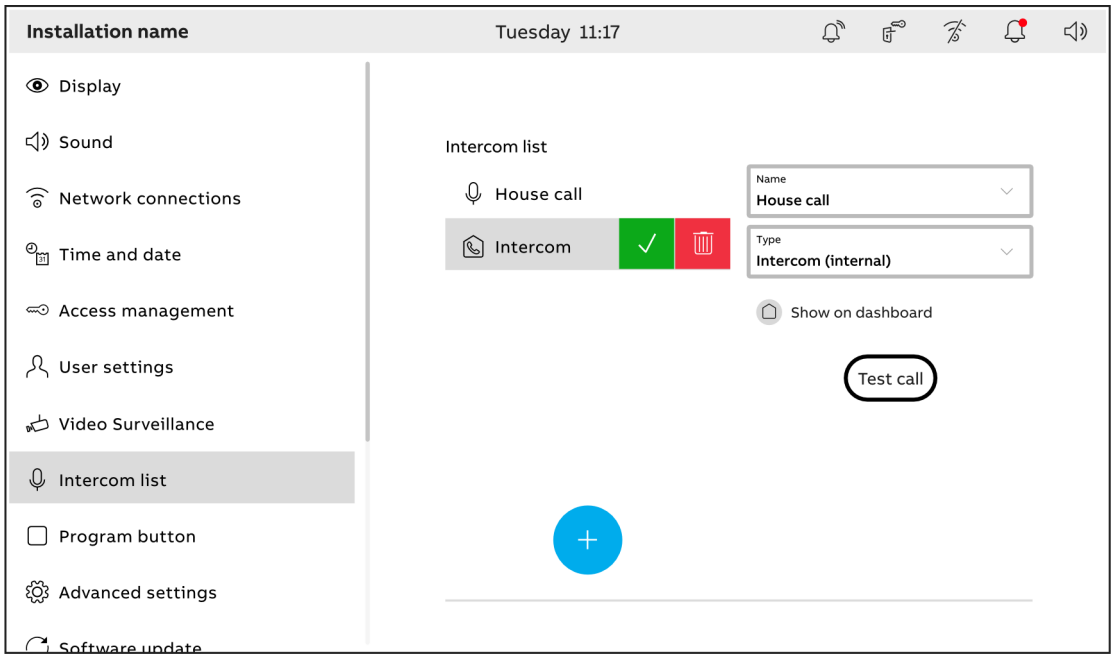


Fig. 68: Adding an intercom

1. Tap on the plus icon.
2. Add the desired intercom.
3. Specify the name and type of the intercom.
4. As an option, enable the intercom for the display on the dashboard.

Deleting an intercom

Intercoms that are already integrated can be deleted from the intercom list by swiping to the left on the menu entry.

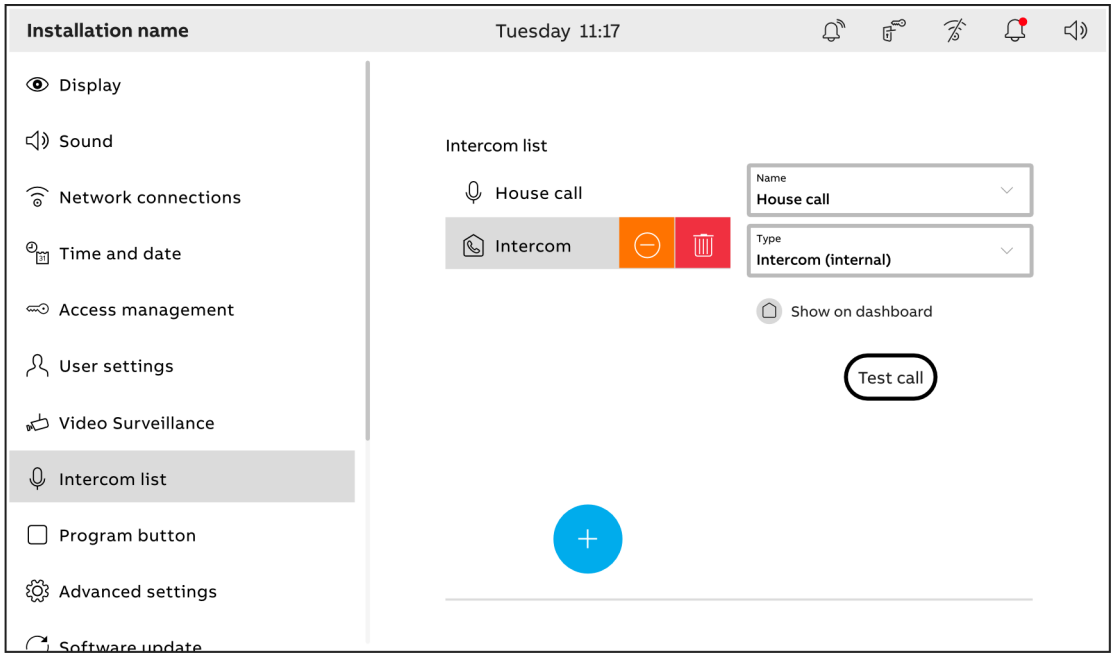


Fig. 69: Deleting an intercom

1. Select an intercom in the intercom list.
2. Visualise the intercom menu by swiping to the left on the menu entry of the affected intercom.
3. Tap on the rubbish bin icon next to the intercom to delete it.

10.6.9. System settings - Program button

New programming buttons can be added via the "Programming button" menu and the door communication can be managed.

Adding programming button

Programming button functions can be added and managed via the programming button tab.

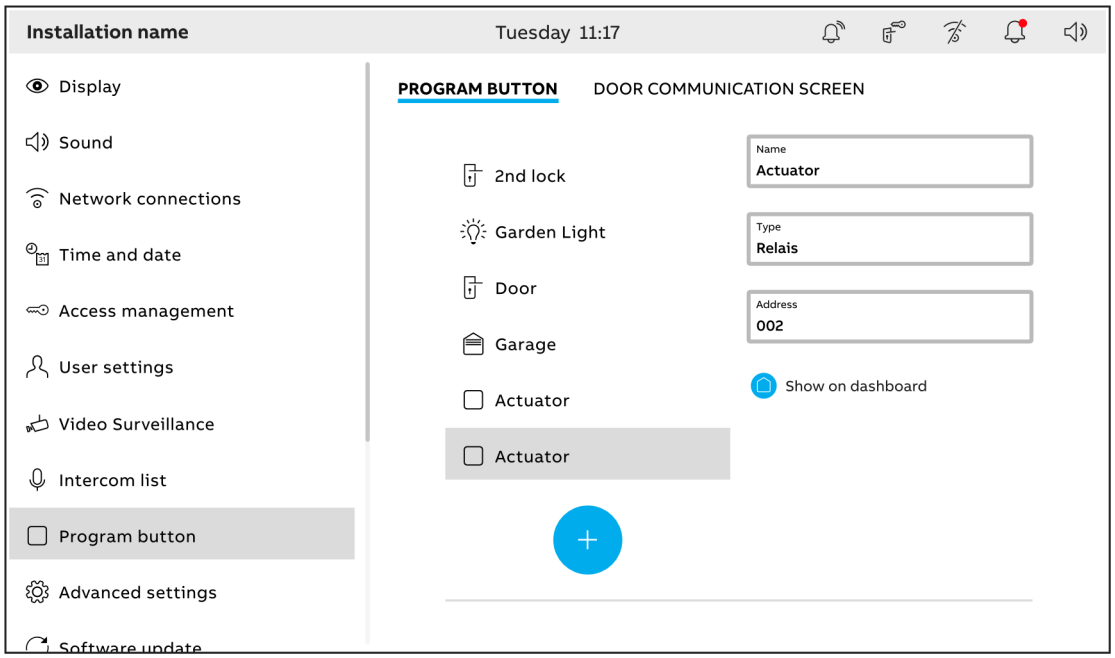


Fig. 70: System settings - Programming button

1. Add a new programming button via the plus icon.
2. Assign a function to the programming button.
   - Lock
   - Garden light
   - Door
   - …
3. Assign a name and specify the type.
4. Enter the address of the programming button.
5. Tap on the house icon to display the programming button on the dashboard.

Door communication screen

Functions of the door communication can be arranged or managed via the door communication tab. This serves to display the functions on the dashboard in the desired order.

1. Select the corresponding programming buttons and functions in the left area.
2. Then add via the arrows.
3. Adjust the order via the arrows in the right area.

10.6.10. System settings - Extended settings

Detail settings on the door communication and building automation can be made via the extended settings. If required, the system can be reset to the factory settings.

The settings can only be made when the PIN code was entered successfully beforehand.

Door communication

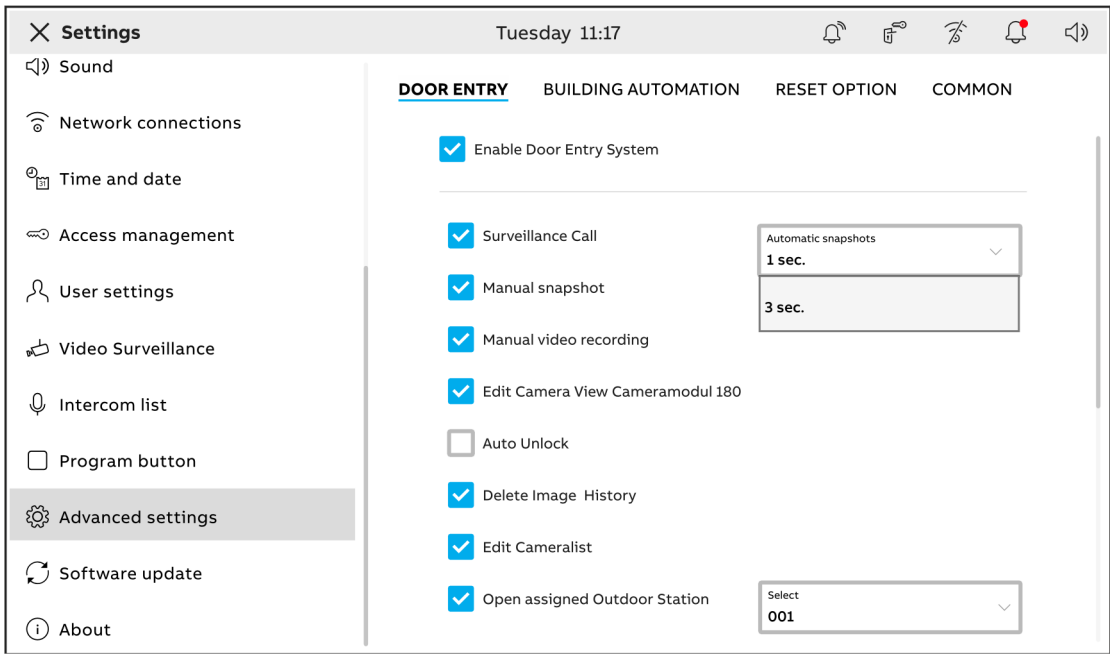


Fig. 71: System settings - extended settings - door communication

Standard functions of the door communication can be activated and deactivated by activating the checkboxes.

Building automation

The operating mode of the panel can be specified in the building automation tab. It can function as internal SysAP or linked with an external SysAP of an existing free@home installation.

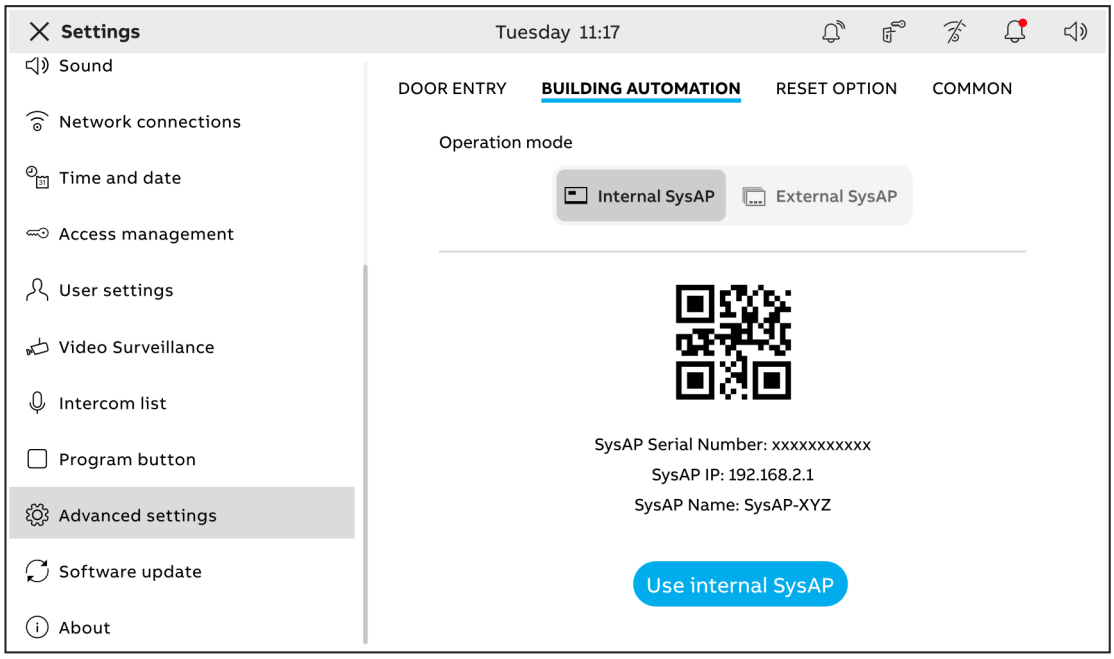


Fig. 72: System settings - extended settings - building automation (internal SysAP)

When using in combination with an existing external SysAp, a connection must be established by tapping on the corresponding button.

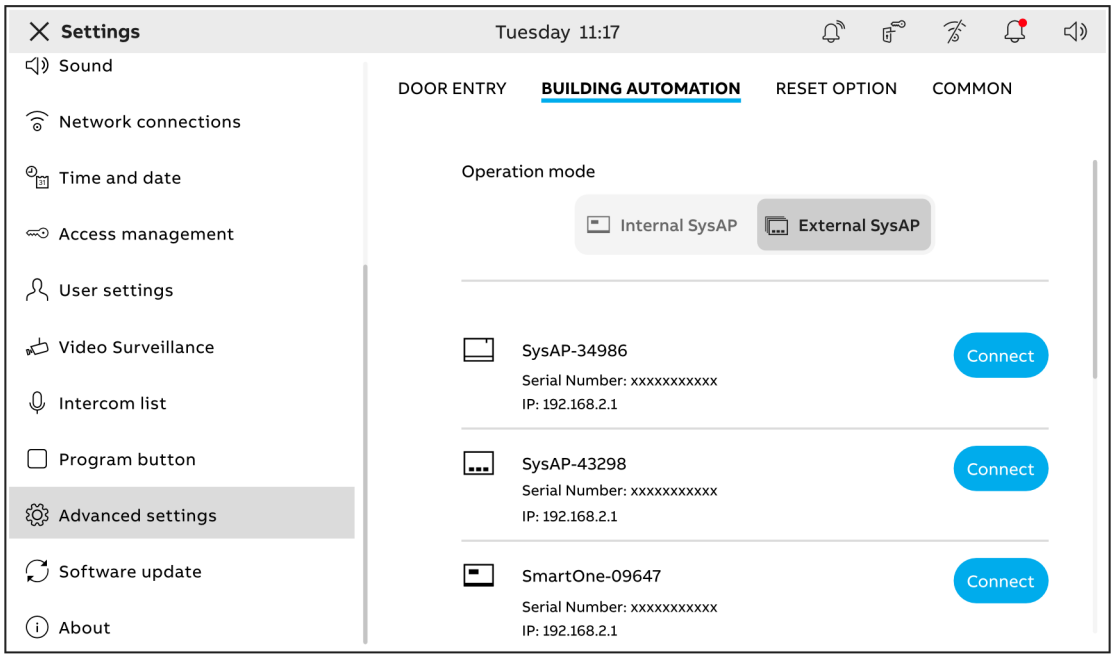


Fig. 73: System settings - extended settings - building automation (external SysAP)

Resetting system to factory settings

The system can be reset to the factory settings in the "Reset option" tab.

1. Tap on the "Reset to factory settings" button.
2. Confirm the enquiry.
   – The system will be reset to the factory settings.

Notice
After a successful reset, the system is restarted.

Notice
An external System Access Point transmits the configuration it knows to the panel. That is why, if required, the additionally existing connection must be deleted from the external System Access Point.

10.6.11. System settings - Software update

Software updates can be searched for via the Internet, downloaded and installed.

Update via the internet

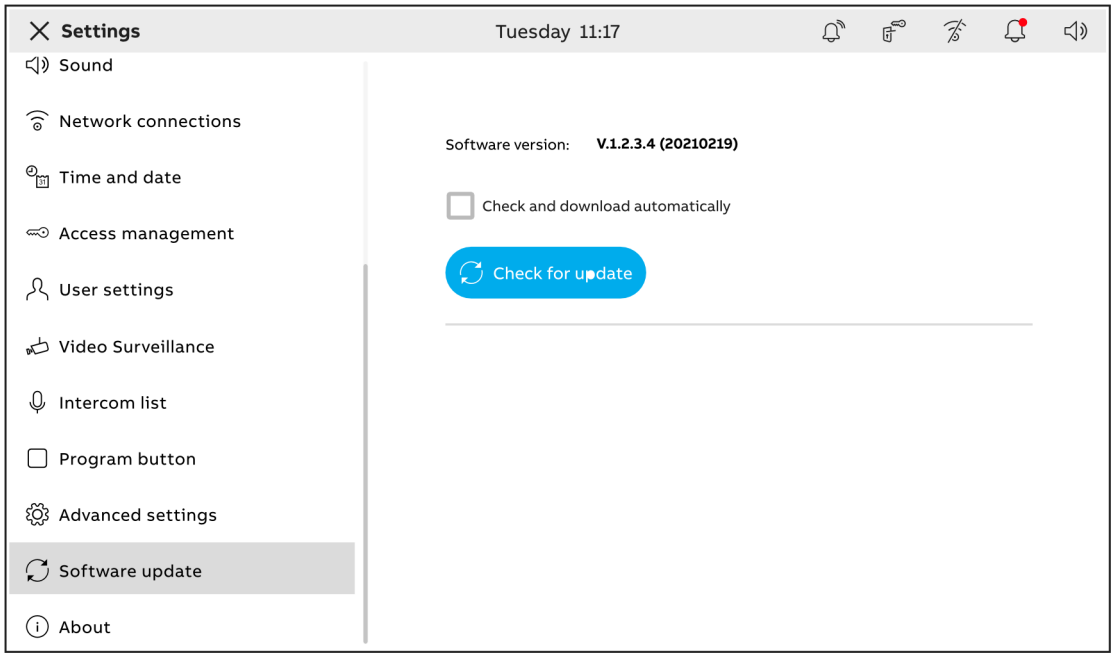


Fig. 74: System settings - Software update

1. Tap on the "Search for updates" button.
   – The system then searches for available updates. A new available update is displayed in the dialogue.

2. Perform the update by tapping on "Install update".
   – The successful installation is displayed in the dialogue. If there was a problem during the update, it can be installed again.

Notice
If required, activate the checkbox "Check and download automatically". This is how updates are searched for and installed.

10.6.12. System settings - Via

Via this page, information about the network, Welcome and free@home devices, general matters (license agreements) and QR codes can be called up. You can switch between the different system information via the tabs at the upper edge of the screen.

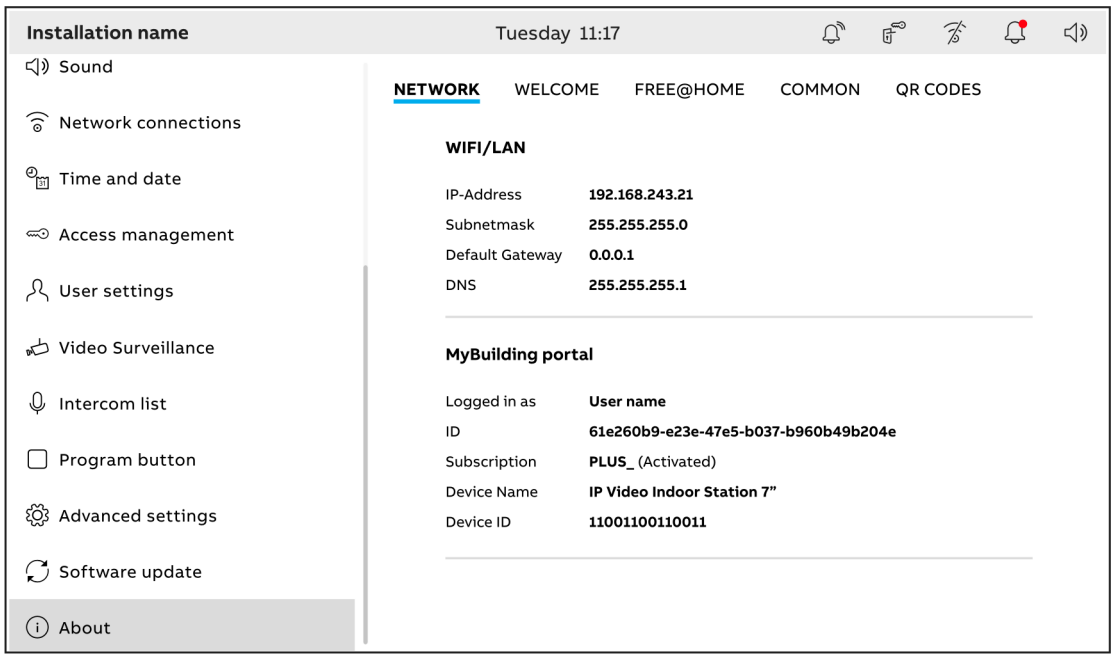


Fig. 75: System settings - Via

10.6.13. Terminal resistor

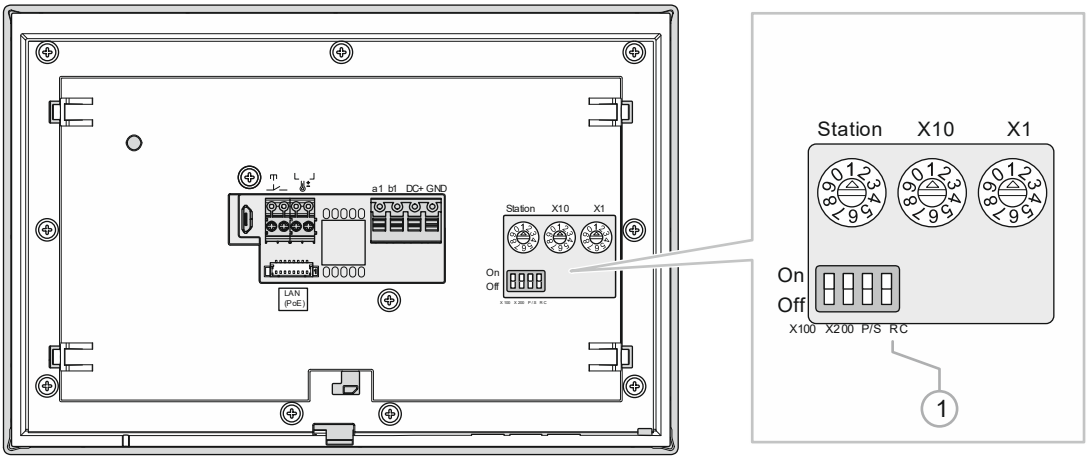


Fig. 76: Terminal resistor

In video installations or mixed audio and video installations, set the terminal resistor for the last devices of a branch on "ON".

10.6.14. Primary/subsidiary function switch

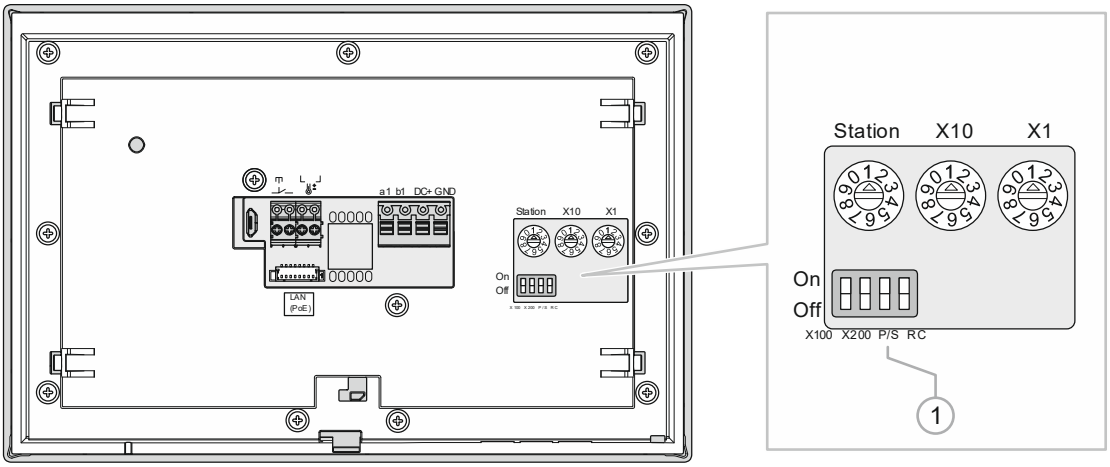


Fig. 77: Primary/subsidiary function switch

One station must always be a "Primary function" in each apartment. All other indoor stations in the same apartment must be "Auxiliary functions".

Indoor station that is set up as "Primary function":

1. Set switch "R/S" [1] on "ON".

All other indoor stations:

1. Set switch "R/S" [1] on "OFF".

11. Update

A software update can be performed by means of the system settings on the panel. Various update options are available (see chapter 10.6.11 “System settings - Software update“ on page 99).

12. Addressing

The individual stations or components are networked with each other in a ABB-Welcome® system.

An example: To ensure that the bell rings in a certain apartment when you press a specific doorbell button, they must be "programmed" together. In this case the indoor station of an apartment is assigned to a doorbell button of an outdoor station. This programming process is designated as "Addressing".

The process of addressing is generally the same for all devices of the ABB-Welcome® system. The addressing is performed via three trimmers and two Dip switches.

- Addressing is carried out on the trimmers and DIP switches.
- The trimmers and DIP switches are located on the rear of the device. To adjust the device it must be removed.

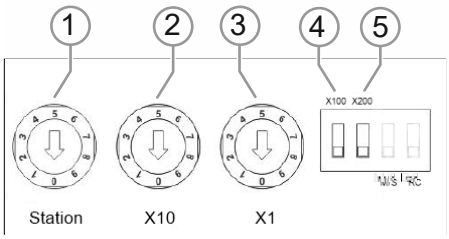


Fig. 78: Trimmers and Dip switches for addressing (Example)

Trimmer [1]:

- Address of outdoor station

Trimmers [2] and [3] and Dip switches [4] and [5]:

- Address of an indoor station.
- Tens digit [2], ones digit [3], [4] and [5] hundreds digits

13. Maintenance

13.1. Cleaning

Caution! - Risk of damaging the device!

- When spraying on cleaning agents, these can enter the device through crevices.
  - Do not spray cleaning agents directly onto the device.
- Aggressive cleaning agents can damage the surface of the device.
  - Never use caustic agents, abrasive agents or solvents.

Clean dirty devices with a soft dry cloth.

– If this is insufficient, the cloth can be moistened slightly with a soap solution.

14. Notes

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