ABB

System Manual | 23.02.2021

ABB-Welcome IP

1 Overview

1.1 Introduction to ABB-Welcome IP

ABB-Welcome IP is an IP door communication system for building communication. The range of functions starts from video and audio transmission, intercom, concierge function, access control function and goes up to the integration of IP cameras. ABB-Welcome IP requires its own IP network.

ABB-Welcome IP offers a safe and easier operation while at the same time retaining a high cyber security standard. The entire communication in the ABB-Welcome IP system is carried out encrypted. This includes video and audio communication, text messages as well as remote access via MyBuildings and the ABB-Welcome® App (Android and iOS). In addition, ABB-Welcome IP offers a future-safe update function via MyBuildings.

The ABB-Welcome IP can be used for major objects where many participants, entrances or several buildings with large distances exist. In addition, theABB-Welcome IP can be used in single residential buildings. This always requires an own structured building cabling. Here private apartments are a separate network segment with an own structured cabling. These are connected with the building network via the "ABB-Welcome IPTouch 7"".

Performance features

Up to 999 buildings each with 64 floors and 32 residential/office units can be portrayed in a ABB-Welcome IP system. Here 64 outdoor stations per building can be portrayed (in the perimeter area 32 outdoor stations and up to 32 outdoor stations in the private area).

The ABB-Welcome IP also offers:

- Full HD (720p) video transmission
- Full duplex voice connections
- Up to 600 participants per system with the "Smart Access Point"
- More than 600 participants with the PC Management Software
    - Separate project request.
    - The actual number of devices depends on the PC performance capacity.
    - ABB-Welcome IP participants means each network-capable device of the ABB-Welcome IP range. This includes all outdoor stations, panels and system devices.
- Up to 5 parallel audio connections per unit.
- Management software for commissioning plus access and news management.
- Global remote access via the ABB-Welcome® App
    - Remote access takes place via the remote access service MyBuildings. This service is subject to a charge.
- Outdoor station with modern touchdisplay
- Concierge station with video surveillance function
- Complete power supply for all ABB-Welcome IP devices via the PoE Standard IEEE802.3af
- Full encryption of the entire ABB-Welcome IP devices.
- Certificate-based device pairing
- Intercom function (apartment-apartment, group call within a unit, internal apartment call)
- Call history
- Text message function (Broadcast, Multicast and Unicast) via Management Software
- Concierge function: door-call exchange, video surveillance function, intercom function

This manual serves as a basis for planning the ABB-Welcome IP system. It supports you in the selection and planning of the correct structure.

It includes an overview of the available components and shows examples for practical combinations and integrations.

For detailed technical information about the individual components please also note the respective product documentation.

In Chapter 7 "Case studies" on page 138 the topics of this document are explained by means of examples. The information in the chapters is structured logically. If you wish to familiarise or re-familiarise yourself again with the topic, read through all the relevant subchapters on this topic.

1.2 Fundamentals of structured cabling

1.2.1 Basic principles

Structured cabling is a uniform setup plan for a network infrastructure. The network infrastructure is independent of the application and future-oriented. Additional designations for the structured cabling are Universelle Gebäudeverkabelung (UGV) (universal structured cabling) or Universelle Kommunikationsverkabelung (UKV) (universal communication cabling).

Structured cabling is to prevent expensive faulty installations and extensions and also make the installation of new network components easier.

Unstructured cabling is normally bound to requirements or a specific application. If the changeover to a new technology or technology generation becomes necessary, this could easily lead to a cost explosion.

Structured cabling is based on a generally valid cabling structure. This cabling structure, among others, takes the requirements for several years into the future into consideration. It contains reserves and can be used independent of the applications. E.g., one lets the local network and the telephony operate via the same cabling.

Structured cabling includes the following points:

- Standardized components (wires, connectors, etc.)
- Hierarchical network topology (star, tree, etc.)
- Recommendations for laying and installation
- Standardized measuring, testing and documentation processes

Objectives of structured cabling

- Support of all current and future communication systems
- Reserve of capacity regarding limiting frequency
- Neutral behaviour of the network regarding the transmission protocol and terminal devices
- Flexible expandability
- Fail-safe due to star-shaped cabling
- Implementation of data protection and security
- Adherence to existing standards

Standards for structured cabling

Area of validity	Standard	Description
Europe	EN 50173-1 (2003)	Cabling standard information system - application-neutral cabling systems
North America	TIA/EIA 568 B.1 (2001) / B.2 1 (2001)	Telecommunication cabling standard for building cabling
World	ISO/IEC 11801 (2002)	Cabling standard for application-neutral building cabling

Table 1: Standards for structured cabling

ISO/IEC 11801 (2002) and EN 50173-1 (2003)
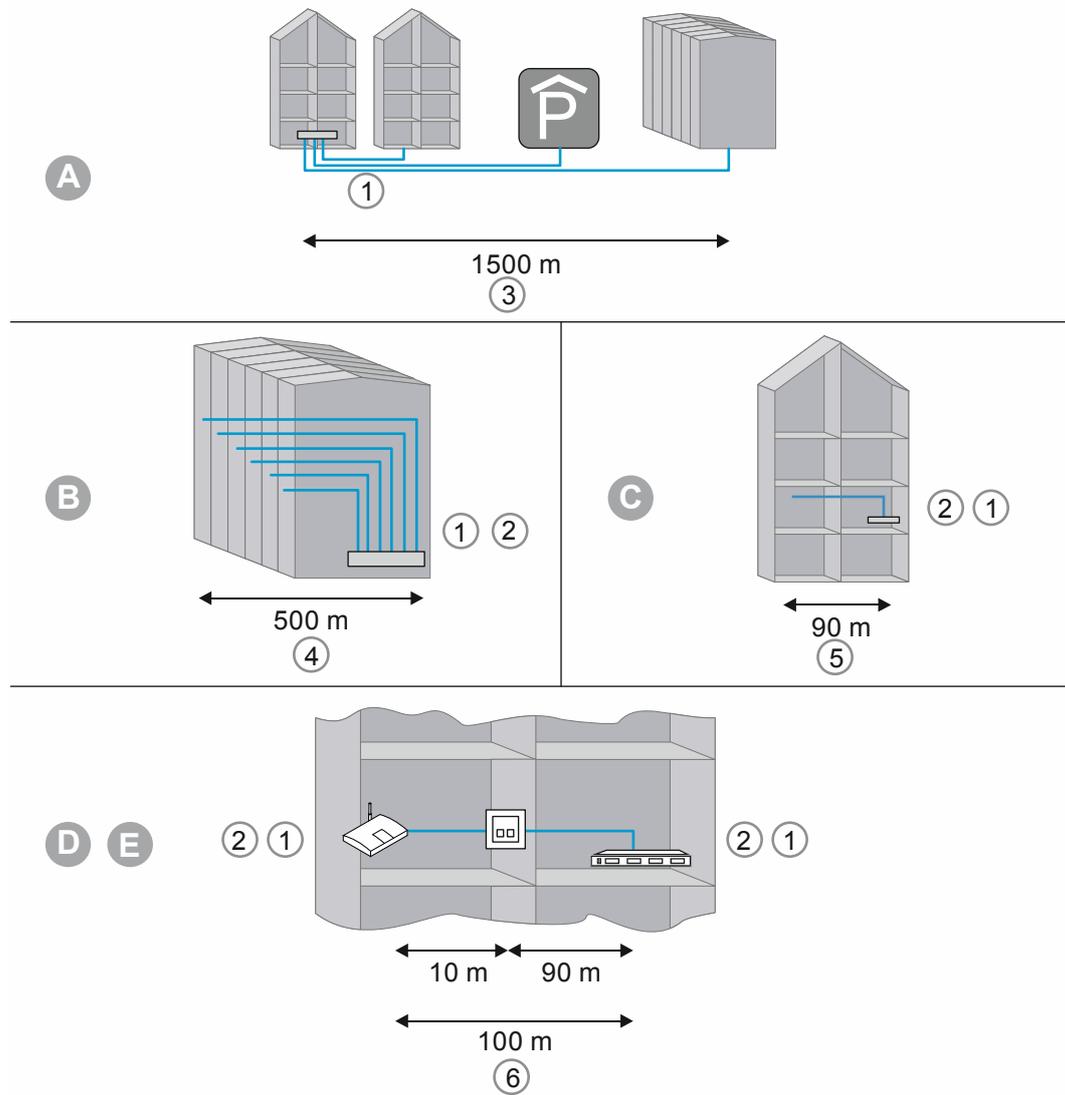
Fig. 1:   Structured cabling

A	Location distributor
B	Building distributor
C	Floor distributor
D	Connection unit
E	Terminal device
1	Optical fibre
2	Copper conductor
3	Primary area
4	Secondary area
5	Tertiary area
6	Tertiary area including patch cable

Table 2:   Structured cabling

In the European standard (EN) and the globally valid ISO standard, structuring is carried out in the form of hierarchical levels. These levels are formed by groups. These groups are joined topologic and administrative.

Cabling is divided into the following areas:

- Site cabling (primary cabling)
- Building cabling (secondary cabling)
- Floor cabling (tertiary cabling)

The cabling standards are optimized for the following geographic expansion:

- Expansion: 3000 m,
- Area: 1,000,000 sqm
- Users: 50 - 50,000

Maximum admissible cable lengths have been specified in every cabling sector and must be adhered to during installation. Many transmission techniques refer to the defined cable lengths and quality requirements.

Notice
All ISO standards are recommendations for handling. The adherence to the ISO standard is voluntary. Adherence to the ISO standards my be demanded by different parties, such cooperation partners, manufacturers and customers.

Primary cabling - Site cabling

The primary area is designated as campus cabling or site cabling. The primary area implements the joint cabling of individual buildings. The primary area includes large distances, high transmission rates as well as a minimum number of stations.

In most cases is glass fibre cable (50 μm) with a maxim length of 1,500 m used. Normally these are glass fibre cables with multi-mode fibres or also single-mode cables in case of greater distances. Sometimes also copper cables are used for smaller distances.

The primary area should fundamentally be planned in greater detail. The transmission medium should, with regard to the transmission speed, be open upwards. This equally applies to the transmission system used. As a rule of thumb, a 50 percent reserve applies to the current requirement of the investment.

Secondary cabling - building cabling

The secondary area is designated as building cabling or rising area cabling. The secondary area implements the joint cabling of individual floors or storeys within a building. Here the preferred use is glass fibre cables (50 μm) or copper cables with a maximum length of 500 m.

Tertiary cabling - floor cabling

The tertiary area is designated as floor cabling. The tertiary area implements the cabling of floor or storey distributors to the connection sockets. While a network cabinet with a patch field is located in the storey distributor, the cable at the workplace of the user leads to a connecting socket on the wall, to a cable duct or a floor tank with outlet.

Twisted pair cables are used for these relatively short distances whose length is limited to a total of 100 m (90 m plus 2 x 5 m connecting cable). Also glass fibre cables (62.5 μm) are used as an alternative.

Components of structured cabling:

- Patch field (patch panel)
- Patch cable
- Connection sockets
- Network cable
- Distributor cabinets
- Switch, hubs, router

1.2.2 Wiring of a ABB-Welcome IP system

For a ABB-Welcome IP system there is a distinction between a building network and units network. The building network includes all conduits and network components from the outdoor station up to the master indoor station of a unit (apartment or business unit).

The unit network includes all components within a unit (apartment or business unit). A unit network is required for the following applications:

- More than one indoor station (extension units).
  - A maximum of 8 indoor stations per unit can be installed.
- When using the app "ABB-Welcome® App".
- Connection of free@home.
- Connection of KNX.
- Outdoor stations that are assigned to only one unit.
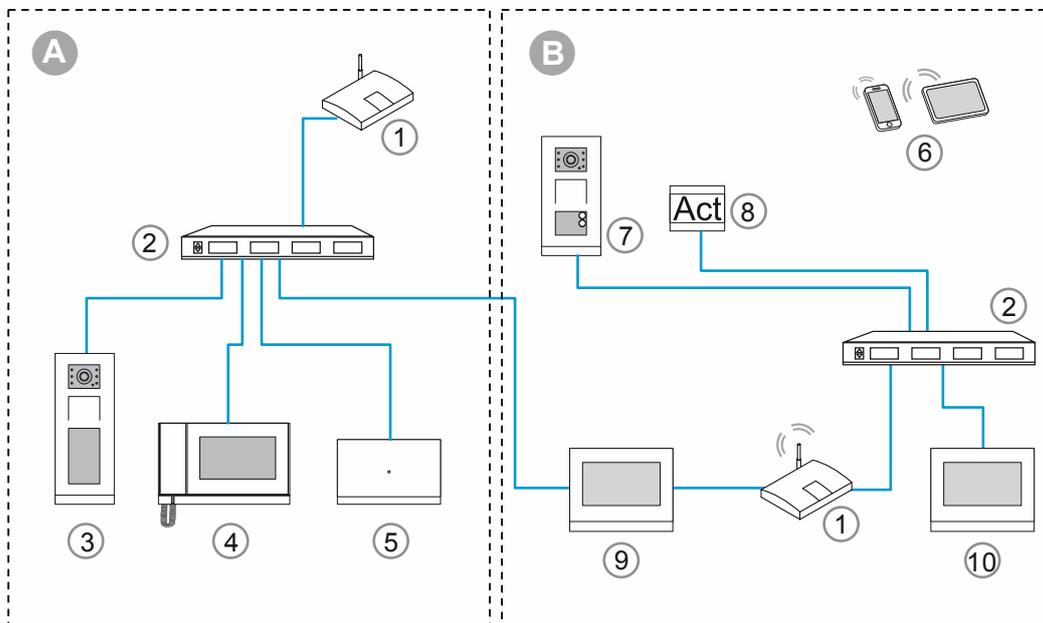
Fig. 2:   Structured cabling

A	Building network
B	Unit network

1	Router
2	Switch
3	IP touch 5" outdoor station H8138.T-.
4	Guard unit H8303
5	Smart Access Point D0401.
6	Smartphone / tablet in the unit network
7	IP pushbutton outdoor station H81381P.-.
8	IP switch actuator
9	ABB-Welcome IPTouch 7" (Master)
10	ABB-Welcome IPTouch 7" (Extension unit)

The "Master" indoor station operates as gateway between the two networks.

A gateway in an active network node. This active node can connect two networks with each other that are physically incompatible with each other and/or use different addressing. Gateways couple the different protocols and transmission processes with each other.

1.2.3 Ports a services in a ABB-Welcome IP system

The following ports a services are used in a ABB-Welcome IP system.

Port	Service
5060, 5070	UDP (SIP)
5004 / 5005 / 5006 / 5007	UDP
8016 / 8017	UDP
7777	UDP
7005 / 7006	TCP
7777	TCP
8001	TCP
5061, 5070	TCP (sips)
50602	UDP
239.0.0.1:3333	UDP (Multicast)
239.0.0.1:4444	UDP (Multicast)
239.0.0.1:5555	UDP (Multicast)
8887	TCP
10777	TCP (TLS)
11778	TCP (TLS)
12779	TCP (TLS)
5269	TCP
5222	TCP (TLS)
1070, 1071	UDP
8277	TCP

Table3:   Ports a services

1.3   Major projects

For major projects (e.g. a building complex with more than 600 participants) a PC software version is required. This software is available upon request at ABB.

Notice
ABB-Welcome IP participants means each network-capable device of the ABB-Welcome IP range. This includes all outdoor stations, panels and system devices.

2 Overview of product range

2.1 Outdoor stations

2.1.1 Devices

ABB-Welcome IP Outdoor stations are installed in the outdoor and indoor areas.

The versatility of the devices makes them suitable for the following areas:

- Building entrances
- Perimeter areas
- Storey areas
- Apartment doors
- Basement garages

For the door call there is also a voice output aside from the classic doorbell buttons. The voice output can be activated as an option.

Outdoor stations are always equipped with video function.

Outdoor stations are available in the materials stainless steel and white.


Fig. 3:   Outdoor stations

	1	2
Article number	H8138.T-.	H81381P.-.
Type	IP touch 5" outdoor station	IP pushbutton outdoor station
Video image	720P	720P
Camera angle diagonal / horizontal / vertical	139° / 111° / 73°	139° / 111° / 73°
Anti-mist camera	●	●
Automatic day/night switchover	●	●
Integrated status display via LED symbols (complies with DIN 18040)	●	●
Capacitive touch screen 5 inch	●	—
Virtual keypad	●	—
Programmable buttons	—	●
Detection of door status	●	●
Integrated lighting and automatic background illumination	●	●
Transfer of all calls to the "Guard unit"	●	●
Integrated RFID reader (MIFARE® DESFire® EV1 and EV2)	●	—
News and advertising via 5 inch monitor	●	—
Induction loop for persons with impaired hearing	●	●
Power supply		
▪ Via PoE (802.3af)	●	●
▪ Local supplier (24 V DC, 450 mA)	●	●
Mounting		
▪ Flush-mounted/surface-mounted	●	●
Protection rating	IP 54	IP 54
Safe against vandalism	IK 07	IK 07

2.1.2 Installation boxes

Overview of installation boxes

The installation boxes for surface mounting or flush-mounted installation are available separately in the corresponding size for each device.

Notice

Installation boxes for surface mounting, flush mounting and pre-plastered mounting are not included in the scope of delivery of an outdoor station and must be purchased separately.
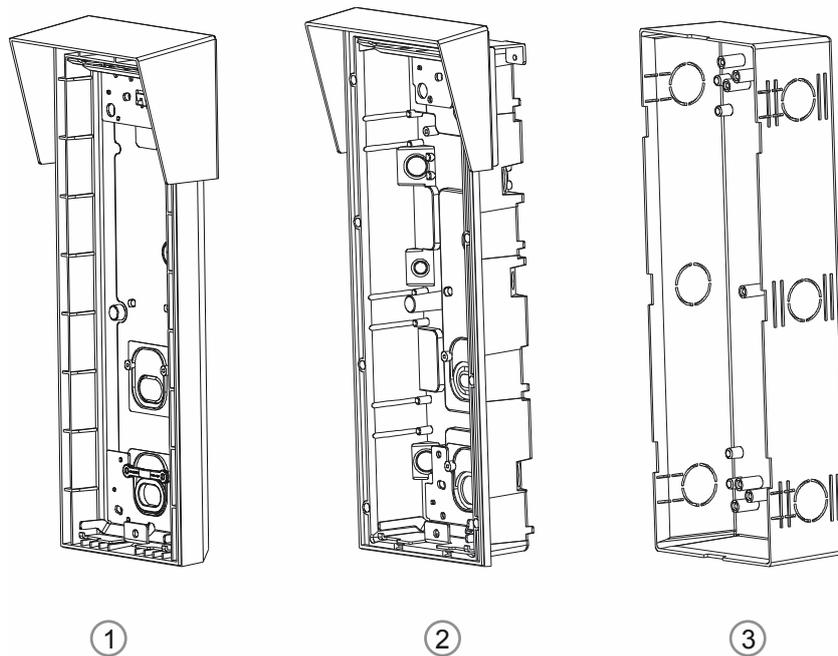

Abb. 4:   Installation boxes for outdoor stations

Surface mounting	
1	Installation boxes for surface mounting ▪ Flush-mounted box for outdoor stations size 1/3, size 1/4, size 1/5, size 2/3
Flush mounting	
2	Installation boxes for flush-mounted installation ▪ Flush-mounted box for outdoor stations size 1/3, size 1/4, size 1/5, size 2/3
3	Pre-plastered mounting box ▪ The pre-plastered mounting box serves as mounting accessory for plastering walls or facades. The pre-plastered mounting box is installed prior to plastering. The pre-plastered mounting box offers mounting points for the flush-mounted installation box. ▪ Pre-plastered mounting box for outdoor stations size 1/3, size 1/4, size 1/5, size 2/3

Sizes for the outdoor station installation boxes

Outdoor station				
	1 x 5	1 x 4	1 x 3	2 x 3
Size	1 x 5	1 x 4	1 x 3	2 x 3

Installation boxes for surface-mounted installation: Outdoor station

1 x 5	1 x 4	1 x 3	2 x 3
41385.S-xxx	41384.S-xxx	41383.S-xxx	41386.S-xxx

Installation boxes for flush-mounted installation: Outdoor station

Installation box

1 x 5	1 x 4	1 x 3	2 x 3
41385.F-xxx	41384.F-xxx	41383.F-xxx	41386.F-xxx

Pre-plastered mounting box

1 x 5	1 x 4	1 x 3	2 x 3
41385.PB-xxx	41384.PB-xxx	41383.PB-xxx	41386.PB-xxx

2.1.3 Individual assembly arrangement

Aside from the assembled devices, devices can also be arranged individually from single modules.

Cover frame

1 x 5	1 x 4	1 x 3	2 x 3
41385CF-x-xx	41384CF-x-xx	41383CF-x-xx	41386CF-x-xx

Video and audio modules
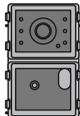
H851381M-x-xx

Doorbell button modules: Round push-buttons

51381RP1-xx	51381RP2-xx	51381RP3-xx

Doorbell button modules: Round push-buttons with read function for transponder cards

51382RP1-xx	51382RP2-xx	51382RP3-xx

Doorbell button modules: Surface push-buttons

51381SP3-xx	51381SP4-xx

End strip modules

For: 1x3 / 1x4 / 1x5	For: 2x3
51381EP-x-xx	51382EP-x-xx

2.2 Indoor stations IP Touch 7 and Guard unit

2.2.1 Devices

The door call is signalled at the IP Touch 7 or Guard unit. Here the call is received and the door is opened when a visitor arrives. The camera image is displayed directly, to ensure that you immediately see who is at the door and you can communicate with the visitor.

As an option, a visitor can leave an audio message, if the function has been enabled in the IP Touch 7.

IP Touch 7 permits the integration of SmartHome functions via ABB-free@home®.

IP Touch 7 permits the integration of the ABB-Welcome® App with https://mybuildings.abb.com. Internet connection in the apartment is a prerequisite.

The indoor stations can also be used with the intercom function for communication within and between apartments and buildings.

The integrated blacklist can be used to specify which calls are blocked automatically.

For the Guard unit a similar range of functions is available as for the IP Touch 7. The concierge can transfer the call to an IP Touch 7 or assign the access authorisation himself. The ABB-Welcome® App function and Smart Home are not possible for the concierge station.
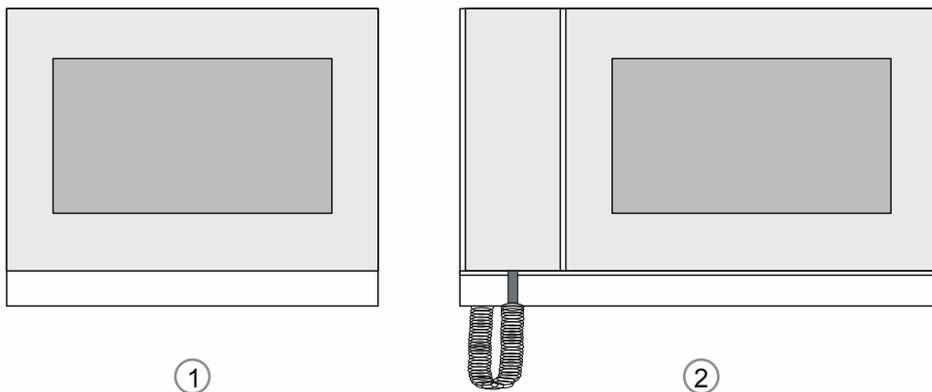
Fig. 5:   Indoor stations

	1		2
Article Number	H82364	H82365	H8303
Type	IP Touch 7	IP Touch 7	Guard unit
Touchscreen	●	●	●
Extension on app without additional system equipment (prerequisite is an Internet connection)	●	●	—
Central operating field for DES, CCTV, AC and home automation (KNX & F@H)	●	●	●
Video doorbell via IP camera	●	●	●
LAN interface	1	2	1
Wi-Fi interface	1	—	1
Remote firmware update	●	●	●
Power supply			
▪ PoE	●	●	●
▪ Local power supplier CP-D 24/2.5 MDRC power pack	●	●	●
Mounting			
▪ Wall mounting, surface-mounted	●	—	●
▪ Wall mounting, flush-mounted	●	●	—
▪ Desktop mounting	●	—	●
Call lists	●	●	●
Receipt of alarm and emergency call (SOS)	●	●	●
Fire alarm input	—	●	●
Support for surveillance of outdoor stations or IP cameras.	●	●	●

Notice on selection of indoor stations IP Touch 7
The LAN-LAN version of the indoor station can only be installed flush-mounted.

2.2.2 Installation boxes

Overview of installation boxes

The installation boxes for surface mounting or flush-mounted installation are available separately in the corresponding size for each device.

Notice
Installation boxes for surface mounting, flush mounting and pre-plastered mounting are not included in the scope of delivery of an indoor station and must be purchased separately.
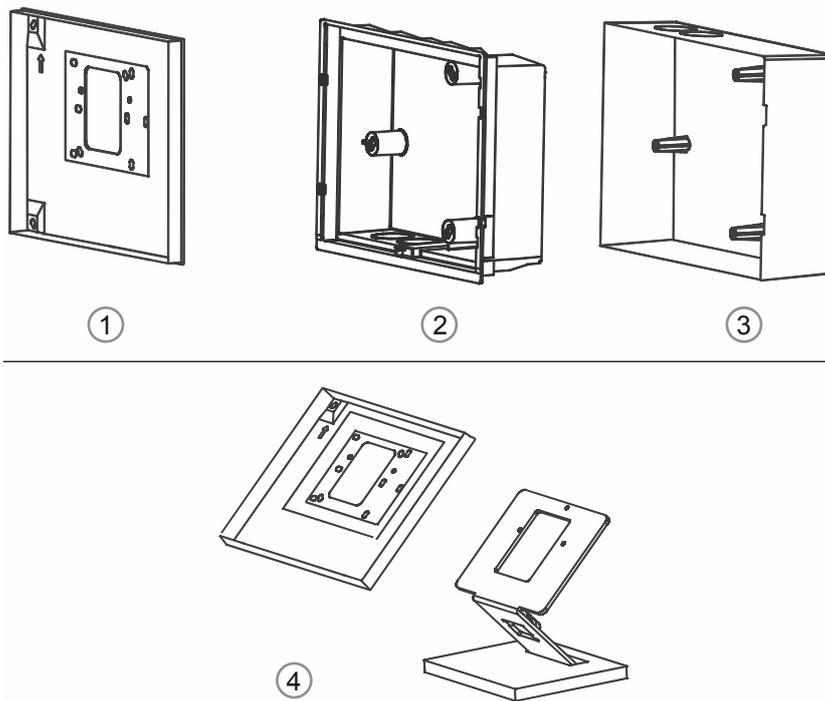
Fig. 6:   Installation boxes / Installation box accessories

	Surface mounting
1	Installation boxes for surface mounting
	Flush mounting
2	Installation boxes for flush-mounted installation ▪ The mounting box for flush-mounted installation is always supplied as a set together with the associated pre-plastered box.
3	Pre-plastered mounting box ▪ The pre-plastered mounting box serves as mounting accessory for plastering walls or facades. The pre-plastered mounting box is installed prior to plastering. The pre-plastered mounting box offers mounting points for the flush-mounted installation box.
	Desktop mounting
4	Installation box and table stand for desktop mounting

Installation boxes for surface-mounted installation: Indoor station

- H82364 IP Touch 7
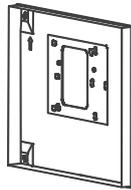
42363.S-xxx

Installation boxes for flush-mounted installation: Indoor station

Installation box plus pre-plastered box mounting box

- H82364 IP Touch 7
- H82365 IP Touch 7
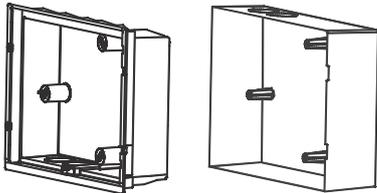
42363.F-xxx

Table stand

Indoor station IP Touch 7	Guard unit
- 42363.S-xxx Installation box - 83506-500 Table stand	The Guard unit has been designed for mounting on desktops. No additional accessories are required for mounting on the desktop. The table stand is included in the delivery. Also wall mounting is possible. For this the device must be removed from the table stand.

2.3 System devices
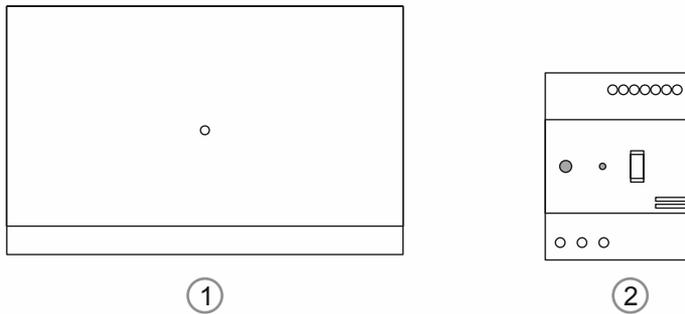
Fig. 7:   System devices

[1] „Smart Access Point " D0401.

The management software is installed on the "Smart Access Point". The management software is operated via the indoor station.

The "Smart Access Point" offers the access point for commissioning and managing the ABB-Welcome IP with a PC or a mobile terminal device.

For opening the Web-based user interface of the Smart Access Point" you require a computer with a LAN or WLAN network adaptor and an installed Internet browser.

[2] IP actuator H8304

The "IP actuator" carries out the switching commands. The setting is made via the management software.

The "IP actuator" has the following main functions:

- Connection of door openers or lighting circuits.
- The switching duration of the lock release or the switching on of the lighting can be set via the Smart Access Point".
- DIN rail mounting.
- Firmware can be updated via the "Smart Access Point".
- Power supply via PoE or separate power supply adapter.

3 PoE switch selection

For the selection of a PoE switch please observe the following points:

▪ All ABB-Welcome IP devices meet standard IEEE802.3af

– ABB-Welcome IP devices can be operated with PoE switches that meet standard 802.3af or 802.3at. A power supply via 24 V is also possible as an alternative to the PoE.

▪ The minimum band width amounts to 100 Mbit/s.

Notice
During selection observe that the absolute total output on the PoE switch is adequate for all devices to be connected.
▪ Do not load the PoE switch to its limit.
▪ Include a power buffer of at least 20% when calculating the total output.

Device	Power supply: PoE switch	Power supply: Local	Consumption	Recording of power (W)
IP Touch 7	●	●	300 mA / 27 VDC	8.1
IP touch 5" outdoor station	●	●	400 mA / 27 VDC	10.80
Guard unit	●	●	85 mA / 27 VDC	2.30
Smart Access Point Lite	●	●	375 mA / 27 VDC	10.13
IP actuator	●	●	30 mA / 27 VDC	0.81

Table 4:   Calculation of consumption

Example for the selection of a PoE switch

Count	Device	Power (W)
4	IP Touch 7	32.4
1	IP touch 5" outdoor station	10.8
1	Guard unit	2.295
1	Smart Access Point Pro	10.125
1	IP actuator	0.81
	Total output	**56.43**

Table 5:   Determination of total output of the devices to be connected

Result	
Number of occupied ports:	8
Necessary total output:	56.43

Table 6:   Result of total output of the devices to be connected

Recommendation:

For the calculation of a reserve for the future, a PoE switch with 12 ports and a total output of 70 W is recommended for this example.

Devices recommended by ABB

Netgear ProSafe series

	GS108LP	**GS108PP**	**GS116LP**	**GS116PP**
Speed	10/100/1000 Mbit/s Gigabit Ethernet	10/100/1000 Mbit/s Gigabit Ethernet	10/100/1000 Mbit/s Gigabit Ethernet	10/100/1000 Mbit/s Gigabit Ethernet
Number of ports	8	8	16	16
PoE ports	8 PoE + ports up to 30 W per connection	8 PoE + ports up to 30 W per connection	16 PoE + ports up to 30 W per connection	16 PoE + ports up to 30 W per connection
PoE total power	60 W	123 W	76 W	183 W

Table 7:   Recommended switches

4 Onsite devices

4.1 Door opener

Commercially available door openers with the following key data can be supplied with electrical power via the ABB-Welcome IP switch actuators.

▪ 12 V AC/DC, maximum 500 mA

For all other commercially available door openers an onsite power supply must be provided.

5 Connection, installation / mounting

5.1 Outdoor stations: SM installation boxes

Notice
▪ The device is always installed together with the surface-mounted installation box via a deep standard flush-mounted box.
▪ The mounting height of the device and the deep standard flush-mounted box should always be aligned so that the cable can be guided through the surface-mounted installation box without a problem and the device can again be mounted at the desired height.
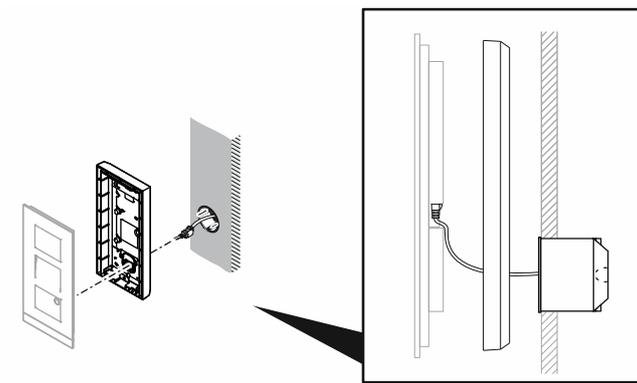
Fig. 8:   Mounting instruction for the surface-mounting of outdoor stations

For mounting the surface-mounted installation box, perform the following points:
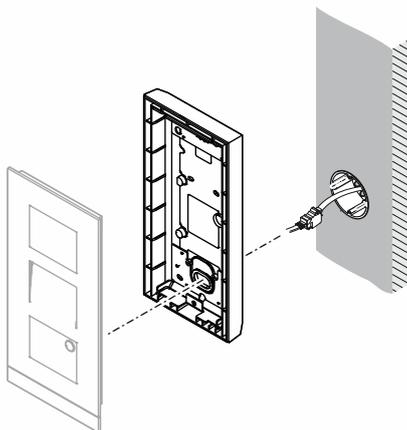
Fig. 9:   Mounting the surface-mounted installation box

1. Align the mounting height between the outdoor station, the surface-mounted installation box and the deep flush-mounted box.
2. Create the boreholes for mounting.
   – The suitable template is enclosed with the box.
   – Dimensional drawings, see chapter 5.9.3 "Installation boxes - Surface mounting" on page 57.

3. Attach the surface-mounted installation box.

   – Fix the surface-mounted installation box on the facade with the aid of the elongated holes.

   – No additional accessories are necessary for mounting.

4. Mounting the outdoor station.

   – see chapter 5.3 "Outdoor stations" on page 39.

5.2   Outdoor stations: FM installation boxes and plastered boxes

5.2.1   Mounting in insulated facades

For mounting the installation boxes in insulated facades, perform the following points:
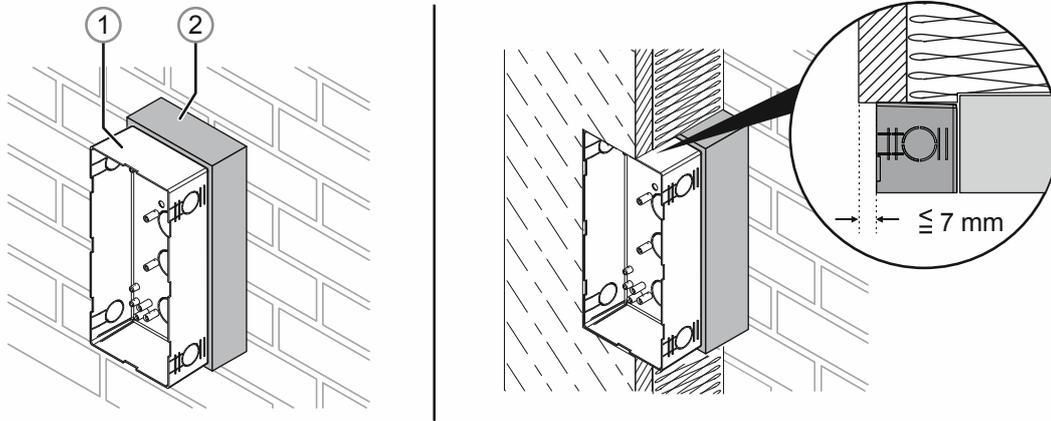
Fig. 10:   Mounting in insulated facades: Plastered box on device carrier

1. Fix the plastered box [1] to a device carrier [2] that is suitable for the insulated exterior facades (e.g. universal device supports, from Kaiser).

    –   Ensure that the installation height of the device carrier and the plastered box matches the thickness of the planned exterior insulation (e.g. 160 mm exterior insulation).

    –   Align the mounting height of the plastered box and the device so that the cable can later be guided through the flush-mounted installation box without a problem and the device can be at the desired height.

    –   The plastered box can later be located a maximum of 7 mm deeper than the plastered surface of the wall. If it is more, use a higher device carrier or distance pieces between the device carrier and the plastered box.

2. Insert the cable through a suitable hole in the plastered box.

3. Protect the plastered box against penetrating plaster, etc. E.g. with a cut-to-size polystyrene block that is inserted into the plastered box.

4. Ensure during insulating and plastering that no cavities are created, to prevent heat bridges from forming. Fill any existing cavities with suitable insulation material.

After the insulation and plastering:

5. Carefully remove the plaster located over the box.

    –   Ensure that a sufficient amount of plaster remains so that the hole can later be completely covered by the encircling "Collar" of the flush-mounted installation box.
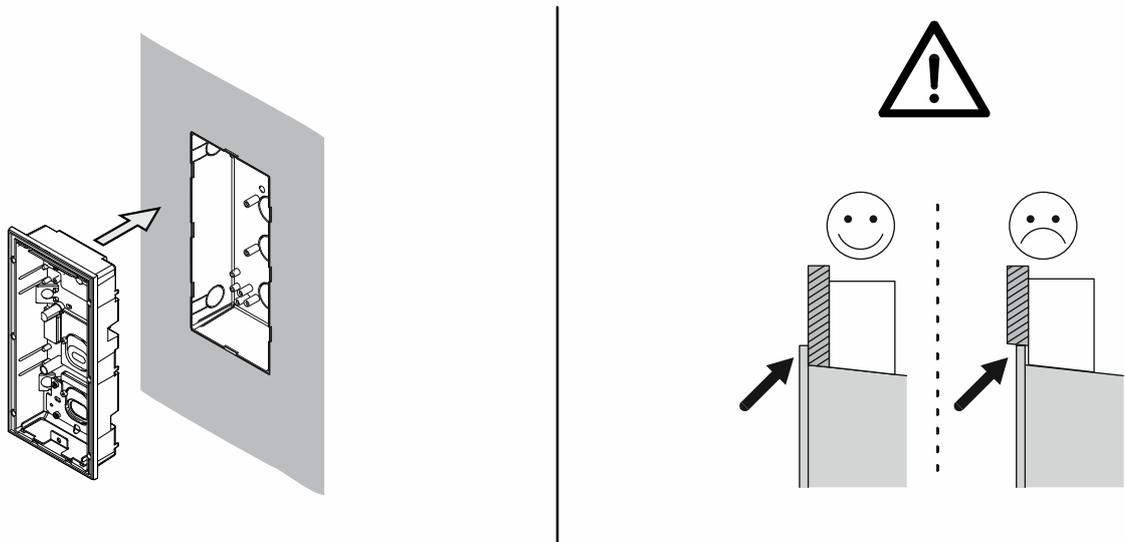
Fig. 11:   Mounting in insulated facades: Inserting flush-mounted installation box

6. After the wall has been plastered, insert the flush-mounted box into the plastered box.

    –   Attention:

        Ensure that the encircling "Collar" of the flush-mounted installation box rests on the facade. The encircling "Collar" of the flush-mounted installation box must not be submerged in the facade. The device can then not be mounted later.

    –   Tighten the flush-mounted installation box with the enclosed screws.

        –   For this, use the four elongated holes in the bottom of the flush-mounted installation box. Information on the elongated holes and boreholes is available in the graphics of the drilling templates, see chapter 5.9.3 "Installation boxes - Surface mounting" on page 57 and see chapter 5.9.4 "Installation boxes - flush-mounted installation" on page 59.

        –   Use the shorter or longer screws depending on the thickness of the plaster.

7. Mounting the outdoor station.

    –   see chapter 5.3 "Outdoor stations" on page 39.

5.2.2 Mounting in clinker facades

For mounting the installation boxes in clinker facades, perform the following points:
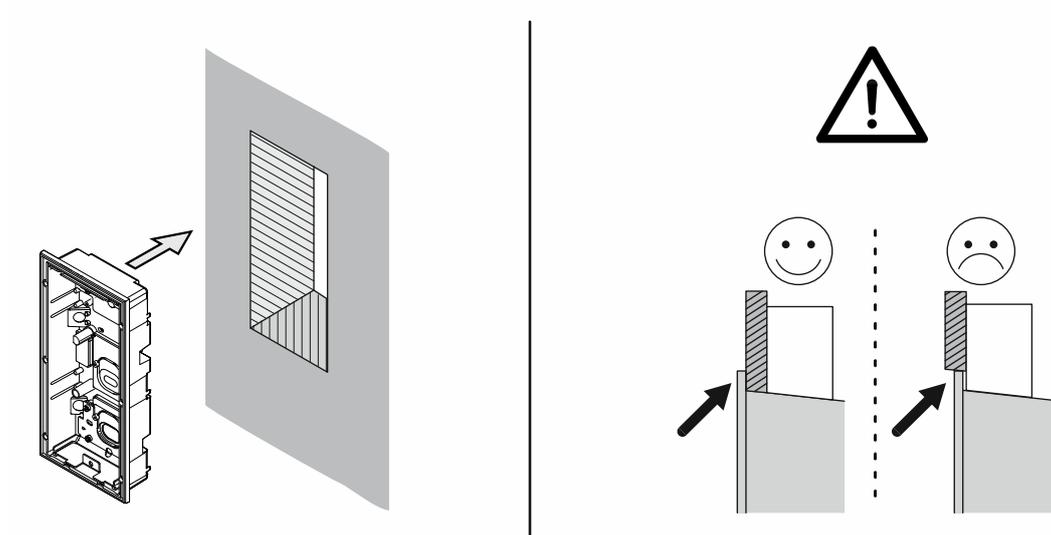
Fig. 12: Mounting installation boxes in clinker facades

1. Chisel a hole according to the size of the outdoor station used into the facade provided.
   – The suitable template is enclosed with the flush-mounted installation box.
   – Dimensional drawings, see chapter 5.9.4 "Installation boxes - flush-mounted installation" on page 59.
   – The installation depth of the flush-mounted installation box is 46 mm.
2. Insert the flush-mounted installation box.
   – Attention:

     Ensure that the encircling "Collar" of the flush-mounted installation box rests on the facade. The encircling "Collar" of the flush-mounted installation box must not be submerged in the facade. The device can then not be mounted later.
   – Fix the flush-mounted installation box into the cut-out of the facade with the aid of the elongated holes.
   – The hollow spaces between the flush-mounted installation box and the clinkers can be filled with PU foam.
     – For this, break out the holes in the corners of the box angled at 45°.
     – Insert the extension tube of the PU foam and fill the cavities.
     – Use a low-expansion foam to prevent foam from penetrating the flush-mounted box. If necessary, use foam cleanser to remove the contaminations.
   – No additional accessories are necessary for mounting.
3. Mounting the outdoor station.
   – see chapter 5.3 "Outdoor stations" on page 39.

5.2.3 Mounting in hollow walls

For mounting the installation boxes in hollow walls, perform the following points:

1. Cut a hole according to the size of the outdoor station used into the facade.

    – The suitable template is enclosed with the flush-mounted installation box.

    – Dimensional drawings, see chapter 5.9.4 "Installation boxes - flush-mounted installation" on page 59.

    – The installation depth of the flush-mounted installation box is 46 mm.
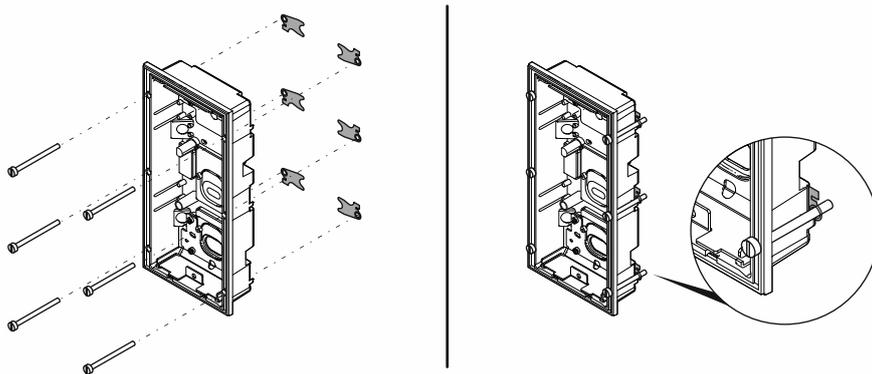
Fig. 13:   Mounting set for hollow wall boxes (83511-500)

To anchor the flush-mounted installation box in the cut-out, the separately available hollow-wall mounting set (83511-500) is used.

2. Mount the mounting set on the flush-mounted installation box.

    – The clamps must then be located behind the flush-mounted installation box.
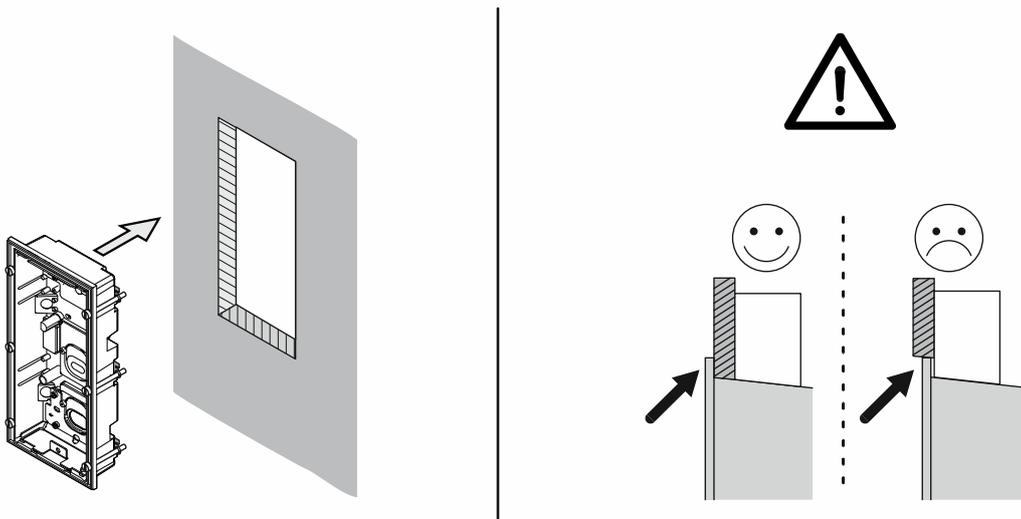
Fig. 14:   Mounting installation boxes in hollow wall: Inserting flush-mounted installation box

3. Insert the flush-mounted installation box into the cutout.

   – Attention:

   Ensure that the encircling "Collar" of the flush-mounted installation box rests on the facade. The encircling "Collar" of the flush-mounted installation box must not be submerged in the facade. The device can then not be mounted later.
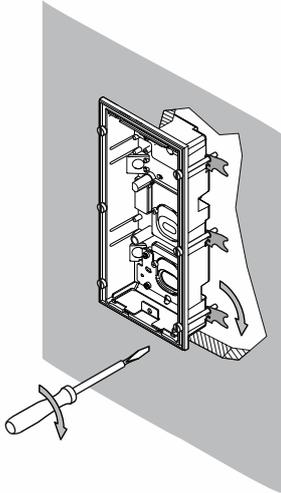
Fig. 15:   Mounting installation boxes in hollow wall: Clamping flush-mounted installation box

4. Tighten the clamps.

   – The clamps click automatically into the correct position.

5. Mounting the outdoor station.

   – see chapter 5.3 "Outdoor stations" on page 39.

5.3 Outdoor stations

5.3.1 Mounting

For mounting an outdoor station, perform the following points:

1. First set the installation box for the corresponding mounting situation.
   – Surface-mounting: see chapter 5.1 "Outdoor stations: SM installation boxes" on page 32.
   – Flush-mounted installation in solid facades: see chapter 5.2.2 "Mounting in clinker facades" on page 36.
   – Flush-mounted installation in insulated facades: see chapter 5.2.1 "Mounting in insulated facades" on page 34.
   – Flush-mounted installation in hollow walls: see chapter 5.2.3 "Mounting in hollow walls" on page 37.
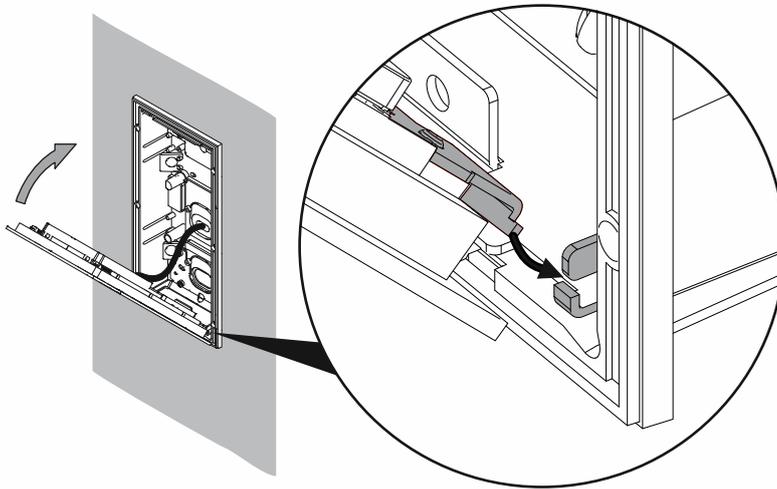
Fig. 16:   Mounting outdoor station: Inserting the device (Example of flush-mounted installation box)

2. When the installation box is set:
   ▪ Establish the connection on the device.
   ▪ Insert the device into the installation box.
       – Set the device at the bottom into the holding fixture and fold it up.
       – The two spring pins at the top on the device must latch into the installation box.
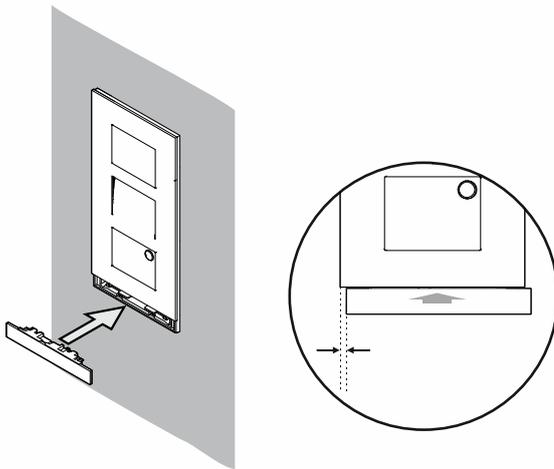
Fig. 17:   Mounting the outdoor station: Mounting end piece

3. Mounting the end piece.
    –   Attach the end piece on the device slightly offset to the right and press it on.
    –   The spring mechanics in the device pull the end piece auromatically into the correct position when pressed on.
    –   The end piece can then be removed again with the enclosed dismantling tool.

5.3.2   Dismantling

The device is mounted from below.

–   The device is secured at the top by the spring pin.
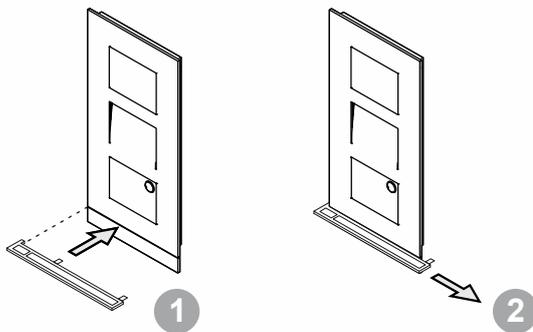
Fig. 18:   Mounting the outdoor station: Dismantling the end piece

1. Dismantle the end piece.
    –   Set the enclosed dismantling tool between the cover and the end piece [1].
    –   Push out the dismantling tool together with the end piece to the right [2].
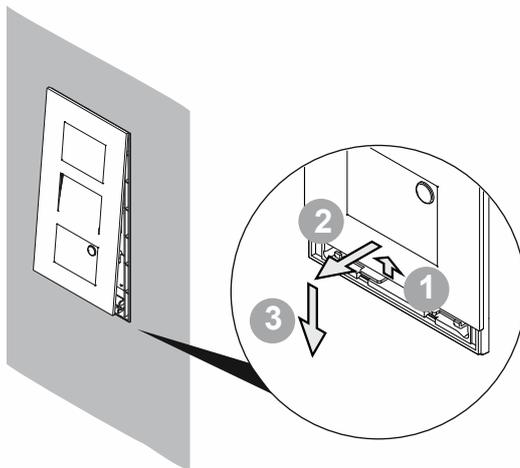
Fig. 19:   Mounting the outdoor station: Pulling the device off

2. Remove the device from the bottom.
    –   Press the device a few mm to the top [1] until it can be pulled off at the bottom [2].
    –   Pull of the device slightly at the bottom [2].
    –   Pull the device to the bottom [3], until the spring pins are free at the top of the device.
3. Disconnect the device.

5.3.3   Name plates

To edit the nameplate the device must be hung out.

1. Hanging the device out: see chapter 5.3.2 "Dismantling" on page 40.
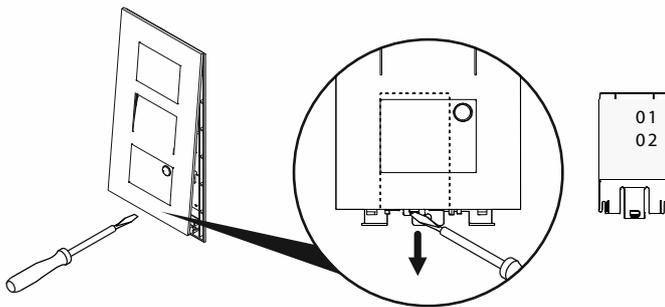
Fig. 20:   Mounting the outdoor station: Editing the nameplate

2. Pull the nameplate out of the device toward the bottom.
    –   The nameplate is a transparent plastic insert.
    –   The nameplate can be pulled out with the fingers.

5.4 Indoor stations IP touch: SM installation boxes

Notice
▪ The device is always installed together with the surface-mounted installation box via a deep standard flush-mounted box.
▪ The mounting height of the device and the deep standard flush-mounted box should always be aligned so that the cable can be guided through the surface-mounted installation box without a problem and the device can again be mounted at the desired height.
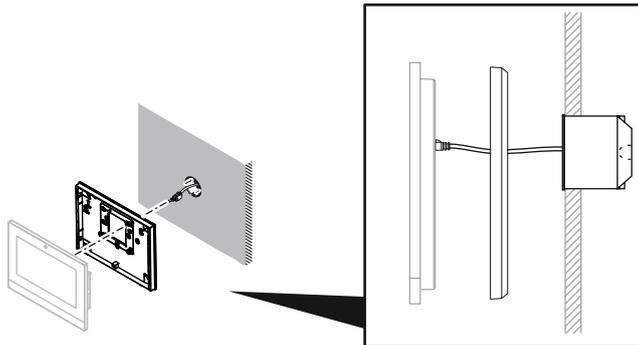
Fig. 21: Mounting instruction for the surface-mounting of IP touch

For mounting the surface-mounted installation box, perform the following points:
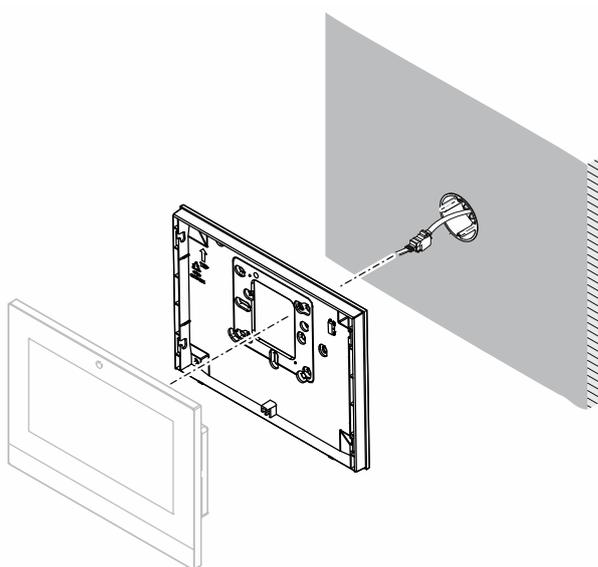
Fig. 22: Mounting the installation box: Surface-mounted installation box

1. Align the mounting height between the indoor station, the surface-mounted installation box and the deep flush-mounted box.

2. Create the boreholes for mounting.

   – The suitable template is enclosed with the box.

   – Dimensional drawings, see chapter 5.9.3 "Installation boxes - Surface mounting" on page 57.

3. Attach the surface-mounted installation box.
   – Fix the surface-mounted installation box on the facade.
   – No additional accessories are necessary for mounting.
4. Mounting the indoor station.
   – see chapter 5.6.1 "Wall installation in installation boxes" on page 49.

5.5   Indoor stations IP touch: FM installation boxes and plastered boxes

5.5.1   Mounting in solid walls

For mounting the installation boxes in solid walls, perform the following points:
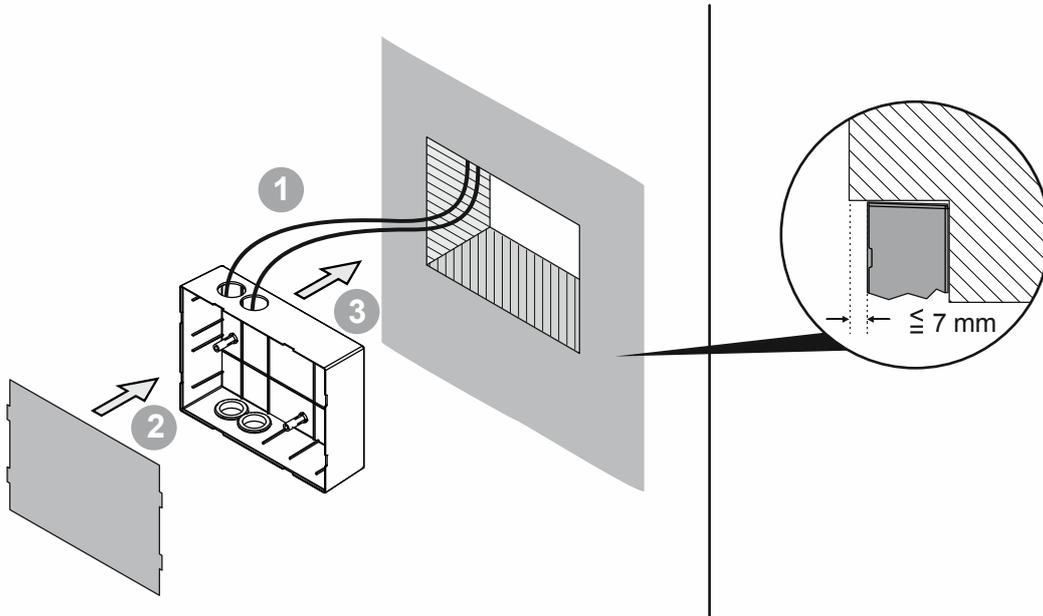
Fig. 23:   Mounting installation boxes in solid walls: Plastered box

1. Chisel a hole according to the size of the indoor station used into the wall provided.
    –   The suitable template is enclosed with the box.
    –   Dimensional drawings, see chapter 5.9.4 "Installation boxes - flush-mounted installation" on page 59.
    –   The installation depth of the box is 54 mm.
2. Insert the plastered box.
    –   Feed the connecting cable [1] through the desired opening.
    –   Attach the protective cover [2].
    –   Insert the plastered box [3].
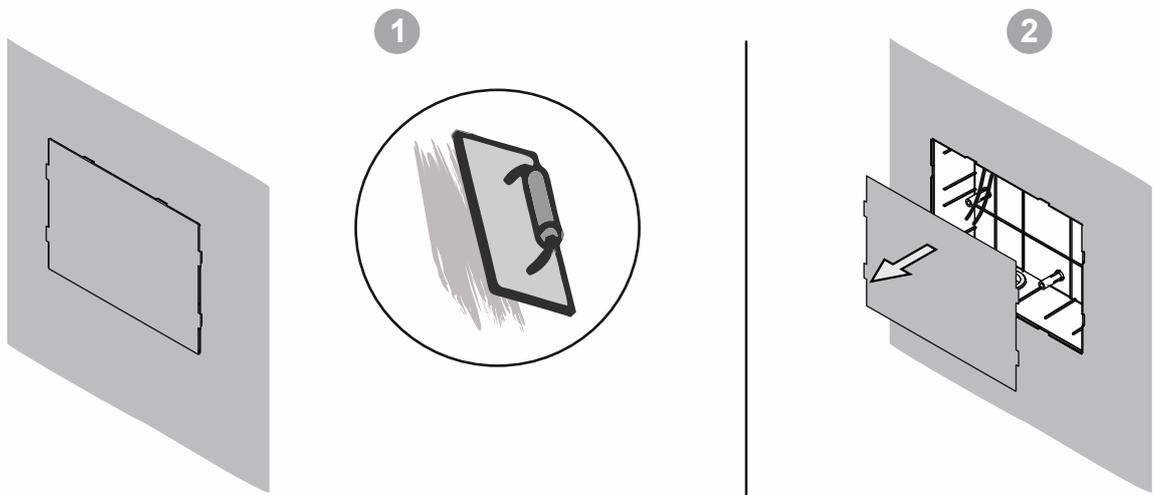
Fig. 24:   Mounting installation boxes in solid walls: Wall work

3. After the plastering / painting work is concluded, remove the protective cover.

    –   After the plastering / painting work is concluded, the wall may only project a maximum of
   7 mm over the plastered box. If it is more, the indoor station can no longer be inserted.
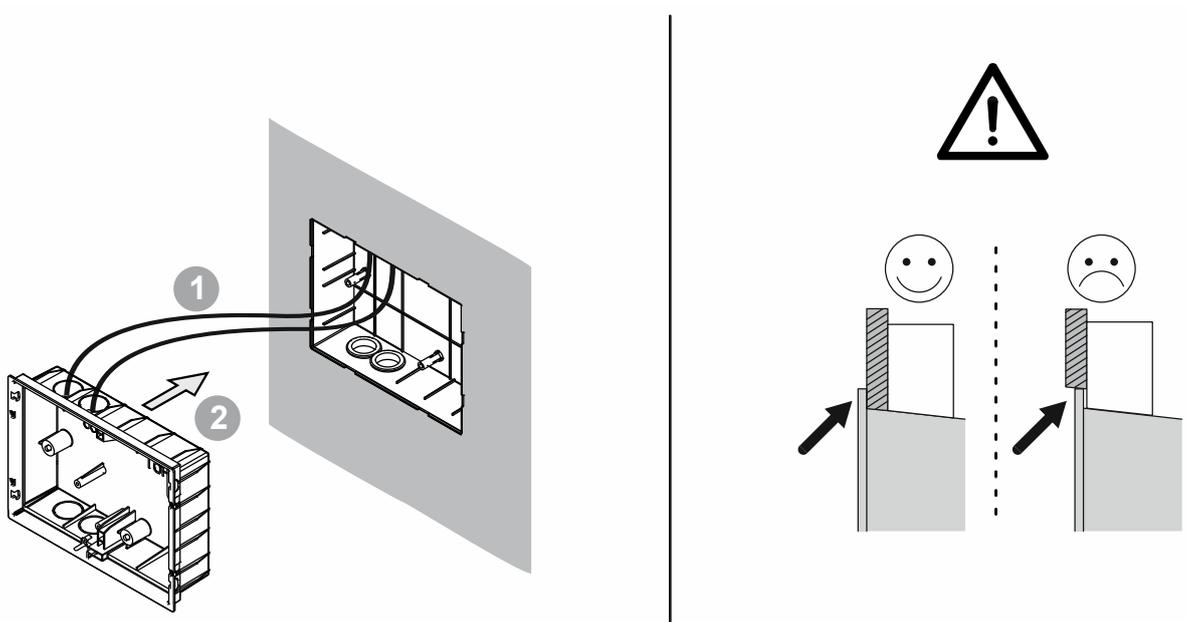
Fig. 25:   Mounting installation boxes in solid walls: Inserting flush-mounted installation box

4. Insert the flush-mounted installation box.

    –   Attention:

        Ensure that the encircling "Collar" of the flush-mounted installation box rests on the
        facade. The encircling "Collar" of the flush-mounted installation box must not be
        submerged in the facade. The device can then not be mounted later.

    –   No additional accessories are necessary for mounting.

5. Mounting the IP touch indoor station.
   – see chapter 5.6.1 "Wall installation in installation boxes" on page 49.

5.5.2   Mounting in hollow walls

For mounting the installation boxes in hollow walls, perform the following points:

1. Cut a hole according to the size of the indoor station used into the facade.

    –   The suitable template is enclosed with the flush-mounted installation box.

    –   Dimensional drawings, see chapter 5.9.4 "Installation boxes - flush-mounted installation" on page 59.

    –   The installation depth of the flush-mounted installation box is 56 mm.
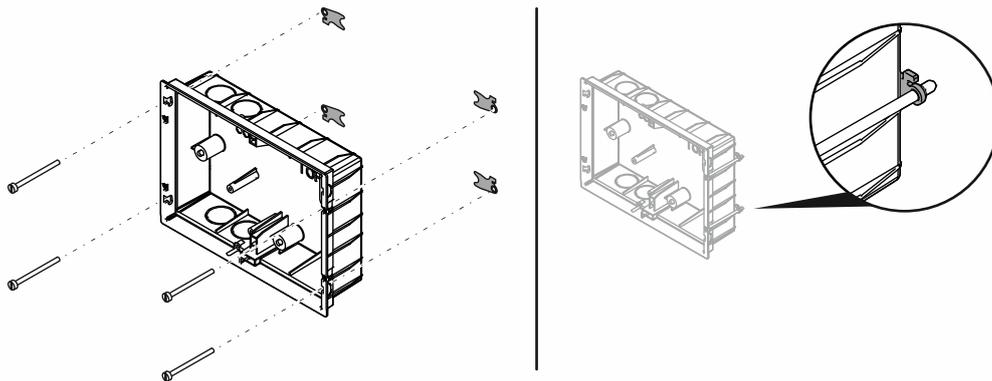
Fig. 26:   Mounting set for hollow wall boxes (83511-500)

To anchor the flush-mounted installation box in the cut-out, the separately available hollow-wall mounting set (83511-500) is used.

2. Mount the mounting set on the flush-mounted installation box.

    –   The clamps must then be located behind the flush-mounted installation box.
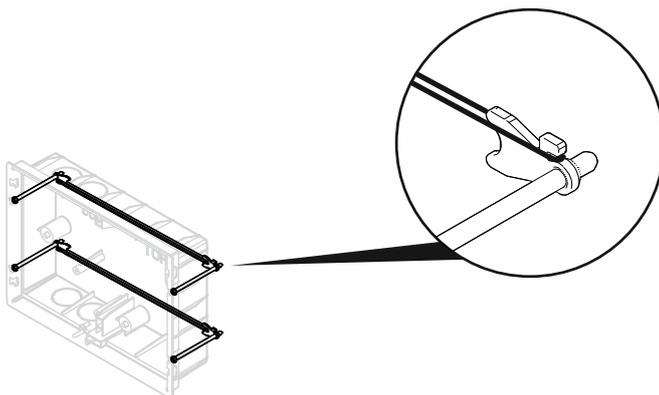
Fig. 27:   Mounting set for hollow wall box: Rubber bands

3. Connect the clamps with rubber bands.
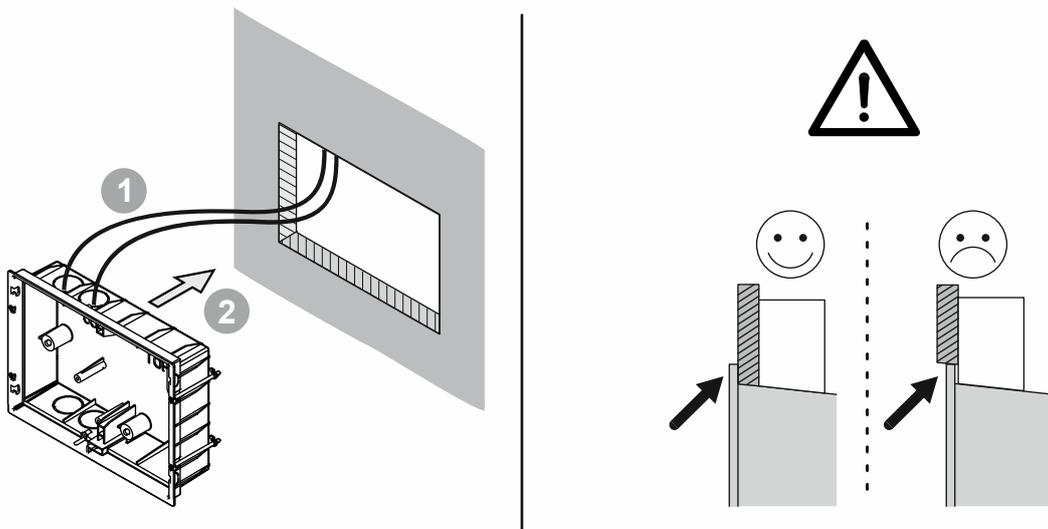
Fig. 28:   Mounting installation boxes in hollow wall: Inserting flush-mounted installation box

4. Insert the flush-mounted installation box into the cutout.

  – Attention:

    Ensure that the encircling "Collar" of the flush-mounted installation box rests on the facade. The encircling "Collar" of the flush-mounted installation box must not be submerged in the facade. The device can then not be mounted later.
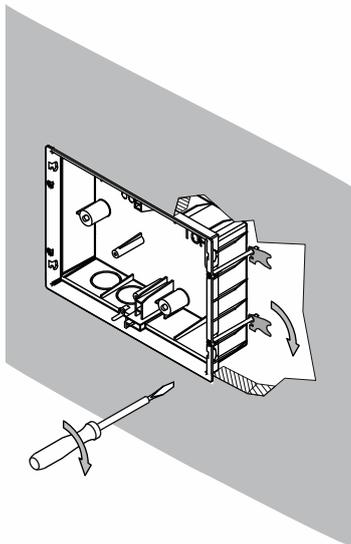
Fig. 29:   Mounting installation boxes in hollow wall: Clamping flush-mounted installation box

5. Tighten the clamps.

  – The clamps click automatically into the correct position.

6. Mounting the IP touch indoor station.

  – see chapter 5.6.1 "Wall installation in installation boxes" on page 49.

5.6 Indoor stations IP touch

5.6.1 Wall installation in installation boxes

Notice
- Due to the larger device depth the IP touch (LAN / LAN) indoor station can only be inserted into a flush-mounted installation box.
- The additional device versions can be inserted into a surface-mounted installation box or flush-mounted installation box.

For mounting an IP touch indoor station, perform the following points:

1. First set the installation box for the corresponding mounting situation.

   – Surface-mounting: see chapter 5.4 "Indoor stations IP touch: SM installation boxes" on page 42.

   – Flush-mounted installation in facades: see chapter 5.5.1 "Mounting in solid walls" on page 44.

   – Flush-mounted installation in hollow walls: see chapter 5.5.2 "Mounting in hollow walls" on page 47.
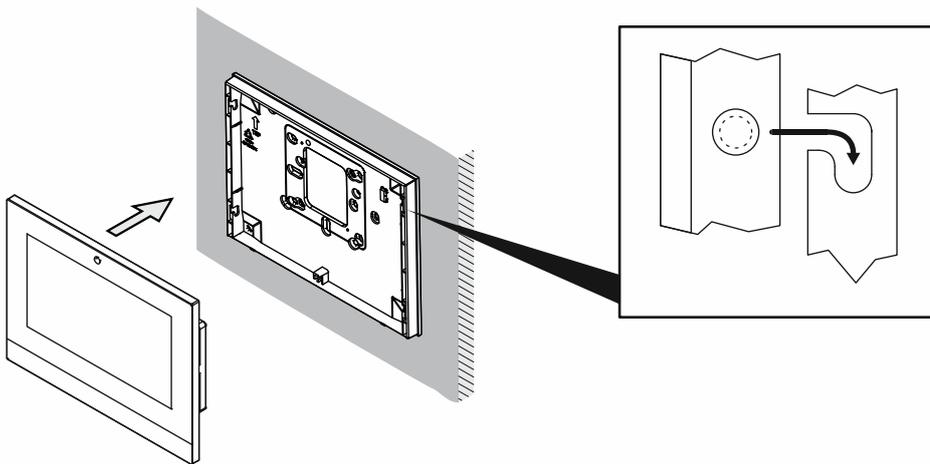
Fig. 30: Mounting indoor station: Insert the device surface-mounted (only LAN / WLAN version)
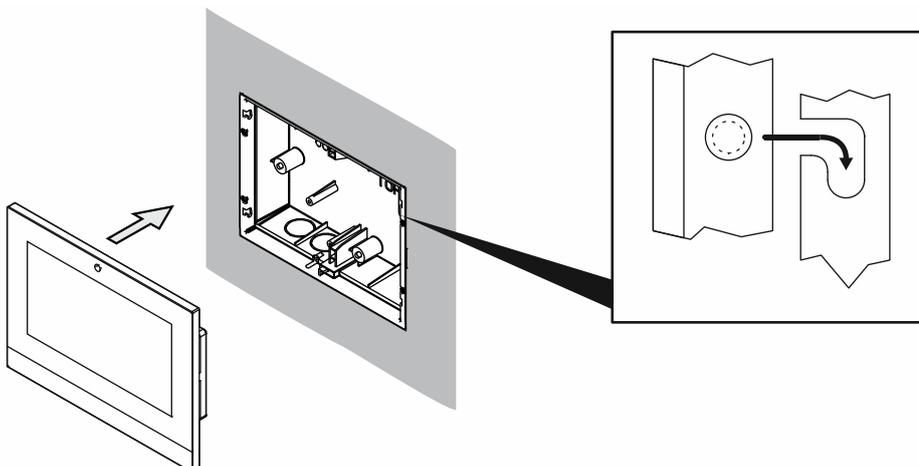
Fig. 31: Mounting indoor station: Insert the device flush-mounted (LAN / LAN and LAN / WLAN versions)

2. When the installation box is set:
   - ▪ Establish the connection on the device.
   - ▪ Mount the device into the installation box.
     - – Push the device into the lateral holders of the installation box and press down.

5.6.2 Table installation

Notice
- Due to the larger device depth the IP touch (LAN / LAN) indoor station can only be inserted into a flush-mounted installation box.
- The additional device versions can be inserted into a table stand.

For mounting an IP touch indoor station, perform the following points:
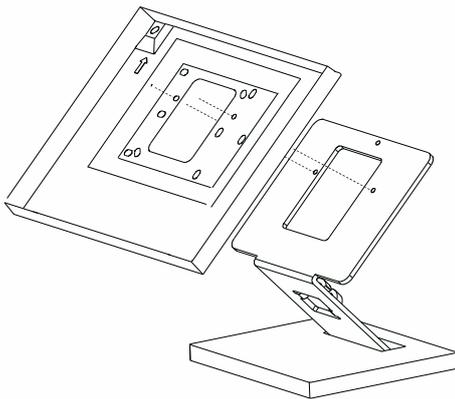
Fig. 32:   Mounting indoor station table installation: Attach the installation box (only for LAN / WLAN version)

1. Connect the surface-mounted installation box with the table stand.
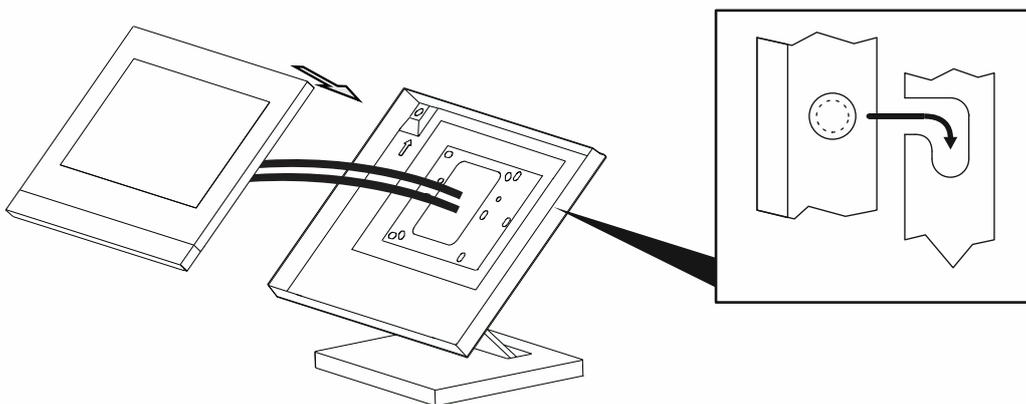
Fig. 33:   Mounting indoor station table installation: Insert the device (possible only for LAN / WLAN version)

2. Mount the device into the installation box.
    - Establish the connection on the device.
    - Push the device into the lateral holders of the installation box and press down.

5.7 Guard unit

5.7.1 Wall mounting

Notice

- The device is always installed together with the surface-mounted installation box via a deep standard flush-mounted box.
- The mounting height of the device and the deep standard flush-mounted box should always be aligned so that the cable can be guided through the surface-mounted installation box without a problem and the device can again be mounted at the desired height.

213,4 mm

78,8 mm

37 mm

102,3 mm

VDE Box
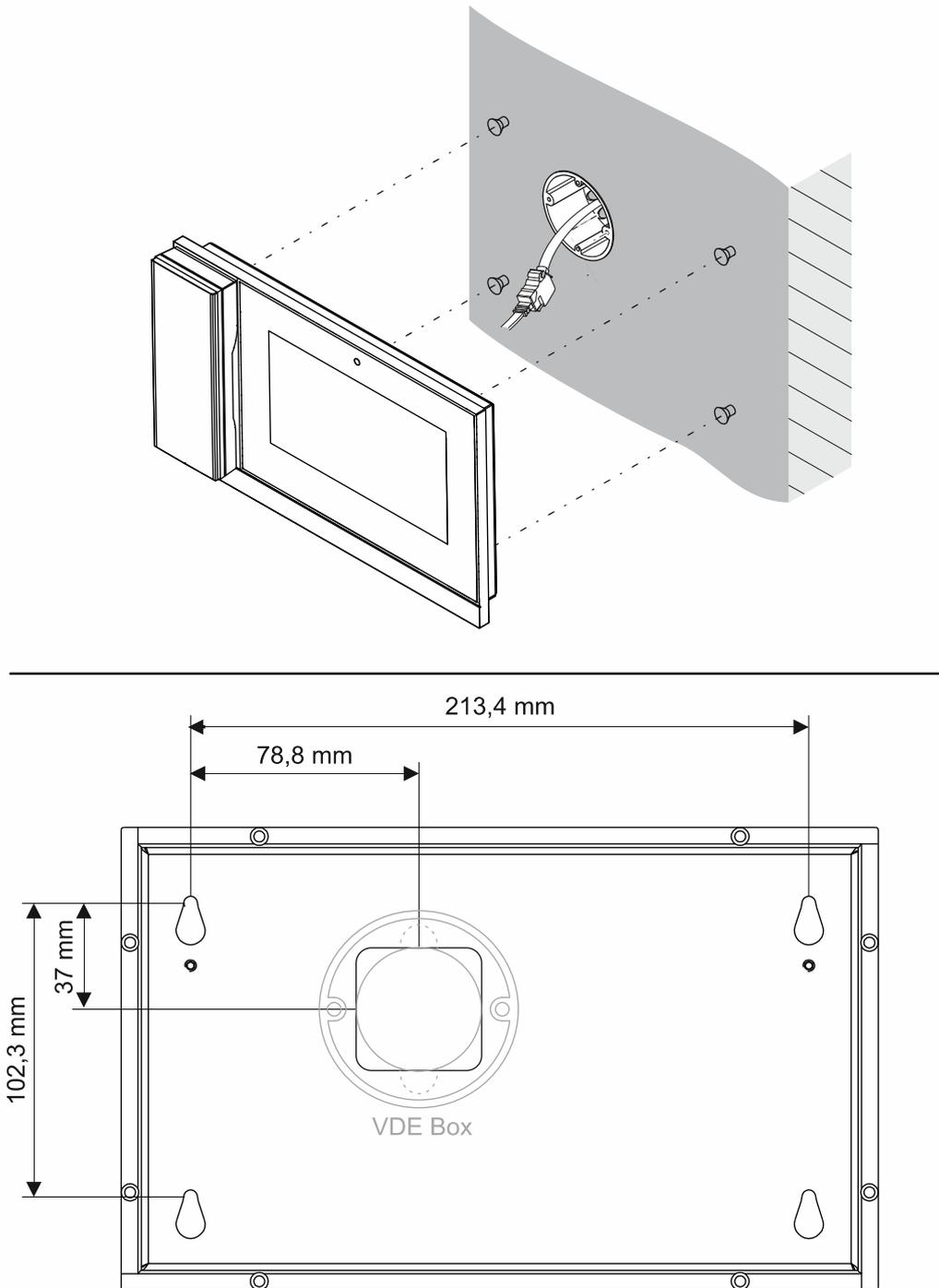
Fig. 34:   Wall mounting of the Guard unit

Wall mounting is possible. For this, attach appropriate mounting devices at the installation site that match the holders on the rear of the device.

5.7.2   Table installation

The table stand is included with the device and must not be purchased separately.
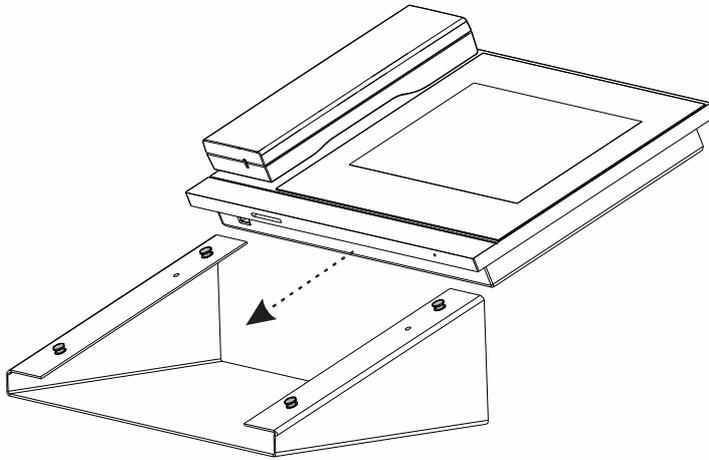
Fig. 35:   Table installation of Guard unit

5.8 Installation recommendation

Network cables must be used for the structured cabling because they are more inflexible due to their mechanical strength than patch cables.

For the connection inside the device box it is therefore recommended to install an RJ45 universal module (0219-101-500) to the incoming network cable.

The final cabling between the RJ45 universal module and the device is then established via a short patch flat ribbon cable.

The RJ45 universal module and the flat ribbon cable are not included in the scope of delivery.

Notice
The flat LAN cable must be suitable for a power transmission via PoE from the transmission standard Cat5e.
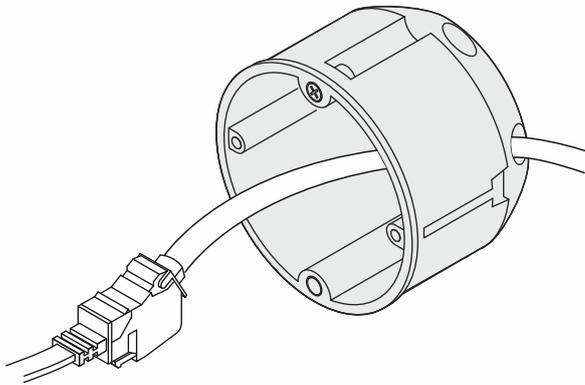
Fig. 36:   Universal module 0219-101-500

5.9 Dimensional drawings

5.9.1 Outdoor stations
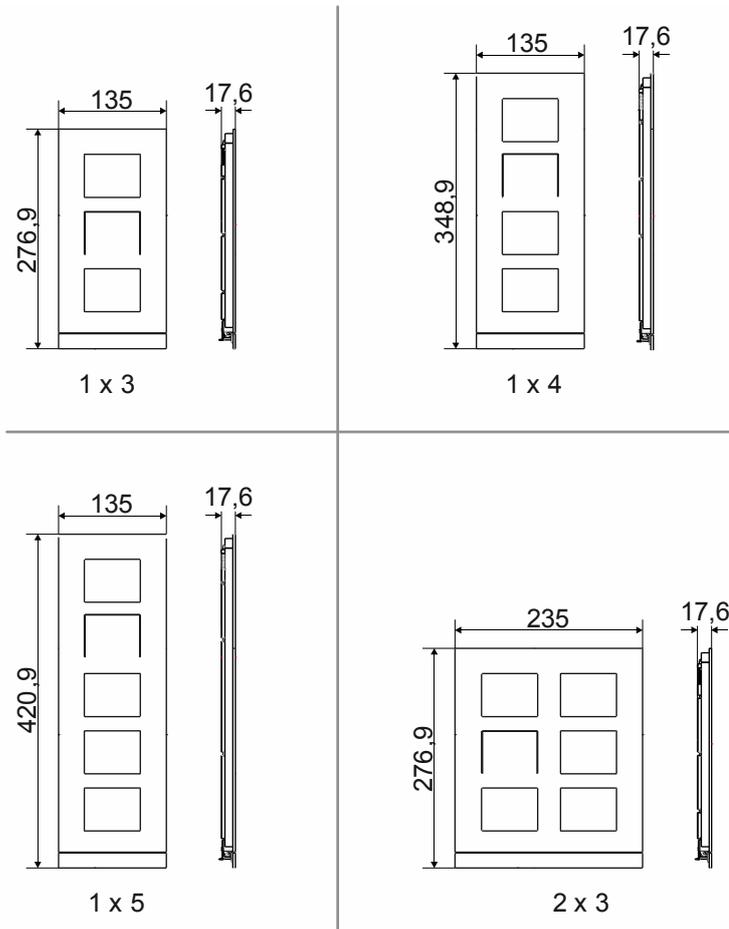
Fig. 37: Exterior dimensions of outdoor stations (dimensions in mm)

5.9.2 Indoor stations IP touch
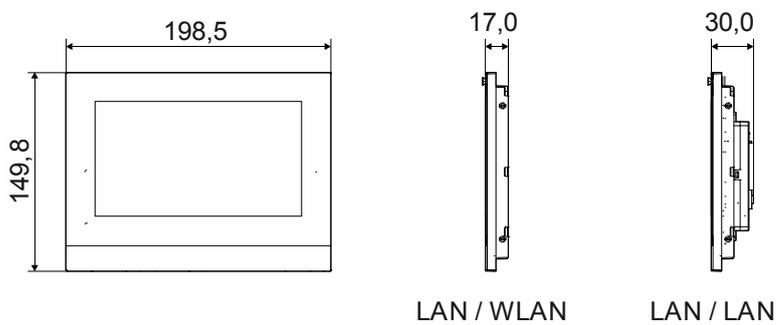
Fig. 38: Exterior dimensions of indoor stations IP Touch 7 (dimensions in mm)

5.9.3   Installation boxes - Surface mounting
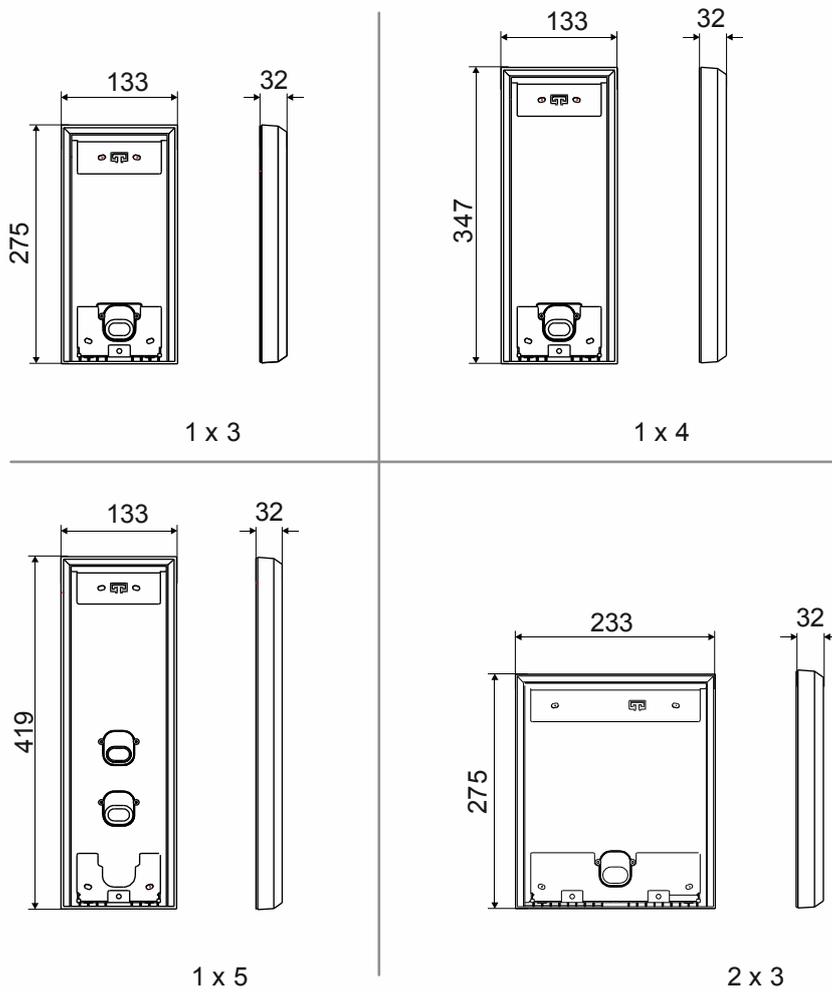
Fig. 39:   Dimensions of surface-mounted installation boxes of outdoor stations (dimensions in mm)
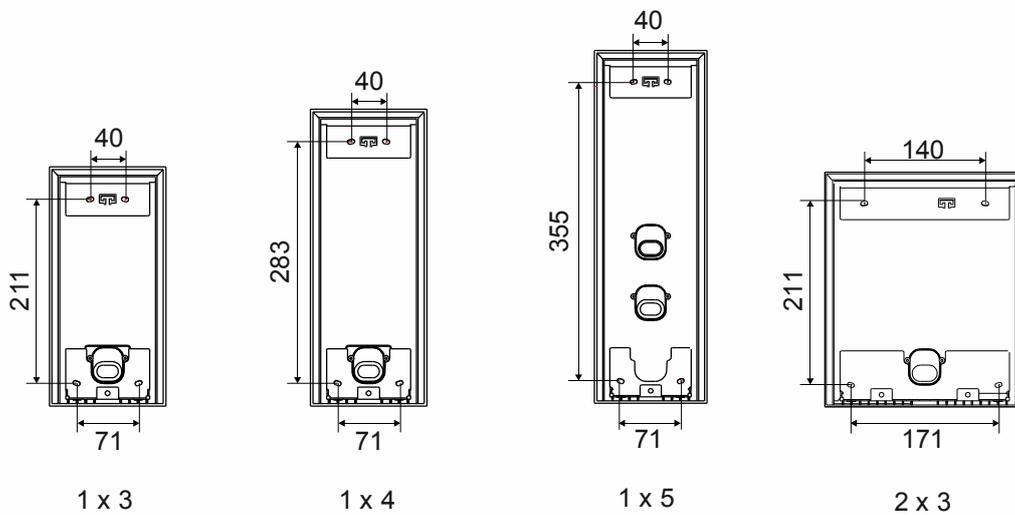
Fig. 40:   Boreholes of surface-mounted installation boxes of outdoor stations (dimensions in mm)
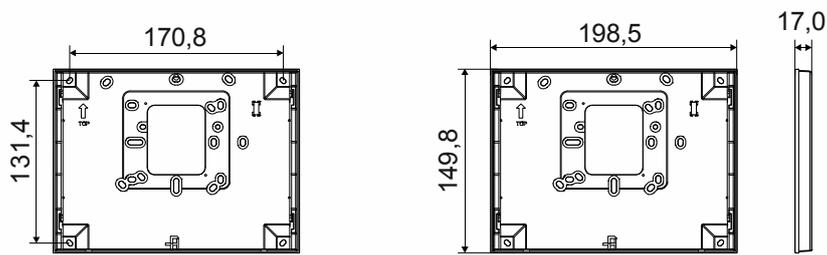
Fig. 41:   Boreholes and dimensions of surface-mounted installation boxes of indoor stations IP Touch 7 (dimensions in mm)

5.9.4 Installation boxes - flush-mounted installation
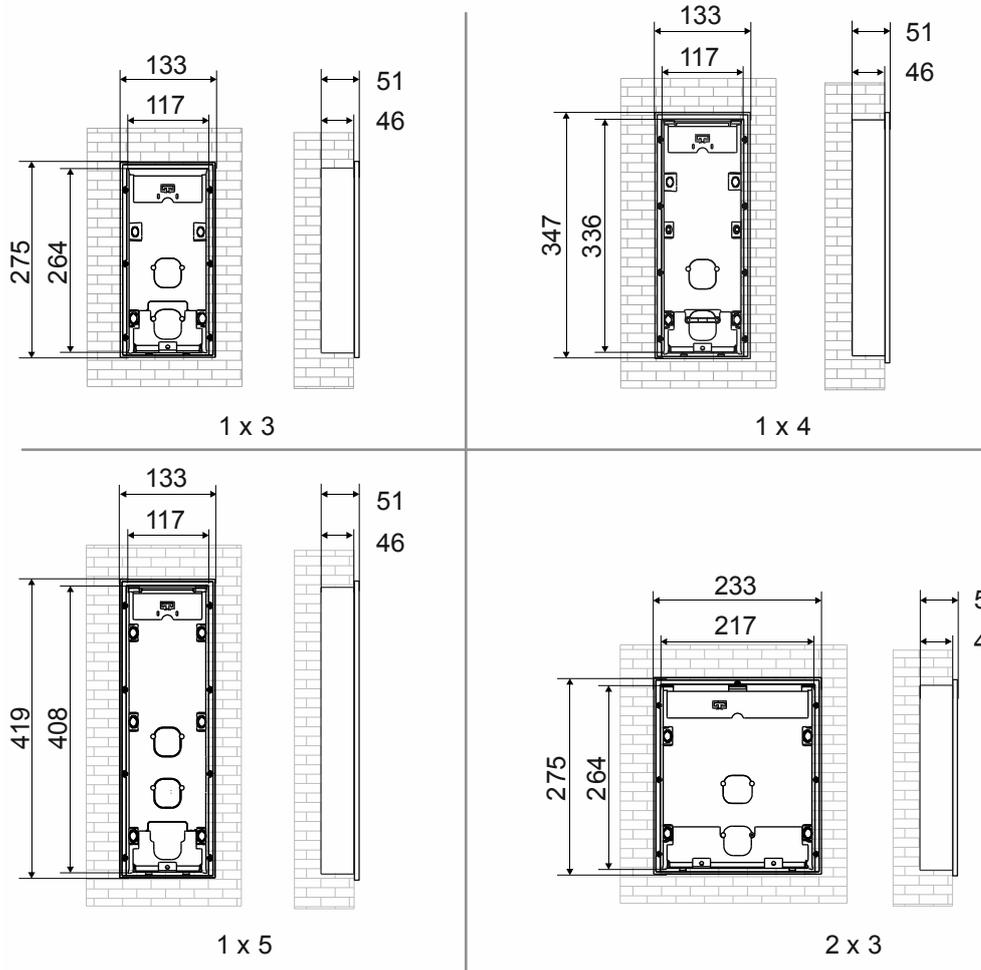
Fig. 42: Dimensions of flush-mounted installation boxes of outdoor stations (dimensions in mm)
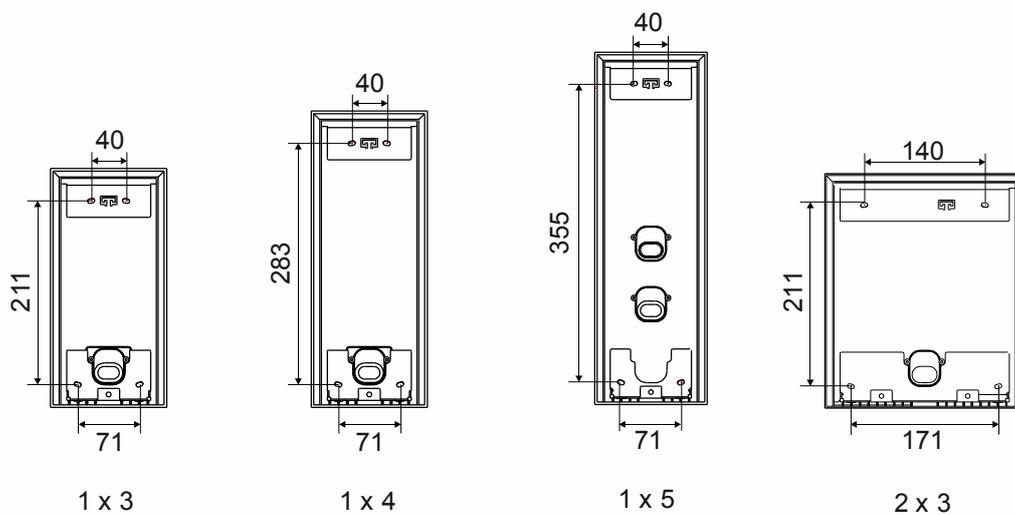
Fig. 43: Boreholes of flush-mounted installation boxes of outdoor stations (dimensions in mm)
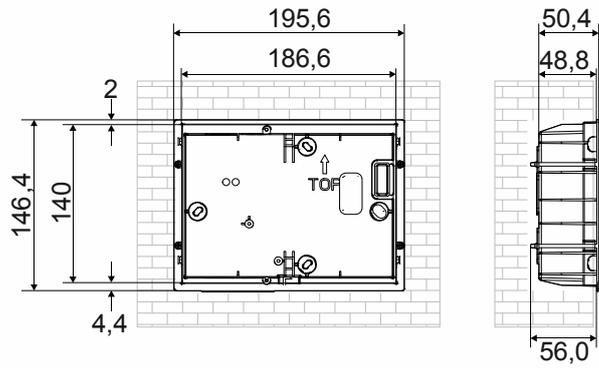
Fig. 44:   Dimensions of flush-mounted installation boxes of indoor stations IP Touch 7 (dimensions in mm)

5.9.5 Plastered boxes
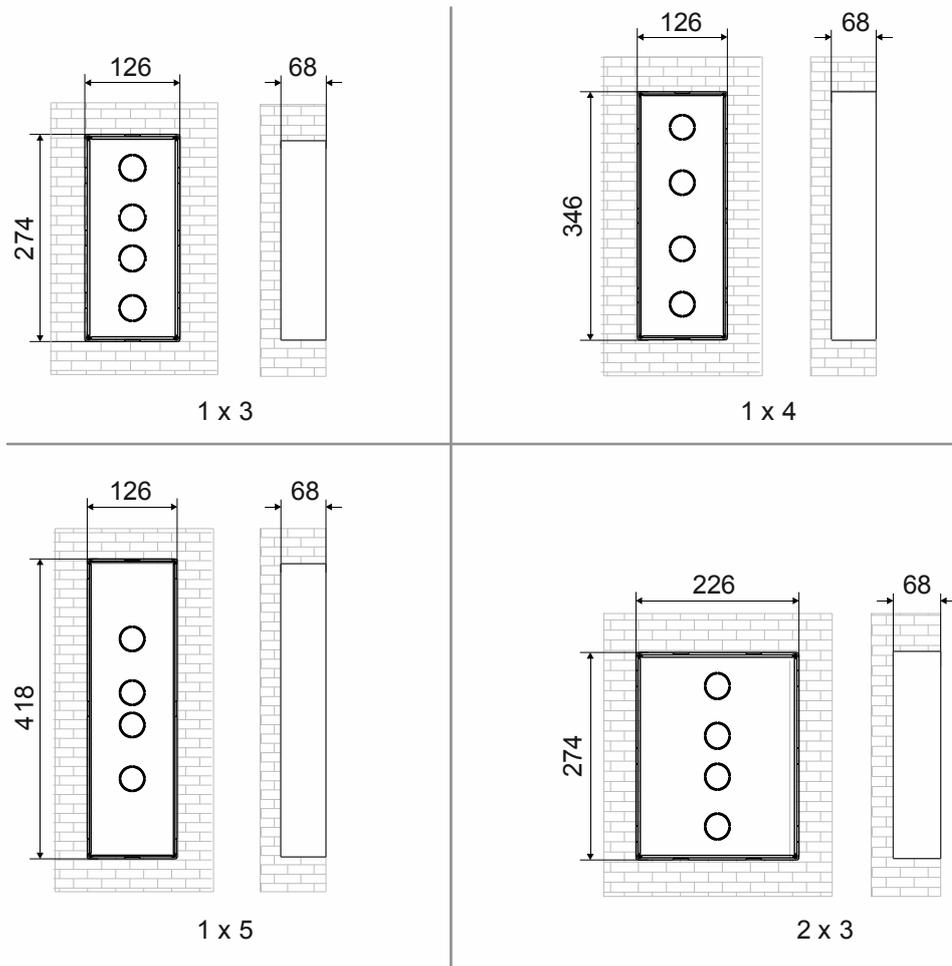
Fig. 45:   Installation dimensions of plastered boxes of outdoor stations (dimensions in mm)
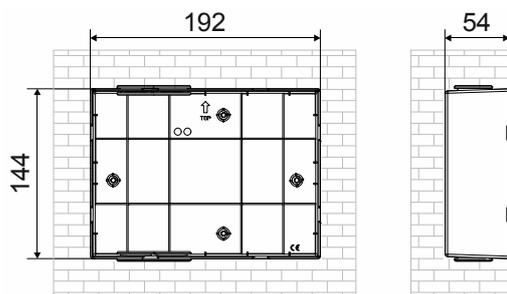
Fig. 46:   Installation dimensions of plastered boxes of indoor stations IP Touch 7 (dimensions in mm)

6   Commissioning

6.1   Overview of commissioning

Commissioning in three sections

Commissioning of the ABB-Welcome IP system is carried out in three sections.

– Please observe the order of the steps. They are dependent on each other.

Step 1	Local addressing – For local addressing the physical addresses are assigned for each participant in the "ABB-Welcome IP" system.	see chapter 6.2 "Commissioning of a system — Step 1: Local addressing " on page 63
Step 2	Initial commissioning of "Smart Access Point"	see chapter 6.3 "Commissioning of a system — Step 2: Commissioning "Smart Access Point"" on page 83
Step 3	Searching and certifying – Searching and automatic certification of all available participants in the "ABB-Welcome IP" system. – Definition of trustworthy participants for door opening (who can open the to whom). – Data backup	see chapter 6.4 "Commissioning a system — Step 3: Searching and certifying" on page 102

6.2 Commissioning of a system — Step 1: Local addressing

6.2.1 Fundamentals of physical addressing ABB-Welcome IP

Physical address: Not to be mixed up with the IP address.

– The physical address designates the location in the structure of the building.
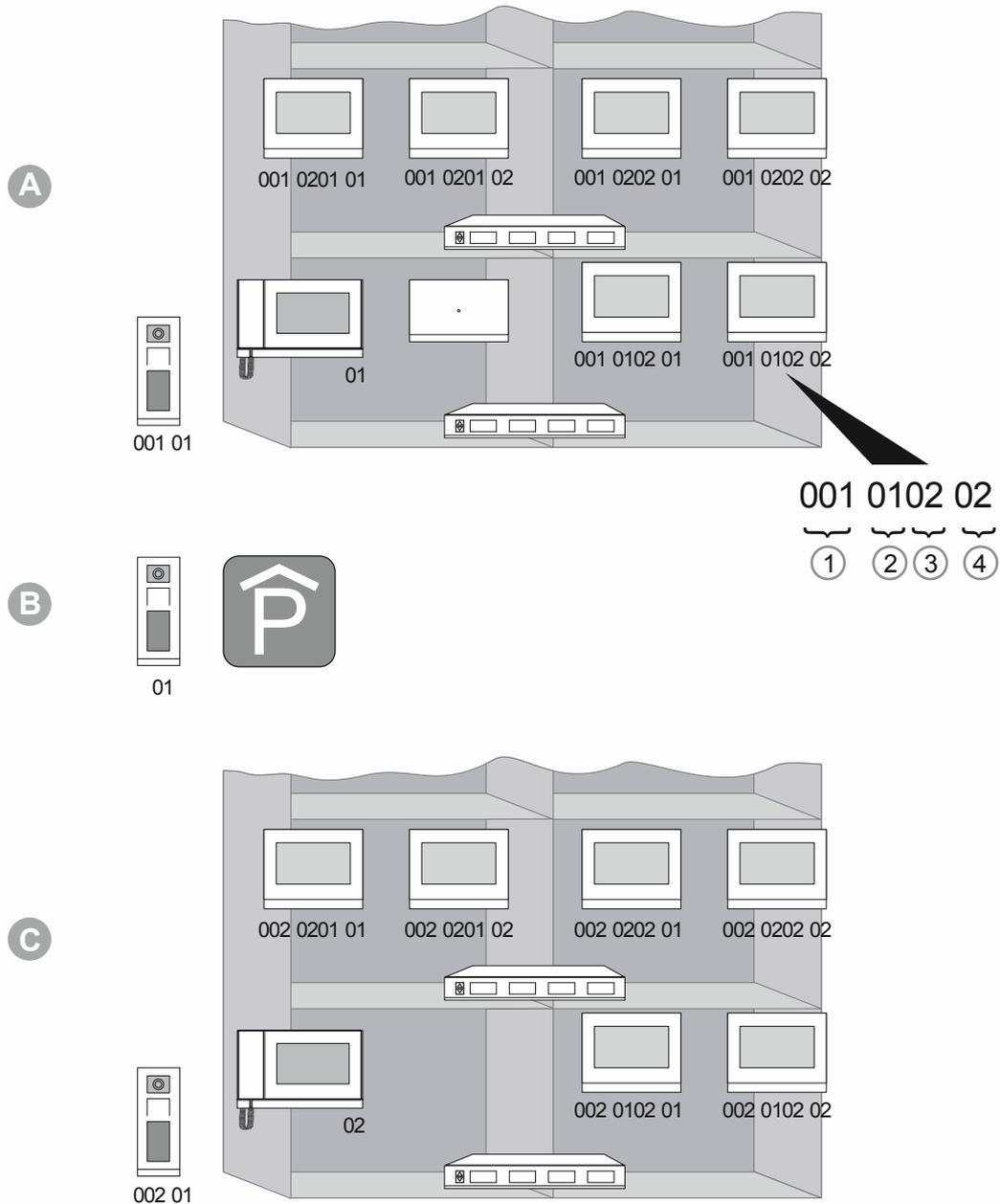
Fig. 47:   Principle of addressing

A	Building 1
B	Perimeter (parking garage) outdoor station
C	Building 2

Setup of the physical address	
1	Buildings
2	Storey / Floor
3	Unit (office, private apartment, etc.)
4	Device in a unit

The physical address of a device is principally the same for all devices. The address consists of 4 parts. Part 1 designates the building, part 2 the storey/floor, part 3 the unit on a storey and part 4 the device in a unit.

When buildings, floors or units are added, the address for the devices is counted upwards.

Depending on the device or operating mode the same address is assigned or only the necessary part thereof.

	Building Address	Floor Address	Unit Address	Device Address
Indoor station	1 ... 999	01 ... 64	01 ... 32	01 ... 08
Outdoor station (Public) *	1 … 999	—	—	01 ... 64
Outdoor station (Private) *	1 ... 999	01 ... 64	01 ... 32	01 ... 64
Outdoor station (Perimeter) *	—	—	—	1 … 32
Guard unit	—	—	—	1 … 32
Management Software	—	—	—	—
IP switch actuator (Network)	—	—	—	01 ... 32
IP switch actuator (Building)	1 ... 999	—	—	01 ... 32
IP switch actuator (Private)	1 ... 999	01 ... 64	01 ... 32	01 ... 32

* A public outdoor station is the central outdoor station of a multi-party building. A private outdoor station belongs to a unit (e.g. office or apartment). A perimeter outdoor station belongs to a common facility, e.g. to a parking garage.

Notice

From a physical address a ABB-Welcome IP participant generates itself an own IP address (IPv4) in the IP address range 10.x.x.x / 255.x.x.x

A physical address is specific in a ABB-Welcome IP system and must not be assigned twice within a device category.

For example:

- An outdoor station and an IP actuator can have the same physical address.
- Two outdoor stations can not have the same physical address.

The "Smart Access Point" always has the IPv4 address 10.0.0.1 and communicates with it with the ABB-Welcome IP participants.

In parallel the "Smart Access Point" can have an additional IP address.

- Case 1: The "Smart Access Point" receives an IP address assigned from a local DHCP server/router.
- Case 2: The "Smart Access Point" receives a static IP address that is manually assigned.

Physical addresses of the IP cameras

For IP cameras the following addresses are assigned in the functional network:

- 10.0.3.1 … 10.0.3.254

In this address range also other devices, such as a computer, can use the 10-type addresses without coming into conflict with the ABB-Welcome IP address range.

Notice

Commercially available IP cameras with the profile "ONVIF Profile S" and the video coding format "H.264" can be integrated in the ABB-Welcome IP system.

6.2.2 Physical addresses — Preparing addressing

If the devices have a display, the addressing is carried out on the device itself.

If the devices do not have a display, the addressing is carried out via the IP Touch 7.

Devices with display

– As soon as the devices are supplied with voltage via the PoE switch, the device boots up automatically.

The devices are prepared for addressing.

Devices without display

– Connect the devices to the indoor station via a PoE switch.
    – As soon as the devices are supplied with voltage via the PoE switch, the device boots up automatically.

The devices are prepared for addressing.

6.2.3   Indoor stations IP Touch 7 and Guard unit

First address stations IP Touch 7 or Guard unit. Addressing is carried out in the same way for all versions.
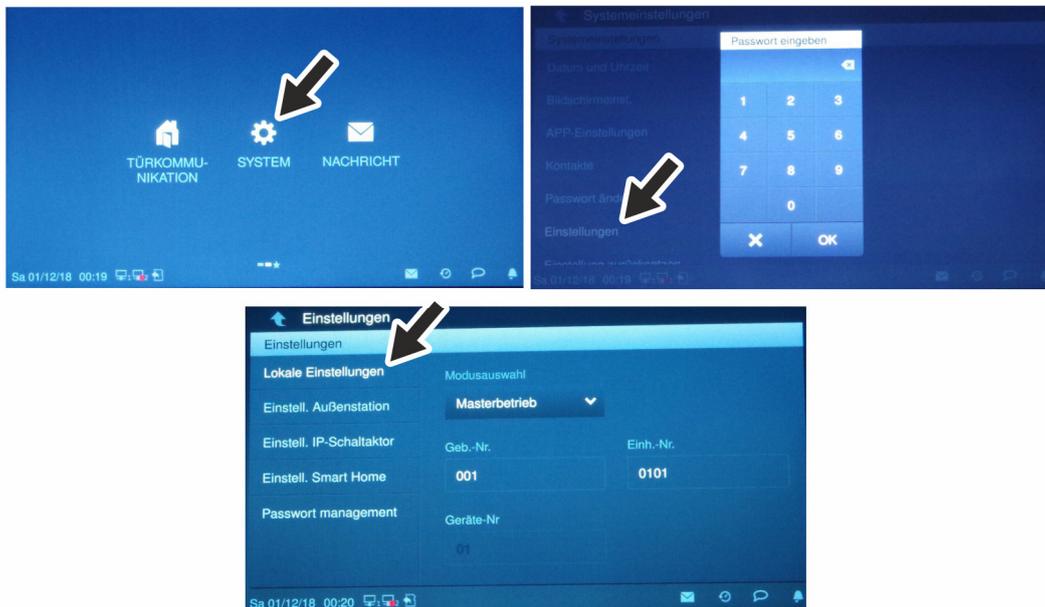
Fig. 48:   Addressing station IP Touch 7 or Guard unit

The wizard is displayed after the device has booted up automatically and will guide you through the first setup. If the device has already been setup, the main menu is displayed directly.

To address the device, perform the following steps:

1. Boot up the device.
    – The device boots up automatically when the power supply is connected.
2. For an initial commissioning of the device: Follow the steps of the wizard for the initial commissioning.
    – For a LAN / WLAN version of the device: During the initial commissioning, the area of the network selection is run through. Skip the area if no selection is to be made here. Then nothing is saved.
3. Enter the physical address of the device in menu "System / settings / local settings".
    ▪ A new password must be assigned once during the first call-up of the "Settings" menu.
        – The old password of the factory settings is: 345678. This must be replaced with a personal password. Simple passwords consisting of sequential numbers, for example, are not possible.

- Mode selection and device number:
  - The first indoor station in each unit is set up as "Master mode" under "Mode selection". The device number of the physical address is then automatically "01" and cannot be set.
  - Each further indoor station within a unit is set up as "Master mode" under "Subsidiary mode". The device number of the physical address is then correspondingly counted upward from "02" and entered for each further indoor station. The building number and the units number of the physical address are then automatically "01" and cannot be set.
  - For information on the mode selection of the IP Touch 7, see chapter 1.2 "Fundamentals of structured cabling" on page 7.

    The mode selection for the Guard unit is not possible.
- Floor number and unit number of the physical address.
  - The four-digit unit number in the display consists of two parts. The floor number (first two digits) and the units number (last two digits).

The indoor station IP Touch 7 or Guard unit is addressed.

Do not switch the indoor station IP Touch 7 or Guard unit off or separate it from the other devices.

6.2.4 Outdoor station with display
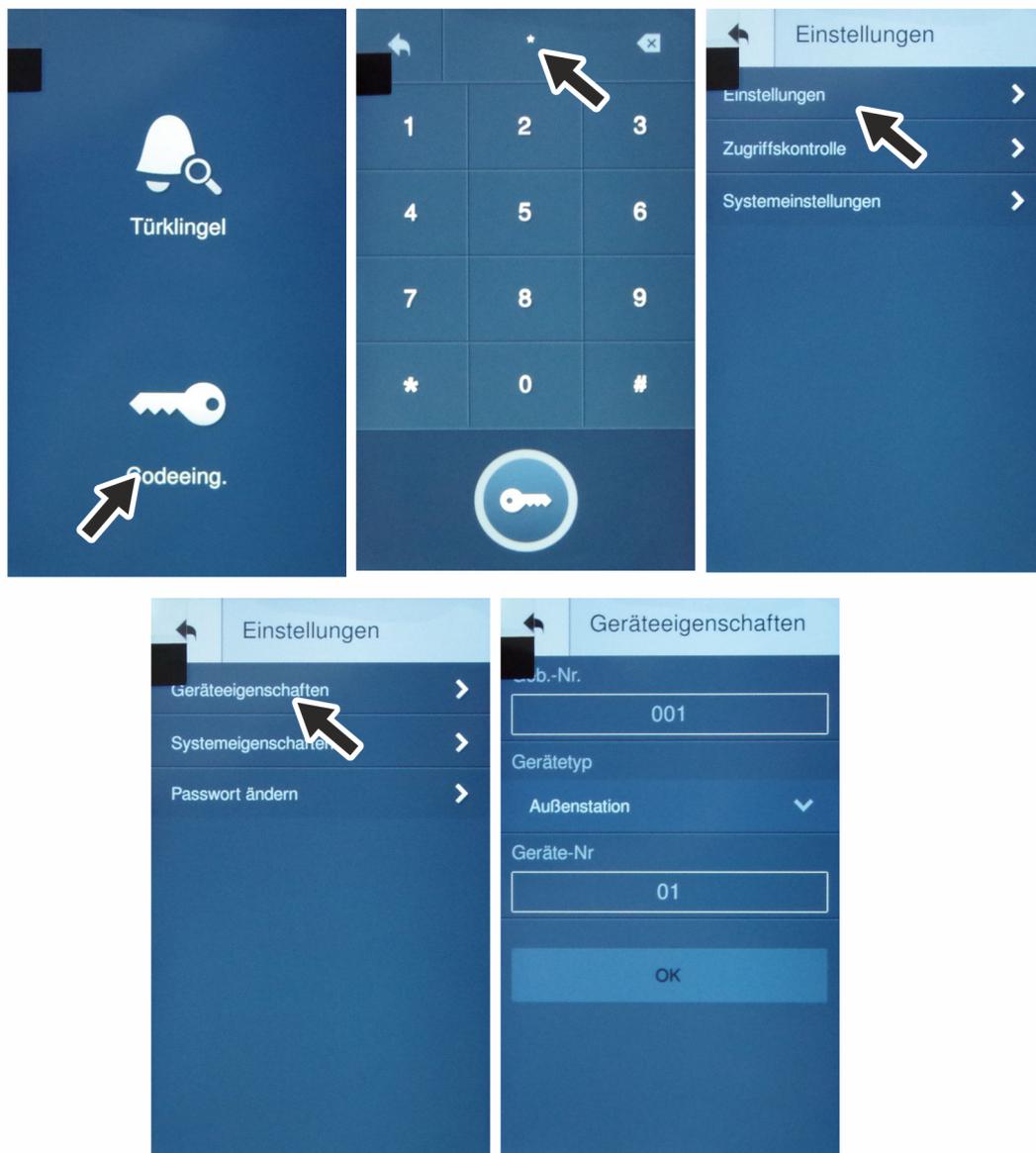
Fig. 49: Outdoor station with display: Settings

The wizard is displayed after the device has booted up automatically and will guide you through the first setup. If the device has already been setup, the main menu is displayed directly.

To address the device, perform the following steps:

1. Boot up the device.
   – The device boots up automatically when the power supply is connected.
2. For initial commissioning: Follow the steps of the wizard for the initial commissioning.
   – First select the language.
3. Open the "Entry code" function in the standby mode.
4. In window "Password" enter the following: [#*] + settings password + [#]
   – The device automatically switches to the selection windows of the setting areas.
   – On the password, see the information at the end of this section.

5. Open the "Settings" / "Device characteristics" function.

6. In the area "Device characteristics" assign the physical address of the device.

    – The physical address 001-01 has already been preset in the factory settings.

    – A preset address or one that has already been entered cannot be confirmed again. In this case, change back to the main menu. The available address then remains fixed.

7. In the "Device characteristics" sector under "Device type", select between the "Outdoor station" or "Gate station" operating mode.

    – "Outdoor station" for building or floor entrances (e.g. separate building wing).

    – "Gate station" for perimeter (e.g. an associated underground car park).

The outdoor station is addressed.

Notice

The engineering password must be changed the first time you access the engineering settings.

– The basic setting is 345678.
– This password should only be used for the first setup and changed to a different password. It cannot be used as actual password.

Notice

If a wrong engineering password is entered 10 times within 5 minutes, no further tries are possible for the next 5 minutes.

Password rule

The password must not contain consecutively rising or falling numbers (e.g. 123456, 654321), and three consecutive identical numbers are also inadmissible (e.g.123444, 666888).

Operating mode

If an outdoor station is to be set up or added for a perimeter (e.g. park house), it is commissioned as normal, just like every other outdoor station.

The outdoor station operation for the perimeter is different only in the operating mode and the physical address.

Perform the following steps for commissioning or adding the outdoor station for the perimeter:

▪ Start the operation of the outdoor station as normal, see chapter 6.2.4 "Outdoor station with display" on page 70.

   – Perform the following deviations at the same time:
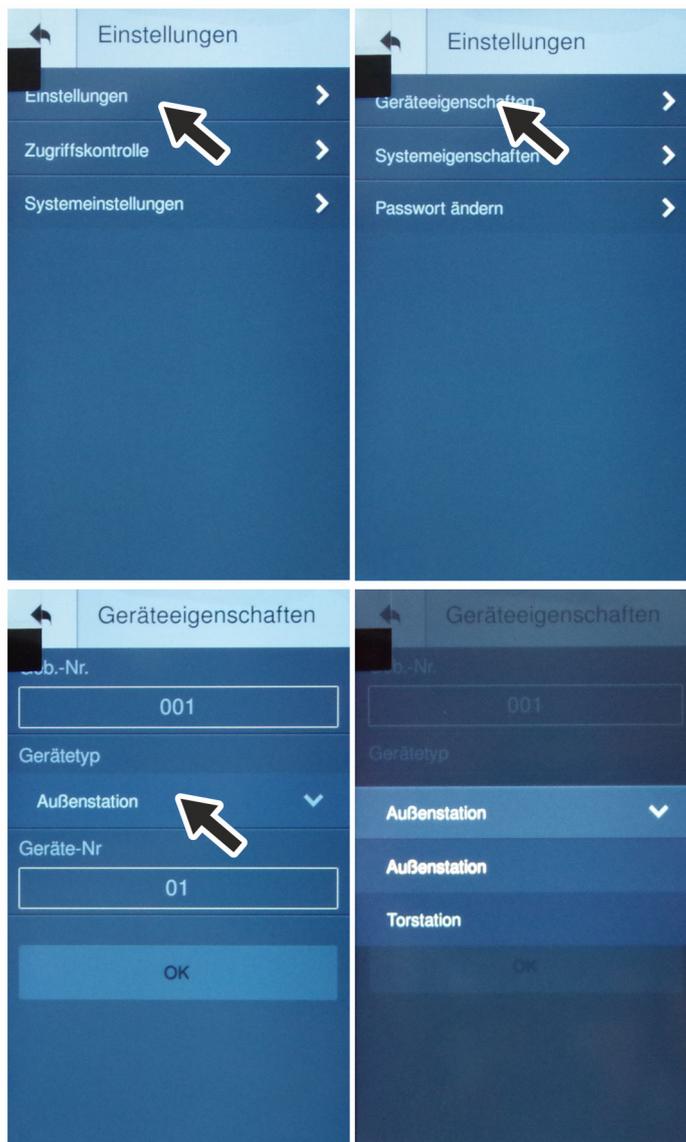
Fig. 50:   Outdoor station with display: operating mode/dg_ref_target>

1. At the outdoor station set the operating mode on "Gate station".

2. Set the physical address for a gate station. A gate station only has the physical address of the device, see chapter 6.2 "Commissioning of a system — Step 1: Local addressing " on page 63.

   – Address range: 01 - 32

Concierge call

If a Guard unit is used in the system, the call to the "Guard unit" can be enabled in the outdoor stations.

▪ This function can only be used by the outdoor station and the gate station of a building. This function cannot be used by additional outdoor stations that are assigned to a unit as private outdoor station.

▪ If this function is enabled, each incoming call from this outdoor station will be transferred to the "Guard unit".

For enabling, perform the following points:

▪ Start the operation of the outdoor station as normal, see chapter 6.2.4 "Outdoor station with display" on page 70.

   – Then perform the following steps:
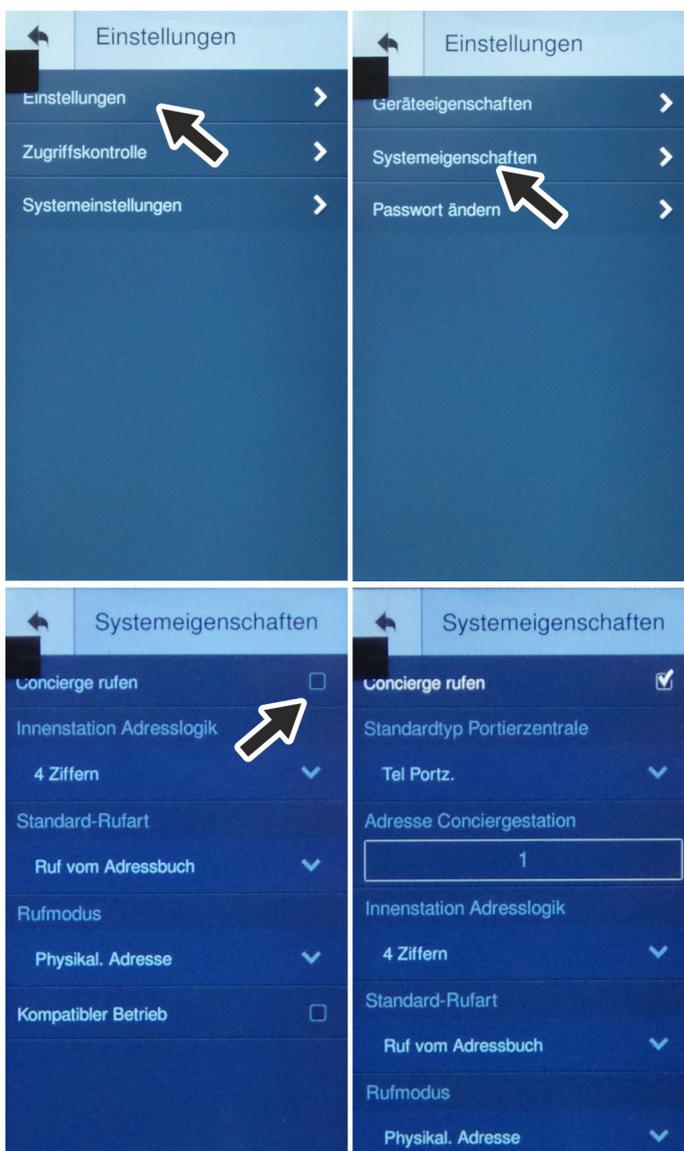
Fig. 51: Outdoor station with display: Setting the concierge call

1. Open the "Settings" / "System settings" function.

2. Set the concierge call to "ON" and select the physical address of the desired "Guard unit".
    – Address range: 01 - 32

If the concierge call is enabled, an additional option can be set.

– Always transfer each unit call (via the name list or number) to the concierge.
    – For the general transfer, perform the following points:
        – Change to the following menu: "System settings / Other settings"
        – Enable the "Telephone to the guard unit" function.

6.2.5 Outdoor station with push-buttons

**Address the device via the " IP Touch 7".**

Fig. 52: Outdoor station with buttons: Commissioning mode

To address the device, perform the following steps:

1. Boot up the device.
   – The device boots up automatically when the power supply is connected.
   – If the device is already booted up, briefly interrupt the power supply of the device. The device reboots.
   – The LED icons [1] light up permanently during the automatic boot up.

2. Activating the "Commissioning mode":
   – After the LED icons [1] in the camera have stopped being lit up, keep the top doorbell button pressed (about 11 seconds), until the LED icons [1] light up green.
      – In case of several bell spaces, the first doorbell button is located below the audio shell [2].
      – If no entry is made within the next 5 minutes, the device exits the "Commissioning mode" automatically.

3. Switch to the indoor station.

Fig. 53: Outdoor station without buttons: Addressing via indoor station

4. Switch to menu "System / Settings" at the indoor station.

   – Switch to function "Outdoor station setting".

      – The outdoor station is searched for automatically.

5. Address the outdoor station and save the entries via the "OK" button.

   – Navigate to the "OK" button at the bottom.

The outdoor station is addressed.

Operating mode

If an outdoor station is to be set up or added for a perimeter (e.g. park house), it is commissioned as normal, just like every other outdoor station.

The outdoor station operation for the perimeter is different only in the operating mode and the physical address.

Perform the following points for commissioning or adding the outdoor station for the perimeter:

▪ Start the operation of the outdoor station as normal, see chapter 6.2.5 "Outdoor station with push-buttons" on page 77.

– Perform the following deviations at the same time:
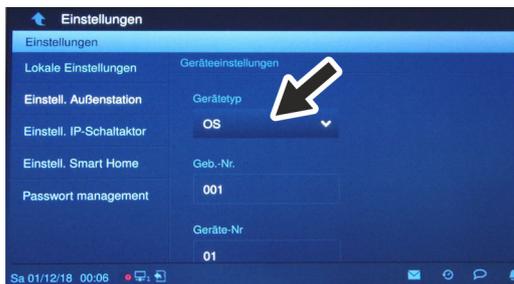
Fig. 54:   Outdoor station with buttons: Set the operating mode via the indoor station

1. At the indoor station set the operating mode for the outdoor station on "Gate station".

   ▪ GS: Gate station (Gate Station)

   ▪ OS: Outdoor station (Outdoor Station)

2. Set the physical address for a gate station. A gate station only has the physical address of the device, see chapter 6.2.1 "Fundamentals of physical addressing ABB-Welcome IP" on page 63.

   – Address range: 01 - 32

Concierge call

If a Guard unit is used in the system, the call to the "Guard unit" can be enabled in the outdoor stations.

▪ This function can only be used by the outdoor station and the gate station of a building. This function cannot be used by additional outdoor stations that are assigned to a unit as private outdoor station.

▪ If this function is enabled, each incoming call from this outdoor station will be transferred to the "Guard unit".

For enabling, perform the following points:

▪ Start the operation of the outdoor station as normal, see chapter 6.2.5 "Outdoor station with push-buttons" on page 77.

– Then perform the following steps:

Fig. 55:   Outdoor station with buttons: Setting the concierge call via the indoor station

1. Enable the "Outdoor station setting / "Concierge call forward" function on the indoor station.

2. Set the physical address for a gate station. A gate station only has the physical address of the device, see chapter 6.2.1 "Fundamentals of physical addressing ABB-Welcome IP" on page 63.

– Address range: 01 - 32

6.2.6 IP switch actuator

Address the device via the " IP Touch 7"

Fig. 56: IP switch actuator: commissioning mode

To address the device, perform the following steps:

1. Boot up the device.
   – The device boots up automatically when the power supply is connected.
   – If the device is already booted up, briefly interrupt the power supply of the device. The device reboots.
   – The LED LED [1] lights up permanent after the automatic boot up.
2. Activating the "Commissioning mode":
   – After the device has booted and the LED [1] lights up permanent, briefly press the "Reset" [2] button.
     – The LED [1] then flashes slowly. The flashing signals that the device is in "Commissioning mode".
     – If no entry is made within the next 5 minutes, the device exits the "Commissioning mode" automatically.
3. Switch to the indoor station.

Fig. 57:   Addressing IP switch actuator

4. Switch to menu "System / Settings" at the indoor station.
    –   Switch to function "IP switch actuator setting".
        –   The IP switch actuator is searched for automatically.
    –   Select the operating mode of the IP switch actuator.
        –   IP switch actuator of building: When the IP switch actuator is part of a building.
        –   IP switch actuator network: When the IP switch actuator is part of a perimeter.
        –   IP switch actuator private: When the IP switch actuator is part of a units network.
    –   Addressing the IP switch actuator.
5. Save the entries via the "OK" button.
    –   Navigate to the "OK" button at the bottom.
6. Restart the IP switch actuator.

The IP switch actuator is addressed.

6.3 Commissioning of a system — Step 2: Commissioning "Smart Access Point"

6.3.1 Overview

Commissioning of the "Smart Access Point" system is carried out in 3 sections.

– Please observe the order of the steps. They are dependent on each other.

1.	Connect the "Smart Access Point" via WLAN with a computer and call up the website of the "Smart Access Point".	see chapter 6.3.2 "Connecting a PC with the "Smart Access Point "" on page 83
2.	Make a preliminary decision about the system mode.	see chapter 6.3.3 "Preliminary information: Selection of the system mode" on page 87
3.	Run through the wizard with selection of the system mode.	see chapter 6.3.4 "Commissioning the "Smart Access Point"" on page 89

6.3.2 Connecting a PC with the "Smart Access Point "

Attention! Loss of data

The "Smart Access Point" safely integrates the device found into the system with the aid of certificates. This makes encrypted communication between all devices possible.

▪ Perform a backup after commissioning.

– If the Smart Access Point becomes defective, without a backup you would need to re-commission the entire system.

Boot up the "Smart Access Point"

PoE
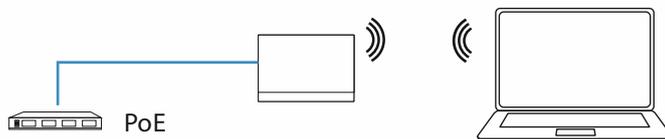
Fig. 58:   Principle: Connecting the "Smart Access Point" with PC (initial connection)
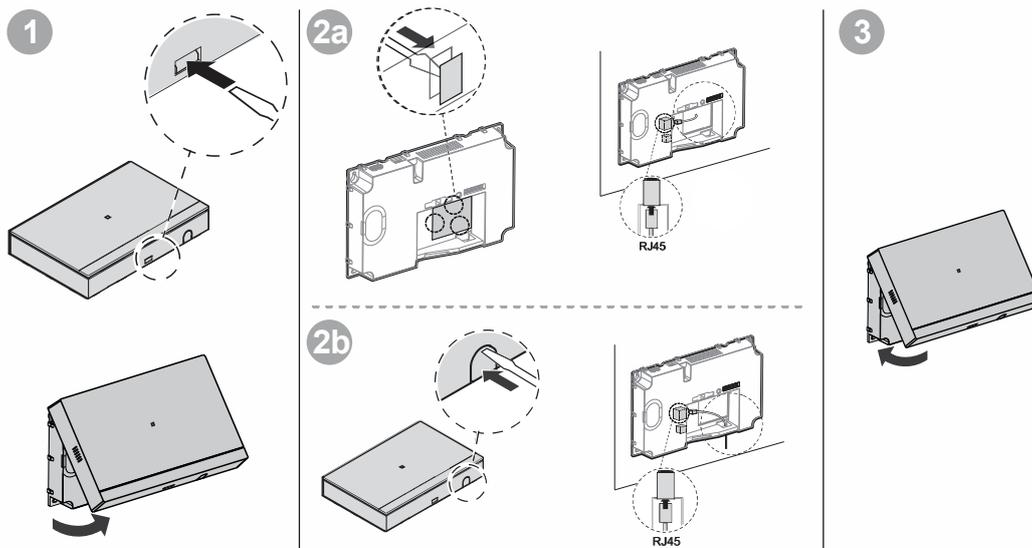
Fig. 59:   LAN cable on the "Smart Access Point"

Use the following steps to boot up the "Smart Access Point":

1. Connect the LAN cable with the "Smart Access Point".

2. Remount the cover of the "Smart Access Point".

    –   Attention: The "Smart Access Point" cannot be put into operation if the cover is
        removed.

3. Connect the LAN cable with the PoE switch and thereby connect the power supply.

    –   As soon as the "Smart Access Point" is supplied with voltage via the PoE switch, the
        device boots up automatically.

    –   The LED lights up permanently white during the automatic boot up.

        –   The LED lights up permanently white before the initial commissioning is finished and
            also after the boot up.

    –   The PC can be connected with the "Smart Access Point".

Notice

LED (white / red) / Access Point mode

–   Normally the "Smart Access Point" switches directly into the Access Point
    Mode after the boot-up (the LED lights up permanently red). In this mode it is
    not possible to access the"Smart Access Point" via LAN because of the
    security of the system. Since access per WLAN is necessary for initial
    commissioning, the "Smart Access Point" switches into the Access Point
    Mode only after initial commissioning. The active connection is then
    automatically disconnected.

Connecting the "Smart Access Point" with the PC via WLAN

Use the following steps to connect with the PC:
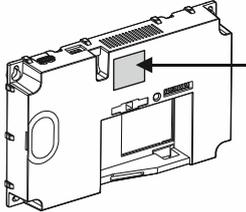
Fig. 60:   WLAN access data

1. Note down the WLAN access data.
   – The WLAN access data are located on the device. Remove the cover of the device.
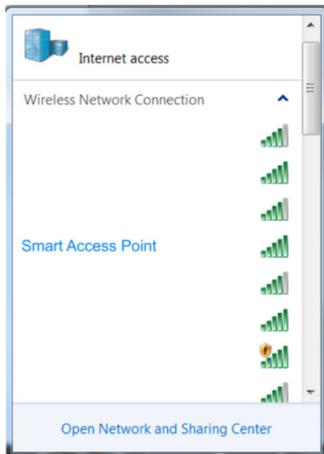
Fig. 61:   "Smart Access Point" in the network list of the PC

2. Connecting the PC with the WLAN of the "Smart Access Point".
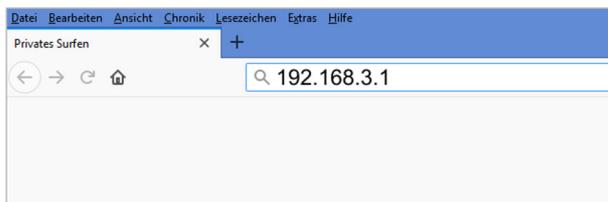
Fig. 62:   Entering the IP address in a browser

3. Call up the start page of the "Smart Access Point" in a commercially available browser.
   – For this, enter the IP address "192.168.3.1" in the address line of the browser.
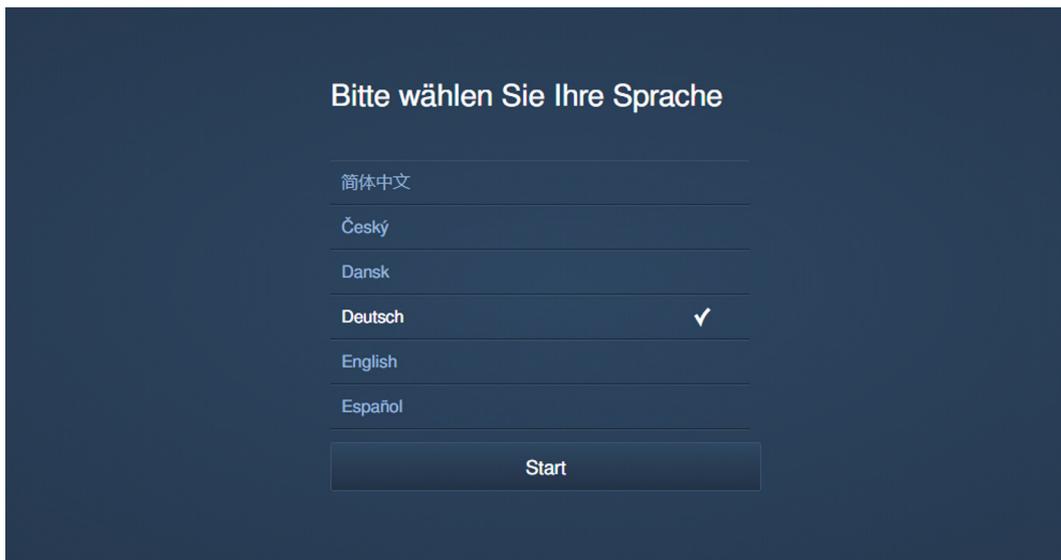
Fig. 63:   Start page of the "Smart Access Point"

– The start page of the "Smart Access Point" is displayed in the browser.
    – During the first call-up the start page is in English.

6.3.3 Preliminary information: Selection of the system mode

Preliminary information about the selection of the system modes
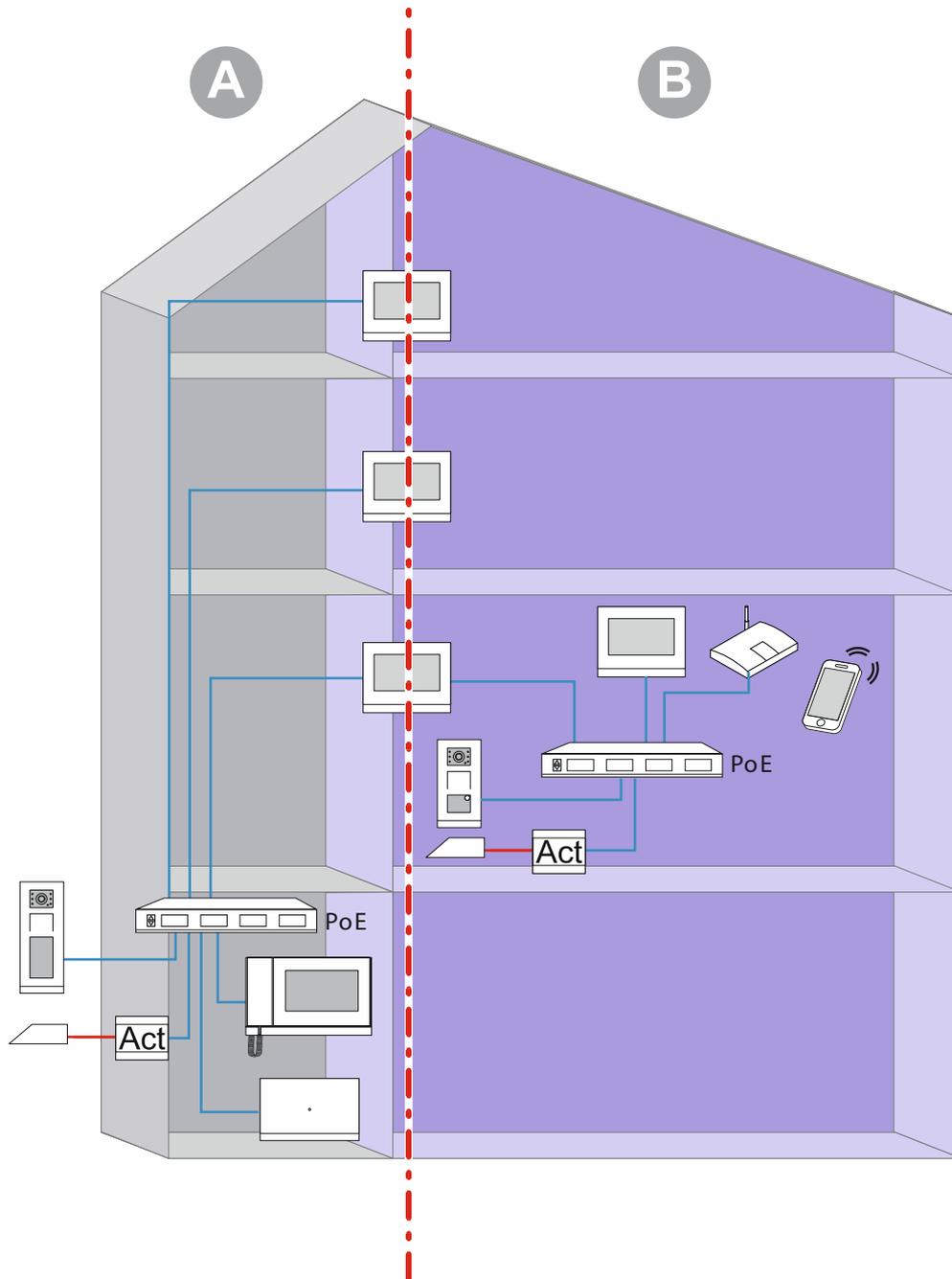
Fig. 64:   Preliminary information about the selection of the system modes

The graphics illustrate two basic areas within buildings (here a residential building). Both areas of the installation are strictly separated by the first indoor station (master) of a unit which operates as IP gateway. No area can access the other area.

▪ Area [A]: The public area (building network)
  – Here, for example, the caretaker receives the visitors and guides them to the individual apartments.
▪ Area [B]: The private area (units network)

– This area is, as the name indicates, private. The public area cannot access the private area from behind the 1st indoor station. Access is also not possible from the private area to the public area.

System modes of the "Smart Access Point"

For the later adding of the devices the system mode must already be specified during the processing steps of the commissioning of the "Smart Access Point".

- Mode "Multi-unit house / commercial":
  – For a building network.
  – The "Smart Access Point" is located in the building network.
  – The "Smart Access Point" has the static IP address "10.0.0.1".
    – The 10s IP address range is used to communicate with the "ABB-Welcome IP" participants.
    – In parallel the "Smart Access Point" can be connected with a router per WLAN or LAN and act as DHCP Client. Here the device receives an additional IP address assigned by the router. This it uses in addition to its own 10s IP address.
- Mode "One-family house / terraced house":
  – For a units network.
  – The "Smart Access Point" is located in the units network.
  – The "Smart Access Point" has the static IP address "10.0.0.1".
    – The 10s IP address range is used to communicate with the "ABB-Welcome IP" participants.
    – In parallel the "Smart Access Point" can be connected with a router per WLAN or LAN and act as DHCP Client. Here the device receives an additional IP address assigned by the router. This it uses in addition to its own 10s IP address.

6.3.4 Commissioning the "Smart Access Point"

When the "Smart Access Point" is connected to the PC and the start page of the "Smart Access Point" is called up in the browser, the "Smart Access Point" is ready for commissioning.

During commissioning a wizard guides through the individual steps.

Commissioning must be carried out in the following situations:

▪ For initial commissioning
▪ After a reset to the factory settings

To commission the device, perform the following steps:
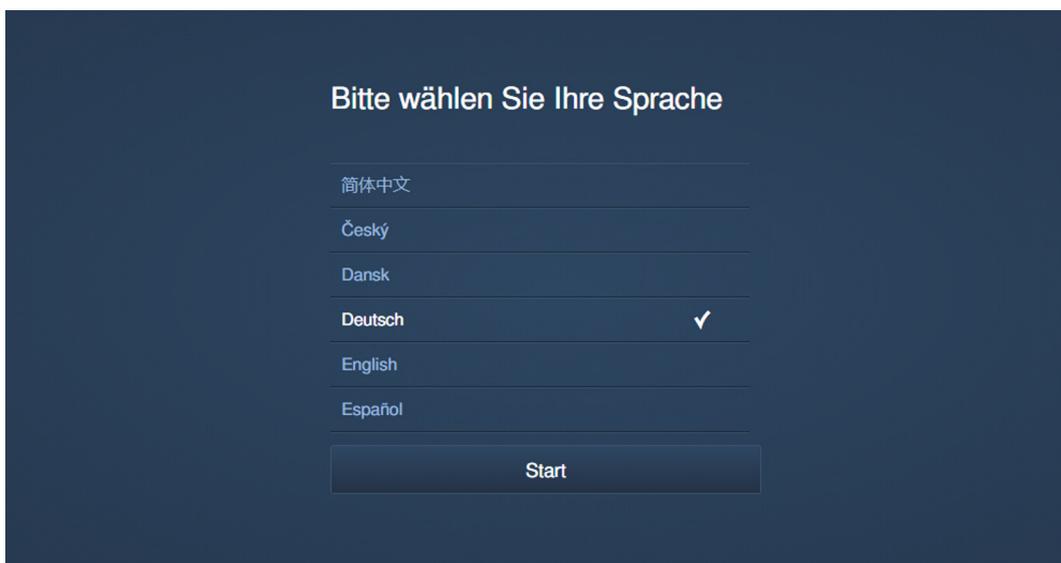
Fig. 65:   Commissioning "Smart Access Point": Language

1. Select the language.
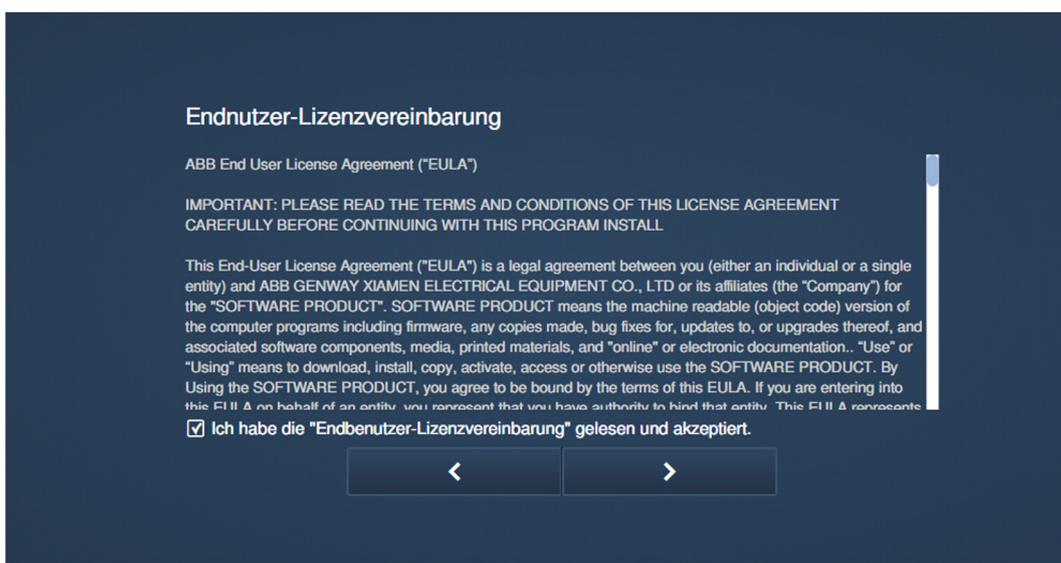
Fig. 66:   Commissioning "Smart Access Point": Licence agreements

2. Accept the following licence agreements:

   ▪ End-user licence agreement

   ▪ Software licence agreement

   ▪ Data protection declaration

Fig. 67:   Commissioning "Smart Access Point": Building type

3. Select the building type (system mode).

   – Detailed information: see chapter 6.3.3 "Preliminary information: Selection of the system mode" on page 87.

   – Attention:

     The building type can only be specified in the initial setup and it cannot be changed after the initial setup.

     If you want to change the building type, you need to reset the "Smart Access Point" to the factory settings.
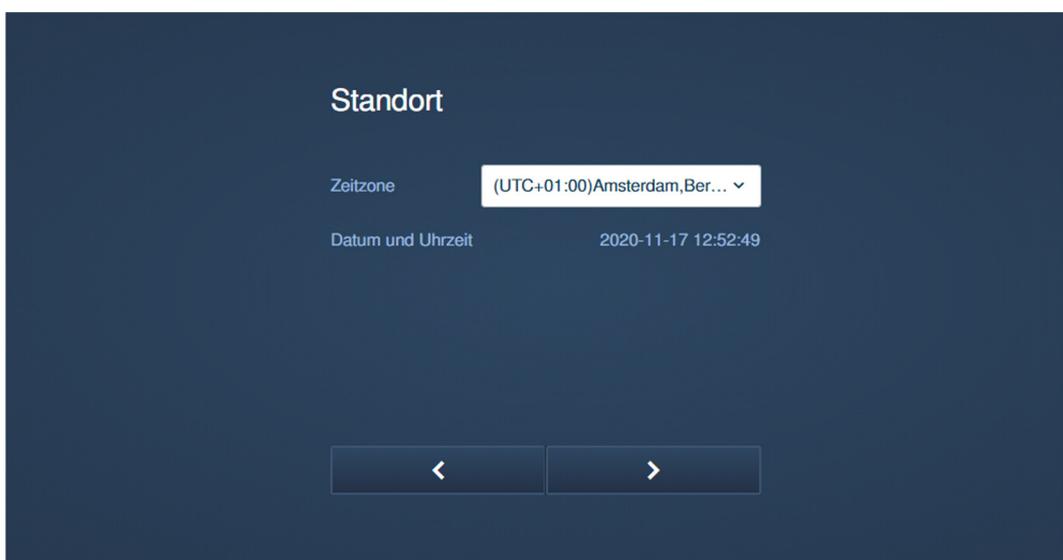
Fig. 68:   Commissioning "Smart Access Point": Location

4. Enter the location.

– A time zone can be selected from a drop-down menu.

– This step can be skipped. During the later reconnection there is an automatic request for an adjustment if the values between the PC and the "Smart Access Point" do not match.

Commissioning

Fig . 69:   Commissioning "Smart Access Point": WIFI settings

5. Entering the WIFI settings of the "Smart Access Point".

- SSID (Name):
  - The name can be freely selected. This can, for example, be the name of the device (located on the device) or the name of the building in which the "Smart Access Point" is located.

- Password:
  - The password must be changed during the initial setup. The password rule is displayed in a dialogue window when you enter the password.

    This password replaces the previous WLAN Access Point password of the "Smart Access Point". The factory password is printed on the "Smart Access Point".
  - The password is later necessary each time the "Smart Access Point" is called up.
  - Note down the password.

- Country code
  - Ensure that the country code is selected correctly for the location of the device.

    The "Country code" setting ensures that your router will only activate WLAN settings that conform with the country's official regulatory laws.

Fig. 70: Commissioning "Smart Access Point": Connection to the local network

6. Connection to the local network

– Attention! Do **not** skip this step if devices are to be integrated now or later into the ABB-Welcome IP.

For the application of the "Smart Access Point" in the "ABB-Welcome IP" system a selection of the type of connection is absolutely necessary. Even when no connection to a local network is planned. If this step is skipped, no devices can be added to the system after commissioning.

If currently no connection to a local network is currently planned, select "LAN" or "WIFI".

- Option 1: LAN
    - All communication with system devices of the ABB-Welcome IP is carried out via a LAN interface.
    - All system devices of the ABB-Welcome IP keep their own IP address when they are used in the building network. The "Smart Access Point" can reach them even if they use a DHCP client IP address.
- Option 2: WLAN
    - All communication with system devices of the ABB-Welcome IP is carried out via a WLAN interface.
    - All system devices of the ABB-Welcome IP keep their own IP address when they are used in the building network. The "Smart Access Point" can reach them even if they use a DHCP client IP address.
- Option 3: Skip the selection
    - Communikation with system devices of the ABB-Welcome IP is not possible.

Fig. 71: Commissioning "Smart Access Point": LAN Network settings

7. Network settings

– If a LAN connection was selected, the IP address must be specified to establish the LAN connection.

▪ Checkbox "Obtain IP address automatically' is activated:

– The "Smart Access Point" functions as DHCP client.

– If the "Smart Access Point" is connected to DHCP server/router, the IP address is assigned automatically.

▪ Checkbox "Obtain IP address automatically' is deactivated:

– The "Smart Access Point" is to be reached in a network that operates with static IP addresses.

– Here the network parameters such as IP address, subnet mask and gateway must be configured manually.

Fig. 72: Commissioning "Smart Access Point": WLAN connection

– If a WLAN connection is selected, a connection with a WLAN network must be established.

  – All available nearby WLAN networks will be displayed on the list.

  – If you can't find the desired WLAN network, click the "Update" button to search again.

  – Click on the desired WLAN name (SSID) in the list, enter the password and then click on "Connect" to establish the connection to the WLAN network.

Fig. 73:   Commissioning "Smart Access Point": Administrator account

8. Create administrator account (first admin user)

  – The administrator account has management and modification rights for the entire system. Additional accounts can be added at a later point in time. For example, an account with rights only for the administration of keys and names.

  – The first admin user cannot be deleted. It manages all other users.

  – If you want to reset the password for the first admin, see chapter 6.7.4 ""Smart Access Point"" on page 120.

Fig. 74:   Commissioning "Smart Access Point": Options for resetting

9. Options for resetting the "Smart Access Point".

- Without MyBuildings account

  – If this option is selected, anyone can reset the password for the first admin user by pressing the reset button.

  – This configuration is used when the "Smart Access Point" is installed in a private area and is not physically accessible to unauthorized users.

- With MyBuildings account

  – If this option is selected, a one-time valid security code is needed to reset the password for the first admin user by pressing the reset button. The security code will only be sent to the email specified during the initial setup.

  – This configuration is used when the "Smart Access Point" is installed in a public area and is not physically accessible to unauthorized users.

  – For this option the registration for a "myBuildings account" is necessary.

    If you are not yet registered for a "myBuildings account", this can be done for this selection in the next step.

Notice

- The reset option can only be specifies during the initial setup and cannot be changed after the initial setup.

  – The reset option can only be changed later when you restore the "Smart Access Point" to the factory settings.

- An Internet connection is required for the reset option of "With MyBuildings account". If this is not available or it should not be used, skip the next step.

---

10. Performing "myBuildings" settings:

Fig. 75:   Commissioning "Smart Access Point": Without myBuildings account

- Reset option: "Without myBuildings account"

  – This page is displayed when the reset option is set on "Without myBuildings account".

  [1] Click on the "Skip" button to change to the next step if no connection is to be established with myBuildings.

[2] The myBuildings portal is called up via the "Register" link. There an account can be registered if necessary.

[3] Enter the user name, the password and the display name. Then click on "Connect". A connection with the MyBuildings portal is established.

[4] If access is to be gained to the "Smart Access Point" via the MyBuildings portal, the remote access must be activated (activate the checkbox).

Fig. 76:   Commissioning "Smart Access Point": With myBuildings account

- Reset option: "With myBuildings account"

    – This page is displayed when the reset option is set on "With myBuildings account".

    [1] A myBuildings account is required for this reset option. The myBuildings portal is called up via the "Register" link. There an account can be registered if one is not yet available.

    [2] Enter the user name, the password and the display name. Then click on "Connect". A connection with the myBuildings portal is established.

    [3] Enter the e-mail address that is to be used to activate the myBuildings account. This e-mail address will receive a security code when the first admin user is to be reset. If you want to reset the password for the first administrator, see chapter 6.7.4 ""Smart Access Point"" on page 120.

    [4] If access is to be gained to the "Smart Access Point" via the myBuildings portal, the remote access must be activated (activate the checkbox).
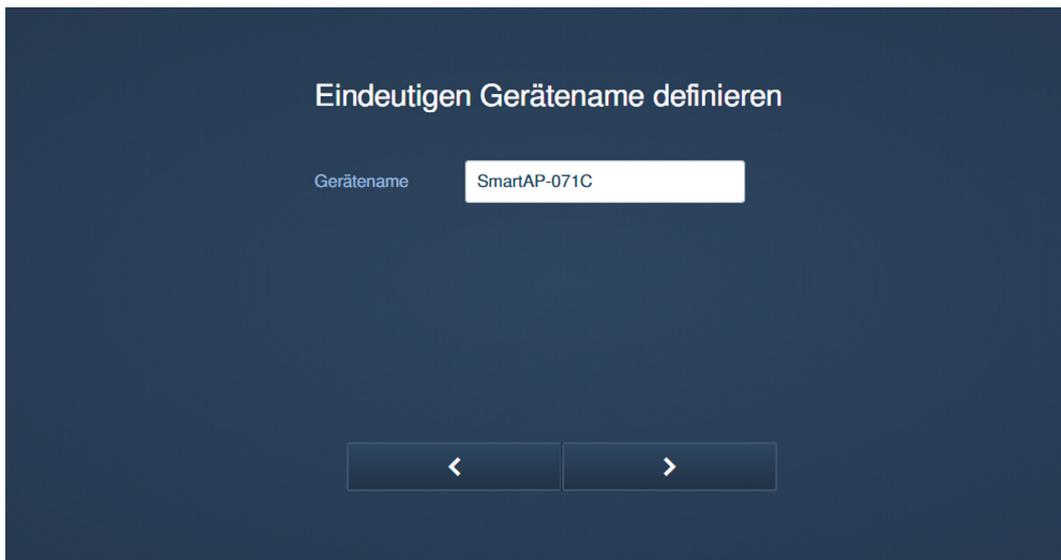
Fig. 77:   Commissioning "Smart Access Point": Device name

11. Define an unmistakable device name.

– The UPnP device name is defined with the device name.

– The device name will be displayed on the log in screen.

Fig. 78:   Commissioning "Smart Access Point": Overview of settings

12. Overview of settings

– The "Overview of settings" page is merely a display in which all the settings made can be checked again.

– If you navigate with the mouse pointer to the right next to the text, a photo sequence is faded in.

– If a setting is to be changed, navigate via the forward/back buttons to the page with the desired settings to change them. All other settings are retained.

Fig . 79: Commissioning "Smart Access Point": Confirm settings

13. Confirm the settings made.

– The system configures itself.
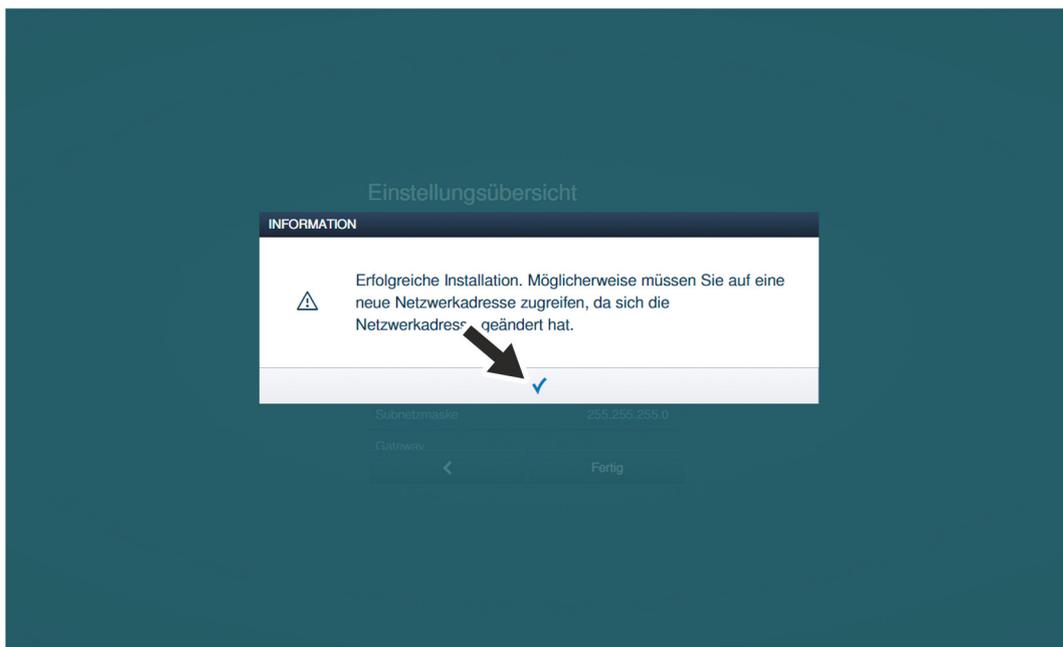
Fig . 80: Commissioning "Smart Access Point": Confirm commissioning

14. Confirm the configuration.

Fig. 81: Commissioning "Smart Access Point": Separation of connection

– At the end of initial commissioning the "Smart Access Point" switches automatically into the Access-Point mode (the LED lights up red).

– The WLAN connection with the "Smart Access Point" is activated with the new data.

– From now on the "Smart Access Point" switches directly into the Access-Point after every boot-up.

For the additional commissioning access can be gained to the Smart Access Point either via WLAN AP or via LAN.

– Attention:

   The "Smart Access Point" can only be accessed via WLAN with the new access data.

6.4 Commissioning a system — Step 3: Searching and certifying

6.4.1 Overview

1.	Reconnection with the "Smart Access Point" after commissioning.	see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105
2.	If there is no router with a DHCP function in the system, enter the IP address of the PC in the IP address range of the ABB-Welcome IP system.	▪ see chapter 6.4.2 "Preliminary information: Adjusting IP addresses to a PC" on page 103 ▪ see chapter 6.4.4 "Adding via automatic search" on page 108
3.	Searching and certifying devices.	see chapter 6.4.4 "Adding via automatic search" on page 108
4.	Backing up the system.	see chapter 6.4.6 "Backup / restore the project" on page 111

The actual commissioning process of the system is complete after the system is backed up. The system is ready to run.

Additional steps

The following points serve for completing the system and are performed only when necessary.

- Finishing entries of names / bell buttons,
  - Entries of names for outdoor stations with display / indoor stations / concierge stations, see chapter 6.9 "Setting up name entries in the IP touch 5" outdoor station" on page 124.
  - Doorbell buttons, see chapter 6.8 "Setting up the doorbell buttons of the "IP pushbutton outdoor station"" on page 122.
- Adding the following devices manually: IP switch actuator, see chapter 6.5 "Adding devices manually in the "Smart Access Point"" on page 112.
- Certifying an IP switch actuator, see chapter 6.5 "Adding devices manually in the "Smart Access Point"" on page 112.
- Deleting devices, see chapter 6.6 "Delete device in the "Smart Access Point" " on page 116.
- Resetting the system, see chapter 6.7 "RESET (Reset system / devices)" on page 117.
- Changing physical addresses later, see chapter 6.10 "Change devices / Change physical address" on page 137.

6.4.2 Preliminary information: Adjusting IP addresses to a PC

Depending on the setup of the system, the IP address of the connection must be put on the same area on the PC / laptop as that of the device (only required once). Otherwise the Web browser does not establish a connection to the device.

Setting of the IP address according to the example of Windows 10 operating system
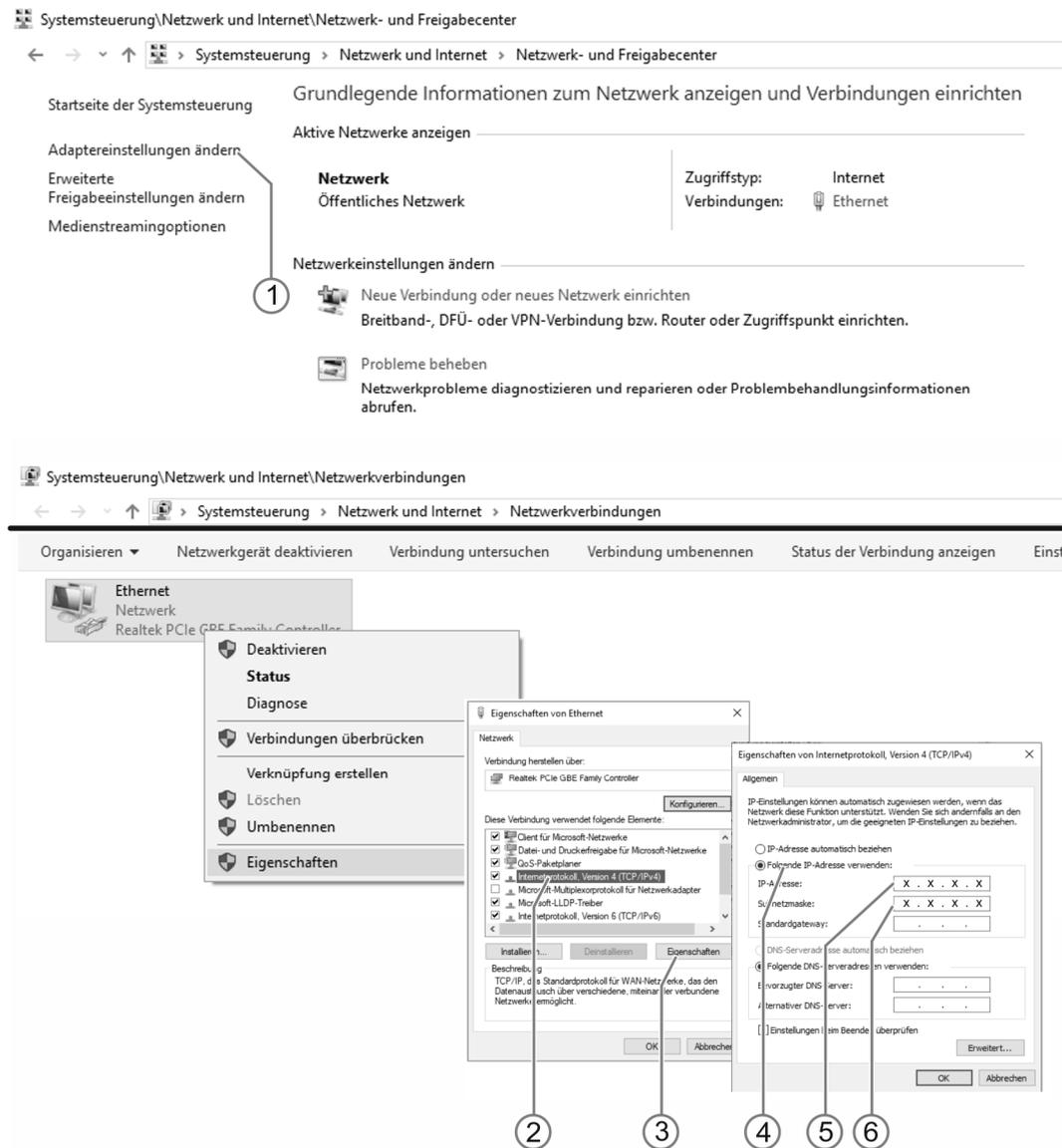
Fig. 82:   Setting the IP address in the PC (example Windows 10)

Use the following steps to set the IP address:

1. Switch to the system controller.
2. Open: The network and the enabling centre.
   – "Network and Internet" / "Network and enabling centre".
3. Open: "Changing the adapter settings" [1].
   – The dialogue field "Network connections" is displayed.
4. Mark the network connections in the dialogue field and open them with a right click: Properties [3].
5. Mark in dialogue field: "Internet protocol Version 4 (TCP/IPv4)" [2].
6. Open in dialogue field: Properties [3].
7. Activate in dialogue field: Use the following IP address [4].
8. Enter the desired IP address at "IP address" [5].
9. At "Subnet mask": Only enter a click [6].
   – The address is located automatically.
10. Confirm and close all windows.

The device can now be called up via a Web browser.

6.4.3 Reconnect the "Smart Access Point"

Connecting the "Smart Access Point" with the PC via LAN
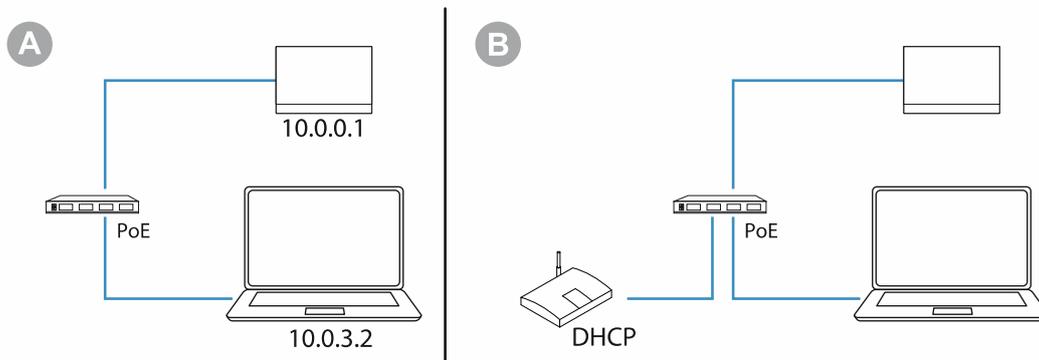
Fig. 83:   Connecting the "Smart Access Point" with the PC

Preliminary information / Preparation:

[A] If there is no router with a DHCP function in the system, the PC must be put into the same IP address range of the "Smart Access Point" before calling up the start page of the "Smart Access Point", see chapter 6.4.2 "Preliminary information: Adjusting IP addresses to a PC" on page 103.

[B] If a router with a DHCP function is integrated, the IP addresses are managed automatically by the router.

–   The IP address range of the PC must not be adjusted manually.

–   The IP address of the "Smart Access Point" assigned by the router can, for example, be seen in the router or determined via a network scanner app.

The "Smart Access Point" always has the fixed IP address "10.0.0.1". This address is necessary to communicate with the ABB-Welcome IP in the IP network. If a router with DHCP function is active in the same network, the "Smart Access Point" operates in parallel as DHCP client. This means that, if necessary, the router can be checked to see which IP address the "Smart Access Point" has received from the router (with DHCP). The connection is then established via this IP address:

▪   10.0.3.1 ... 10.0.3.254

In this address range also other devices, such as a camera, can use the 10-type addresses without coming into conflict with the ABB-Welcome IP address range.

As soon as the "Smart Access Point" is supplied with voltage via the PoE switch, the device boots up automatically. After the boot-up the "Smart Access Point" switches automatically into the Access Point Mode (the LED lights up permanently red). The PC can be connected with the "Smart Access Point".

Connect.

Use the following steps to connect with the PC:

1. Connecting the PC with the LAN of the "Smart Access Point".
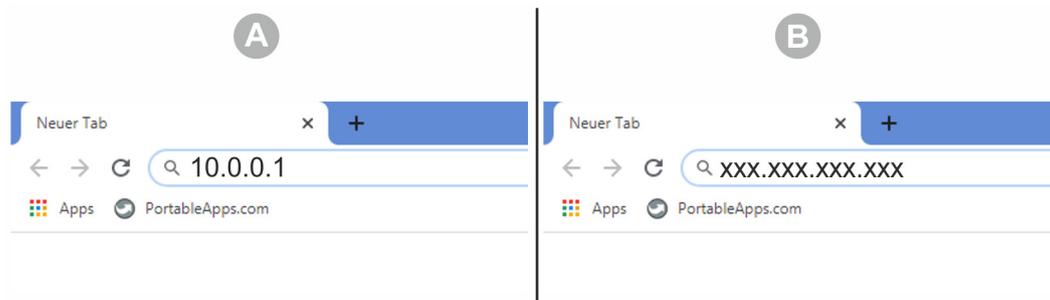
Fig. 84:   Entering the IP address of the "Smart Access Point" in a browser

2. Call up the start page of the "Smart Access Point" in a commercially available browser.

   [A} There is no router with a DHCP function in the system.

      – Enter the IP address 10.0.0.1.

   [B] A router with a DHCP function is integrated in this system.

      – Enter the IP address that was assigned by the DHCP function of the router.
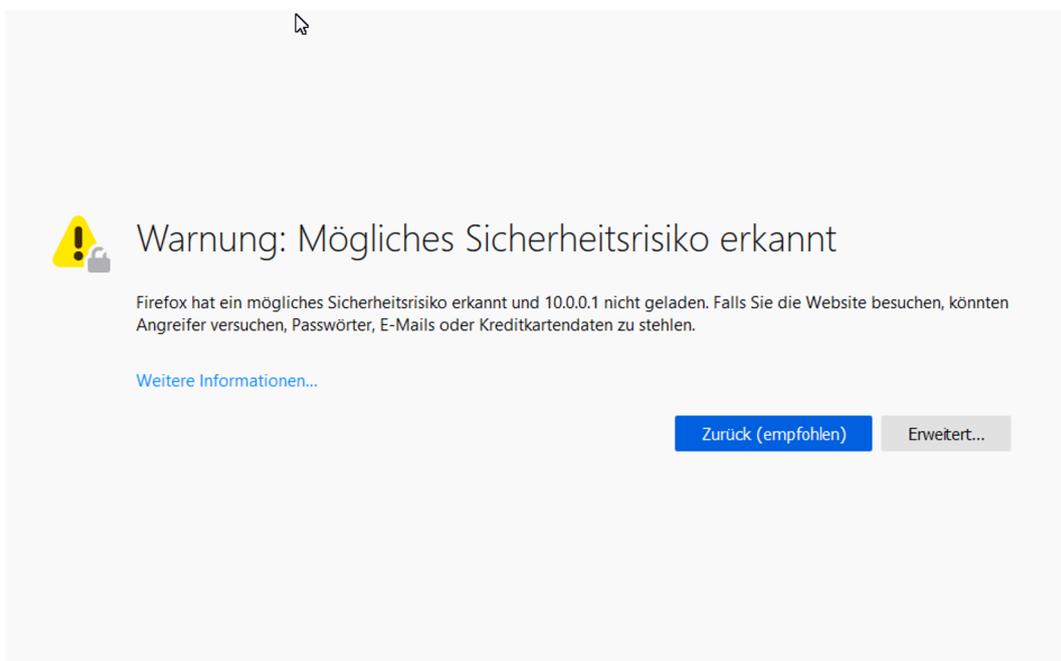
Fig. 85:   Error message: Unsafe connection

      – A warning is apparently displayed when the "Smart Access Point" is called up. This is normal since this is a connection to a stationary device.

3. Acknowledge the error message if it is displayed.
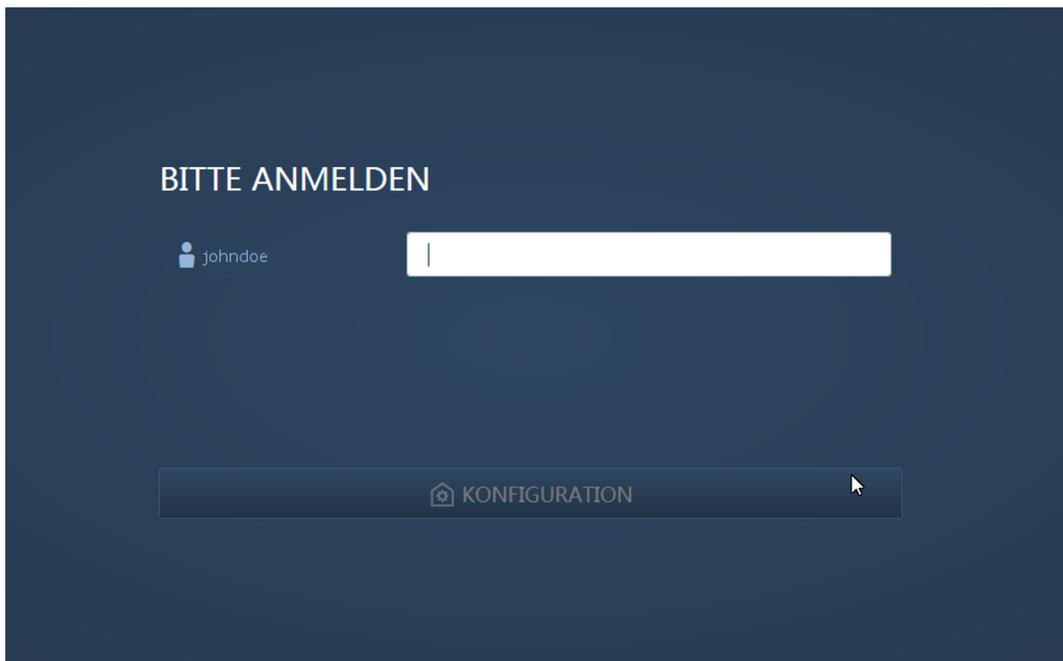
Fig. 86:   Start page of the "Smart Access Point"

– The start page of the "Smart Access Point" is displayed.

6.4.4 Adding via automatic search

For the certification of devices, first the entire system is searched in the "Smart Access Point" for available devices.
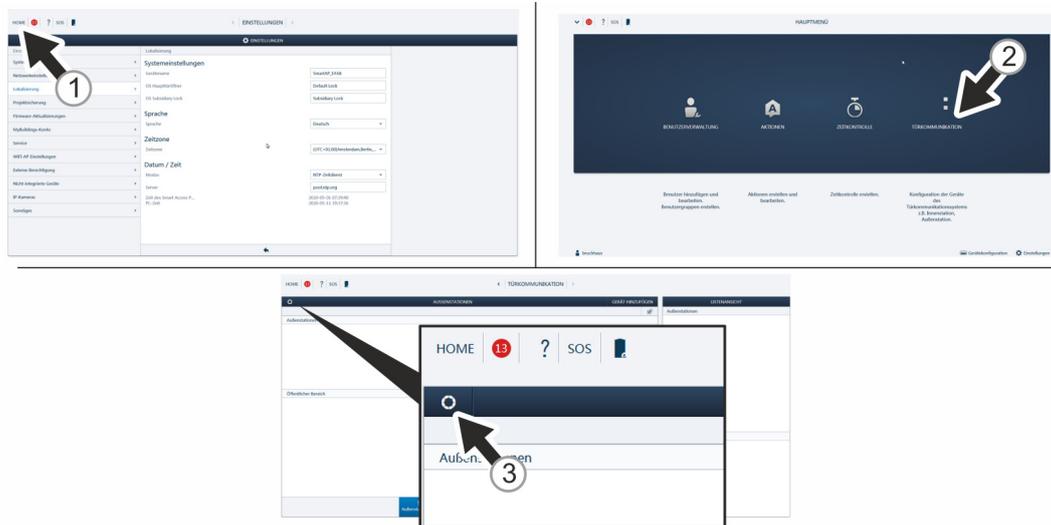
Fig. 87:   Door communication: Searching and certifying

Use the following steps to search for devices automatically:

1. Connect a PC with the "Smart Access Point".
   – More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.

2. Navigate to function "Searching and certifying".
   – Call up the main menu [1], if it is not yet displayed.
   – Switch to door communication [2].
   – The circular button of function "Searching and certifying" is located at the top left [3].
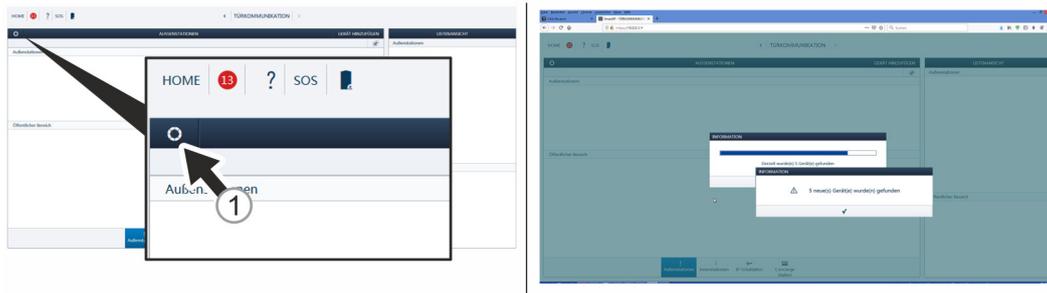
Fig. 88:   Door communication: Search run

3. Start the "Searching and certifying" function [1] in the door communication of the "Smart Access Point".

    –   All located devices are displayed.

    –   The search always extends itself over the entire available address range of the door communication system. It always takes the same amount of time.

    –   The search only concludes with the separate message of the devices found. If actions are performed prior to this message, the search continues to run in the background.

Search mode notice
-   The search for devices can be started at any time via the "Smart Access Point". It can, for example, be used to search for newly added devices in the system.
-   The search mode merely adds something. Nothing is overwritten or deleted. All settings that were made in the system up to the start of the search are retained.
-   Also older devices that were removed from the system and are no longer available are not deleted during the search. They are merely no longer displayed as search result.

Notice

With the local input of a new physical address on a device with display, the existing certificate of the device is deleted. The device must then be deleted manually from the "Smart Access Point" and then re-integrated into the system.

For the renewed assigning of a physical address via the "Smart Access Point" this is no longer necessary.

Notice

The search is based on UDP (User Datagram Protocol).

In case of large networks with more than 13 hops / switches, the automatic search cannot be performed.

6.4.5 Defining trustworthy devices

Outdoor stations, indoor station and the IP switch actuators must be joined to each other. This specifies the indoor station from which the door is allowed to be opened.
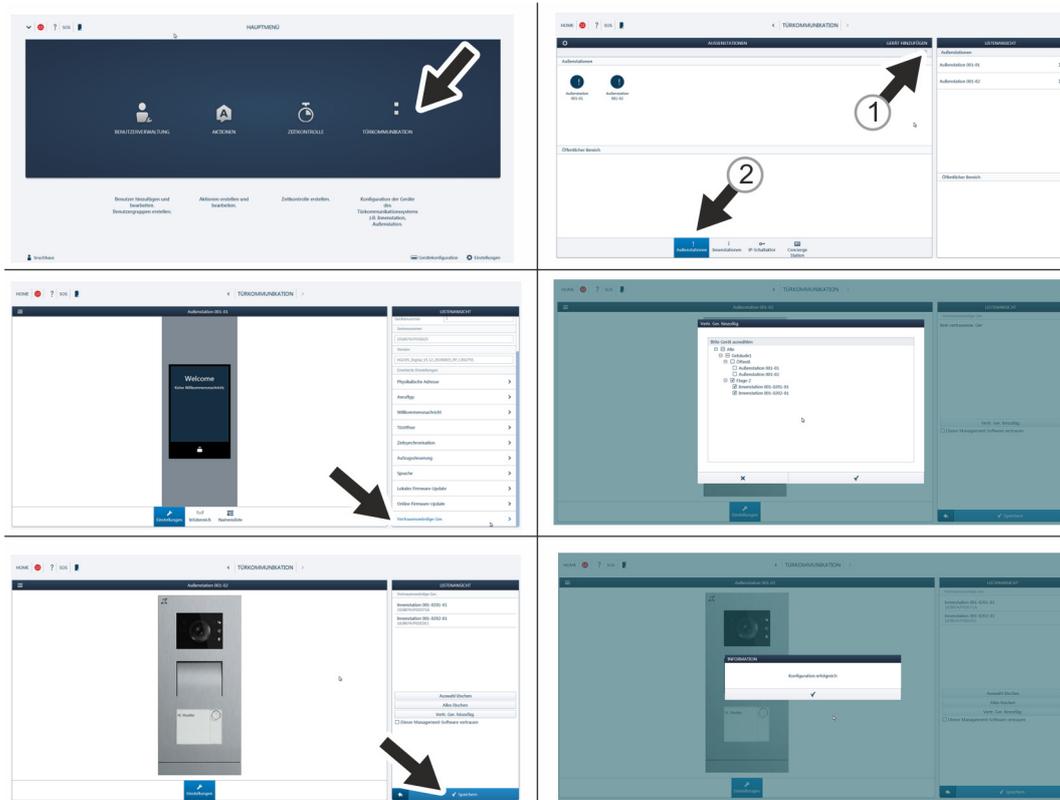
Fig. 89:   Joining device together

To join the devices, perform the following steps:

1. Connect a PC with the "Smart Access Point".

    – More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.

2. In the main menu of the "Smart Access Point", change to the "Door communication" function.

3. Navigate to the desired outdoor station.

    – Multiple selection of outdoor stations [1].

    – Single selection of an outdoor station [2].

4. Switch to the "Trusted devices" function.

5. Select the indoor stations that are to communicate with this outdoor station (or the selected outdoor stations at multiple selection).

6. Confirm the selection.

The devices are joined together.

6.4.6   Backup / restore the project
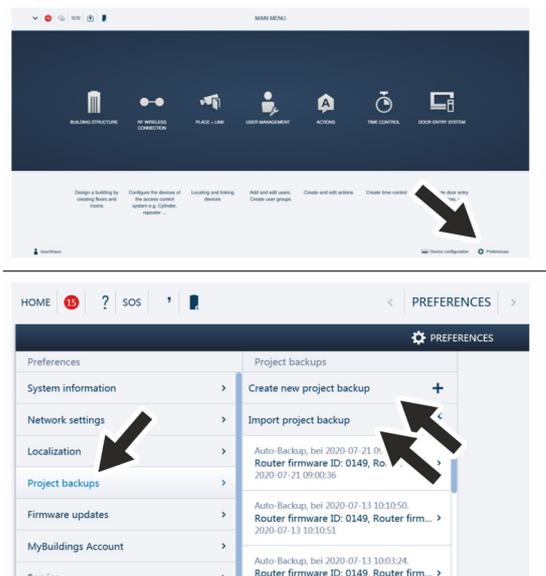
Fig. 90: Data backup / data restoration

Create the first data backup after the first initialization has been completed.

Then create a backup after every major change, such as the addition or deletion of devices.

To create the data backup, carry out the following steps:

1. Connect a PC with the "Smart Access Point".
   – More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105
2. In the main menu of the "Smart Access Point", change to the "Settings" function.
3. Change to the "Project backup" function.

Creating data backup

1. The backup file is created via the "Create new project backup" function.

Playback of data backup

1. The backup file is imported via the "Import project backup" function.

6.5 Adding devices manually in the "Smart Access Point"

Address the device via the " IP Touch 7"

Fig. 91:   IP switch actuator: commissioning mode

To address the device, perform the following steps:

1. Boot up the device.
    –   The device boots up automatically when the power supply is connected.
    –   If the device is already booted up, briefly interrupt the power supply of the device. The device reboots.
    –   The LED LED [1] lights up permanent after the automatic boot up.
2. Activating the "Commissioning mode":
    –   After the device has booted and the LED [1] lights up permanent, briefly press the "Reset" [2] button.
        –   The LED [1] then flashes slowly. The flashing signals that the device is in "Commissioning mode".
        –   If no entry is made within the next 5 minutes, the device exits the "Commissioning mode" automatically.
3. Switch to the indoor station.

Fig. 92:   Addressing IP switch actuator

4. Switch to menu "System / Settings" at the indoor station.

    –   Switch to function "IP switch actuator setting".

        –   The IP switch actuator is searched for automatically.

    –   Select the operating mode of the IP switch actuator.

        –   IP switch actuator of building: When the IP switch actuator is part of a building.

        –   IP switch actuator network: When the IP switch actuator is part of a perimeter.

        –   IP switch actuator private: When the IP switch actuator is part of a units network.

    –   Addressing the IP switch actuator.

5. Save the entries via the "OK" button.

    –   Navigate to the "OK" button at the bottom.

6. Restart the IP switch actuator.

The IP switch actuator is addressed.

Adding device manually
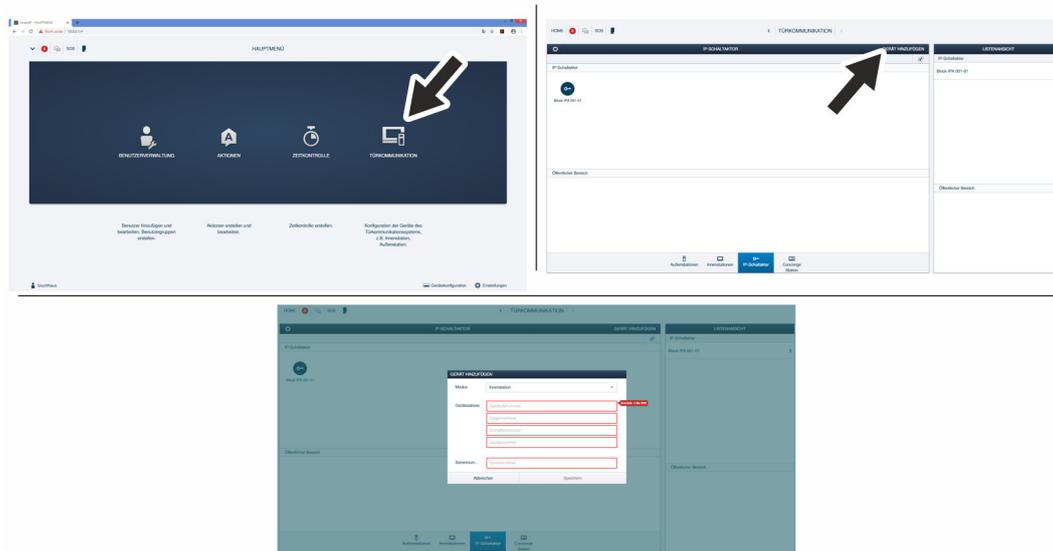
Fig. 93:   Adding device manually: Example of IP switch actuator

Use the following steps to add devices manually:

1. Connect a PC with the "Smart Access Point".
   – More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.
2. Navigate to the "Add devices" function.
   – Call up the main menu, if it is not yet displayed.
   – Switch to door communication.
3. Select the "Add devices" function.
   – Make the following settings in the dialogue field:
       – Mode: IP switch actuator
         Building: When the IP switch actuator is part of a building.
         Network: When the IP switch actuator is part of a perimeter.
         Private: When the switch actuator is part of a private network range in a unit.
       – Device address: The physical address that was assigned via the indoor station.
       – Serial number: The serial number is located on the device.
   – Confirm the settings.

The IP switch actuator is added in the "Smart Access Point".

Join the IP switch actuator with the "IP Touch 7" / outdoor station.

The standard configuration of the outdoor stations is such that the door openers can be connected directly with the door opener contacts of the outdoor station. To add an IP switch actuator that is to activate the door opener, these settings must be adjusted.

To join the IP switch actuator, perform the following steps:

1. In the "Smart Access Point" change to the outdoor station that is to activate the IP switch actuator.

2. The outdoor station has two door opening contacts. In the device management on the page of the outdoor station make the following settings for the first door opening contact:

    –   Main door opener: IP switch actuator

    –   Mode: Door opener contact

    –   IP switch actuator address: Enter either the physical address of the IP switch actuator directly or select it from the list of the available ones under "Select IP switch actuator".

3. If necessary, set the second door opening contact in the same way.

6.6   Delete device in the "Smart Access Point"
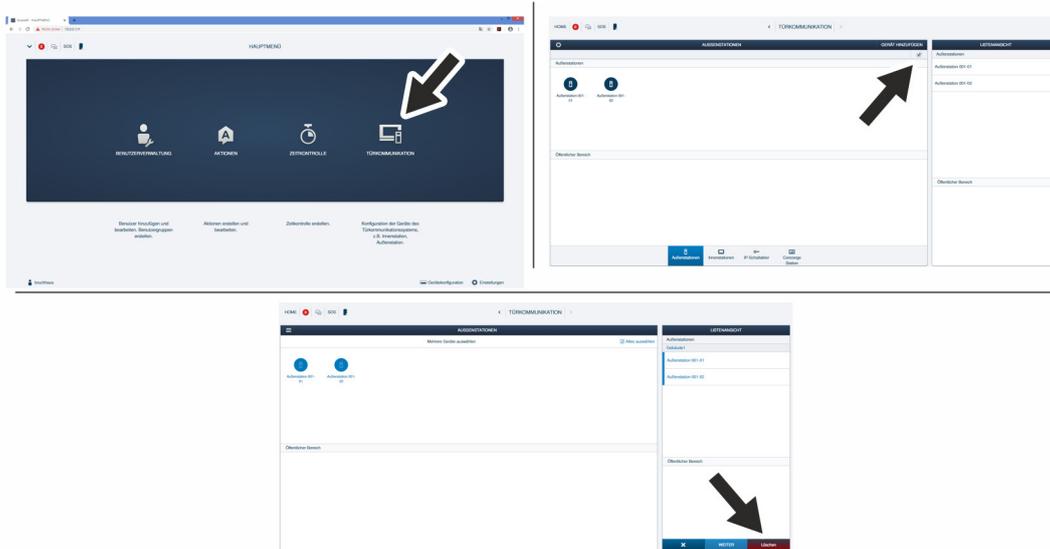
Fig. 94:   Deleting devices

One device or several devices can be deleted at the same time. They are deleted in the device administration of the "Smart Access Point".

Carry out the following steps to delete devices:

1.   Connect a PC with the "Smart Access Point".

      –   More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.

2.   Navigate to the "Door communication" function.

      –   Call up the main menu, if it is not yet displayed.

      –   Switch to door communication.

3.   Mark the device to be deleted.

      –   Click directly on the device or on "Select all".

4.   Click on "Delete".

The device or devices are deleted in the device administration.

6.7 RESET (Reset system / devices)

6.7.1 Indoor stations IP Touch 7 and Guard unit
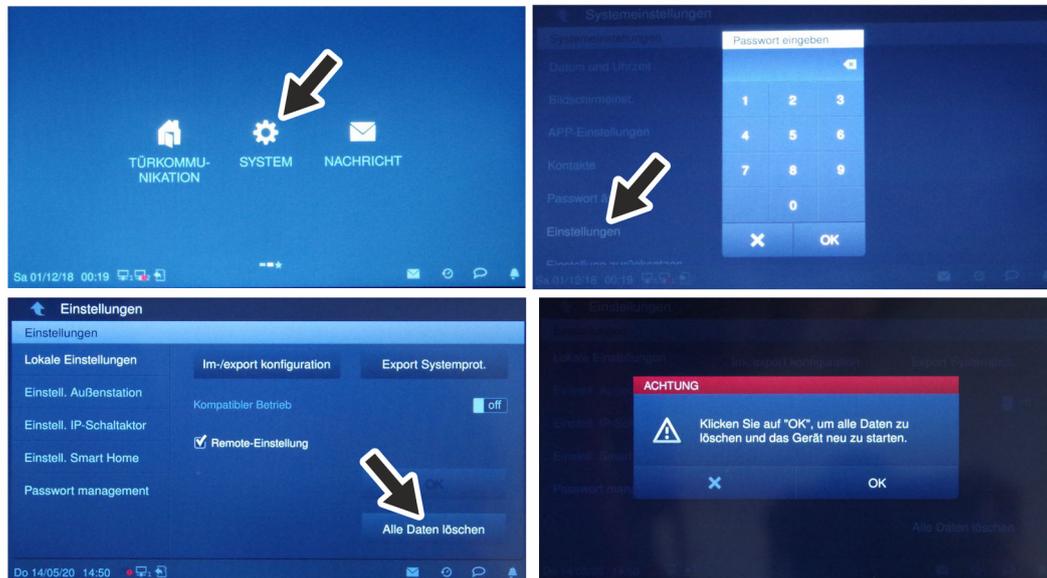
Fig. 95:   Resetting the indoor stations IP Touch 7 and Guard unit

Resetting becomes necessary, for example, when they have already been integrated in a system or are to be integrated in a new system.

There is a time space of 2 minutes for resetting after the device has booted.

▪   This is no longer possible after the 2 minutes. The device must be rebooted.

▪   Resetting is carried out on the devices themselves.

Carry out the following steps to reset devices:

1.   Change to the "Settings" function.

    –   Enter the password for the "Settings".

2.   Change to the "Local settings" function.

3.   Click on the "Delete all data" button.

4.   Confirm the security request.

    –   The existing data are reset.

    –   The device reboots.

6.7.2   Outdoor station with buttons / display

Resetting becomes necessary, for example, when they have already been integrated in a system or are to be integrated in a new system.

Carry out the following steps to reset devices:

1. Briefly interrupt the power supply at the rear of the device.
    –   The device reboots.
    –   The LEDs in the camera field on the front light up permanently during the boot up.
    –   The LEDs go out when the device has booted.
2. Press the "Reset" button on the rear of the device directly after the LEDs have gone out and keep it pressed.
    –   The LEDs in the camera field on the front flash.
    –   Keep the "Reset" button pressed until two beeps have sounded.
        –   Approximately 15 seconds pass until the first beep. Approximately another 8 seconds pass until the second beep.
    –   The existing data are reset.
    –   The device reboots.

6.7.3   IP switch actuator
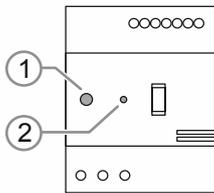
Fig. 96: Resetting the IP actuator

Resetting becomes necessary, for example, when they have already been integrated in a system or are to be integrated in a new system.

Carry out the following steps to reset devices:

1. Briefly interrupt the power supply on the device.
    – The device reboots.
    – The LED [1] lights up permanent after the automatic boot up.
2. Press the "Reset" button [2] directly after the permanent lighting of the LED and keep it pressed.
    – The LED [1] flashes fast several times after 3 seconds. Then keep the "Reset" button [2] pressed until the LED [1] stops flashing and lights up permanently again.
    – The existing data are reset.
3. Loosen the "Reset" button [2].
    – The LED [1] goes out.
    – The device reboots.

6.7.4 "Smart Access Point"

Completely resetting the "Smart Access Point".

– Here all entered data, performed settings, etc., are deleted. After the reset the "Smart Access Point" will be in the state at the point of delivery.

– After the reset, an initial commissioning of the "Smart Access Point" must be carried out.

– After the initial commissioning, old data can be read in via an available backup.
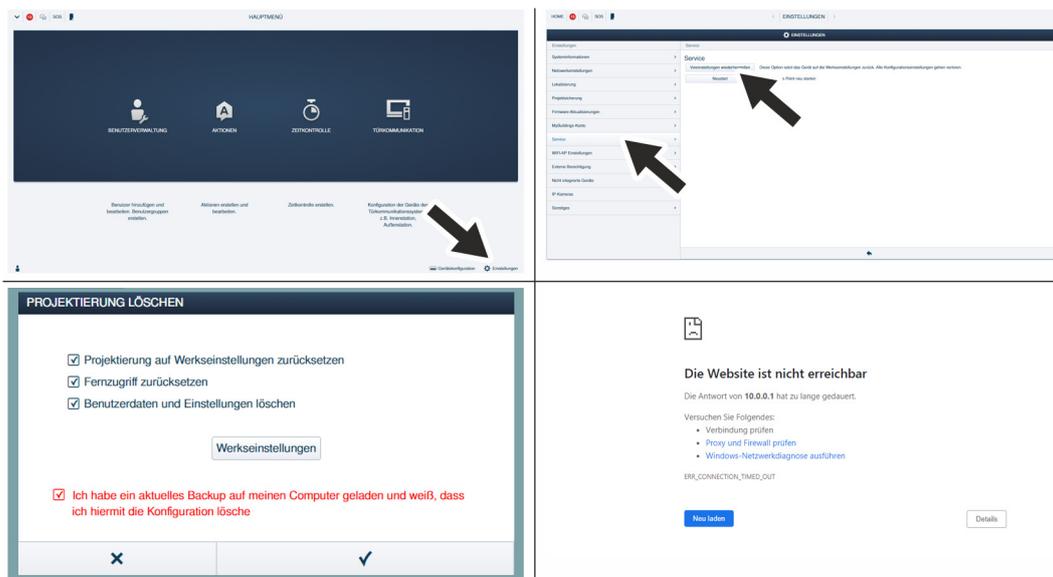
Fig. 97: Completely resetting the "Smart Access Point"

Use the following steps for the reset:

1. Connect a PC with the "Smart Access Point".

   – More detailed information for connecting, see chapter 6.3.2 "Connecting a PC with the "Smart Access Point "" on page 83.

2. Change to the "Settings" / "Service" function.

3. Call up the "Reset default settings" function.

4. Select the areas that are to be reset.

5. Confirm the selection.

   – The "Smart Access Point" is being reset.

   – After the reset the connection to the "Smart Access Point" is no longer active.

   – The "Smart Access Point" must be put back into operation via an initial commissioning, see chapter 6.3.4 "Commissioning the "Smart Access Point"" on page 89.

Resetting the password of the 1st administrator.

The reset depends on the option of resetting that was selected for the commissioning of the "Smart Access Point".

- Option "Without MyBuildings account":
  – The password of the 1st administrator is reset on the rear side of the "Smart Access Point" via the "Reset" button.
- Option "With MyBuildings account":
  – The password of the 1st administrator is reset via a security release that is sent by e-mail via the "myBuildings account".

Resetting the settings when the "Smart Access Point" can no longer be reached.

This can happen, for example, when the network settings are entered incorrectly.

1. Connect a PC with the "Smart Access Point".
   – More detailed information for connecting, see chapter 6.3.2 "Connecting a PC with the "Smart Access Point "" on page 83.
2. Call up the start page of the "Smart Access Point" in a commercially available browser with one of the following IP addresses.
   - Via the static IP address "10.0.0.1".
   - Via the IP address "192.168.3.1", if the "Smart Access Point" is in the Access-Point mode.
     – The "Smart Access Point" switches automatically into the Access-Point mode after every boot-up. The LED on the rear side of the device then lights up red.
   - Via an IP address that was assigned by the DHCP function of a router.
     – For this a router must be connected with the "Smart Access Point" in addition to the PC.
     – The assigned address is obtained via the router. This depends on the router used.

The settings can be changed normally if the start page of the "Smart Access Point" is called up.

6.8   Setting up the doorbell buttons of the "IP pushbutton outdoor station"

The doorbell buttons of the outdoor station must be assigned to the respective indoor stations that they are to activate. The happens via the assigning of the physical addresses of the indoor stations to the respective doorbell button.
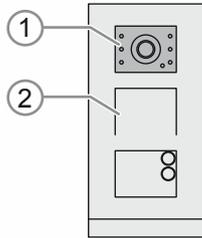
Fig. 98:   Outdoor station with buttons: Commissioning mode

Perform the following steps to assemble the doorbell buttons of the device:

1.   Boot up the device.

–   The device boots up automatically when the power supply is connected.

–   If the device is already booted up, briefly interrupt the power supply of the device. The device reboots.

–   The LED icons [1] light up permanently during the automatic boot up.

2.   Activating the "Commissioning mode":

–   After the LED icons [1] in the camera have stopped being lit up, keep the top doorbell button pressed (about 11 seconds), until the LED icons [1] light up green.

–   In case of several bell spaces, the first doorbell button is located below the audio shell [2].

–   If no entry is made within the next 5 minutes, the device exits the "Commissioning mode" automatically.

3.   Switch to the indoor station.

Fig. 99:   Outdoor station with buttons: Assembling the doorbell buttons

4. Switch to menu "System / Settings" at the indoor station.

– Switch to function "Outdoor station setting".

– The outdoor station is searched for automatically.

5. Change to the "Enter push-button address" function.

– Enter the physical address of the indoor station for each push-button that it is to activate.

6. Save the entries via the "OK" button.

– Navigate to the "OK" button at the bottom.

The doorbell push-buttons are assembled.

6.9   Setting up name entries in the IP touch 5" outdoor station

6.9.1   Introduction

The name entries must be added or changed for the outdoor stations with display after the actual commissioning of the system or later during the running operation. This can be performed centrally and easily via the "Smart Access Point".

Overview:

Next the first indoor stations of each unit are named.

▪   The names are already known:

–   The first indoor stations of each unit are assigned with the respectively already known name.

▪   The names are nor yet known

–   The naming of the first indoor stations is skipped. In this case the indoor stations retain their system name and are renamed later.

Then the names are imported as a list in the the outdoor station with display.

–   If the names were already known, they are imported.

–   If the names were not known, the system names of the indoor station are imported and serve as placeholders for the later renaming.

Notice
The sequence of the display is always alphabetical. Here the first names are displayed first.
–   If surnames are to be displayed first, change the first and surnames during entry in the fields provided.

6.9.2   Adding name entries

To add the name entries, perform the following steps:

1.   Connect a PC with the "Smart Access Point".

–   More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.

2.   Navigate to the "Door communication" function.

–   Call up the main menu, if it is not yet displayed.

–   Switch to door communication.

Step 1: Naming the indoor station

Skip this step if the name entries are not yet known.
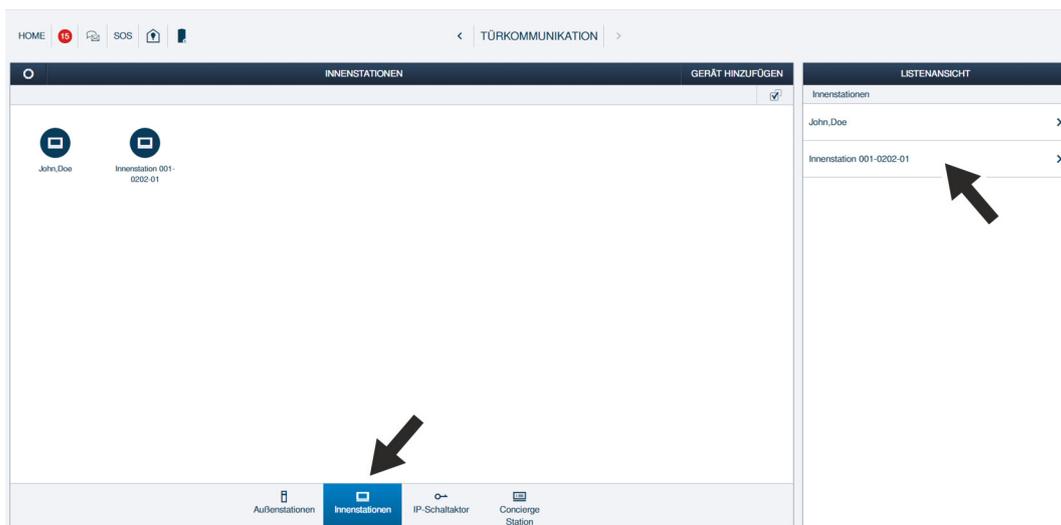
Fig. 100: Name entries of the indoor station: Selecting the indoor station

1. Change to the indoor stations and select the desired indoor station.
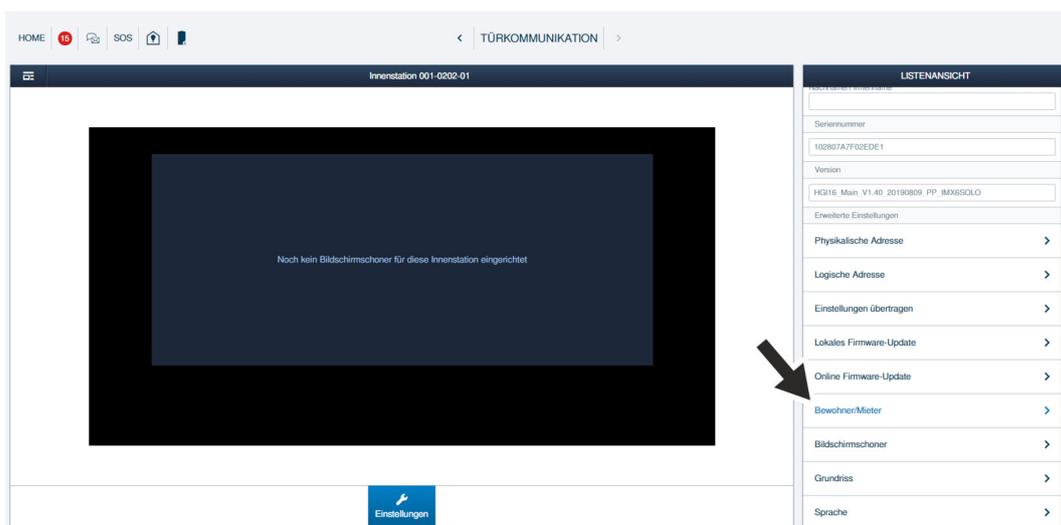
Fig. 101: Name entries of the indoor station: Name assignment function

2. Change to the name assignment function for the indoor station.
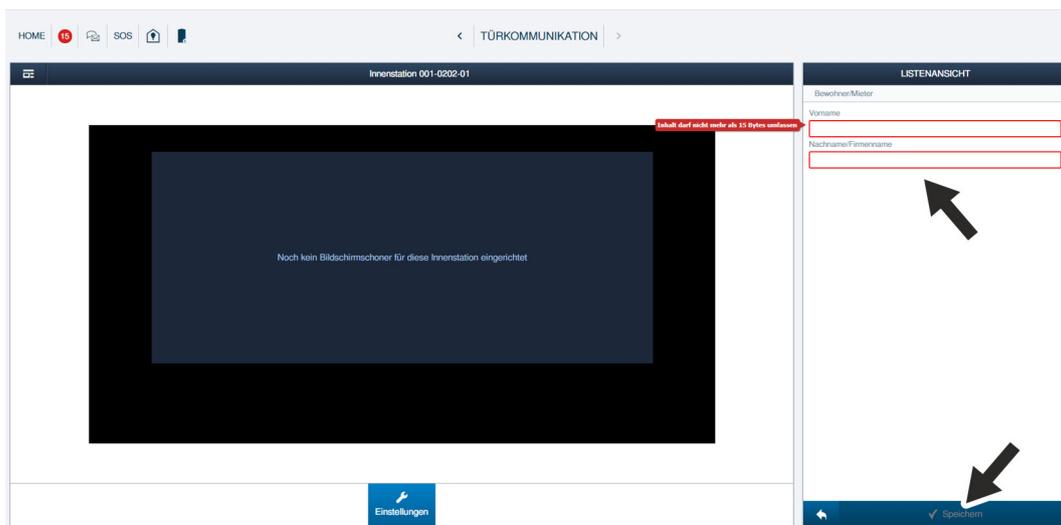
Fig. 102: Name entries of the indoor station: Entering the names

3. Enter the names.

4. Confirm the entries made.

In this way consecutively select and rename each indoor station. When all desired indoor stations are named, then continue with the import of these names in the outdoor station.

Step 2: Importing the name list / placeholder list into the outdoor station with display.

- Are the indoor stations already named (step 1), these names are imported as name entries.
- Are the names still unknown, placeholders are imported as name entries. These can be changed appropriately at a later point in time.
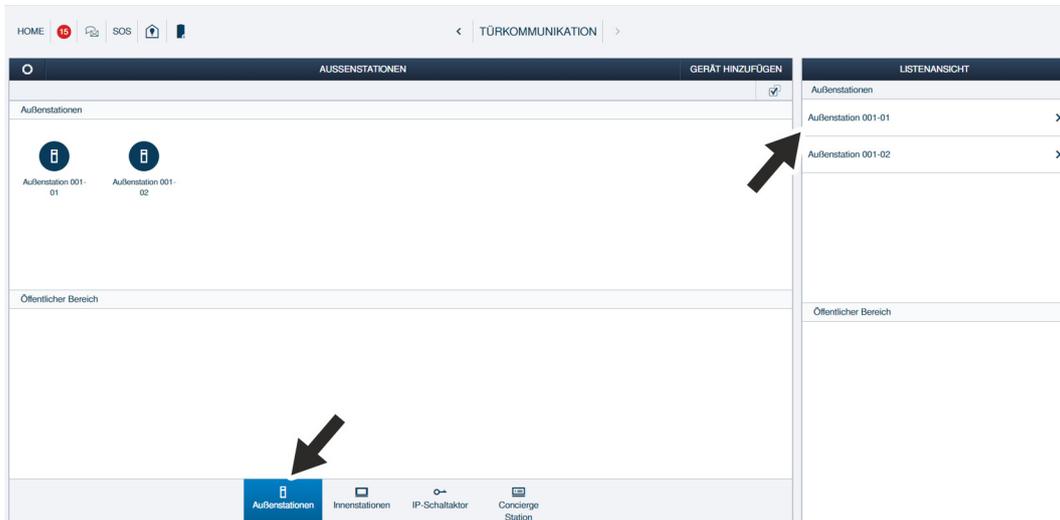
Fig. 103: Adding names: Select outdoor station

1. Change to the desired outdoor station or select several outdoor stations in a multiple selection.
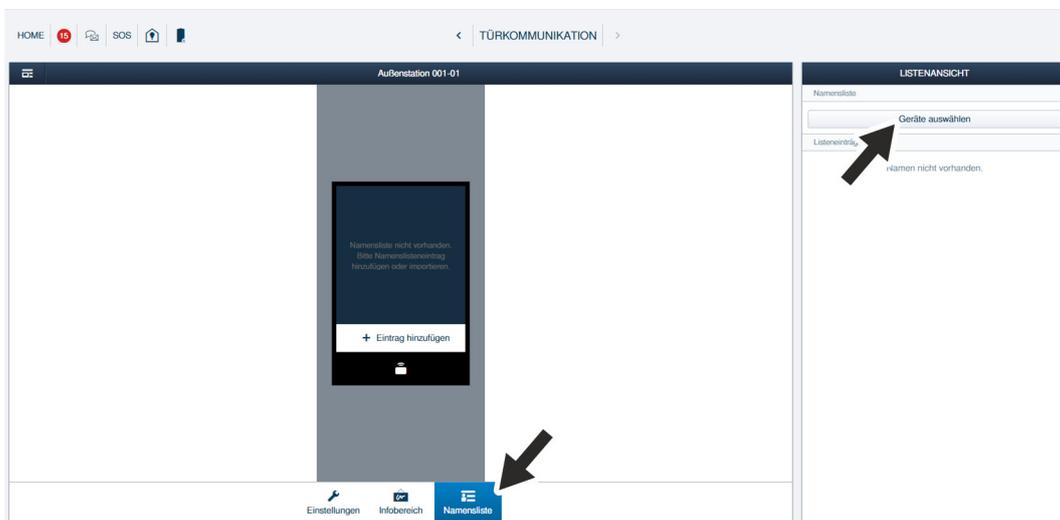
Fig. 104: Adding names: "Name list" function

2. Change to the "Name list" function.
3. Change to the "Select devices" function.
   - The building structure is displayed.
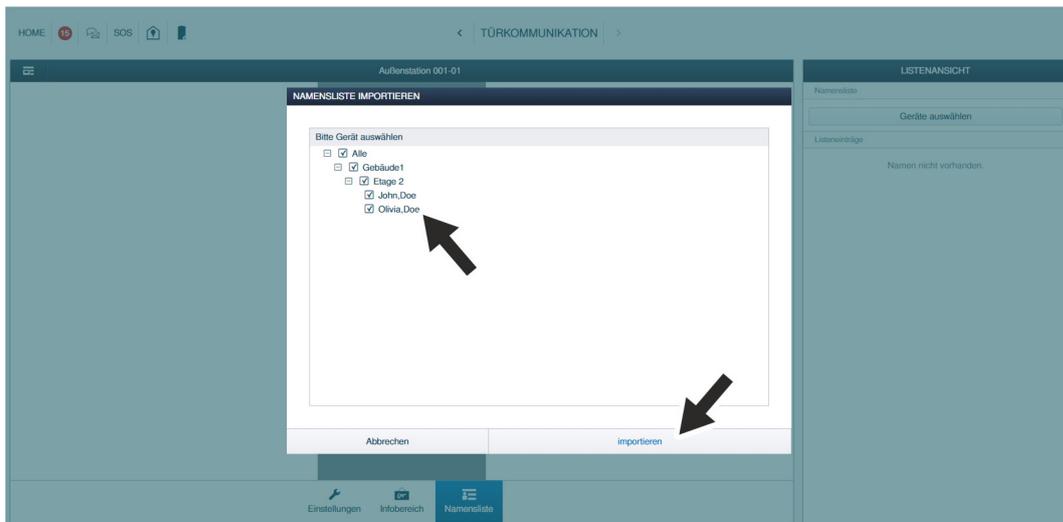
Fig. 105: Adding names: Select outdoor station

4. Select all relevant indoor stations in the building structure.

   – Are the names still unknown, the system names of the indoor station are displayed here (e.g.: "Indoor station 001-0202-01").

5. Import the selection.
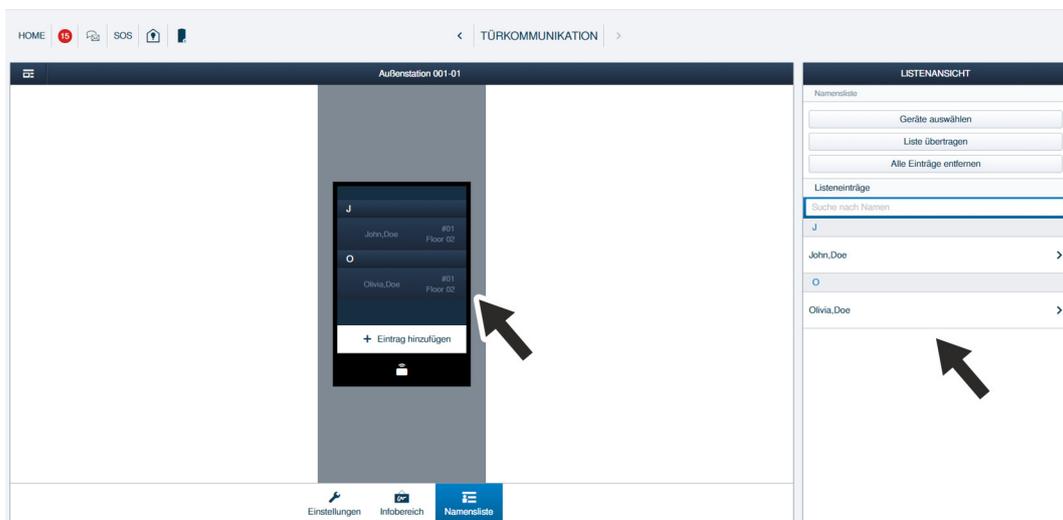
Fig. 106: Adding names: Select outdoor station

   – An entry is created for each previously selected indoor station and displayed on the outdoor station as well as in the list of the "Smart Access Point".

   – The entries are automatically displayed on the "Real" outdoor station in parallel.

6.9.3 Changing name entries

The change of a name entry is not transmitted automatically to all linked devices. The name entry is changed in three main steps:

- ▪ Change the entry of the indoor station.
- ▪ Delete the old entry in the outdoor station.
- ▪ Import the new entry of the indoor station into the outdoor station.

To change the name entries, perform the following steps:

1. Connect a PC with the "Smart Access Point".
   - – More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.
2. In the main menu of the "Smart Access Point", change to the "Door communication" function.

Changing the entry of the indoor station
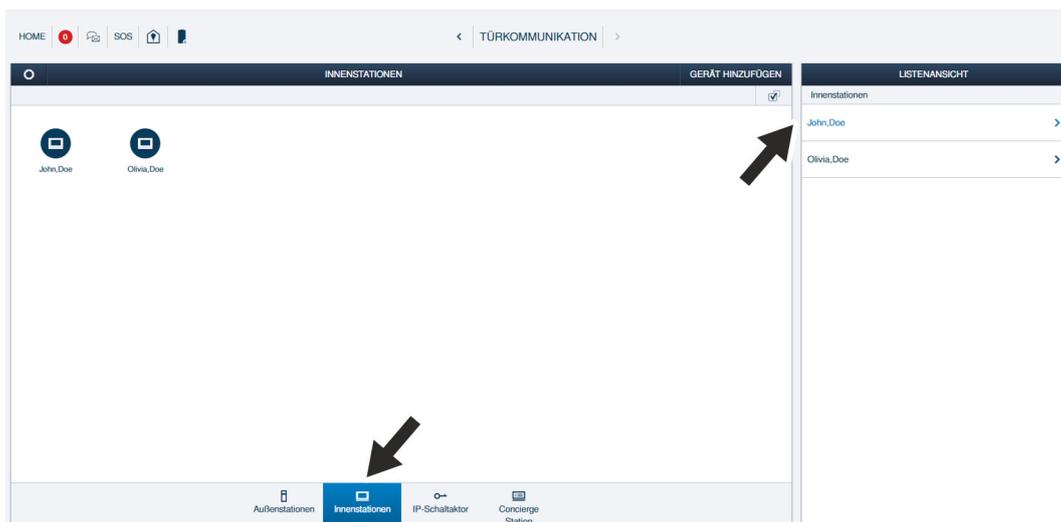
Fig. 107: Changing name: Select indoor station

1. Change to the indoor stations and select the desired indoor station.
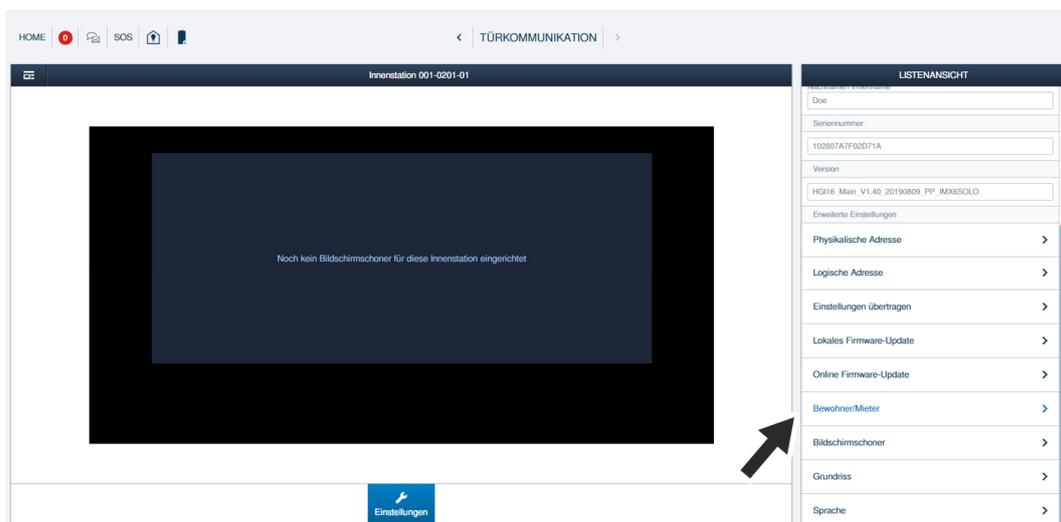
Fig. 108: Changing name: Name assignment of indoor function

2. Change to the name assignment function for the indoor station.
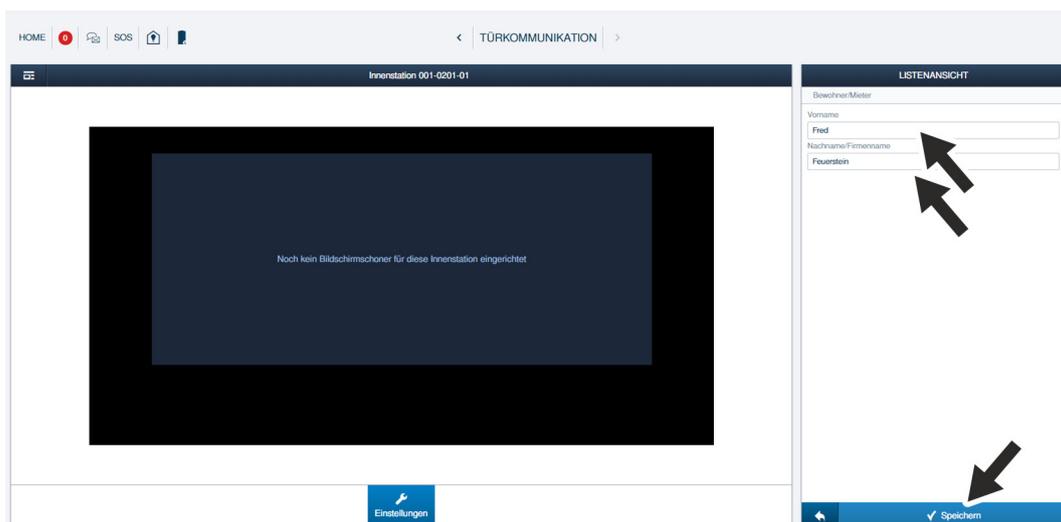
Fig. 109: Changing name: Overwriting the indoor station name

3. Enter the new name.
   – For this, overwrite the old name.
4. Confirm the entries made.

Deleting the old entry from the outdoor station
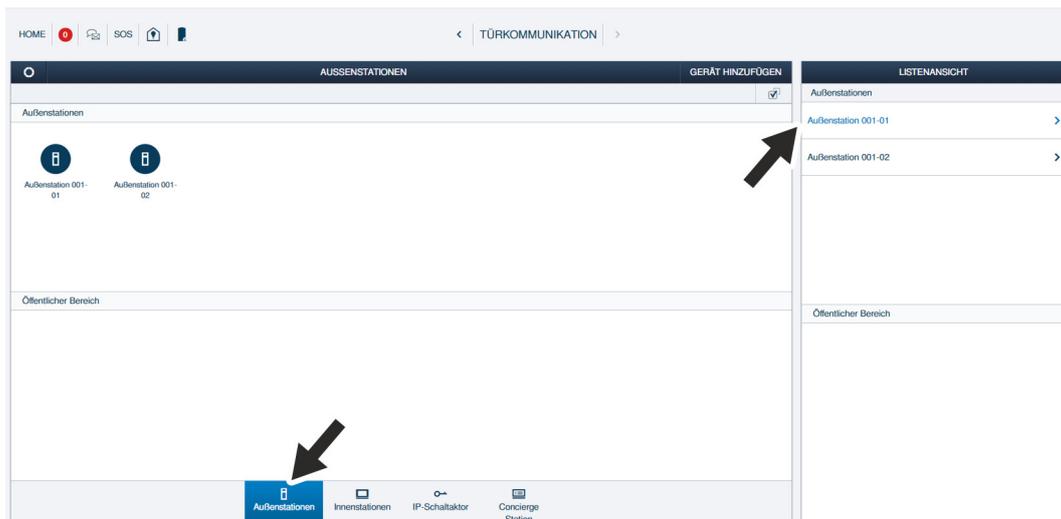
Fig. 110: Changing name: Select outdoor station

1. Change to the desired outdoor station or select several outdoor stations in a multiple selection.
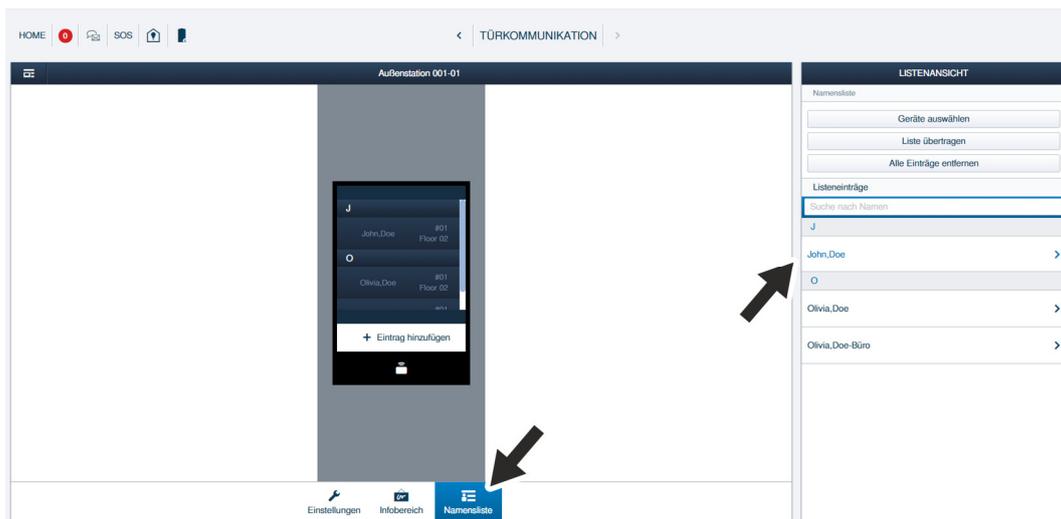
Fig. 111: Changing name: Select outdoor station entry from the name list

2. Change to the "Name list" function.
3. Select the old entry in the name list.
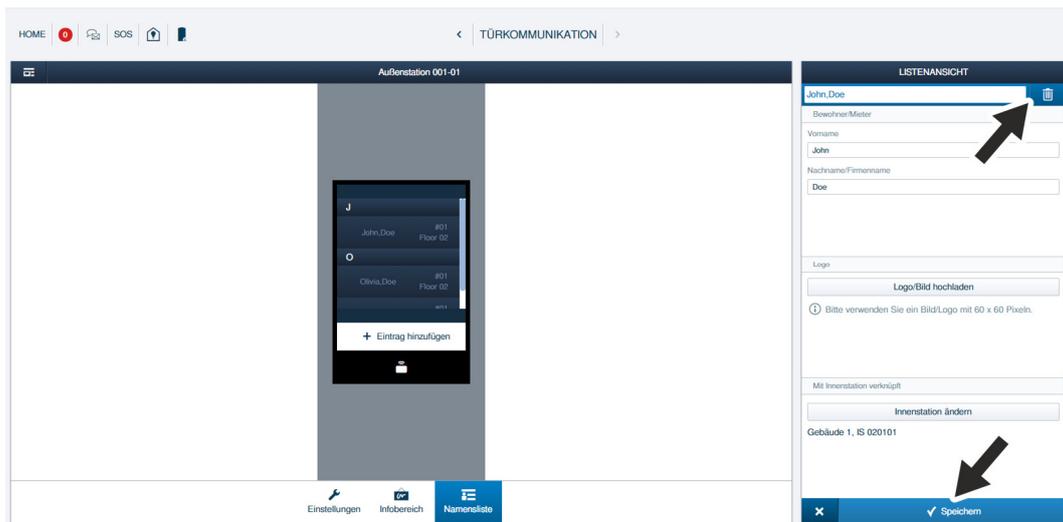
Fig. 112: Changing name: Delete outdoor station entry from the name list

4. Delete the old entry and confirm the action.

Importing the new entry into the outdoor station
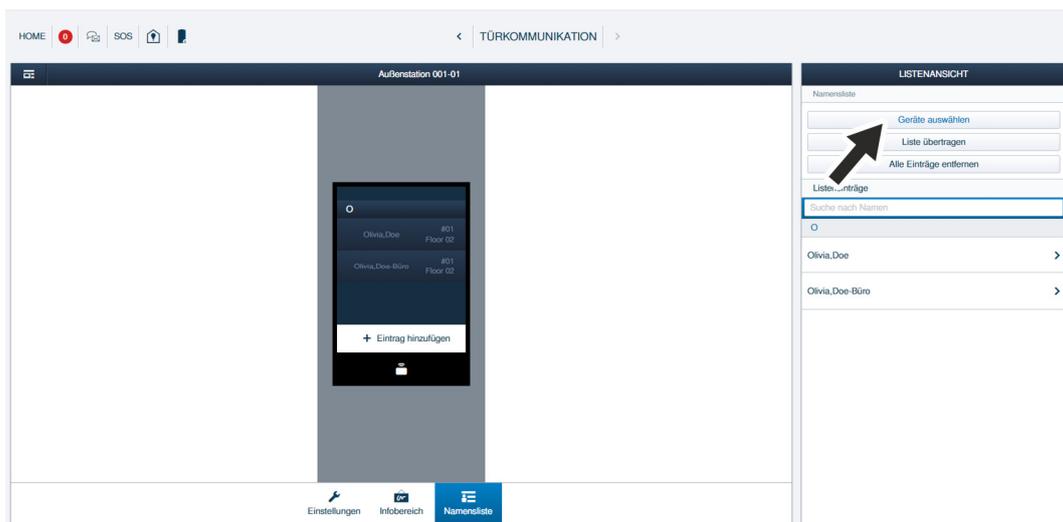
Fig. 113: Changing name: Outdoor station function "Select device"

5. Change to the "Select devices" function.

   – The building structure is displayed.
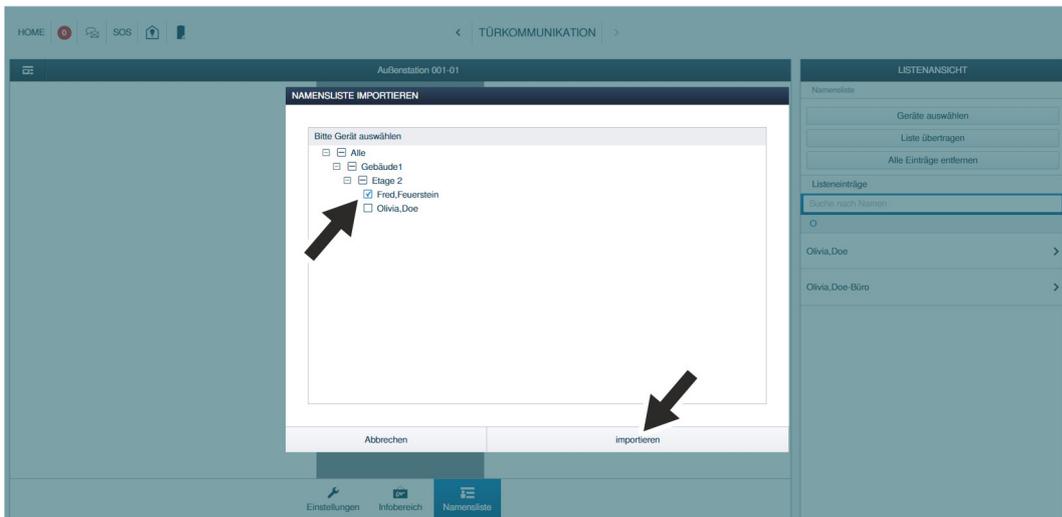
Fig. 114:   Changing name: Select renamed indoor station from device list

6.   Select the newly named indoor station in the building structure.

7.   Import the selection.
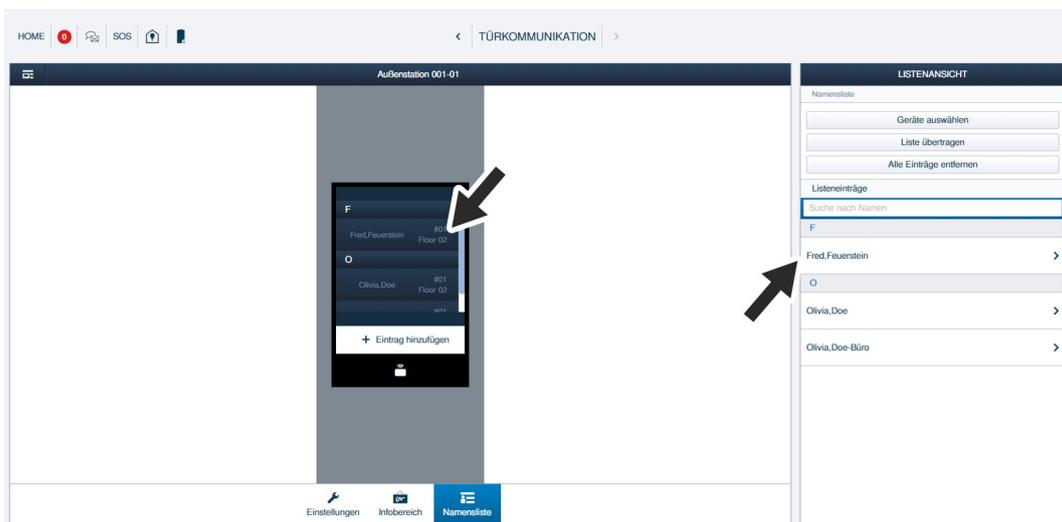
Fig. 115:   Changing name: Entry is changed

– The entry is changed.

Notice

▪ If the displayed entries on several outdoor stations are the same, a multiple selection of the outdoor stations is possible.

▪ Are the displayed entries on several outdoor stations different, the change of the entry must be performed separately for each outdoor station.

6.9.4 Several name entries for a IP Touch 7

For each resident (owner, tenant, office, etc.) several name entries of the associated indoor station can be created. These are shown accordingly on the display of the outdoor station.

To add the additional name entries, perform the following steps:

1. Connect a PC with the "Smart Access Point".

   – More detailed information for connecting, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105.

2. In the main menu of the "Smart Access Point", change to the "Door communication" function.
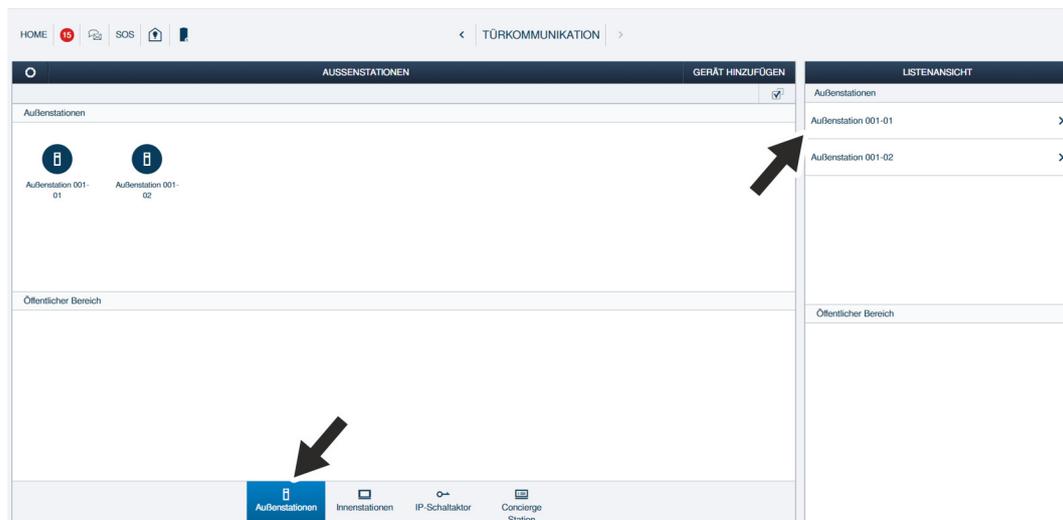
Fig. 116: Additional name entry: Select outdoor station

3. Change to the desired outdoor station.
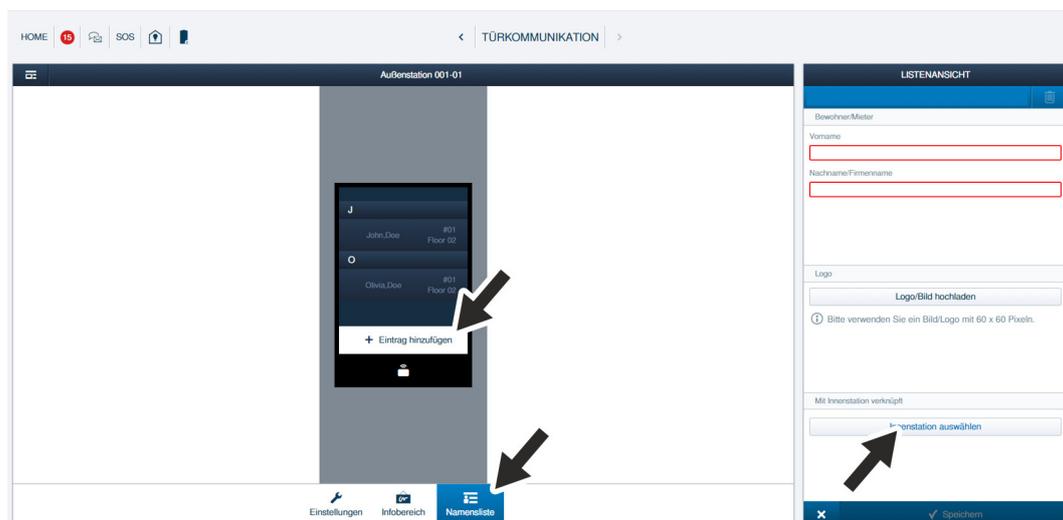
Fig. 117: Additional name entry: Add entry

4. Change to the "Name list" function.

5. Change to the "Add entry" function.

6. Change to the "Select indoor station" function.
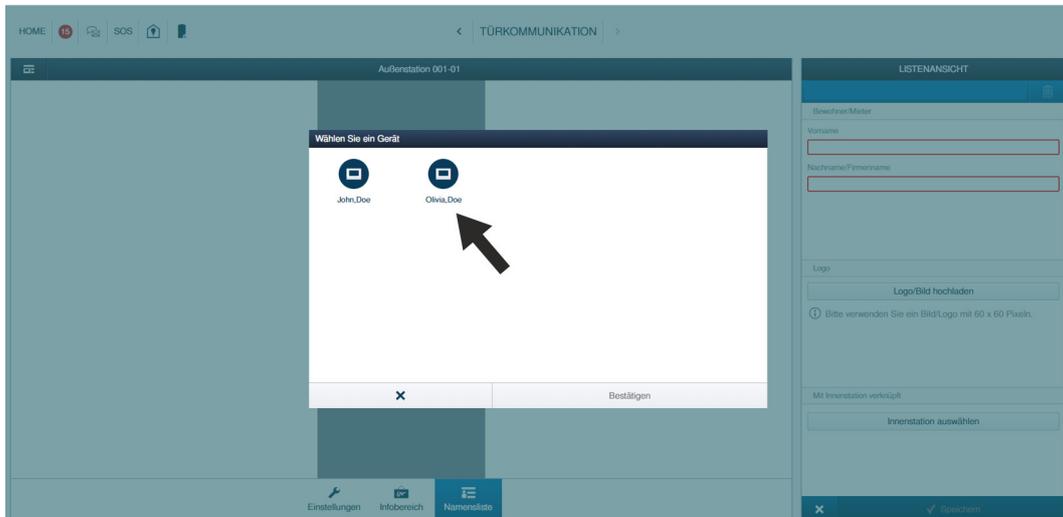
Fig. 118: Additional name entry: Select indoor station

7. Select the desired indoor station and confirm the selection.
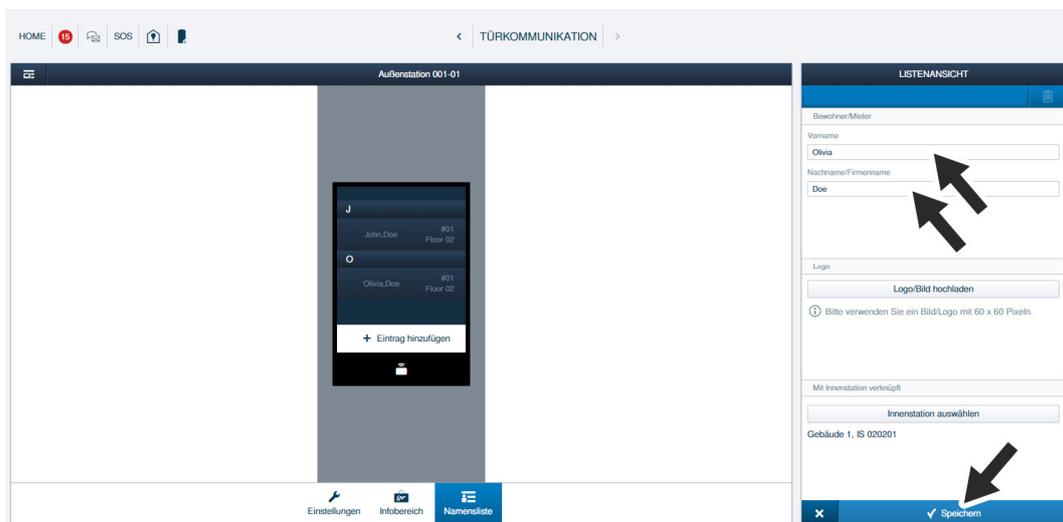
Fig. 119: Additional name entry: Enter new data

- The current data are displayed in the "Resident / Tenant" area.

8. Overwrite the data in the "Resident / Tenant" area with the new entries.

- The existing data in the administration software of the "Smart Access Point" are retained.

9. Confirm the new entries.
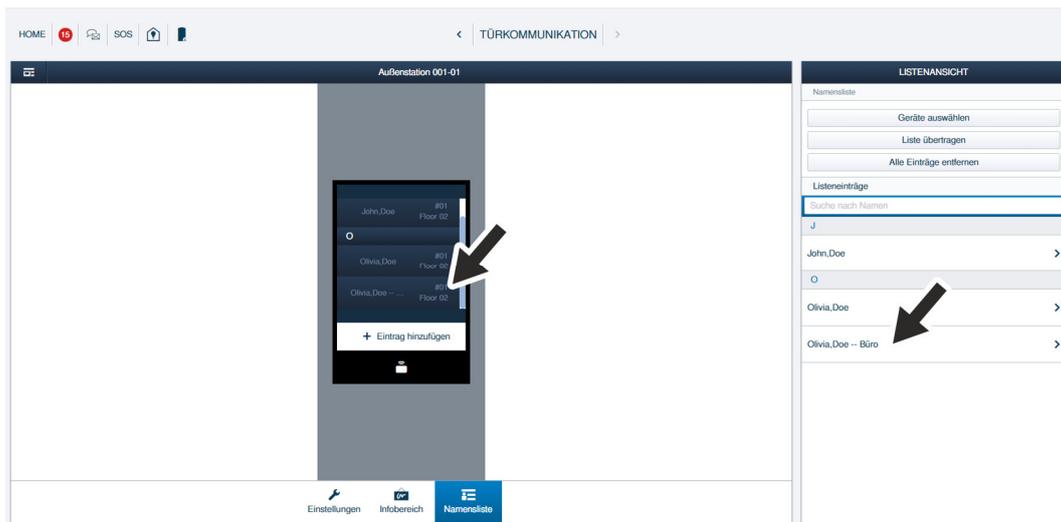
Fig. 120: Additional name entry: New name entry is added

    –   The new entry is added as additional name entry for a resident / Tenant.

6.10   Change devices / Change physical address

The devices can be changed later at any time. This, for example, could be necessary when when after the installation an indoor station "moves" to a different floor or house. This also applies when a device is to be commissioned that has already been commissioned in a different system.

For this, the physical address has be be reentered anew, see chapter 6.2 "Commissioning of a system — Step 1: Local addressing " on page 63.

With the input of a new physical address the device loses its certificate. The device must then be re-integrated into the system.

7 Case studies

7.1 Legend

Legends in the graphics:
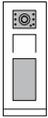
	Outdoor station: IP pushbutton outdoor station
	Outdoor station: IP touch 5" outdoor station
	Smart Access Point: Smart Access Point Lite
	Indoor station: IP Touch 7
	Indoor station: Guard unit
Act	IP actuator: IP actuator
	Switch: Commercially available
	Router: Commercially available
	Door opener: Commercially available
	Network cable (Cat cable or glass fibre cable)
	Power supply cable
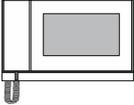
7.2   Private apartment

In the following examples different situations on the basis of simple installations are illustrated. The main purpose of the examples is to become familiar with the topics.

Minimum installation (Switch with PoE):

The smallest possible installation comprises the following devices:

- ▪ Smart Access Point (operating mode "One-family house / Terraced house")
- ▪ Indoor station
- ▪ Outdoor station
- ▪ Switch (PoE-capable)

In a ABB-Welcome IP system the devices are integrated and managed via the "Smart Access Point". The "Smart Access Point" is therefore a prerequisite for the operation.
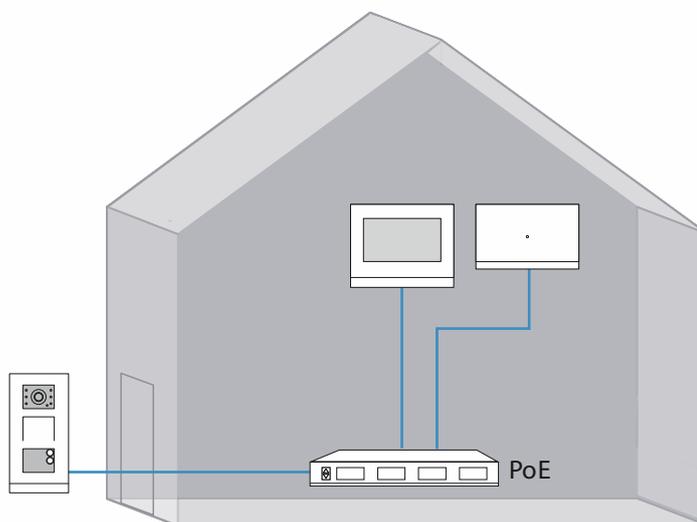
Fig. 121:   Overview: Minimum installation (Switch with PoE)
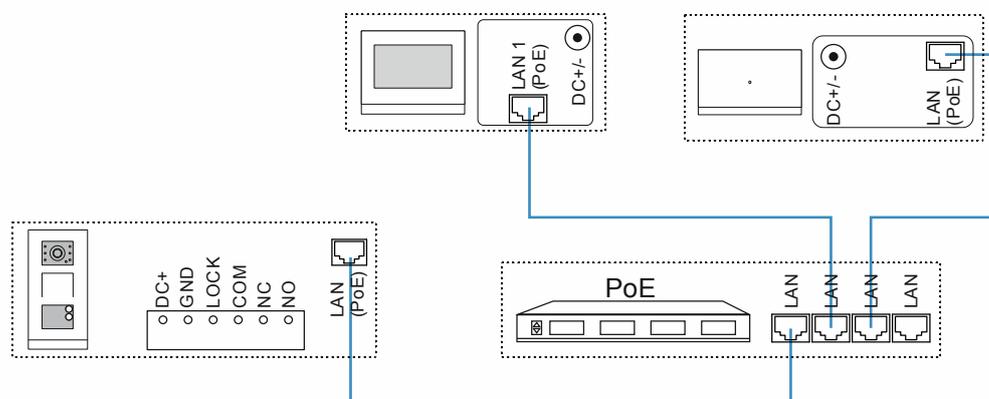
Fig. 122:   Connection: Minimum installation (Switch with PoE)

Unit (Switch without PoE):

The switch is not PoE-capable in a system or the capacity is too low. That is why an additional power supply is required for the devices.
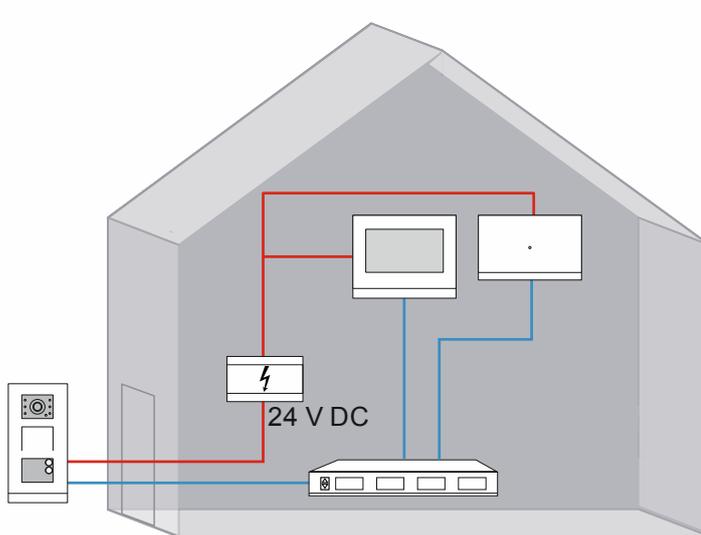
Fig. 123: Overview: Unit (Switch without PoE)
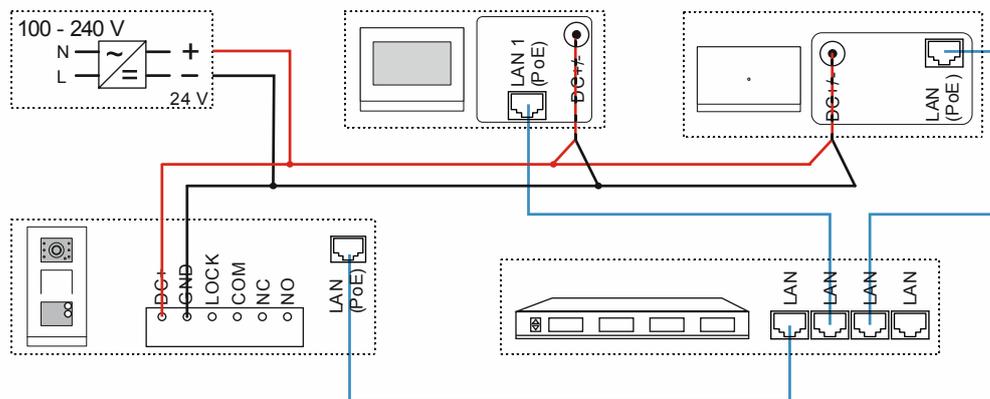
Fig. 124: Connection: Unit (Switch without PoE)

Unit with door opener:

The entrance door is equipped with a door opener. For this an IP switch actuator is required which accepts the digital opening command and switches the door opener.
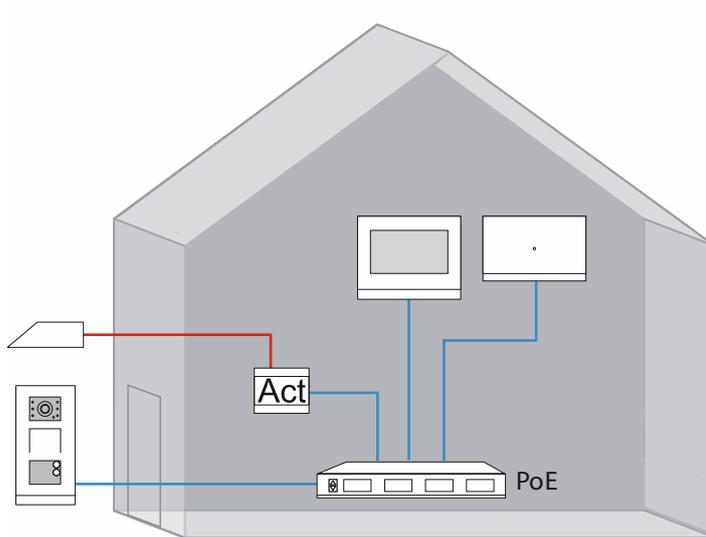

Fig. 125:   Overview: Unit with door opener
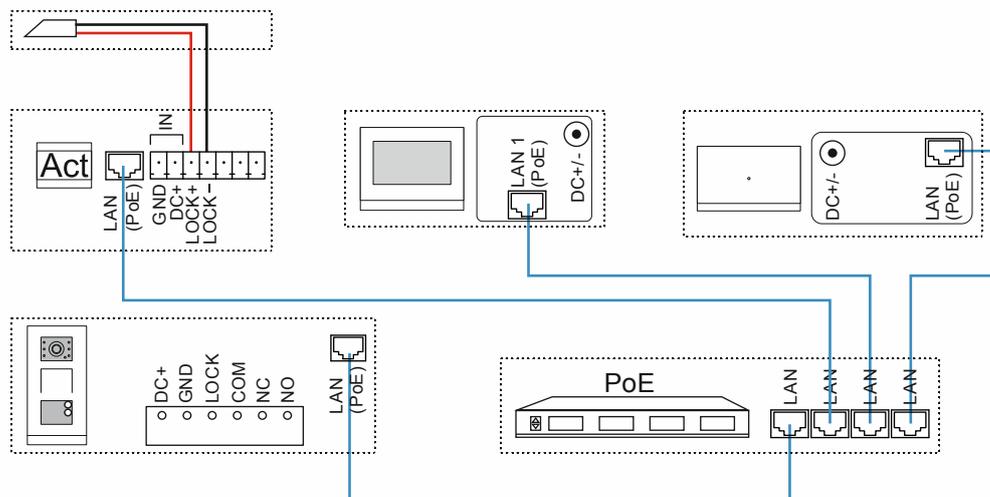
Fig. 126:   Connection: Unit with door opener

Unit with three indoor stations:

If further indoor stations are added to a unit, this is a special feature.

These additional indoor stations are separated from the remaining devices and constitute an independent network. At the end of the installation there is the building network and the units network (with the additional indoor stations).

For the integration of additional indoor stations there are several situations, see chapter 7.3 "Adding a unit network / indoor stations to a unit" on page 144.

In this example two additional indoor stations are integrated via a PoE switch.
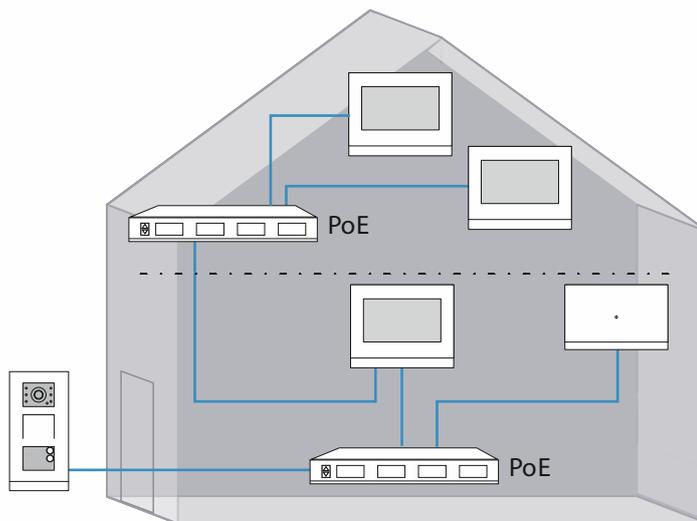
Fig. 127:   Overview: Unit with several indoor stations
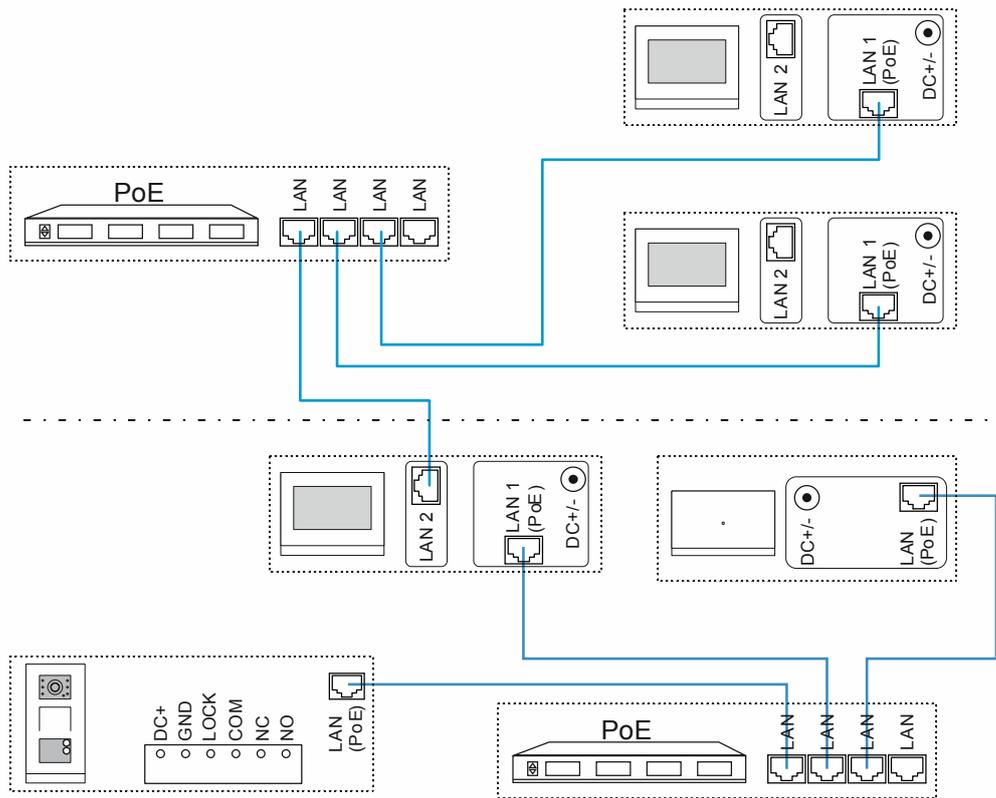
Fig. 128:   Connection: Unit with several indoor stations

7.3   Adding a unit network / indoor stations to a unit

7.3.1   Introduction
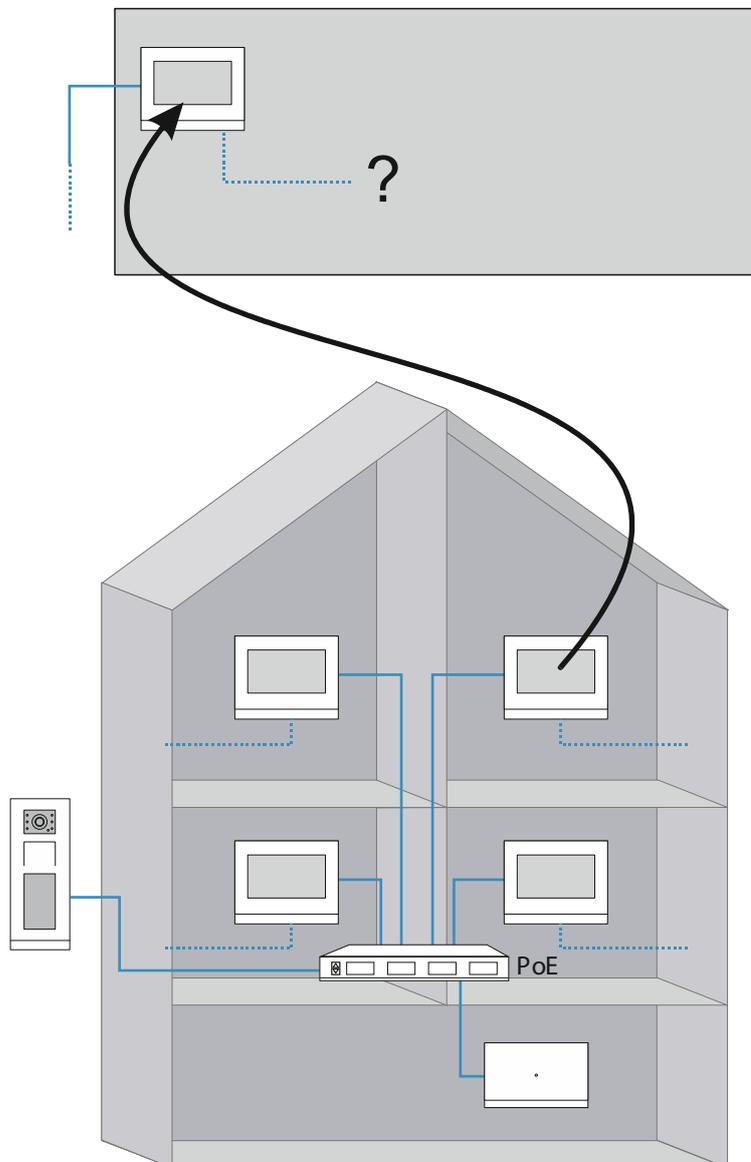
Fig. 129:   Overview: Connecting additional indoor stations

If a one or several indoor stations are to be added in a unit (apartment, office, etc.), these constitute an independent network. The first indoor station in a unit always belongs to the building structure. Each further indoor station in a unit belongs to the unit structure.

Depending on the situation and the selected version, 4 basic options are to be considered for the connection.

- Point to point connection (1st indoor station LAN / 2nd indoor station LAN), see chapter 7.3.2 "Point-Point connection / LAN-LAN" on page 146.

- PoE switch connection (1st indoor station LAN / 2nd indoor station LAN), see chapter 7.3.3 "Connection of PoE switch / LAN-LAN" on page 148.

- Router connection (1st indoor station LAN / 2nd indoor station LAN), see chapter 7.3.4 "Connection of router / LAN-LAN" on page 150.

- Router connection (1st indoor station WLAN / 2nd indoor station WLAN), see chapter 7.3.5 "Connection of router / WLAN-WLAN" on page 152.

7.3.2   Point-Point connection / LAN-LAN
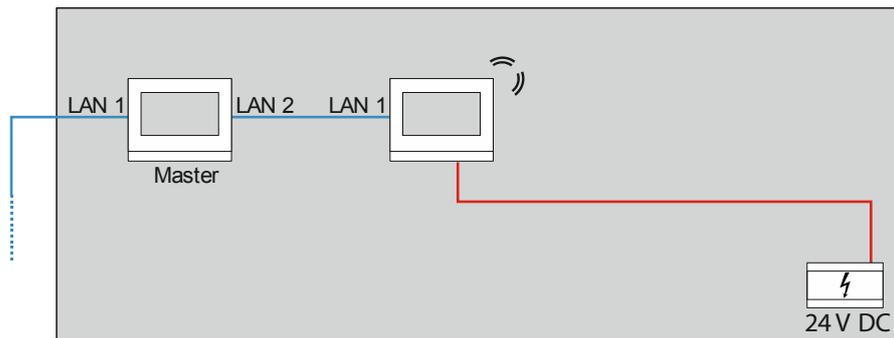
Fig. 130:   Adding a units network point-point / LAN-LAN

This version allows an additional indoor station to be added in a unit as extension unit.

The second LAN connection of an indoor station is not PoE-capable. That is why a 24 V power supply is required for the additional indoor station.

Use the following steps to add additional indoor stations:

1. Searching for devices in the "Smart Access Point".

    –   Connect a PC with the "Smart Access Point".

    –   In the main menu of the "Smart Access Point", change to the "Door communication" function.

    –   Search for all devices in the building network including the master indoor station.

Switch to the 1st indoor station

2. Prepare the 1st indoor station (Master) for the operation of an indoor station.

    –   In the 1st indoor station change to the "System settings" / "Network settings" function.

    –   Set a fixed IP address and the sub-net mask in the "Network settings" for the LAN connection "LAN 2".

        –   Disable the "Obtain IP address automatically" function.

        –   IP address: 192.168.1.200

        –   Sub-net mask: 255.255.255.0

Change to further indoor stations

3. Configure the additional indoor station (extension unit) for operation.

    –   Change to the "Settings" / "Local settings" function in the additional indoor station.

    –   Set the following points in the "Local settings" function:

        ▪   Physical address (physical address, see chapter 6.2.3 "Indoor stations IP Touch 7 and Guard unit" on page 68).

            Apart from the device number the physical address of the extension unit is identical with the master address.

        ▪   Mode: Extension unit

        ▪   Device number: For the first additional indoor station the device number is set automatically on 02.

4. Prepare the home network.

   ▪ For this, set up the LAN connections of the additional indoor stations (extension units) in the "Local settings" / "Home network port".

      – LAN/WLAN version: Set it on "LAN".

      – LAN/LAN version: Set it on the 1st LAN connection "LAN1".

5. Switch the extension unit over to the static IP address and adjust the IP address.

   – In the additional indoor station change to the "System settings" / "Network settings" function.

   – Set a fixed IP address and the sub-net mask in the "Network settings" function.

      – Disable the "Obtain IP address automatically" function.

      – IP address: 192.168.1.201

      – Sub-net mask: 255.255.255.0

Change to the "Smart Access Point".

6. Add the extension unit manually to the project in the "Smart Access Point".

   – By saving in step two of adding, the extension unit receives a certificate from the "Smart Access Point".

Fig. 131: Indoor station: Certificate

   – Check on the additional indoor station (extension unit) whether it has received the certificate.

7.3.3 Connection of PoE switch / LAN-LAN
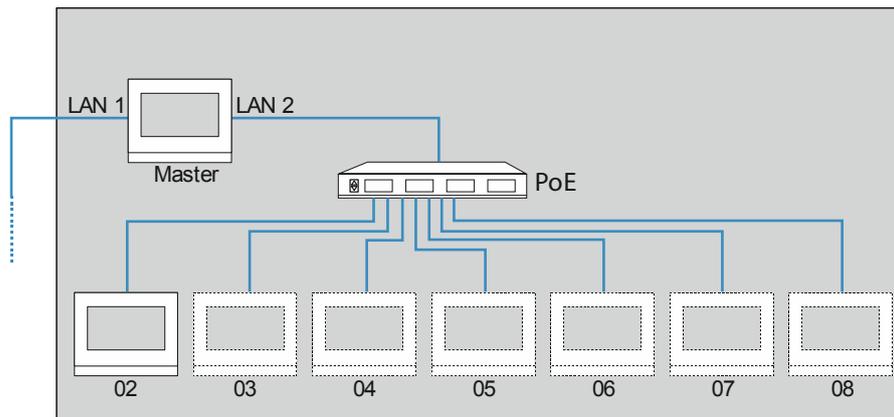
Fig. 132: Adding a units network PoE switch / LAN-LAN

This version allows up to 7 additional indoor stations (02 - 08) to be added in a unit as extension units.

Use the following steps to add additional indoor stations:

1. Search for devices in the "Smart Access Point".

   – Connect a PC with the "Smart Access Point".

   – In the main menu of the "Smart Access Point", change to the "Door communication" function.

   – Search for all devices in the building network including the master indoor station.

Switch to the 1st indoor station

2. Prepare the 1st indoor station (Master) for the operation of an indoor station.

   – In the 1st indoor station change to the "System settings" / "Network settings" function.

   – Set a fixed IP address and the sub-net mask in the "Network settings" for the LAN connection "LAN 2".

      – Disable the "Obtain IP address automatically" function.

      – IP address: 192.168.1.200

      – Sub-net mask: 255.255.255.0

Change to further indoor stations

3. Configure the additional indoor station (extension unit) for operation.

   – Change to the "Settings" / "Local settings" function in the additional indoor station.

   – Set the following points in the "Local settings" function:

      ▪ Physical address (physical address, see chapter 6.2.3 "Indoor stations IP Touch 7 and Guard unit" on page 68).

         Apart from the device number the physical address of the extension unit is identical with the master address.

      ▪ Mode: Extension unit

      ▪ Device number: For the first additional indoor station the device number is set automatically on 02. Each additional indoor station must be correspondingly counted upwards.

4. Prepare the home network.

   ▪ For this, set up the LAN connections of the additional indoor stations (extension units) in the "Local settings" / "Home network port".

      – LAN/WLAN version: Set it on "LAN".

      – LAN/LAN version: Set it on the 1st LAN connection "LAN1".

5. Switch the extension unit over to the static IP address and adjust the IP address.

   – In the additional indoor station change to the "System settings" / "Network settings" function.

   – Set a fixed IP address and the sub-net mask in the "Network settings" function.

      – Disable the "Obtain IP address automatically" function.

      – IP address: 192.168.1.201

         Each additional indoor station is counted upwards by one. E.g.to "192.168.1.202", etc.

      – Sub-net mask: 255.255.255.0

Change to the "Smart Access Point".

6. Add the extension unit manually to the project in the "Smart Access Point".

   – By saving in step two of adding, the extension unit receives a certificate from the "Smart Access Point".

Fig. 133:   Indoor station: Certificate

   – Check on the additional indoor station (extension unit) whether it has received the certificate.

7.3.4   Connection of router / LAN-LAN
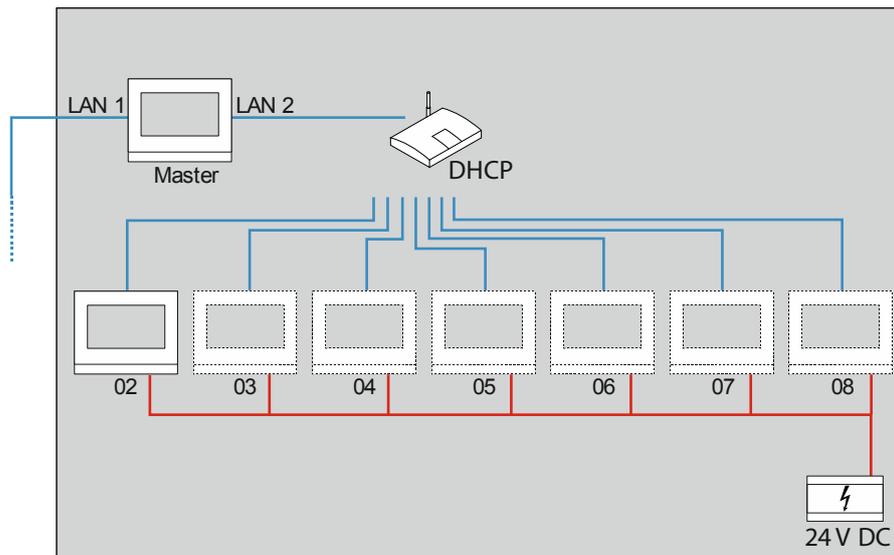
Fig. 134:   Adding a unit network router / LAN-LAN

This version allows up to 7 additional indoor stations (02 - 08) to be added in a unit as extension unit.

A standard commercially available router is not PoE-capable. In this case a 24 V power supply is required for the additional indoor station.

The IP addresses and the sub-net masks of the unit network are assigned automatically by the DHCP function of the router.

Use the following steps to add additional indoor stations:

1. Search for devices in the "Smart Access Point".

    – Connect a PC with the "Smart Access Point".

    – In the main menu of the "Smart Access Point", change to the "Door communication" function.

    – Search for all devices in the building network including the master indoor station.

Change to further indoor stations

2. Configure the additional indoor station (extension unit) for operation.

    – Change to the "Settings" / "Local settings" function in the additional indoor station.

    – Set the following points in the "Local settings" function:

        ▪ Physical address (physical address, see chapter 6.2.1 "Fundamentals of physical addressing ABB-Welcome IP" on page 63).

            Apart from the device number the physical address of the extension unit is identical with the master address.

        ▪ Mode: Extension unit

        ▪ Device number: For the first additional indoor station the device number is set automatically on 02. Each additional indoor station must be correspondingly counted upwards.

3. Prepare the home network.

▪ For this, set up the LAN connections of the additional indoor stations (extension units) in the "Local settings" / "Home network port".

– LAN/WLAN version: Set it on LAN.

– LAN/LAN version: Set it on the 1st LAN connection "LAN1".

Change to the "Smart Access Point".

4. Add the extension unit manually to the project in the "Smart Access Point".

– By saving in step two of adding, the extension unit receives a certificate from the "Smart Access Point".

Fig. 135: Indoor station: Certificate

– Check on the additional indoor station (extension unit) whether it has received the certificate.

7.3.5 Connection of router / WLAN-WLAN
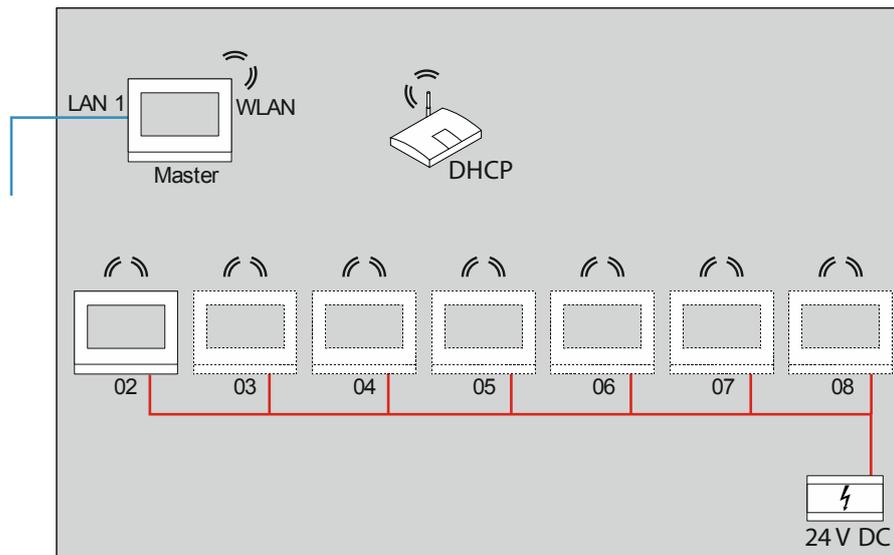
Fig. 136:   Adding a unit network router / WLAN-WLAN

This version allows up to 7 additional indoor stations (02 - 08) to be added in a unit as extension unit.

No power supply can be set up for a WLAN connection. That is why a 24 V power supply is required for the additional indoor station.

The IP addresses and the sub-net masks of the unit network are assigned automatically by the DHCP function of the router.

Use the following steps to add additional indoor stations:

1. Search for devices in the "Smart Access Point".

    –   Connect a PC with the "Smart Access Point".

    –   In the main menu of the "Smart Access Point", change to the "Door communication" function.

    –   Search for all devices in the building network including the master indoor station.

Change to further indoor stations

2. Configure the additional indoor station (extension unit) for operation.

    –   Change to the "Settings" / "Local settings" function in the additional indoor station.

    –   Set the following points in the "Local settings" function:

        ▪   Physical address (physical address, see chapter 6.4.3 "Reconnect the "Smart Access Point"" on page 105).

            Apart from the device number the physical address of the extension unit is identical with the master address.

        ▪   Mode: Extension unit

        ▪   Device number: For the first additional indoor station the device number is set automatically on 02. Each additional indoor station must be correspondingly counted upwards.

3. Set up the WLAN connection.

   – Perform the following points in menu "Network settings / WIFI settings":

      ▪ Scan and select the network.

      ▪ Set up a network password with WLAN.

Change to the "Smart Access Point".

4. Add the extension unit manually to the project in the "Smart Access Point".

   – By saving in step two of adding, the extension unit receives a certificate from the "Smart Access Point".

Fig. 137: Indoor station: Certificate

   – Check on the additional indoor station (extension unit) whether it has received the certificate.

7.4 Practice-oriented examples

7.4.1 One-family house with a panel

In a ABB-Welcome IP system in a private building the building network is disconnected from the units network. This prevents unauthorized access to the private units network via the outdoor station.

A IP Touch 7 is installed.

In this type of installation the IP Touch 7 additionally meets the function of an IP gateway.
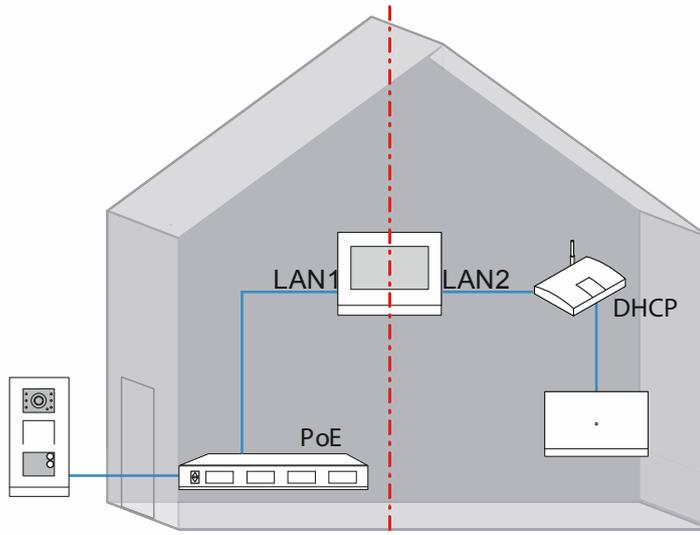
Fig. 138: Overview: One-family house with one panel
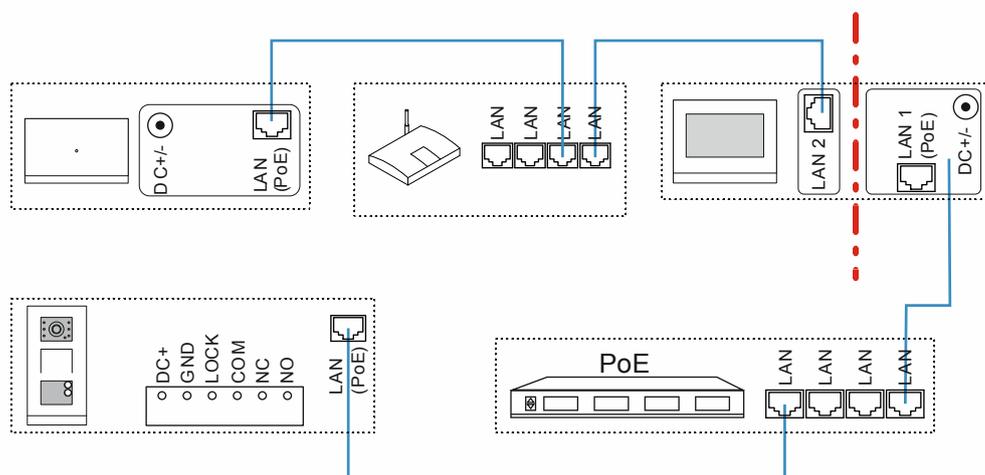

Fig. 139: Connection: One-family house with one panel
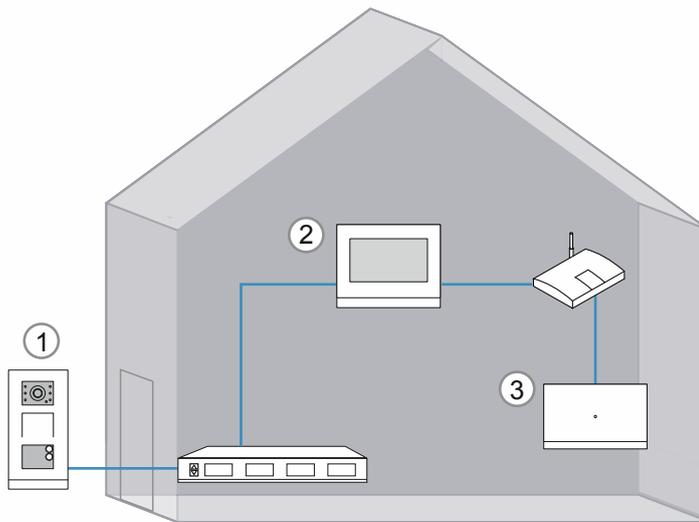
Fig. 140:   Physical addressing: One-family house with one panel

The counting sequence of the physical addresses can be freely selected. However, it should be noted that no physical address can be assigned twice to a device type. This would cause conflict.

	Physical Address				Settings
	Building No.	Floor No.	Units No.	Device ID	Mode
1	001	—	—	01	—
2	001	01	01	01	Master
3	—	—	—	—	One-family house / Terraced house

Table 8:   Physical addressing: One-family house with one panel

7.4.2 One-family house with three panels

In a ABB-Welcome IP system in a private building the building network is disconnected from the units network. This prevents unauthorized access to the private units network via the outdoor station.

Three IP Touch 7 devices are installed.

In this type of installation the master IP Touch 7 additionally meets the function of an IP gateway.
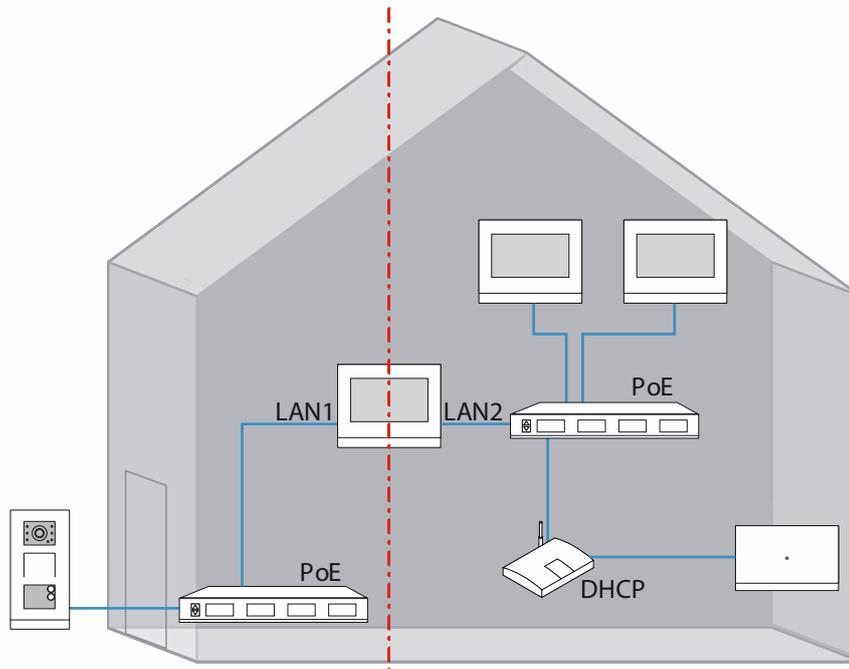
Fig. 141: Overview: One-family house with three panels
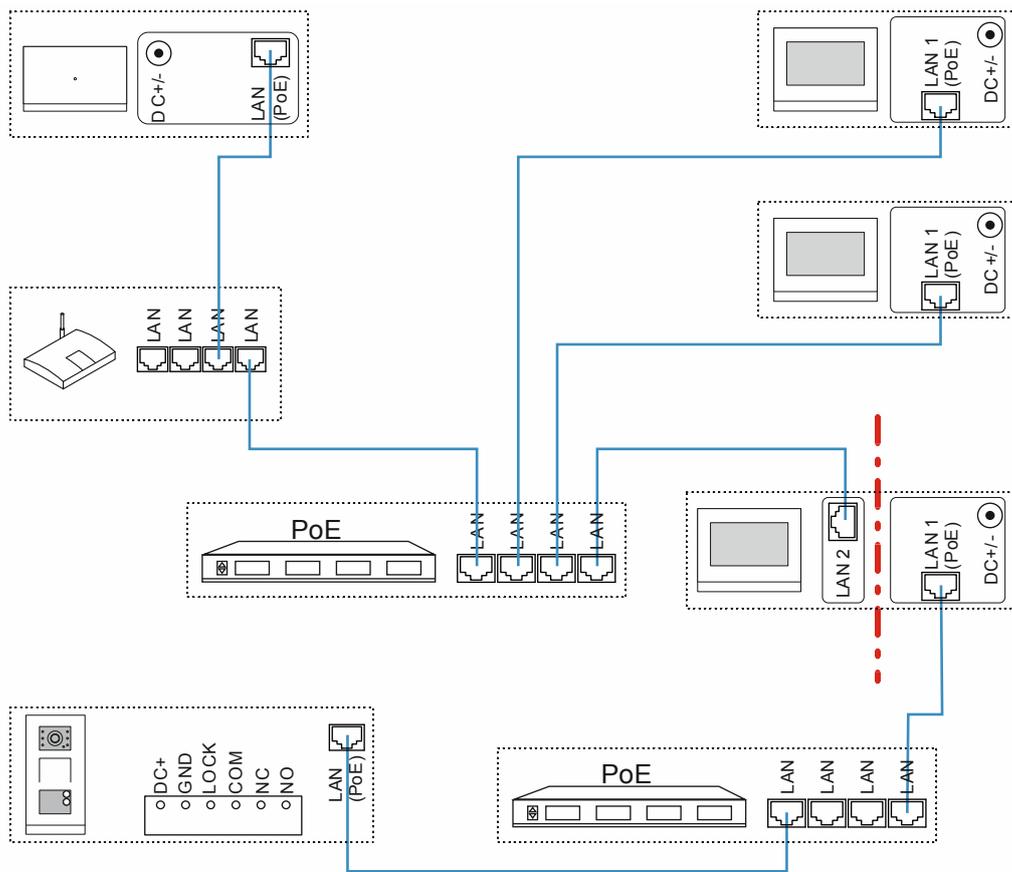
Fig. 142:   Connection: One-family house with three panels
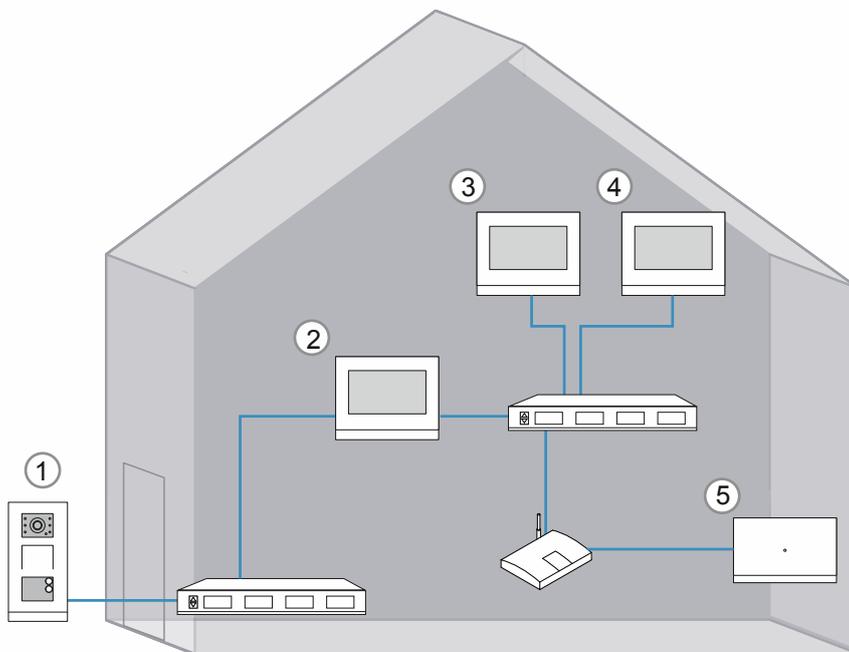
Fig. 143:   Physical addressing: One-family house with three panels

The counting sequence of the physical addresses can be freely selected. However, it should be noted that no physical address can be assigned twice to a device type. This would cause

conflict.

	Physical Address				Settings
	Building No.	Floor No.	Units No.	Device ID	Mode
1	001	—	—	01	—
2	001	01	01	01	Master
3	001	01	01	02	Subsidiary mode
4	001	01	01	03	Subsidiary mode
5	—	—	—	—	One-family house / Terraced house

Table 9:   Physical addressing: One-family house with three panels

7.4.3 Multifamily house with 10 parties

In a ABB-Welcome IP system an IP Touch 7 is installed in a multifamily house for every unit.

One outdoor station each is installed for the building entrances. One IP switch actuator each is required for the door openers.
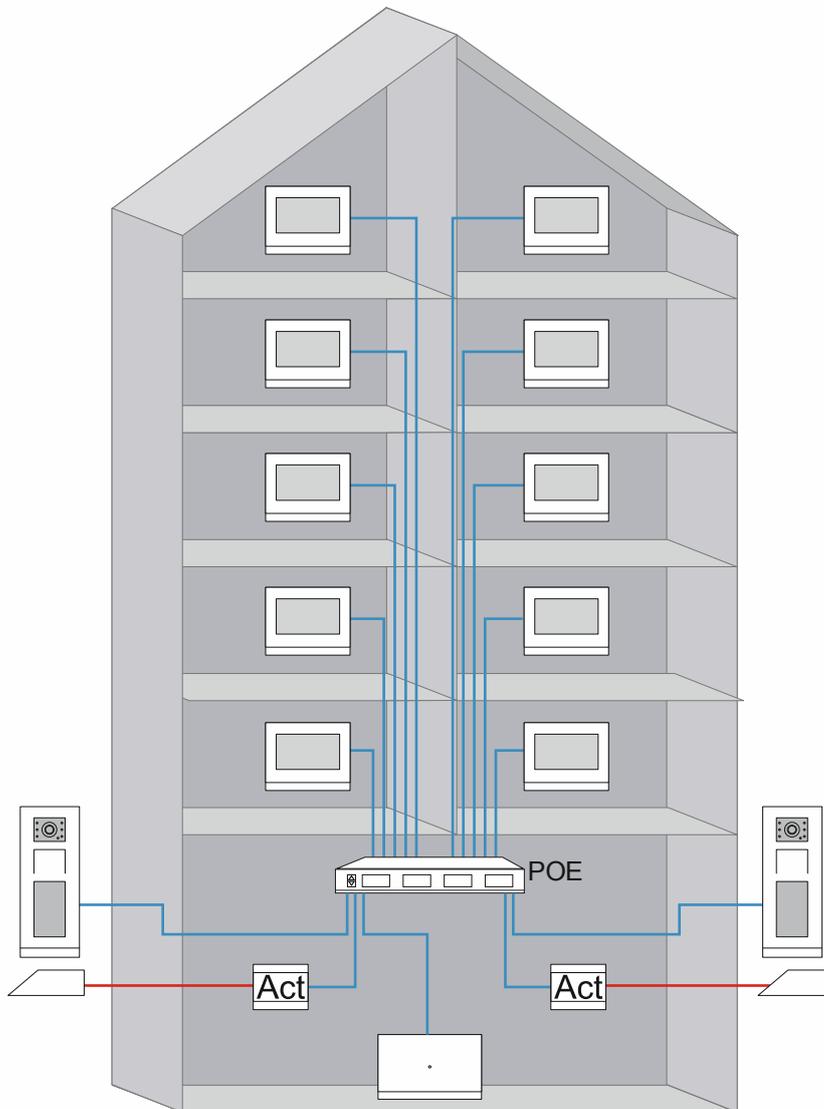
Fig. 144: Overview: Multifamily house with 10 parties
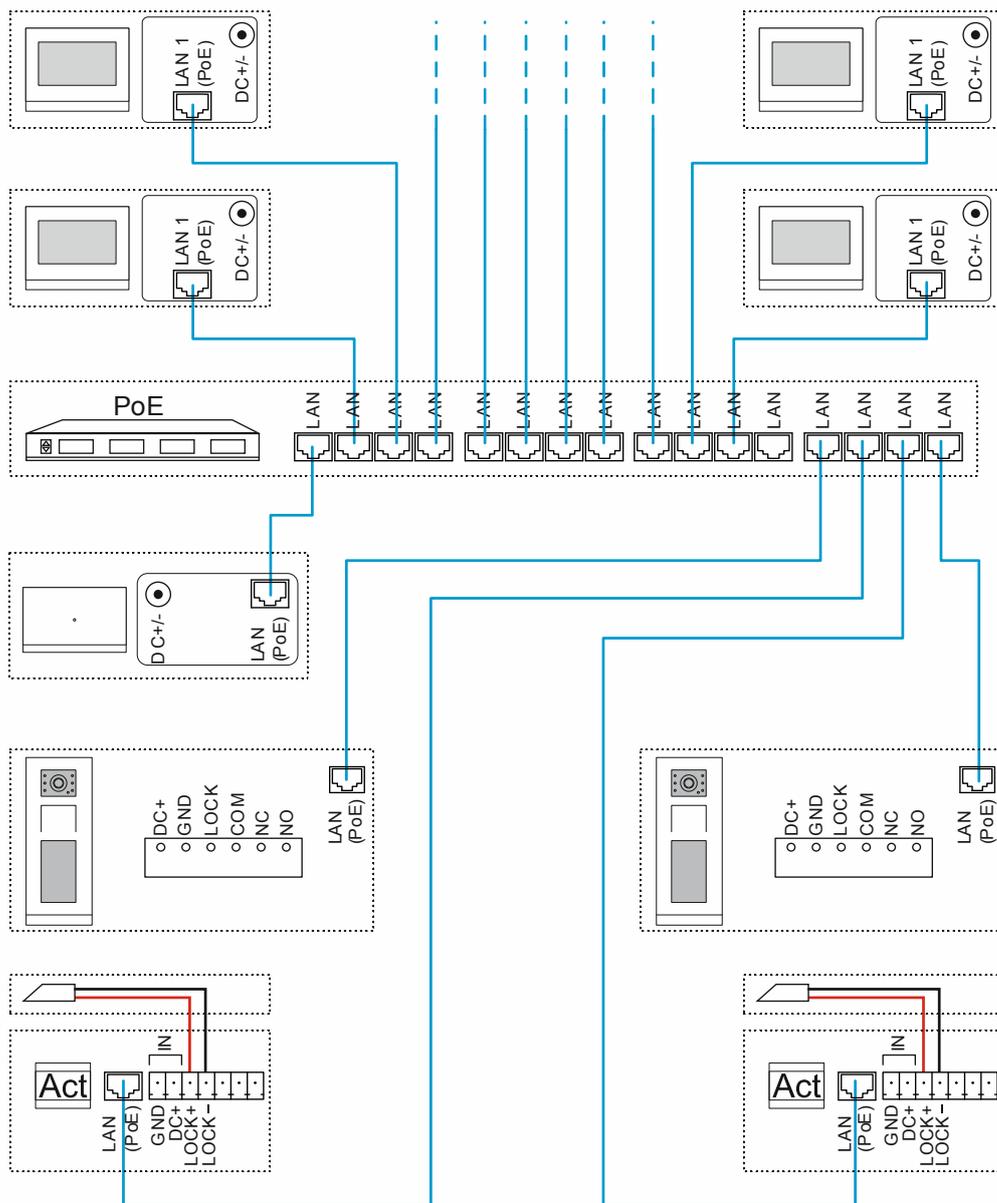
Fig. 145: Connection: Multifamily house with 10 parties
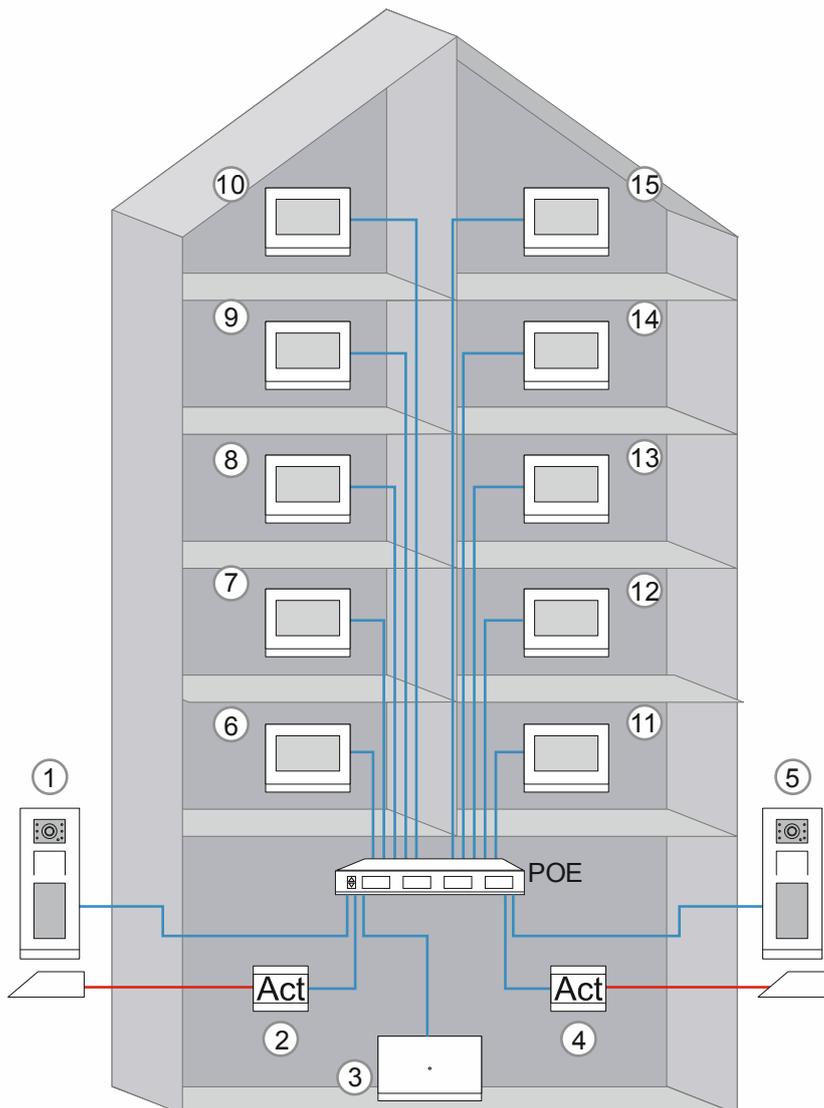
Fig. 146: Physical addressing: Multifamily house with 10 parties

The counting sequence of the physical addresses can be freely selected. However, it should be noted that no physical address can be assigned twice to a device type. This would cause conflict.

	Physical Address				Settings
	Building No.	**Floor No.**	**Units No.**	**Device ID**	**Mode / Device type**
1	001	—	—	01	Outdoor station / —
2	001	—	—	01	— / Building IP actuator
3	—	—	—	—	Multi-unit house / commercial / —
4	001	—	—	02	— / Building IP actuator

5	001	—	—	02	Outdoor station / —
6	001	02	01	01	Master / —
7	001	03	03	01	Master / —
8	001	04	05	01	Master / —
9	001	05	07	01	Master / —
10	001	06	09	01	Master / —
11	001	02	02	01	Master / —
12	001	03	04	01	Master / —
13	001	04	06	01	Master / —
14	001	05	08	01	Master / —
15	001	06	10	01	Master / —

Table 10: Physical addressing: Multifamily house with 10 parties

7.4.4 Multifamily house with a floor door in a separate building wing

In a ABB-Welcome IP system an IP Touch 7 is installed in a multifamily house for every unit.

One outdoor station is installed for the building entrance. One IP switch actuator is installed for the door opener of this entrance.

The building has a separate wing with three units. The separate wing has its own entrance door within the building which receives an outdoor station. One IP switch actuator is installed for the door opener of this entrance.
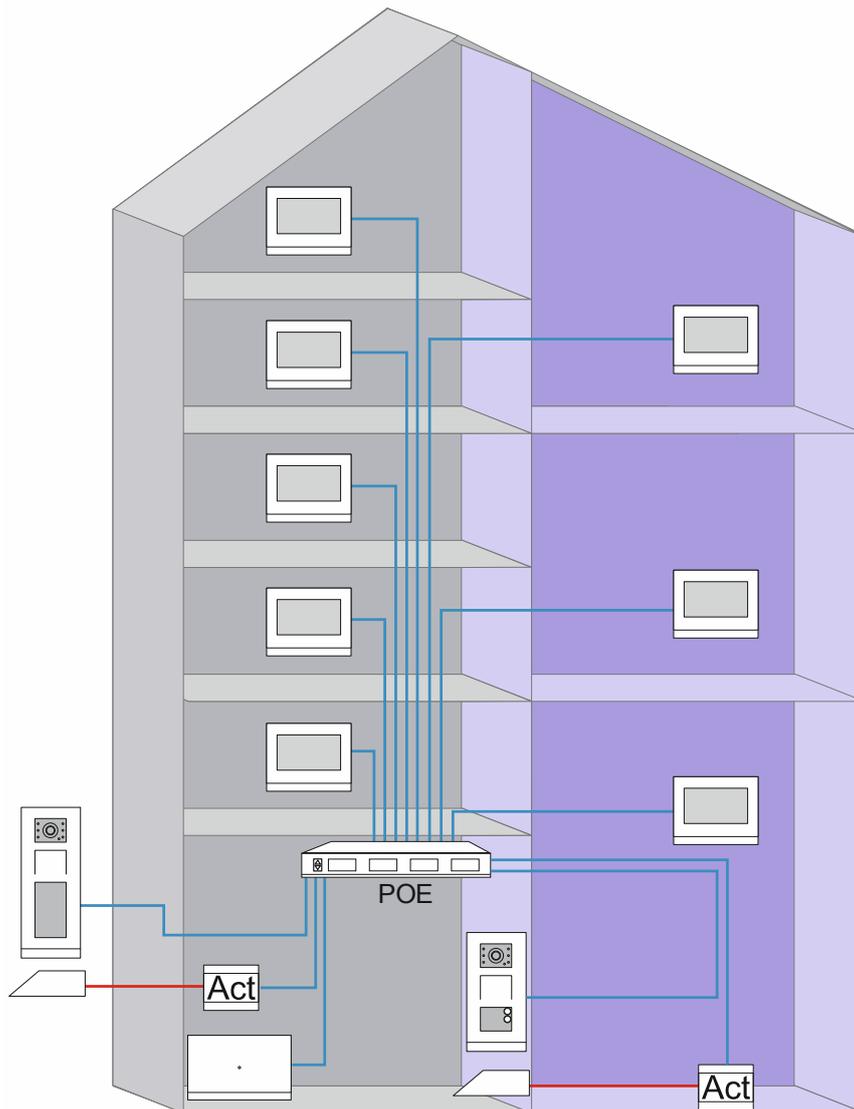
Fig. 147:   Overview: Multifamily house with entrance door in the separate wing
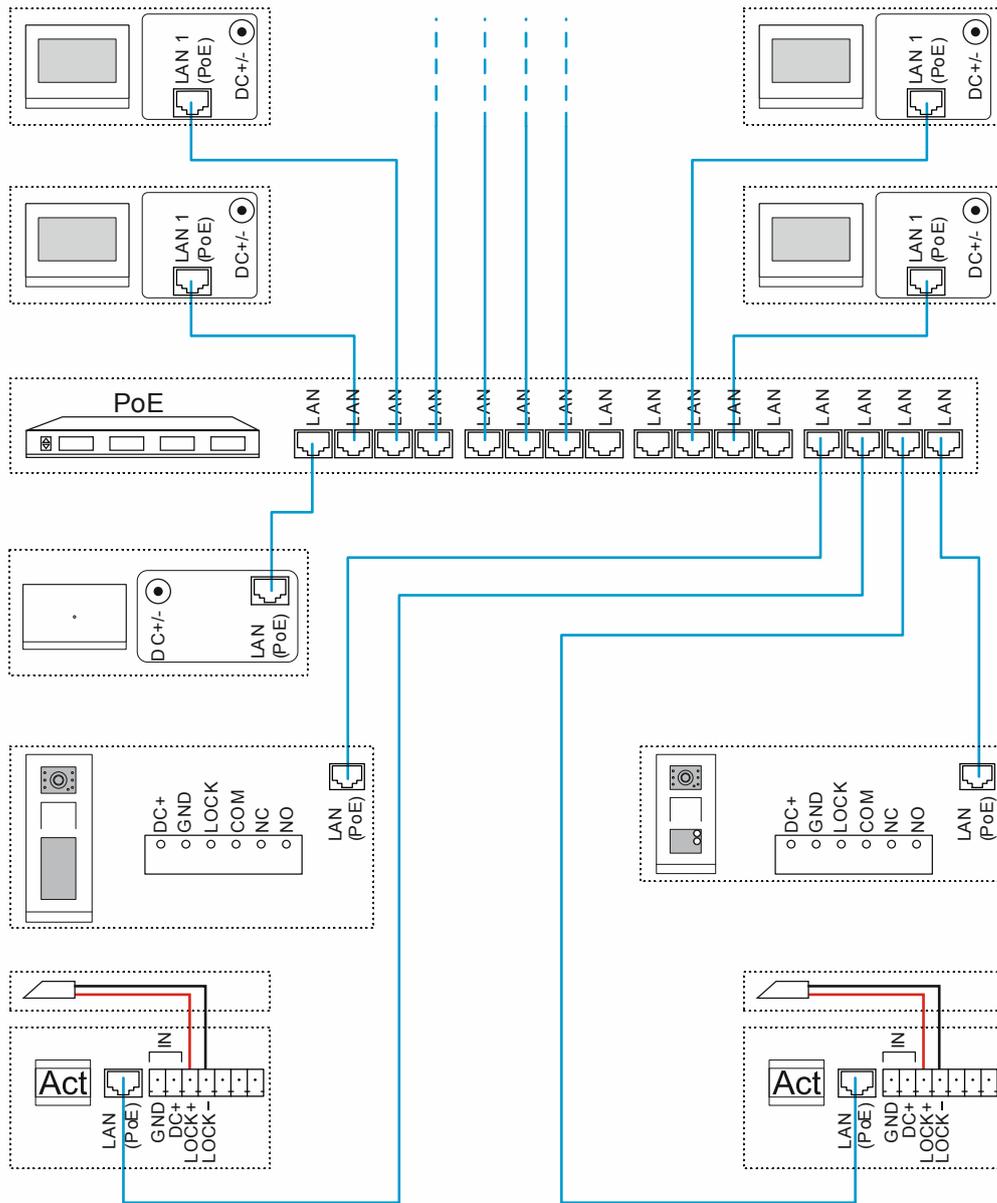
Fig. 148:   Connection: Multifamily house with entrance door in the separate wing
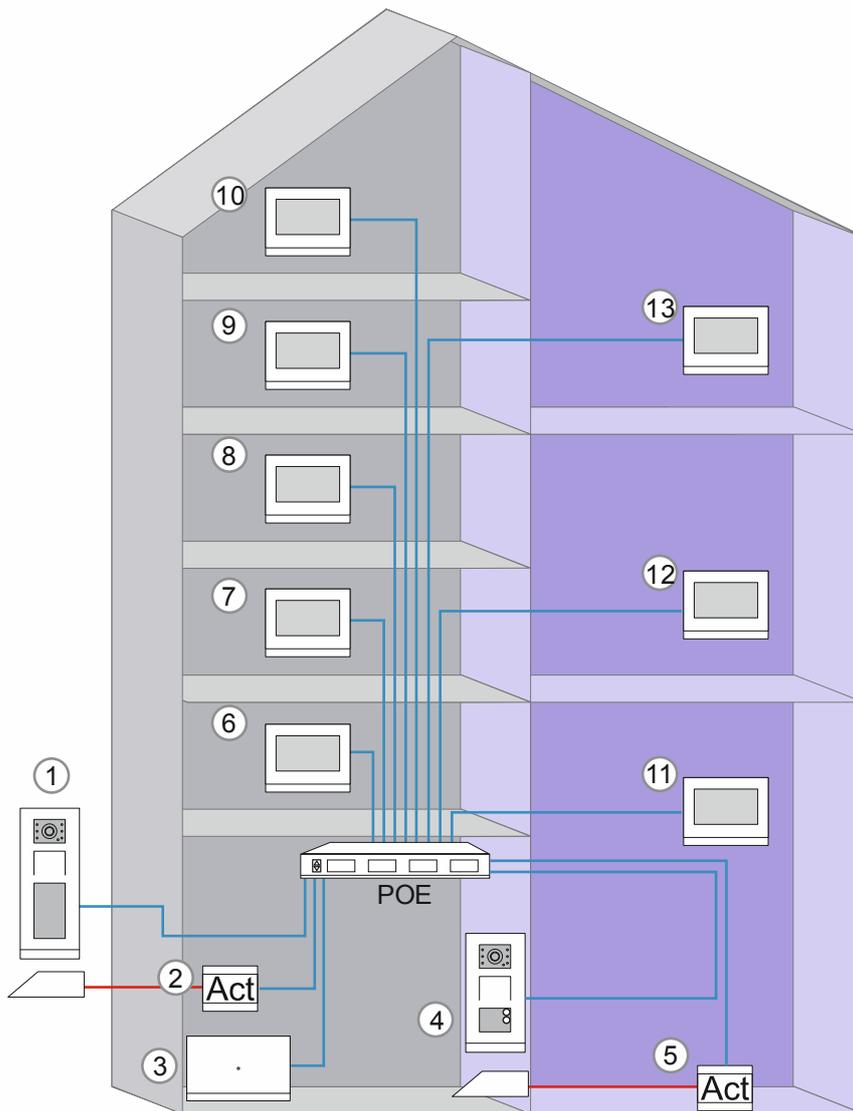
Fig. 149: Physical addressing: Multifamily house with entrance door in the separate wing

The counting sequence of the physical addresses can be freely selected. However, it should be noted that no physical address can be assigned twice to a device type. This would cause conflict.

	Physical Address				Settings
	Building No.	**Floor No.**	**Units No.**	**Device ID**	**Mode / Device type**
1	001	—	—	01	Outdoor station / —
2	001	—	—	01	— / Building IP actuator
3	—	—	—	—	Multi-unit house / commercial / —
4	001	—	—	02	Outdoor station / —

5	001	—	—	02	— / Building IP actuator
6	001	02	01	01	Master / —
7	001	03	02	01	Master / —
8	001	04	03	01	Master / —
9	001	05	04	01	Master / —
10	001	06	05	01	Master / —
11	001	01	06	01	Master / —
12	001	03	07	01	Master / —
13	001	05	08	01	Master / —

Table 11: Physical addressing: Multifamily house with entrance door in the separate wing

7.4.5   Multifamily house with units doors

In a ABB-Welcome IP system an IP Touch 7 is installed in a multifamily house for every unit.

Each unit additionally receives an outdoor station for the units entrance door and an IP switch actuator for the automatic door opener.

One outdoor station each is installed for the building entrances. One IP switch actuator each is required for the door openers.
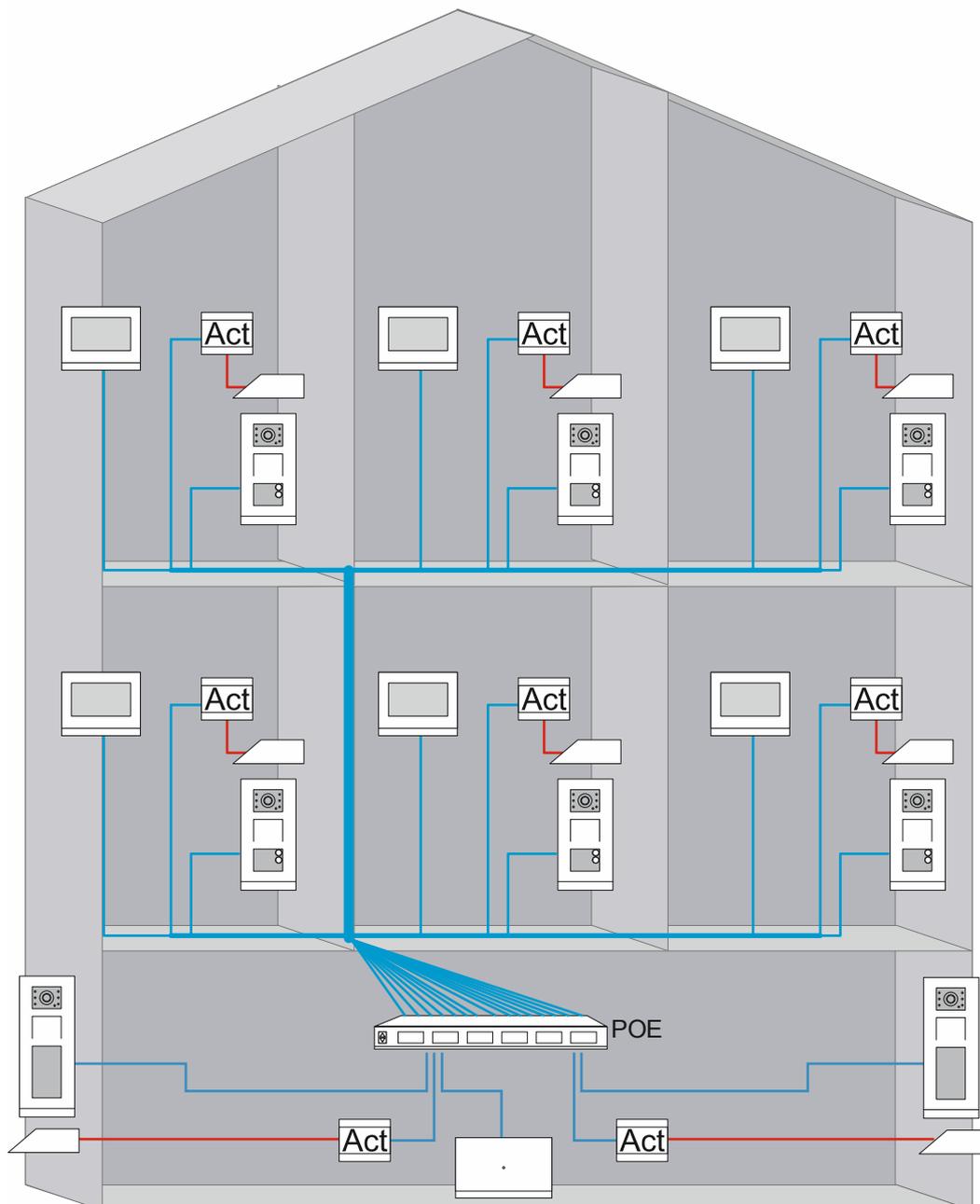
Fig. 150:   Overview: Multifamily house with outdoor station for each unit
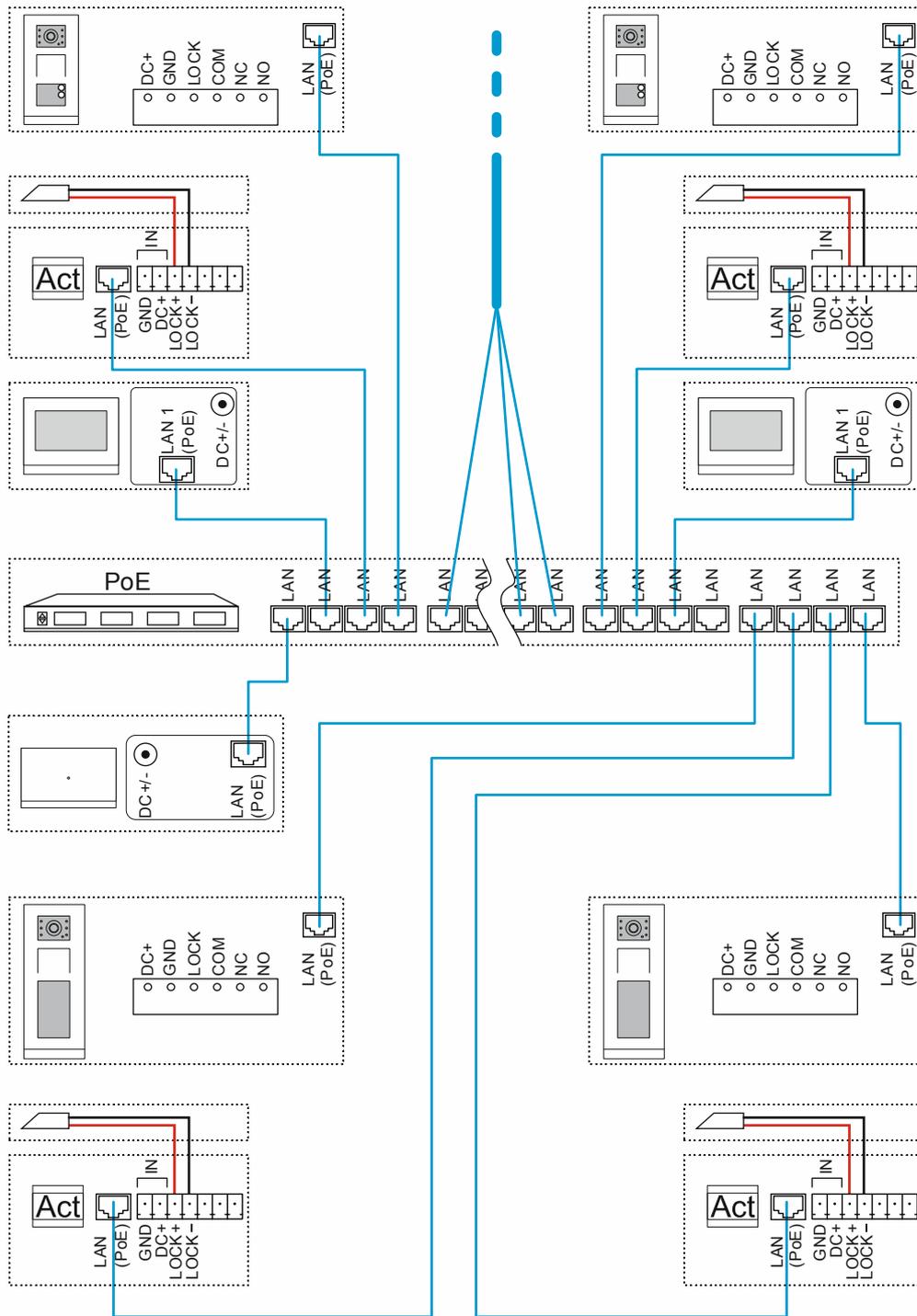
Fig. 151: Connection: Multifamily house with outdoor station for each unit
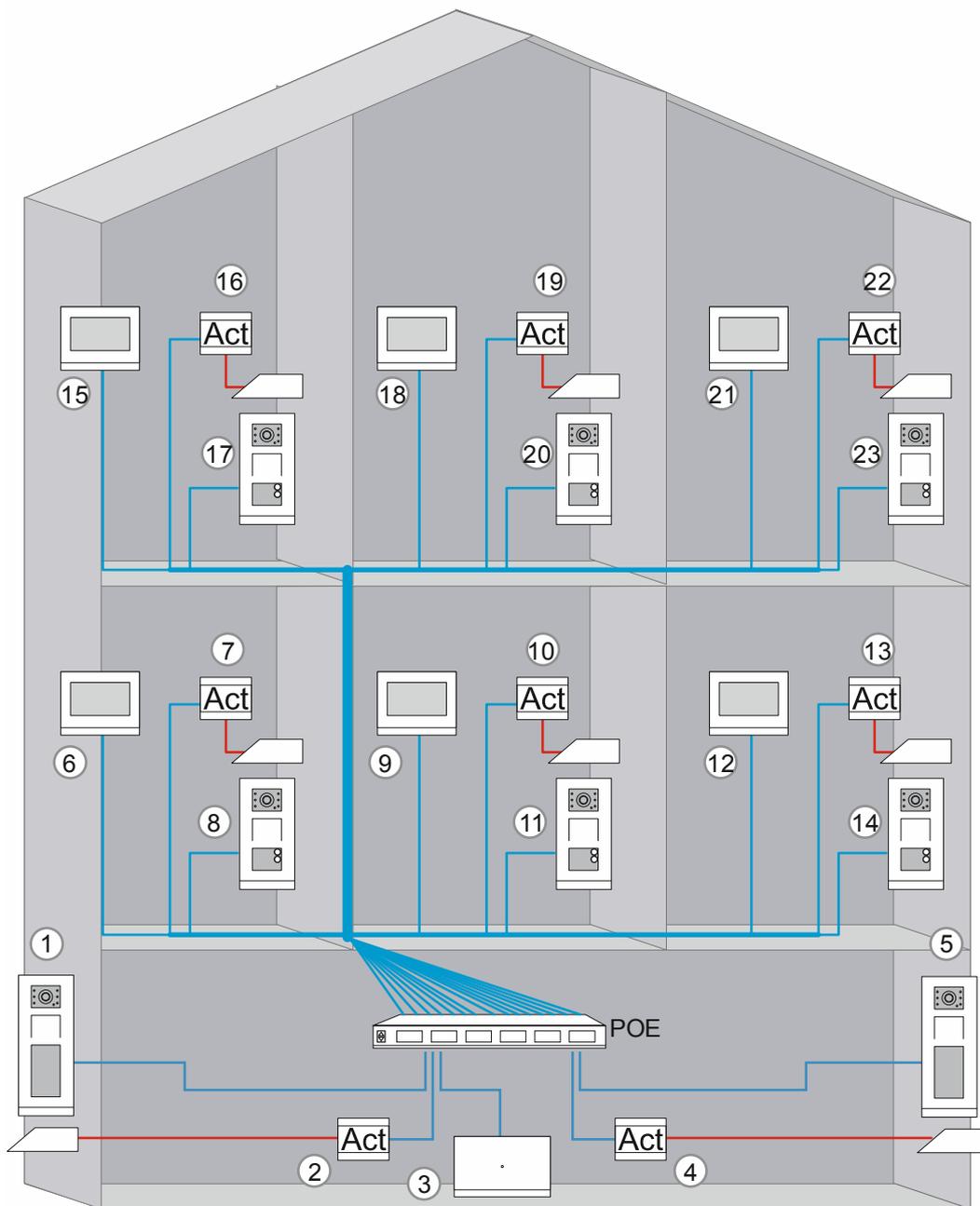
Fig. 152:   Physical addressing: Multifamily house with outdoor station for each unit

The counting sequence of the physical addresses can be freely selected. However, it should be noted that no physical address can be assigned twice to a device type. This would cause conflict.

	Physical Address				Settings
	Building No.	**Floor No.**	**Units No.**	**Device ID**	**Mode / Device type / Location / Position of IP gateway**
1	001	—	—	01	Outdoor station / — / — / —

2	001	—	—	01	— / Bulding IP actuator — / —
3	—	—	—	—	Multi-unit house / commercial / — / — / —
4	001	—	—	02	— / Bulding IP actuator — / —
5	001	—	—	02	Outdoor station / — / — / —
6	001	02	01	01	— / — / — / Master
7	001	02	01	01	— / Private IP actuator / outdoor / —
8	001	02	01	01	Private door station / — / — / outdoor
9	001	02	02	01	— / — / — / Master
10	001	02	02	01	— / Private IP actuator / outdoor / —
11	001	02	02	01	Private door station / — / — / outdoor
12	001	02	03	01	— / — / — / Master
13	001	02	03	01	— / Private IP actuator / outdoor / —
14	001	02	03	01	Private door station / — / — / outdoor
15	001	03	04	01	— / — / — / Master
16	001	03	04	01	— / Private IP actuator / outdoor / —
17	001	03	04	01	Private door station / — / — / outdoor
18	001	03	05	01	— / — / — / Master
19	001	03	05	01	— / Private IP actuator / outdoor / —
20	001	03	05	01	Private door station / — / — / outdoor
21	001	03	06	01	— / — / — / Master
22	001	03	06	01	— / Private IP actuator / outdoor / —
23	001	03	06	01	Private door station / — / — / outdoor

Table 12: Physical addressing: Multifamily house with outdoor station for each unit

7.4.6   One-family house with camera

Notice

Commercially available IP cameras with the profile "ONVIF Profile S" and the video coding format "H.264" can be integrated in the ABB-Welcome IP system.

The IP camera can be connected to the router as DHCP client.
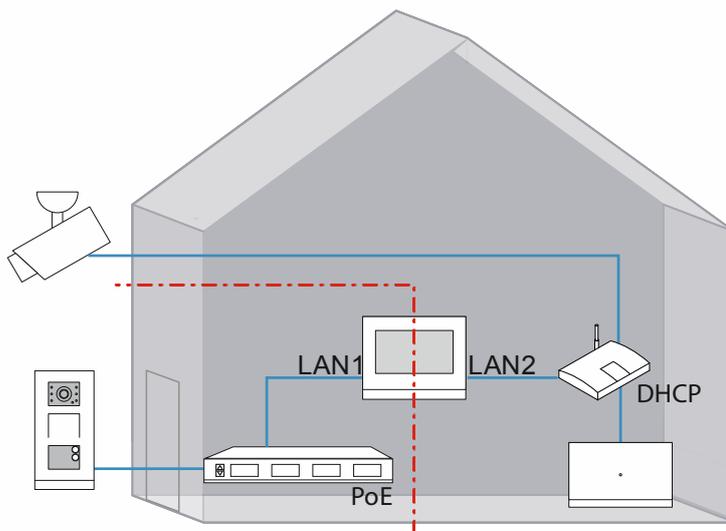
Fig. 153:   One-family house with camera

Setting up the IP camera in the Smart Access Point.
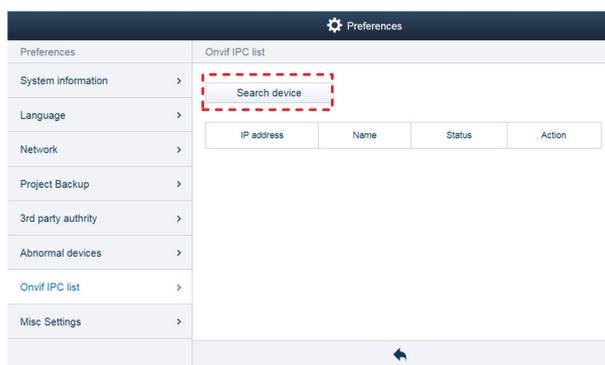
Fig. 154:   Searching for the IP camera in the "Smart Access Point"

1. Under "Settings", "IP cameras", click on "Search device" to search for the cameras used in the public network.
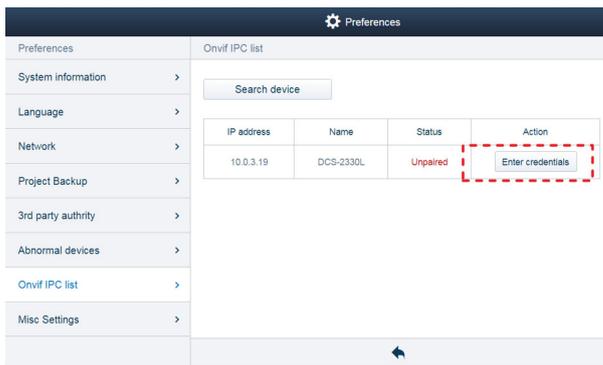
Abb. 155: Credentials of the IP camera in the "Smart Access Point"

2. Then click "Enter credentials".
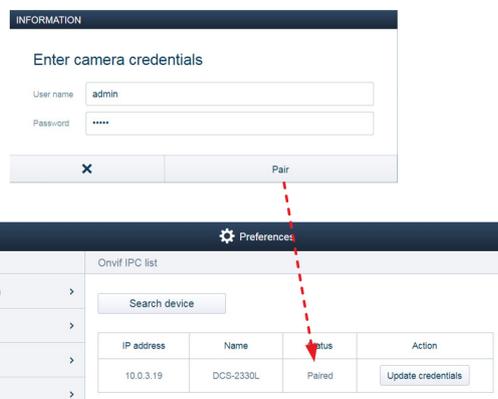
Abb. 156: Enter the credentials of the IP camera in the "Smart Access Point"

3. Enter the user name and the password of the IP camera and click on "Pair".

Integrating the IP camera in the IP Touch 7
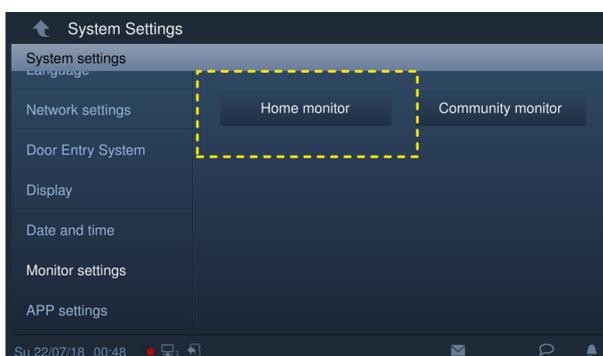
Fig. 157: Start screen in the IP Touch 7

4. In the IP Touch 7 change to "System settings" / "Monitor settings" and there open the "Start screen" page.
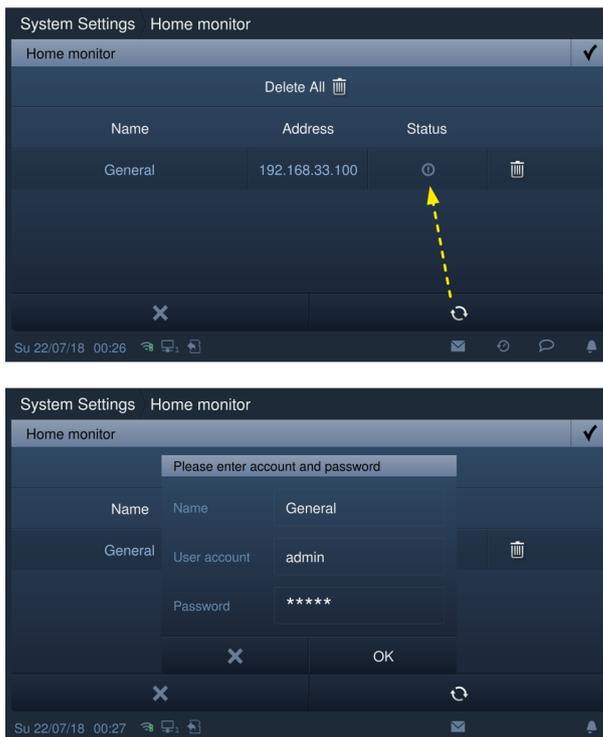
Fig. 158: Start screen in the IP Touch 7: IP cameras

– Click on the "Search" button to search for the IP cameras and to create a camera list automatically. Select an IP camera from the camera list and click on the "Start" button.

– Enter the name, user account and password, then click on the "OK" button.
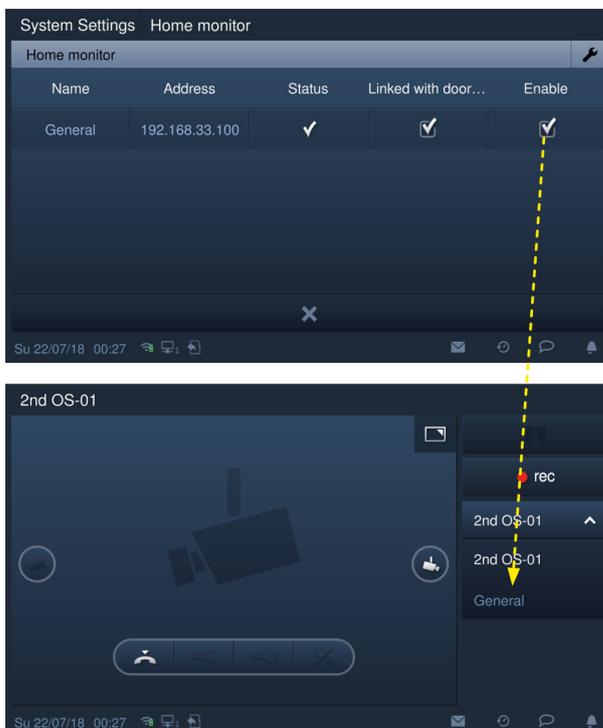
– On the "Home monitor" screen, tick "Enable" to enable the function.

– With this setting, the registered IP camera can be selected from the drop-down list under "Door communication".

7.4.7   Multifamily house with 10 parties and camera

Notice
Commercially available IP cameras with the profile "ONVIF Profile S" and the video coding format "H.264" can be integrated in the ABB-Welcome IP system.

The IP camera must be integrated in the IP address range 10.0.3.1 - 10.0.3.254.
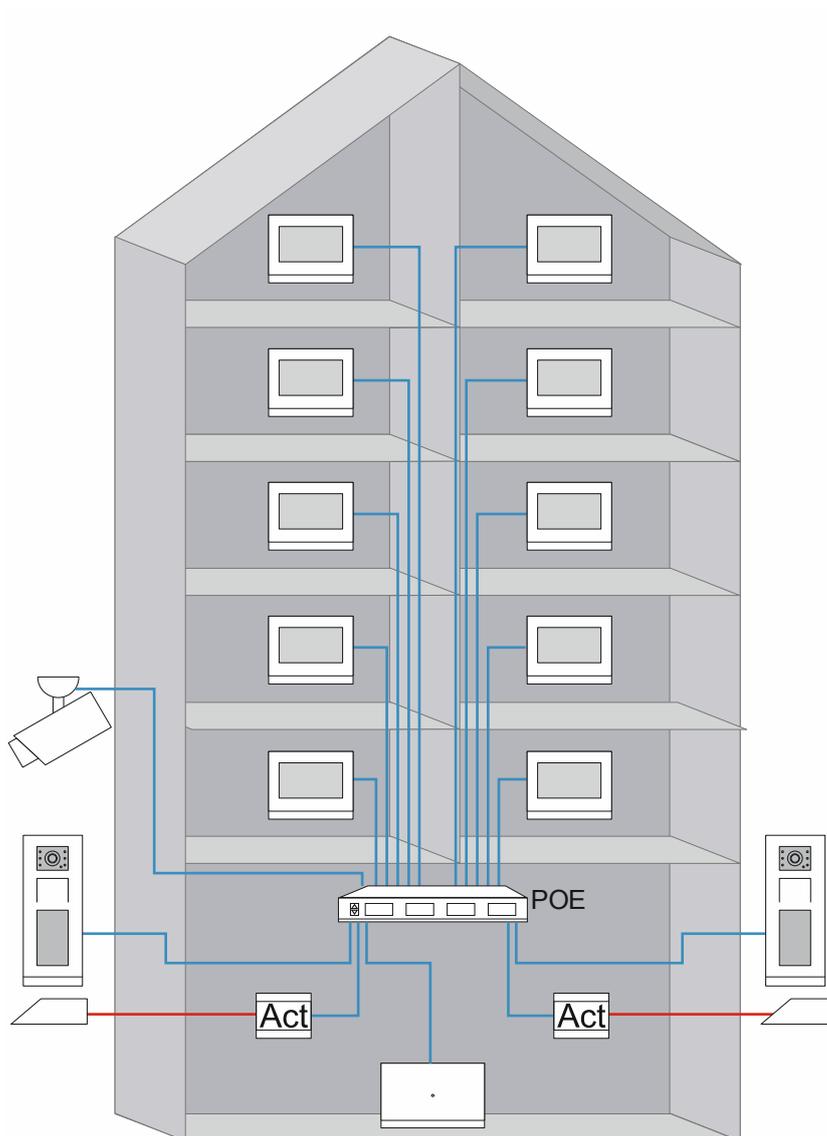
Fig. 159:   Multifamily house with camera

Setting up the IP camera in the Smart Access Point.
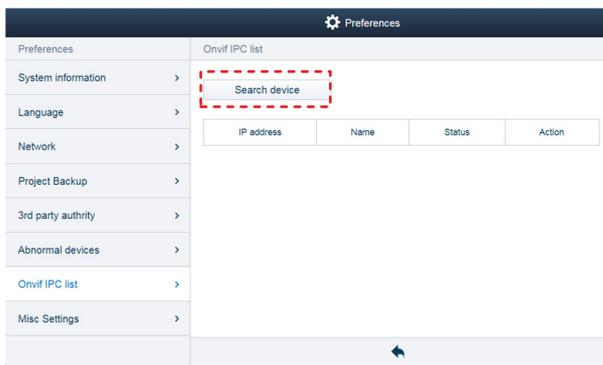
Fig. 160: Searching for the IP camera in the "Smart Access Point"

1. Under "Settings", "IP cameras", click on "Search device" to search for the cameras used in the public network.
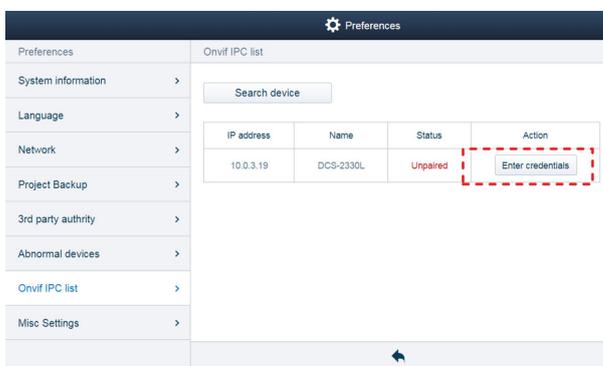
Abb. 161: Credentials of the IP camera in the "Smart Access Point"

2. Then click "Enter credentials".
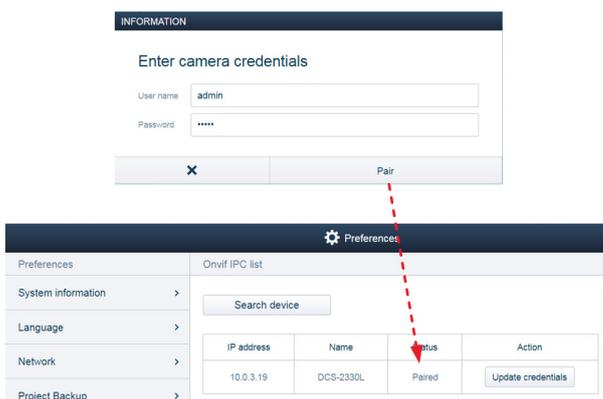
Abb. 162: Enter the credentials of the IP camera in the "Smart Access Point"

3. Enter the user name and the password of the IP camera and click on "Pair".

Integrating the IP camera in the IP Touch 7
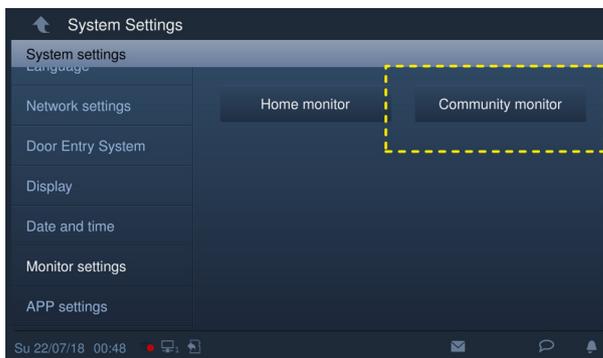
Fig. 163: Community Monitor in the IP Touch 7

4. In the IP Touch 7 change to "System settings" / "Monitor settings" and there open the "Community monitor" page.
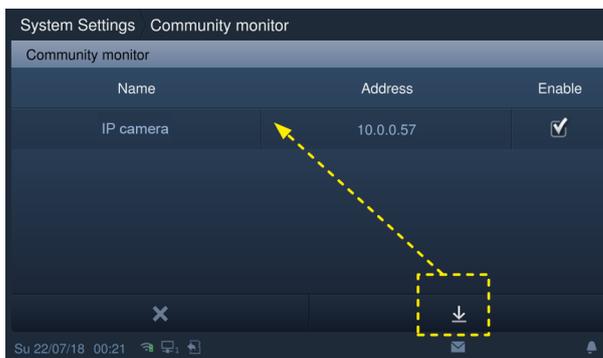
Fig. 164: Start screen in the IP Touch 7: IP cameras

– Click on the "Download" button to download the camera list from the management software.

7.4.8 One-family house with ABB-Welcome IP and free@home

In a ABB-Welcome IP system in a private building the ABB-Welcome IP system is connected with a free@home system. After the connection there is the option of operating the ABB-Welcome IP system via the free@home system. For example, to accept a door call on a free@home panel.

Up to 8 free@home panels can be connected to the ABB-Welcome IP system.

For the connection, the free@home System Access Point is connected with the router.
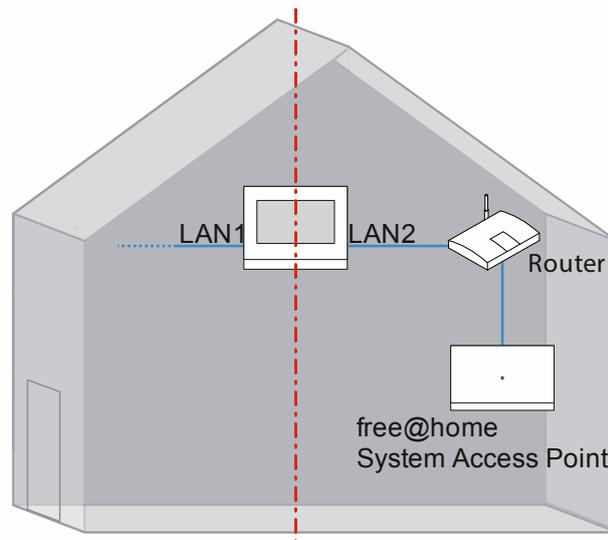
Fig. 165: Overview: One-family house ABB-Welcome IP and free@home

The following settings are necessary for the connection:

ABB-Welcome IP: IP Touch 7:
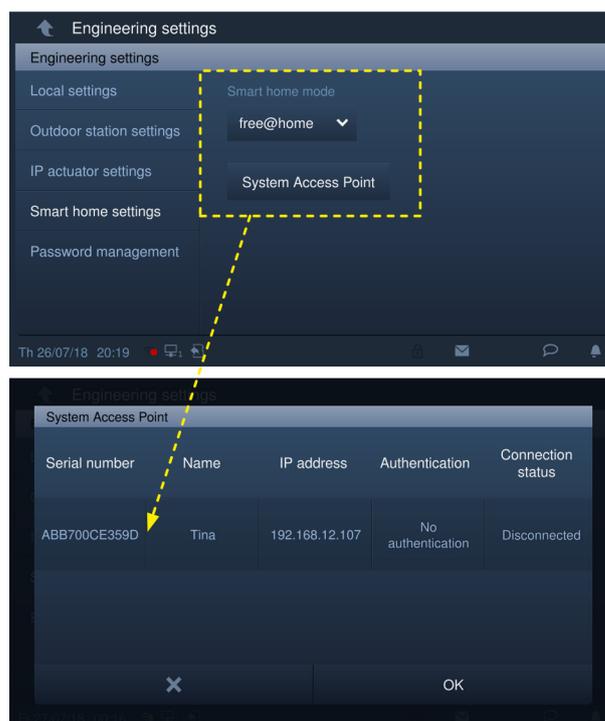
Fig. 166: Engineering settings on the IP Touch 7

1. "Smart Home" mode = free@home
   – On the "Smart home settings" screen, click on "System Access Point" and then on the name.
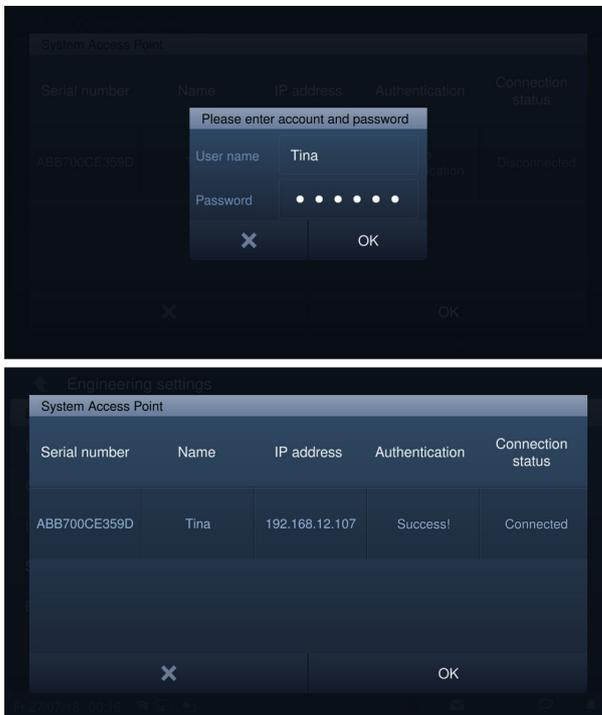
Fig. 167: Password on the IP Touch 7

2. Enter the user name and password, and click on "OK".

free@home: ABB-free@homeTouch 4.3":
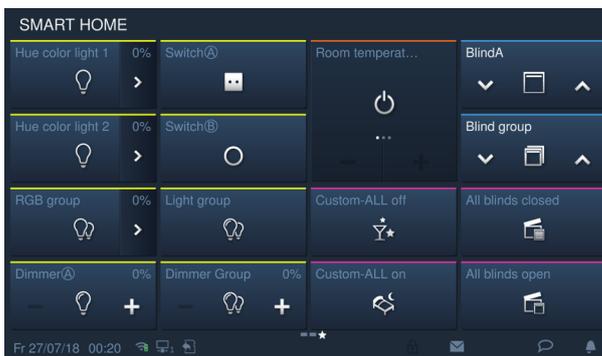
Fig. 168: Start page ABB-free@homeTouch 4.3"

3. The start page of free@home is set on "SysAP". Additional details are available in the product manual.

7.4.9 One-family house with ABB-Welcome® App

The ABB-Welcome IP system is to be operated additionally with a mobile device (smartphone, etc.) via the ABB-Welcome® App. For example, to accept a door call.
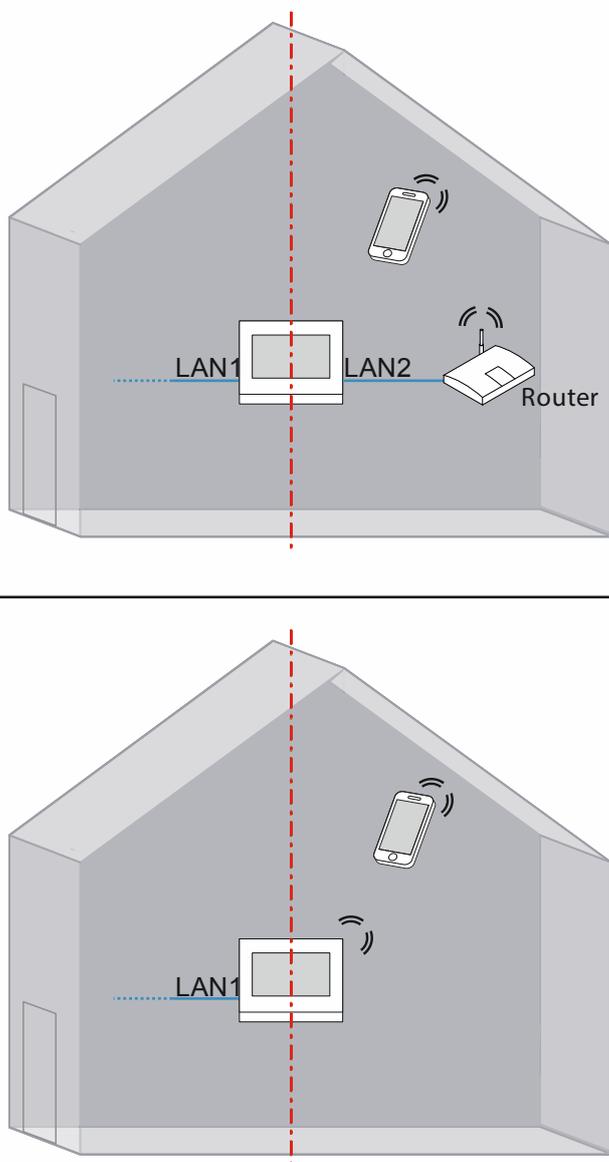
Fig. 169: Overview: One-family house ABB-Welcome® App connection via IP Touch 7 LAN/LAN or LAN/WLAN

The following settings are necessary for the connection:
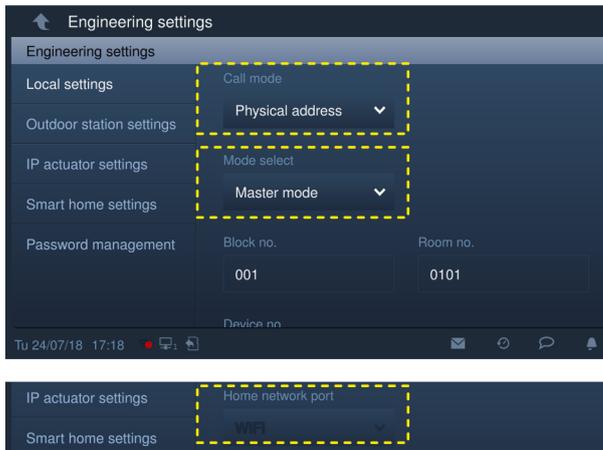
Fig. 170: Engineering settings on the IP Touch 7

1. Mode selection = Master mode
   – The connection of the ABB-Welcome® App is only possible within a unit/one-family house, and there on the IP Touch 7 with the master mode.

2. Home network port
   – LAN/LAN version: LAN2
   – LAN/WLAN version: WIFI
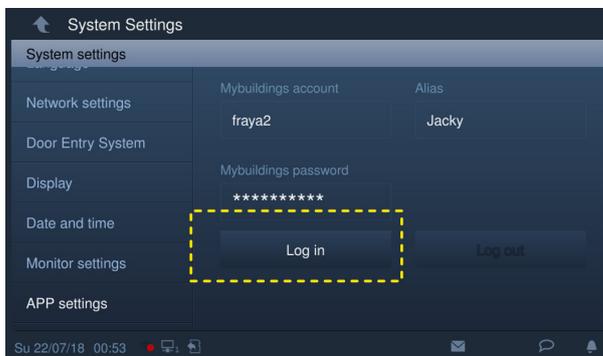
Fig. 171: Password on the IP Touch 7

3. Login on the MyBuildings portal via the IP Touch 7.
   – On the IP Touch 7 under system settings click on "MyBuildings settings" and enter the user password to call up the settings screen.
   – Then enter a user name, an alias and a password, and click on "Log in".

7.5   Perimeter

An installation with a perimeter is illustrated in the following example. The perimeter comprises two houses and associated parking garage.

▪   Each unit receives an indoor station.

▪   The main entrances and the parking garage receive an outdoor station.

▪   Each of the main entrances is equipped with a door opener.

▪   The switches are PoE-capable. The capacity is sufficient for supplying all devices of the system with voltage.

Notice
▪   It is absolutely essential that the houses are always connected with glass fibre cables.
▪   Set up the outdoor station for the parking garage in "Gate station" operating mode.
–   see chapter 0 "Outdoor station with buttons: Set the operating mode via the indoor station" on page 79.

    –   see chapter 0 "Operating mode

" on page 73.
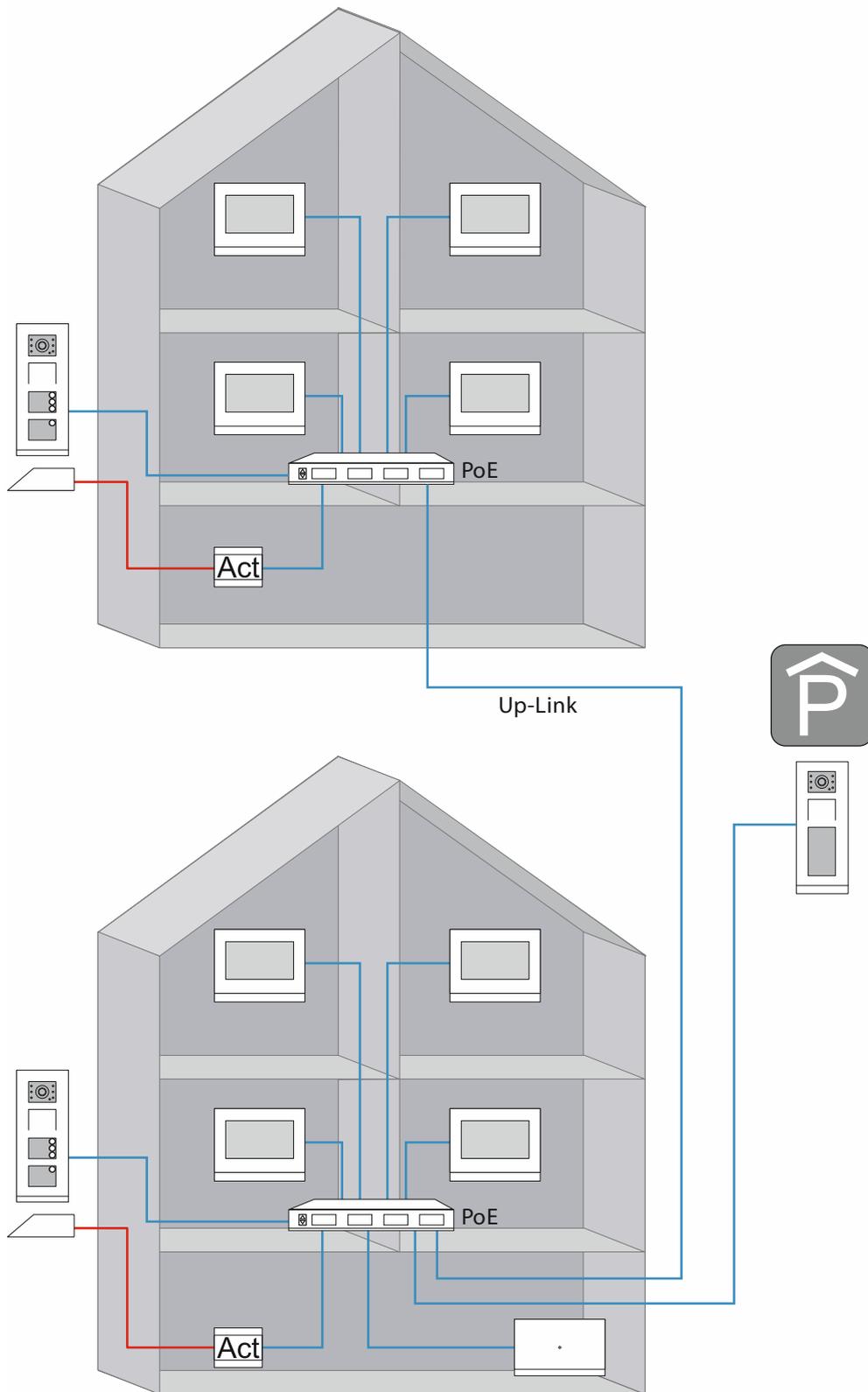
Fig. 172:   Overview: Perimeters
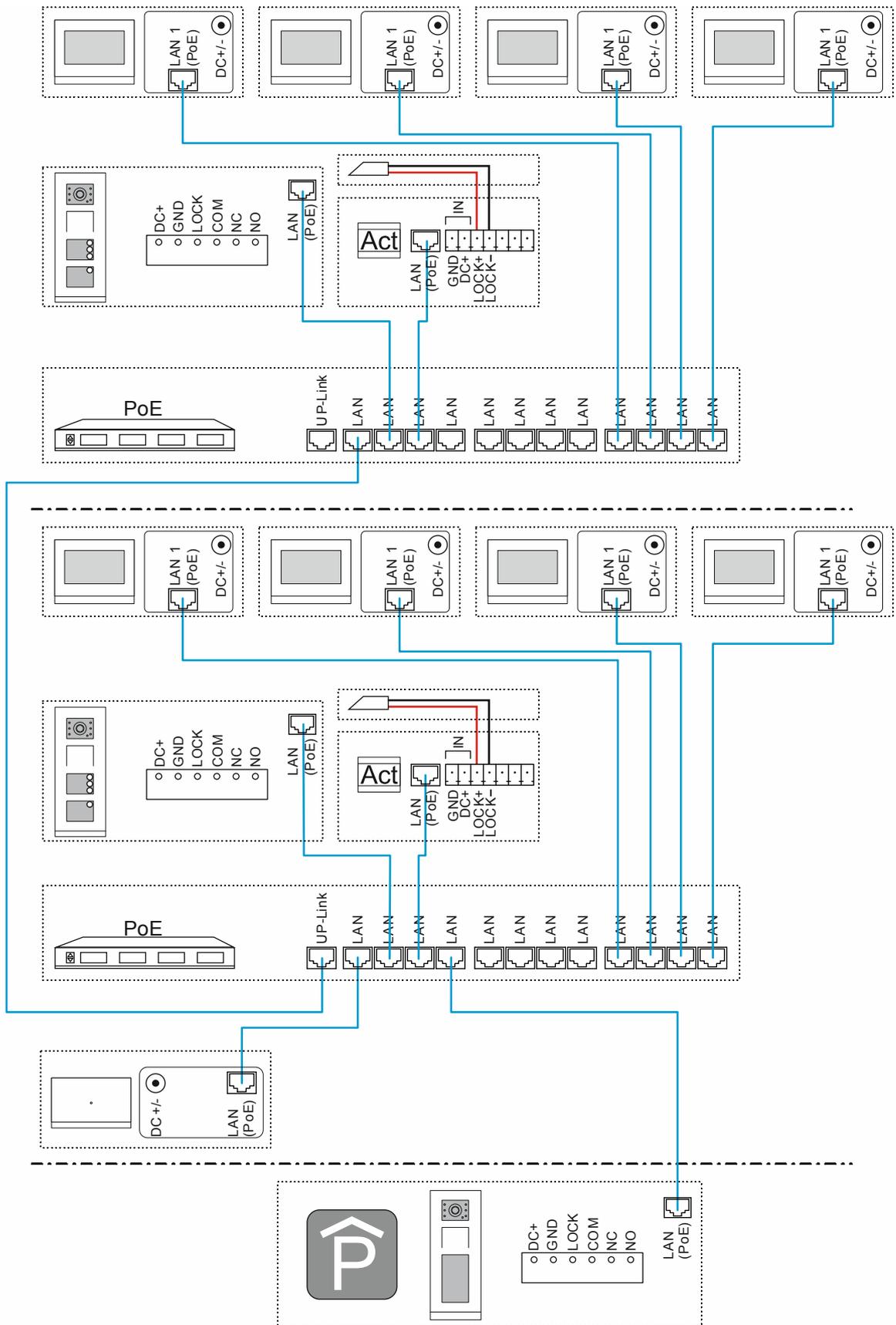
Fig. 173:   Connection: Perimeters

UP-link connection for the cascading (series switching) of switches:

– When the switch has an up-link connection:

Connect the up-link connection with a normal LAN cable with a LAN connection of the next switch.

– When the switch has no up-link connection:

Connect a LAN connection with a crossover cable with a LAN connection of the next switch.

Attention!

Malfunctions

– For building-interlinking cabling, observe the specifications of the structured cabling (glass fibre line), see chapter 1.2 "Fundamentals of structured cabling" on page 7.
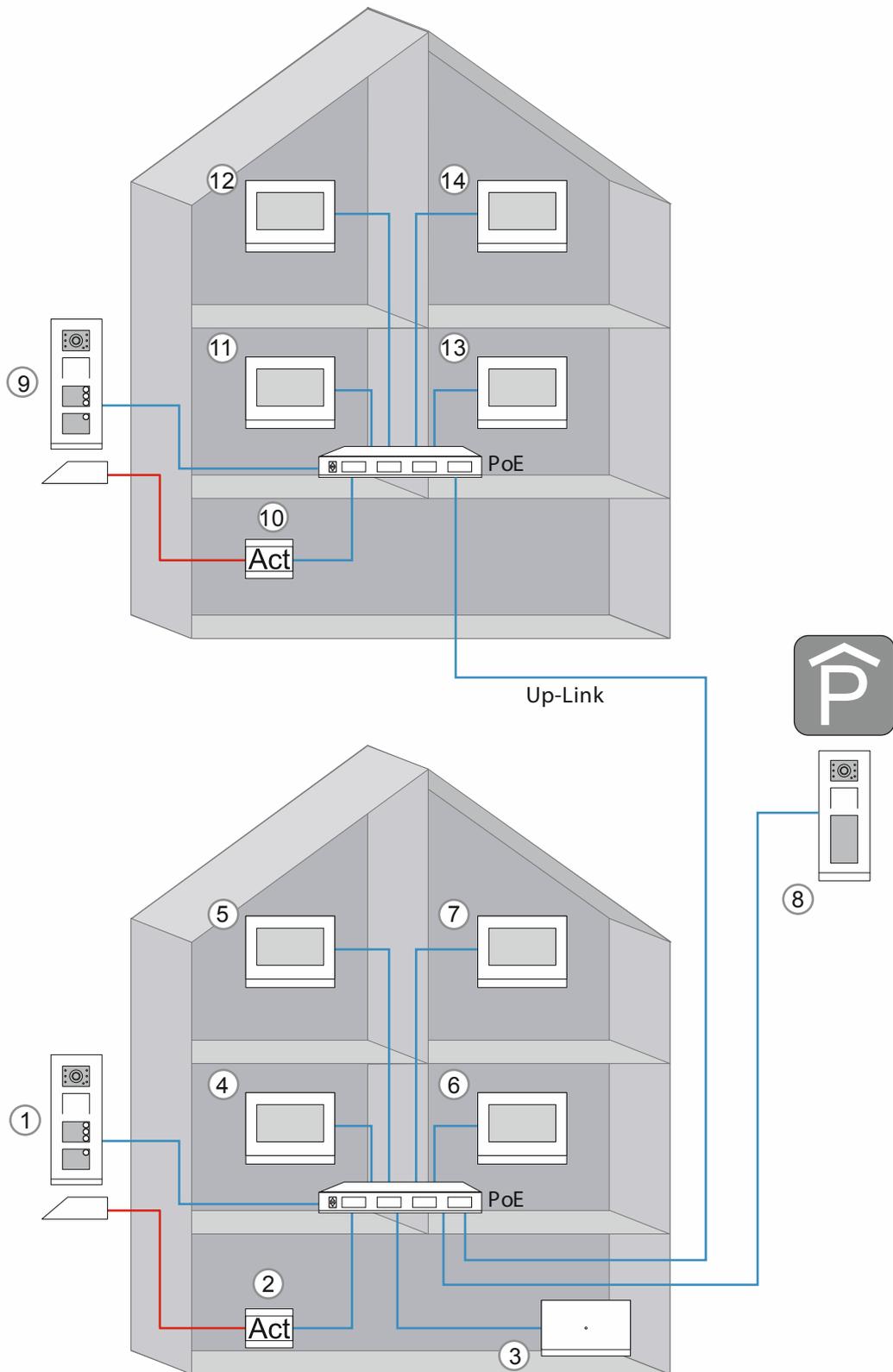
Fig. 174:   Physical addresses: Perimeter

The counting sequence of the physical addresses can be freely selected. However, it should be noted that no physical address can be assigned twice to a device type. This would cause conflict.

	Physical Address				Settings
	Building No.	Floor No.	Units No.	Device ID	Mode / Device type
1	001	—	—	01	Outdoor station / —
2	001	—	—	01	— / Building IP actuator
3	—	—	—	—	Multi-unit house / commercial / —
4	001	02	01	01	Master / —
5	001	03	03	01	Master / —
6	001	02	02	01	Master / —
7	001	03	04	01	Master / —
8	—	—	—	01	Gate station / —
9	002	—	—	01	Outdoor station / —
10	002	—	—	01	— / Building IP actuator
11	002	02	01	01	Master / —
12	002	03	03	01	Master / —
13	002	02	02	01	Master / —
14	002	03	04	01	Master / —

Table 13:Physical addressing: Perimeter

8 Glossary

Cloud memory	The data is stored on an external server. – In the ABB-Welcome IP system on the server of Busch-Jaeger.
DHCP	Dynamic Host Configuration Protocol – In a network, every device requires its own address so as to able to be recognised in the network. These addresses are allocated automatically via the DHCP.
Guard unit	
Gateway	Interface between two systems
Multicast network	The transmitter can simultaneously deliver IP data flows to many recipients in a single step.
Patch field	Connection strip in the data transmission.
Patch cable	Connection cable in the data transmission.
Perimeter	Boundary of an administration unit. – A typical example of such a boundary in ABB-Welcome IP is an underground car park to which several houses belong. There is a central access to the underground car park for all and several independent houses. All of this is part of a central administration.
PoE	Power over Ethernet – With PoE, network cables supply network-capable devices with current via an existing data connection. Only one cable is required for the transmission of the current and data.
PSE	Power Sourcing Equipment – Devices for the infeed of PoE. E.g. PoE switches.
PD	Powered Device – Device that is supplied via PoE.
QoS	Quality of Service – Optimisation of connection through automatic prioritisation of applications.
Routing	A device, a computer for example, can normally communicate only within its own network. To enter a different network, a device is required that transmits and distributes the data packages. This process is called routing. The device that takes over this task is the router.
Slideshow	Picture series or picture collections for which many photos or other graphics are consecutively illustrated.
Twisted pair cable	Data transmission cables in which the wires are twisted in pairs. – Twisted pair wires in comparison to parallel wires offer better protection against electrical and magnetic interference.

Table 14: Glossary

9   Notes

10 Index

ABB

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