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2TMD042400D0002 | 30.05.2024

# System Manual

## ABB-Welcome IP



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# 1 Overview of IP Technology

## 1.1 Cabling and Connection

### 1.1.1 Fundamentals of structured cabling

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 Universal Structured Cabling (UGV) or Universal Communication Cabling (UKV).

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. For example lets the local network and the telephony operate via the same cabling.

Structured cabling includes the following points:

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

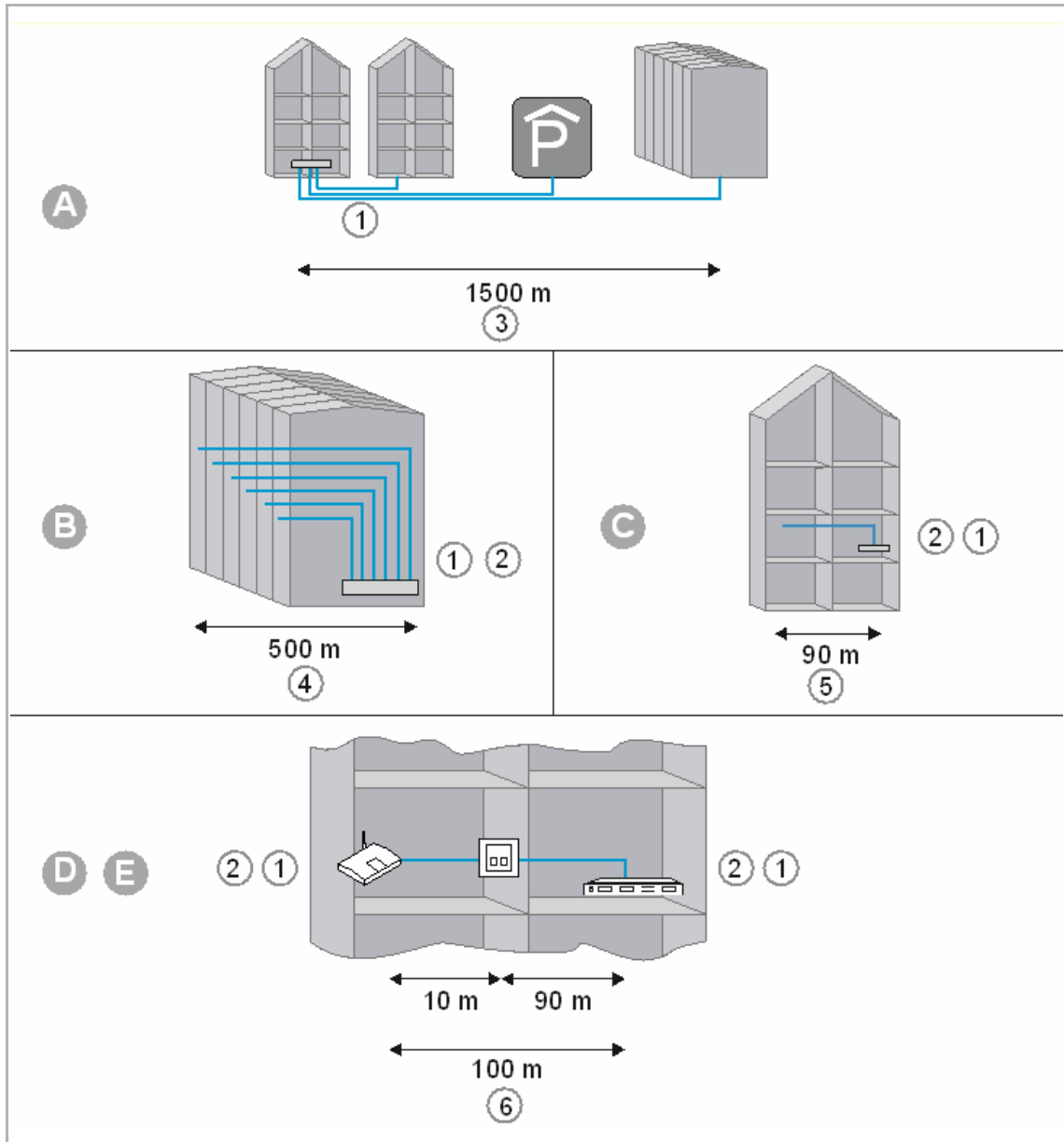
#### Objectives of structured cabling

- 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

ISO/IEC 11801 (2002) and EN 50173-1 (2003)



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

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 have topology and administrative points in common.

Cabling is divided into the following areas:

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

The cabling standards are optimised 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 maybe 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, glass fibre cable (50 µm) with a maximum length of 1,500 m is 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). Glass fibre cables (62.5 µm) are also used as an alternative.

Components of structured cabling:

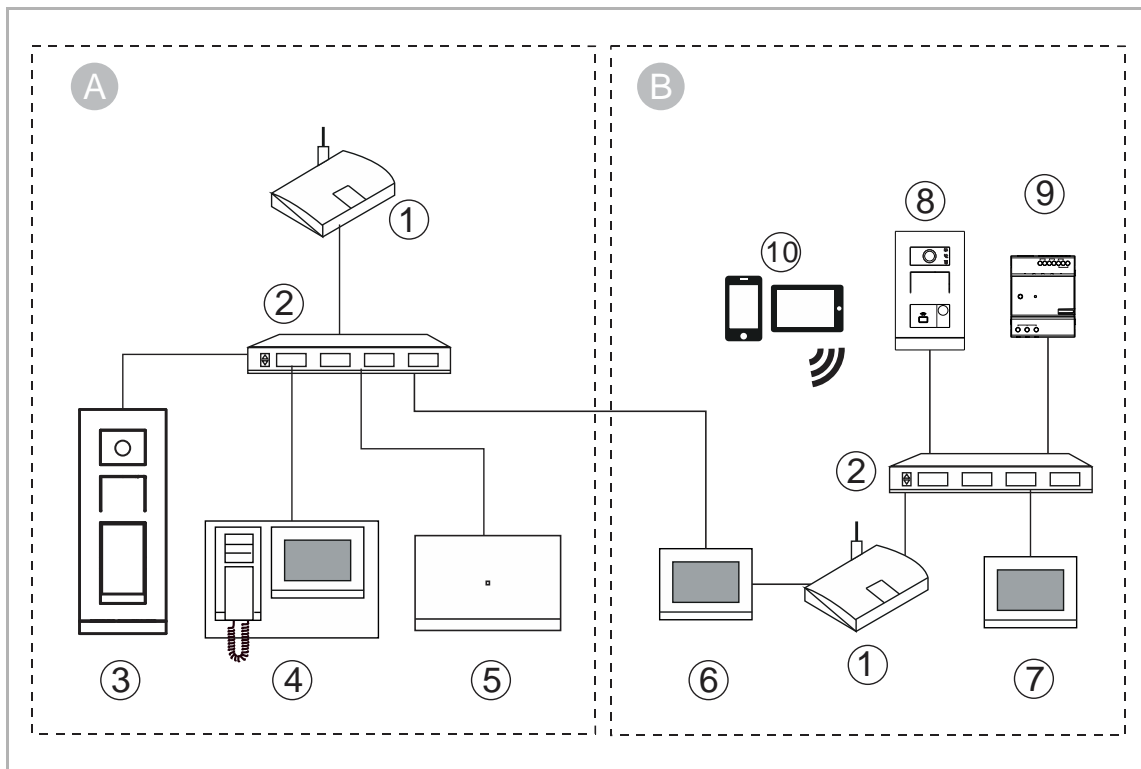
- Patch field (patch panel)
- Patch cable
- Connection sockets
- Network cable
- Distributor cabinets
- Switch, hubs, router

### 1.1.2 Wiring of a Welcome IP system

For a Welcome IP system there is a distinction between a building network and private 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 private network includes all components within a unit (apartment or business unit). A private 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 "Welcome® App".
- Connection of free@home.
- Connection of KNX.
- Outdoor stations that are assigned to only one unit.



A	Building network
B	Private network
1	Router
2	Switch
3	IP Touch 5 Outdoor Station
4	Guard Unit
5	SmartAP
6	Indoor Station (Master)
7	Indoor Station (Subsidiary)
8	IP Pushbutton Outdoor Station/Mini Video Outdoor Station
9	IP Actuator
10	Smartphone / tablet on the private network

### 1.1.3 Ports & services in a Welcome IP system

The following ports & services are used in a 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

## 1.2 Network types

In the Welcome IP System, two separate networks have been identified:

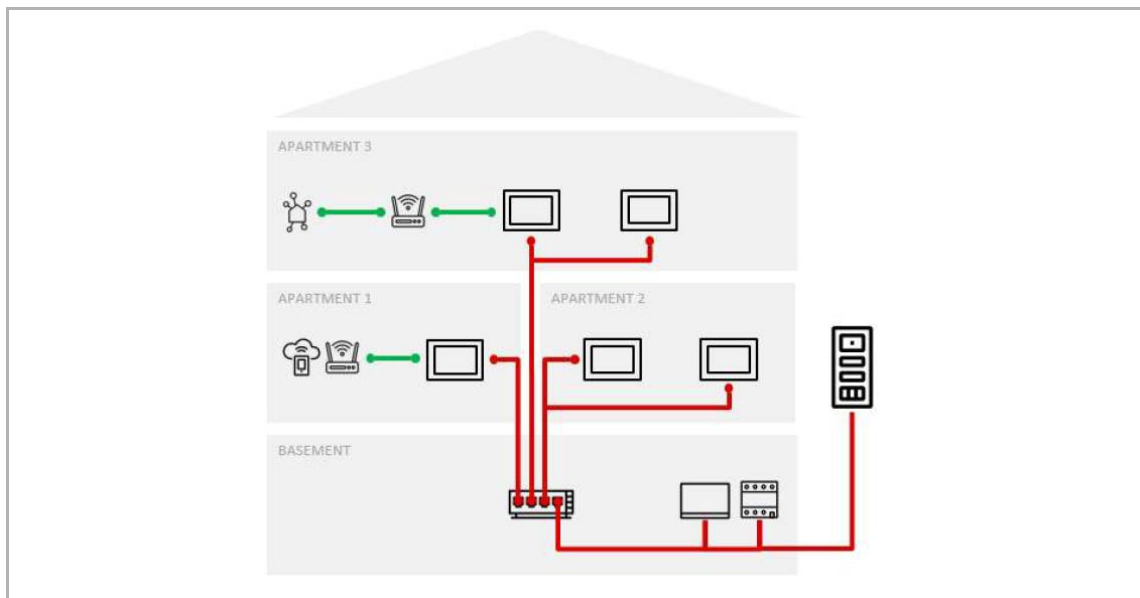
- Building Network
- Private Network

### Building Network

Main connection network for Welcome IP. Always necessary, it will be set-up by the installer and represents the core communication way for the Door Entry system devices.

### Private Network

It may be used in multi-unit installations to enable private connectivity to smart home and single unit internet. It is usually the end final user's responsibility, and it could be set up after the main DES System has been commissioned.



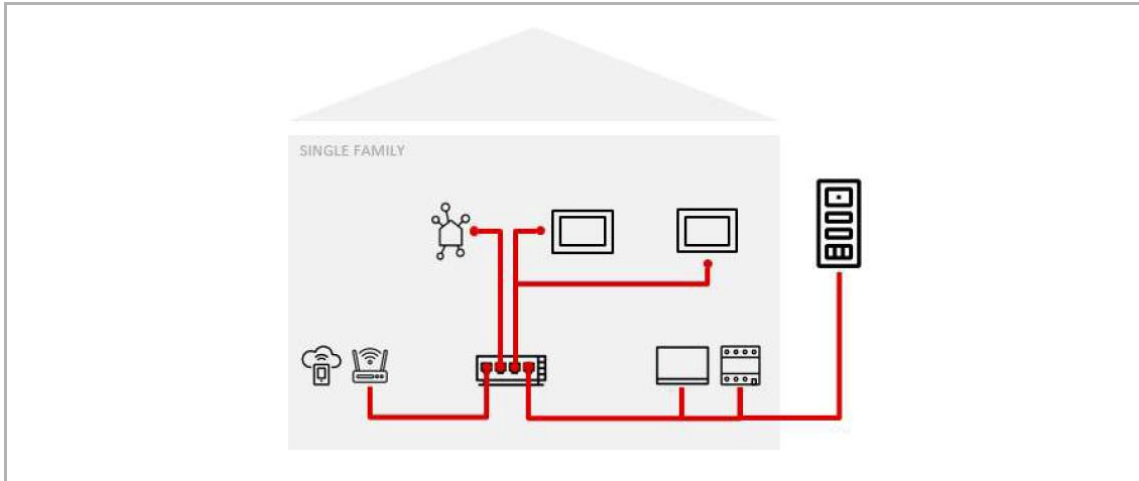
This network differentiation in multi apartment projects, may allow a clear separation between devices belonging to public or private.

- Public devices shared among the tenants of different apartments, (such as main entrance outdoor stations, gate stations, public cameras, elevator controller, guard unit etc.).
- Private devices which are privately managed by the tenants of a single unit (such as private cameras, a second privately confirmed outdoor station, smart home devices, private actuators etc.)

Nevertheless, it is now possible to connect private marked devices directly to the central POE/switch.

The network differentiation is not usually required for Single Family houses, as the entire building is owned and shared, but it is still possible to differentiate if required.

It is still possible to share between Building Network/Private to split the network.



### 1.3 IP Addressing assignment modes

In Welcome IP it is possible to select the preferred IP Addressing Assignment modes:

- Automatic (DHCP) (a router is needed) / Manual Mode (a router is optional)
- ABB Legacy mode (preconditions: standalone Door Entry network /Building Network)

#### 1.3.1 Preconditions

It is required the installation of the following (or later versions) software version:

Device name	Abbreviation	Software version
SmartAP	SmartAP	V6.55
IP Touch 10	IP Touch 10	V2.44
IP Touch 7	IP Touch 7	V2.44
IP Touch Lite 7	IP Touch Lite 7	V1.10
Outdoor Station	OS	V1.53
Guard Unit	GU	V1.54
IP Actuator	IPA	V1.17
IP Elevator Controller	IPEC	V1.15
Audio IP	Audio IP	V1.22
Mini Video Outdoor Station with IC	Mini OS (IC)	V1.13

### 1.3.2 Automatic (DHCP) / Manual Mode:

In the Automatic (DHCP) or Manual Mode, the requirement is a router installed and connected to the POE switch which is necessary for the IP address assignation.

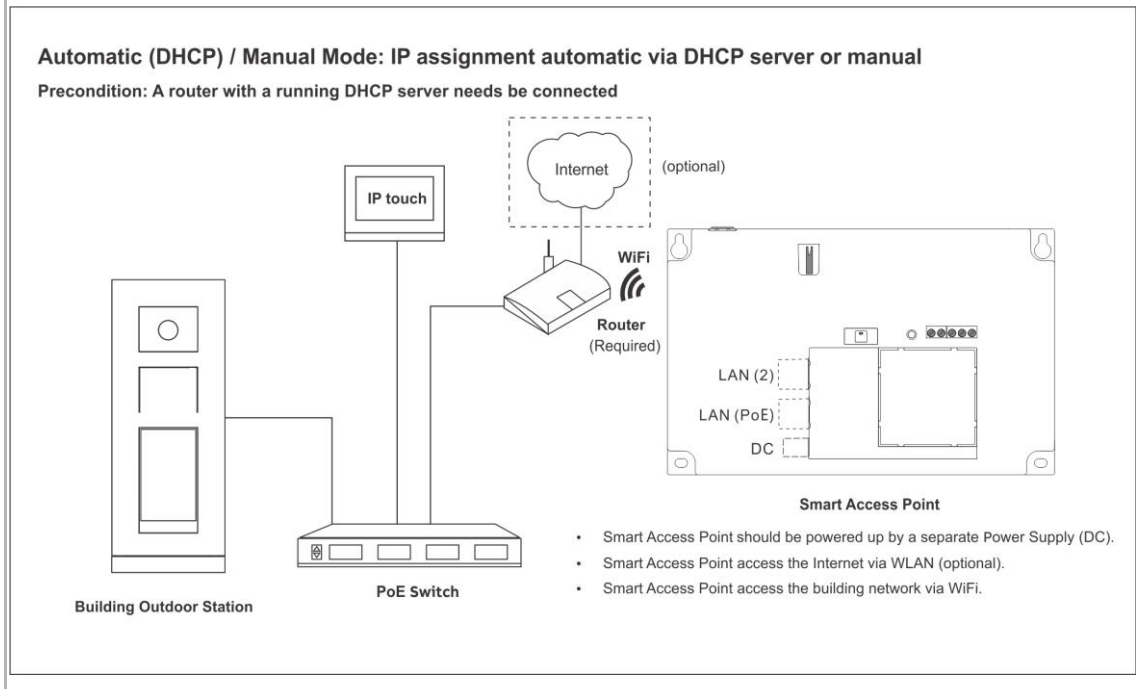
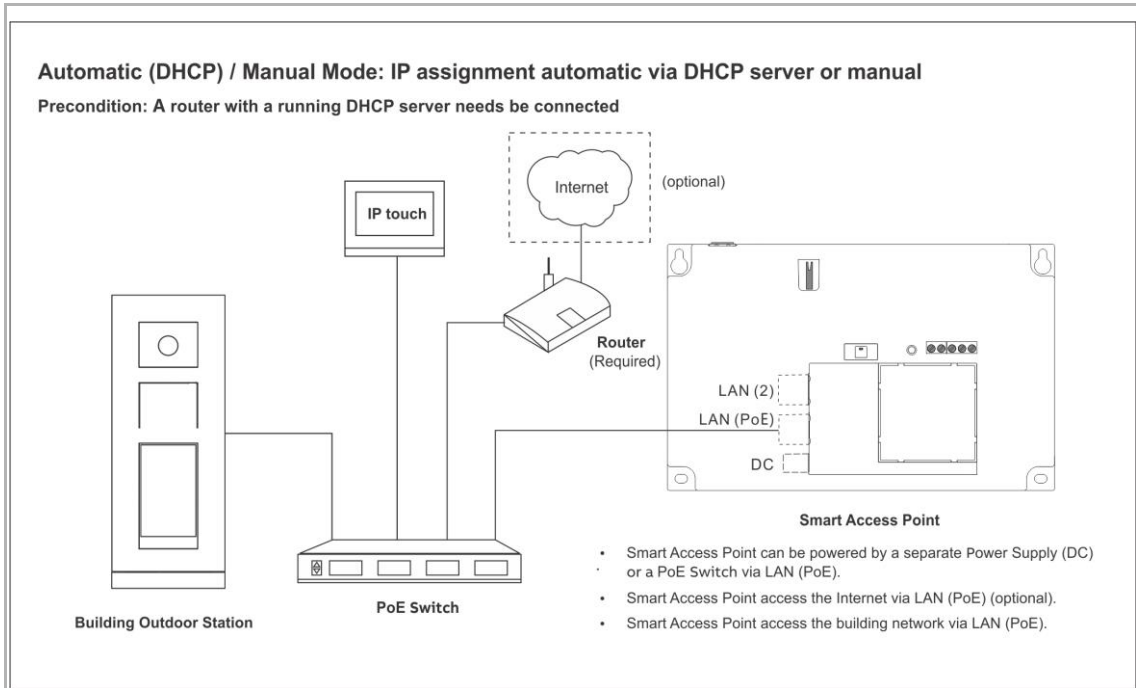
The advantages of this mode are:

- The IP address is randomly generated (in DHCP), or manually selected (manual static mode), allowing a multi-function use of the network (no conflict with CCTV, building home automation or others.)
- Option to connect all DES devices\* to the same PoE switch, with consequent cabling simplification and speed of installation
- Greater flexibility on multi-unit projects

(\* limitations for private used devices per single unit: up to 8 IS, 4 second confirmed OS, 4 IPA)



The router is required to be connected via LAN cable to the main PoE switch of the System Network (diagram 1 below), or via WIFI from the SmartAP (diagram 2 below).



### 1.3.3 ABB Legacy Mode

In the ABB Legacy Mode, there is no need for a router to be installed, as it may be used as optional gateway to connect to internet, but it is not required for the IP Addressing assignation.

The IP Addressing is automatically generated by Welcome IP, based on the physical addressing of the devices.

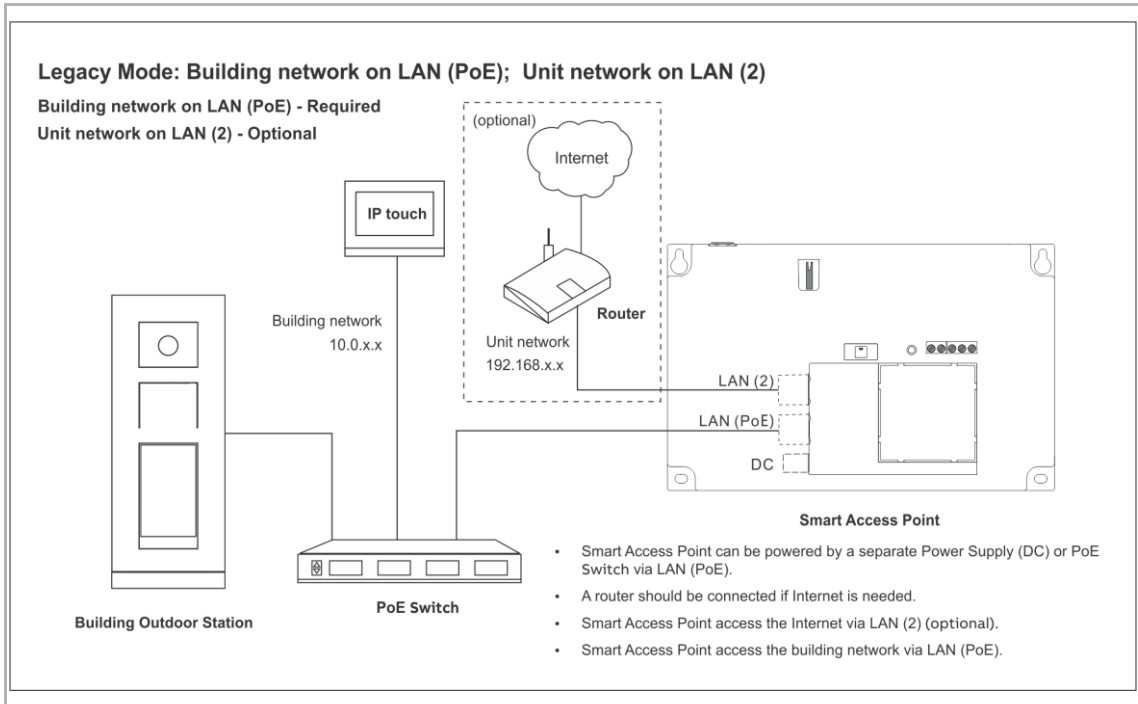
The ABB Legacy Mode requires the separation of the Door Entry Network from other networks that may be used in the project, however, to avoid addressing conflicts.

The advantages of this mode are:

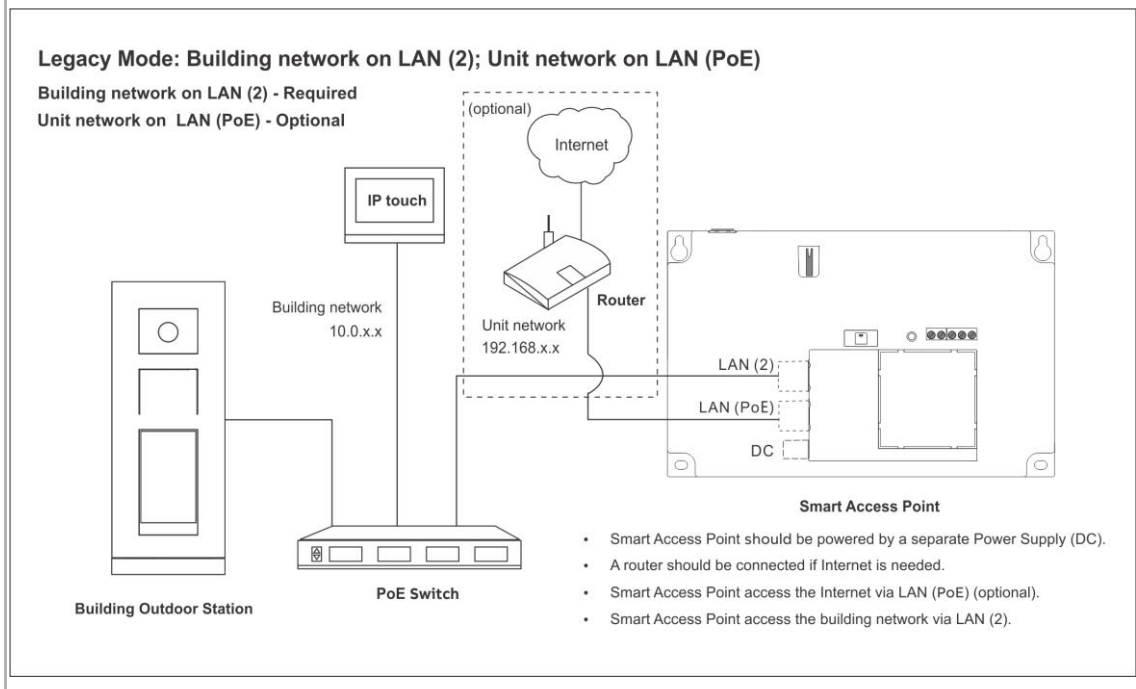
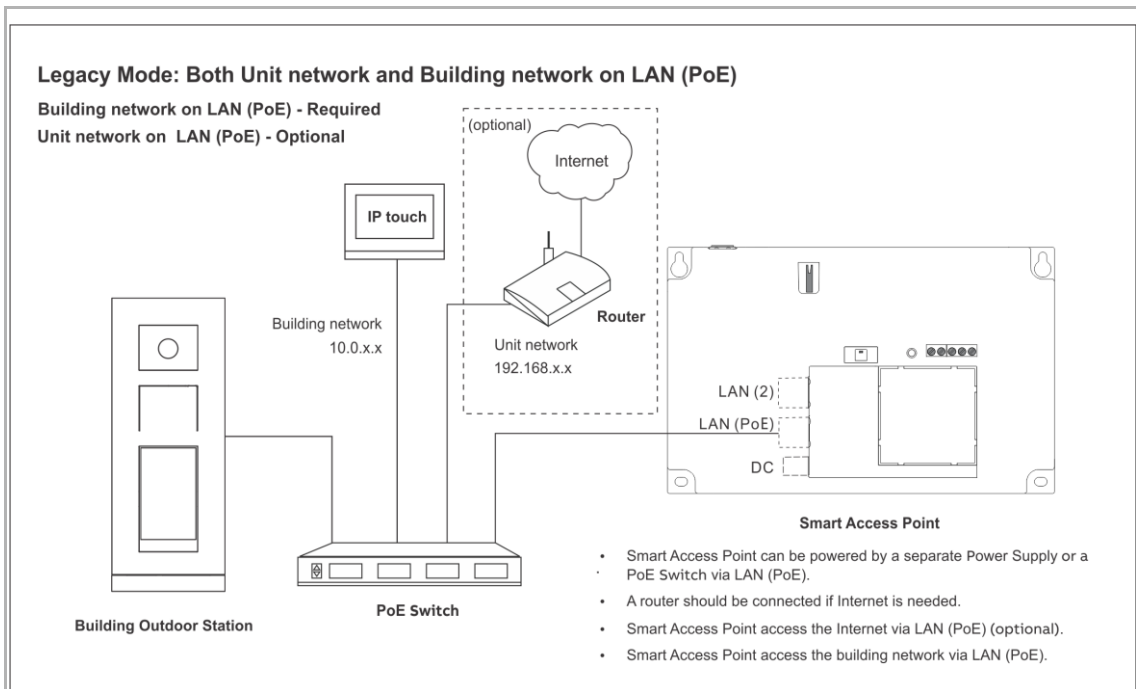
- Simple installation for project with dedicated DES network
- No router requirement
- Option to connect all DES devices\* to the same PoE switch, with consequent cabling simplification and speed of installation.

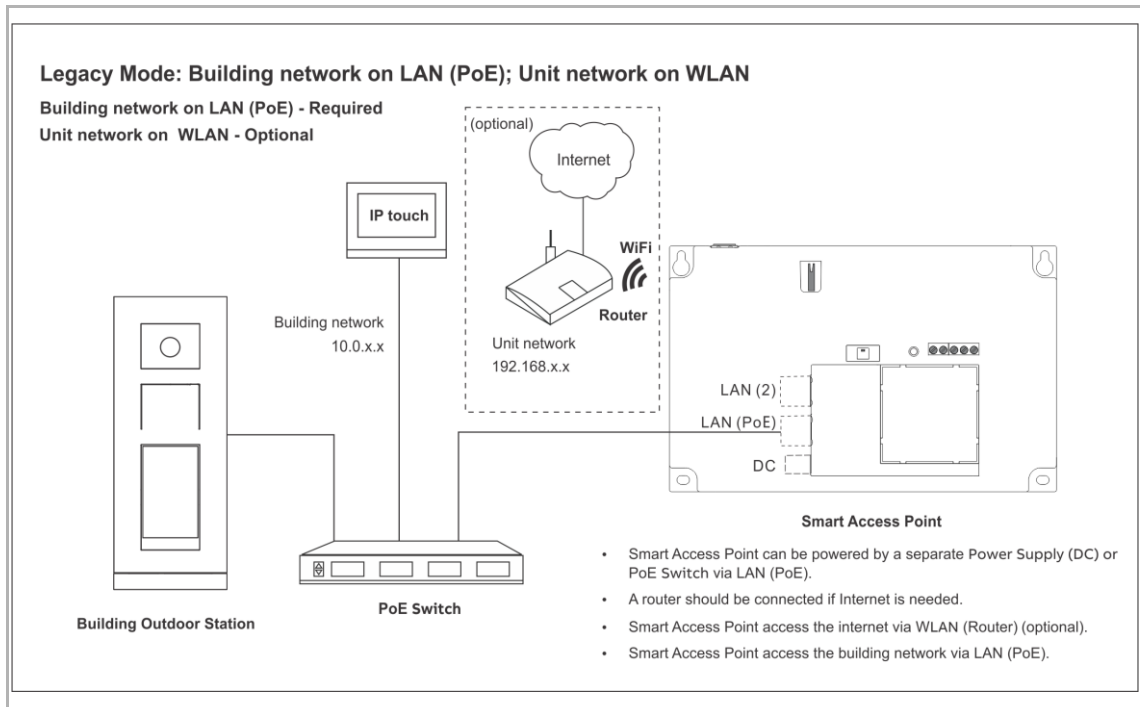
(\* limitations for private used devices per single unit: up to 4 IS, 2 second confirmed OS, 2 IPA)

The recommended set up is to connect the Building Network in the LAN (PoE), while dedicating the Private Network to the LAN (2) port in the SmartAP:



However, it is also possible to connect the router directly to the PoE, or to the LAN (PoE), or to the WiFi of SmartAP:





## 1.4 PoE switch selection

For selecting a PoE switch, please observe the following points:

- All Welcome IP devices meet standard IEEE802.3af
  - 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	Power consumption (W)
Audio IP	•	-	40 mA / 48 VDC	1.9
IP Touch Lite 7 (LAN+WiFi)	•	•	375 mA / 24 VDC	9.0
IP Touch 7 (LAN+WiFi)	•	•	280 mA / 24 VDC	6.72
IP Touch 7 (LAN+LAN)	•	•	440 mA / 24 VDC	10.6
IP Touch 10 (LAN+WiFi)	•	•	440 mA / 24 VDC	10.6
IP Touch 10 (LAN+LAN)	•	•	500 mA / 24 VDC	12.0
Mini Video Outdoor Station	•	•	350 mA / 24 VDC	8.4
IP Touch 5 Outdoor Station	•	•	450 mA / 24 VDC	10.8
IP Pushbutton Outdoor Station	•	•	450 mA / 24 VDC	10.8
IP Keypad Outdoor Station	•	•	500 mA / 24 VDC	12.0
SmartAP	•	•	375 mA / 24 VDC	9.0
Guard unit	•	•	260 mA / 24 VDC	6.2
IP Actuator	•	•	350 mA / 24 VDC	8.4
P Elevator Controller	•	•	60 mA / 24 VDC	1.4
Lift control relay module	-	•	250 mA / 24 VDC	6.0

**Example for the selection of a PoE switch**

Count	Device	Power consumption (W)
3	IP Touch 7 Lite (LAN+WiFi)	3*9,0=27.0
1	IP Touch 5 Outdoor Station	10.8
1	IP Actuator	8.4
	Total output	46.2

Result	
Number of occupied ports:	5
Necessary total output:	46.2

**Recommendation:**

For the calculation of a reserve for the future, a PoE switch with 8 ports and a total output of 70 W is recommended for this example.

The individual consumption per port should not exceed the maximum total consumption of the entire PoE switch.

\*

## 2 Overview of product range

### 2.1 Outdoor Stations

#### 2.1.1 Overview

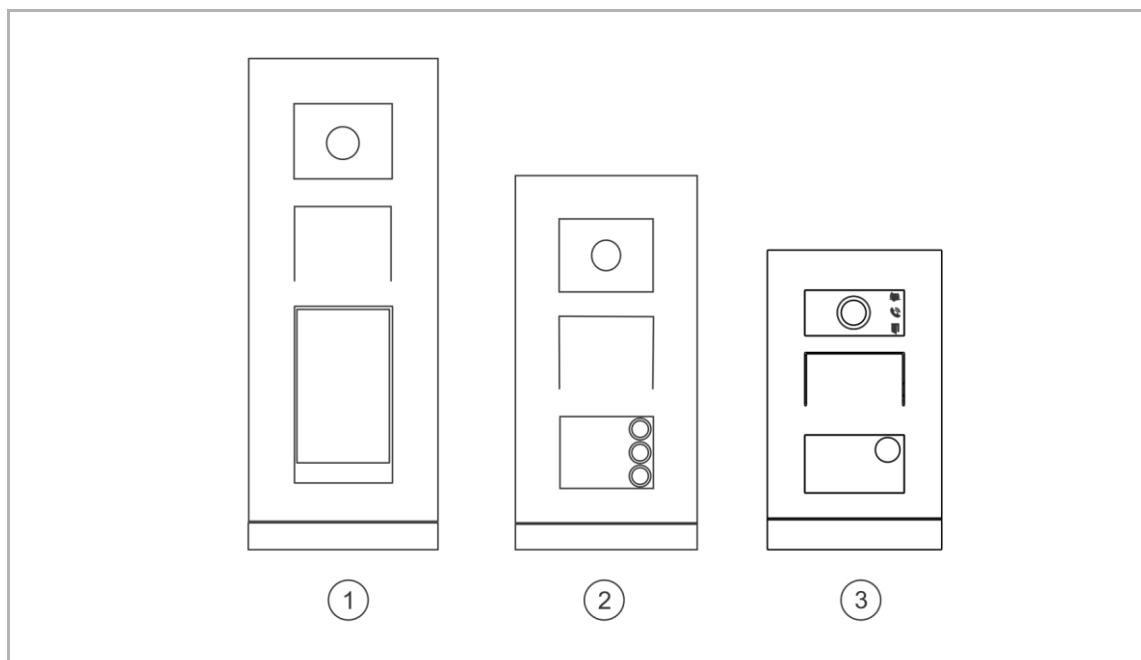
Welcome IP Outdoor Stations are installed in the outdoor areas as follow:

- 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, and aluminium.



No.	Article number	Product name	Abbreviation
1	H8138.T.-.	IP Touch 5 Outdoor Station	IP Touch 5 OS
2	H81381P.-.	IP Pushbutton Outdoor Station	IP Pushbutton OS
3	H8131.P.-./ H8136.P.-.	Mini Video Outdoor Station	Mini OS

\*\*"Outdoor Station" is usually abbreviated to "OS".



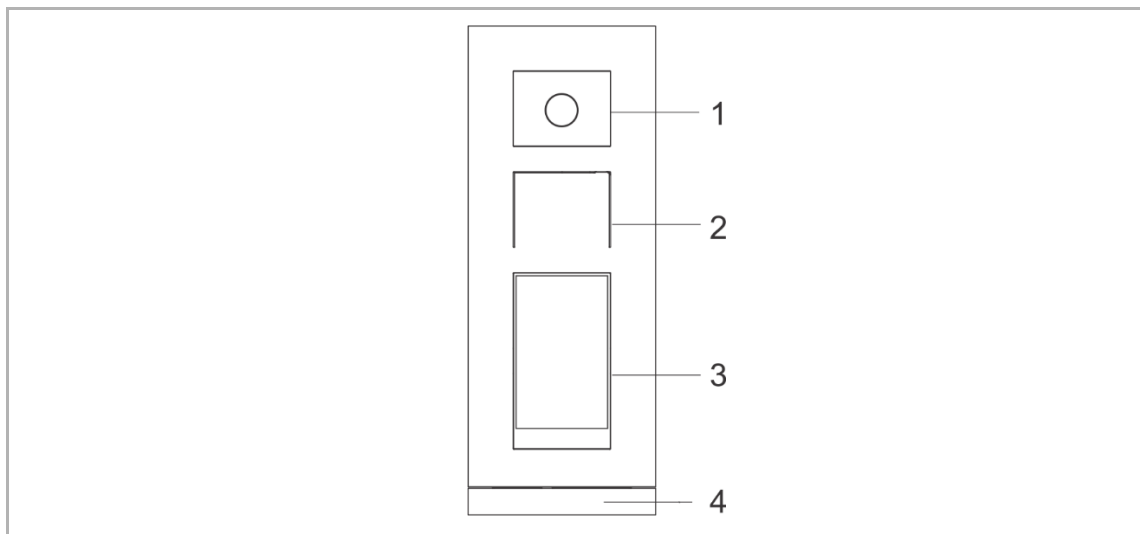
Type	IP Touch 5 OS	IP Pushbutton OS	Mini OS - IC
Video image	720P	720P	VGA
Camera angle diagonal / horizontal / vertical	139° / 111° / 73°	139° / 111° / 73°	139° / 111° / 73°
Anti-mist camera	•	•	•
Automatic day/night switchover	•	•	•
Integrated status display via LED symbols (complies with DIN 18040).	•	•	•
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	•	-	-
Support of lift control	•	•	-
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 power supply	•	•	•
Surface-mounted installation	•	•	•
Flush-mounted installation	•	•	•
Cavity wall installation	•	•	•
Protection rating	IP 54	IP 54	IP 54
Safe against vandalism	IK 07	IK 07	IK 07
Remote firmware update	•	•	•

### 2.1.2 IP Touch 5 OS

#### Device type

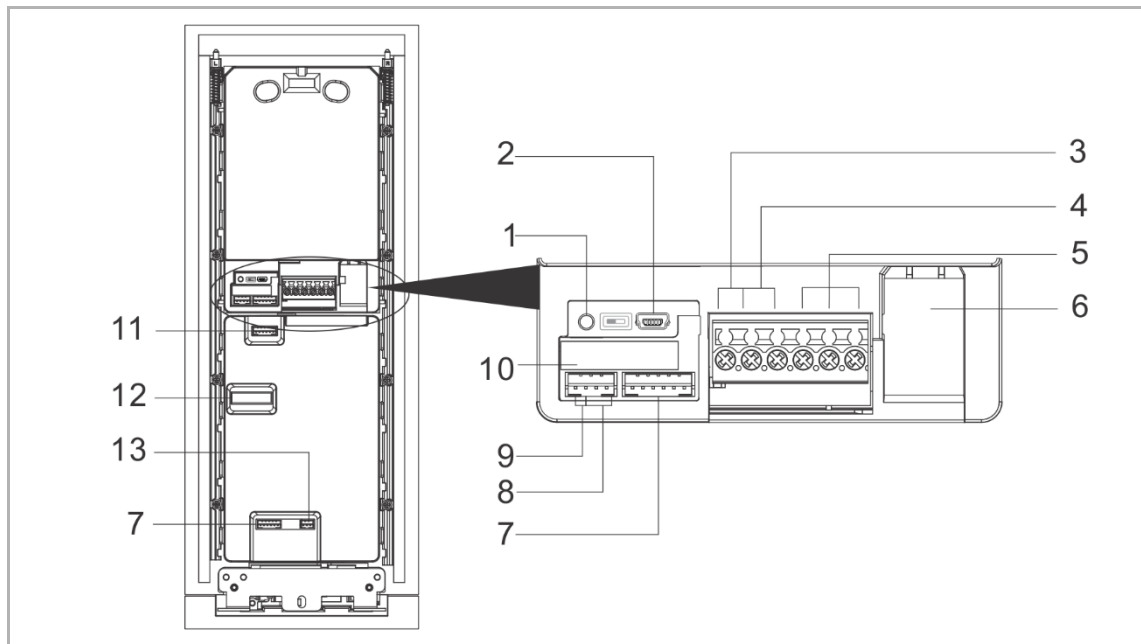
Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
H81381T-S	2TMA130010X0009	IP Touch 5 Outdoor Station	Stainless steel	135 x 349 x 29
H81381T-W	2TMA130010W0013	IP Touch 5 Outdoor Station	White	135 x 349 x 29

#### Control elements



No.	Description
1	Camera
2	Speaker and microphone integration
3	5-inch touch display
4	End strip

**Terminal description**



No.	Description
1	Reset button
2	Micro USB update connector
3	Plug-in clamps (DC+...GND) for standalone power supply
4	Plug-in clamps (LOCK...GND) for door opener
5	Plug-in clamps (COM...NC...NO) for floating output, door opener
6	LAN (PoE)
7	Connector for next module
8	Connector for exit button
9	Connector for the sensor used for door status detection
10	Connector for 5" display module
11	Connector for previous module
12	Connector for A/V module
13	Connector for Wiegand output It supports 26 bits and 34 bits

**Technical data**

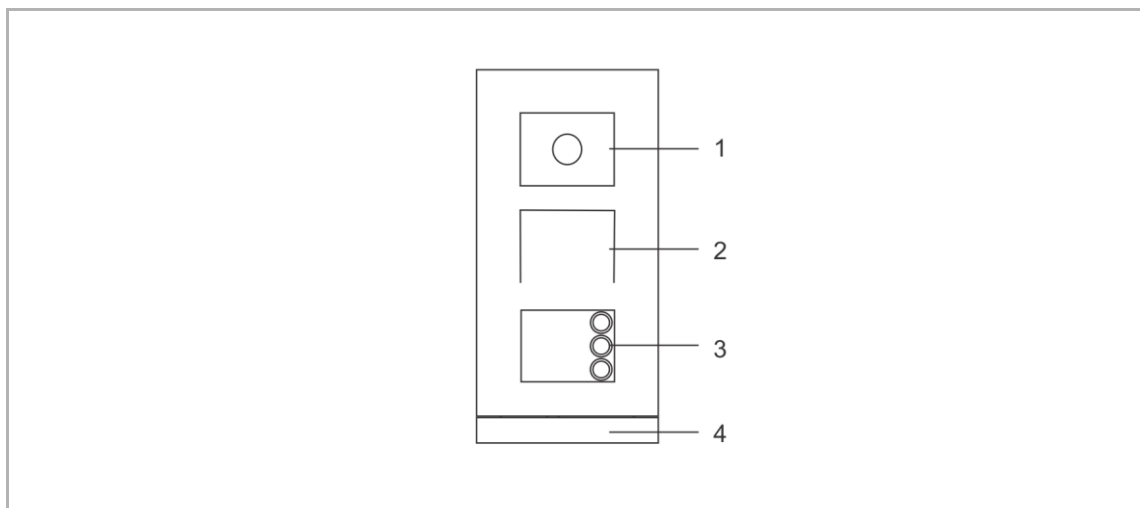
<b>Designation</b>	<b>Value</b>
Rating voltage	24 V =
Operating voltage range	20-27 V =
Rating current	27 V =, 410 mA 24 V =, 450 mA
Operating temperature	-20 °C...+55 °C
Camera type	CMOS
Camera viewing angle	130°
Resolution ratio	HD (1280 x 720 pixel)
Ambient brightness	<50000 Lux
Power supply for door opener	18 V, 4 A impulse, max. 250 mA holding
Floating output for door opener	230 V ~, 3 A 30 V =, 3 A
Video codec	H.264
Audio codec	G.711
IP level	IP 54
IK level	IK 07

### 2.1.3 IP Pushbutton OS

#### Device type

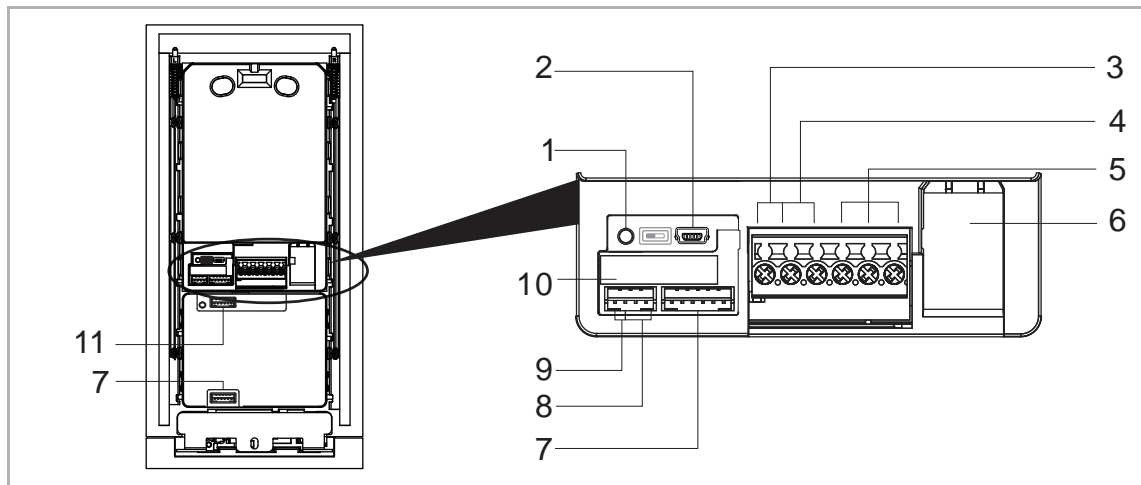
Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
H81381P1-S	2TMA130010X0001	OS, IPpush, 1 gang	Stainless steel	135 x 277 x 29
H81381P2-S	2TMA130010X0002	OS, IPpush, 2 gang	Stainless steel	135 x 277 x 29
H81381P3-S	2TMA130010X0003	OS, IPpush, 3 gang	Stainless steel	135 x 277 x 29
H81381P1-W	2TMA130010W0021	OS, IPpush, 1 gang	White	135 x 277 x 29
H81381P2-W	2TMA130010W0025	OS, IPpush, 2 gang	White	135 x 277 x 29
H81381P3-W	2TMA130010W0029	OS, IPpush, 3 gang	White	135 x 277 x 29

#### Control elements



No.	Description
1	Camera
2	Speaker and microphone integration
3	Round pushbutton
4	End strip

**Terminal description**



No.	Description
1	Reset button
2	Micro USB update connector
3	Plug-in clamps (DC+...GND) for standalone power supply
4	Plug-in clamps (LOCK...GND) for door opener
5	Plug-in clamps (COM...NC...NO) for floating output, door opener
6	LAN (PoE)
7	Connector for next module
8	Connector for exit button
9	Connector for the sensor used for door status detection
10	Connector for 5" display module
11	Connector for previous module

**Technical data**

<b>Designation</b>	<b>Value</b>
Rating voltage	24 V DC
Operating voltage range	20-27 V DC
Rating current	27 V DC, 300 mA 24 V DC, 330 mA
Operating temperature	-40 °C...+55 °C
Product dimensions	135mm x 276.9 mm x 17.6 mm
Camera type	CMOS
Camera viewing angle	130°
Resolution ratio	HD (1280 x 720 pixel)
Power supply for door opener	18 V, 4 A impulse, max. 250 mA holding
Floating output for door opener	230 V AC, 3 A 30 V DC, 3 A
Video codec	H.264
Audio codec	G.711
IP level	IP 54
IK level	IK 07

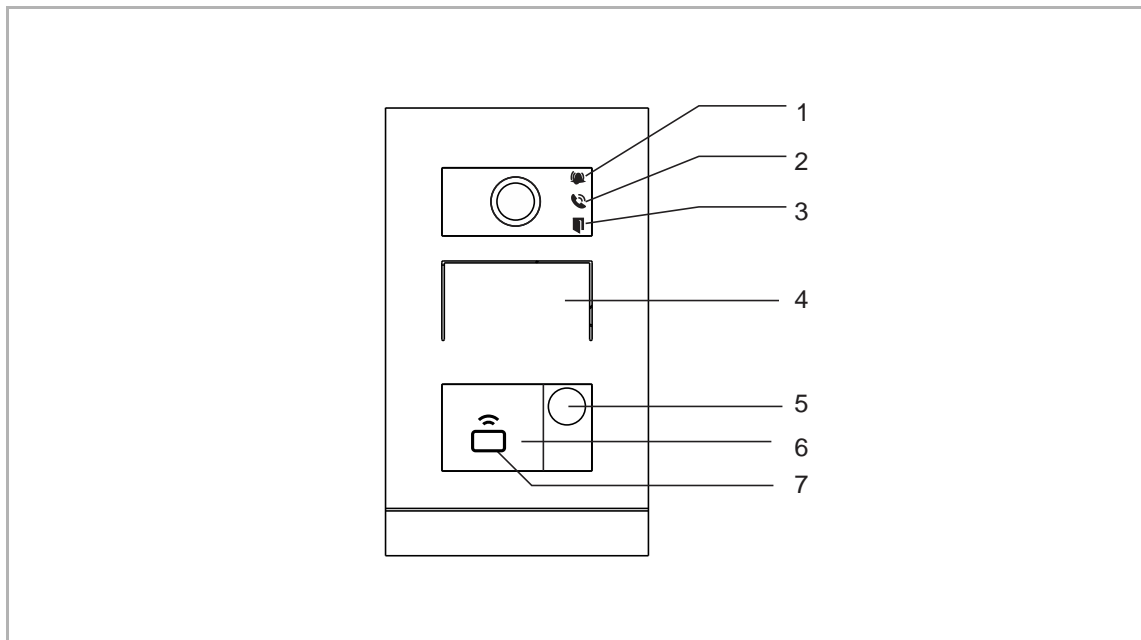
**2.1.4 Mini OS**

**Device type**

<b>Article number</b>	<b>Product ID</b>	<b>Product name</b>	<b>Colour</b>	<b>Size (WxHxD) Unit: mm</b>
H81313P1-A	2TMA130010A0001	Mini video outdoor station, 1 gang, ID, SM	Aluminium alloy	99 x 168 x 26
H81313P2-A	2TMA130010A0004	Mini video outdoor station, 2 gang, ID, SM	Aluminium alloy	99 x 168 x 26
H81363P1-A	2TMA130010A0007	Mini video outdoor station, 1 gang, ID,FM	Aluminium alloy	105 x 180 x 43
H81363P2-A	2TMA130010A0010	Mini video outdoor station, 2 gang, ID, FM	Aluminium alloy	105 x 180 x 43
H81364P1-A	2TMA130010A0013	Mini video outdoor station, 1 gang, FM	Aluminium alloy	99 x 168 x 26
H81316P1-A	2TMA130011A0003	Mini video outdoor station, 1 gang, IC/DESFire, SM	Aluminium alloy	99 x 168 x 26
H81316P2-A	2TMA130011A0004	Mini video outdoor station, 2 gang, IC/DESFire, SM	Aluminium alloy	105 x 180 x 43
H81366P1-A	2TMA130011A0005	Mini video outdoor station, 1 gang, IC/DESFire, FM	Aluminium alloy	105 x 180 x 43
H81366P2-A	2TMA130011A0006	Mini video outdoor station, 2 gang, IC/DESFire, FM	Aluminium alloy	105 x 180 x 43

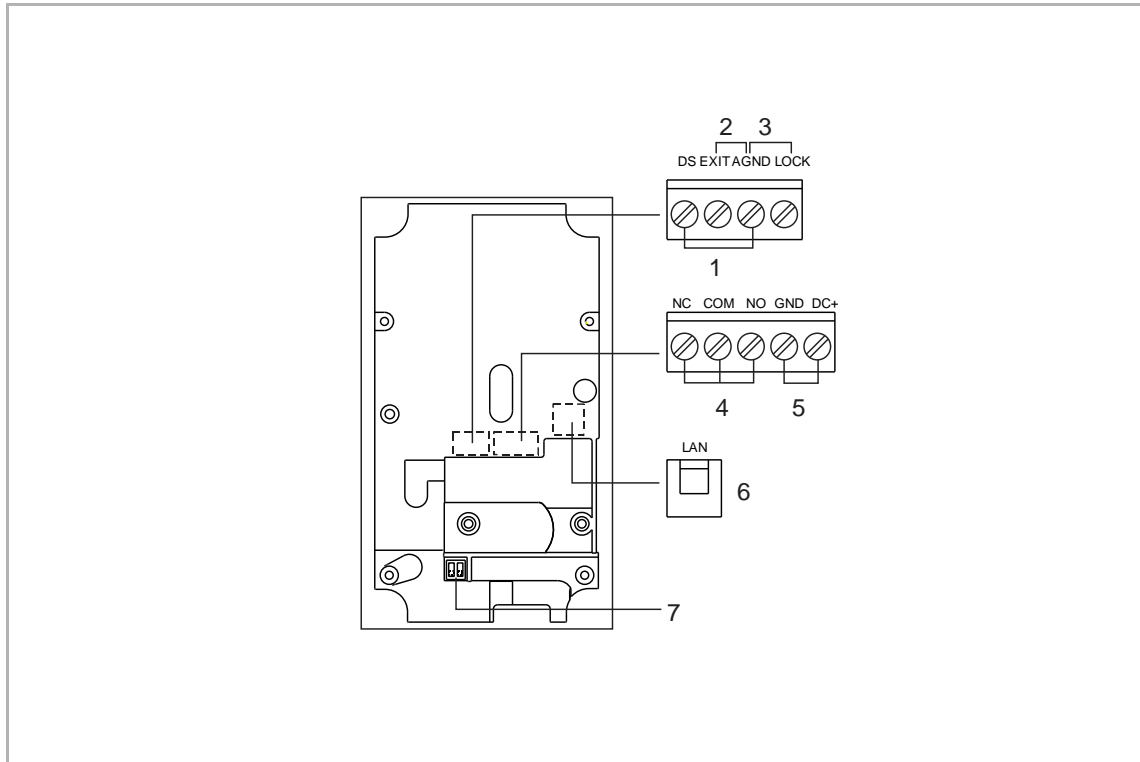


**Control elements**



No.	Description
1	<b>Ring indicator</b> Indicator flashes slowly: ringing Indicator flashes quickly: busy line
2	Call indicator
3	Unlock indicator
4	Speaker and microphone integration
5	Call button
6	Label field
7	Integrated ID card reader

**Terminal description**



No.	Description
1	Connector for the sensor used for door status detection
2	Connector for exit button
3	Plug-in clamps (LOCK...AGND) for door opener
4	Plug-in clamps (COM...NC...NO) for floating output
5	Plug-in clamps (DC+...GND) for standalone power supply
6	LAN (PoE)
7	N/A

**Technical data**

<b>Designation</b>	<b>Value</b>
Rating voltage	24 V =
Operating voltage range	20-27 V =
Rating current	27 V =, 310 mA 24 V =, 350 mA
Operating temperature	-40 °C...+55 °C
Product dimensions	99 mm x 168 mm x 26 mm (H8131.P.-.) 105 mm x 180 mm x 43 mm (H8136.P.-.)
Camera type	CMOS
Camera viewing angle	104°
Power supply for door opener	15 V =, 4A impulse, max. 250 mA holding
Floating output for door opener	30 V =, 3 A
IP level	IP 54
IK level	IK 07
Network connection standard	IEEE802.3, 10/100 Mbps, auto MDI/MDI-X

**2.2 Indoor Stations**

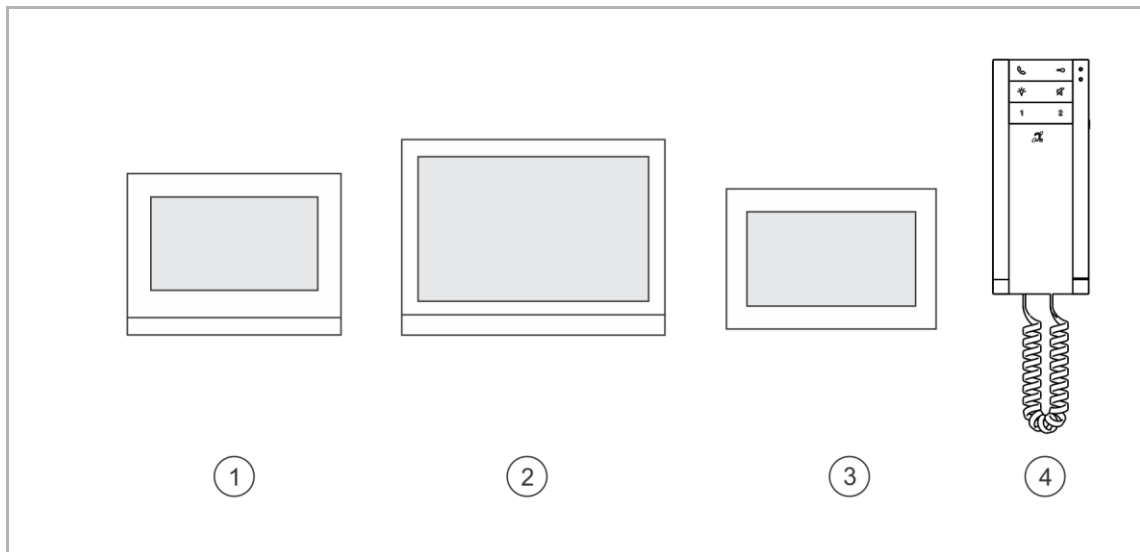
**2.2.1 Overview**

The door call is signalled on the Indoor Station. 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 on the Indoor Station.

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.



No.	Article number	Product name	Abbreviation
1	H8236-	IP Touch 7	IP Touch 7
2	H8237-	IP Touch 10	IP Touch 10
3	H8249	IP Touch Lite 7	IP Touch Lite 7
4	H82001-W	Audio IP	Audio IP

\*"Indoor Station" is usually abbreviated to "IS"

## Overview of product range

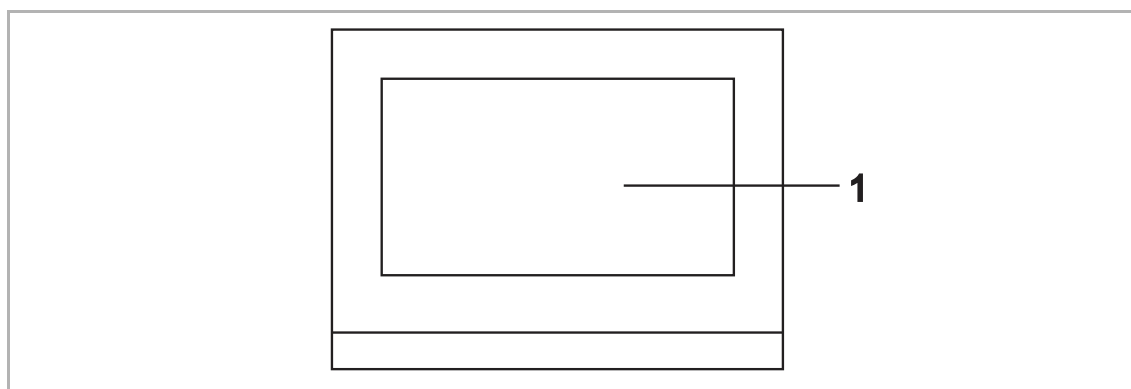
Type	IP Touch 7	IP Touch 10	IP Touch Lite 7	Audio IP
Touchscreen	•	•	•	-
Extension on app without additional system equipment (prerequisite is an Internet connection)	•	•	•	-
Central operating field for DES, CCTV, AC and home automation (KNX & F@H)	•	•	-	-
Video doorbell via IP camera	•	•	•	-
LAN interface	•	•	•	•
Wi-Fi interface	•	•	•	-
Remote firmware update	•	•	•	•
Power supply via PoE (802.3af)	•	•	•	•
Local power supply	•	•	•	•
Surface-mounted installation	•	•	•	•
Flush-mounted installation	•	•	•	-
Cavity wall installation	•	•	•	-
Desktop installation	•	•	•	-
Call lists	•	•	•	-
Send an emergency call (SOS)	•	•	•	•
Support for surveillance of outdoor stations or IP cameras.	•	•	•	-
Support induction loop	•	•	-	-
Leave an audio message	•	•	-	-
Blacklist	•	•	-	-

## 2.2.2 IP Touch 7

### Device type

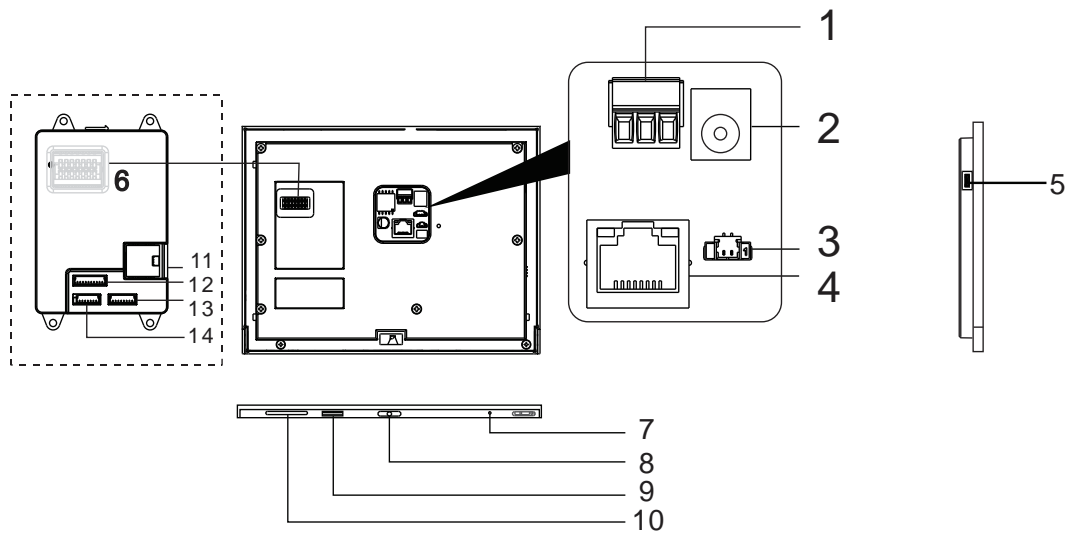
Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
H8236-4B	2TMA130050B0065	IP Touch 7, DES+KNX+f@h+APP, LAN+WiFi, T-loop	Black	199 x 150 x 17
H8236-4W	2TMA130050W0065	IP Touch 7, DES+KNX+f@h+APP, LAN+WiFi, T-loop	White	199 x 150 x 17
H8236-5B	2TMA130050B0067	IP Touch 7, DES+KNX+f@h+APP, LAN+LAN, T-loop	Black	199 x 150 x 31
H8236-5W	2TMA130050W0067	IP Touch 7, DES+KNX+f@h+APP, LAN+LAN, T-loop	White	199 x 150 x 31

### Control elements



No.	Description
1	Touch screen

**Terminal description**



No.	Description
1	Power input connector
2	Power input connector (DC-JACK input)
3	Doorbell connector
4	LAN1 (PoE)
5	Micro USB Upgrade connector
6	Extension module connector
7	Microphone
8	Dismantling switch
9	Micro SD card connector
10	Speaker
11	<sup>2</sup> LAN2
12	<sup>2</sup> Alarm connector
13	<sup>2</sup> RS485 connector, 12 V output, emergency port (SOS, GAS, fire)
14	<sup>2</sup> Relay output

<sup>2</sup> IP touch 7 (LAN+LAN)

**Technical data**

Designation	Value
Rating voltage	24 V =
Operating voltage range	20-27 V =
<sup>1</sup> Rating current	27 V =, 250 mA 24 V =, 280 mA
<sup>2</sup> Rating current	27 V =, 390 mA 24 V =, 440 mA
Display size	7"
Resolution	1024 x 600 px
Operating temperature	-10 °C ... +55 °C
PoE standard	IEEE802.3 af
<sup>2</sup> Alarm power output	12 V =, 200 mA
<sup>2</sup> Relay output	30 V =, 1 A
<sup>1</sup> Wireless transmission band	802.11b/g/n: 2412...2462MHz (for United States) 2412...2472MHz (for European countries) 802.11a/n: 5150...5250MHz 5250...5350MHz 5470...5725MHz (not used in Russia) 5725...5850MHz (for United States)
<sup>1</sup> Wireless transmission power	Max. 20 dBm@12 Mbps OFDM 2.4 G Max. 20 dBm@12 Mbps OFDM 5.8 G
<sup>1</sup> Wireless transmission standard	IEEE 802.11 a/b/g/n

<sup>1</sup> IP touch 7 (LAN+WiFi)    <sup>2</sup> IP touch 7 (LAN+LAN)

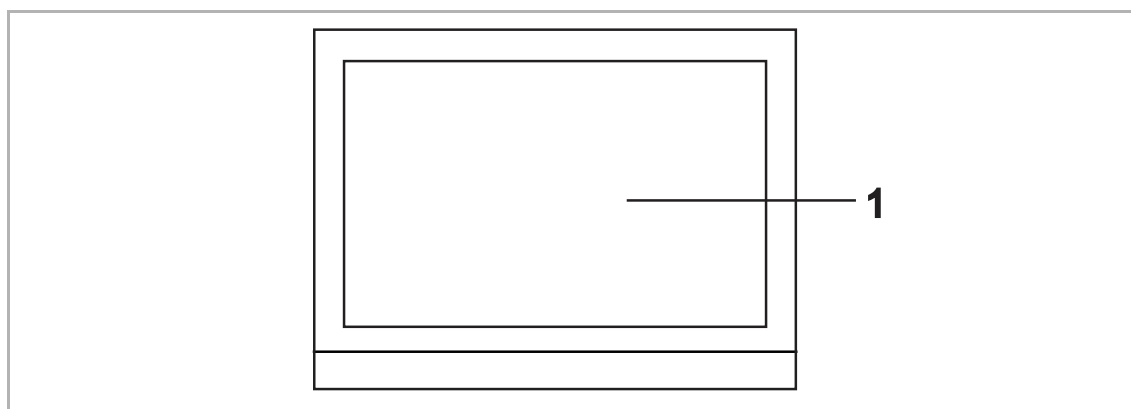


### 2.2.3 IP Touch 10

#### Device type

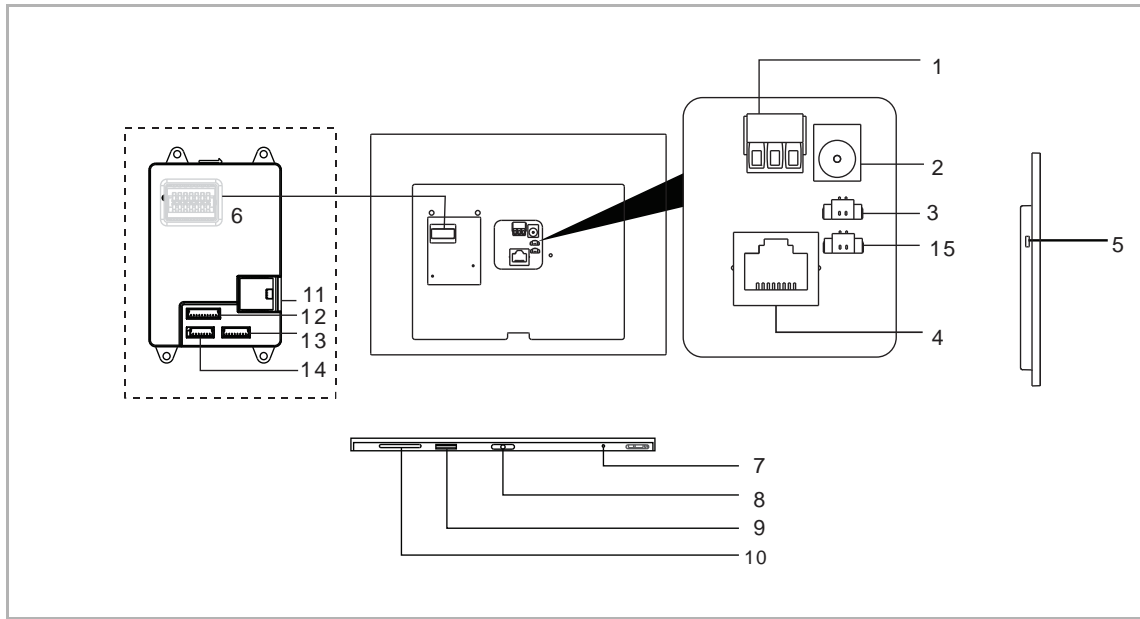
Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
H8237-4B	2TMA130050B0054	IP Touch 10, DES+KNX+f@h+APP, LAN+WiFi, T-loop	Black	251 x 185 x 17
H8237-4W	2TMA130050W0054	IP Touch 10, DES+KNX+f@h+APP, LAN+WiFi, T-loop	White	251 x 185 x 17
H8237-5B	2TMA130050B0055	IP Touch 10, DES+KNX+f@h+APP, LAN+LAN, T-loop	Black	251 x 185 x 31
H8237-5W	2TMA130050W0055	IP Touch 10, DES+KNX+f@h+APP, LAN+LAN, T-loop	White	251 x 185 x 31

#### Control elements



No.	Description
1	Touch screen

**Terminal description**



No.	Description
1	Power input connector
2	Power input connector (DC-JACK input)
3	Doorbell connector
4	LAN1 (PoE)
5	Micro USB Upgrade connector
6	Interface module connector
7	Microphone
8	Dismantling switch
9	Micro SD card connector
10	Speaker
11	<sup>2</sup> LAN2
12	<sup>2</sup> Alarm connector
13	<sup>2</sup> RS485 connector, 12 V output (12 V output is not available when PoE powered)
14	<sup>2</sup> Relay output
15	N/A

<sup>2</sup> IP touch 10 (LAN+LAN)

**Technical data**

Designation	Value
Rating voltage	24 V $\approx$
Operating voltage range	20-27 V $\approx$
<sup>1</sup> Rating current	27 V $\approx$ , 390 mA 24 V $\approx$ , 440 mA
<sup>2</sup> Rating current	27 V $\approx$ , 520 mA 24 V $\approx$ , 600 mA
Display size	10"
Resolution	1280 x 800 px
Operating temperature	-10 °C ... +55 °C
PoE standard	IEEE802.3 af
<sup>2</sup> Alarm power output	12 V $\approx$ , 200 mA (12 V output is not available when PoE powered)
<sup>2</sup> Relay output	30 V $\approx$ , 1 A
<sup>1</sup> Wireless transmission band	802.11b/g/n: 2412...2462MHz (for United States) 2412...2472MHz (for European countries) 802.11a/n: 5150...5250MHz 5250...5350MHz 5470...5725MHz (not used in Russia) 5725...5850MHz (for United States)
<sup>1</sup> Wireless transmission power	Max. 20 dBm@12 Mbps OFDM 2.4 G Max. 20 dBm@12 Mbps OFDM 5.8 G
<sup>1</sup> Wireless transmission standard	IEEE 802.11 a/b/g/n

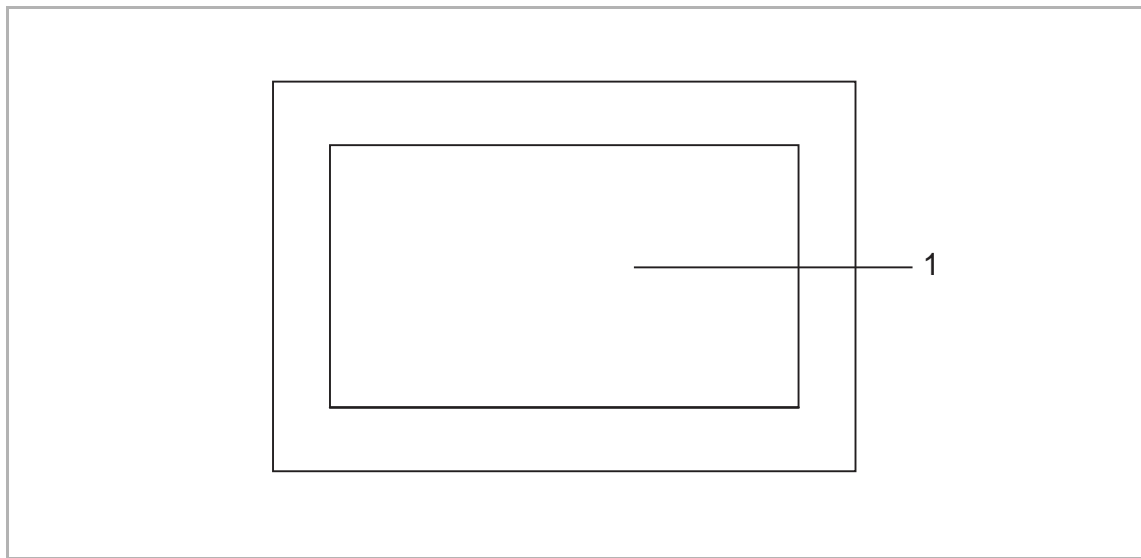
<sup>1</sup> IP touch 10 (LAN+WiFi)    <sup>2</sup> IP touch 10 (LAN+LAN)

**2.2.4 IP Touch Lite 7**

**Device type**

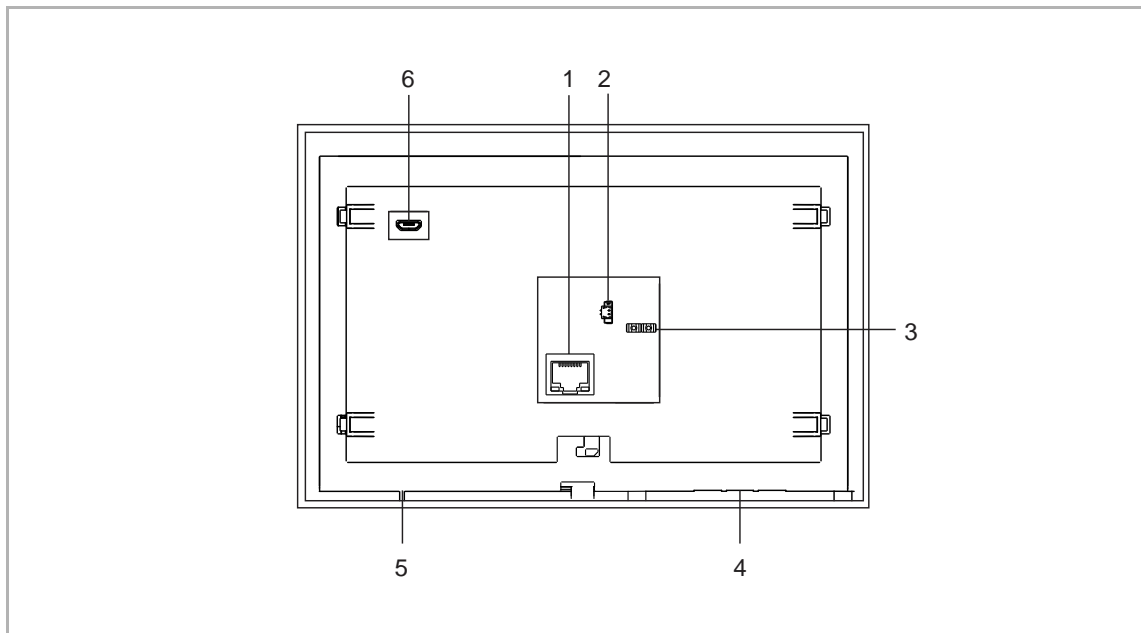
Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
H8249-1W	2TMA130051W0010	IP Touch Lite 7, DES+APP, LAN+WiFi	White	192 x 128 x 17.2
H8249-1B	2TMA130051B0009	IP Touch Lite 7, DES+APP, LAN+WiFi	Black	192 x 128 x 17.2

**Control elements**



No.	Description
1	Touch screen

**Terminal description**



No.	Description
1	LAN1 (PoE)
2	Doorbell connector
3	Power input connector
4	Speaker
5	Microphone
6	Micro USB connector emergency engineering access

**Technical data**

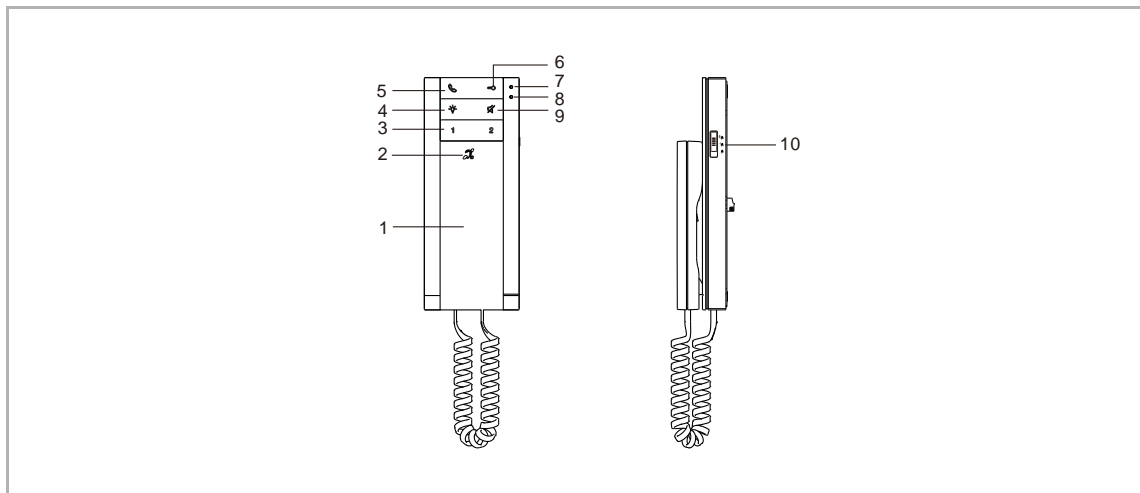
<b>Designation</b>	<b>Value</b>
Rating voltage	24 V =
Operating voltage range	20-27 V =
Rating current	24 V =, 375 mA
Display size	7"
Resolution	1024 x 600 px
Operating temperature	0 °C ... +45 °C
Storage temperature	-25 °C ... +70 °C
PoE standard	IEEE802.3 af
Wireless transmission band	802.11b/g/n: 2412...2462MHz (for United States) 2412...2472MHz (for European countries) 802.11a/n/ac: 5150...5250MHz 5250...5350MHz 5470...5725MHz 5725...5850MHz (for United States)
Wireless transmission power	Max. 20 dBm
Wireless transmission standard	IEEE 802.11 a/b/g/n/ac
Diameter of the cable thickness (3)	1.0 mm...1.4 mm

2.2.5 Audio IP

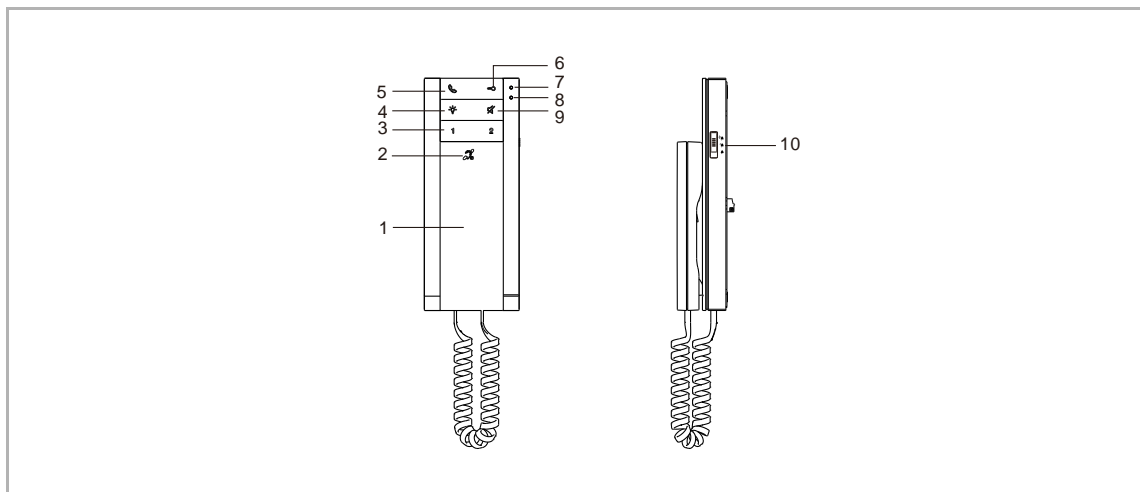
Device type

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
H82001-W	2TMA130011W0001	Audio IP, induction loop	White	81 x 198 x 43

Control elements









No.	Description
1	<p>Handset</p> <ul style="list-style-type: none"> <li>▪ During a call request, pick up the handset within 30 seconds to accept the call.</li> <li>▪ During communication, hang up the handset to terminate the call.</li> </ul>
2	<p><b>Induction Loop symbol</b></p> <p>The device is equipped with a hearing loop for coupling the audio signal into hearing aids.</p> <ul style="list-style-type: none"> <li>▪ To be able to use these hearing loops, the hearing aid must have what is known as a telephone coil (short: "T-coil") that records the magnetic alternating field of the hearing loop.</li> <li>▪ The distance to the device should be a maximum of 80 cm for optimal reception.</li> </ul>
3	<p><b>Programmable button</b></p> <p>The button can be programmed on the SmartAP for the functions below:</p> <ul style="list-style-type: none"> <li>▪ Intercom to same unit (default)</li> <li>▪ Intercom to another unit</li> <li>▪ Call guard unit</li> <li>▪ Open door with Outdoor Station</li> <li>▪ Open door with IP Actuator</li> <li>▪ Turn on the designated light</li> <li>▪ SOS function</li> </ul>
4	<p><b>Light button</b></p> <ul style="list-style-type: none"> <li>▪ In standby status, press the button to turn on the designated light.</li> <li>▪ In standby status, hold the button for 5 seconds to set the ringtone type.</li> <li>▪ During communication, hold the button for 5 seconds to set the call volume.</li> </ul>





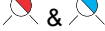



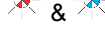
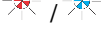
No.	Description
5	<p><b>Call button</b></p> <ul style="list-style-type: none"> <li>▪ Pick up the handset in standby mode and press the button to communicate with other indoor stations within the same apartment (default setting). In doing so, all existing indoor stations within the apartment will be called simultaneously. In this case, the group call is stopped as soon as one of the indoor stations accepts the call.</li> </ul> <p>The button can be programmed on the SmartAP to Intercom to another unit or call guard unit.</p>
6	<p><b>Unlock button</b></p> <ul style="list-style-type: none"> <li>▪ *In standby status, press the button to release the default lock of the default outdoor station. (A default outdoor station should be set on the SmartAP before use).</li> <li>▪ In standby status, hold the button for 10 seconds to enable the "Automatic unlock" function. The LED (red) illuminates to indicate that the "Automatic unlock" function is enabled. The same operation will disable the "Automatic unlock" function and the LED (red) will turn off.</li> </ul> <p>* The "Automatic unlock" function means the door will be unlocked automatically during a call request. This function will be disabled automatically after 10 hours.</p>
7	LED (red)
8	LED (blue)
9	<p><b>Mute button</b></p> <ul style="list-style-type: none"> <li>▪ In standby status, press the button to mute the ringtone.</li> <li>▪ In standby status, hold the button for 3 seconds to mute the ringtone for all the indoor stations in the same apartment.</li> <li>▪ During a call request, press the button to mute the ringtone.</li> <li>▪ During communication, press the button to mute the microphone.</li> </ul>
10	<p><b>Volume button</b></p> <p>Adjust the three-level selector (maximum/medium/low) to set the ringtone volume.</p>



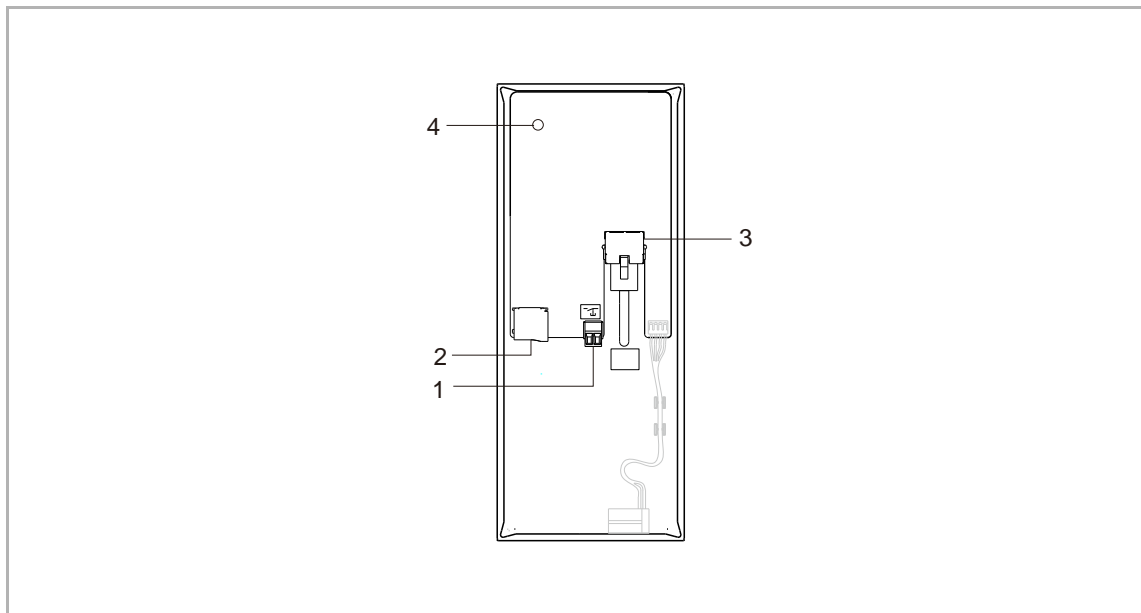
### LED Overview

Icon	Description
	Red LED always on
	Blue LED always on
	Red LED flashes slowly
	Blue LED flashes slowly
	Red LED flashes fast
	Blue LED flashes fast

### LED status

LED status	Description
	"Auto-unlock" function is enabled.
	Mute the speaker or the microphone.
	Unsigned status or enters the setting mode.
	During an incoming call.
	Operation failed.
	Operation success.
	IP address conflicts or network connection is not working properly.
	Two LEDs flash alternative, update the firmware.

**Terminal description**



No.	Description
1	A potential-free contact, such as a doorbell
2	Micro SD card slot (only for factory use)
3	LAN (PoE), PoE is the only power supply for this device
4	Reset button

**Technical data**

Designation	Value
Rating voltage	48 V $\approx$
Operating voltage	38-57 V $\approx$
Rating current	48 V $\approx$ , 40 mA
Operating temperature	-10 °C...+55 °C
Storage temperature	-25 °C...+70 °C
PoE standard	IEEE802.3 af
IP level	IP 30
Size (DxHxW)	81 x 198 x 43 mm

## 2.3 System devices

### 2.3.1 Smart Access Point

\*"Smart Access Point" is usually abbreviated to "SmartAP".

The management software is installed on the SmartAP.

The SmartAP offers the access point for commissioning and managing the Welcome IP devices with a PC.

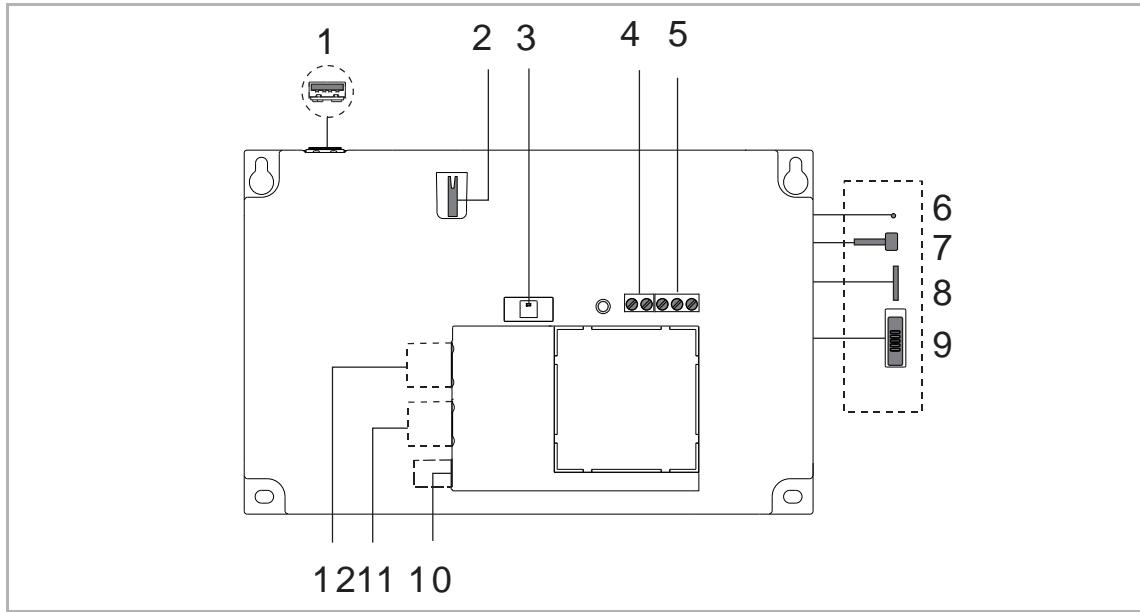
A total of 1200 devices can be supported by the SmartAP.

For opening the Web-based user interface of the SmartAP, you need a computer with a LAN or WLAN network adaptor and an installed Internet browser.

#### Device type

Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
D04011	2TMA400260W0002	SmartAP Pro	White	204 x 32 x 132

**Terminal description**



No.	Description
1	USB stick connector (reserved)
2	<p><b>Tamper switch</b></p> <p>It is used to prevent intruders breaking into the SmartAP. Once the front shell of the SmartAP is opened, a tamper alert will be sounded by the built-in speaker of the SmartAP.</p> <p>The tamper alert can be also set as the precondition and/or event in the "Action" function. Then it can be triggered together with other actions (e.g. pushing notification).</p>
3	<sup>(1)</sup> Status indicator LED
4	Binary input (used to interact with other systems)
5	Binary output (used to interact with other systems)
6	<p><b>Reset button</b></p> <p>Within 2 minutes of powering on the SmartAP, press and hold the reset button for 10 seconds to reset the password of the first admin user and the password of AP mode.</p>
7	<p>Switch on/off to activate/deactivate WiFi Access Point mode</p> <p>When WiFi Access Point mode is activated, Status indicator LED flashes red.</p>
8	Micro SD card connector (reserved)
9	<p><b>Security switch</b></p> <p>ON = The devices are not permitted to be added or deleted</p> <p>OFF = The devices are permitted to be added or deleted (default)</p>
10	Power input connector (DC-JACK input)
11	LAN (PoE)
12	LAN (reserved)

**(1) Status indicator LED**

Description	Blue	Red	Green	White	Priority
Reset to factory default				Flashing slowly	7 (Highest)
Alarm (e.g. tamper alarm)				Flashing quickly	6
Power on or initial setup				on	5
WiFi Access Point is enabled		Flashing slowly			4
Security mode is disabled		on			3
Doorbell is muted	on				2
Normal operation			on		1

**Technical data**

Designation	Value
Rating voltage	24 V $\approx$
Operating voltage range	20-27 V $\approx$
Rating current	24 V $\approx$ , 375 mA
PoE standard	IEEE802.3 af
Wireless transmission band	802.11b/g/n: 2412...2462MHz (for United States) 2412...2472MHz (for European countries) 802.11a/n: 5150...5250MHz 5250...5350MHz 5470...5725MHz (not used in Russia) 5725...5850MHz (for United States)
Wireless transmission power	Max. 20 dBm@12 Mbps OFDM 2.4 G Max. 20 dBm@12 Mbps OFDM 5.8 G
Wireless transmission standard	IEEE 802.11 a/b/g/n
Operating temperature	-10 °C...+45 °C
Storage temperature	-25 °C...+70 °C
IP level	IP 30
IK level	IK 05
Relay output	30 V $\approx$ , 1 A
Binary input	5 V $\approx$ , 1mA

**Bluetooth data**

Bluetooth standard	4.2
Frequency range	2.402...2.480 GHz
TX power	Maximum 8 dBm
RX sensitivity	Minimum -92 dBm

### 2.3.2 Guard Unit

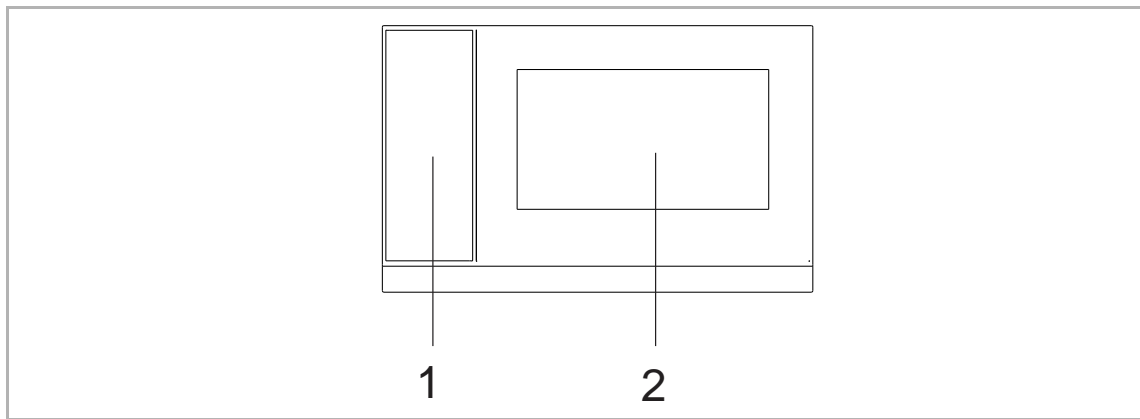
For the Guard Unit a similar range of functions is available as for the Indoor Station. The concierge can transfer the call to an Indoor Station or assign the access authorisation himself. The ABB-Welcome® App function and Smart Home are not possible for the concierge station.

#### Device type

Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
H8303	2TMA130160W0018	Guard Unit	White	265 x 165 x 117

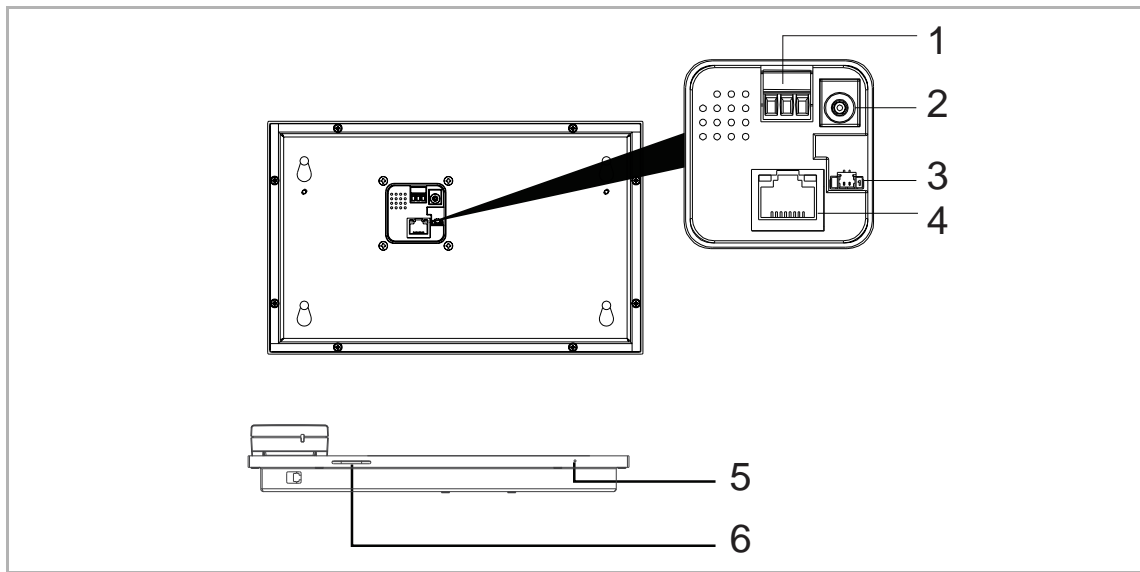
\*"Guard Unit" is usually abbreviated to "GU".

#### Control elements



No.	Description
1	Handset
2	Touch screen

**Terminal description**



No.	Description
1	Power input connector
2	Power input connector (DC-JACK input)
3	Fire control input (release all the locks in case of emergency)
4	LAN (PoE)
5	Microphone
6	Speaker

**Technical data**

Designation	Value
Rating voltage	24 V DC
Operating voltage range	20-27 V DC
Rating current	27 V DC, 230 mA 24 V DC, 260 mA
Display size	7"
Resolution	1024 x 600 pixel
Product dimensions	265 mm x 165 mm x 115 mm
Operating temperature	-10 °C...+55 °C
PoE standard	IEEE802.3 af
Network connection standard	IEEE 802.3, 10Base-T/100Base-TX, auto MDI/MDI-X



### 2.3.3 IP Actuator

The "IP actuator" connects the door openers or the lighting, it carries out the switching commands.

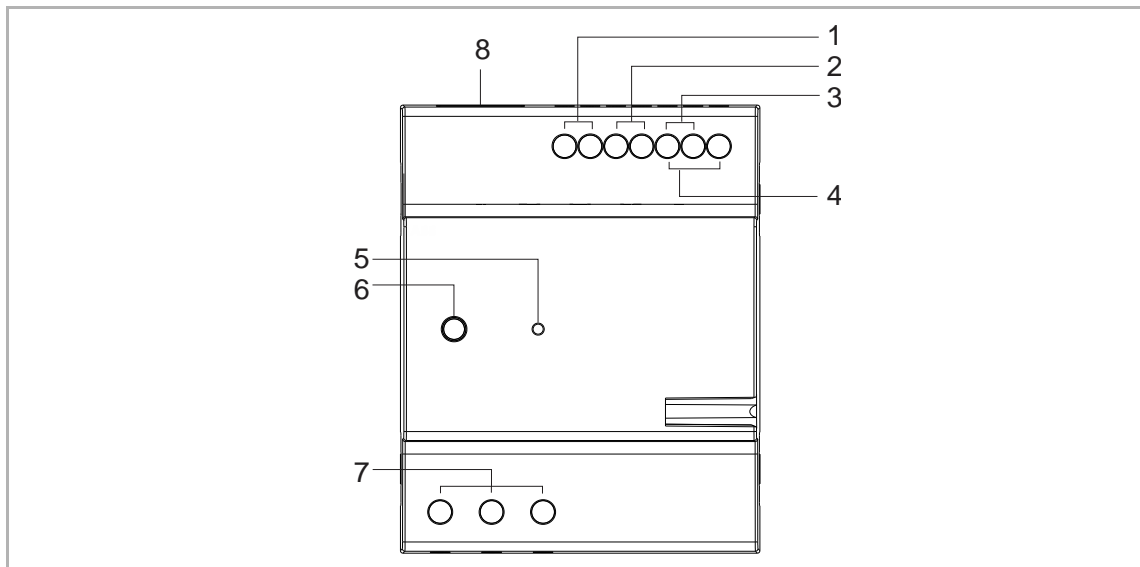
The settings e.g. the switching duration of the lock release or the switching on of the lighting can be made via the "Indoor Station" or the SmartAP.

#### Device type

Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
H8304	2TMA130160H0051	IP Actuator	Grey	65 x 72 x 90

\*"IP Actuator" is usually abbreviated to "IPA".

#### Terminal description



No.	Description
1	System power supply connector
2	Plug-in clamps (LOCK+...LOCK-) for door opener
3	Connector for sensor used for door status detection
4	Connector for exit push-button
5	Reset button
6	Status indicator
7	Plug-in clamps (NC...COM...NO) for floating output, door opener
8	LAN (PoE)

**Technical data**

<b>Designation</b>	<b>Value</b>
Rating voltage	24 V =
Operating voltage range	20-27 V =
Rating current	27 V =, 310 mA 24 V =, 350 mA
Operating temperature	-25 °C...+55 °C
Power supply for door opener	DC: 12 V =, 4 A impulse, max. 500 mA holding AC: 12 V ~, 50 Hz, max. 500 mA holding
Signal unlocking	230 V ~, 3 A
Network connection standard	IEEE802.3, 10/100 Mbps, auto MDI/MDI-X

### 2.3.4 IP Elevator Controller & Lift Control Relay Module

The "IP Elevator Controller" & "Lift Control Relay Module" together ensure that elevator only goes to authorised floor(s).

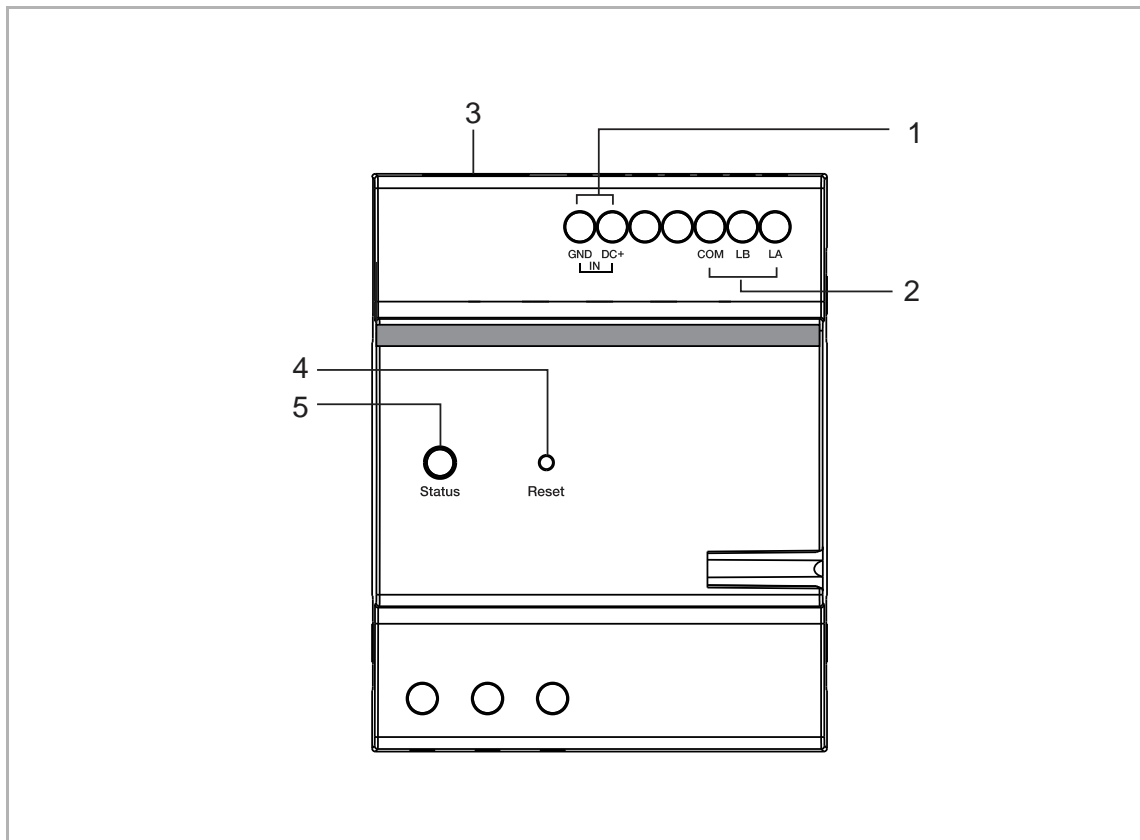
If a resident presses the "unlock" button when receiving a guest's call from the outdoor station, or the authorised user swipes the registered card or enters correct password, the elevator will automatically go down to the floor where the outdoor station is installed. The elevator will then go to the dedicated floor where the resident lives. It cannot go to unauthorised floors, even when other buttons are pressed.

The configuration could be done via the SmartAP.

#### Device type

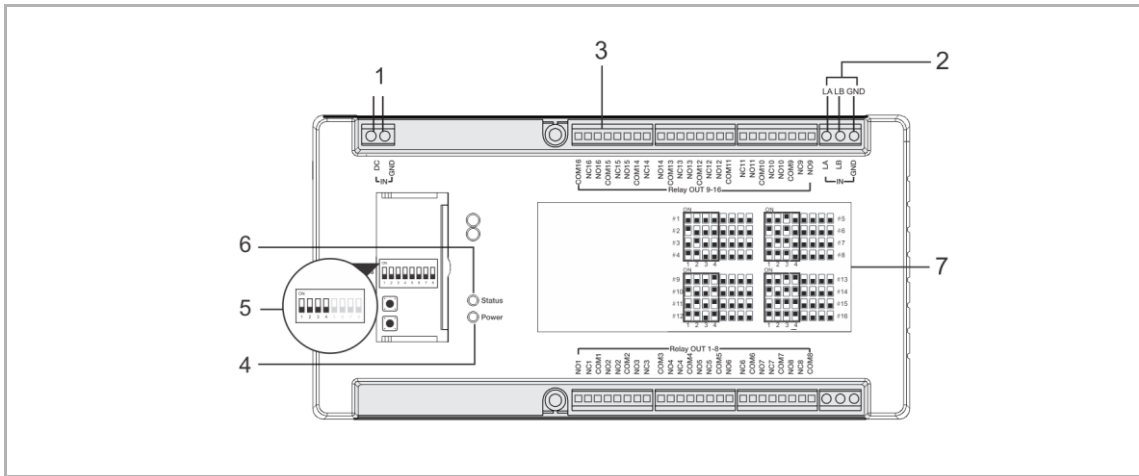
Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
H8308	2TMA130161W0003	IP Elevator Controller	Grey	65 x 72 x 90
M2307	2TMA070150N0044	Lift Control Relay Module	Grey	216 x 45 x 110

**Terminal description - IP Elevator Controller**



No.	Description
1	System power supply connector
2	RS485 connector
3	LAN (PoE)
4	<p><b>Reset button</b></p> <p>Within 2 minutes of powering on the device, press and hold this button for 10 seconds to restore the device to the factory defaults. The status indicator will go off for 3 seconds then start to flash slowly.</p>
5	<p><b>Status indicator</b></p> <ul style="list-style-type: none"> <li>▪ On: the device is working normally</li> <li>▪ Off: the device is not powered on</li> <li>▪ Flashing quickly: the device is working abnormally (e.g. IP conflict, no MAC address)</li> <li>▪ Flashing slowly: the device has not obtained the signature</li> </ul>

**Terminal description - Lift Control Relay Module**



No.	Description
1	Power supply connector
2	Elevator control module connector
3	<b>Relay output</b> Connect to the elevator keyboard
4	Power LED
5	<b>Module address</b> The module address can be set to 1-16 (only the left 4 bits are used).
6	<b>Status LED</b> Blinks when working normally
7	<b>Product label</b> All 16 module address settings are displayed on the label.

**Technical data - IP Elevator Controller**

<b>Designation</b>	<b>Value</b>
Rating voltage	24 V $\overline{=}$
Operating voltage range	20-27 V $\overline{=}$
Rating current	24 V $\overline{=}$ , 60 mA
Operating temperature	-20 °C...+55 °C
Storage temperature	-20 °C...+70 °C
PoE standard	IEEE802.3 af

**Technical data - Lift Control Relay Module**

<b>Designation</b>	<b>Value</b>
Rating voltage	24 V $\overline{=}$
Operating voltage range	20-27 V $\overline{=}$
Rating current	24 V $\overline{=}$ , 250 mA
Operating temperature	-20 °C...+55 °C
Storage temperature	-20 °C...+70 °C

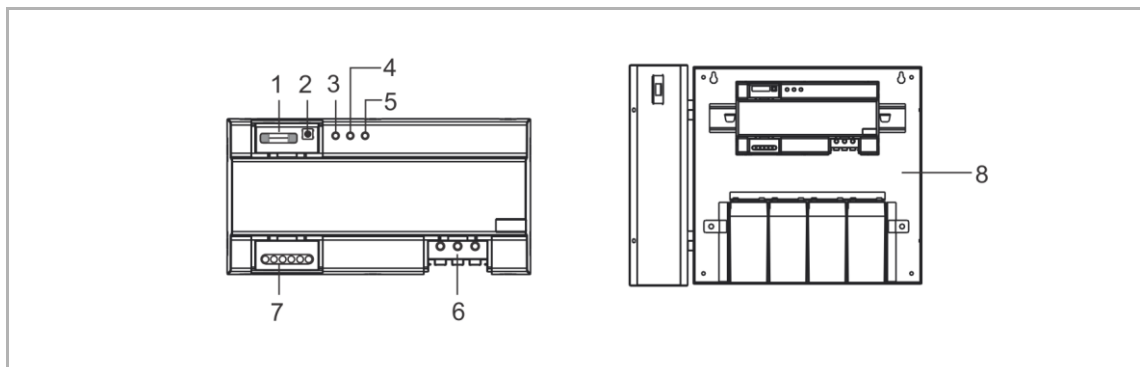
### 2.3.5 Power Supply

Power supply supplies the power for the devices on the system.

#### Device type

Article number	Product ID	Product name	Colour	Size (WxHxD) Unit: mm
YSM01-PS	2TMA130160H0085	Power supply, MDRC, 27VDC	Grey	178 x 64.5 x 90

#### Terminal description



No.	Description
1	<b>Fuse</b> Primary (F1): T3.15 AL/250 V Secondary (F2): T6.3 AL/250 V
2	<b>Commissioning button</b> Press this button to switch from power supply mode to storage battery mode
3	<b>Low battery voltage indicator</b> Indicator always on when low battery voltage
4	<b>Power failure indicator</b> Indicator always on when there is no AC input
5	<b>Operating status indicator</b> Indicator always on when power supply works stably
6	Connector for AC input
7	Connector for DC output
8	UPS (box *1 + power supply *1 + storage battery *4) Starts to work when there is no AC input

### Technical data

Designation	Value
AC input	100-240 V ~, 1.3 A, 50/60 Hz
DC output	27 V =, 3 A
Operating temperature	-25 °C...+55 °C
Ambient humidity	≤93% RH, without condensation
IP level	IP 30
Product dimensions	175 mm x 90 mm x 65 mm
Indication threshold value (when battery voltage is low)	22±0.5 V =
Protection threshold value (when battery is over-discharged)	20±0.5 V =

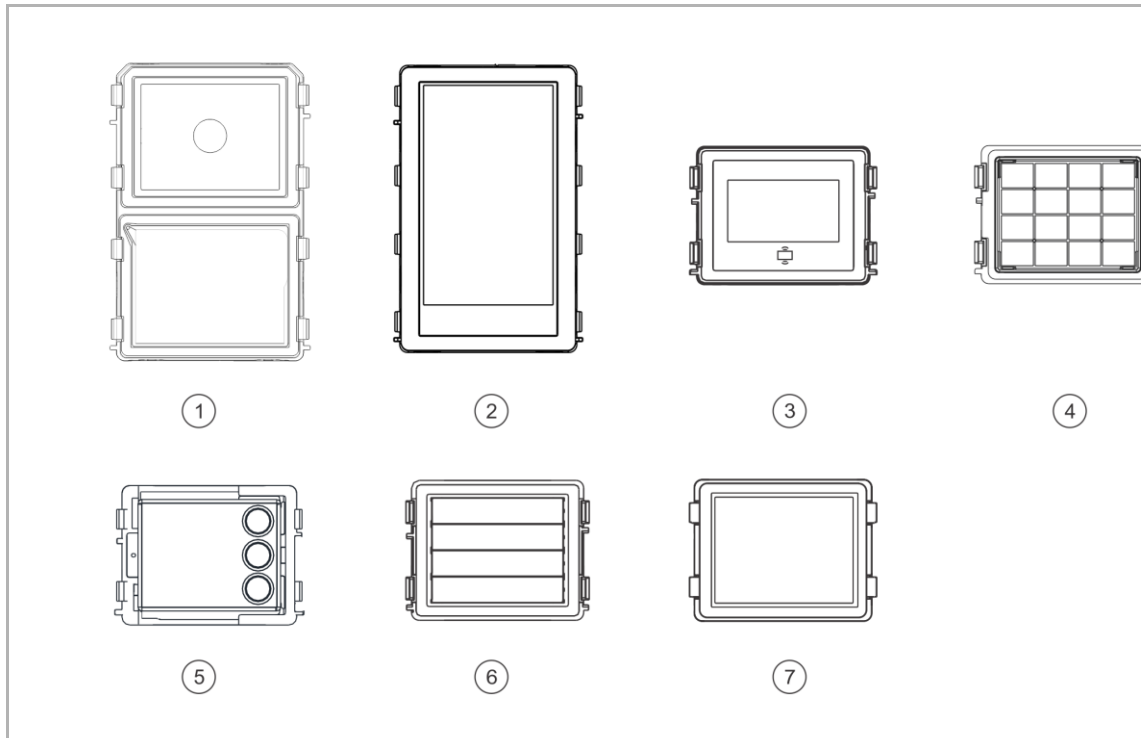
### Regulated lead acid storage battery data

Designation	Value
Rated capacity	4 AH
Rating voltage	6 V =
Overall dimensions	70 mm x 105 mm x 47 mm
Float charge voltage	6.8...6.9 V =, maximum charging current is 1 A (25°C)
Cycle charge voltage	7.2...7.4 V =, maximum charging current is 640 mA (25°C)
Discharging ceased	Discharging 20 hours (5.4 V =, 225 mA) Discharging 27 minutes (4.8 V =, 4.5 A) Charging will be started immediately after discharging is completed.



**2.4 Outdoor Station Modules**

**2.4.1 Overview**



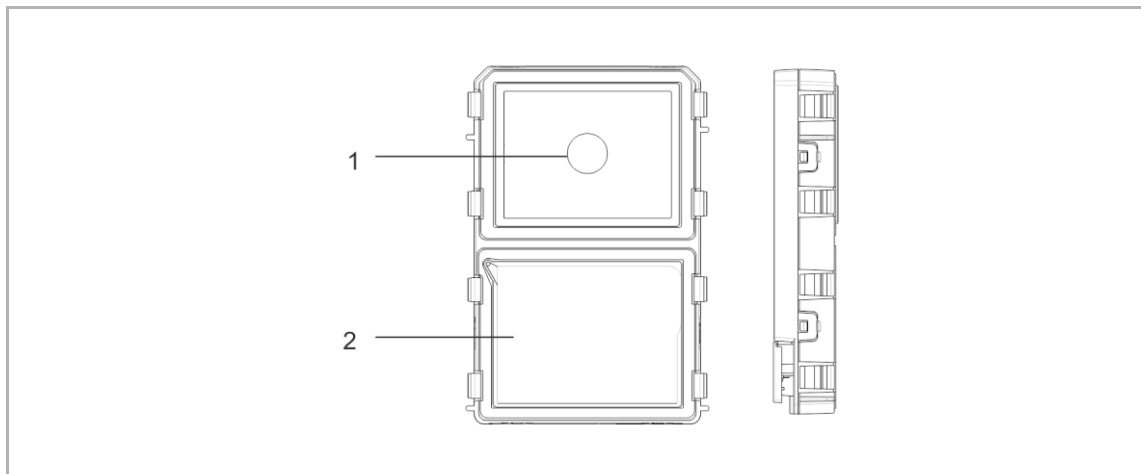
No.	Article number	Product name
1	H85138.M-S	A/V Module
2	H85138.DP	Touch 5" Module
3	5138.CR	Display Module
4	5138.K-.	Keypad Module
5	5138.RP.	Round Pushbutton Module
6	5138.SP.	Bar Pushbutton Module
7	51381DN	Info Module

**2.4.2 A/V Module**

**Device type**

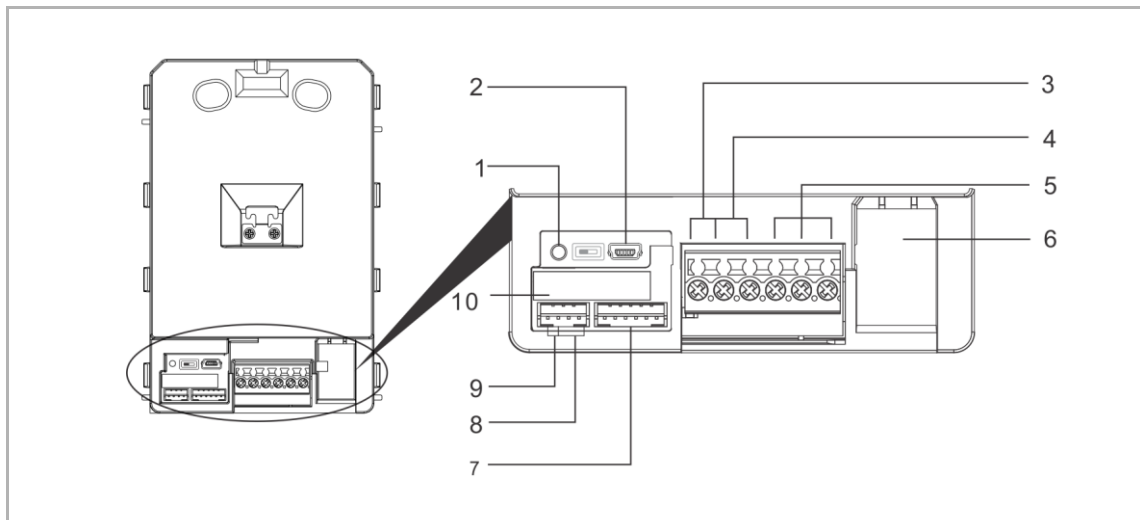
Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
H851381M-S	2TMA130160B0081	A/V Module	-	96 x 143 x 28

**Control elements**



No.	Description
1	Camera
2	Speaker and microphone

**Terminal description**



No.	Description
1	Reset button
2	Micro USB update connector
3	Plug-in clamps (DC+...GND) for standalone power supply
4	Plug-in clamps (LOCK...GND) for door opener
5	Plug-in clamps (COM...NC...NO) for floating output
6	Network connector (PoE)
7	Connector for next module
8	Connector for exit button
9	Connector for the sensor used for door status detection
10	Connector for big display module

**Technical data**

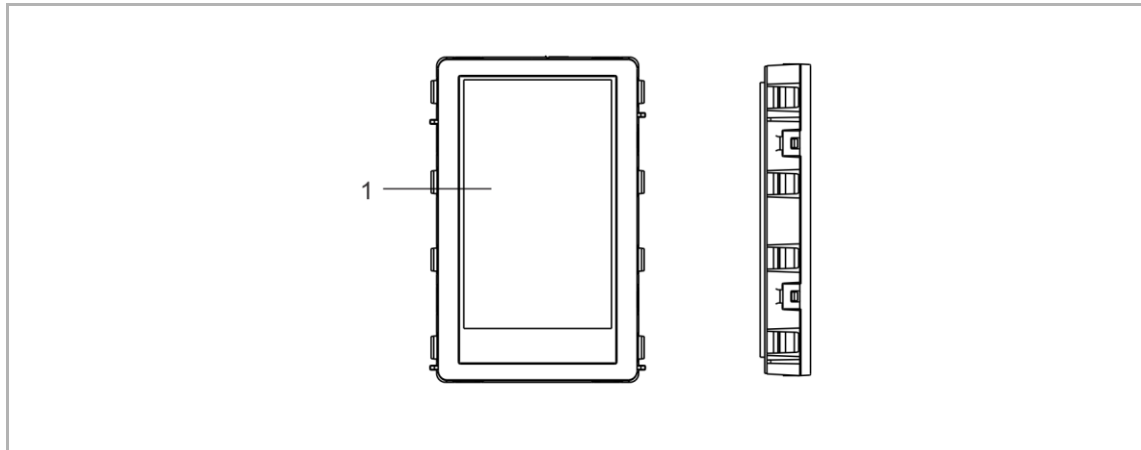
<b>Designation</b>	<b>Value</b>
Rating voltage	24 V =
Operating voltage range	20-27 V =
Rating current	27 V =, 290 mA 24 V =, 320 mA
Operating temperature	-40 °C...+55 °C
Camera type	CMOS
Camera viewing angle	130°
Resolution	HD (1280 x 720 pixel)
Power supply for door opener	18 V =, 4 A impulse, max. 250 mA holding
Floating output for door opener	230 V ~, 3 A 30 V =, 3 A
Video codec	H.264
Audio codec	G.711

### 2.4.3 Touch 5" Module

#### Device type

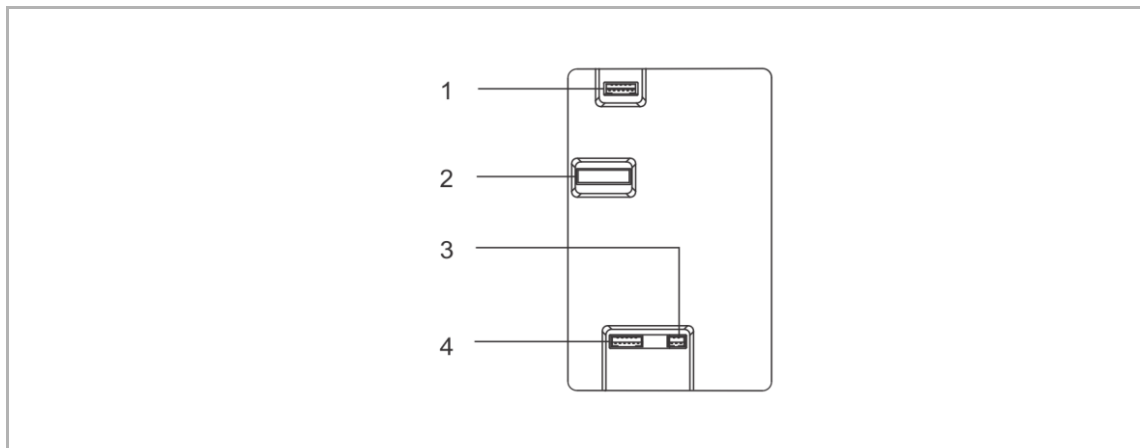
Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
H851381DP	2TMA130160B0082	Touch 5" Module	-	96 x 143 x 23

#### Control elements



No.	Description
1	Touch screen

**Terminal description**



No.	Description
1	Connector for previous module
2	Connector for A/V module
3	Connector for Wiegand output It supports 26 bits and 34 bits
4	Connector for next module

**Technical data**

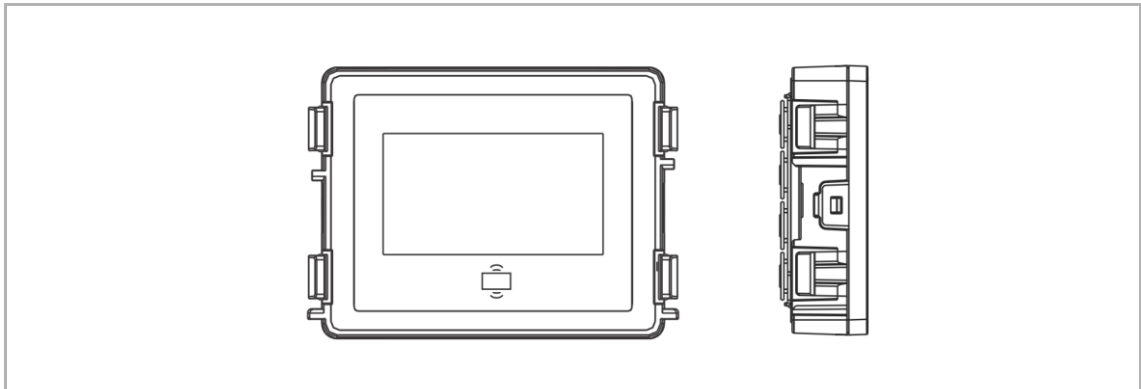
Designation	Value
Rating voltage	24 V $\approx$
Operating voltage range	20-27 V $\approx$
Rating current	27 V $\approx$ , 120 mA 24 V $\approx$ , 130 mA
Operating temperature	-20 °C...+55 °C
Ambient brightness	<50000 Lux
Frequency range	13.56MHz
Maximum power	$\leq$ -0.2 dB $\mu$ A/m @ 3m

## 2.4.4 Display Module

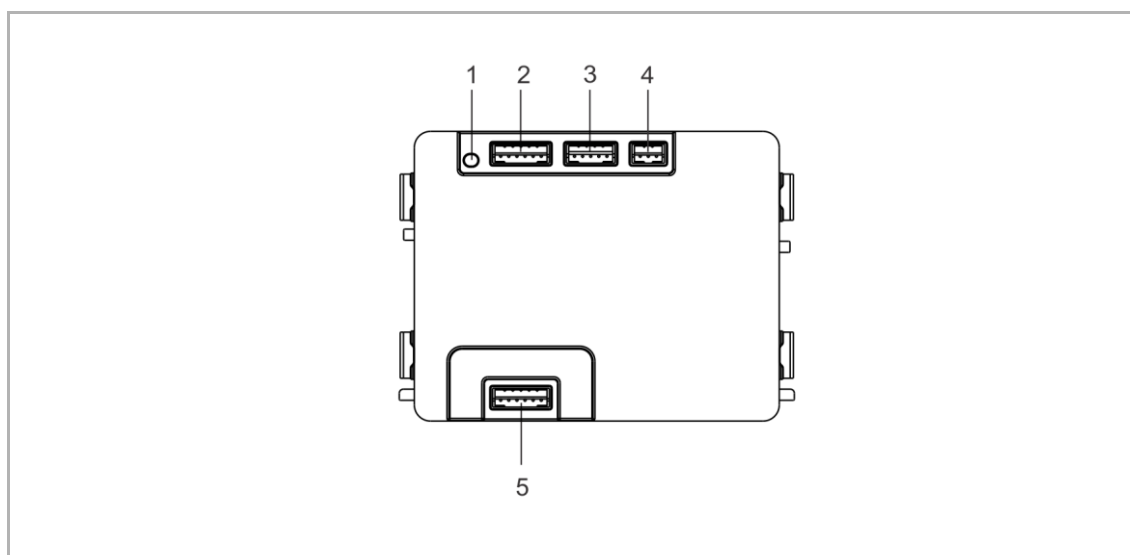
### Device type

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
51381CR	2TMA130160N0010	Display Module, ID	-	97 x 72 x 25
51382CR	2TMA130160N0009	Display Module, Desfire/IC	-	97 x 72 x 25

### Control elements



### Terminal description



No.	Description
1	Program button
2	Connector for previous module
3	Connector for device software update
4	Connector for Wiegand output It supports 26 bits and 34 bits
5	Connector for next module

### Technical data

Designation	Value
Rating voltage	24 V $\overline{=}$
Operating voltage range	20-27 V $\overline{=}$
Rating current	27 V $\overline{=}$ , 145 mA 24 V $\overline{=}$ , 160 mA
Operating temperature	-40 °C...+55 °C
Frequency range (ID)	125KHz
Maximum power (ID)	$\leq$ -3.19 dB $\mu$ A/m @ 3m
Frequency range (IC)	13.56MHz
Maximum power (IC)	$\leq$ -4.75 dB $\mu$ A/m @ 3m

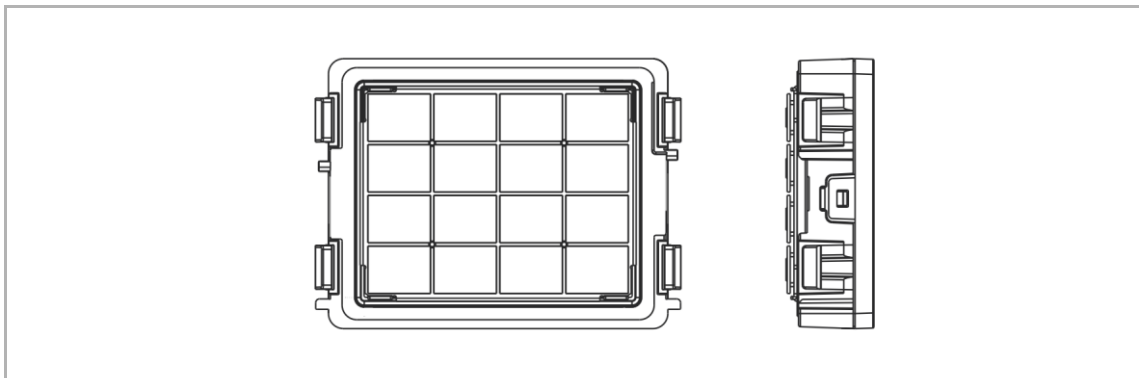


## 2.4.5 Keypad Module

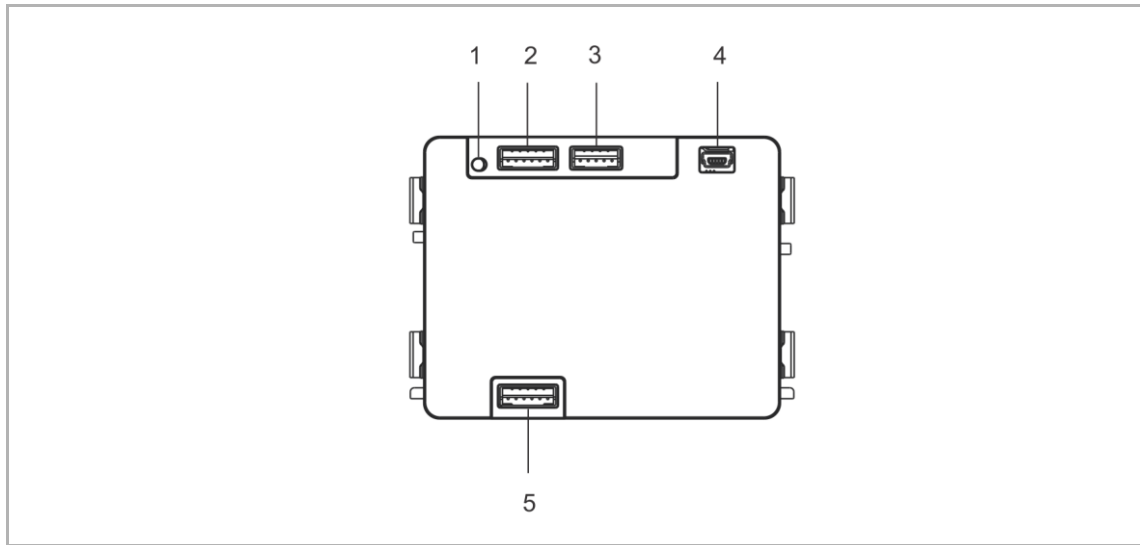
### Device type

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
51381K-A	2TMA210160A0009	Keypad Module	Aluminium	97 x 72 x 25
51381K-S	2TMA130160X0001	Keypad Module	Stainless steel	97 x 72 x 25
51381K-W	2TMA130010W0014	Keypad Module	White	97 x 72 x 25

### Control elements



**Terminal description**



No.	Description
1	Program button
2	Connector for previous module
3	Connector for device software update (can only be done at the factory)
4	Micro USB update connector
5	Connector for next module

**Technical data**

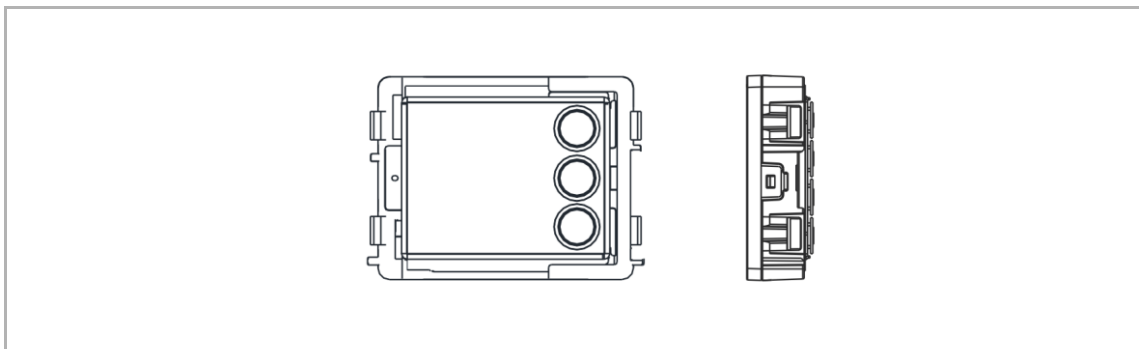
Designation	Value
Rating voltage	24 V $\overline{=}$
Operating voltage range	20-27 V $\overline{=}$
Rating current	27 V $\overline{=}$ , 20 mA 24 V $\overline{=}$ , 20 mA
Operating temperature	-40 °C...+55 °C

## 2.4.6 Round Pushbutton Module

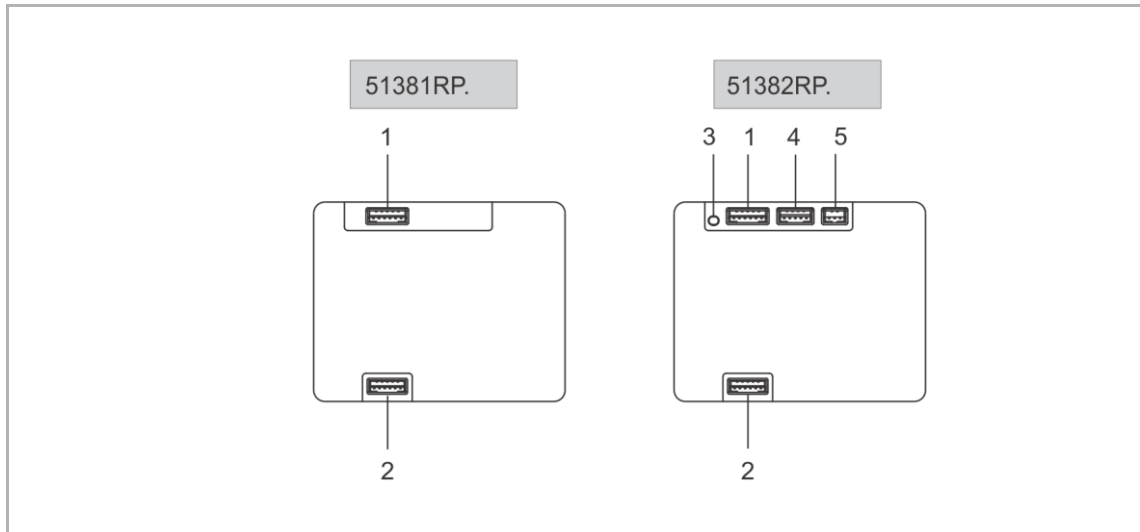
### Device type

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
51381RP1	2TMA130160N0003	Round Pushbutton Module, 1 button	-	97 x 72 x 25
51381RP2	2TMA130160N0004	Round Pushbutton Module, 2 button	-	97 x 72 x 25
51381RP3	2TMA130160N0005	Round Pushbutton Module, 3 button	-	97 x 72 x 25
51382RP1	2TMA130160N0006	Round Pushbutton Module, 1 button, Desfire/IC	-	97 x 72 x 25
51382RP2	2TMA130160N0007	Round Pushbutton Module, 2 button, Desfire/IC	-	97 x 72 x 25
51382RP3	2TMA130160N0008	Round Pushbutton Module, 3 button, Desfire/IC	-	97 x 72 x 25

### Control elements



**Terminal description**



No.	Description
1	Connector for previous module
2	Connector for next module
3	Program button
4	Connector for device software update
5	<sup>2</sup> Connector for Wiegand output It supports 26 bits and 34 bits

<sup>2</sup> 51382RP

**Technical data**

Designation	Value
Rating voltage	24 V $\overline{=}$
Operating voltage range	20-27 V $\overline{=}$
1 Rating current	27 V $\overline{=}$ , 10 mA 24 V $\overline{=}$ , 10 mA
2 Rating current	27 V $\overline{=}$ , 35 mA 24 V $\overline{=}$ , 40 mA
Operating temperature	-40 °C...+55 °C
2 Frequency range	13.56MHz
2 Maximum power	≤0 dBμA/m @ 3m

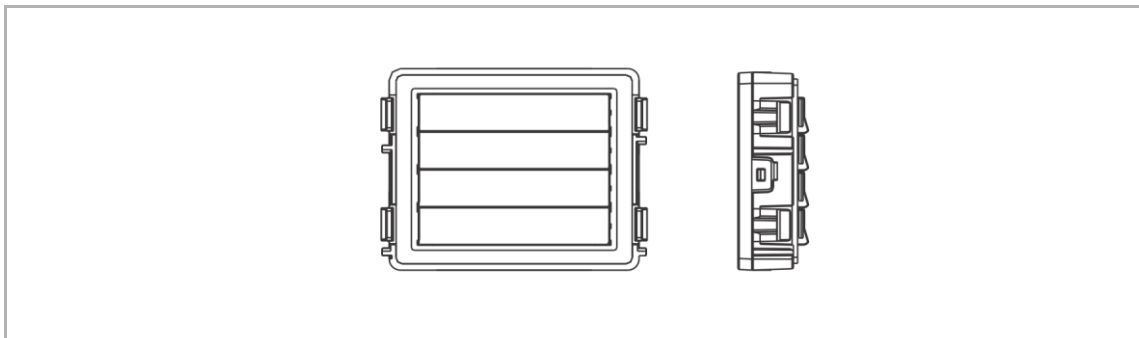
<sup>1</sup> 51381RP. <sup>2</sup> 51382RP.

**2.4.7 Bar Pushbutton Module**

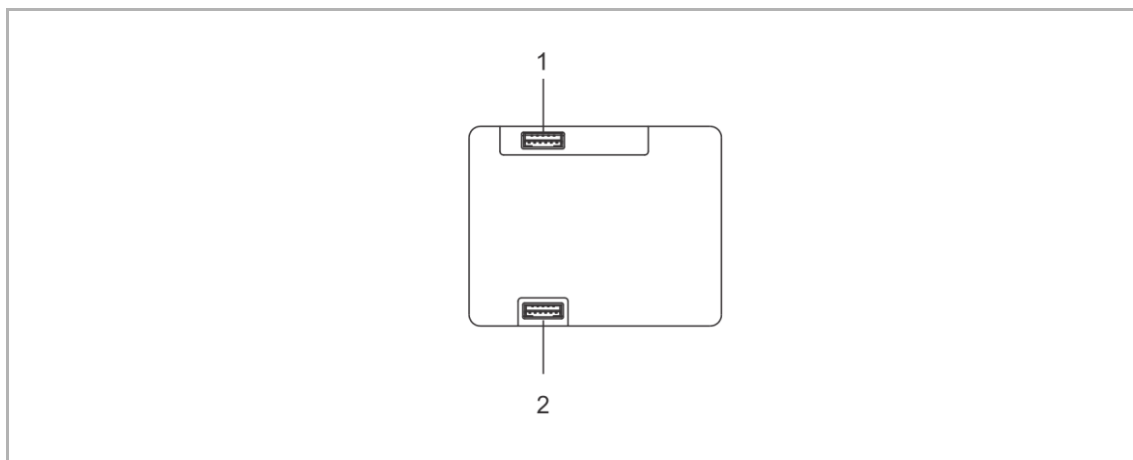
**Device type**

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
51381SP3	2TMA130160N0001	Bar Pushbutton Module, 3/6 buttons	-	97 x 72 x 25
51381SP4	2TMA130160N0002	Bar Pushbutton Module, 4/8 buttons	-	97 x 72 x 25

**Control elements**



### Terminal description



No.	Description
1	Connector for previous module
2	Connector for next module

### Technical data

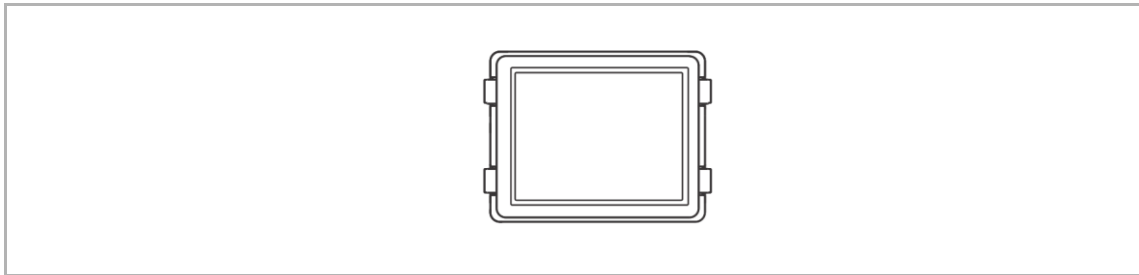
Designation	Value
Rating voltage	24 V =
Operating voltage range	20-27 V =
Rating current	27 V =, 8 mA 24 V =, 8 mA
Operating temperature	-40 °C...+55 °C

### 2.4.8 Info Module

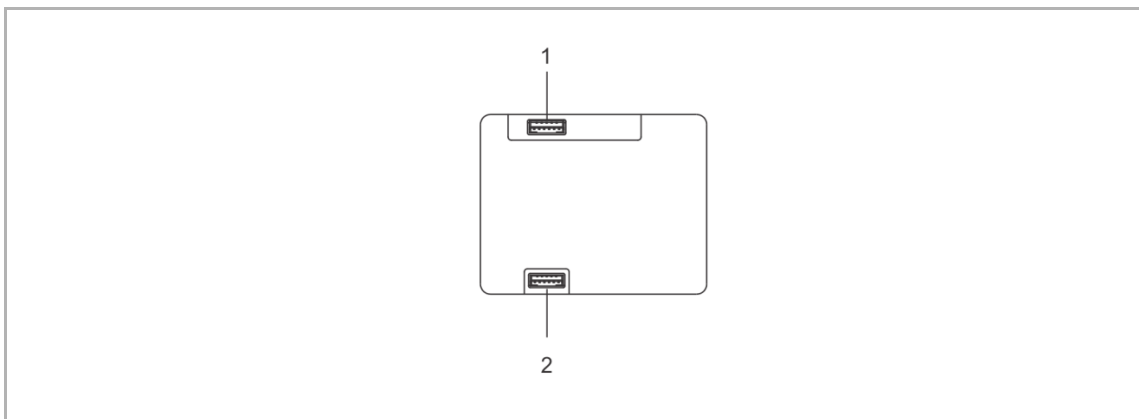
#### Device type

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
51381DN	2TMA200160N0039	Info Module	-	97 x 72 x 25

#### Control elements



#### Terminal description



No.	Description
1	Connector for previous module
2	Connector for next module

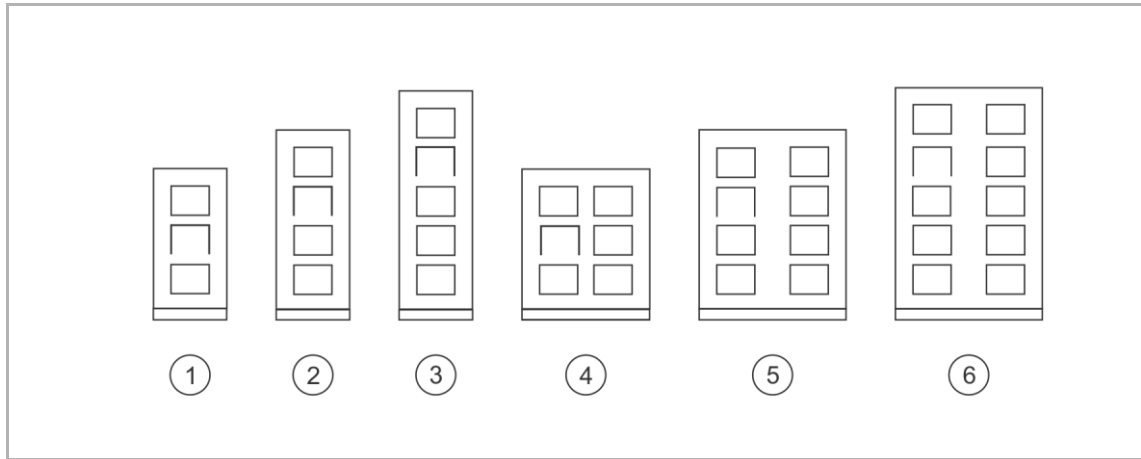
#### Technical data

Designation	Value
Rating voltage	24 V $\overline{=}$
Operating voltage range	20-27 V $\overline{=}$
Rating current	27 V $\overline{=}$ , 8 mA 24 V $\overline{=}$ , 8 mA
Operating temperature	-40 °C...+55 °C

**2.5 Installation materials**

**2.5.1 Video Outdoor Station frame**

**Overview**



No.	Article number	Product name
1	41383CF-.	Video OS frame, size 1/3
2	41384CF-.	Video OS frame, size 1/4
3	41385CF-.	Video OS frame, size 1/5
4	41386CF-.	Video OS frame, size 2/3
5	41388CF-.	Video OS frame, size 2/4
6	413810CF-.	Video OS frame, size 2/5

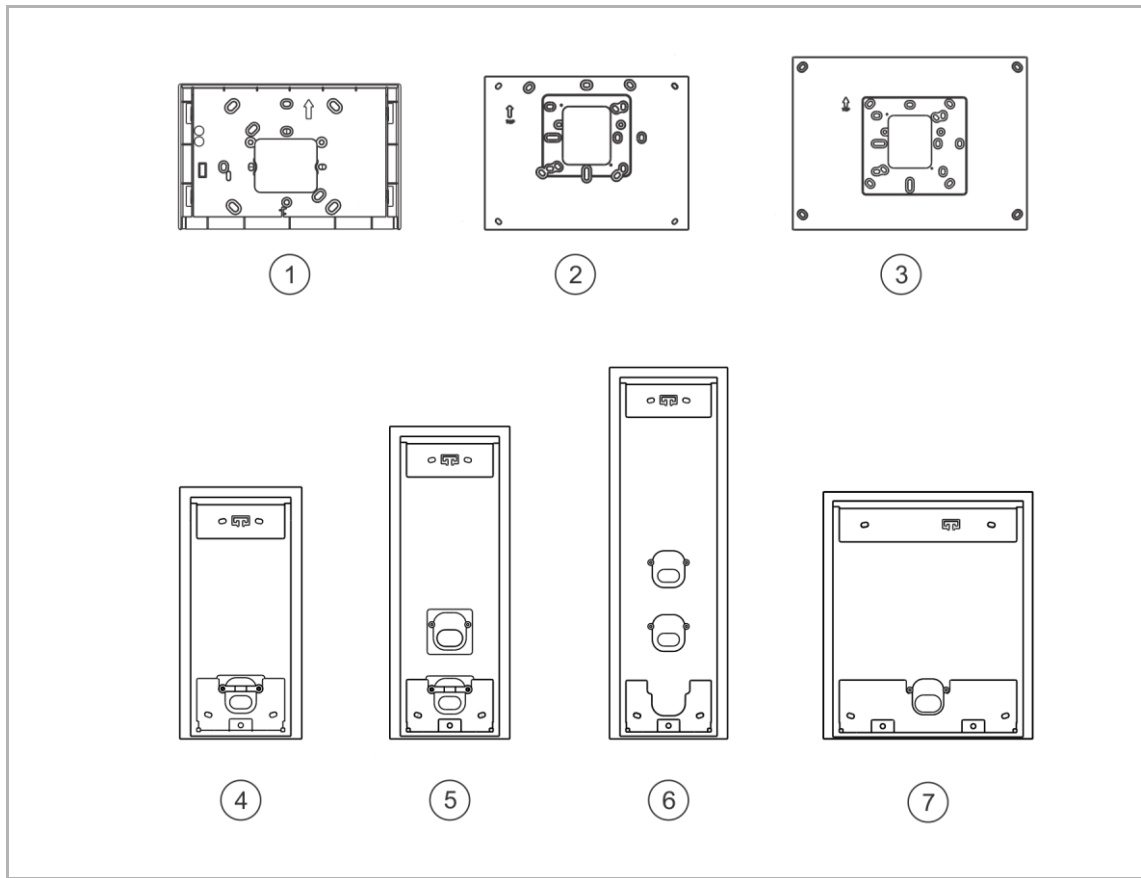


**Device type**

<b>Article number</b>	<b>Order number</b>	<b>Product name</b>	<b>Colour</b>	<b>Size (WxHxD) Unit: mm</b>
41383CF-A	2TMA200160A0003	Video OS frame, size 1/3	Aluminium	135 x 277 x 20.5
41384CF-A	2TMA200160A0005	Video OS frame, size 1/4	Aluminium	135 x 349 x 20.5
41385CF-A	2TMA200160A0007	Video OS frame, size 1/5	Aluminium	135 x 421 x 20.5
41386CF-A	2TMA200160A0009	Video OS frame, size 2/3	Aluminium	235 x 277 x 20.5
41388CF-A	2TMA220161A0010	Video OS frame, size 2/4	Aluminium	235 x 349 x 20.5
413810CF-A	2TMA220161A0011	Video OS frame, size 2/5	Aluminium	235 x 421 x 20.5
41383CF-B	2TMA220161B1004	Video OS frame, size 1/3	Anthracite	135 x 277 x 20.5
41384CF-B	2TMA220161B1005	Video OS frame, size 1/4	Anthracite	135 x 349 x 20.5
41385CF-B	2TMA220161B1006	Video OS frame, size 1/5	Anthracite	135 x 421 x 20.5
41383CF-S	2TMA130160X0004	Video OS frame, size 1/3	Stainless steel	135 x 277 x 20.5
41384CF-S	2TMA130160X0005	Video OS frame, size 1/4	Stainless steel	135 x 349 x 20.5
41385CF-S	2TMA130160X0006	Video OS frame, size 1/5	Stainless steel	135 x 421 x 20.5
41386CF-S	2TMA130160X0007	Video OS frame, size 2/3	Stainless steel	235 x 277 x 20.5
41383CF-W	2TMA130160W0002	Video OS frame, size 1/3	White	135 x 277 x 20.5
41384CF-W	2TMA130160W0003	Video OS frame, size 1/4	White	135 x 349 x 20.5
41385CF-W	2TMA130160W0004	Video OS frame, size 1/5	White	135 x 421 x 20.5

## 2.5.2 Surface-mounted box

### Overview



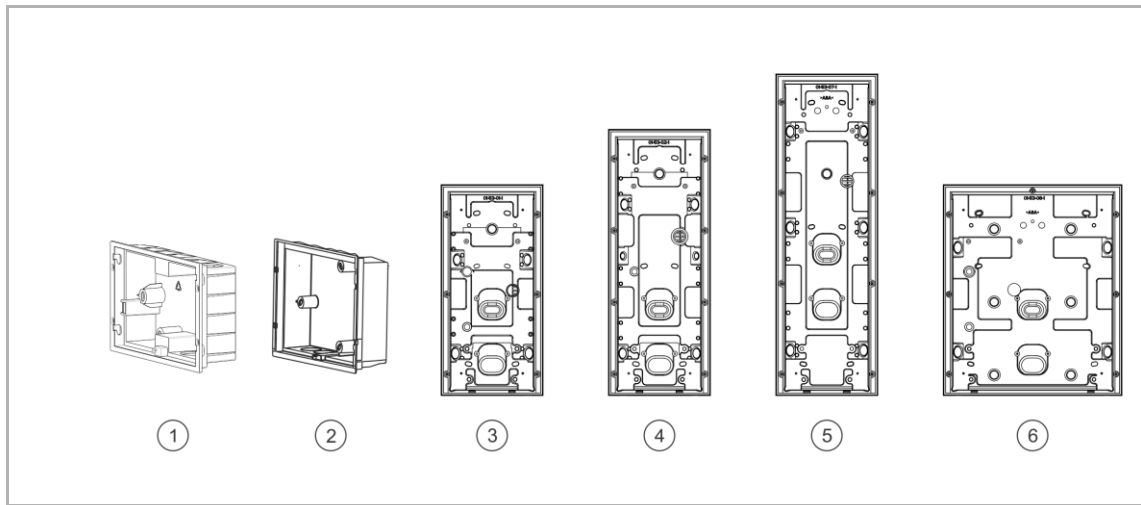
No.	Article number	Product name
1	42491S-	Surface-mounted box for IP Touch Lite 7
2	42361S-	Surface-mounted box for IP Touch 7
3	42371S-	Surface-mounted box for IP Touch 10
4	41383S-	Surface-mounted box for OS, size 1/3
5	41384S-	Surface-mounted box for OS, size 1/4
6	41385S-	Surface-mounted box for OS, size 1/5
7	41386S-	Surface-mounted box for OS, size 2/3

**Device type**

<b>Article number</b>	<b>Order number</b>	<b>Product name</b>	<b>Colour</b>	<b>Size (WxHxD) Unit: mm</b>
H8249-1W	2TMA130051W0010	Surface-mounted box for IP Touch Lite 7	White	188 x 123 x 14
H8249-1B	2TMA130051B0009	Surface-mounted box for IP Touch Lite 7	Black	188 x 123 x 14
42361S-W	2TMA130160W0017	Surface-mounted box for IP Touch 7	White	197 x 148 x 12.7
42361S-B	2TMA130160B0080	Surface-mounted box for IP Touch 7	Black	197 x 148 x 12.7
42371S-W	2TMA130161W0001	Surface-mounted box for IP Touch 10	White	221 x 251 x 13.5
42371S-B	2TMA130161B0001	Surface-mounted box for IP Touch 10	Black	221 x 251 x 13.5
41383S-B	2TMA130160B0011	Surface-mounted box for OS, size 1/3	Anthracite	133 x 275 x 32
41384S-B	2TMA130160B0012	Surface-mounted box for OS, size 1/4	Anthracite	133 x 347 x 32
41385S-B	2TMA130160B0013	Surface-mounted box for OS, size 1/5	Anthracite	133 x 419 x 32
41386S-B	2TMA130160B0014	Surface-mounted box for OS, size 2/3	Anthracite	233 x 275 x 32
41383S-H	2TMA130160H0011	Surface-mounted box for OS, size 1/3	Grey	133 x 275 x 32
41384S-H	2TMA130160H0012	Surface-mounted box for OS, size 1/4	Grey	133 x 347 x 32
41385S-H	2TMA130160H0013	Surface-mounted box for OS, size 1/5	Grey	133 x 419 x 32
41386S-H	2TMA130160H0014	Surface-mounted box for OS, size 2/3	Grey	233 x 275 x 32

### 2.5.3 Flush-mounted box

#### Overview



No.	Article number	Product name
1	42491F-	Flush-mounted box for IP Touch Lite 7
2	42361F-	Flush-mounted box for IP Touch 7/10
3	41383F-	Flush-mounted box for OS, size 1/3
4	41384F-	Flush-mounted box for OS, size 1/4
5	41385F-	Flush-mounted box for OS, size 1/5
6	41386F-	Flush-mounted box for OS, size 2/3

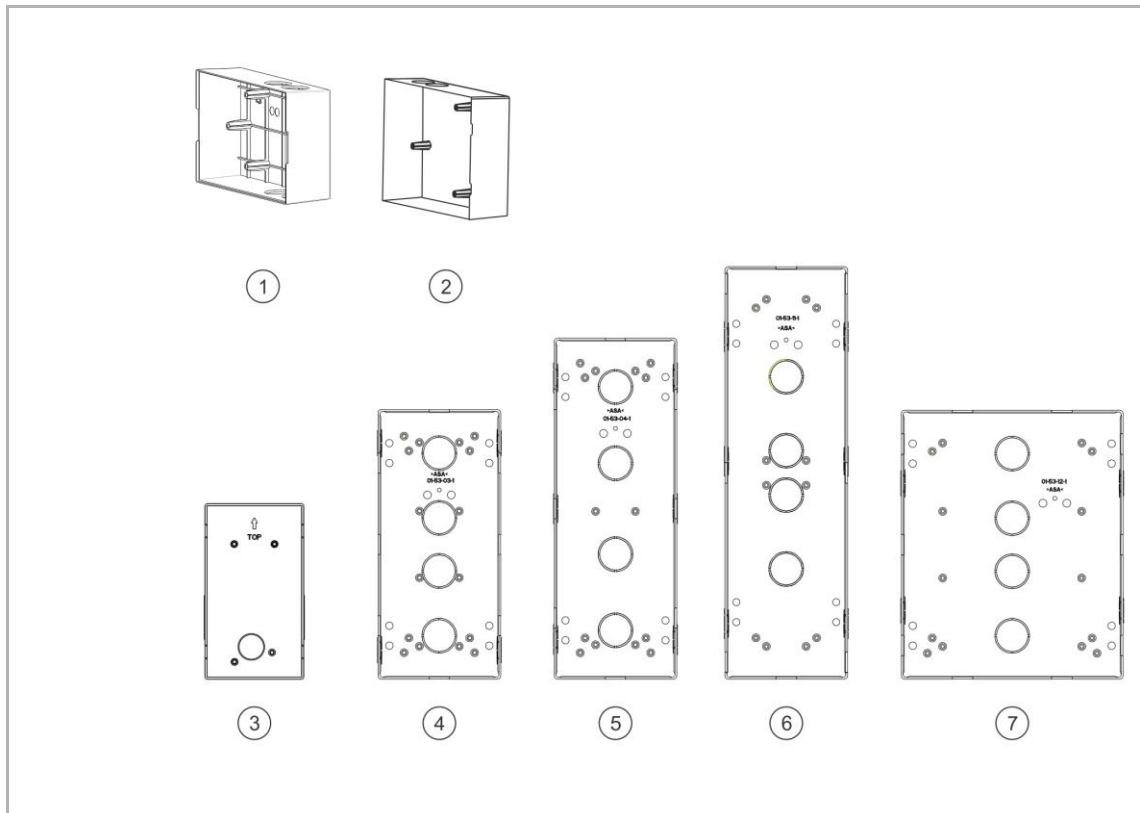
**Device type**

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
42491F	2TMA320161B0002	*Flush-mounted box for IP Touch Lite 7	Black	178 x 108 x 52
42361F	2TMA130160B0132	*Flush-mounted box for IP Touch 7/10	-	194 x 145 x 55
42361F-04	2TMA130160B0135	*Flush-mounted box for IP Touch 7/10	-	194 x 145 x 55
41383F-B	2TMA130160B0003	Flush-mounted box for OS, size 1/3	Anthracite	133 x 275 x 52
41384F-B	2TMA130160B0004	Flush-mounted box for OS, size 1/4	Anthracite	133 x 347 x 52
41385F-B	2TMA130160B0005	Flush-mounted box for OS, size 1/5	Anthracite	133 x 419 x 52
41386F-B	2TMA130160B0006	Flush-mounted box for OS, size 2/3	Anthracite	233 x 275 x 52
41383F-H	2TMA130160H0003	Flush-mounted box for OS, size 1/3	Grey	133 x 275 x 52
41384F-H	2TMA130160H0004	Flush-mounted box for OS, size 1/4	Grey	133 x 347 x 52
41385F-H	2TMA130160H0005	Flush-mounted box for OS, size 1/5	Grey	133 x 419 x 52
41386F-H	2TMA130160H0006	Flush-mounted box for OS, size 2/3	Grey	233 x 275 x 52

\*IP Touch Lite 7, IP Touch 7 & IP Touch 10 integrated the flush-mounted box with the pre-installation box in the package.

## 2.5.4 Pre-mounting box

### Overview



No.	Article number	Product name
1	42491F-.	Pre-installation box for IP Touch Lite 7
2	42361F-.	Pre-installation box for IP Touch 7/10
3	41361F-.	Pre-installation box for mini OS
4	41383F-.	Pre-installation box for OS, size 1/3
5	41384F-.	Pre-installation box for OS, size 1/4
6	41385F-.	Pre-installation box for OS, size 1/5
7	41386F-.	Pre-installation box for OS, size 2/3

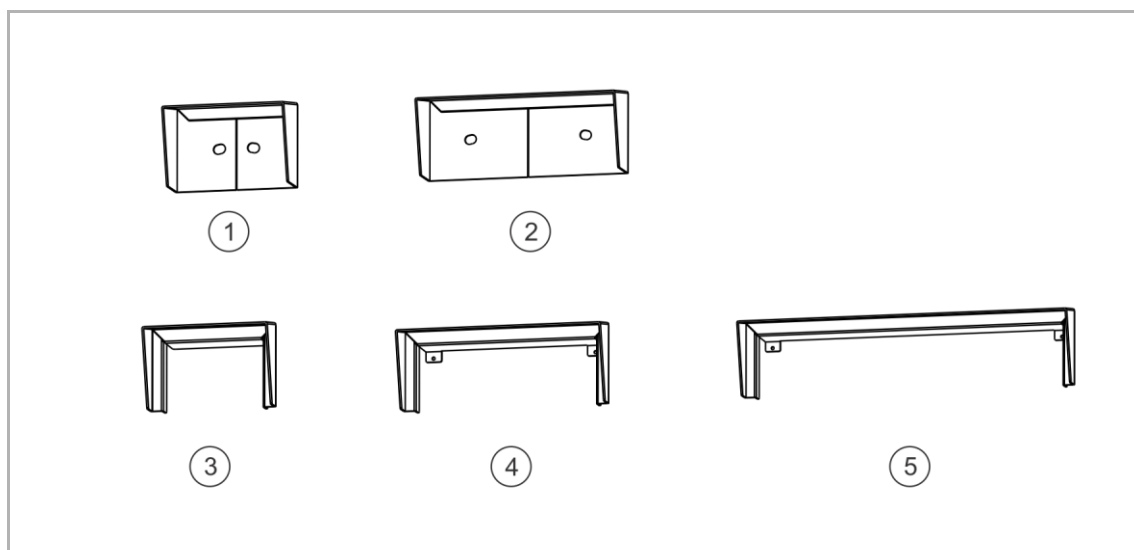
**Device type**

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
42491F	2TMA320161B0002	Pre-installation box for IP Touch Lite 7	Black	178 x 108 x 52
42361F	2TMA130160B0132	Pre-installation box for IP Touch 7/10	-	194 x 145 x 55
42361F-02	2TMA130160B0133	Pre-installation box for IP Touch 7/10	-	194 x 145 x 55
42361F-04	2TMA130160B0135	Pre-installation box for IP Touch 7/10	-	194 x 145 x 55
41361F	2TMA110010N0001	Pre-installation box for Mini OS	-	98 x 174 x 45
41383PB	2TMA130160B0019	Pre-installation box for OS, size 1/3	-	124 x 271 x 64.5
41384PB	2TMA130160B0020	Pre-installation box for OS, size 1/4	-	124 x 343 x 64.5
41385PB	2TMA130160B0021	Pre-installation box for OS, size 1/5	-	124 x 415 x 64.5
41386PB	2TMA130160B0022	Pre-installation box for OS, size 2/3	-	224 x 271 x 64.5

\*IP Touch Lite 7, IP Touch 7 & IP Touch 10 integrated the flush-mounted box with the pre-installation box in the package.

## 2.5.5 Rain hood

### Overview



No.	Article number	Product name
1	41383RH	Rain hood, size 1/x, for SM
2	41384RH	Rain hood, size 2/x, for SM
3	41381RH	Rain hood, size 1/x, for FM
4	41382RH	Rain hood, size 2/x, for FM
5	41385RH	Rain hood, size 3/x, for FM

### Device type

Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
41383RH	2TMA130160A0009	Rain hood, size 1/x, for SM	Aluminium alloy	143 x 98 x 68
41384RH	2TMA130160A0010	Rain hood, size 2/x, for SM	Aluminium alloy	243 x 98 x 68
41381RH	2TMA130160A0001	Rain hood, size 1/x, for FM	Aluminium alloy	143 x 98 x 83
41382RH	2TMA130160A0002	Rain hood, size 2/x, for FM	Aluminium alloy	243 x 98 x 83
41385RH	2TMA130160A0017	Rain hood, size 3/x, for FM	Aluminium alloy	416 x 98 x 83



## 2.6 Accessories

### Device type

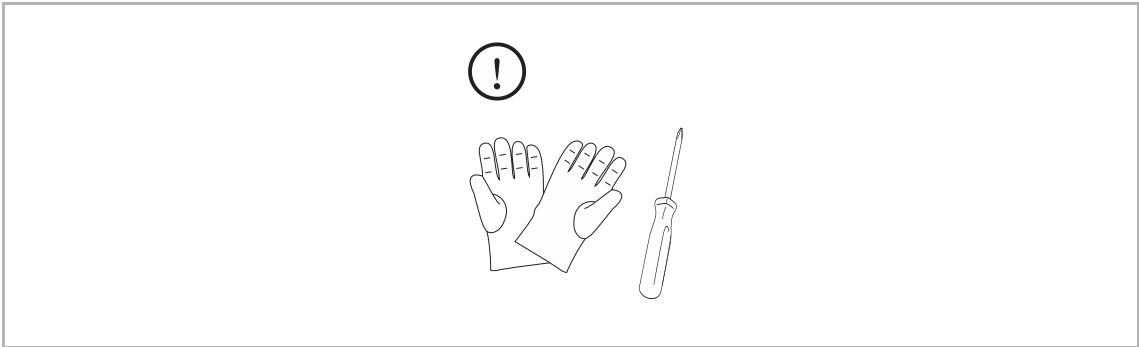
Article number	Order number	Product name	Colour	Size (WxHxD) Unit: mm
51381EP-S	2TMA130160X0002	End-strip, size 1/x	Stainless steel	135 x 19 x 16
51382EP-S	2TMA130160X0003	End-strip, size 2/x	Stainless steel	235 x 19 x 16
51381EP-W	2TMA130160W0001	End-strip, size 1/x	White	135 x 19 x 16
51381MT	2TMA130160B0025	Mounting tool, 135mm	Aluminium alloy	165 x 26 x 4

### 3 Installation guidelines

#### 3.1 Outdoor Stations

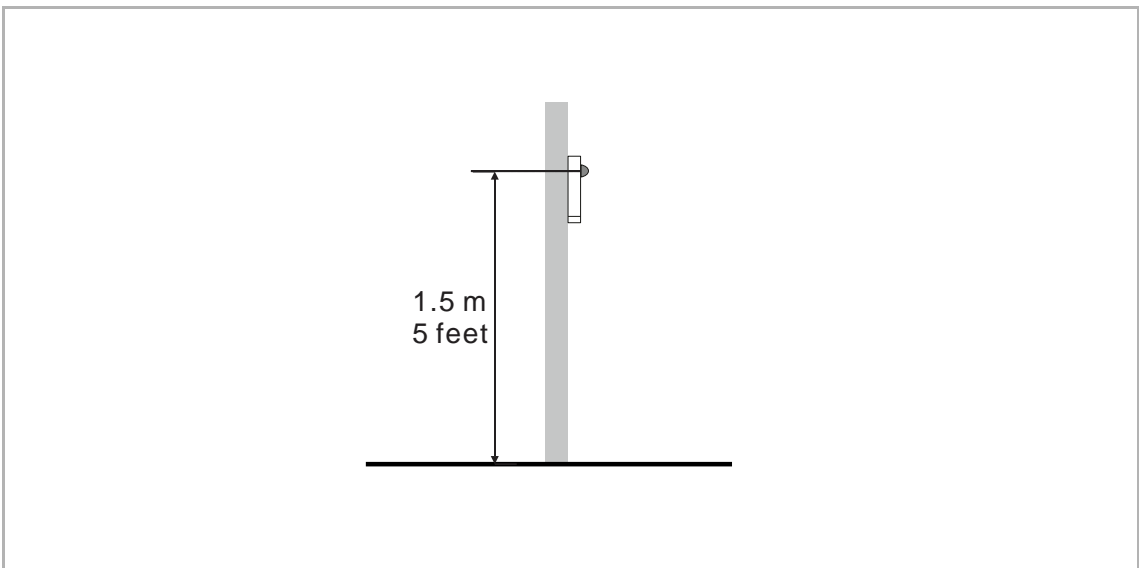
##### 3.1.1 Preparation

Please use gloves to protect yourself against cuts.



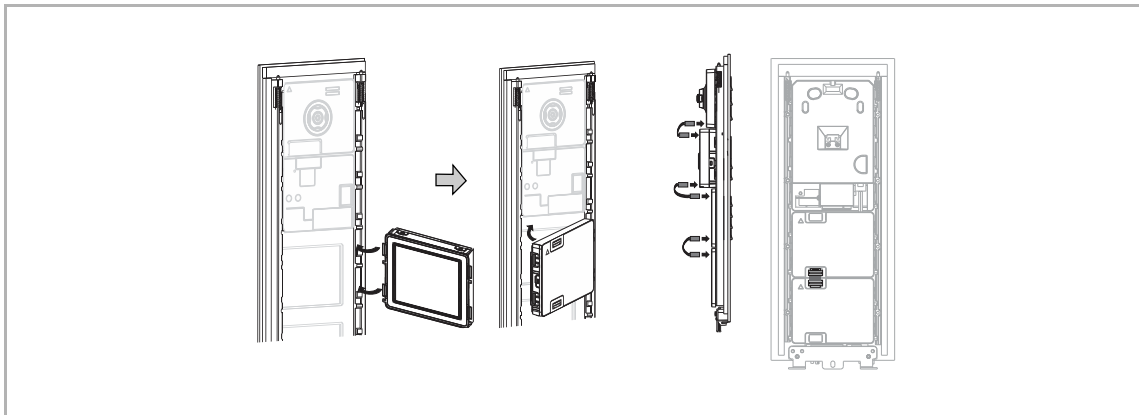
##### 3.1.2 Installation height

(unit: mm)



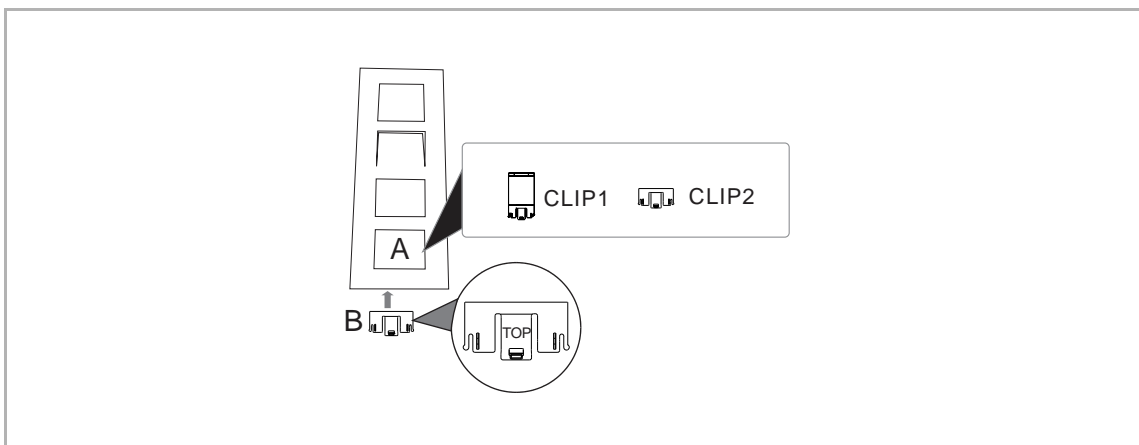
### Mounting the modules

This step can be skipped if the OS modules have been mounted on the OS.



### Inserting the clip

This step can be skipped if the clip has been inserted in the OS.



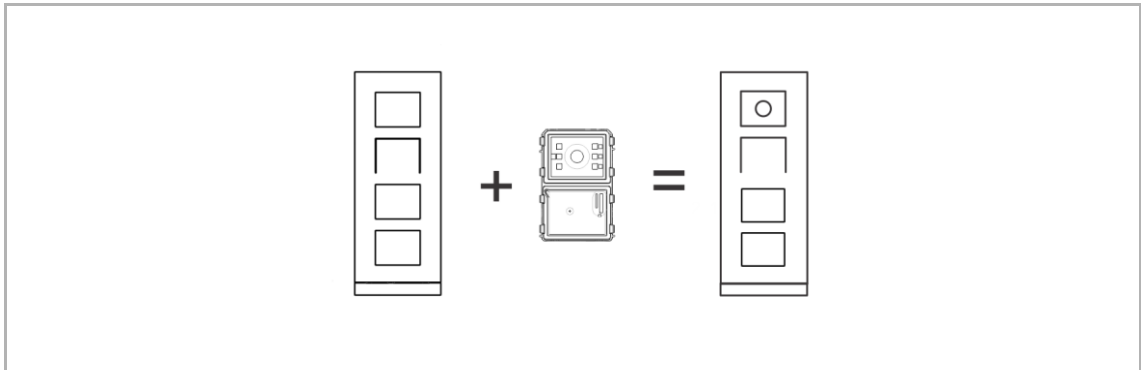
#### CLIP rule

If the round pushbutton module is used in place A, B should be CLIP1, otherwise CLIP2.

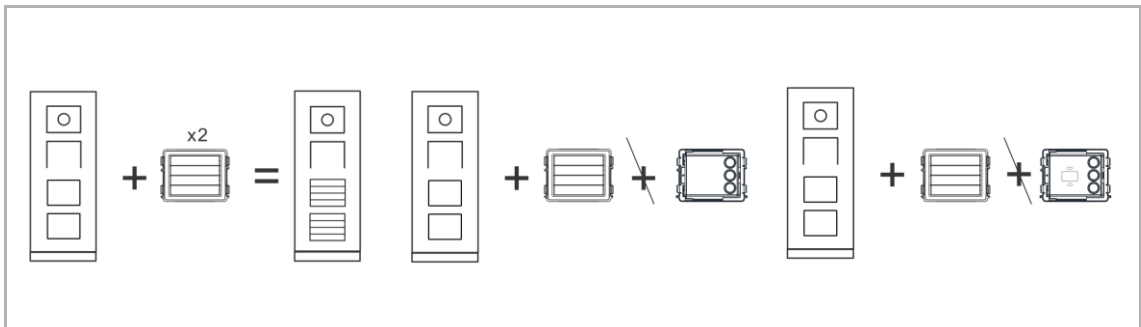
Please pay attention to the direction when inserting the clip.

**3.1.3 The rule of assembled modules**

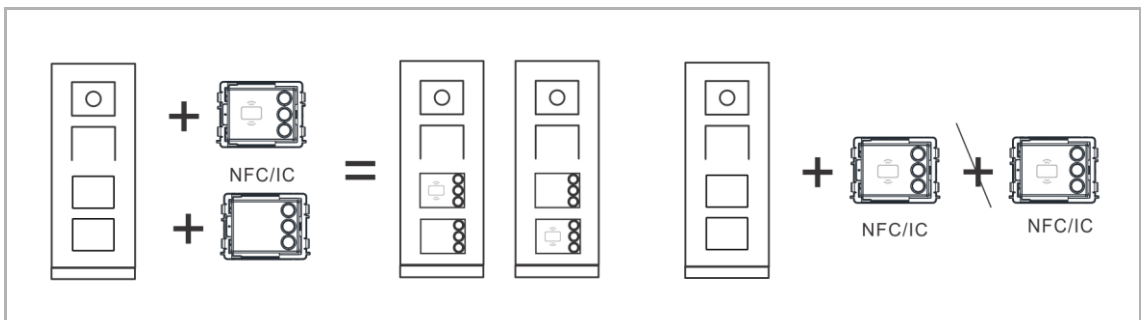
**Rule 1: A/V module should be placed on the top.**



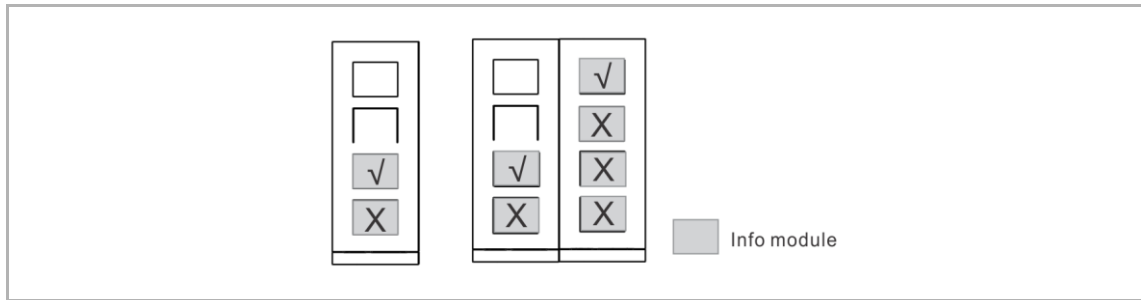
**Rule 2: Bar pushbutton module cannot work with round pushbutton module**



**Rule 3: Only supports 1 Round pushbutton module with NFC**



**Rule 4: The position of info module**



### 3.1.4 Installation overview

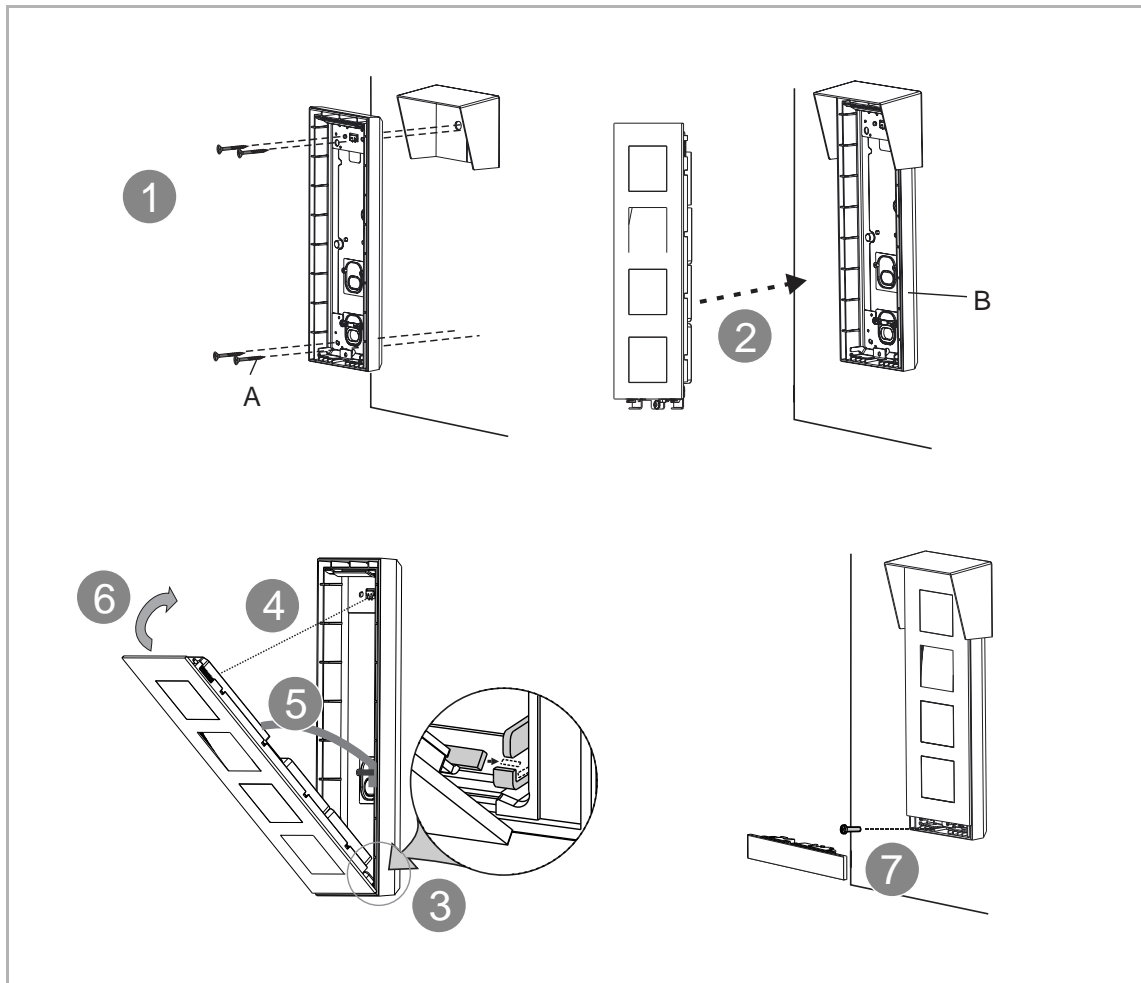
Outdoor Station type	Installation type
1 Single column OS	Surface-mounted installation
	Flush-mounted installation in solid walls
	Flush-mounted installation in hollow walls
2 Multiple columns OS	Flush-mounted installation in solid walls
Mini OS	Surface-mounted installation
	Flush-mounted installation in solid walls
	Flush-mounted installation in hollow walls

<sup>1</sup> Single column OS contains IP Touch 5 OS, IP pushbutton OS , IP keypad OS and other Outdoor Stations assembled with customised modules.

<sup>2</sup> Multiple columns OS contains the Outdoor Stations assembled with customised modules.

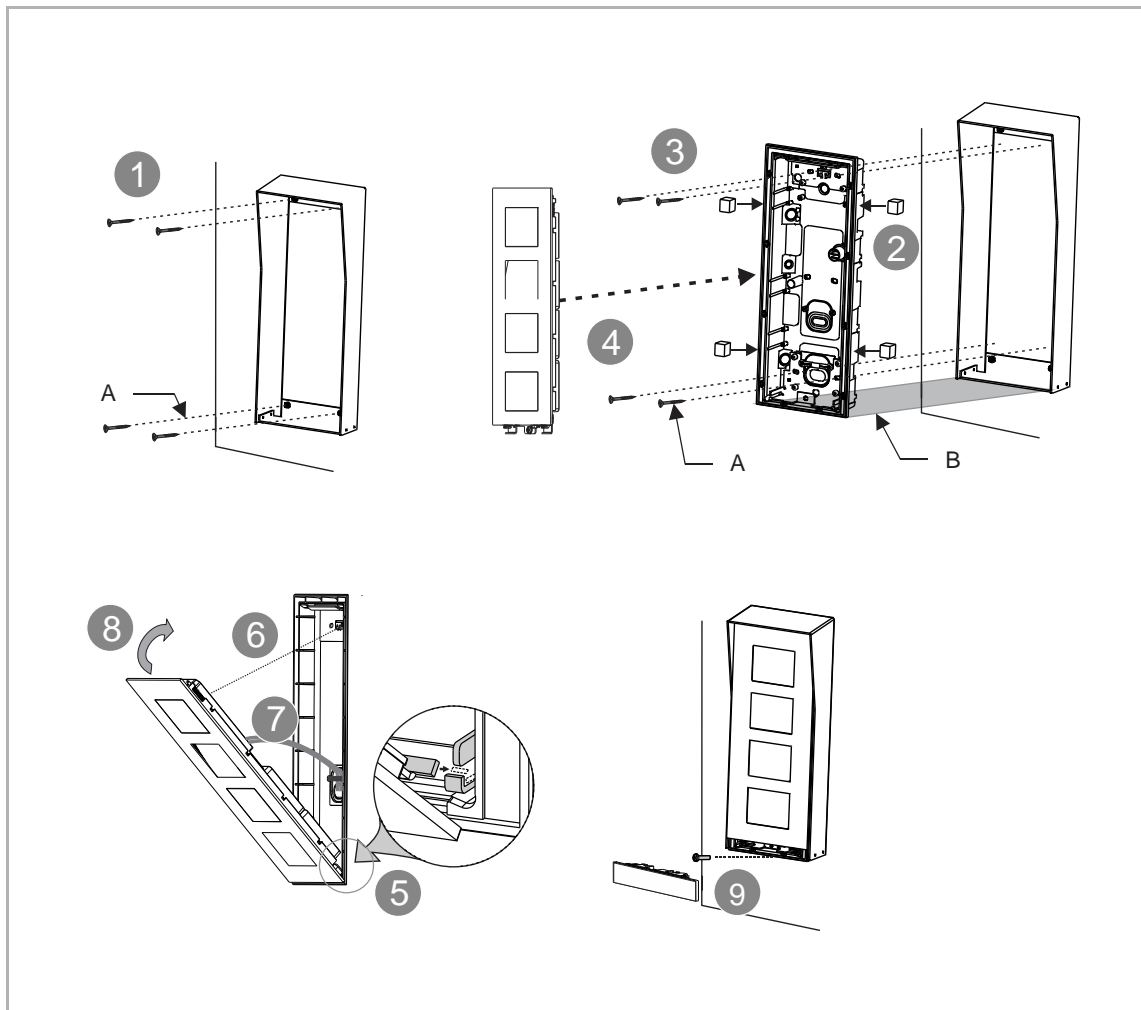
3.1.5 Single column OS

Surface-mounted installation with surface-mounted box



A	Mounting screws x 4
	Screw shaft: $\varnothing 4$
	Screw length: $\geq 25$ mm
B	Surface-mounted box for OS

Surface-mounted installation with flush-mounted box

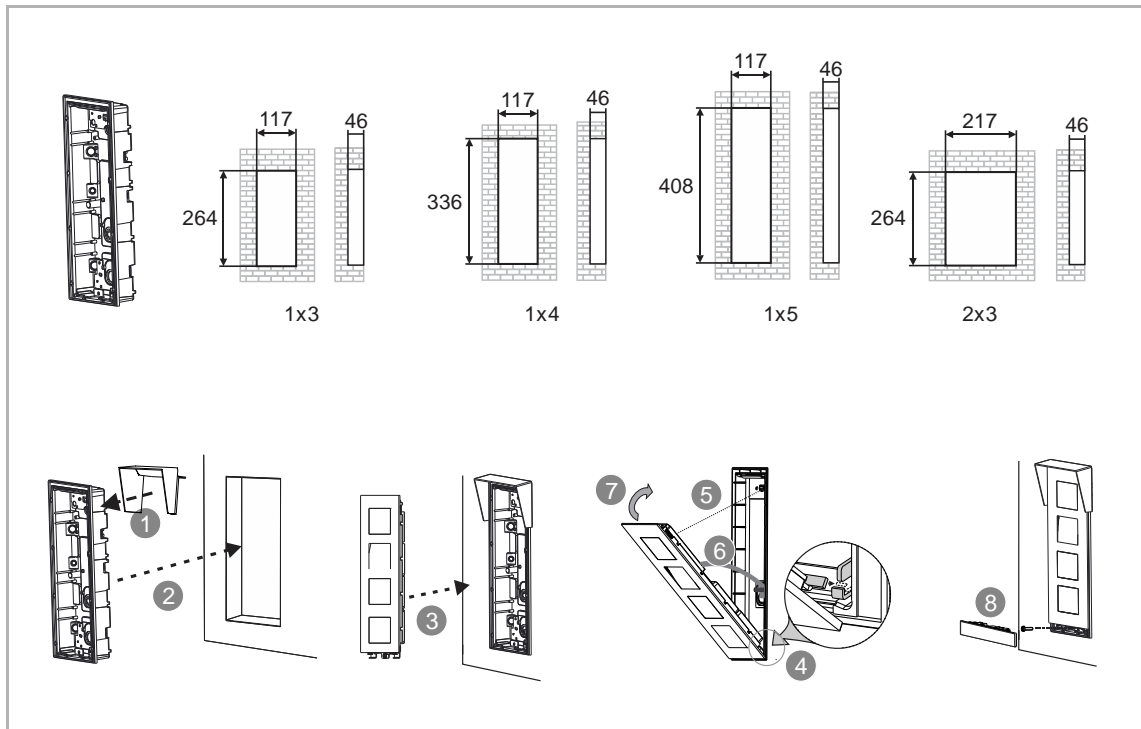


A	<p>Mounting screws x 4</p> <p>Screw shaft: <math>\varnothing 4</math></p> <p>Screw length: <math>\geq 25</math> mm</p>
B	<p>The bottom of FM box must be aligned with the bottom of weather cover.</p>

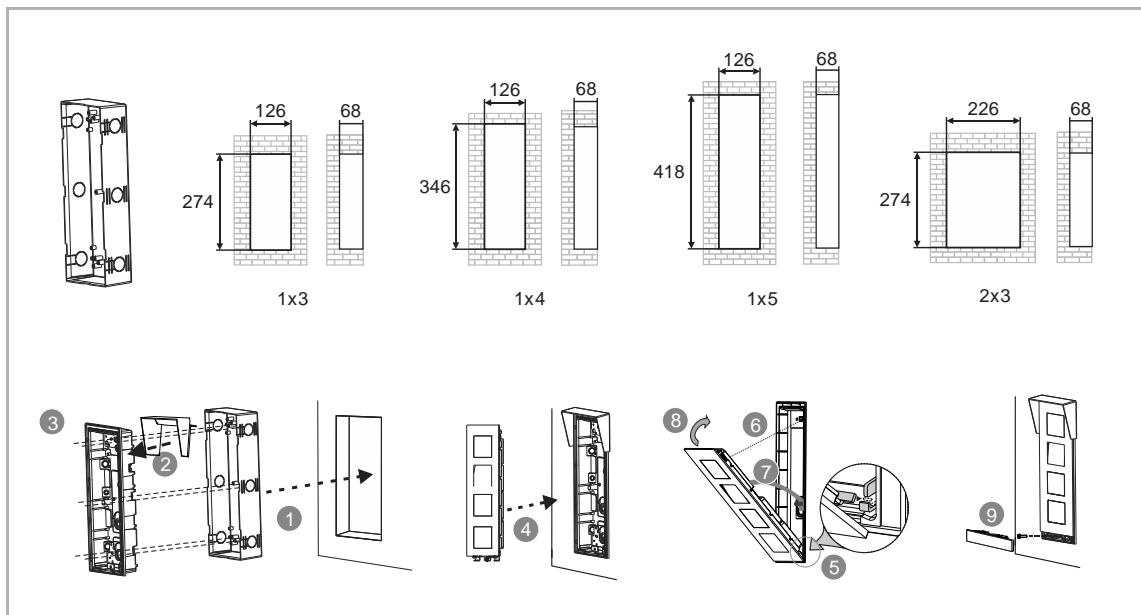


**Flush-mounted installation in solid walls**

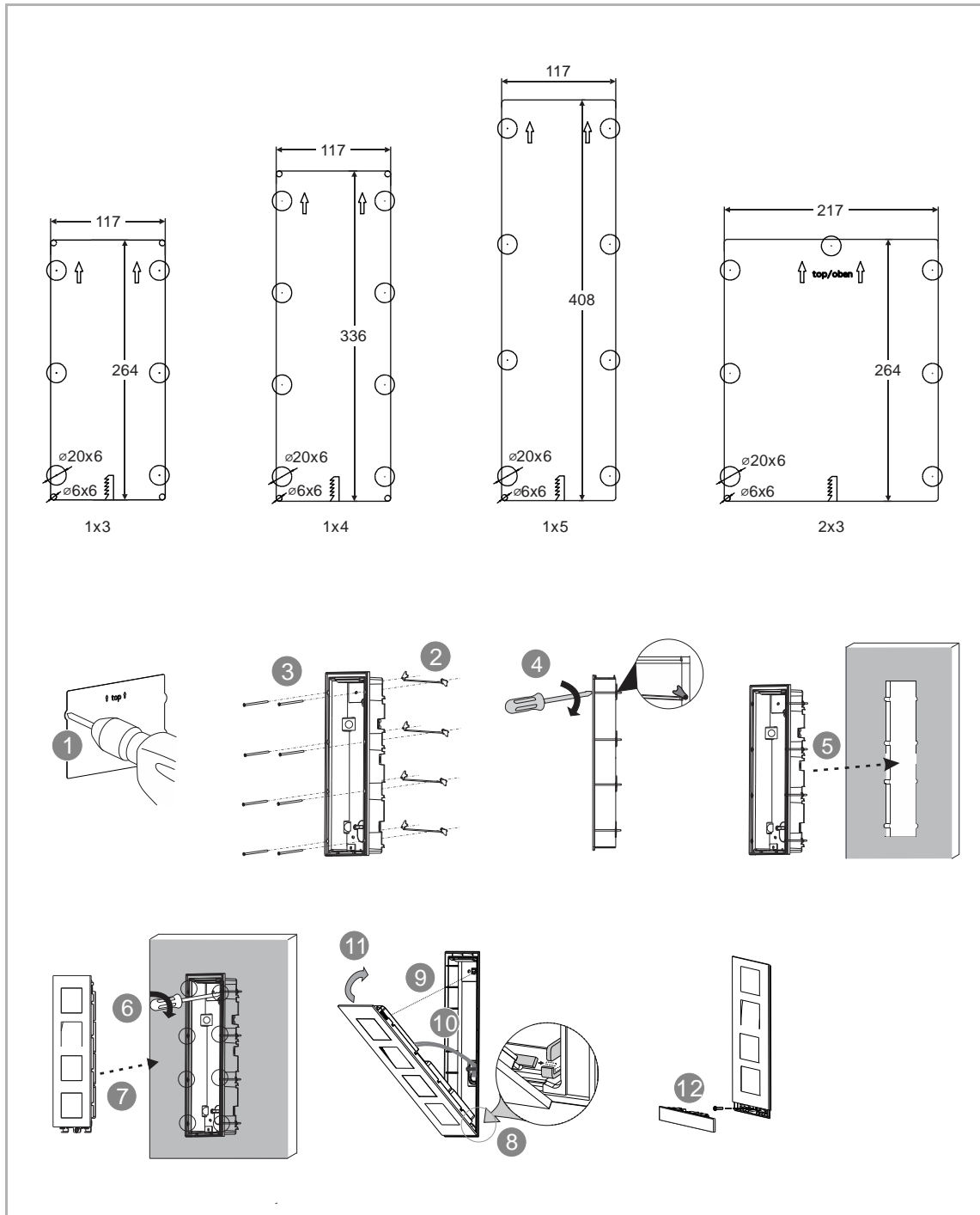
**1. Without the pre-installation box**



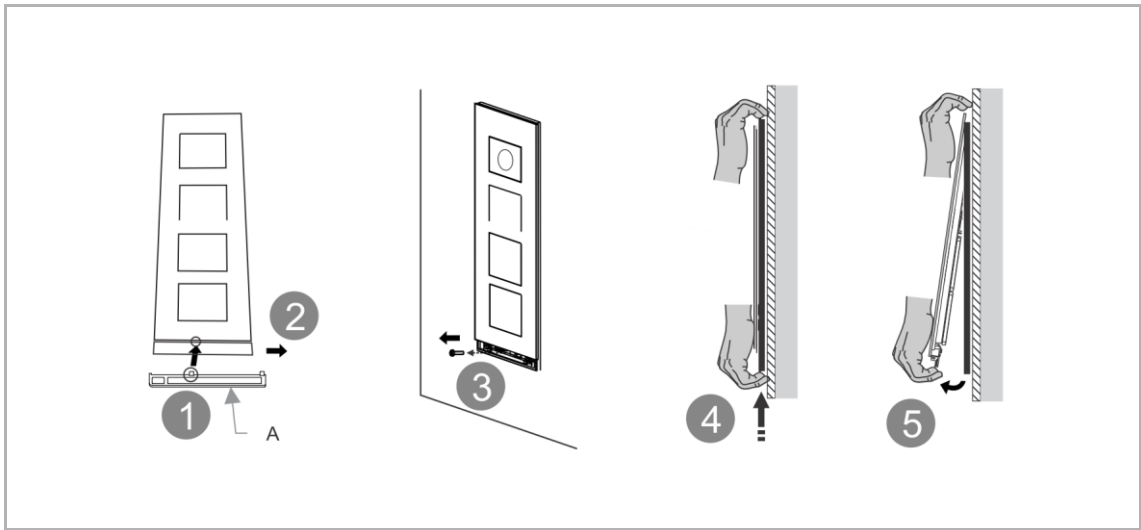
**2. With the pre-installation box**



Flush-mounted installation in hollow walls

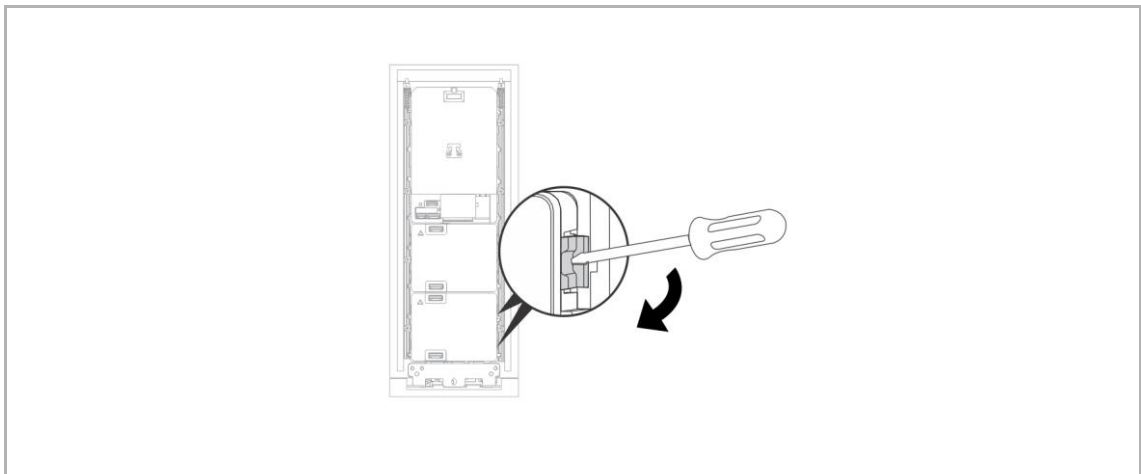


### Dismantling single column OS

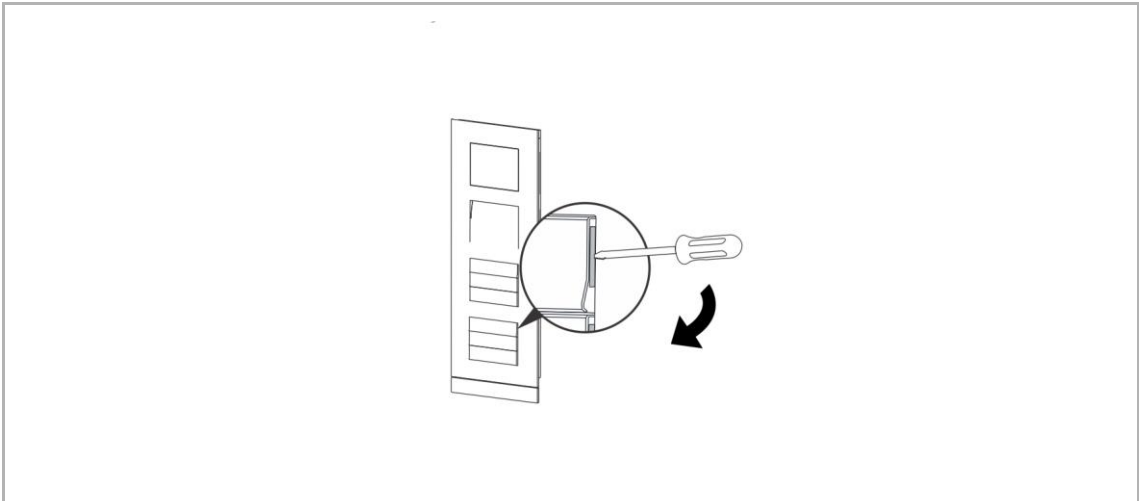


A	Mounting tool
---	---------------

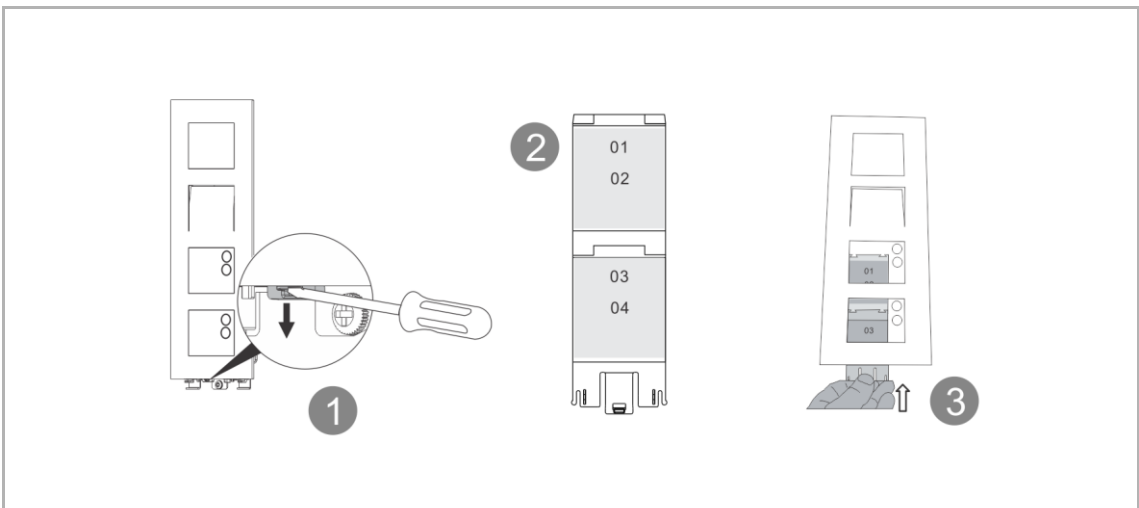
### Dismantling the modules



### Dismantling the name label

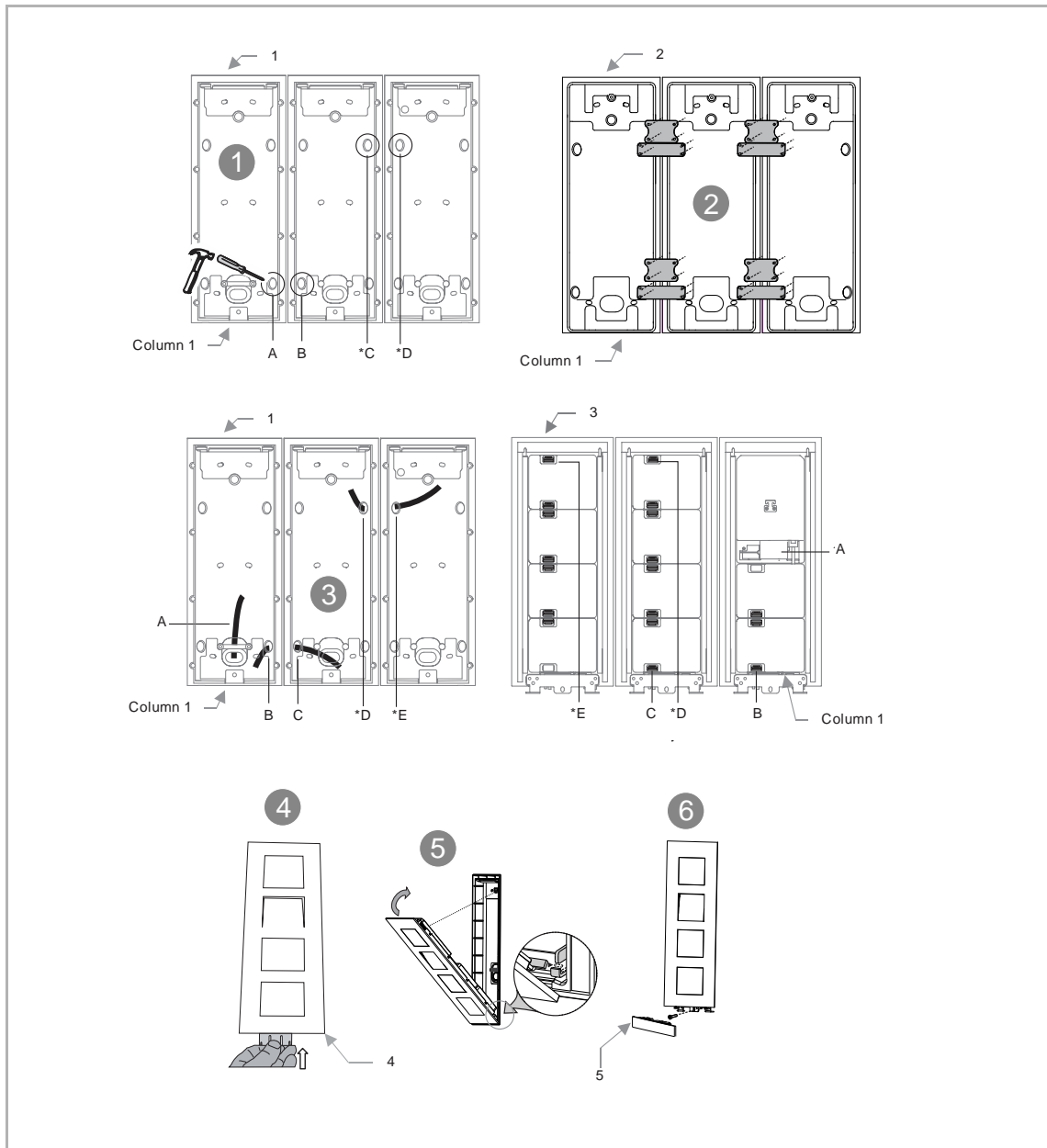


### Replacing the name plate



3.1.6 Multiple columns OS

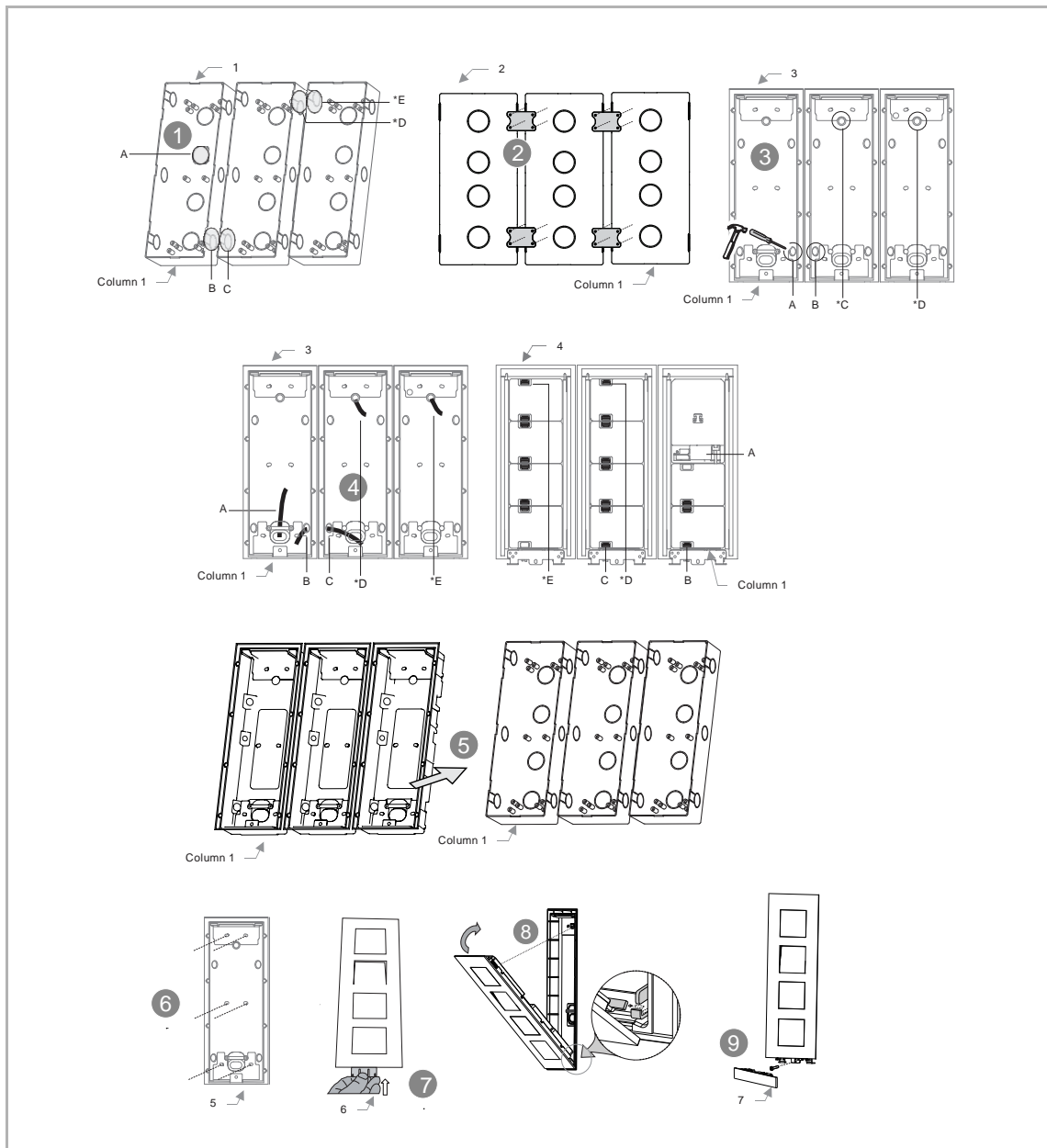
Flush-mounted installation in solid wall without pre-installation boxes



1	Front view of the flush-mounted box
2	Back view of the flush-mounted box
3	Back view of the front panel
4	Insert the clips for each column according to the CLIP rule.
5	Begin form column 1, then column 2, finally column3.

\*applies to 3-column Outdoor Station only

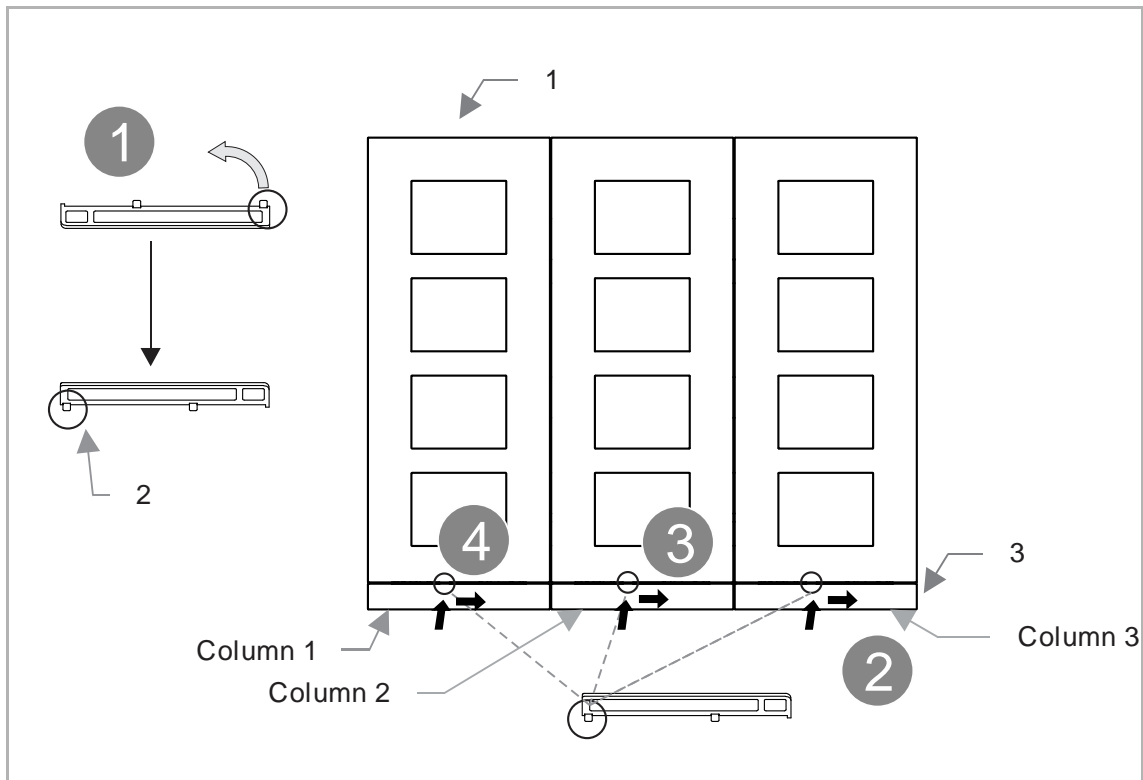
**Flush-mounted installation in solid wall with pre-installation boxes**



1	Front view of the pre-installation boxes
2	Back view of the pre-installation boxes
3	Front view of the flush-mounted boxes
4	Back view of the front panel
5	Lock the flush-mounted boxes onto the pre-installation boxes.
6	Insert the clips for each column according to the CLIP rule.
7	Begin from column 1, then column 2, finally column 3.

\*applies to 3-column Outdoor Station only

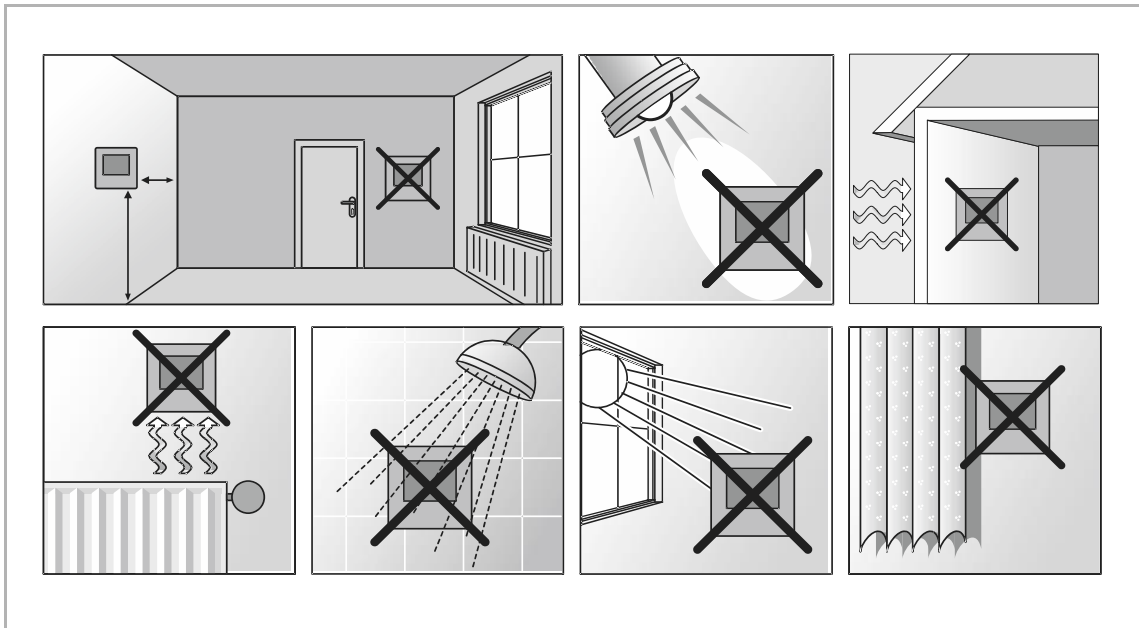
**Dismantling the multiple columns OS**



1	Front view of the multiple columns Outdoor Station
2	Mounting tool
3	Begin from column 3, then column 2, finally column 1.

**3.2 Indoor Stations**

**3.2.1 Location**

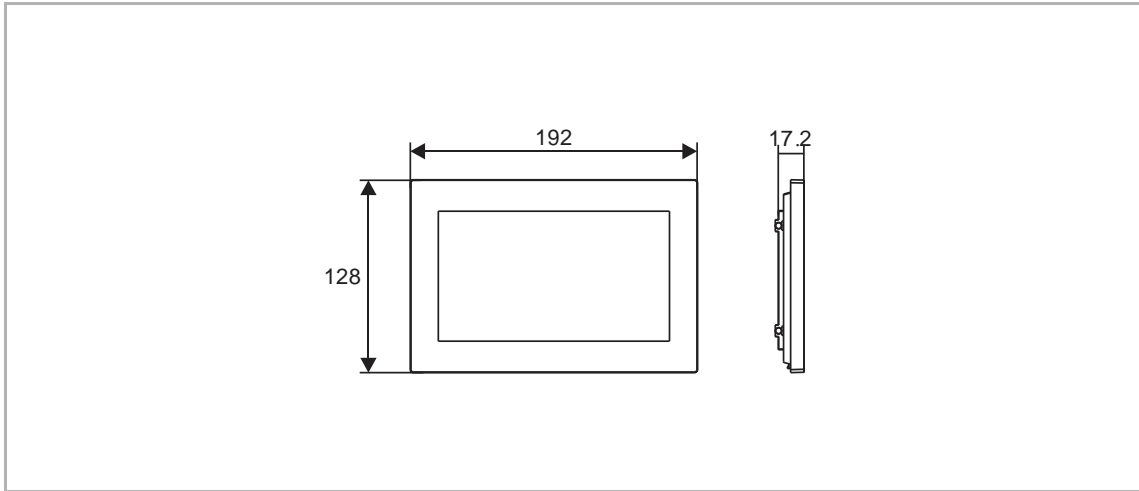




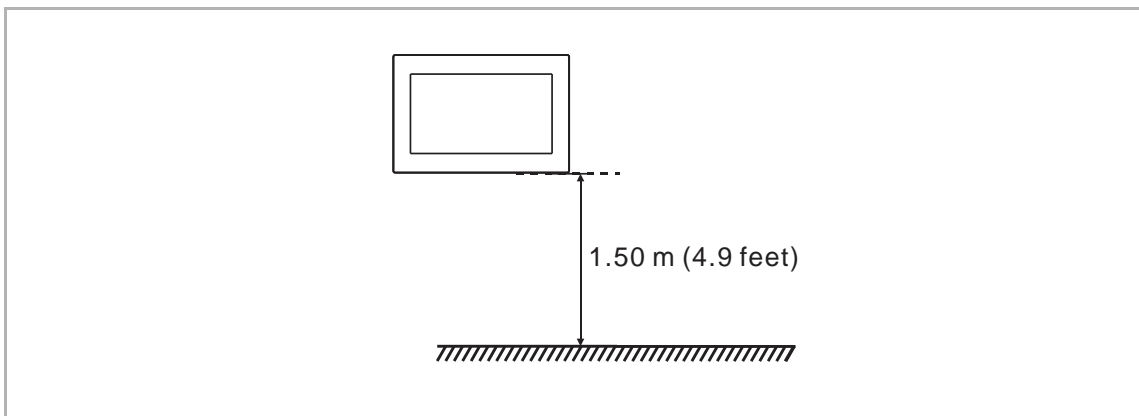
**3.2.2 IP Touch Lite 7**

**Product dimension**

(unit: mm)

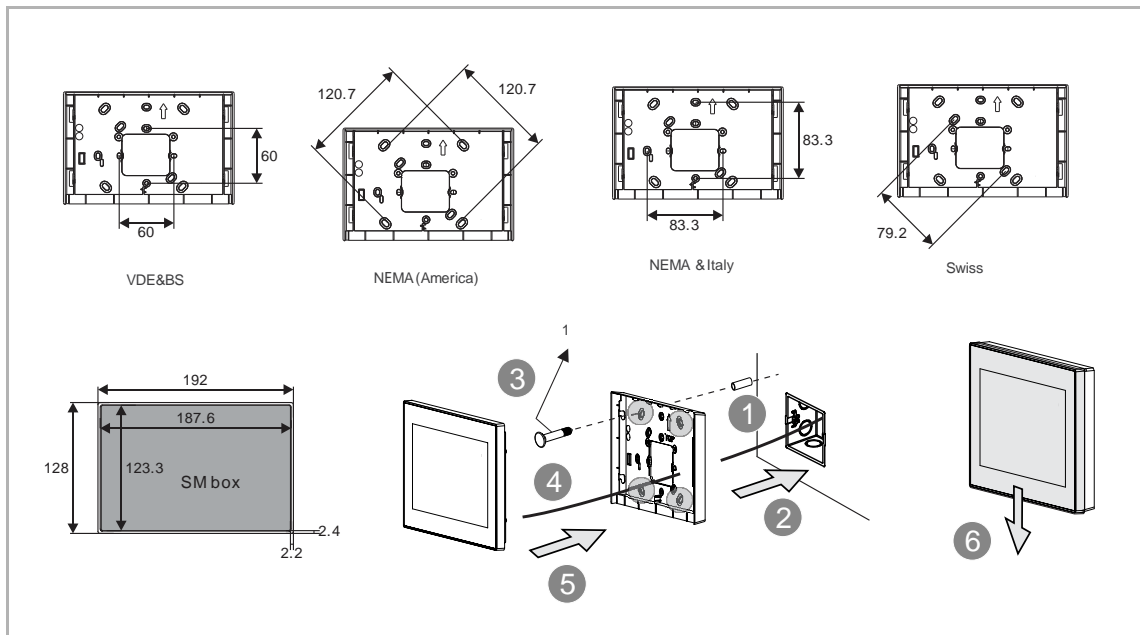


**Installation height**



**Surface-mounted installation**

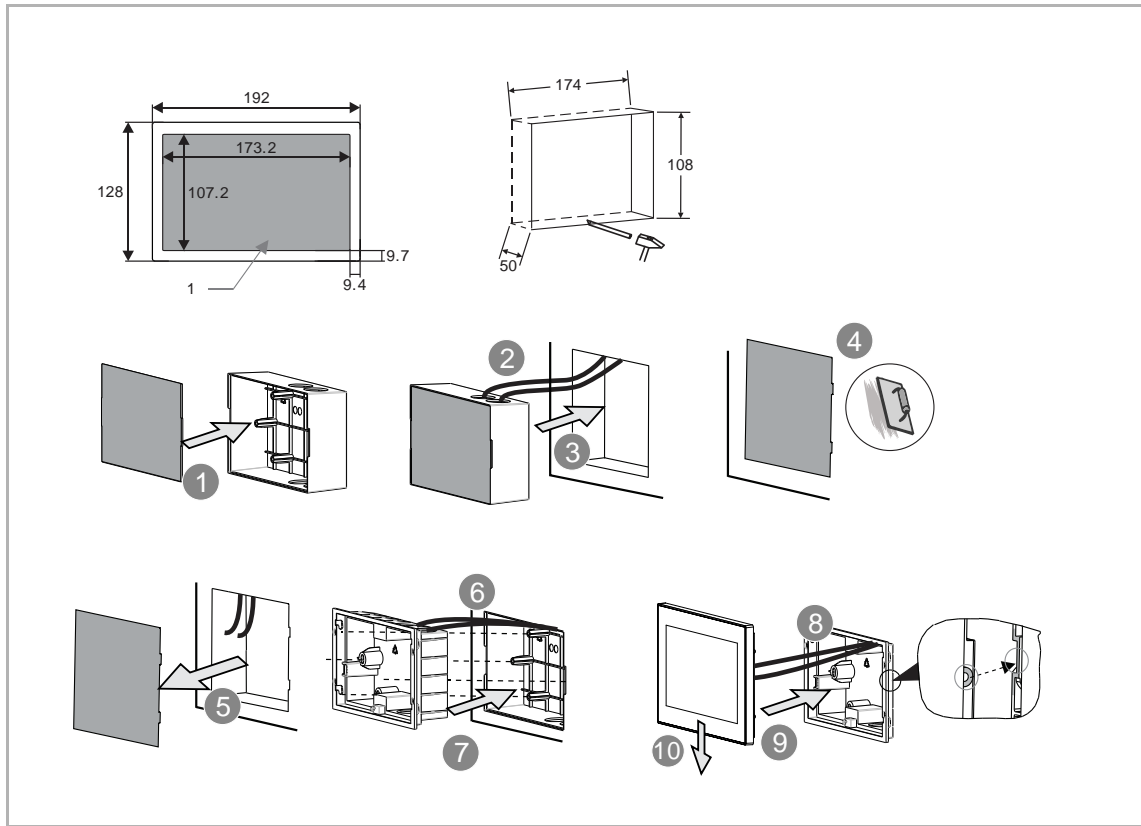
(unit: mm)



- |   |   |
|---|---|
| 1 | <p>Screw the mounting bracket to accessory box.<br/>It is recommended to lock the positions marked in grey with screws to better secure the device.</p> |
|---|---|

**Flush-mounted installation with pre-installation box**

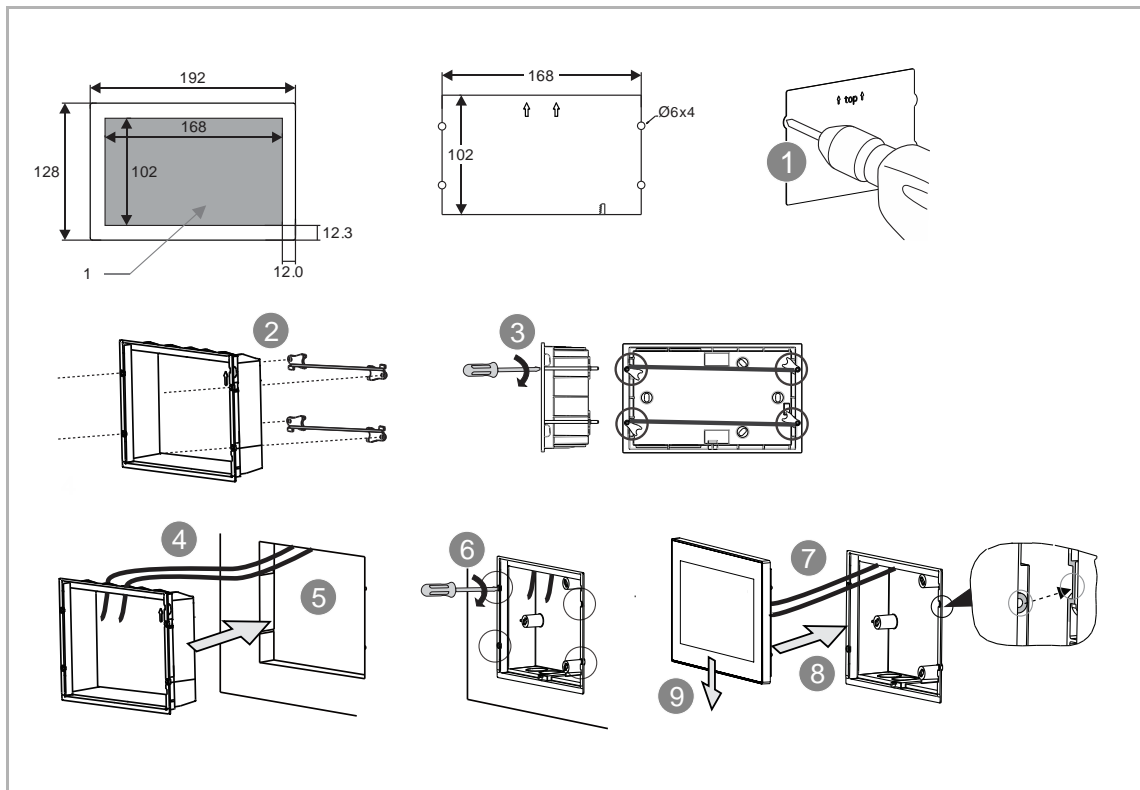
(unit: mm)



1	Hole size of pre-installation box
---	-----------------------------------

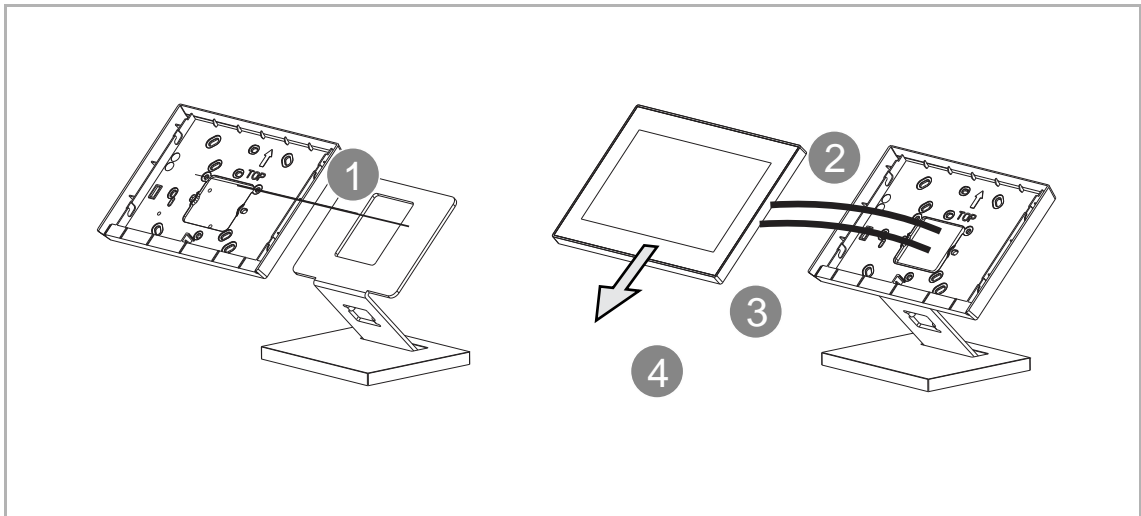
**Flush-mounted installation in the hollow wall**

(unit: mm)

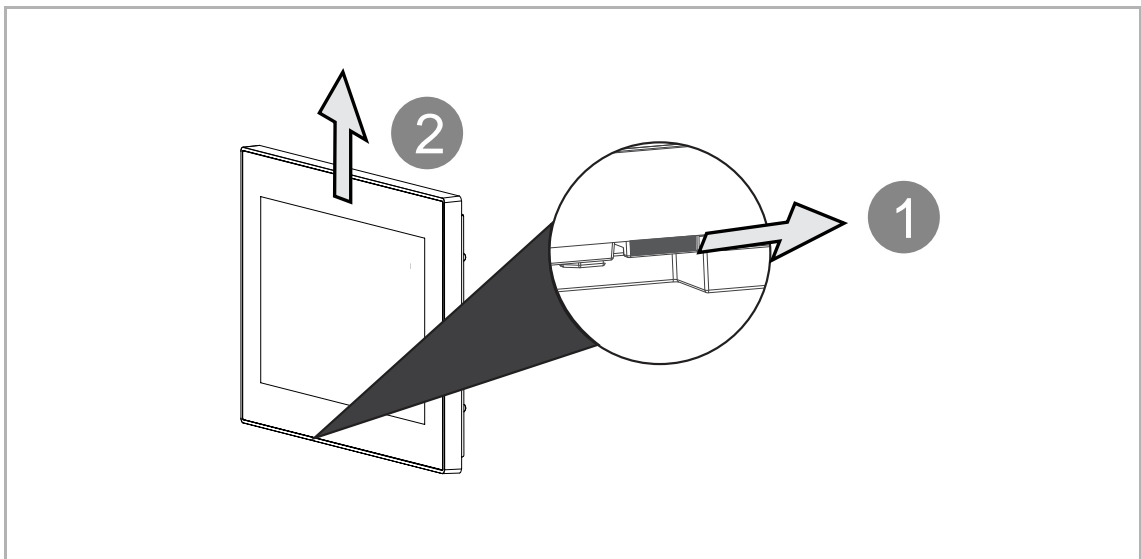


1	Hole size of flush-mounted box
---	--------------------------------

**Desktop installation**



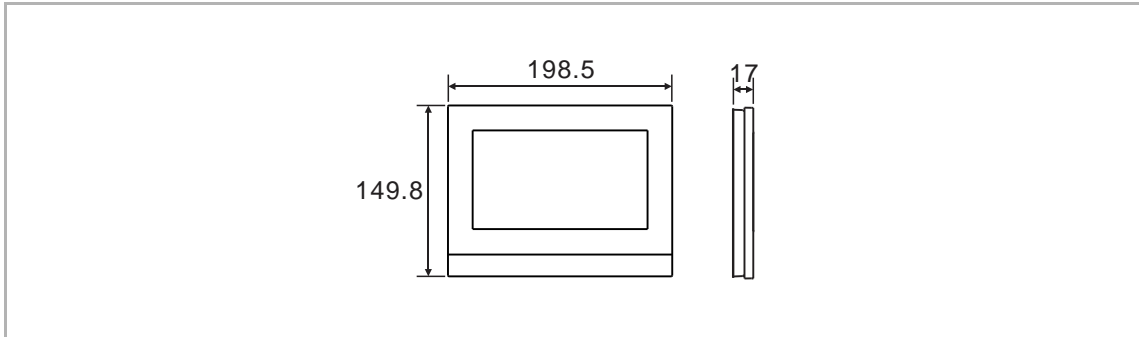
**Dismantling**



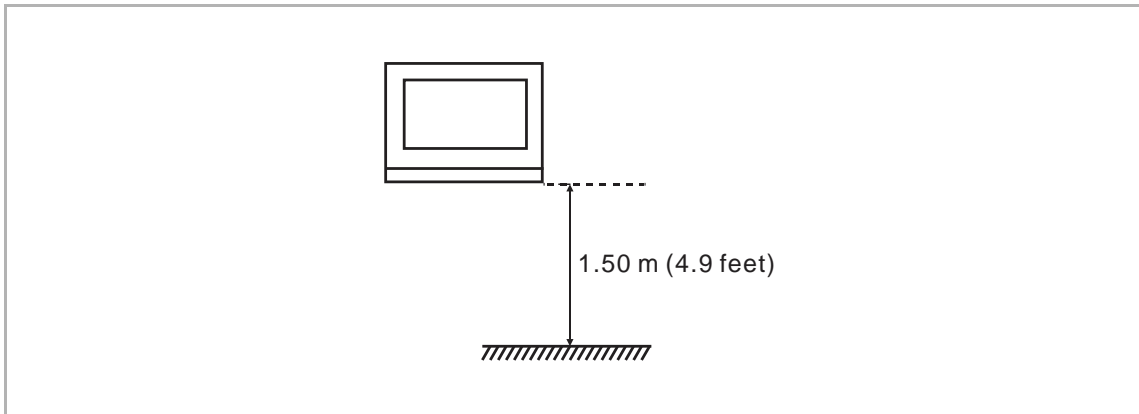
**3.2.3 IP Touch 7**

**Product dimension**

(unit: mm)

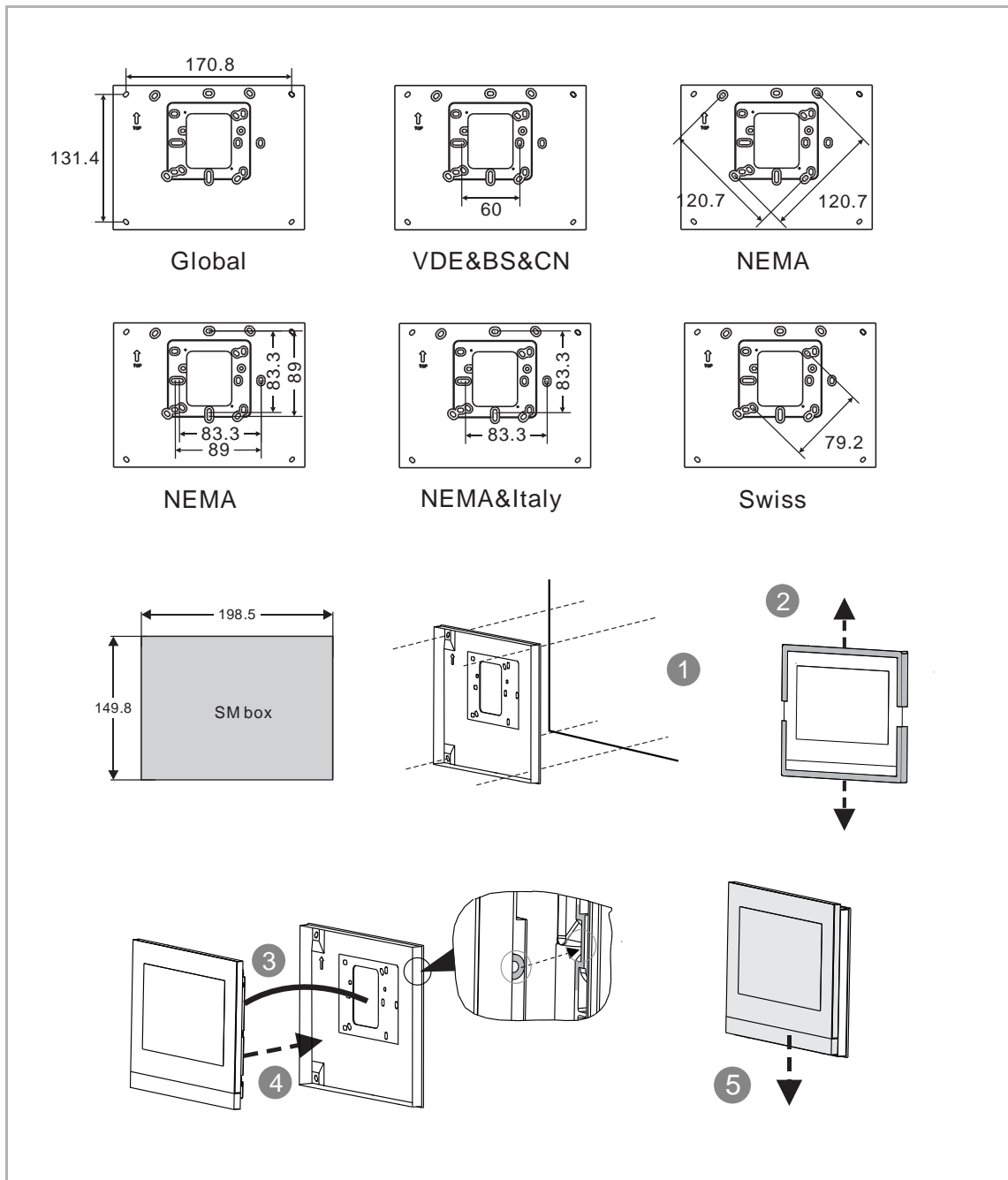


**Installation height**

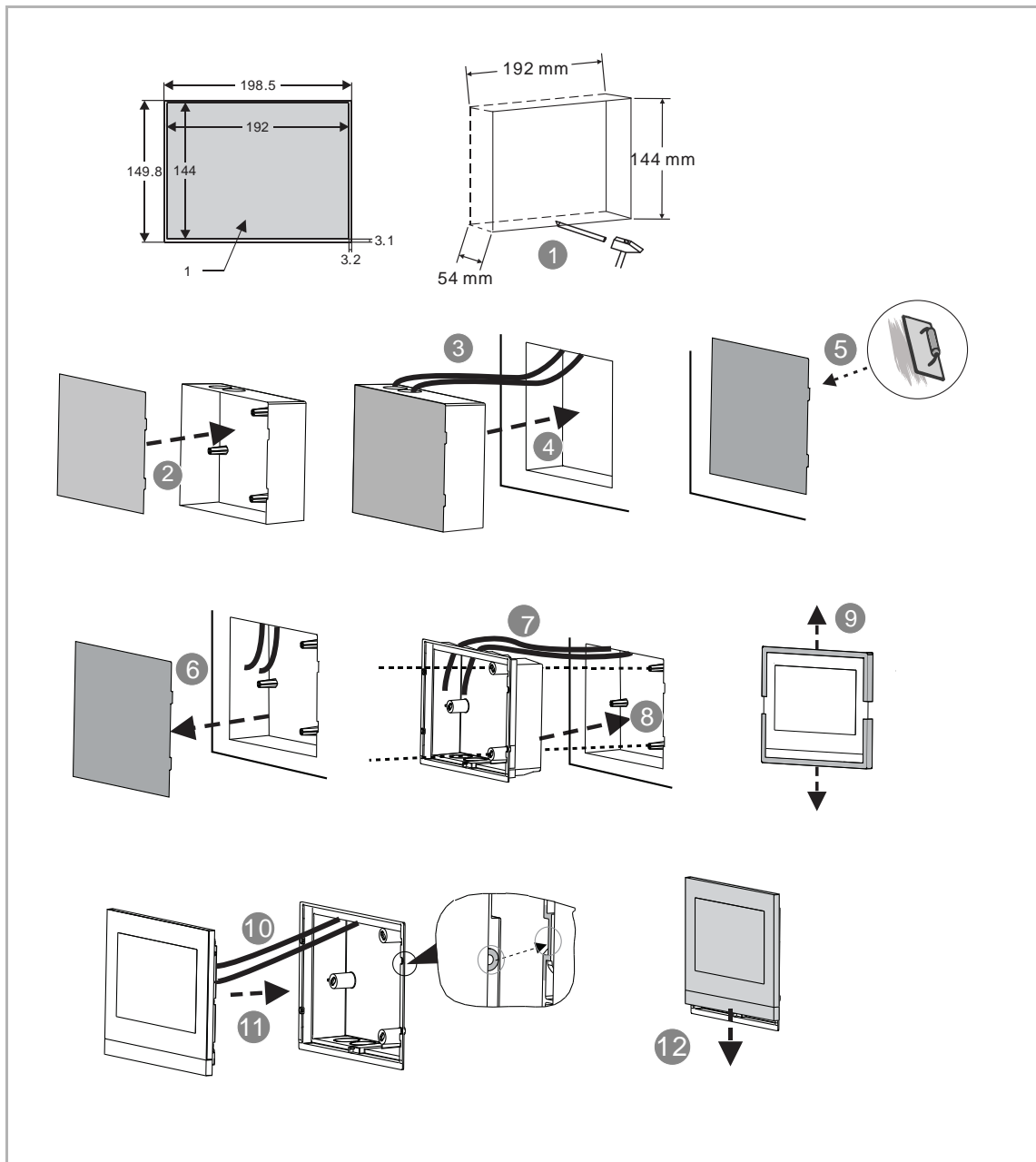


**Surface-mounted installation**

This chapter is not suitable for IP Touch 7 (LAN+LAN).



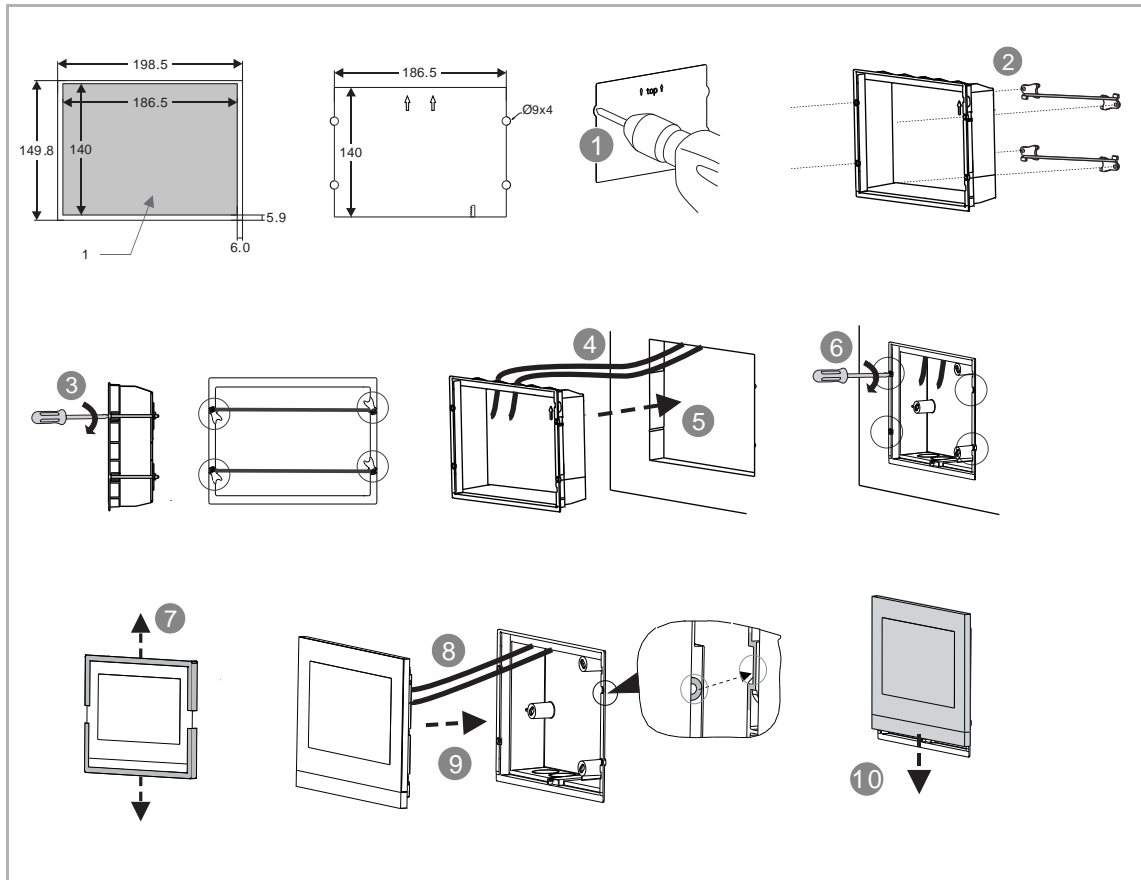
**Flush-mounted installation in the solid wall with pre-installation box**



1	Hole size of the pre-installation box
---	---------------------------------------



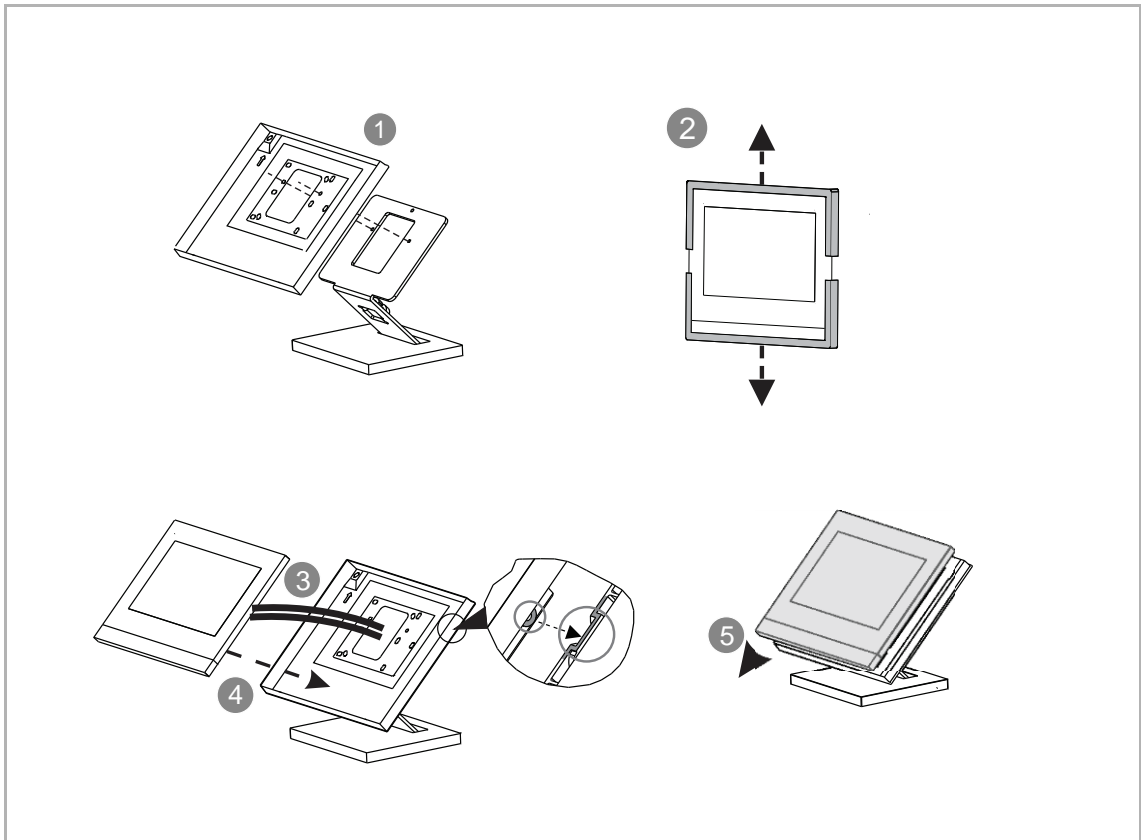
**Flush-mounted installation in the hollow wall**



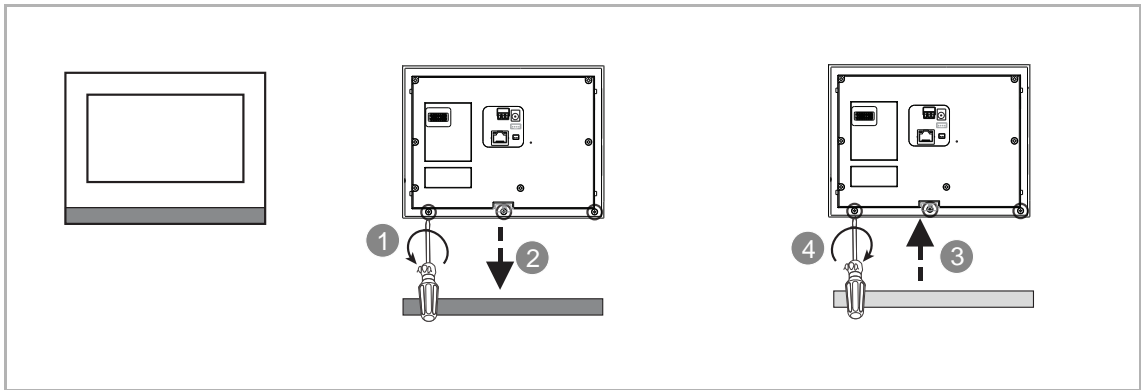
1	Hole size of flush-mounted box
---	--------------------------------

### Desktop installation

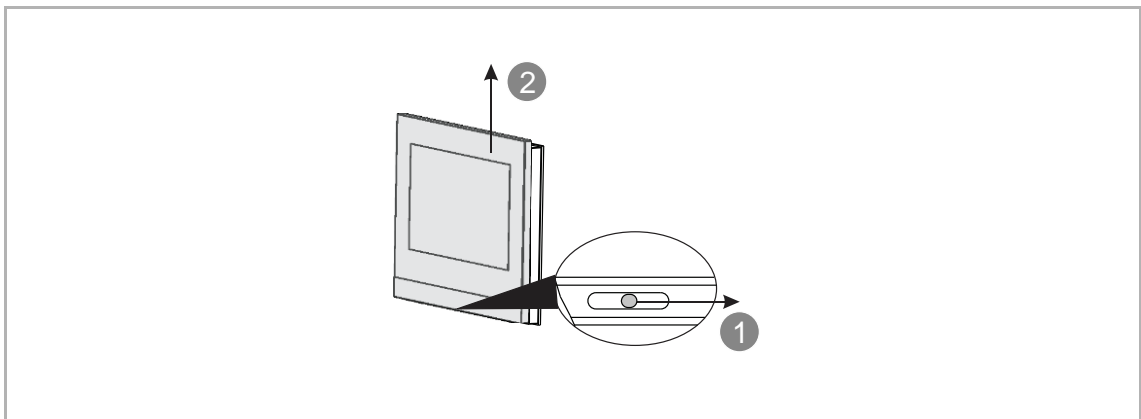
This chapter is not suitable for IP Touch 7 (LAN+LAN).



### Replacing the end strip



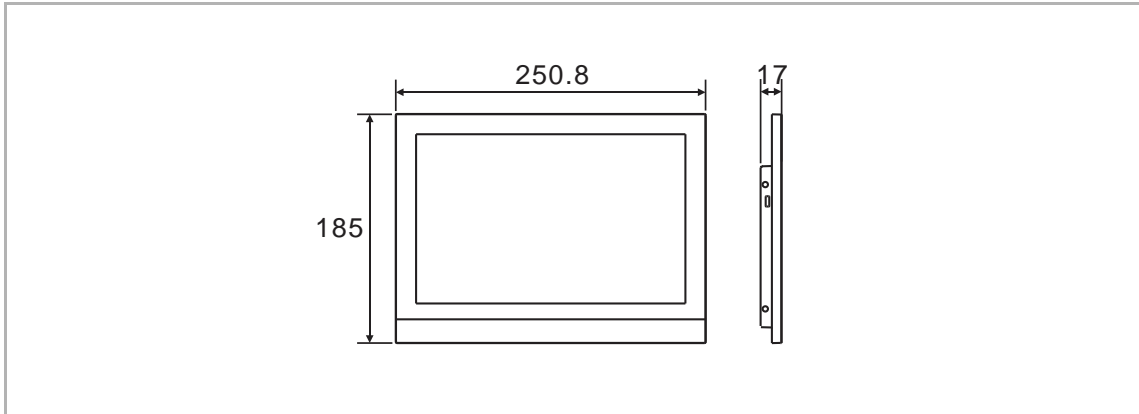
### Dismantling



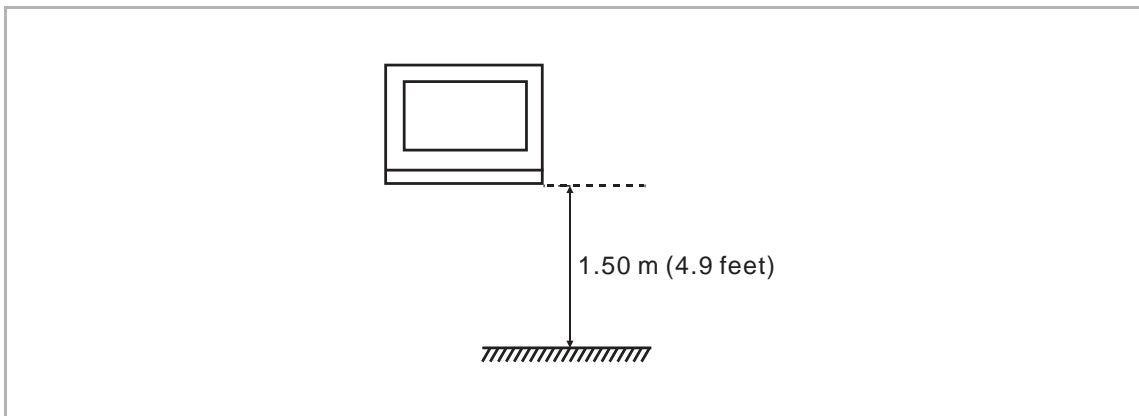
**3.2.4 IP Touch 10**

**Product dimension**

(unit: mm)



**Installation height**

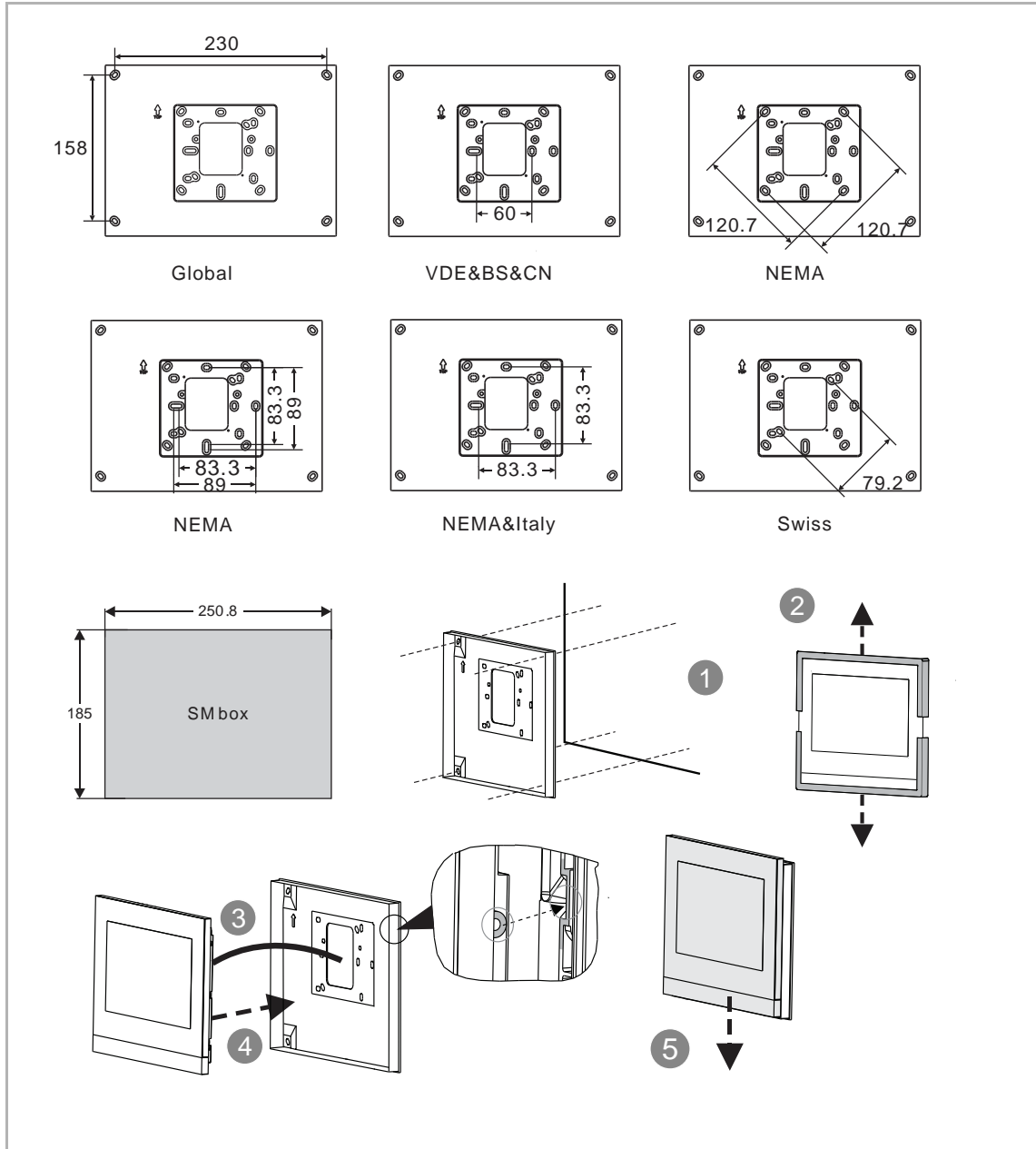


**Surface-mounted installation**

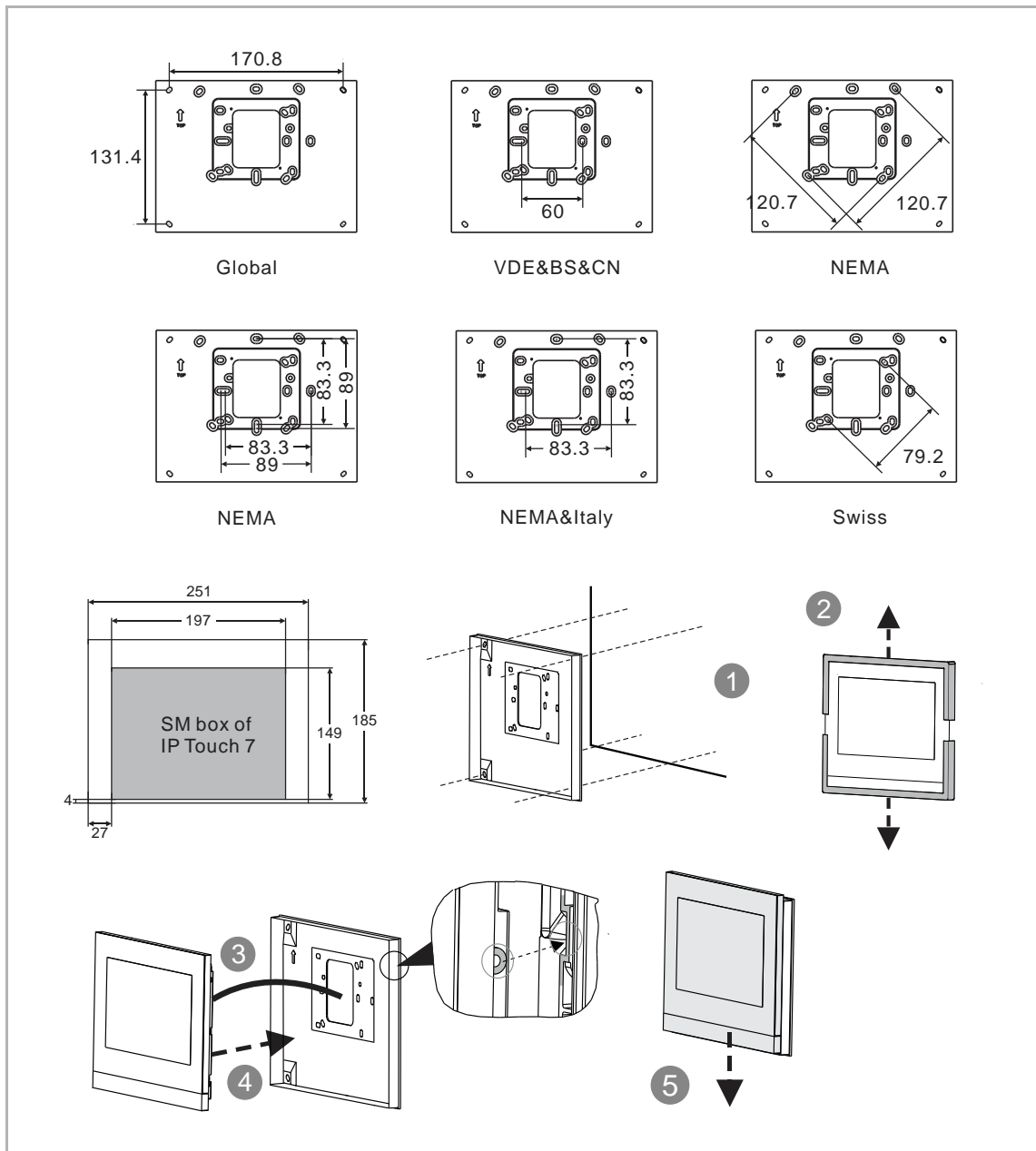
This chapter is not suitable for IP Touch 10 (LAN+LAN).

(unit: mm)

IP Touch 10 can use the surface-mounted box of IP Touch 10.

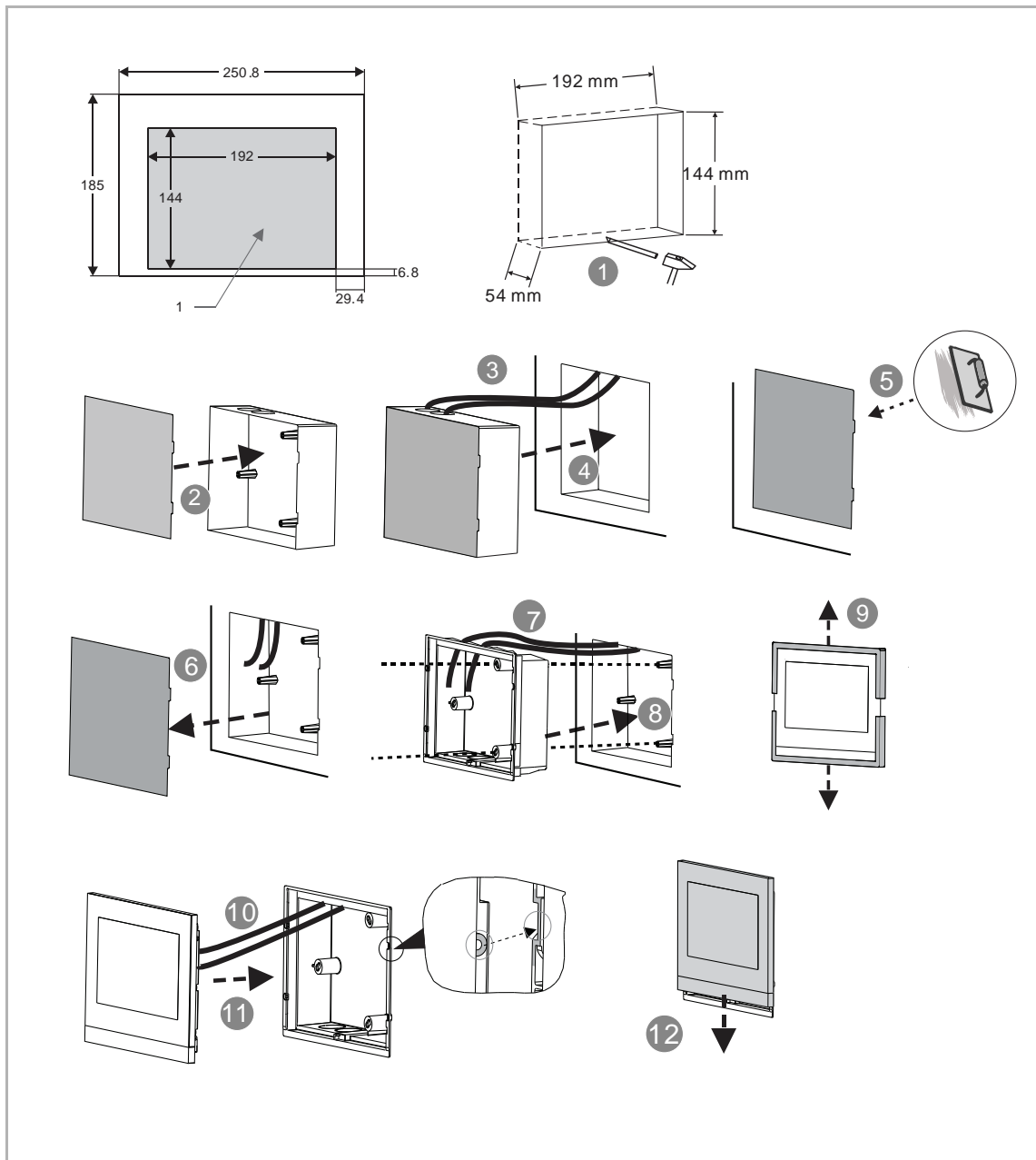


IP Touch 10 can also use the surface-mounted box of IP Touch 7.



**Flush-mounted installation in the solid wall with pre-installation box**

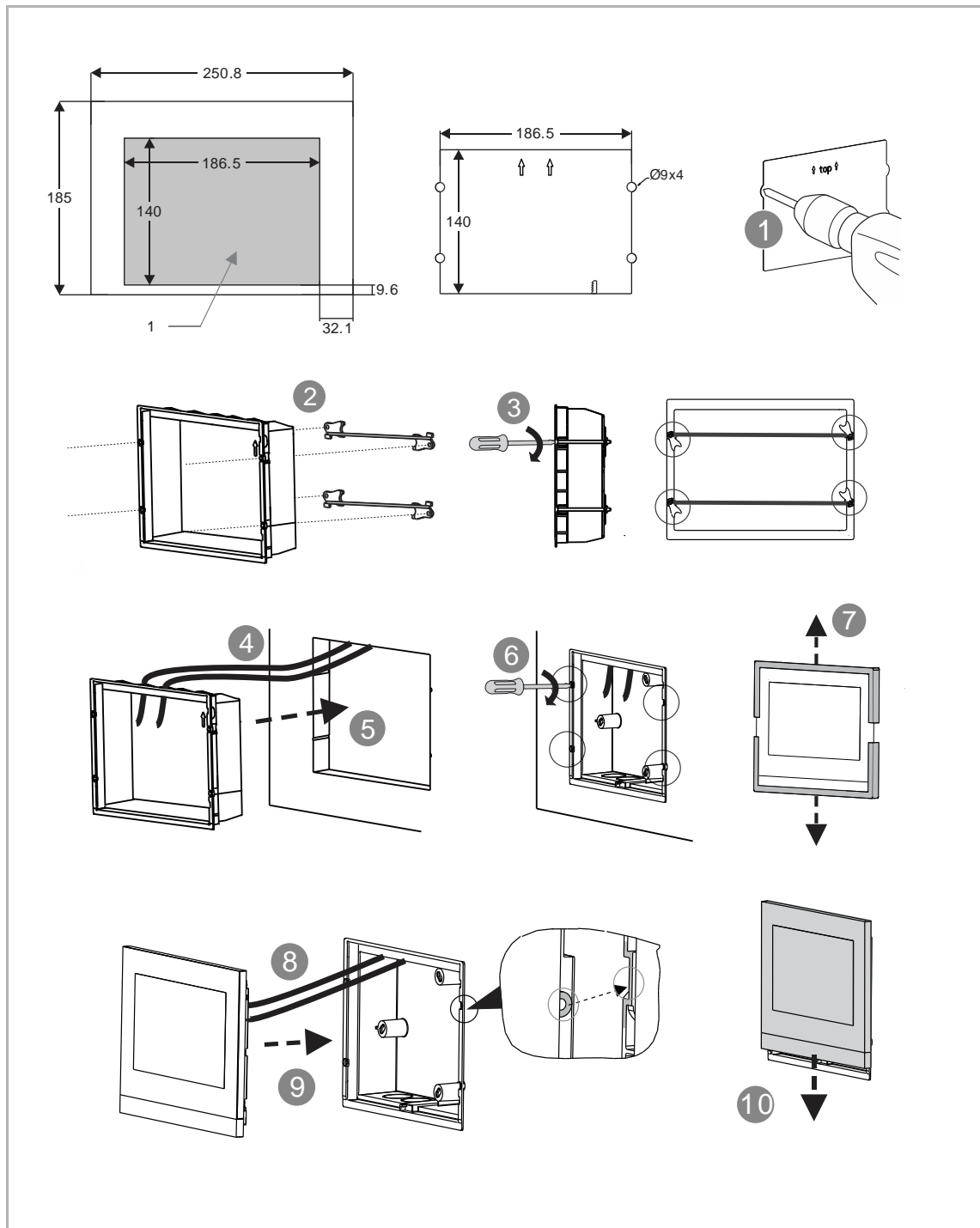
(unit: mm)



1 Hole size of the pre-installation box

**Flush-mounted installation in the hollow wall**

(unit: mm)

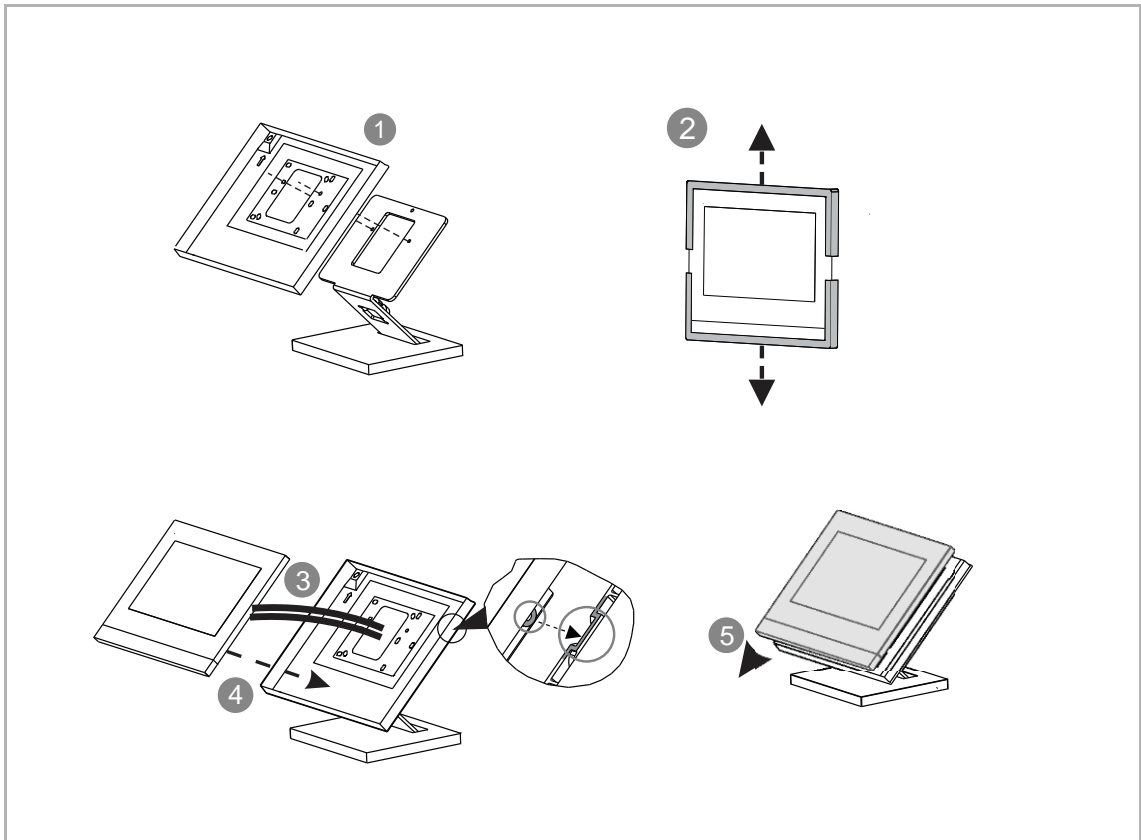


1 Hole size of flush-mounted box



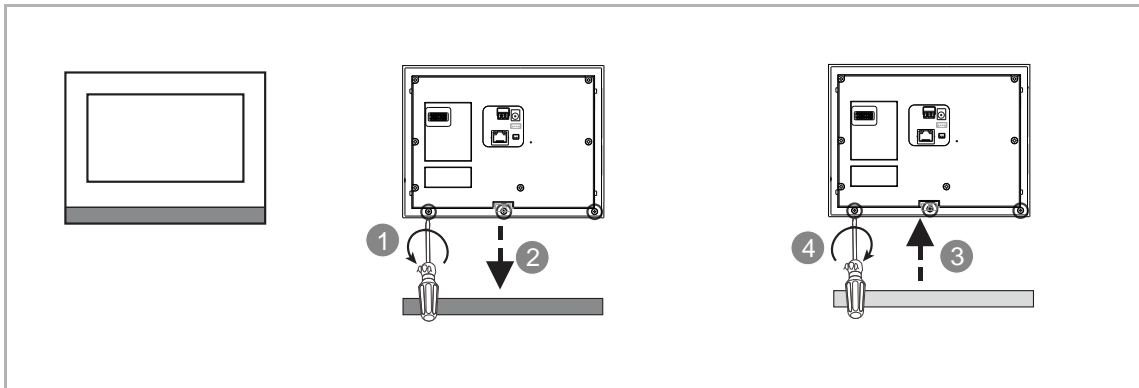
**Desktop installation**

This chapter is not suitable for IP Touch 10 (LAN+LAN).

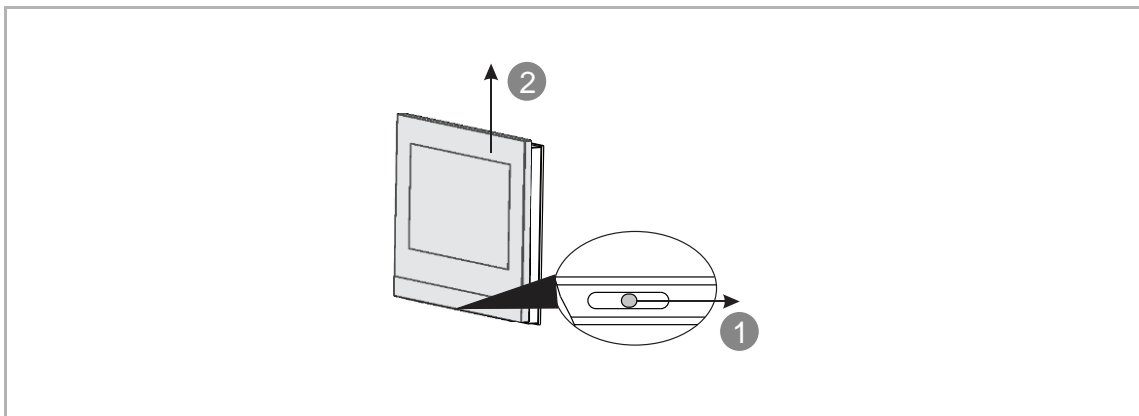


### Replacing the end strip

4 screws need to be removed.



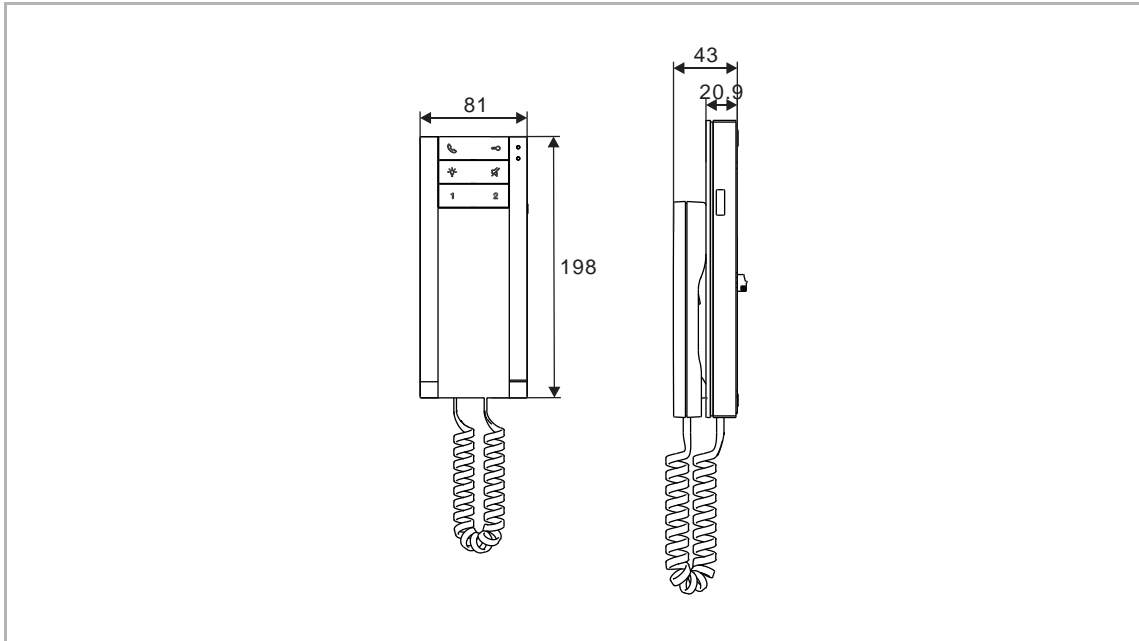
### Dismantling



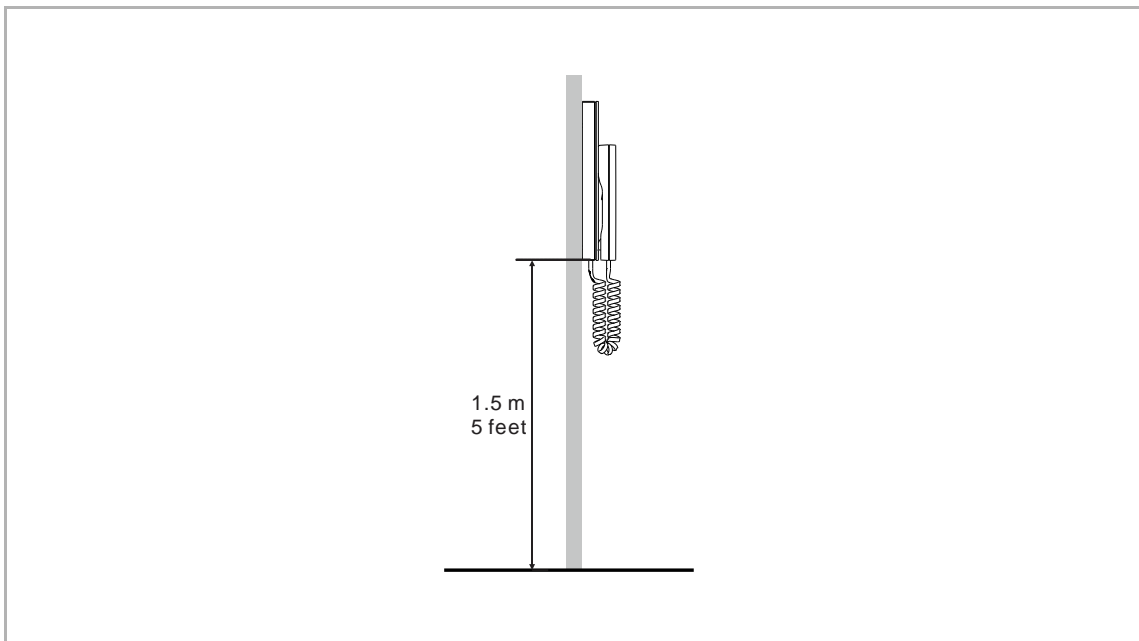
### 3.2.5 Audio IP

#### Product dimension

(unit: mm)

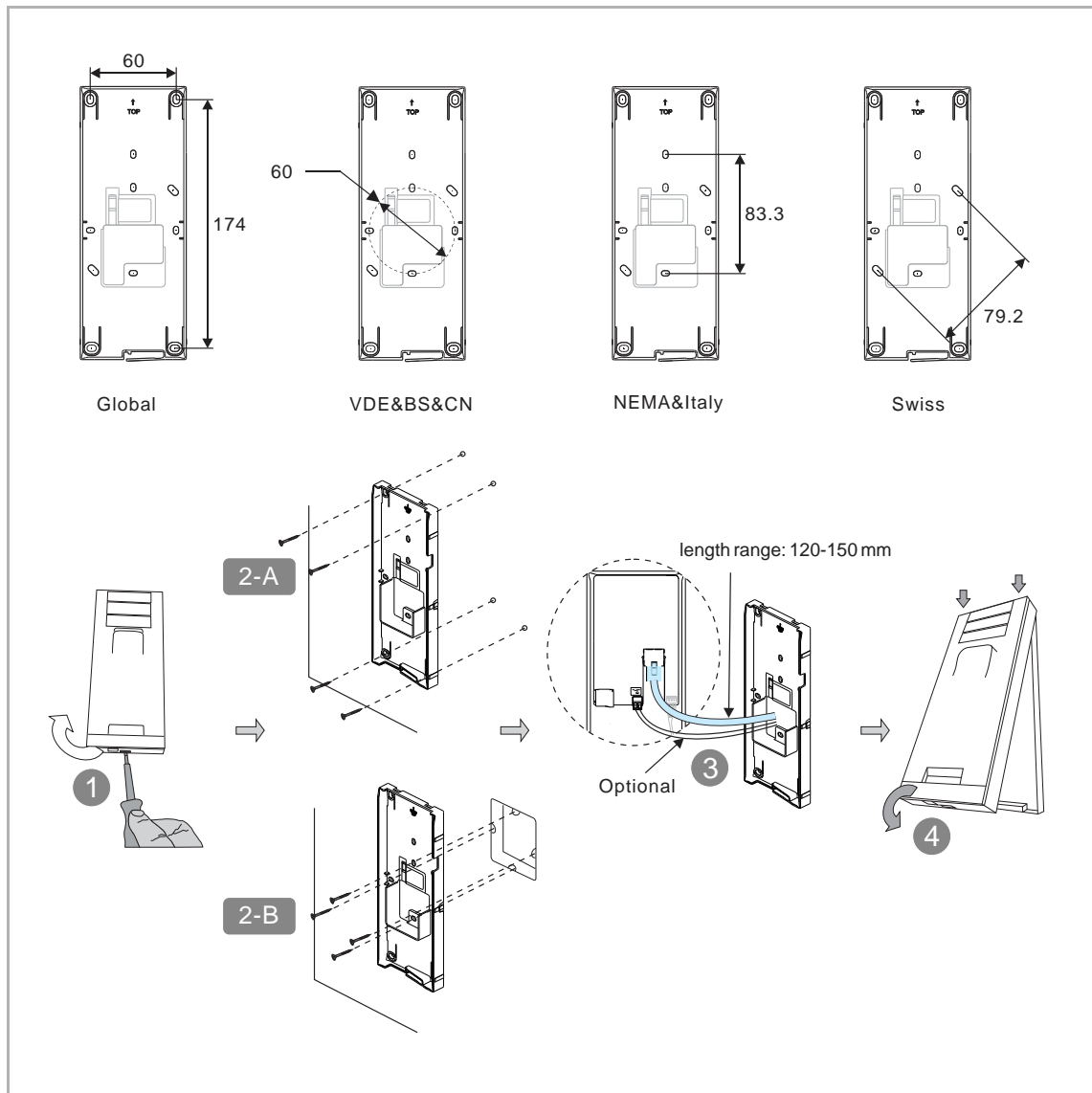


#### Installation height



**Surface-mounted installation**

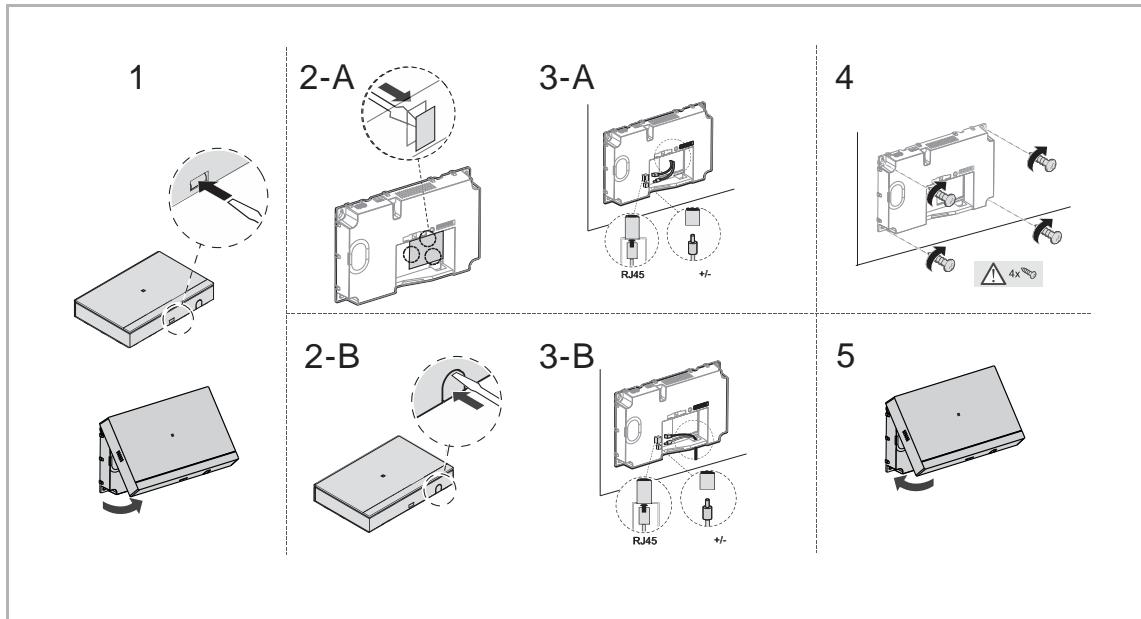
(unit: mm)



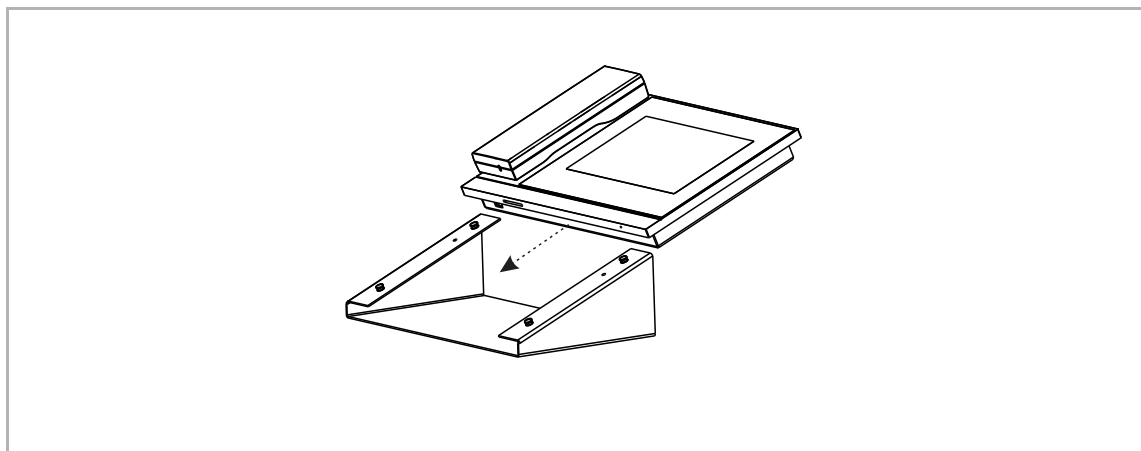
1	Disassemble the upper part from the bottom part by using a screwdriver.
2-A	Affix the bottom part on the wall.
2-B	Affix the bottom part on the box.
3	Connect the wires.
4	Latch the upper part onto the bottom part.

**3.3 System Devices**

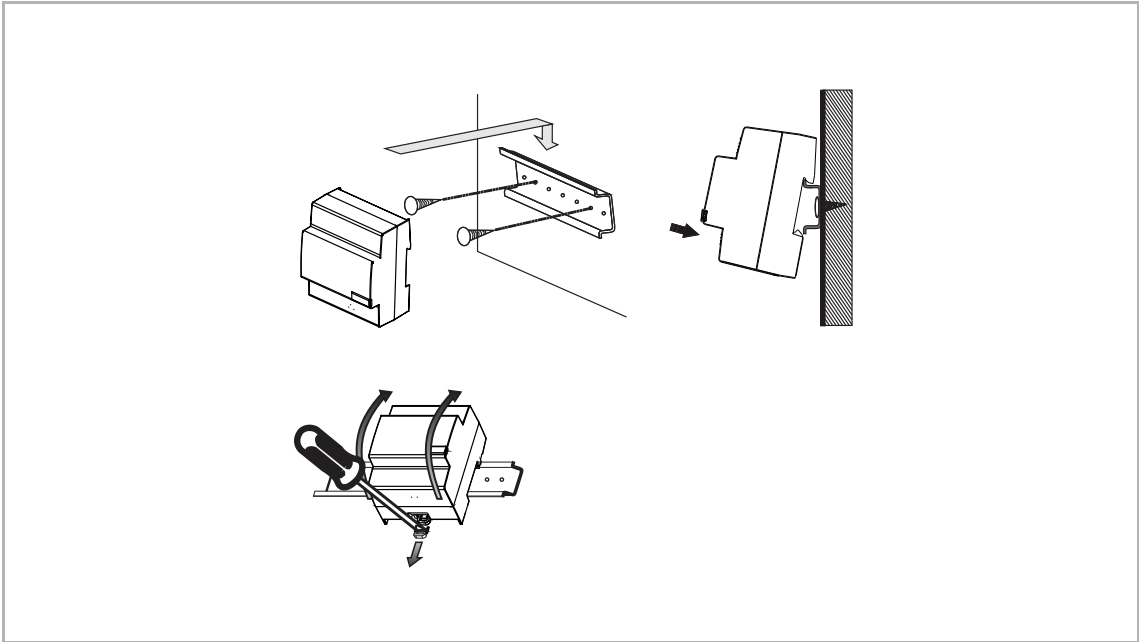
**3.3.1 Smart Access Point**



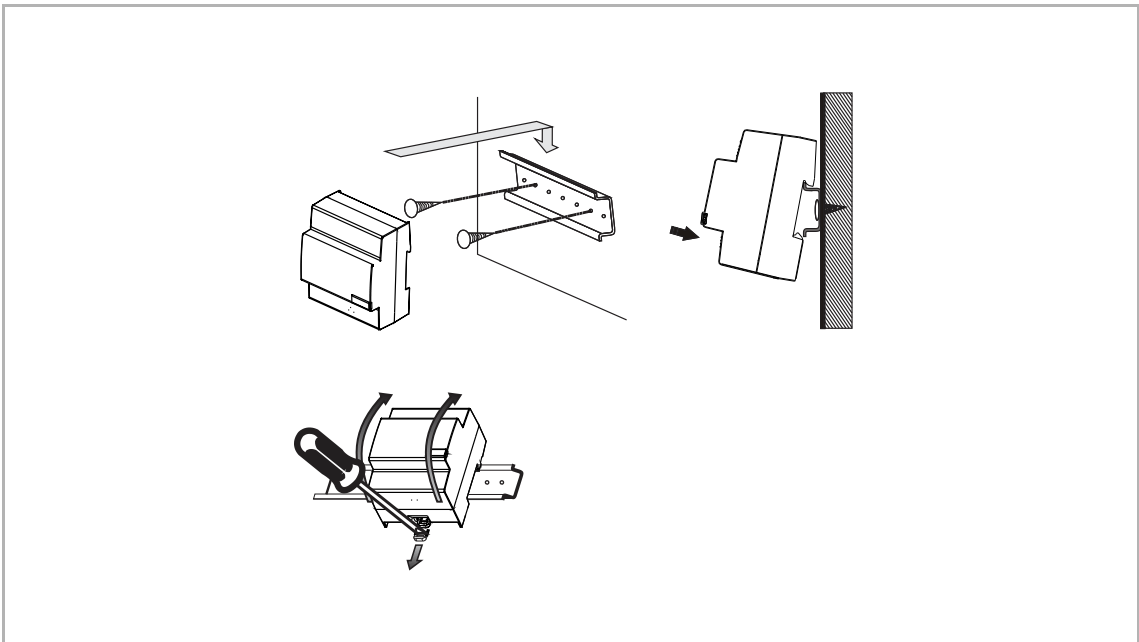
**3.3.2 Guard Unit**



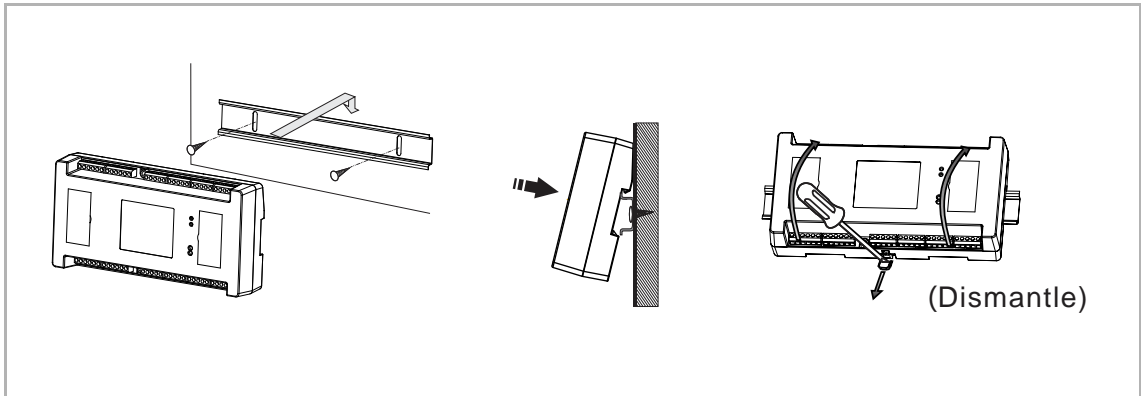
**3.3.3 IP Actuator**



**3.3.4 IP Elevator Controller**



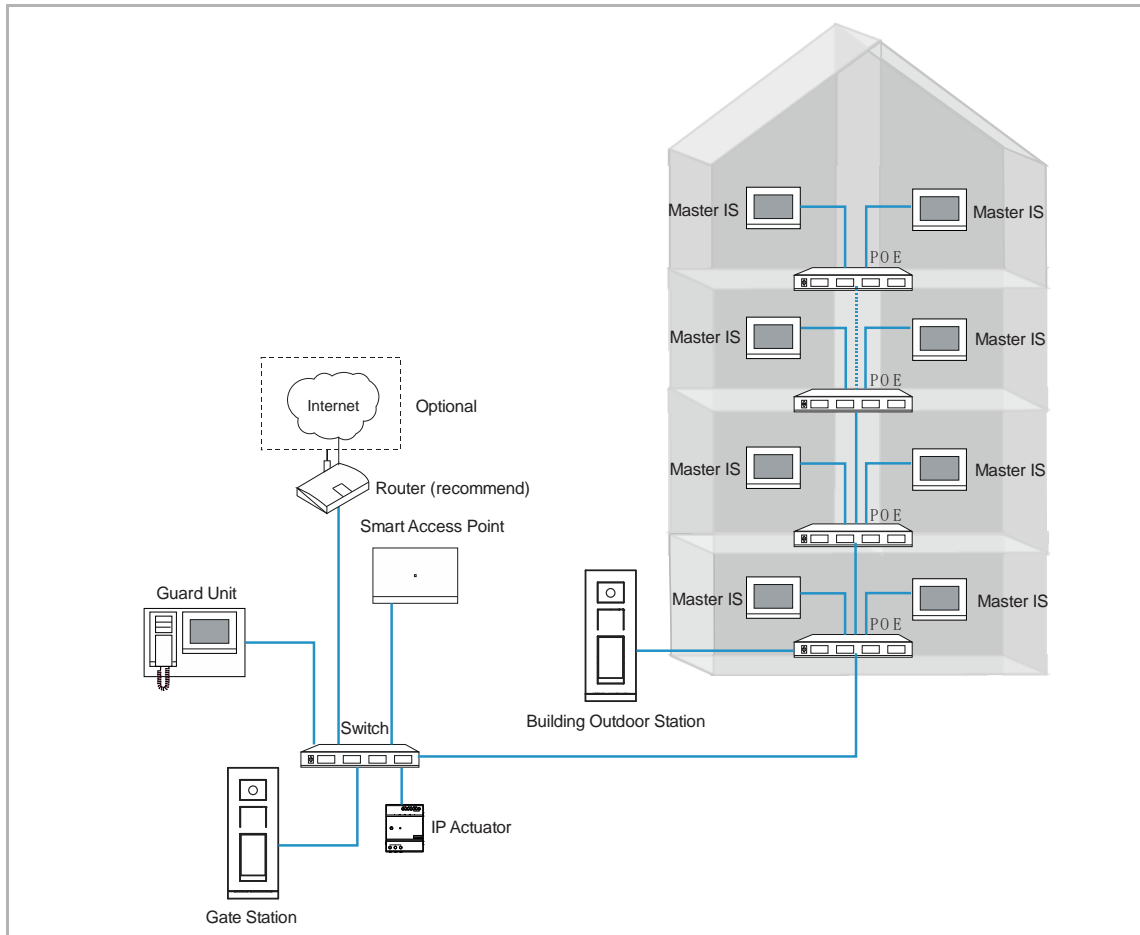
### 3.3.5 Lift Control Relay Module



## 4 Configuration Process

### 4.1 Multi Apartment Configuration with the SmartAP

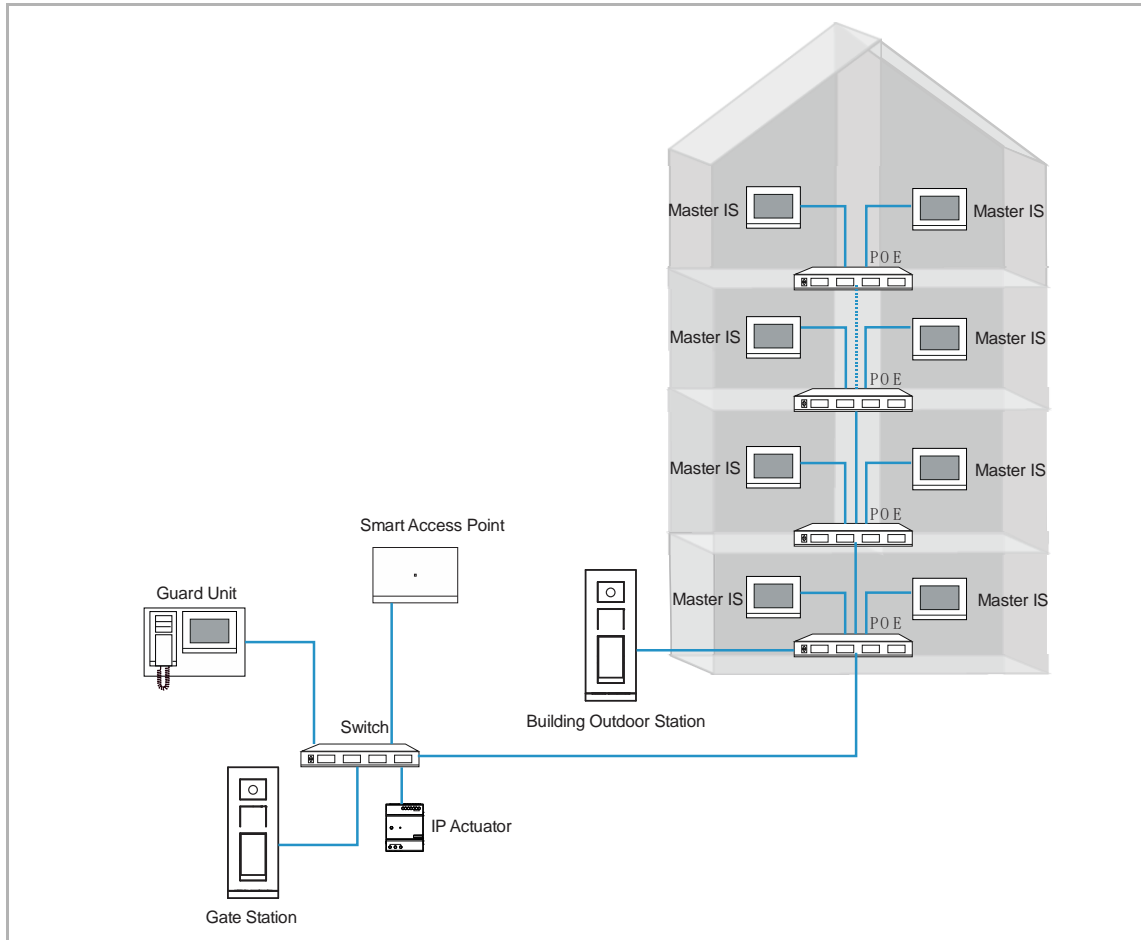
#### 4.1.1 Topology (DHCP)



- In this case, a SmartAP is needed.
- If the devices obtain the address from a DHCP server, a router is needed. Otherwise, a router is optional.
- Limitations for private devices used per single unit: up to 8 IS, 4 second confirmed OS, 4 IPA.



## 4.1.2 Topology (Legacy)



- In this case, a SmartAP is needed.
- Limitations for private devices used per single unit: up to 4 IS, 2 second confirmed OS, 2 IPA.

### 4.1.3 Adding devices via the SmartAP auto scan

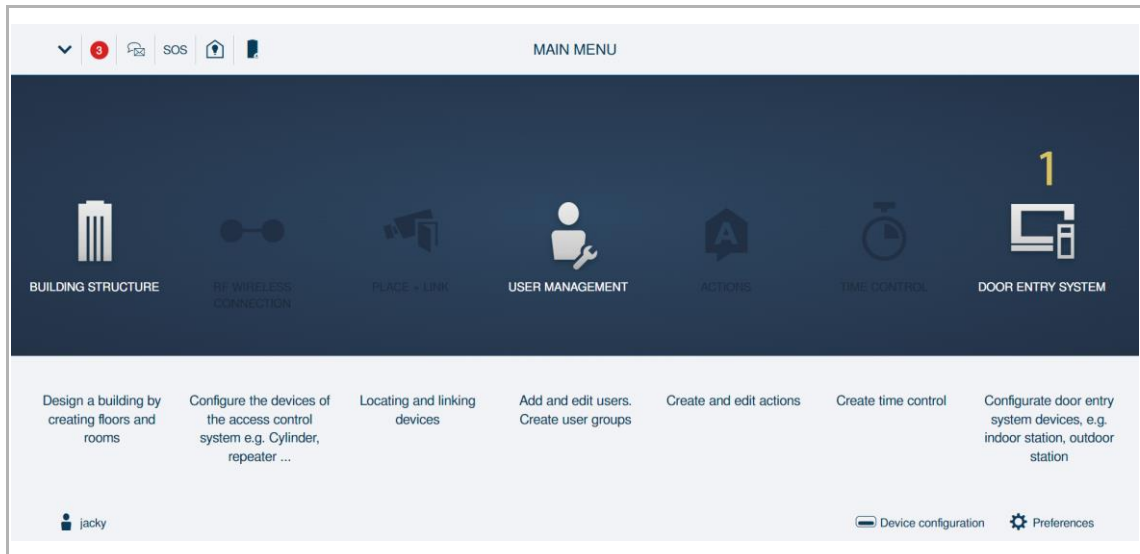
**Note**

Only the devices on the same network segment as the SmartAP can be added via the SmartAP auto scan.

- Audio IP and IP Elevator Controller cannot be added via the SmartAP auto scan. They should be added via the SmartAP manually. see chapter 4.1.4 “Adding devices via the SmartAP manually“ on page 134.
- All the devices to be added via the SmartAP auto scan should be set a different physical address before scanning.see chapter 7.4 “Configuring the physical address and IP mode“ on page 217.
- All the devices to be added via the SmartAP auto scan should not be signed by another SmartAP. If the devices have been signed by another SmartAP, you will need to clear the signatures.see chapter 7.3 “Clearing the signature of the device“ on page 216.
- Please ensure all the devices have been powered on.
- Please ensure the SmartAP has complete its initial setup before the configuration.see chapter 7.1 “Initial setup of the SmartAP“ on page 191.

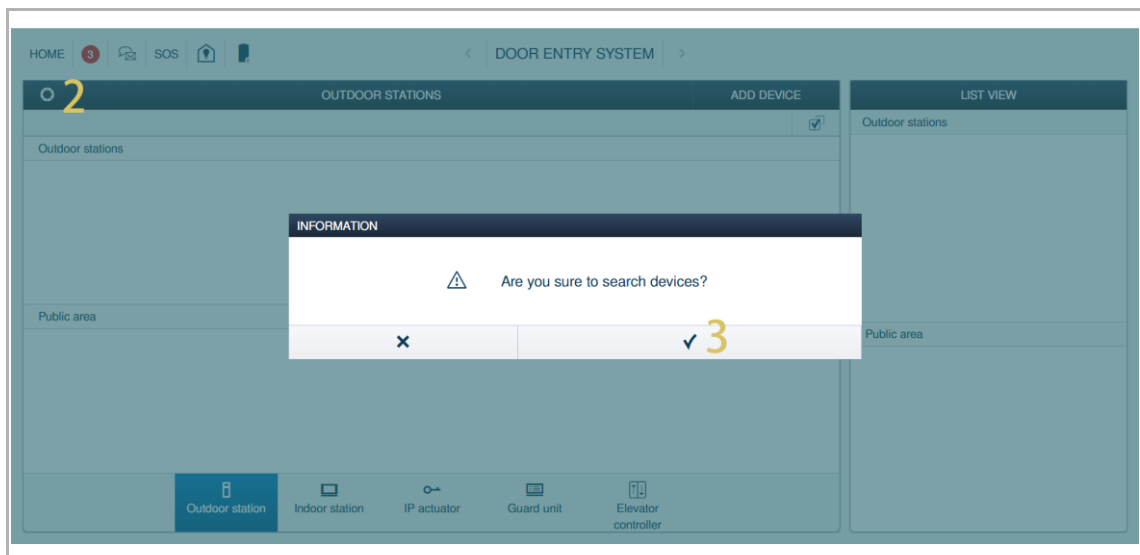
Please follow the steps below:

[1] On the "Main Menu" screen, click "Door entry system" to access the corresponding screen.

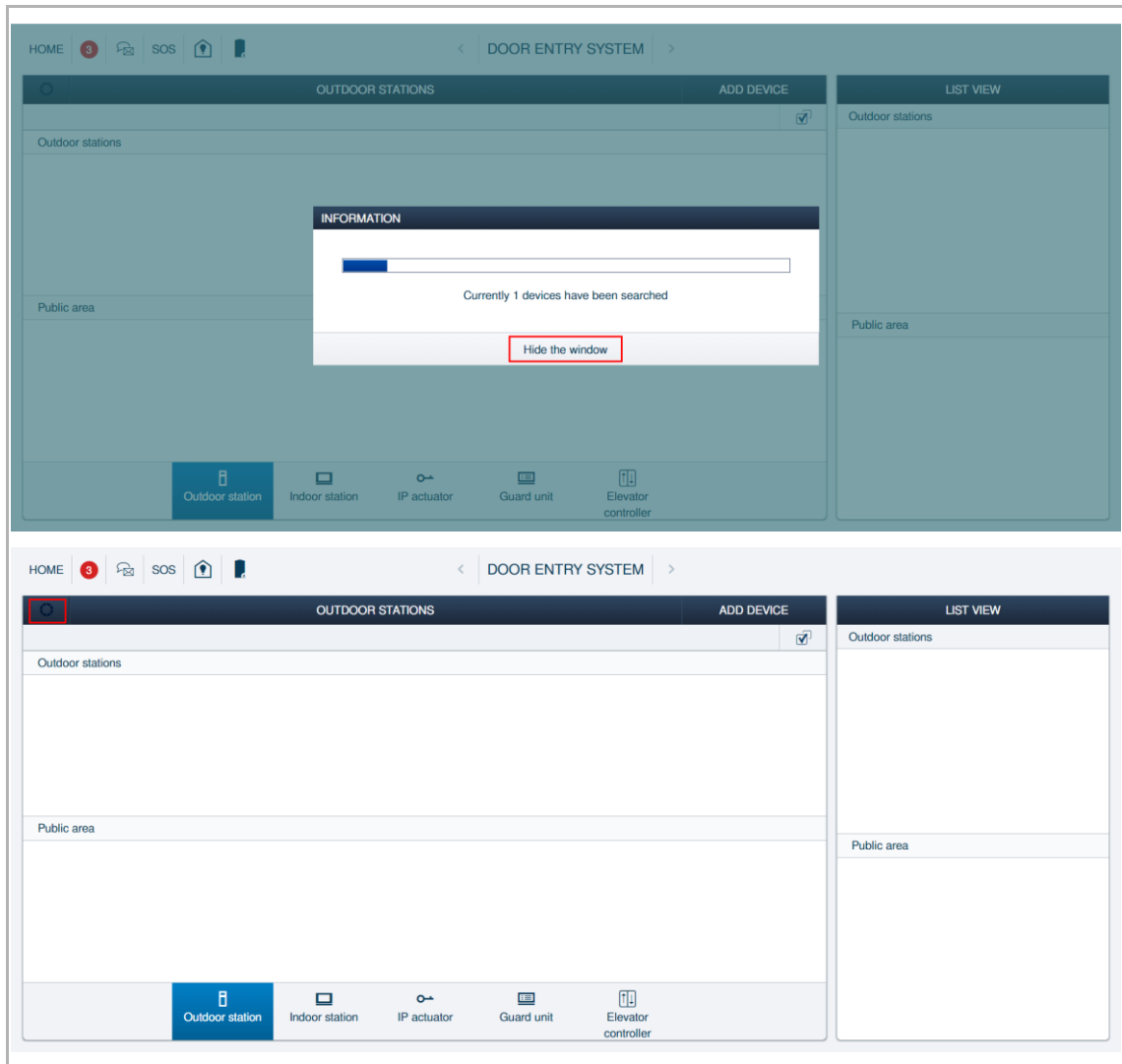


[2] On the "Door Entry System" screen, click "  ".

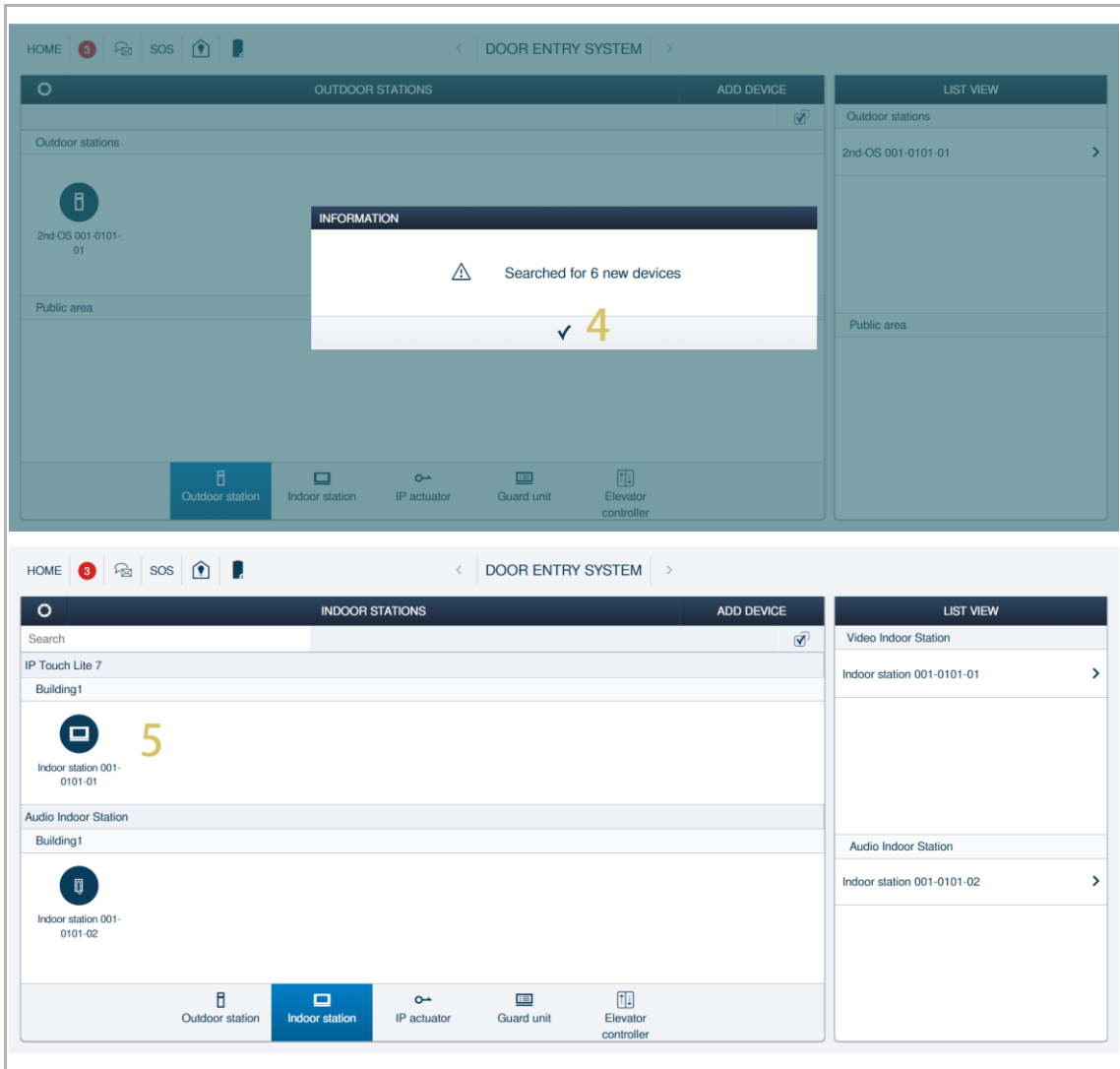
[3] Click " ✓ " to continue.



During the search, click "Hide the window" to hide the current pop-up window and "🔍" will flash to indicate the search status.



- [4] Search result will be displayed on the screen; click " ✓ " to continue.
- [5] The devices will be displayed on the screen if successful.



## 4.1.4 Adding devices via the SmartAP manually



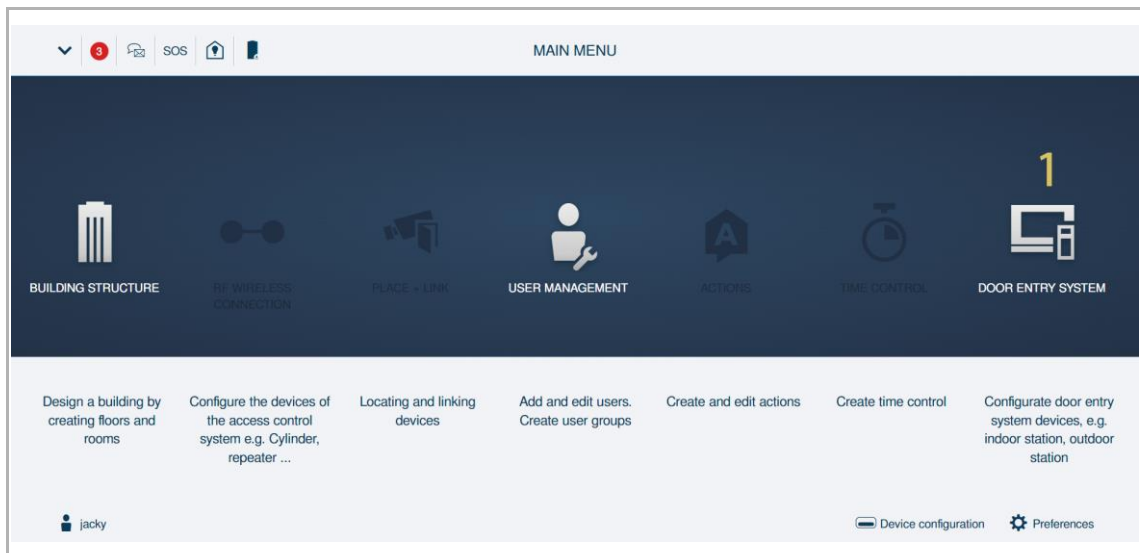
### Note

All the devices can be added via the SmartAP manually.

- All the devices to be added via the SmartAP manually should not be signed by another SmartAP. If the devices have been signed by another SmartAP, you will need to clear the signatures. see chapter 7.3 "Clearing the signature of the device" on page 216.
- Please ensure all the devices have been powered on.
- Please ensure the SmartAP has complete its initial setup before the configuration. see chapter 7.1 "Initial setup of the SmartAP" on page 191.

Please follow the steps below:

[1] On the "Main Menu" screen, click "Door entry system" to access the corresponding screen.



[2] On the "Door Entry System" screen, click "Add device".



### Note

The following operations show you to add a subsidiary indoor station. Please adjust your operations according to the actual devices.

[3] Select a device type from the drop-down list (e.g. "Indoor station").

[4] Enter block number.

[5] Enter floor number.

[6] Enter room number.

[7] Enter device number.

[8] Enter serial number.

[9] Click "Save" to save.

The screenshot displays the 'ADD DEVICE' form within the 'INDOOR STATIONS' application. The form is titled 'ADD DEVICE' and contains the following fields:

- Device type:** A dropdown menu set to 'Indoor station'.
- Device addr.:** Four input fields with values 1, 1, 1, and 2.
- Serial No.:** An input field with the value 102807A7F030593.

The form has 'Cancel' and 'Save' buttons at the bottom. The background shows the 'INDOOR STATIONS' application interface with a 'LIST VIEW' panel on the right showing 'Indoor station 001-0101-01'.

### 4.1.5 Adding devices via the SmartAP & APP



#### **Note**

All the devices can be added via the SmartAP & APP.

- All the devices to be added via the SmartAP & APP should not be signed by another SmartAP. If the devices have been signed by another SmartAP, you will need to clear the signatures.see chapter 7.3 “Clearing the signature of the device“ on page 216.
- Please ensure all the devices have been powered on.
- Please ensure the SmartAP has complete its initial setup before the configuration.see chapter 7.1 “Initial setup of the SmartAP“ on page 191.

#### **QR code of the device**

Usually there is a QR code attached to the back of the device. The serial number can be obtained by scanning this QR code.



## Adding devices on the APP

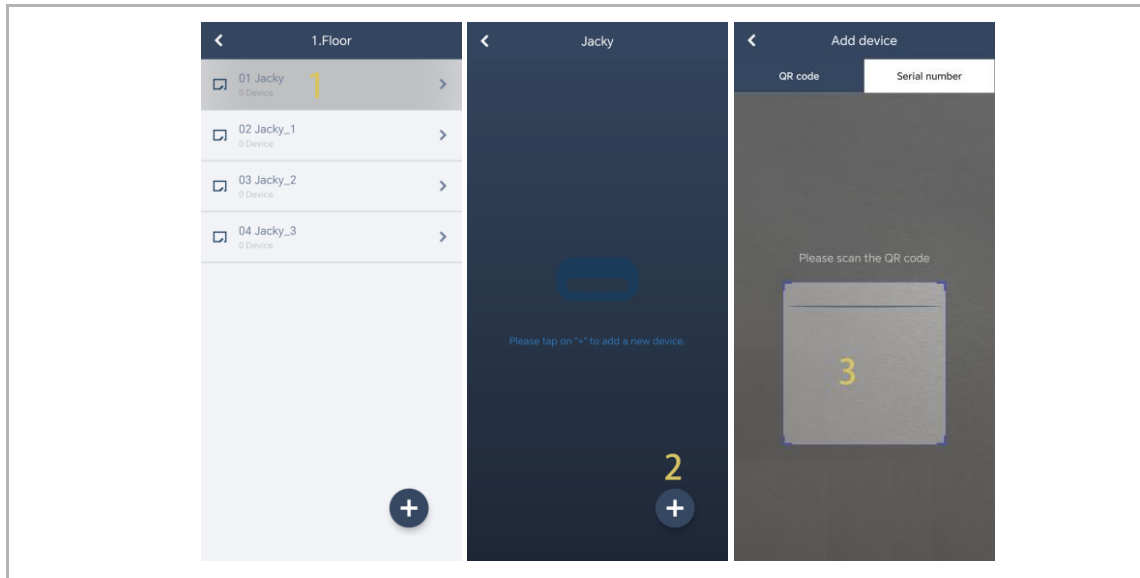
- Please ensure a building structure has been created on APP.see chapter 7.7 “Creating a building on the APP“ on page 240.

Please follow the steps below:

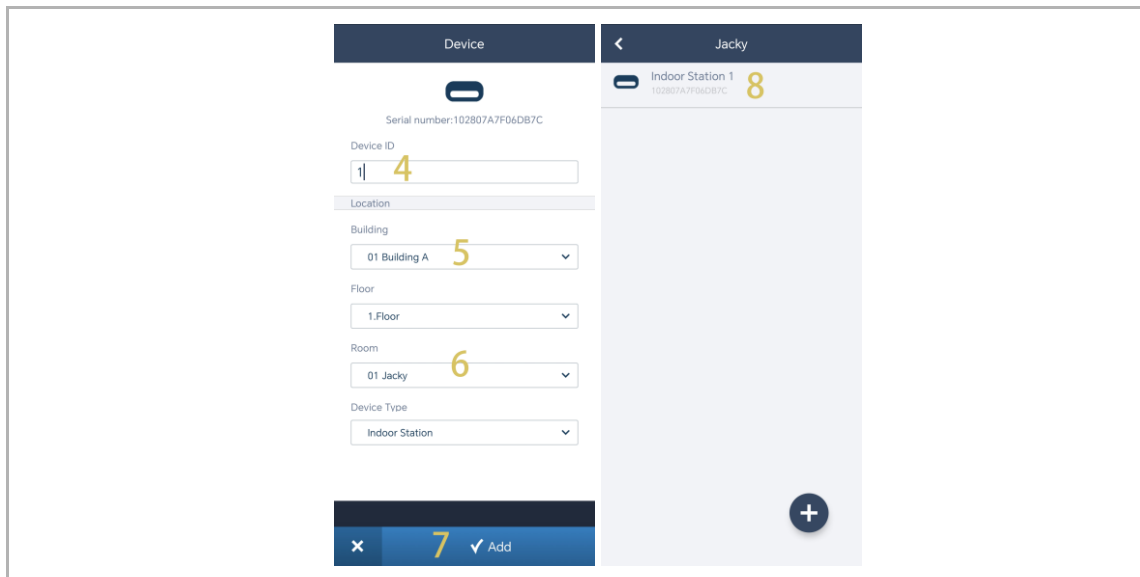
[1] On the designated floor screen, tap the designated room.

[2] On the designated room screen, tap " + " .

[3] On the "Add device" screen, scan the QR code displayed on the panel.



- [4] On the "Device" screen, serial number of the device will be displayed.
  - [5] Check the location.
  - [6] Check the device type.
  - [7] Tap "Add" to add a new device.
  - [8] The result is displayed on the screen if successful.
- Repeat steps 1~7 to add multiple devices.

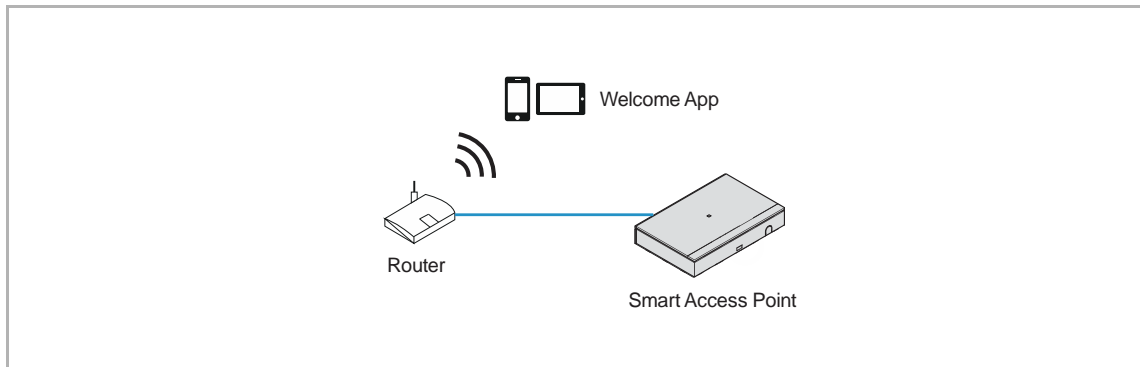


## Importing the building structure from APP to SmartAP

- SmartAP can import the building created in the APP.
- You can import one building once or several buildings as a batch.

### Precondition

- The APP must be on the same network with SmartAP.
- The building structure has been created in the APP.



### Importing rule


The building structure will be overwritten according to the rules below:

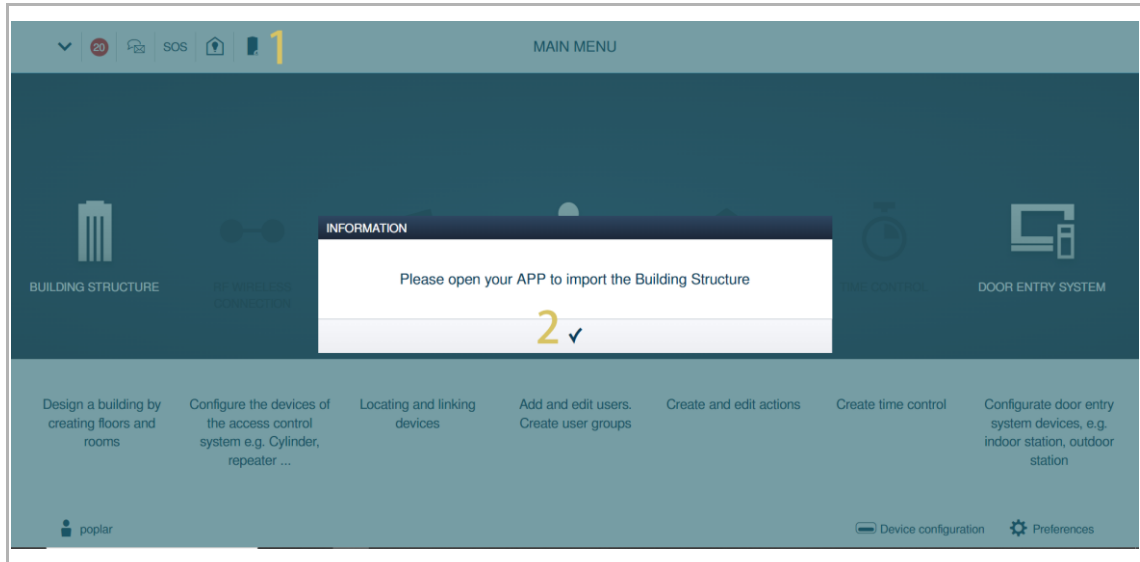
- A, B, C, D, E, F means building number.
- B and B+ has the same building number.
- + means the building structure has been changed.


APP	SmartAP before	SmartAP after
B+	A, B, C	A, B+, C
B+, C+	A, B, C	A, B+, C+
D, E, F	A, B, C	A, B, C, D, E, F

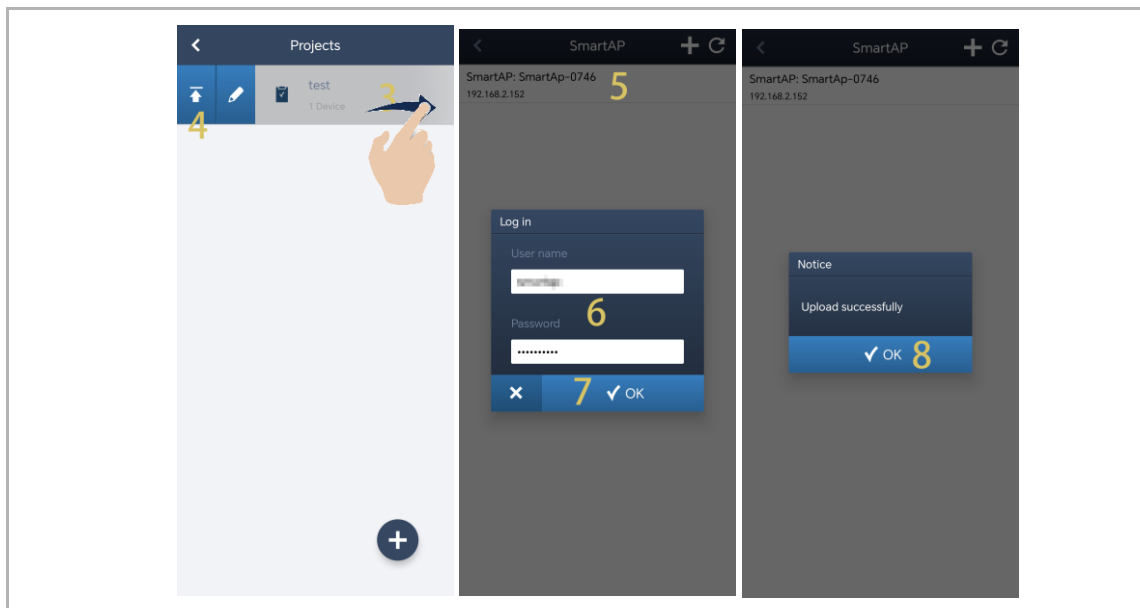
## Importing process

Please follow the steps below:

- [1] On the home screen of the SmartAP, click "  ".
- [2] A pop-up window will appear, please keep the window open and do not click "√".



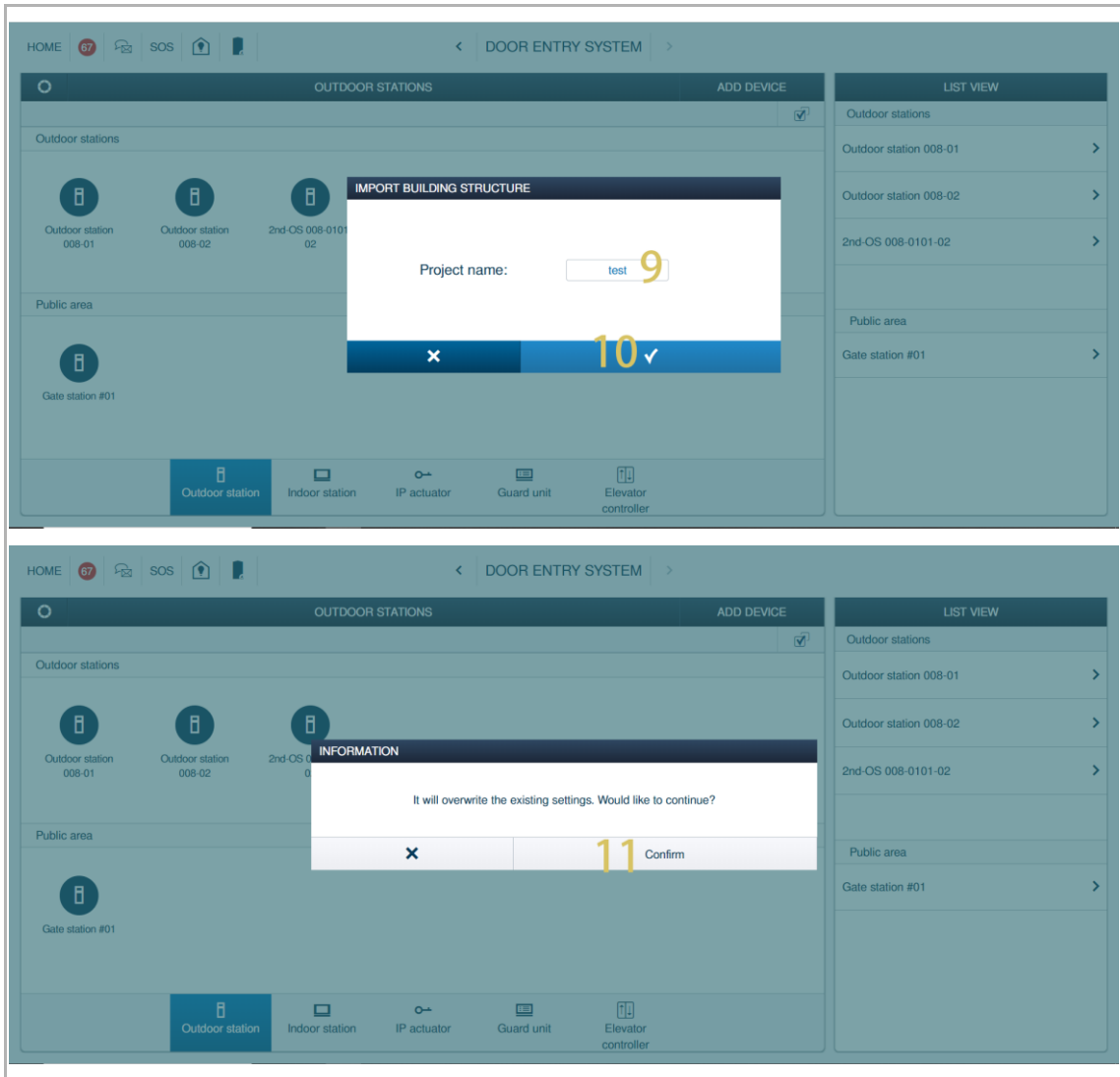
- [3] On the "Projects" screen of the APP, swipe the designated project name to the right.
- [4] Tap "  ".
- [5] Tap the designated SmartAP in the list.
- [6] Enter the account and the password of the designated SmartAP.
- [7] Tap "OK".
- [8] "Upload successfully" will be displayed if successful. Tap "OK".



[9] On the configuration screen of SmartAP, the project name will be displayed on the screen.

[10] Click "√".

[11] Click "Confirm".



[12]The import result will be displayed.

[13]Click "√" to complete the import process.



## 4.1.6 Devices Diagnosis

It is recommended to check the status of all devices to ensure normal use.

### Access the "Devices Diagnosis" screen

Please follow the steps below:

- [1] On the "Main Menu" screen, click "Preferences".
- [2] Click "Devices Diagnosis" to access the corresponding screen.

The screenshot displays the 'MAIN MENU' with various system management options. A '1' is placed over the 'Preferences' icon. Below, the 'PREFERENCES' screen is shown with a '2' over the 'Devices Diagnosis' option in the sidebar. The 'Devices Diagnosis' screen contains the following information:

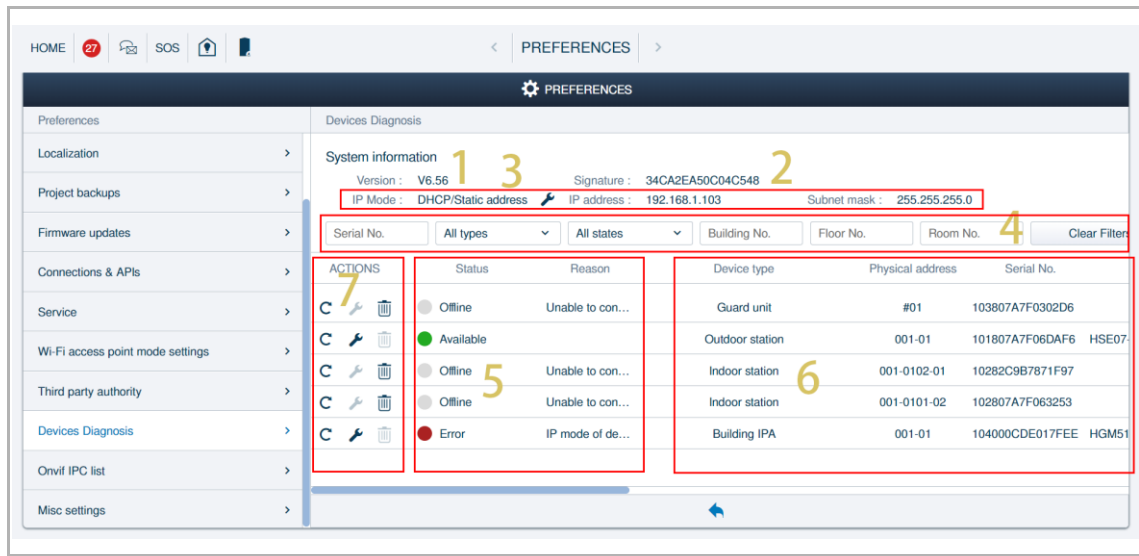
**System information**








Version : V6.56      Signature : 34CA2EA50C04C548  
 IP Mode : DHCP/Static address      IP address : 192.168.1.103      Subnet mask : 255.255.255.0

Filters: Serial No. [input], All types [dropdown], All states [dropdown], Building No. [input], Floor No. [input], Room No. [input], Clear Filters [button]

ACTIONS	Status	Reason	Device type	Physical address	Serial No.
[C] [W] [T]	Offline	Unable to con...	Guard unit	#01	103807A7F0302D6
[C] [W] [T]	Available		Outdoor station	001-01	101807A7F06DAF6 HSE07
[C] [W] [T]	Offline	Unable to con...	Indoor station	001-0102-01	10282C9B7871F97
[C] [W] [T]	Offline	Unable to con...	Indoor station	001-0101-02	102807A7F063253
[C] [W] [T]	Error	IP mode of de...	Building IPA	001-01	104000CDE017FEE HGM51

Overview of Devices Diagnosis



No.	Description
1	Software version of the SmartAP
2	<b>Signature of the SmartAP</b> If the signature of the device which is displayed on the "Signature" column is not the same as the signature of this SmartAP, "Error" will be displayed.
3	<b>IP mode of the SmartAP</b> Click "  " to change the IP mode of the SmartAP.
4	<b>Filters</b> <ul style="list-style-type: none"> <li>It is allowed to display the designated devices according to the filters (e.g., "Serial no.", "Device type", "States" etc.)</li> <li>Click "Clear Filters" to empty the filters.</li> </ul>
5	<b>Status of the devices</b> <ul style="list-style-type: none"> <li> Available= The device has been added by the SmartAP successfully</li> <li> Error = The device has been detected by the SmartAP but failed to be added</li> <li> Offline = The device has not been detected by the SmartAP.</li> </ul>
6	Other information of the devices
7	<b>Actions of the devices</b> <ul style="list-style-type: none"> <li>Click "  " to configure the IP mode and the IP address of the device, you can also re-sign the device here.</li> <li>Click "  " to refresh the status of the device.</li> <li>Click "  " to remove the device from the list.</li> </ul>
8	<b>Refresh all</b> Click it to refresh the status of all the devices



### **Error diagnosis**

"Abnormal" will be displayed due to the following problems.

- The same physical address has been set on different devices
- The same IP address has been set on different devices
- IP mode of this device is different from that of the SmartAP
- The IP address segment of this device is different from that of the SmartAP
- IP mode of Subsidiary IS is different from that of Master IS
- IP address segment of Subsidiary IS is different from that of Master IS
- If master IS is offline, the related Subsidiary IS, 2nd OS and Private IPA will turn to "Abnormal"
- When the IP mode is changed from DHCP/Static IP mode to legacy mode, the device number of the device is out of range.
- The signature of the device is different from that of the SmartAP.

### **Offline diagnosis**

"Offline" will be displayed due to the following problems.

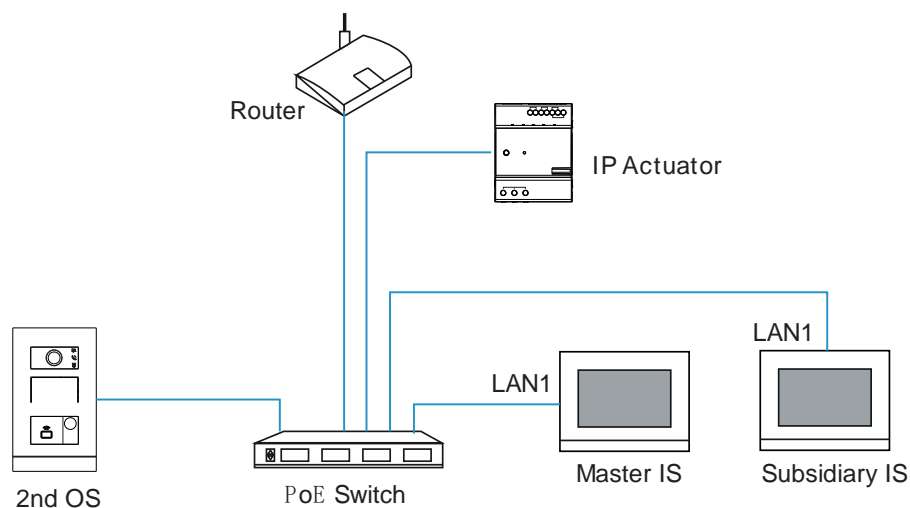
- The device is offline
- The device doesn't obtain the IP address when IP mode is set to "DHCP".
- The serial number entered is not correct when adding the device manually.
- The IP address of the device conflicts with that of the SmartAP.
- The IGMP Snooping function is disabled on the router, multicast packets are suppressed.

### 4.1.7 Managing the trusted devices

see chapter 7.9 “Managing the trusted devices“ on page 255.

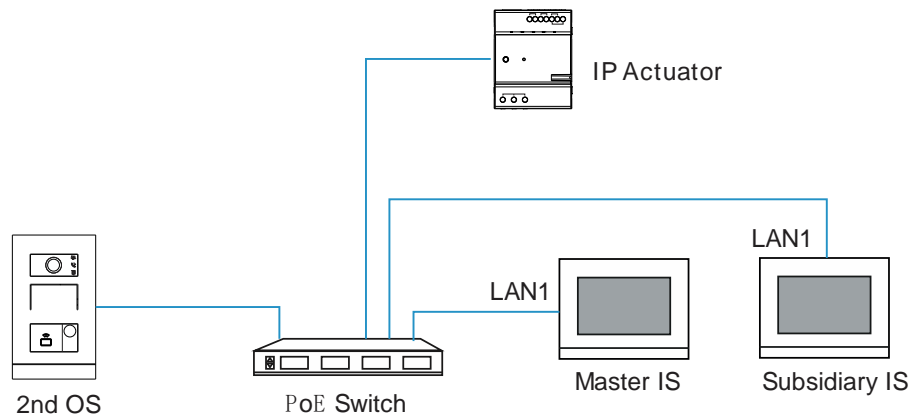
## 4.2 Single House Configuration without the SmartAP

### 4.2.1 Topology (DHCP)



- In this case, no SmartAP is needed.
- In this case, a router is needed for use.
- In this case, all devices are connected to the same network.
- In this case, 1 2nd confirmed Outdoor Station, 1 IP Actuator and max. 4 Indoor Stations are recommended.
- In this case, the 2nd OS could be an IP pushbutton OS or a Mini OS with IC.
- This configuration will be carried out on the Master IS.
- In this configuration, the IPA and 2nd OS will be added to the trusted devices list.

## 4.2.2 Topology (Legacy)



- In this case, no SmartAP is needed.
- In this case, all devices are connected to the same network.
- In this case, 1 2nd confirmed Outdoor Station, 1 IP Actuator and max. 4 Indoor Stations are recommended.
- In this case, the 2nd OS could be an IP pushbutton OS or a Mini OS with IC.
- This configuration will be carried out on the Master IS.
- In this configuration, the IPA and 2nd OS will be added to the trusted devices list.

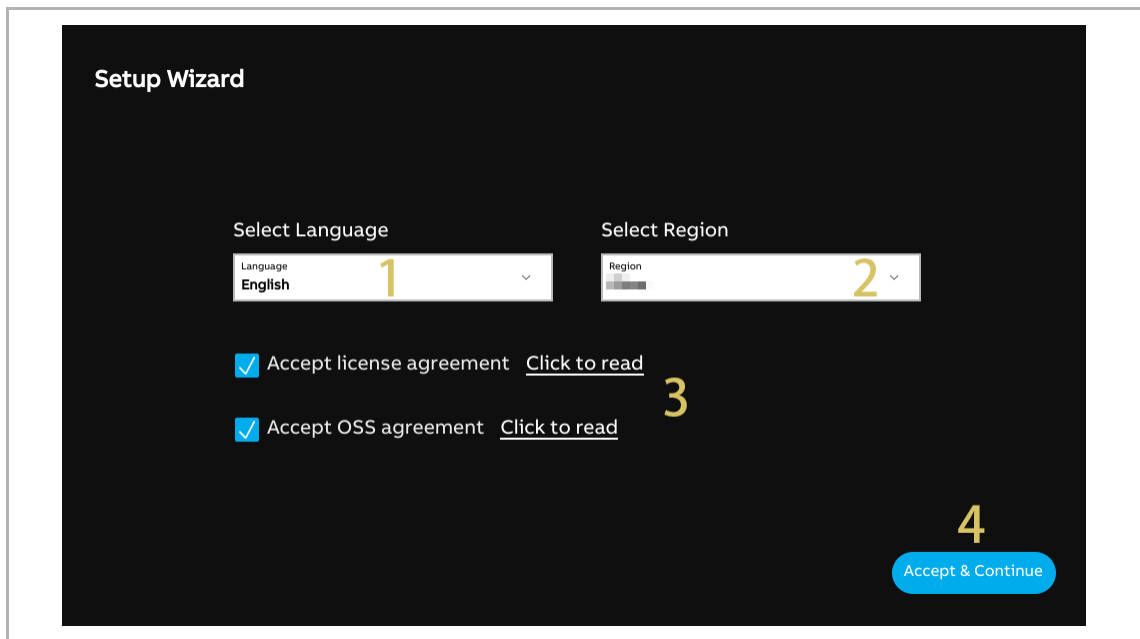
### 4.2.3 Preparation


- Please ensure that all the devices have been connected according to the topology before the configuration.
- Please ensure all the devices have been powered on.
- Please ensure all the devices have been restored to factory default settings to prevent unknown abnormal results.see chapter 7.5 “Restoring to factory default“ on page 229.
- Please ensure all indoor stations connect to the switch via LAN1.

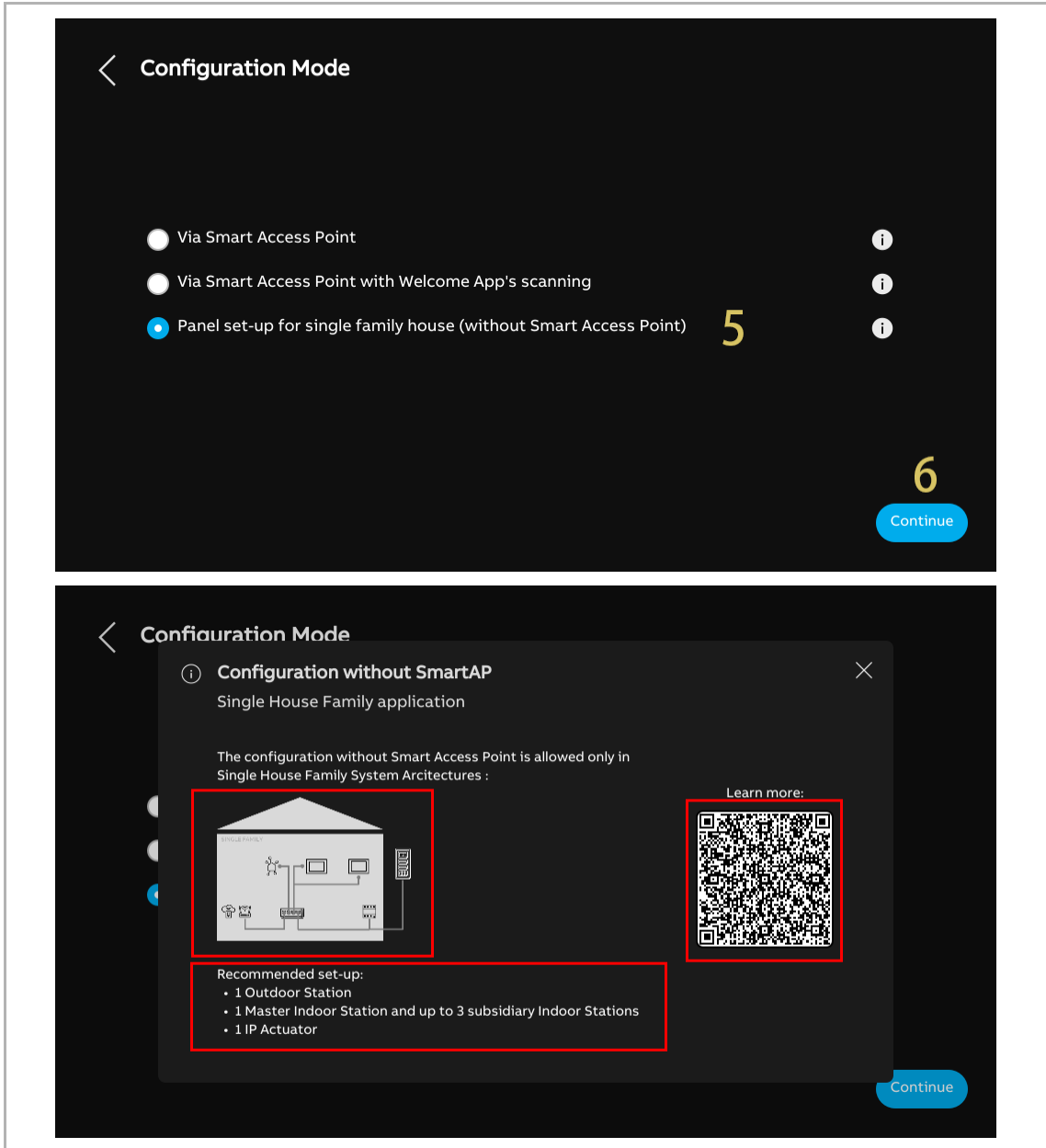
## 4.2.4 Configuring the Master IS

When the IS is powered on the first time or it is restored to factory default settings, it will access the "Setup Wizard". Please follow the steps below:

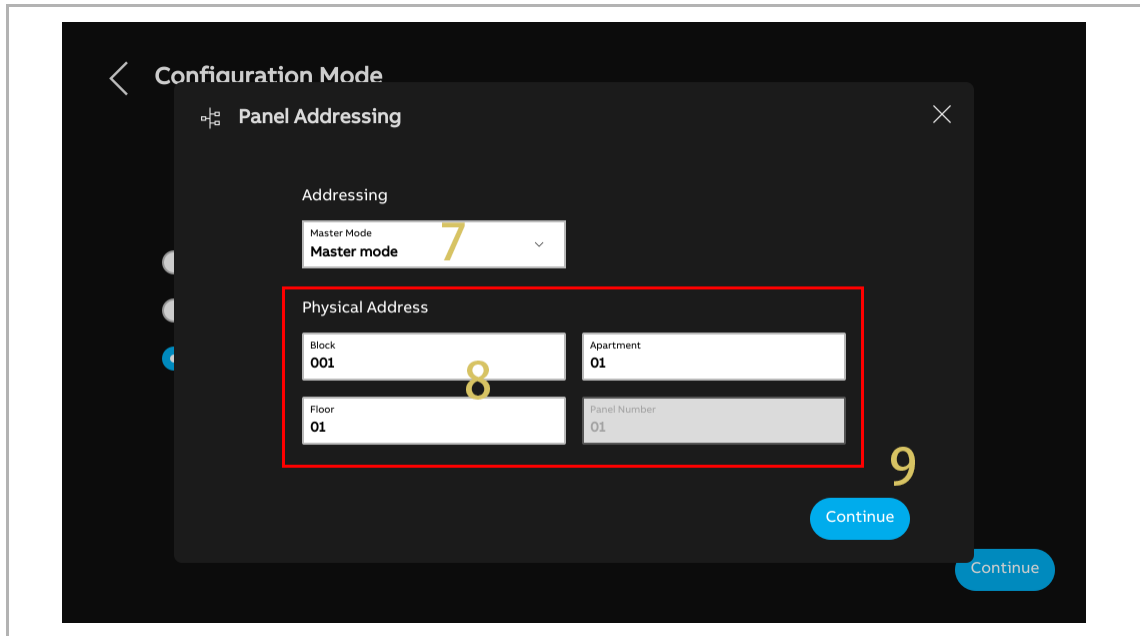
- [1] On the "Setup wizard" screen, select the language from the drop-down list.
- [2] Select the region from the drop-down list.
- [3] Tick the check box to accept the licences. Or tap "Click to read" to view the details of the licence.
- [4] Tap "Accept & continue" to access the next screen.



- [5] On the "Configuration Mode" screen, select "Panel set-up for single family house", tap "  " to see the system topology, system recommended capacity, and you can download the product manual by scanning the QR code on the right.
- [6] Tap "Continue".



- [7] On the "Panel Addressing" screen, select "Master mode". Only one Indoor Station can be set to "Master mode" in the same apartment.
- [8] Enter the block number, the floor number and the apartment number or accept the default value. The "Panel number" is preset as "01" and cannot be modified while the "Master mode" is selected.
- [9] Tap "Continue".

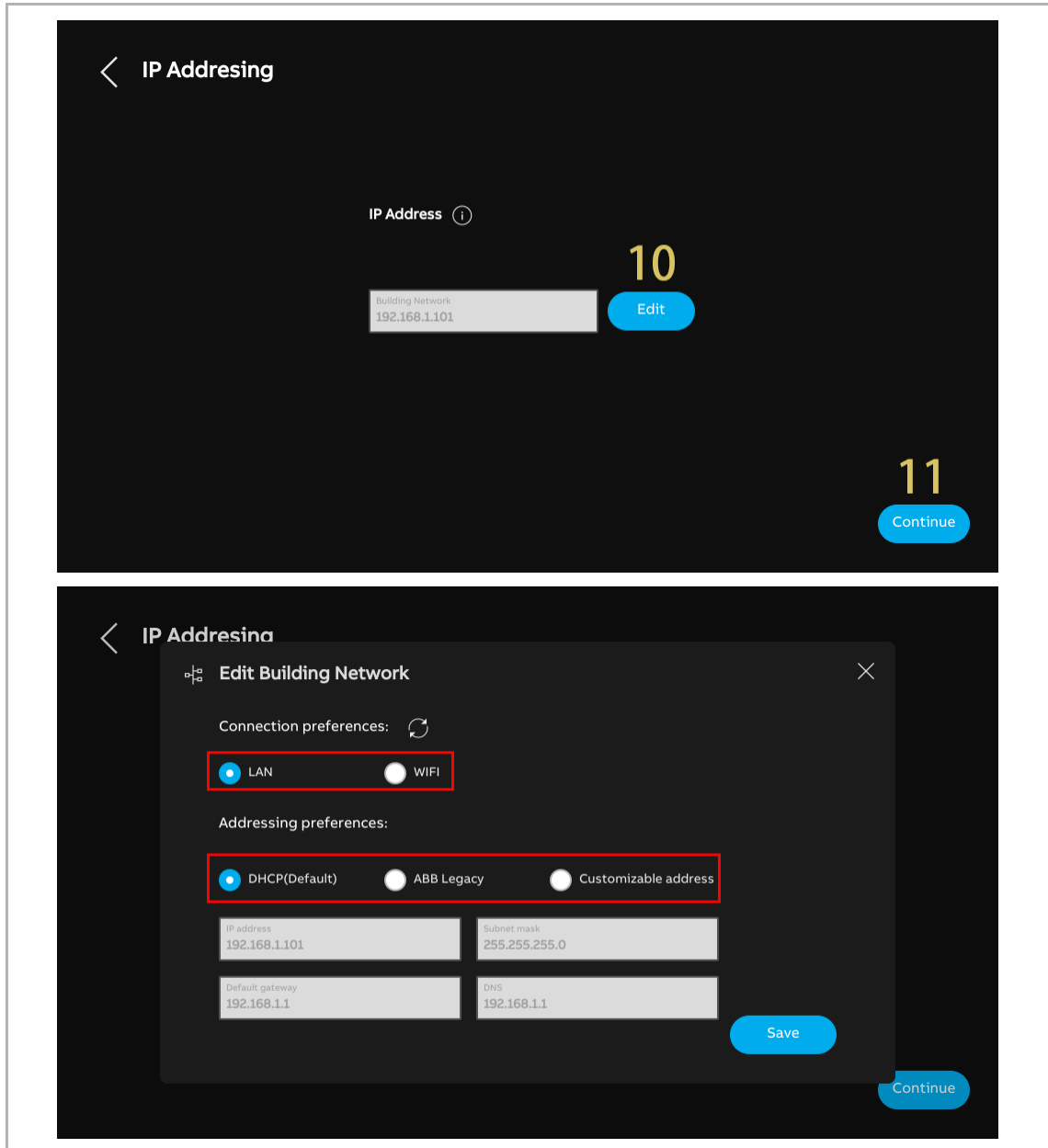




[10] On the "IP Addressing" screen, tap "Edit" to access the corresponding screen.

- Select the connection type, it can be set to "LAN" or "WiFi".
- Select the address type, it can be set to "DHCP", "Customizable address" or "ABB Legacy". If "ABB Legacy" is selected, the IP address will be "10.0.x.x".
- Please tap "Save" if the settings have been changed.

[11] Tap "Continue".

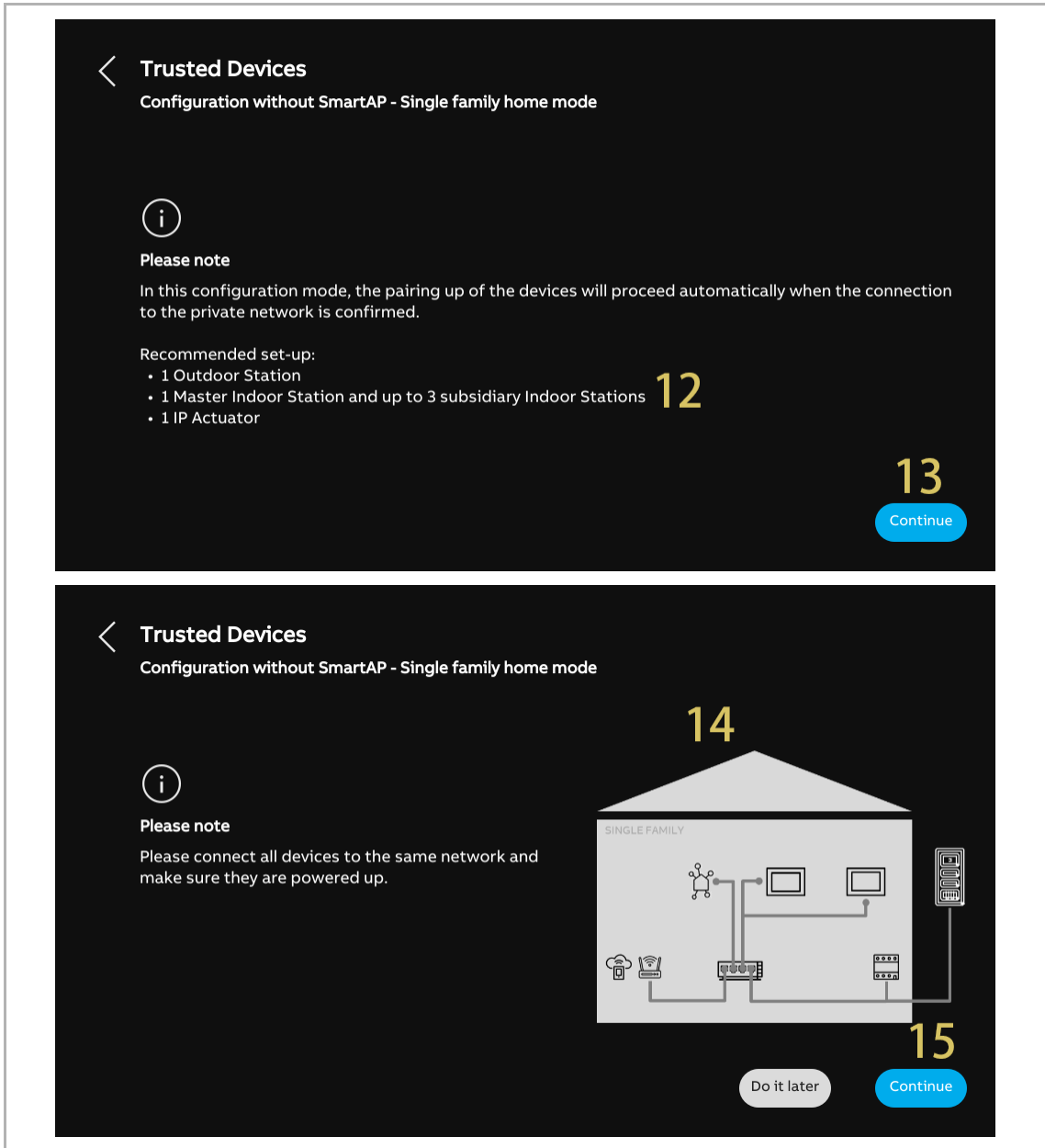


[12] On the "Trusted Devices" screen, check the system recommended capacity again.

[13] Tap "Continue".

[14] Check the system topology.

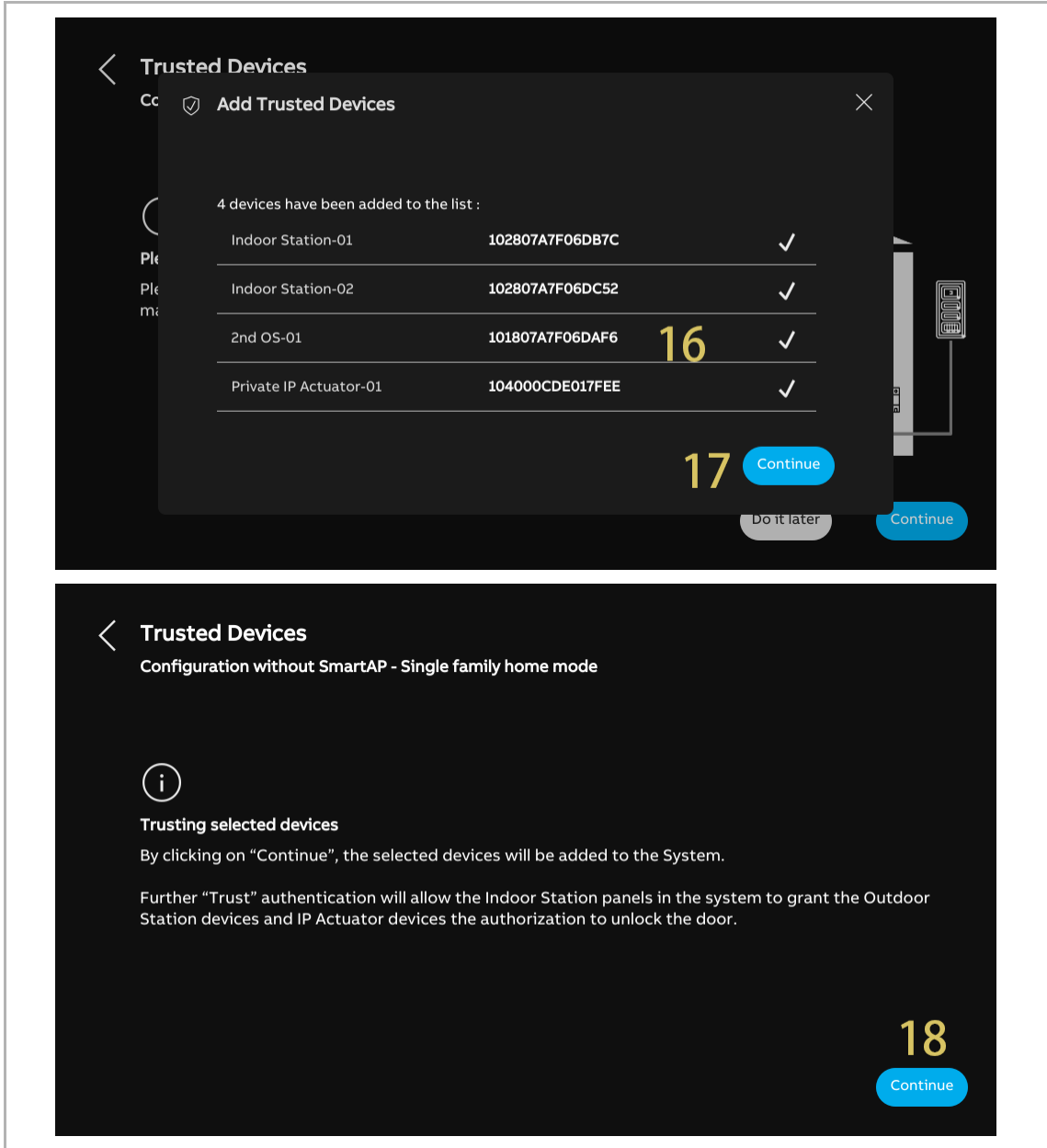
[15] Tap "Continue" to start searching the devices in the single-family house.



[16]All the related devices are displayed on the list.

[17]Tap "Continue".

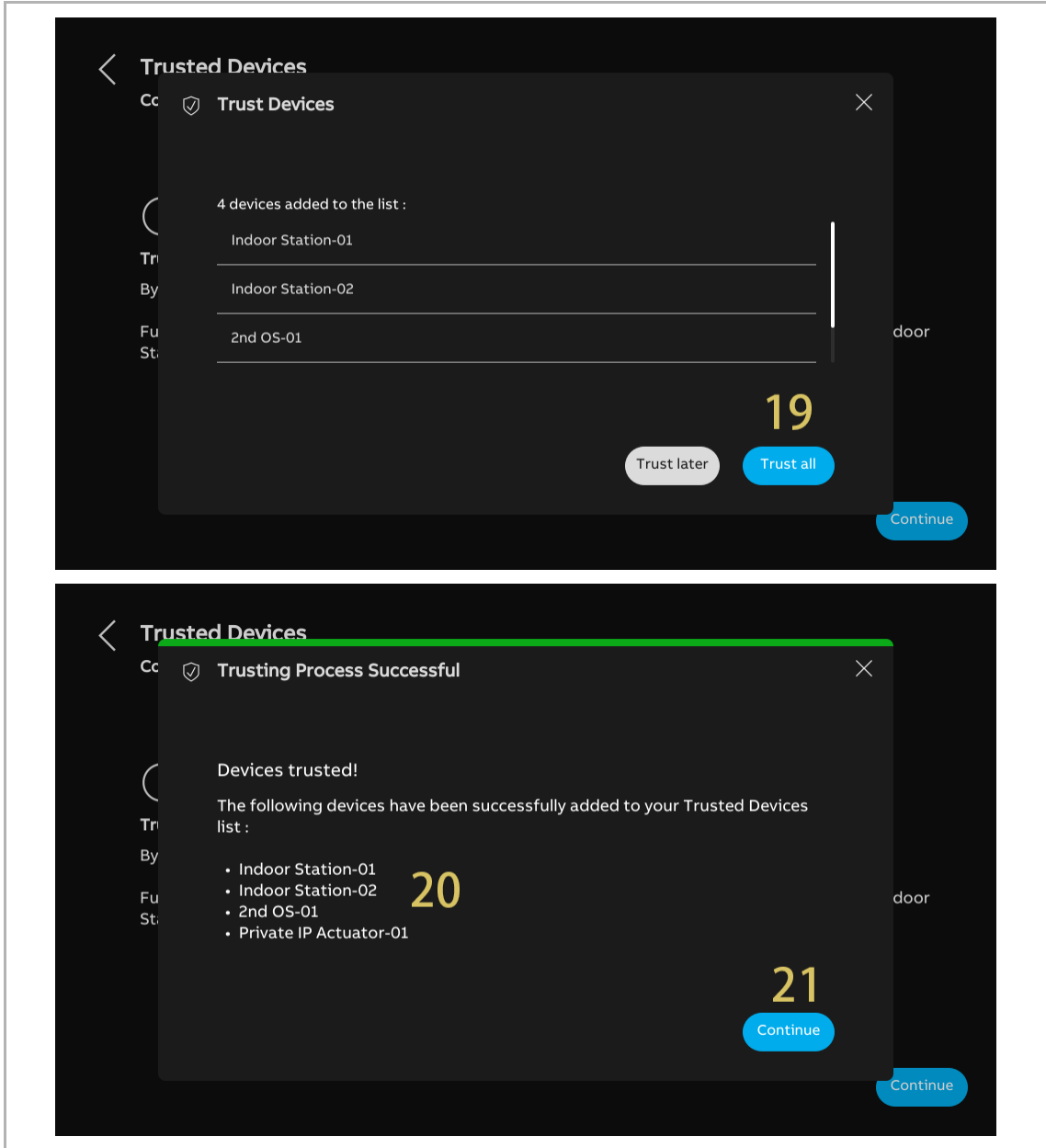
[18]Tap "Continue".



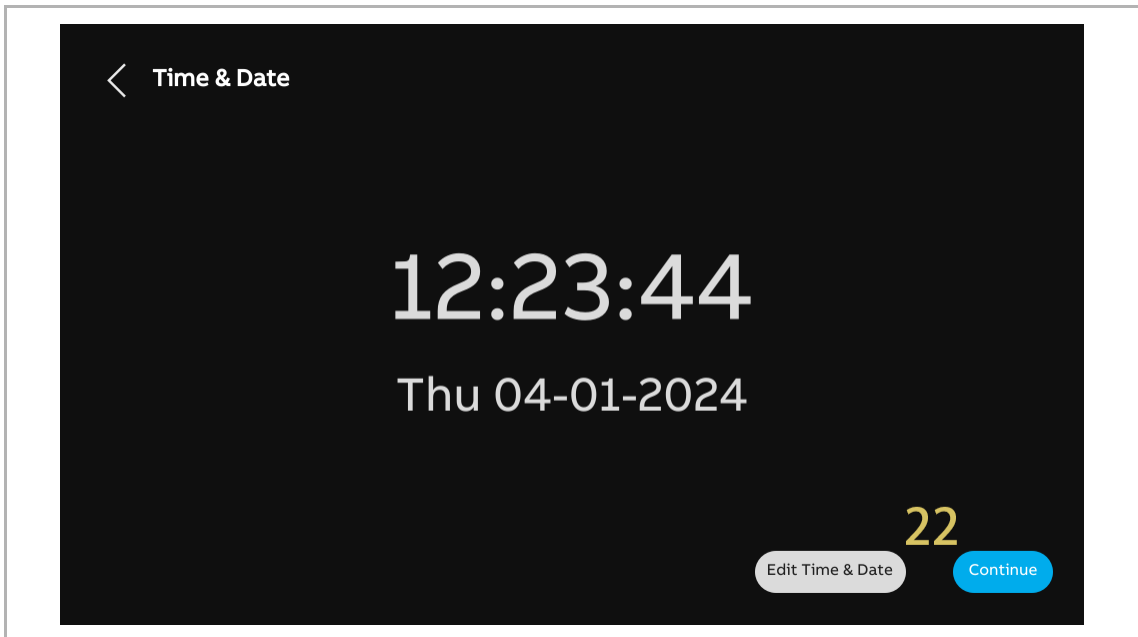
[19] Tap "Trust all".

[20] All the related devices will be displayed on the screen.

[21] Tap "Continue".

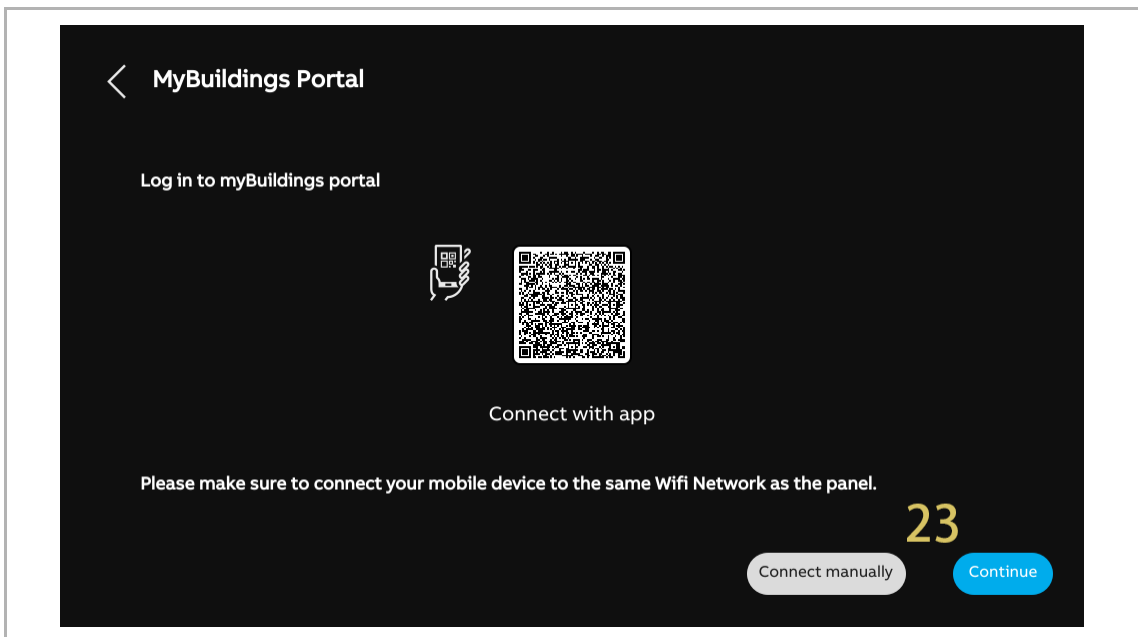


[22] On the "Time & date" screen, you can carry out this setting at this time or tap "Continue" to skip this setting for the moment.



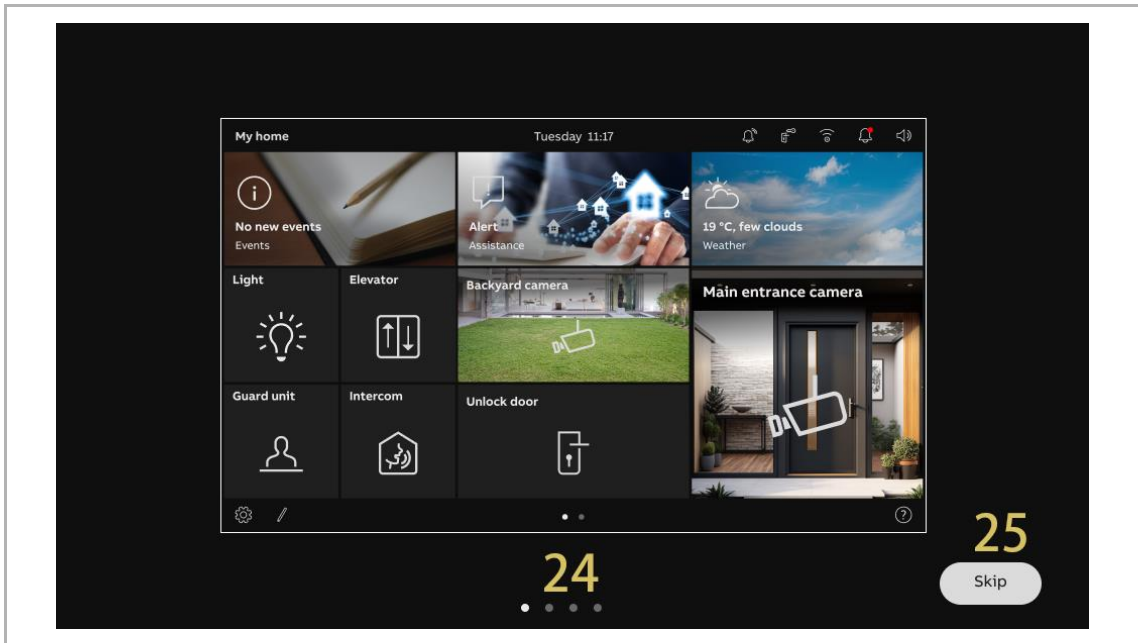
[23] On the "MyBuildings portal" screen, you can carry out this setting at this time or tap "Continue" to skip this setting initially if the App is not ready.

- For more details, see the product manual of the designated Indoor Station.



[24] There are 4 screens to guide you how to use the panel.

[25] Tap "Skip" if you are already familiar with the panel.



### Note

After configuring the Master IS, the 2nd OS and the IPA have both finished their configuration. However, the Subsidiary IS still needs some steps to complete its configuration. see chapter 4.2.5 "Configuring the Subsidiary IS" on page 159.

The outdoor station will be automatically set as a 2nd OS, and the IPA will be automatically set as a private IPA.

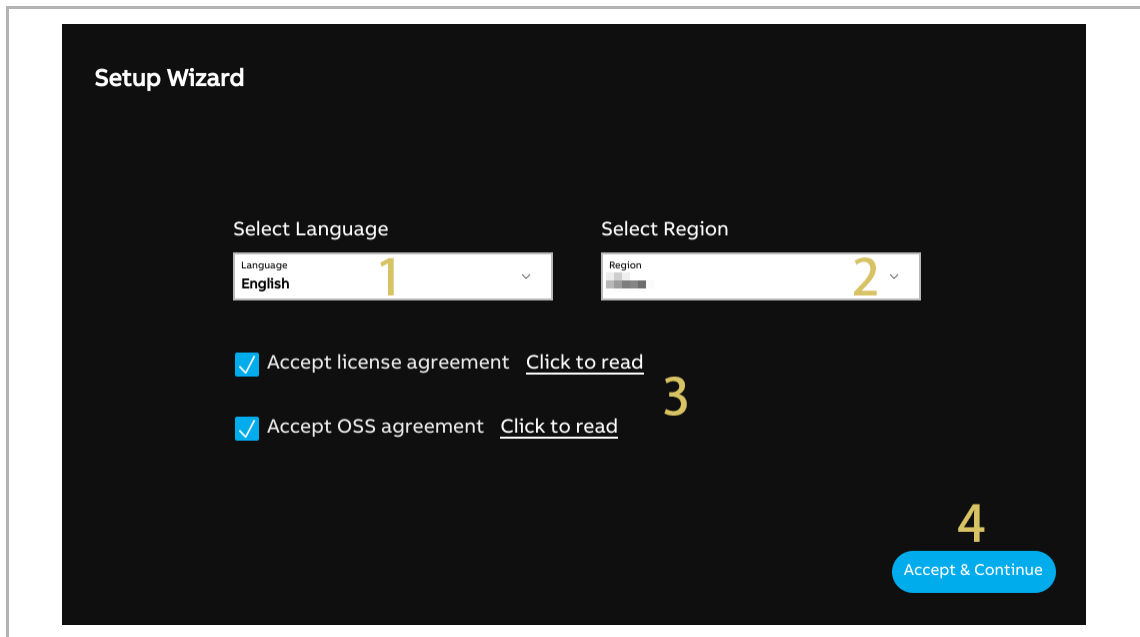
At the same time, the IPA will be automatically set as the default lock of the outdoor station.

#### 4.2.5 Configuring the Subsidiary IS

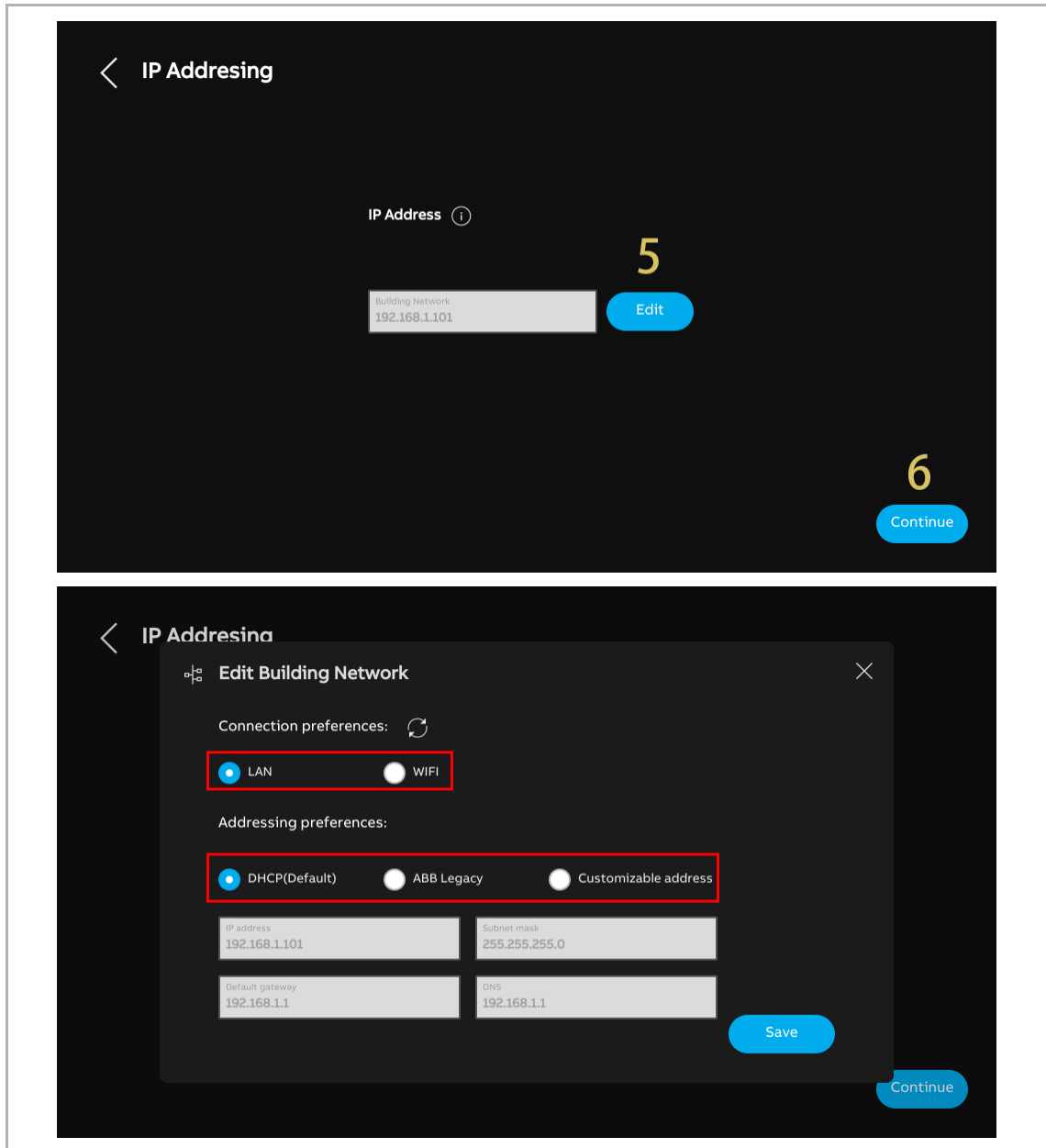
Please ensure the Master IS has completed the Wizard Setup before continuing the configuration of the Subsidiary IS:

Please follow the steps below to continue the configuration of the Subsidiary IS:

- [1] On the "Setup wizard" screen, select the language from the drop-down list.
- [2] Select the region from the drop-down list.
- [3] Tick the check box to accept the licences. Or tap "Click to read" to view the details of the licence.
- [4] Tap "Accept & continue" to access the next screen.

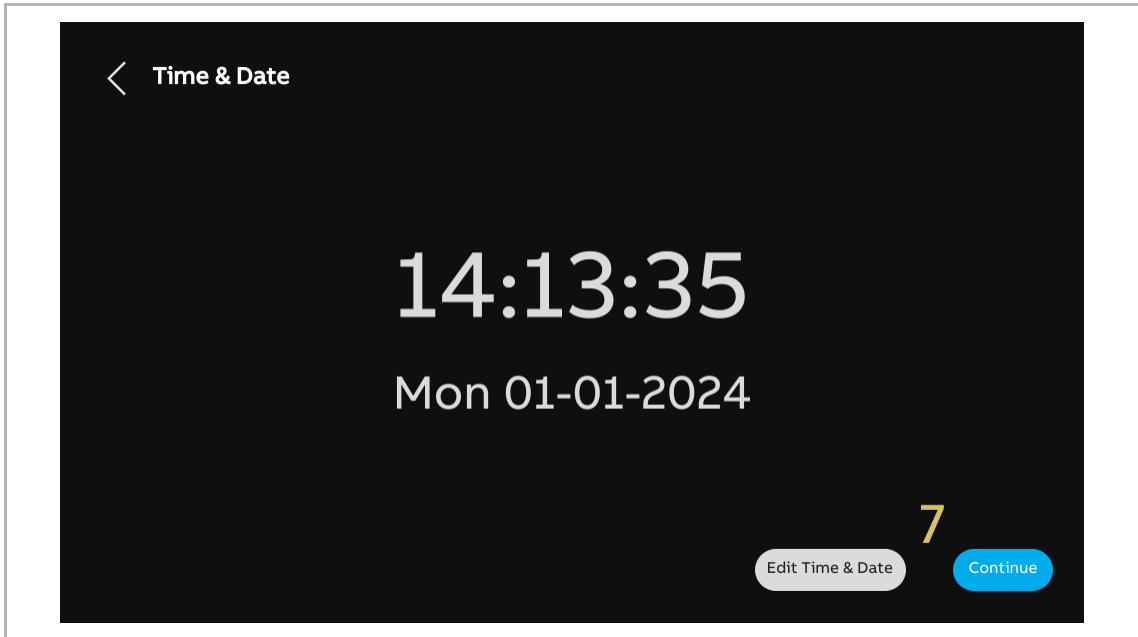


- [5] On the "IP Addressing" screen, tap "Edit" to access the corresponding screen.
- Select the connection type, it can be set to "LAN" or "WiFi".
  - Select the address type, it can set to "DHCP", "Customizable address" or "ABB Legacy". If "ABB Legacy" is selected, IP address will be "10.0.x.x".
  - The address type of the Subsidiary IS should be the same as that of the Master IS.
  - Please tap "Save" if the settings have been changed.
- [6] Tap "Continue".





- [7] On the "Time & date" screen, you can carry out this setting at this time or tap "Continue" to skip this setting for the moment.



- [8] There are 4 screens to guide you how to use the panel.

- [9] Tap "Skip" if you are already familiar with the panel.



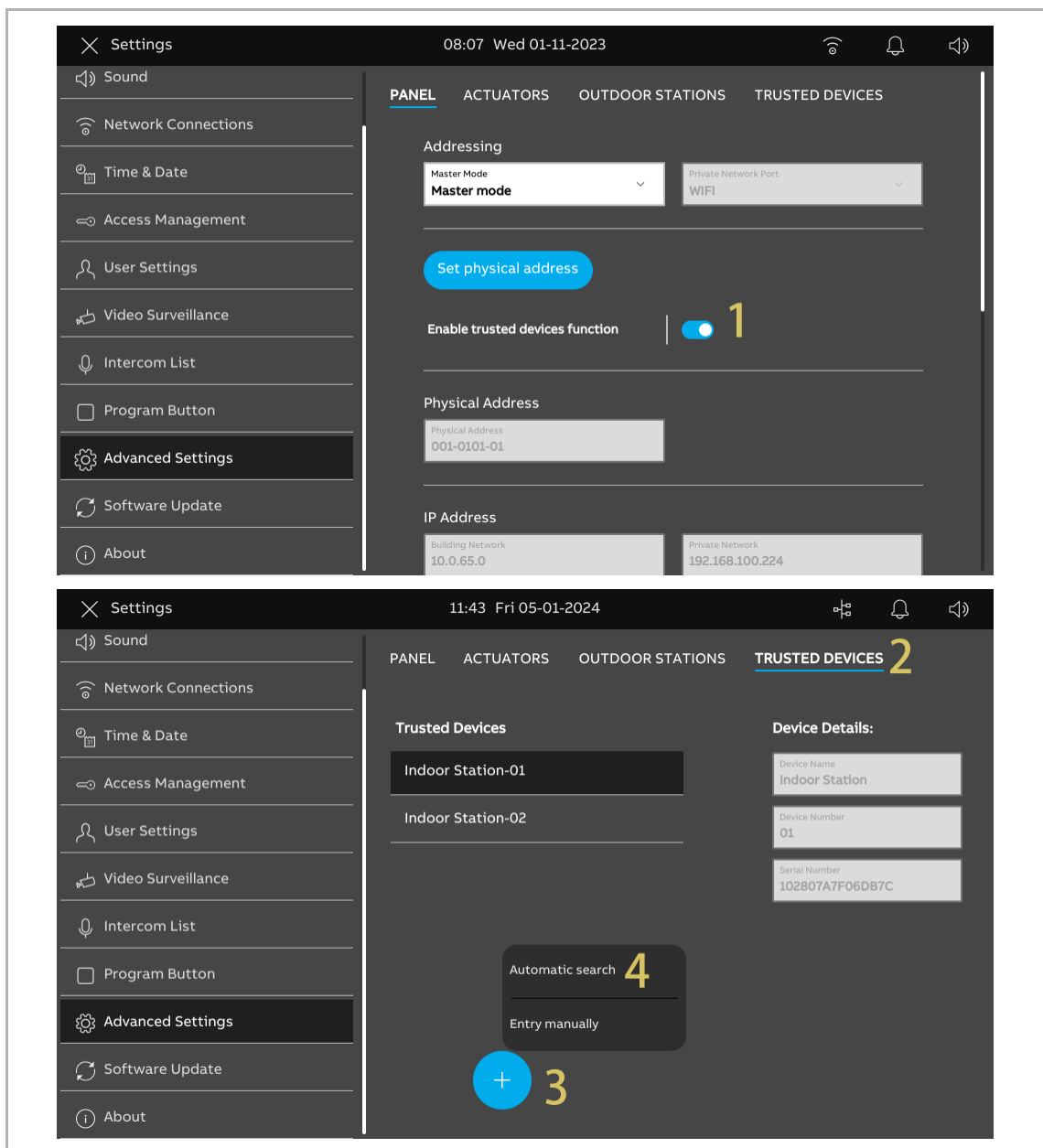
## 4.2.6 Adding new trusted devices via auto search

IPA and 2nd OS with IC can only release the lock when they have been added to the trusted devices list.

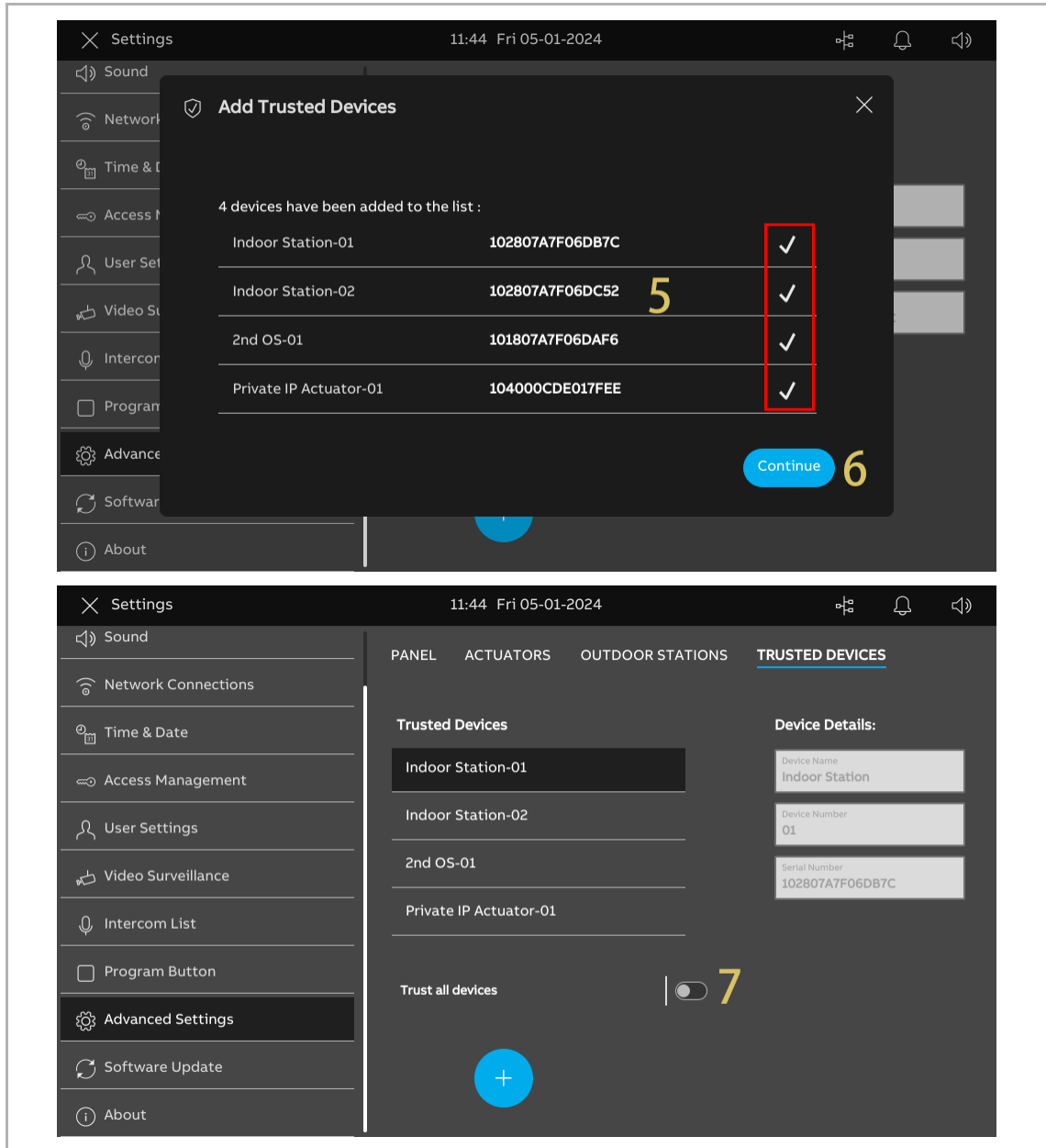
If the designated device has not been added to the trusted device list during the "Setup Wizard", you can add them afterwards via auto search.


Please follow the steps below:

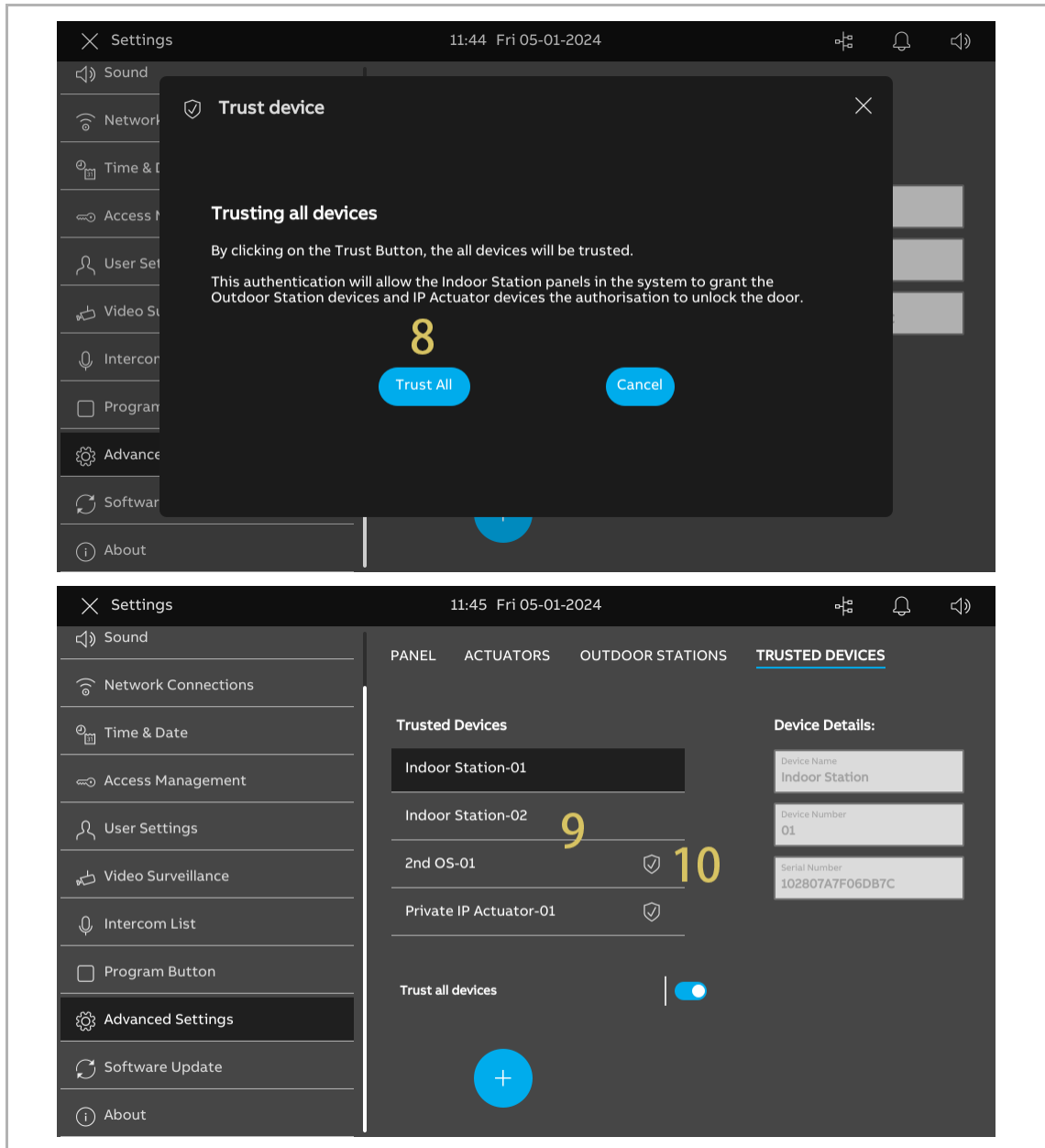
- [1] On the "Advanced Settings" screen, ensure "Enable trusted devices function" is enabled.
- [2] On the "Advanced Settings" screen, tap "Trusted Devices" to access the corresponding screen.
- [3] Tap " + ".
- [4] Tap "Automatic search".



- [5] The devices on the same home network will be displayed on the list.
  - " ✓ " means the device has been configured successfully. Otherwise please restore the designated device to the default factory settings.
- [6] Tap "Continue".
- [7] Enable the "Trust all devices".



- [8] Tap "Trust All".
- [9] All trusted devices will be displayed on the screen.
- [10]  will be displayed on the right to indicate the 2nd OS with IC or IP Actuator can use the unlock function.



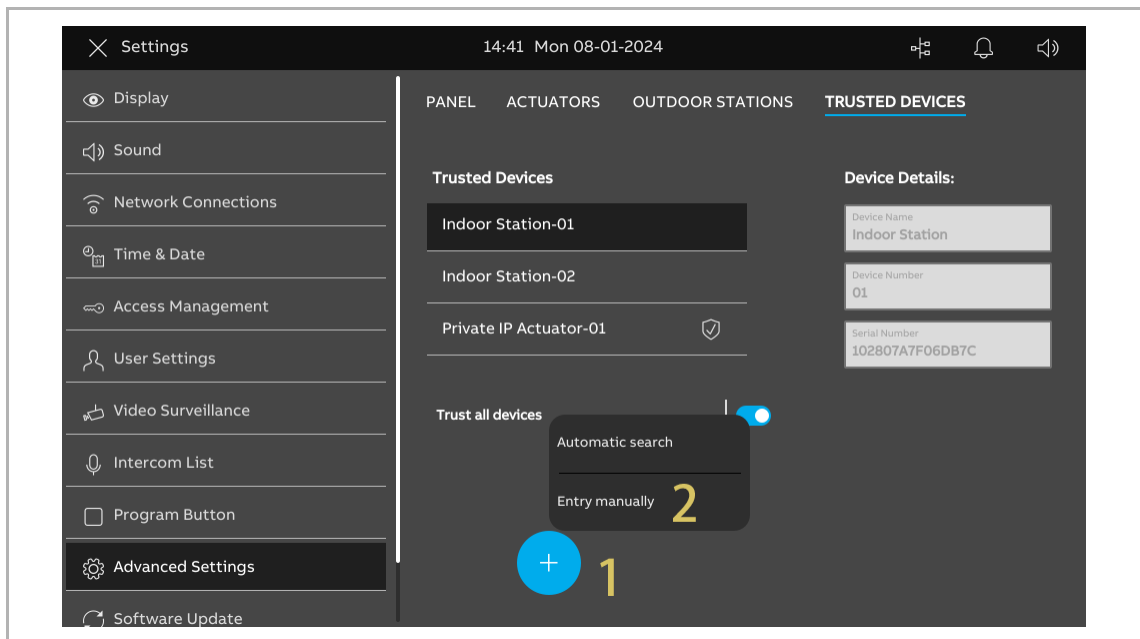
#### 4.2.7 Adding new trusted devices manually

IPA and 2nd OS with IC can release the lock only when they have been added to the trusted devices list.

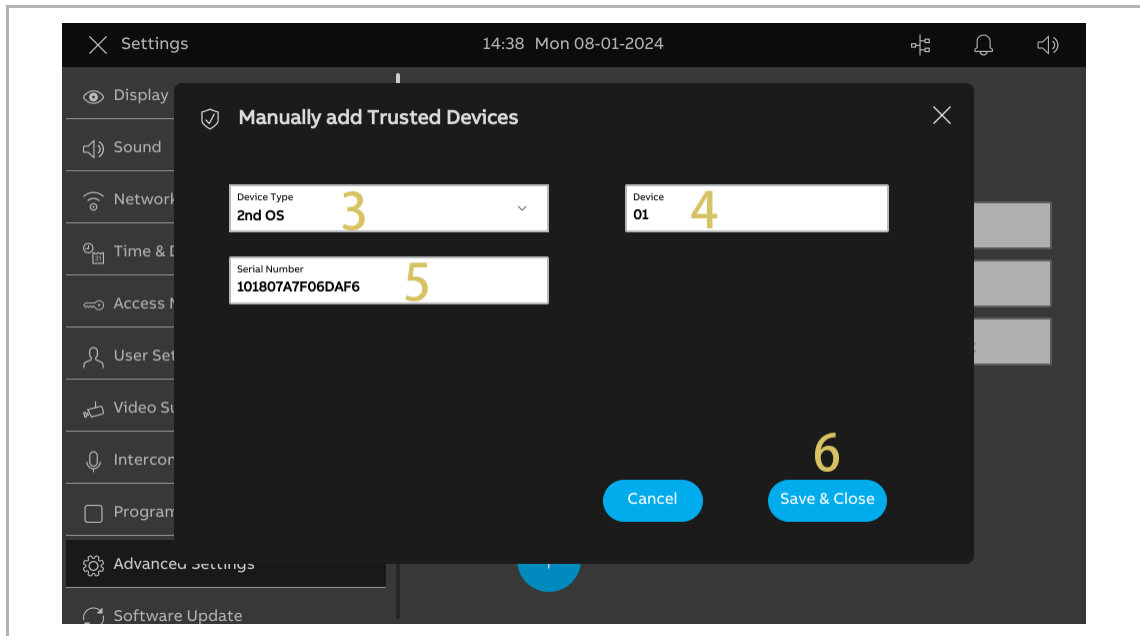
If the designated device has not been added to the trusted device list during the "Setup Wizard", you can add them manually.

Please follow the steps below:

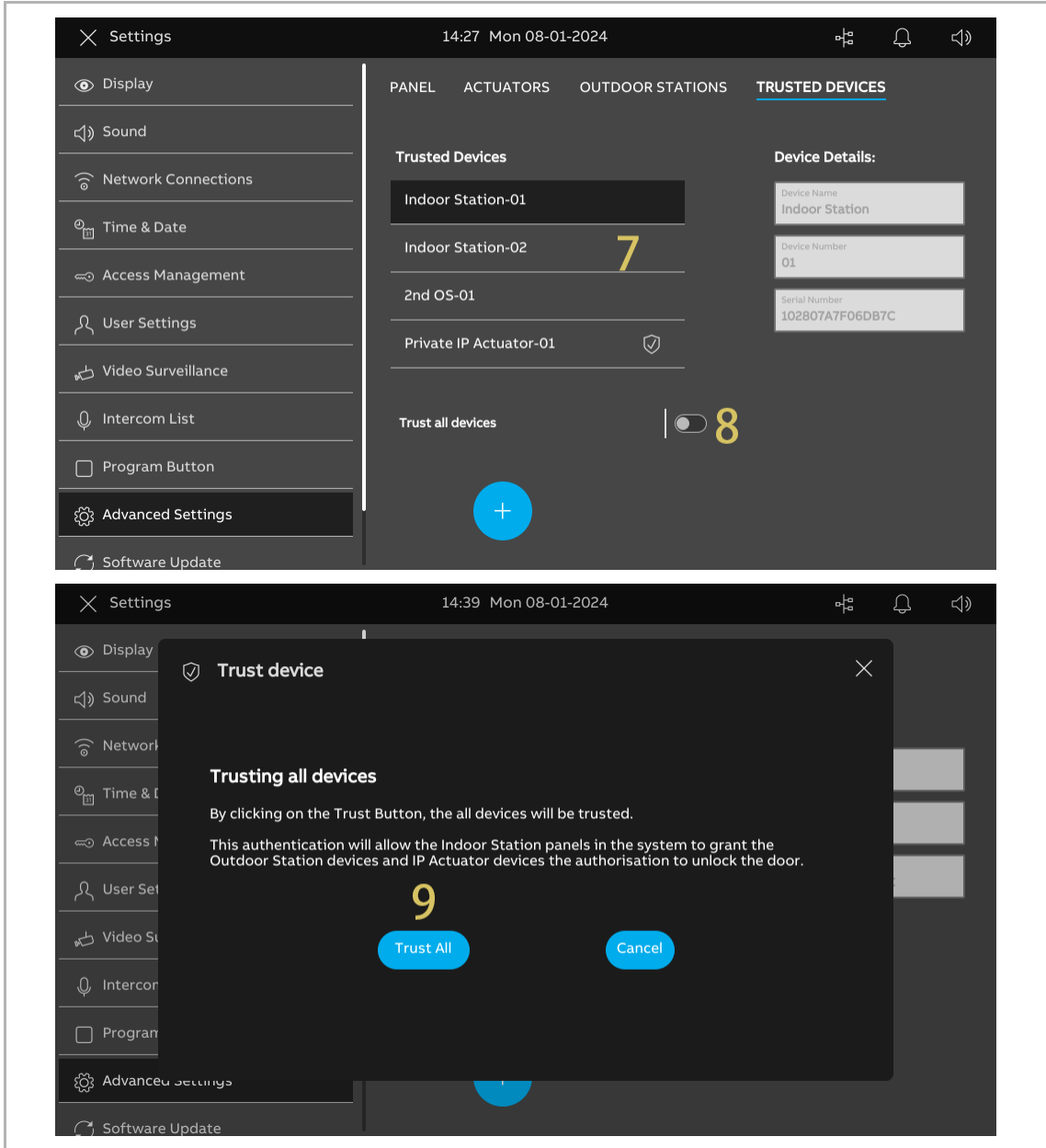
- [1] On the "Trusted Devices" screen, tap " + " .
- [2] Select "Entry manually".




- [3] Select the device type from the drop-down list. It can be set to "2nd OS", "Private IP actuator" or "Indoor station".
- [4] Enter the device number.
- [5] Enter the serial number.
- [6] Tap "Save & Close".

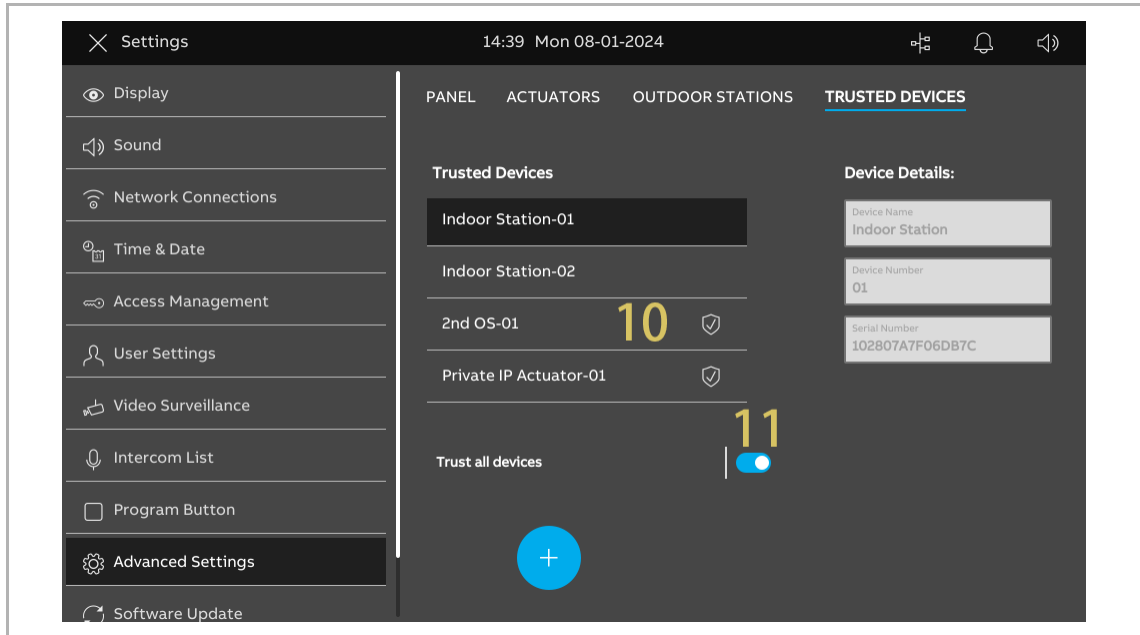


- [7] The designated device has been added to the list.
- [8] Tap "Trust all devices".
- [9] Tap "Trust All".



[10]The designated device is now a trusted device, and  will be displayed on the right to indicate the 2nd Outdoor Station or the IP Actuator can use the unlock function.

[11]"Trust all devices" will be enabled if all devices have been set to trusted.






### 4.2.8 Removing the trusted device

Please follow the steps below:

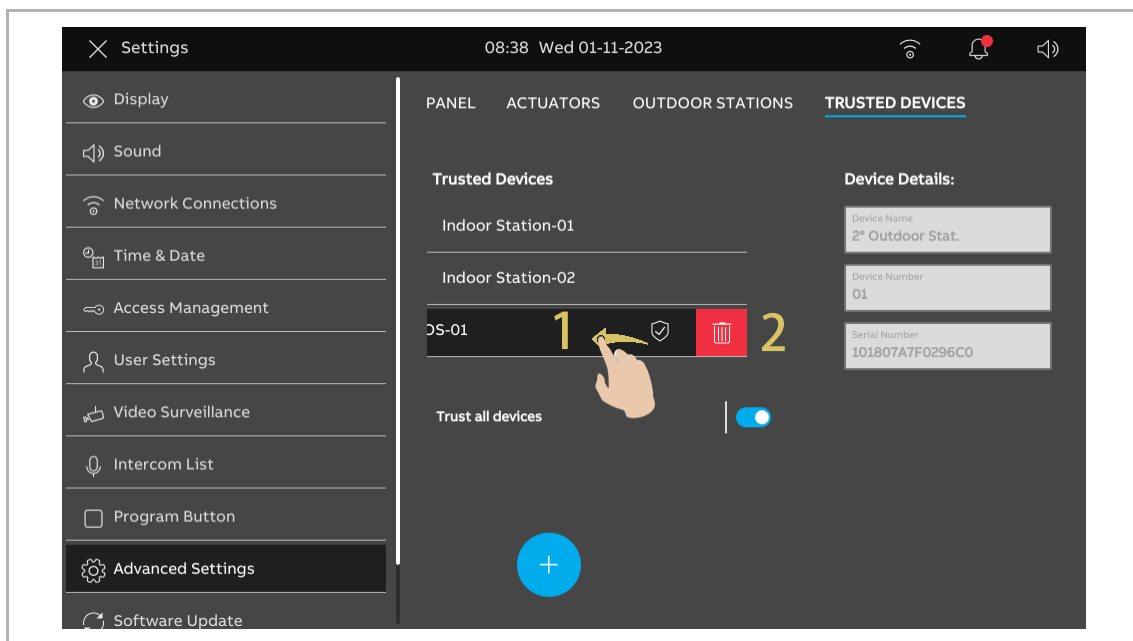
[1] On the "Trusted Devices" screen, swipe the relevant device to the left.

[2] Tap "  " to remove the device.



**Note**

If the device is removed from the trusted devices list, it cannot use the unlock function any more.



## 5 API

### 5.1 API overview

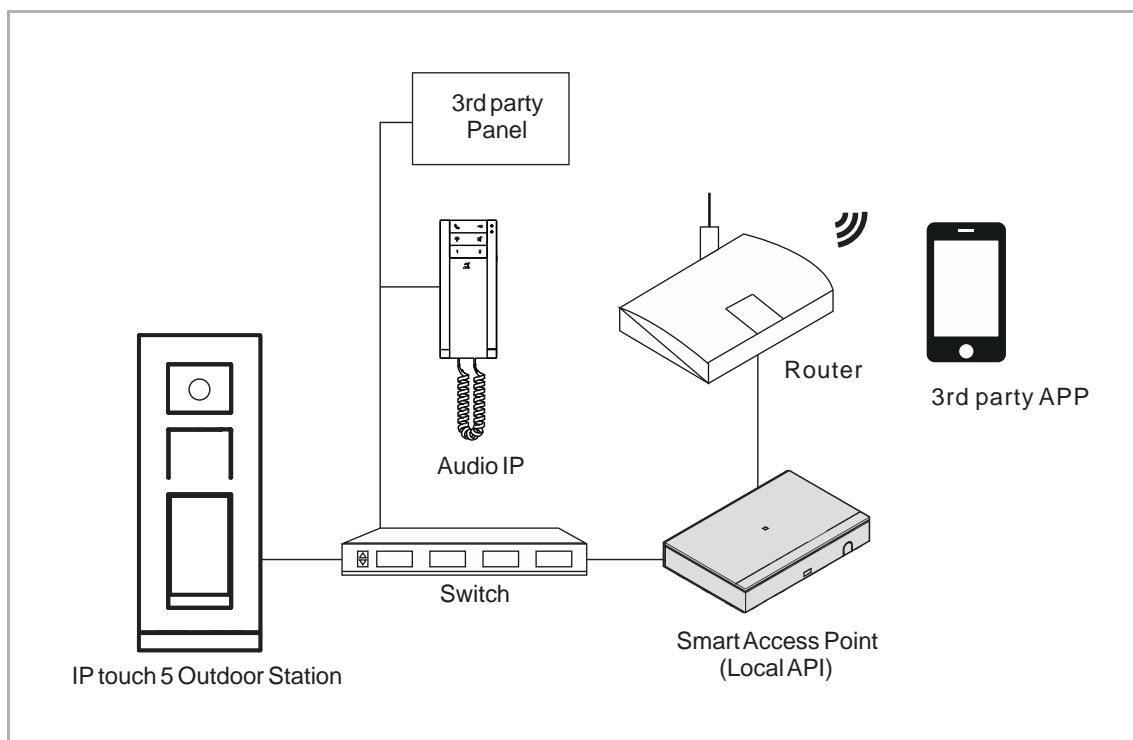
The API provides access to a Welcome IP & AccessControl door entry system, enabling control and monitoring functions.

This API facilitates querying information about the current configuration of the door entry system, including devices and their status. It provides endpoints with the ability to query and modify the current status of devices and receive updates on changes.

Access to the Welcome IP & AccessControl local API is controlled by the user management of the intelligent access point. For this reason, each request must be submitted with valid credentials. The smart access point assigns each user account a generic username that is independent of the account name. The username generated for a specific user account can be found in the Smart Access Point. The credentials are transmitted in accordance with RFC7617 using HTTP Basic Access Authentication.

## 5.2 Topology

The topology is as follows (example only):



## 5.3 Precondition

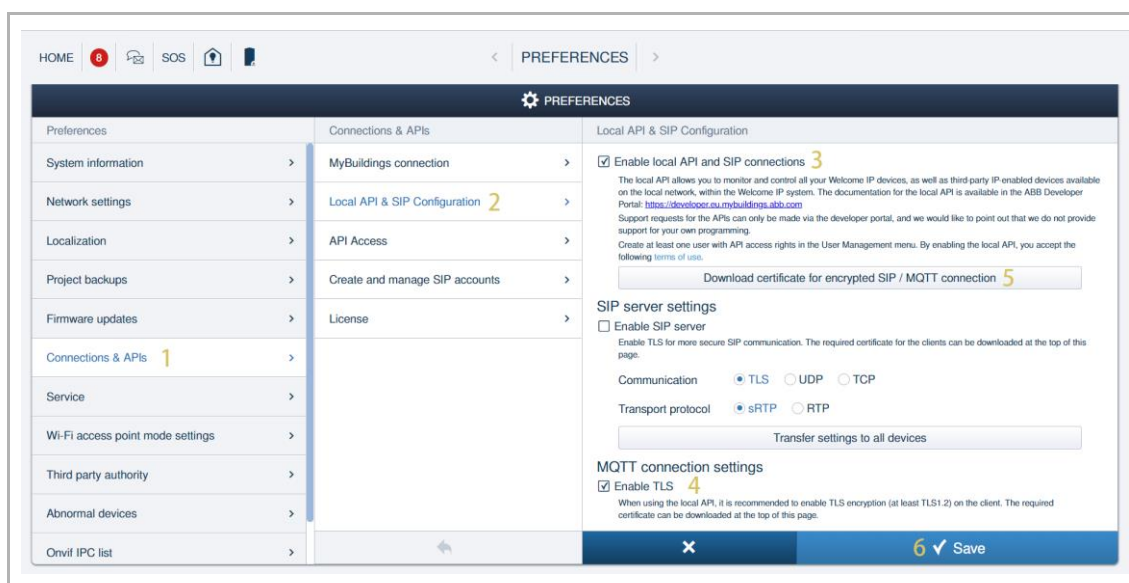
- Ensure the version of "Smart Access Point" should be 6.36 or above.
- Local API is enabled.
- A local API user is created.

## 5.4 Enabling local API

Please follow the steps below:

- [1] On the "Preferences" screen, click "Connections & APIs" to access the corresponding screen.
- [2] Click "Local API & SIP Configuration".
- [3] Tick the check box to enable the local API function.
- [4] It is recommended to tick the check box to enable TLS encryption.
- [5] If "Enable TLS" is activated, please download the certificate for encryption.
- [6] Click "Save".

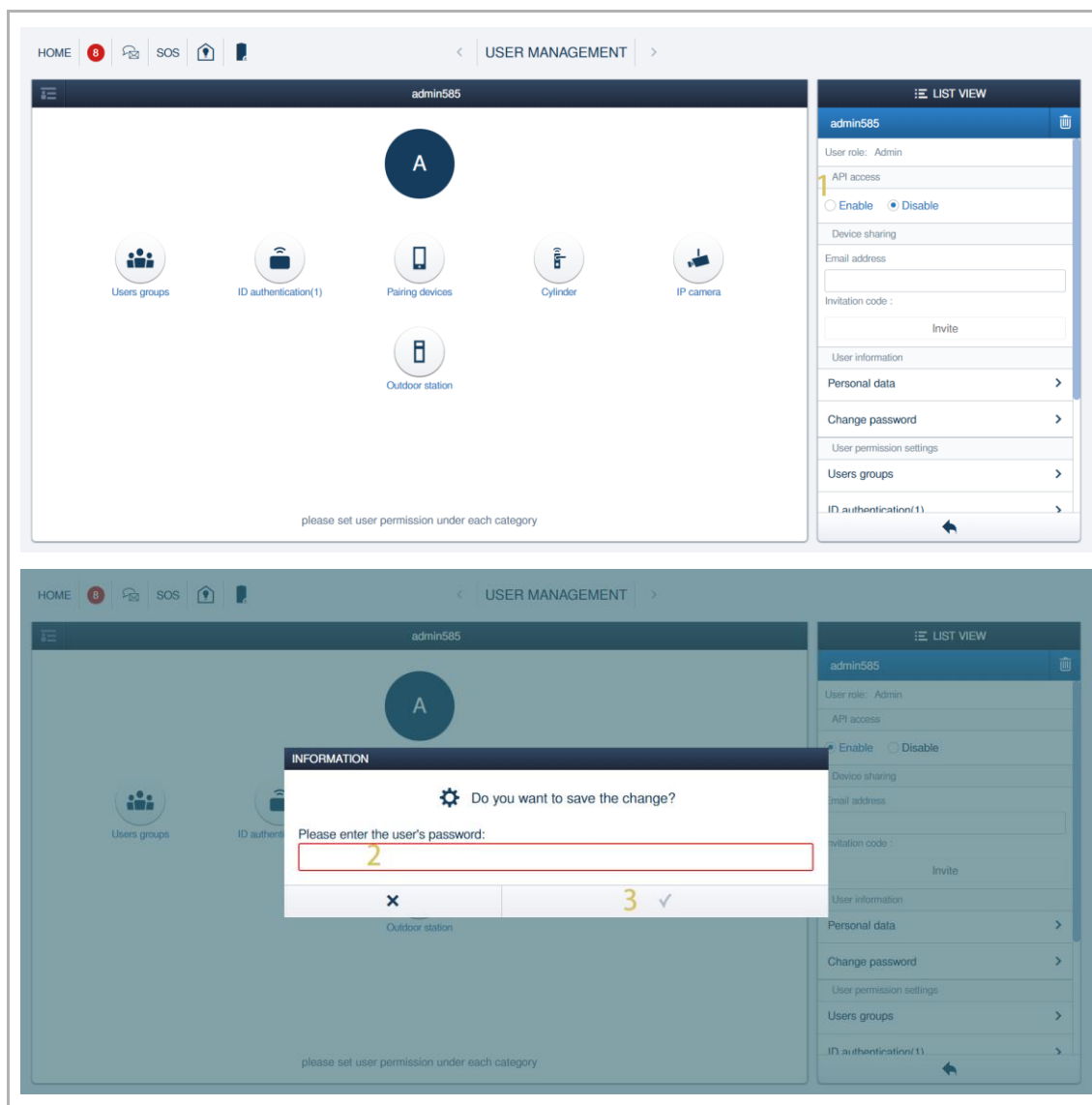
If communication security is not a consideration, step 4 and step 5 can be ignored.



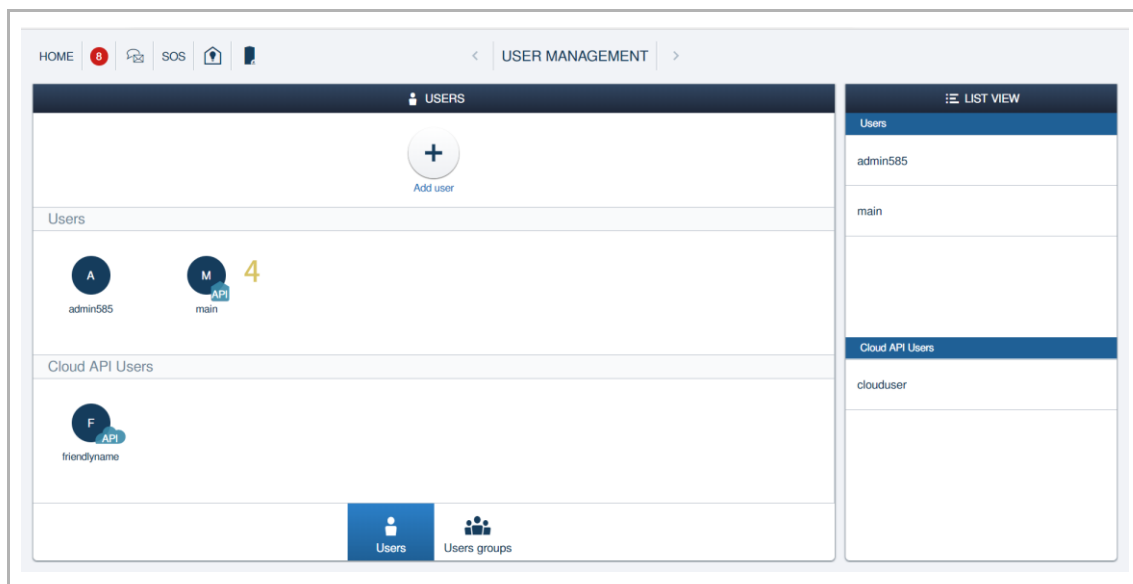
## 5.5 Creating a local API user

Please follow the steps below:

- [1] On the designated user screen, click "Enable" for API access.
- [2] Enter the user's password. If the user has not previously set a password, the password entered here will be used as the password to log into local API.
- [3] Click "√".



[4] Local API user is displayed on the screen.



## 6 SIP

### 6.1 SIP overview

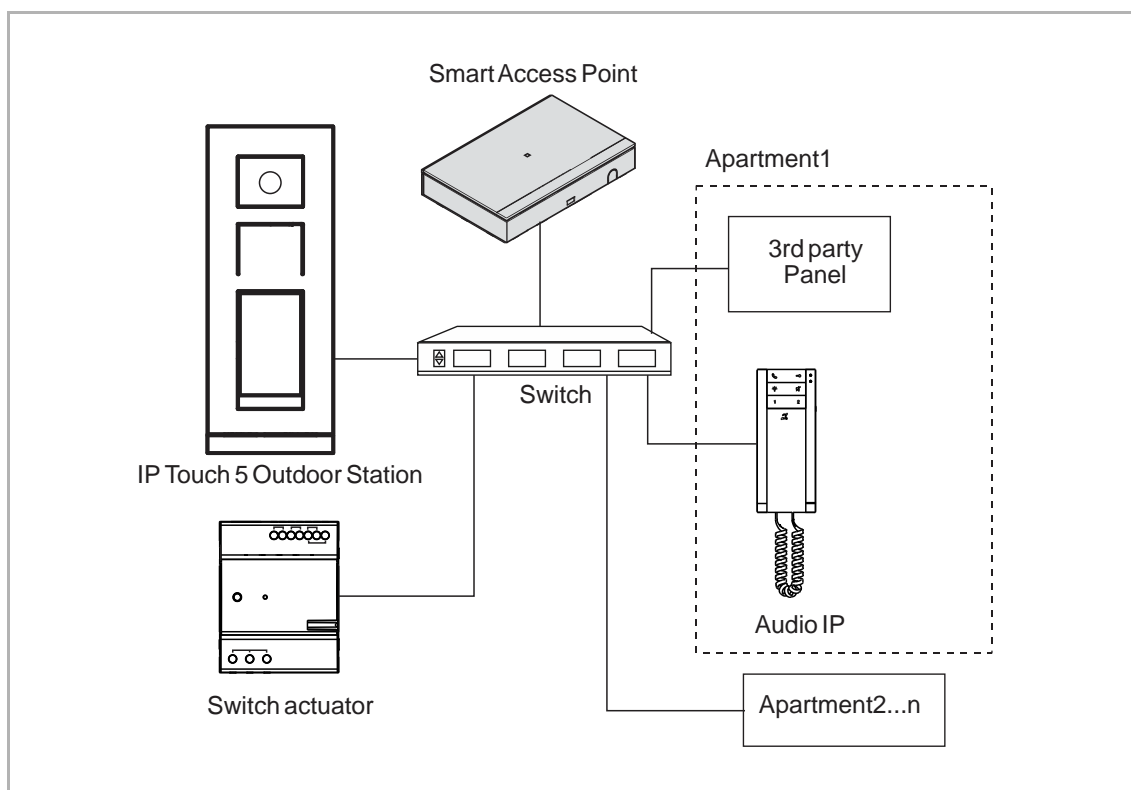
Session Initiation Protocol (SIP) integration refers to the process of implementing SIP technology in communications systems to enable and enhance Voice over Internet Protocol (VoIP) capabilities. SIP is a signalling protocol used to initiate, maintain and terminate real-time sessions, primarily involving video, voice, messaging and other communications services over IP networks.

SIP integration involves setting up SIP servers, gateways and session border controllers, among other components, to manage and route communications between users, devices and the network.

Welcome IP natively supports SIP. This allows organisations and home users to integrate Welcome IP with any third-party telephony application. They can act as either servers or clients within the network.

## 6.2 Topology

The topology is as follows (just an example):



The above topology supports 2 scenarios.

Scenario1: When IP touch 5 outdoor station initiates a call to a specific apartment, the 3rd party panel in the same apartment will ring. The 3rd party panel receives the call and releases the door by sending a command.

Scenario2: The 3rd party panel initiates a call to IP touch 5 outdoor station.

\*Usually, one Audio IP works with one 3rd party panel in the same apartment. When IP touch 5 outdoor station calls Audio IP, the related 3rd party panel also rings.

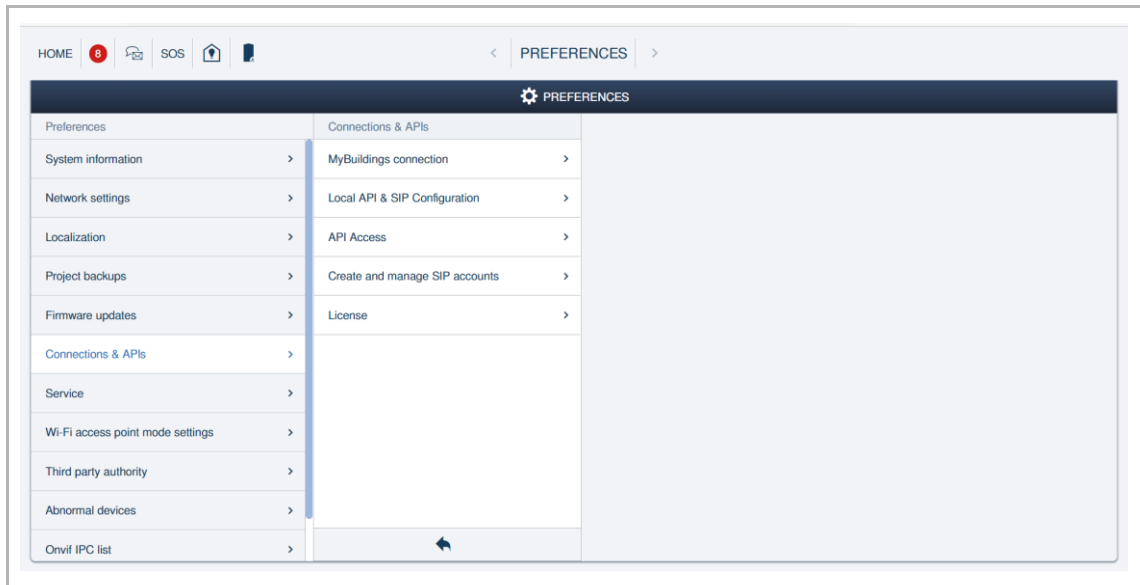
To achieve the scenarios above, the following settings need to be configured first.

- [1] Accessing "APIs" screen on Smart Access Point.
- [2] Configuring Smart Access Point as SIP server.
- [3] Creating an SIP account for each 3rd party panel.
- [4] Configuring the 3rd party panel.
- [5] Configuring IP touch 5 outdoor station.
- [6] Configuring Audio IP.



### 6.3 Accessing "SIP" screen on the SmartAP

On the "Preference" screen, click "Connections & APIs" to access the corresponding screen.



## 6.4 Configuring the SmartAP as SIP server

In scenarios where a smart access point (AP) acts as a SIP server, the device plays multiple roles within the network infrastructure. Essentially, it acts as both a connectivity point for Wi-Fi devices and a central hub for managing SIP-based communications. Here's a brief description of its functions in this dual role:

**Connectivity provider:** The Smart AP provides wireless network access to connected devices, just like a traditional access point.

**SIP Registrar:** It registers SIP clients, authenticates devices and users when they log on to the network, and maintains a directory of these clients to facilitate communication.

**SIP Proxy and Router:** The Smart AP routes SIP calls and messages between registered clients within the network and can also manage traffic between these clients and external SIP networks. This includes call setup, management and teardown.

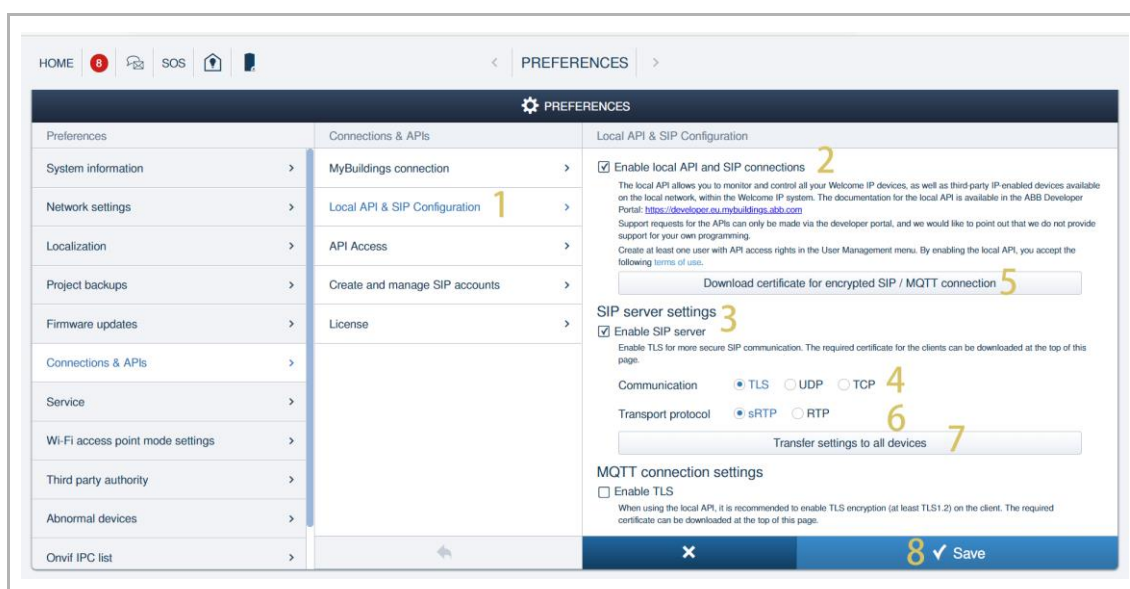
This setup reduces the need for separate hardware and simplifies the network architecture, making it more cost-effective and easier to manage, while still supporting a wide range of communications protocols and services.

Please follow the steps below:

- [1] On the "Connections & APIs" screen, click "Local API & SIP Configuration".
- [2] Tick the check box to enable the "Local API and SIP connections" function.
- [3] Tick the check box to enable "Smart Access Point" as the SIP server.
- [4] Select the communication protocol.
- [5] If the communication protocol is set to "TLS", a certificate should be downloaded before use.
- [6] Select a transport protocol.
- [7] When "Transfer settings to all devices" is clicked, "Smart Access Point" will push related SIP settings to all devices (including IP Touch 5 Outdoor Station and Audio IP, but not including the 3rd party panel).

It is recommended to carry out this operation when SIP settings are changed or if any devices are not working normally.

- [8] Click "Save".



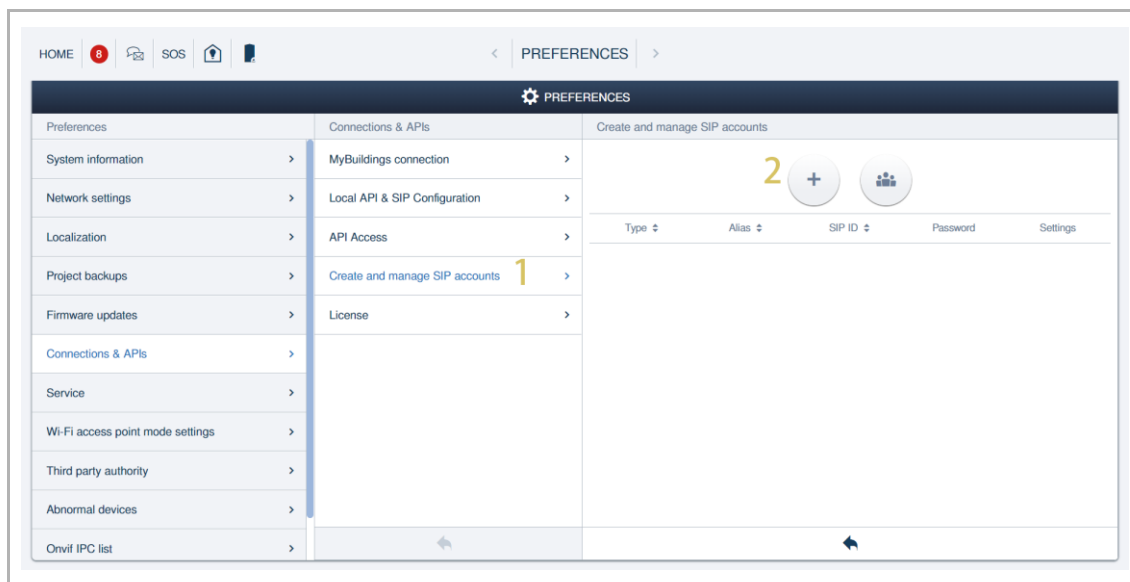
## 6.5 Creating a SIP account for each 3rd party panel

1. Create the SIP accounts one by one

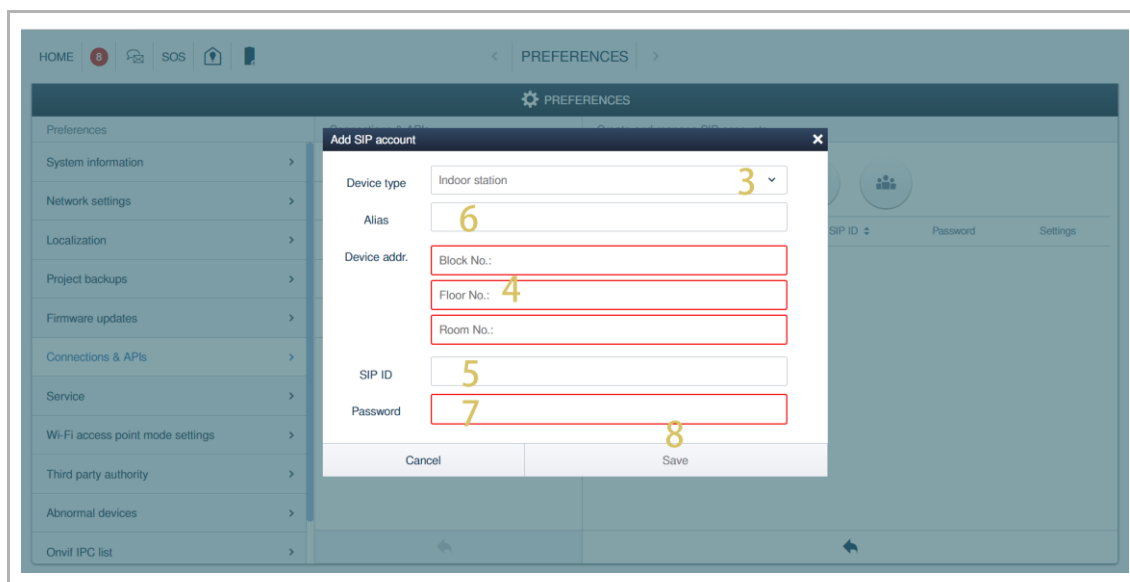
Please follow the steps below:

[1] On the "Connections & APIs" screen, click "Create and manage SIP accounts".

[2] Click "+".



- [3] The 3rd party panel will be set to "Indoor station" automatically and cannot be modified.
- [4] Enter the device address (contains block no., floor no. and room no.).
- [5] The ID will be generated automatically according to the rule and cannot be modified.
- [6] The alias will be generated automatically according to the rule and can be modified.
- [7] Enter the password (6...15 digits).
- [8] Click "Save".



## 2. Creating SIP accounts in batches

SIP accounts for the 3rd party panel can be created in batches.

- At least one Audio IP is used in each apartment.
- The 3rd party panel should be on the same network with the designated Audio IP.
- The 3rd party panel uses the same SIP account as the designated Audio IP.

Please follow the steps below:

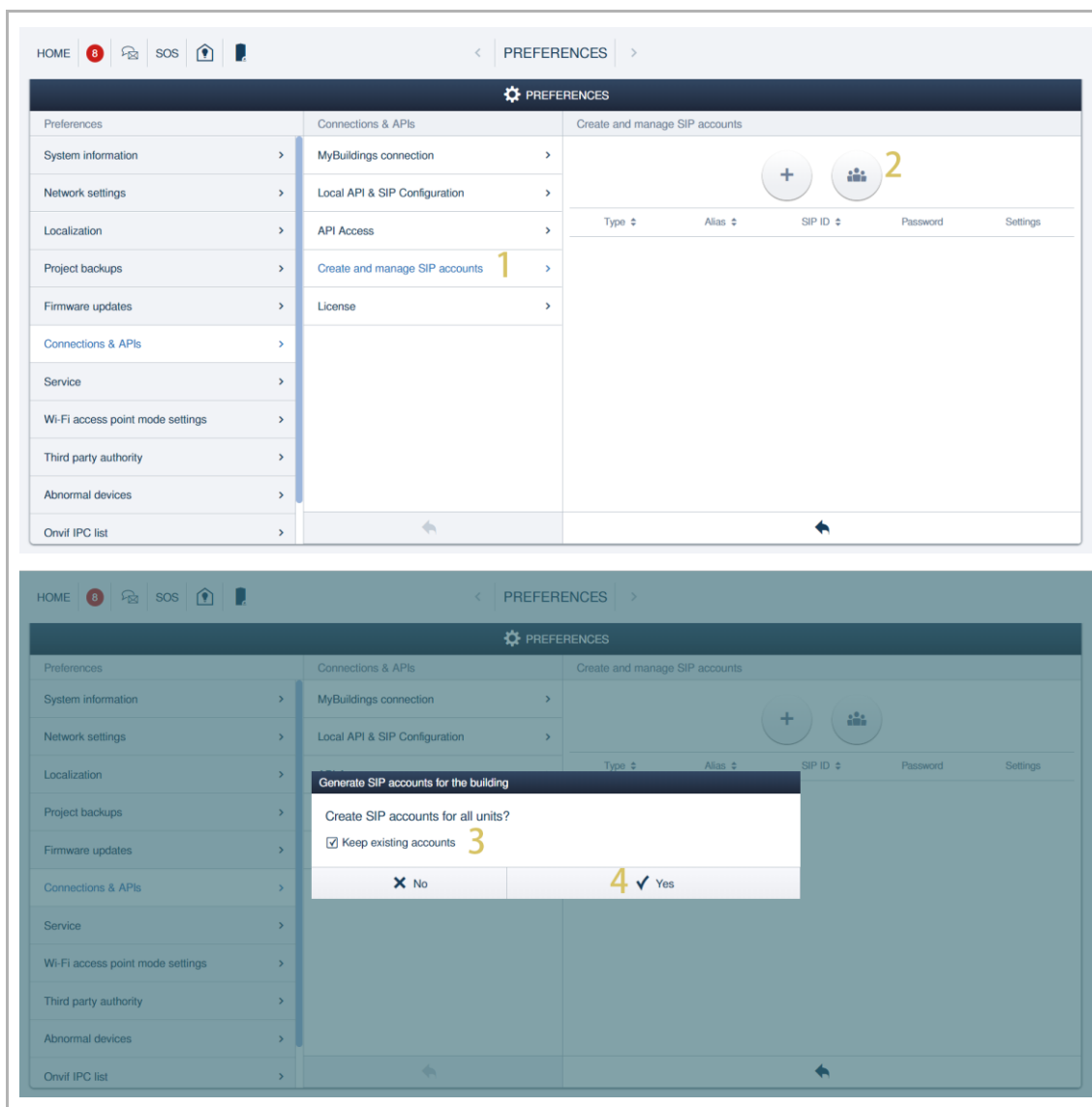
[1] On the "Connections & APIs" screen, click "Create and manage SIP accounts".

[2] Click "  ".

[3] If the existing account needs to be kept, tick the checkbox, otherwise all existing accounts will be cleared and new accounts will be created.

[4] Click "Yes".

SIP accounts of the 3rd party panels are generated based on the room numbers of Audio IPs which have been registered on the system.



The image displays two screenshots of the system's 'PREFERENCES' screen, specifically the 'Connections & APIs' section, illustrating the steps to create SIP accounts in batches.

**Top Screenshot:** The 'Create and manage SIP accounts' screen is shown. A yellow '2' highlights the 'Generate SIP accounts for the building' button (represented by a group of people icon). The screen also shows a table with columns for Type, Alias, SIP ID, Password, and Settings.

**Bottom Screenshot:** A confirmation dialog box is displayed over the same screen. The dialog box title is 'Generate SIP accounts for the building'. The main text asks 'Create SIP accounts for all units?'. Below this, there is a checkbox labeled 'Keep existing accounts' which is checked, highlighted with a yellow '3'. At the bottom of the dialog, there are two buttons: 'No' (highlighted with a yellow '4') and 'Yes'.

## 6.6 Configuring the 3rd party panel

(The addresses are given as an example only, please check the values with your real installation)

Please follow the steps below:

- [1] Enter the SIP account.
- [2] Enter the SIP password.
- [3] Enter the server address 10.0.0.1.
- [4] Select the transport protocol and enter the port.
  - If "UDP/TCP" is selected, port should be set to "5060".
  - If "TLS" is selected, port should be set to "5061".
- [5] Enter the server expire time (60...120 seconds).
- [6] Enter the server retry counts.
- [7] If communication protocol is set to "TLS", a certificate downloaded from "Smart Access Point" needs to be imported.
- [8] Set the media stream transport protocol.
  - Compulsory = SRTP
  - Disabled = RTP

The screenshot displays a configuration window for SIP settings. It is divided into several sections:

- Register status:** Shows 'Registered' and 'Line Active' set to 'Enabled'. Fields for Label, Display Name, Register Name, Username, and Password are all filled with '0030909'. The Password field is masked with dots and has a yellow '2' next to it.
- SIP Server 1:** Contains fields for Server Host (10.0.0.1, marked with a yellow '3'), Port (5060, marked with a yellow '4'), Transport (TCP, marked with a yellow '4'), Server Expires (60, marked with a yellow '5'), and Server Retry Counts (3, marked with a yellow '6').
- Import Trusted Certificates:** Labeled with a yellow '7', it shows 'No selected file' and a 'Browse...' button. Below are 'Upload' and 'Cancel' buttons.
- RTP Encryption (SRTP):** Labeled with a yellow '8', it has a dropdown menu set to 'Compulsory'.

At the bottom of the window, there are 'Confirm' and 'Cancel' buttons.

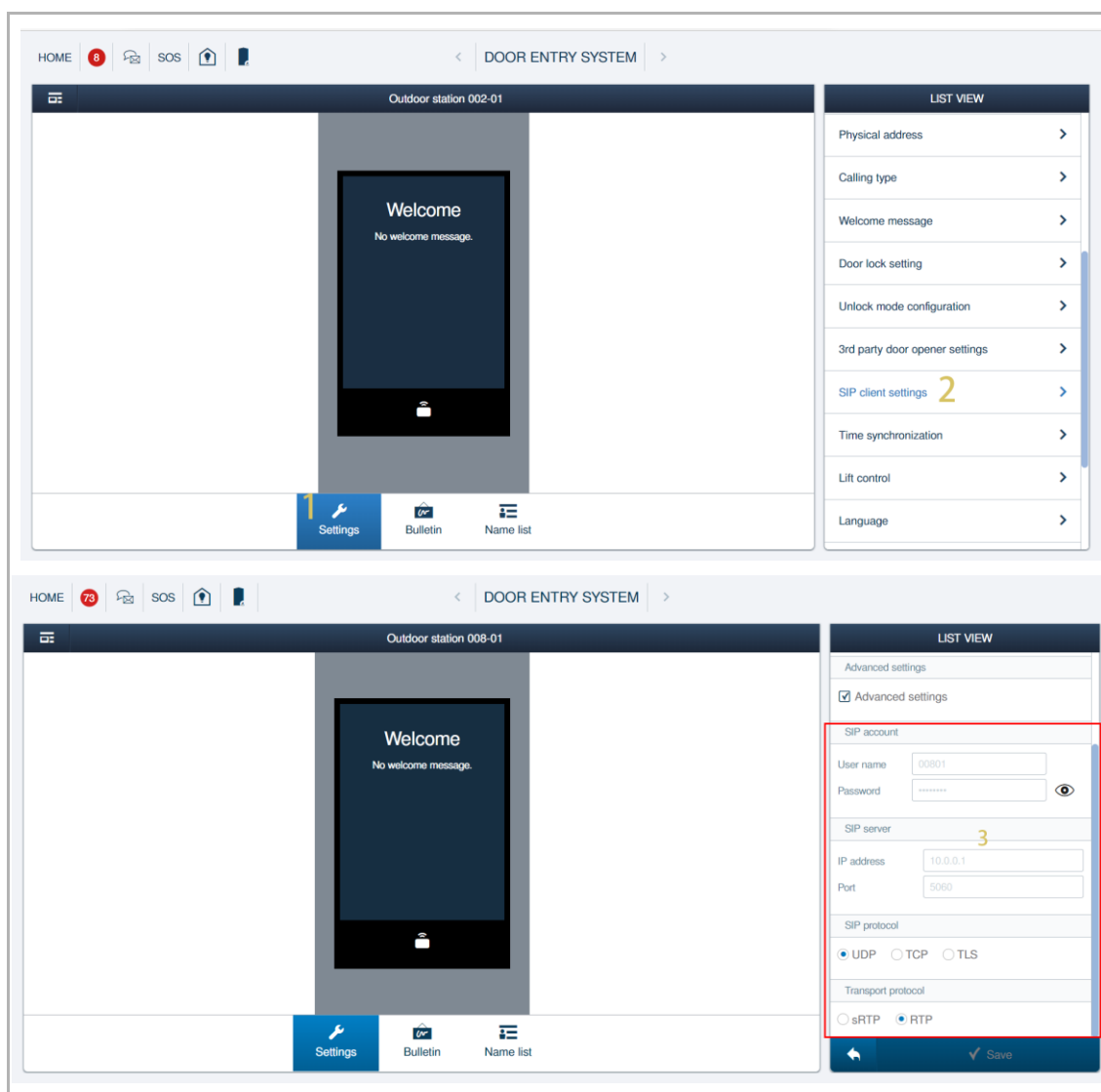
## 6.7 Configuring IP touch 5 OS

IP touch 5 outdoor station needs to be configured before using the SIP function.

### 6.7.1 SIP client settings

Please follow the steps below:

- [1] On the designated IP touch 5 outdoor station screen, click "Settings".
- [2] Click "SIP client settings".
- [3] The following settings will be filled automatically when "Smart Access Point" is enabled as an SIP server and IP touch 5 has obtained the certification from "Smart Access Point".
  - SIP account
  - SIP server
  - Communication protocol
  - Transport protocol



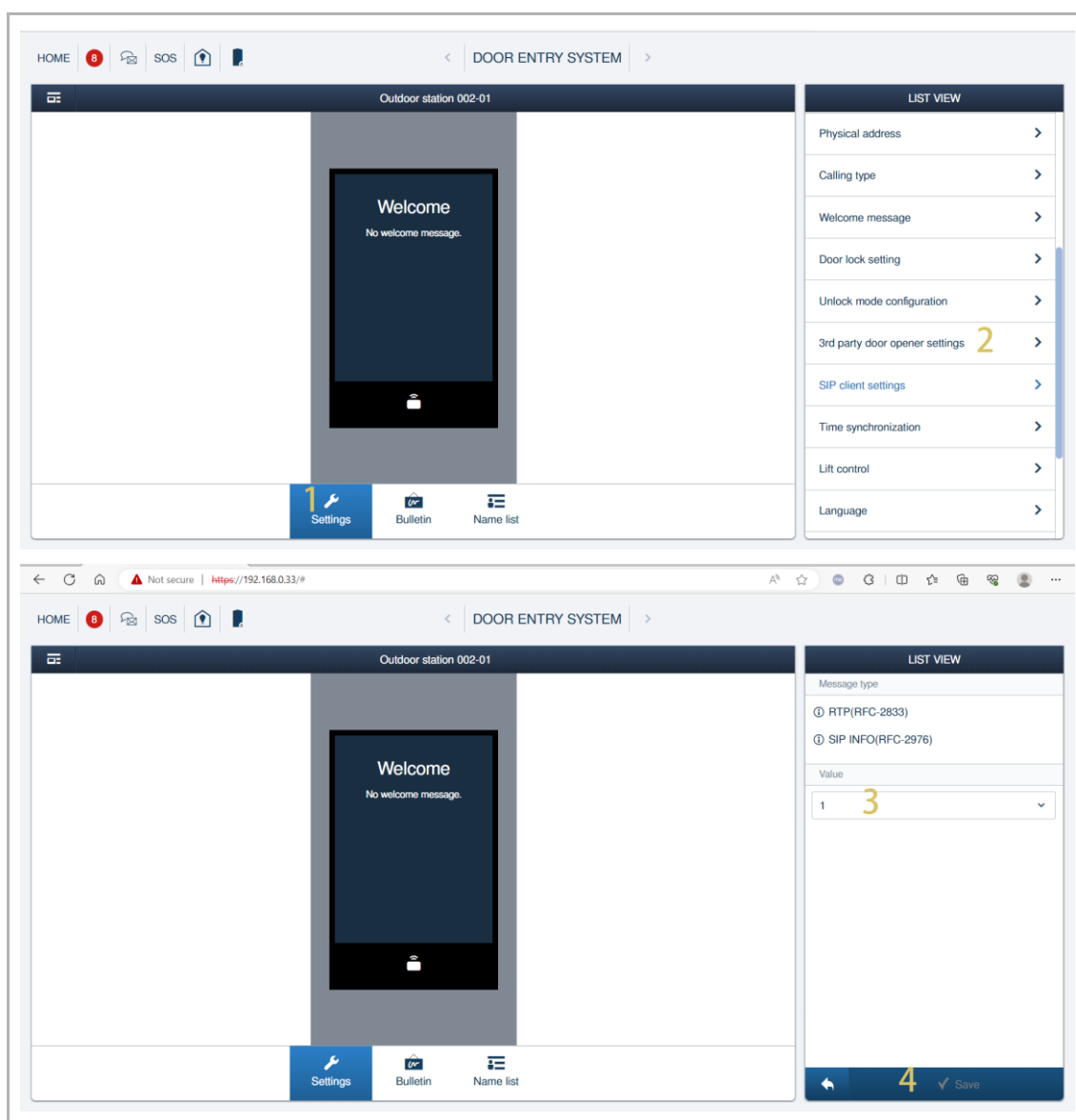


## 6.7.2 3rd party door opener settings

The 3rd party panel needs to set a button on the device to release the lock on the IP touch 5 Outdoor Station.

Please follow the steps below:

- [1] On the designated IP touch 5 Outdoor Station screen, click "Settings".
- [2] Click "3rd party door opener settings".
- [3] Select a value from the drop-list as the command to release the lock. It can be set to "0~9" , "\*" or "#".
- [4] Click "Save".

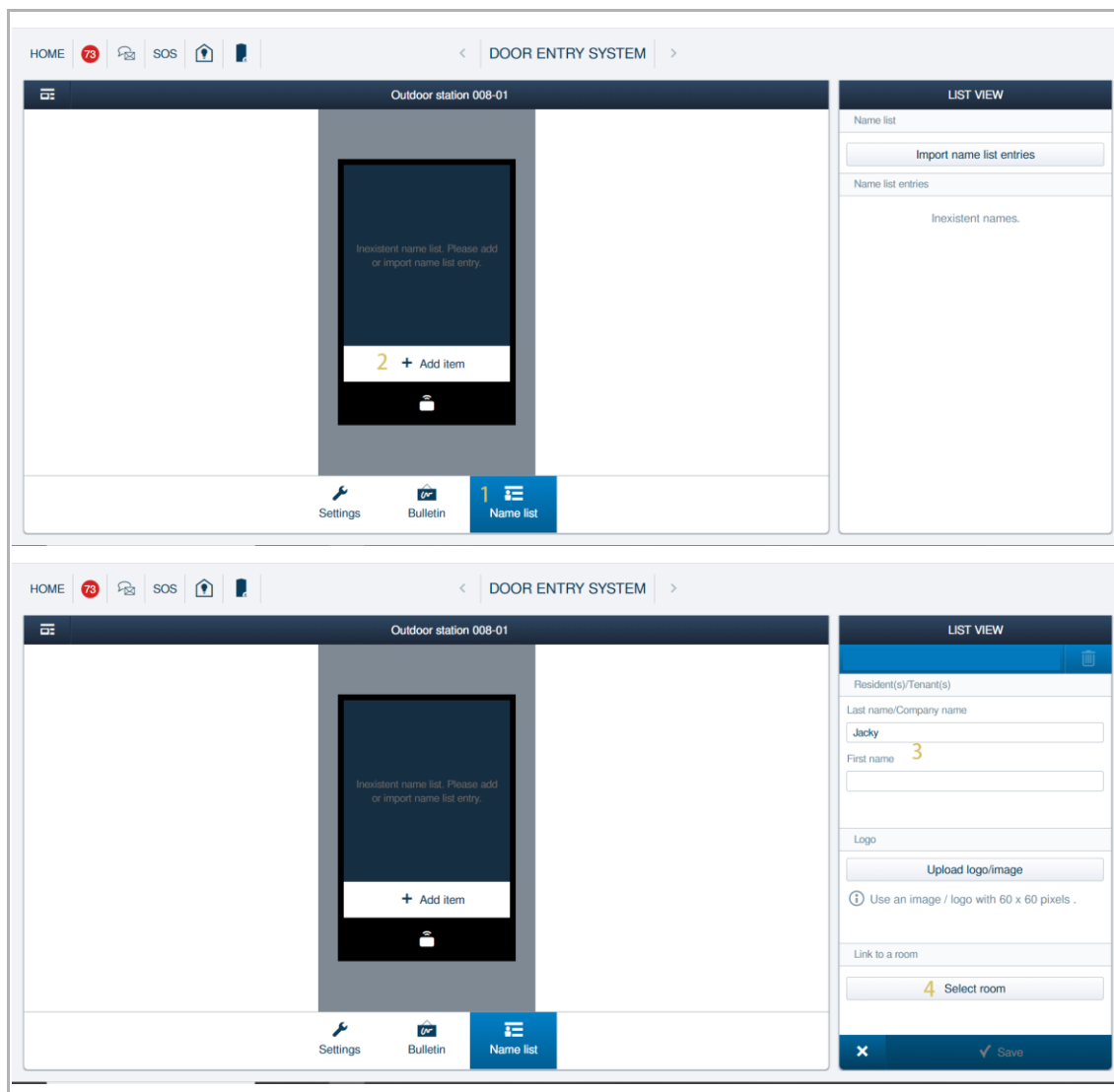


### 6.7.3 Adding the 3rd party panels to the name list one by one

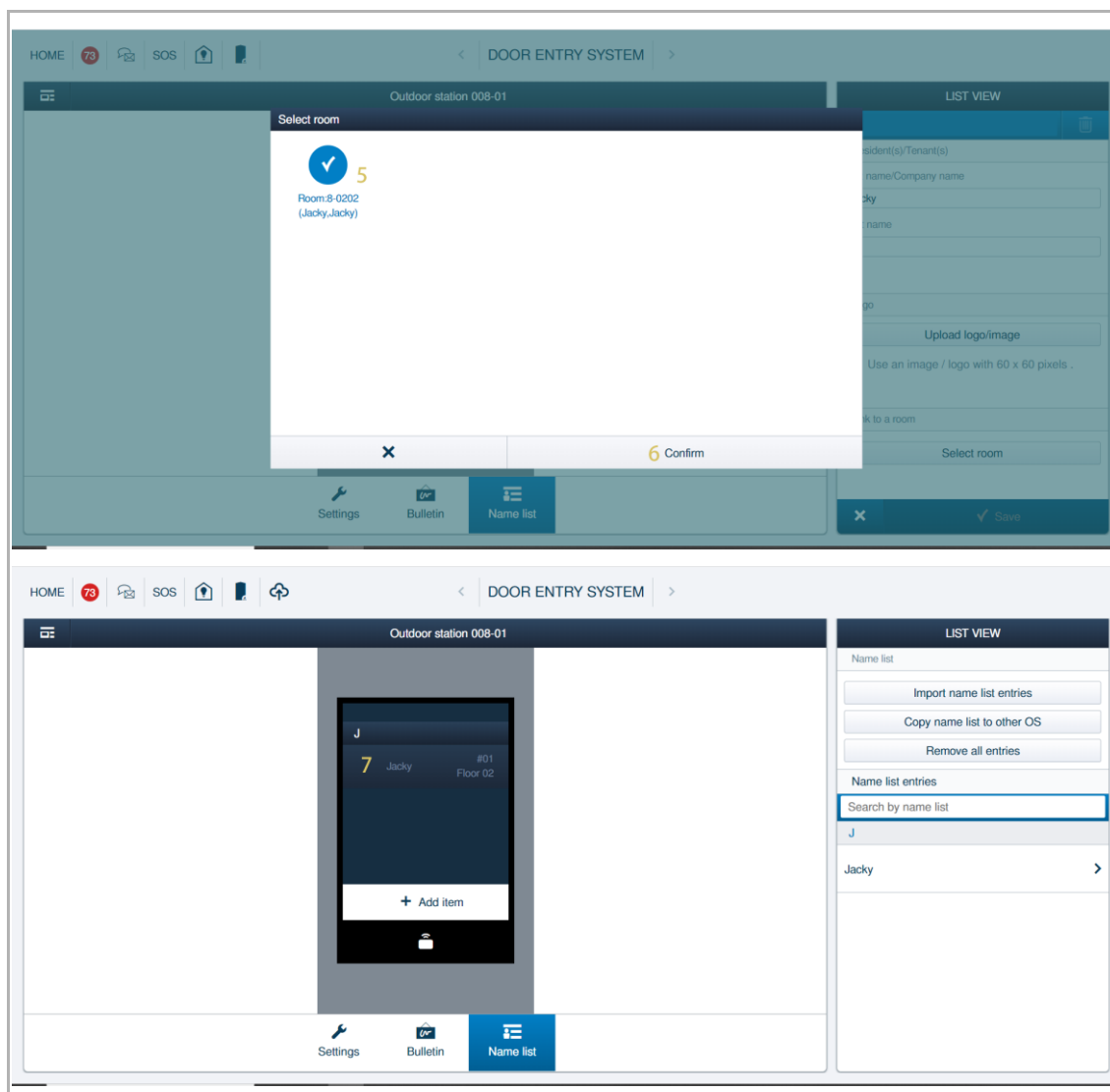
It is available for IP touch 5 outdoor station calls the 3rd party panel via keypad directly or name list.

Please follow the steps to add the 3rd party panel to the name list:

- [1] On the designated IP touch 5 outdoor station screen, click "Name list".
- [2] Click "+ Add item".
- [3] Enter the last name and the first name.
- [4] Click "Select room".



- [5] Select the designated room where the 3rd party panel is positioned.
- [6] Click "Confirm".
- [7] The alias name has been displayed on the screen of the IP touch 5 Outdoor Station.



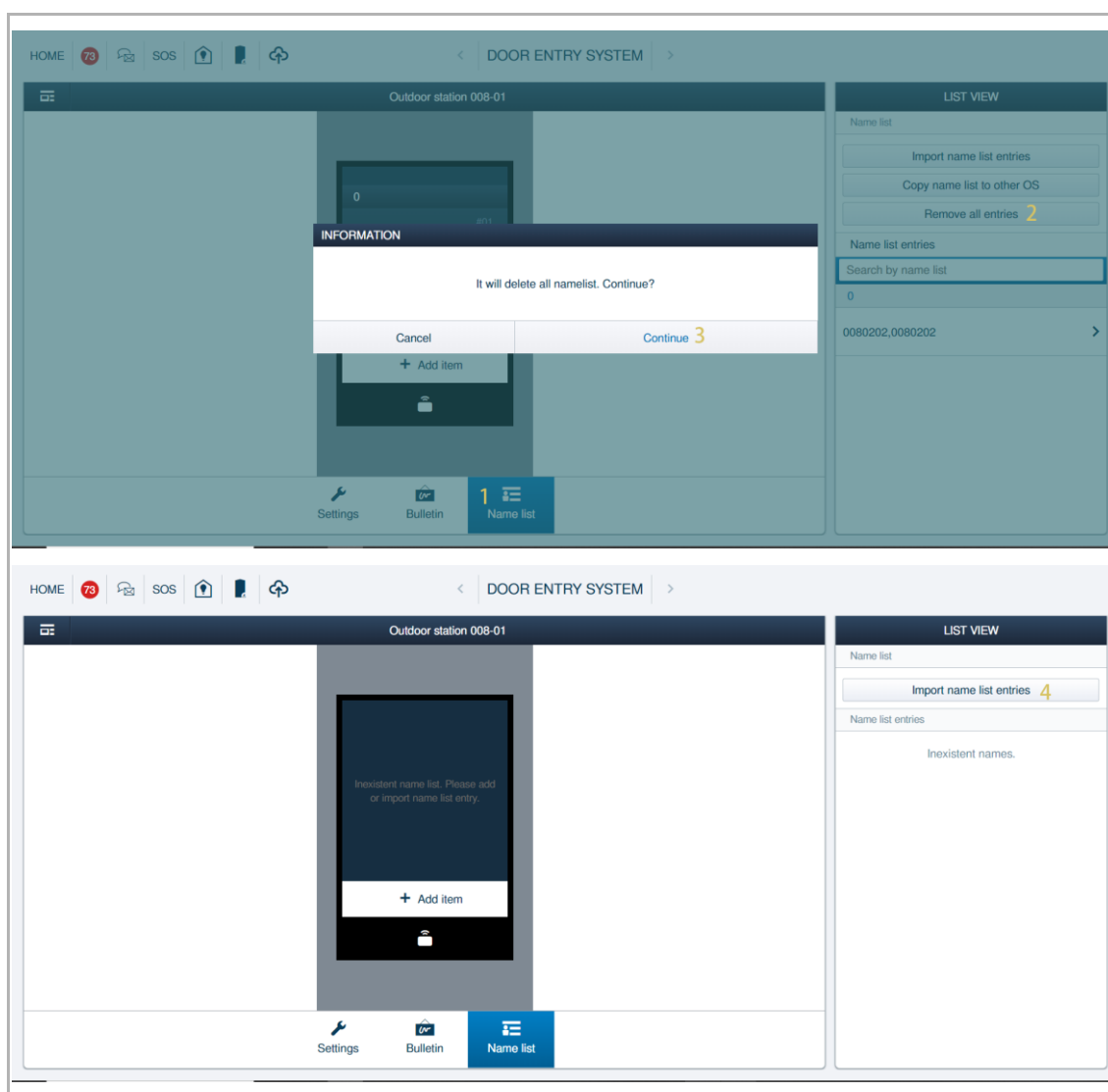
## 6.7.4 Adding the 3rd party panels to the name list in batches

If there are multiple 3rd party panels that need to be added to the name list, it is recommended to use the import function.

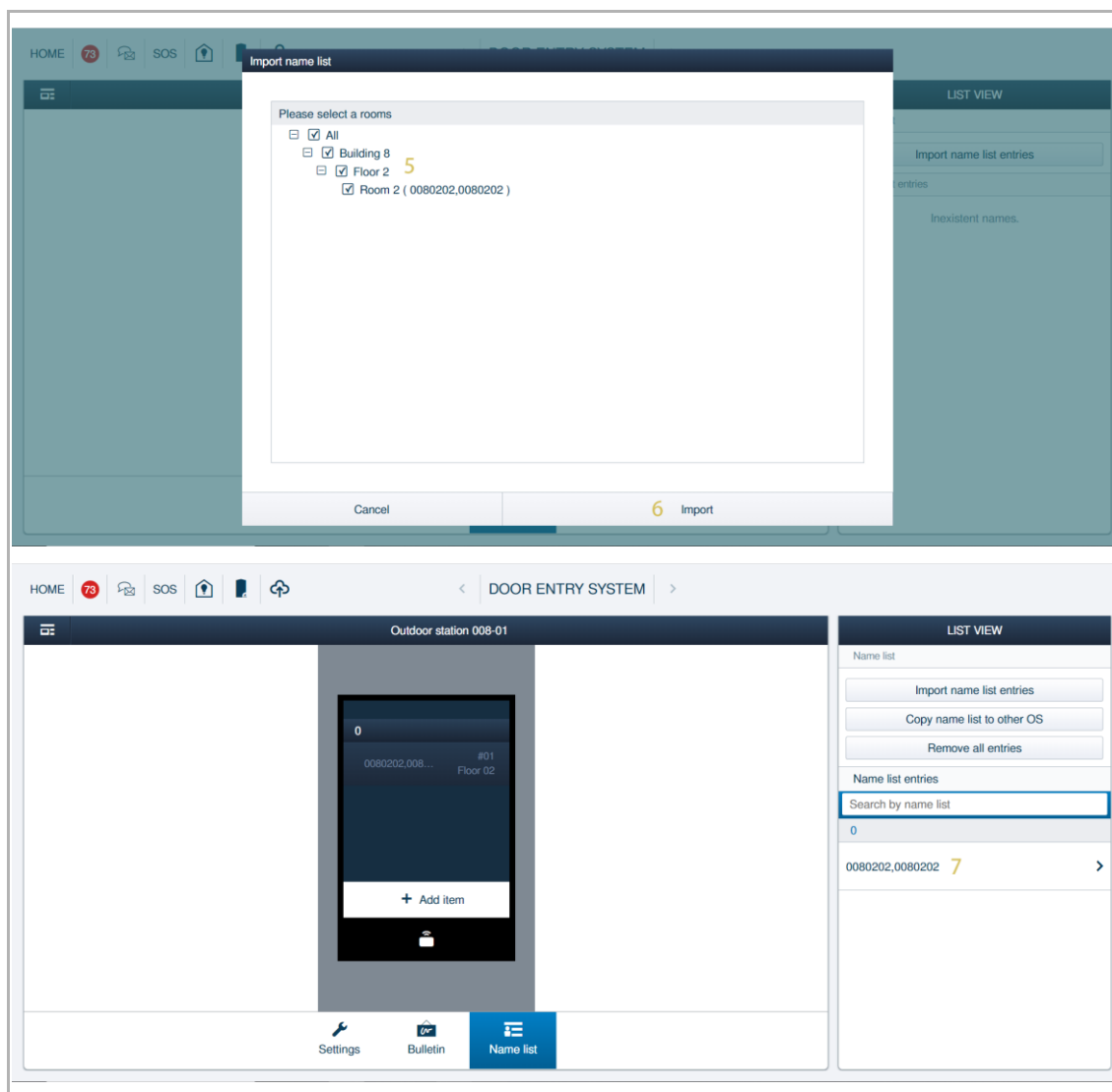
Please follow the steps to add the 3rd party panels to the name list in batches:

It is recommended to remove all entries before importing.

- [1] On the designated IP touch 5 outdoor station screen, click "Name List".
- [2] Click "Remove all entries".
- [3] Click "Continue".
- [4] Click "Import name list entries".



- [5] Select the designated rooms.
- [6] Click "Import".
- [7] The alias name has been displayed on the screen. Click the name to set the alias name.



## 6.8 Configuring Audio IP

Audio IP needs to be configured before using the SIP function.

Please follow the steps below:

- [1] On the designated Audio IP "Settings" screen, click "SIP client settings".
- [2] The following settings will be filled automatically when "Smart Access Point" is enabled as an SIP server and Audio IP has obtained the certification from "Smart Access Point".
  - SIP account
  - SIP server
  - Communication protocol
  - Transport protocol

The image displays two screenshots of the 'Indoor station 008-0202-01' settings interface. The top screenshot shows the 'LIST VIEW' menu with 'SIP client settings' highlighted. The bottom screenshot shows the 'SIP client settings' configuration screen with a red box highlighting the 'Advanced settings' section, which includes fields for SIP account, SIP server, IP address, port, and protocol options.

**Advanced settings**

- Advanced settings
- SIP account
  - User name: 0080202
  - Password: [REDACTED]
- SIP server: 2
  - IP address: 10.0.0.1
  - Port: 5060
- SIP protocol
  - UDP  TCP  TLS
- Transport protocol
  - sRTP  RTP

## 7 Appendix

### 7.1 Initial setup of the SmartAP

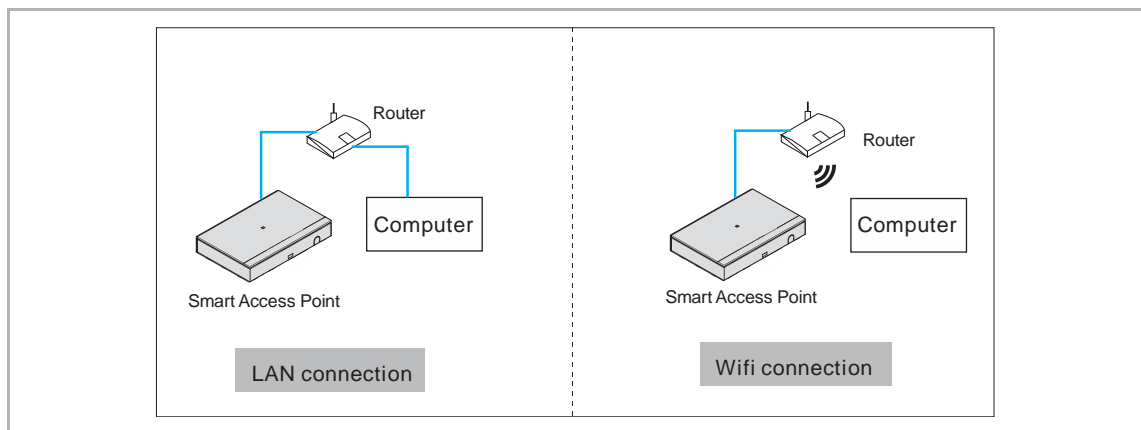
#### 7.1.1 Accessing the web-based user interface

There are 3 options to access the web-based user interface of the SmartAP.

1. By using the Windows UPnP service

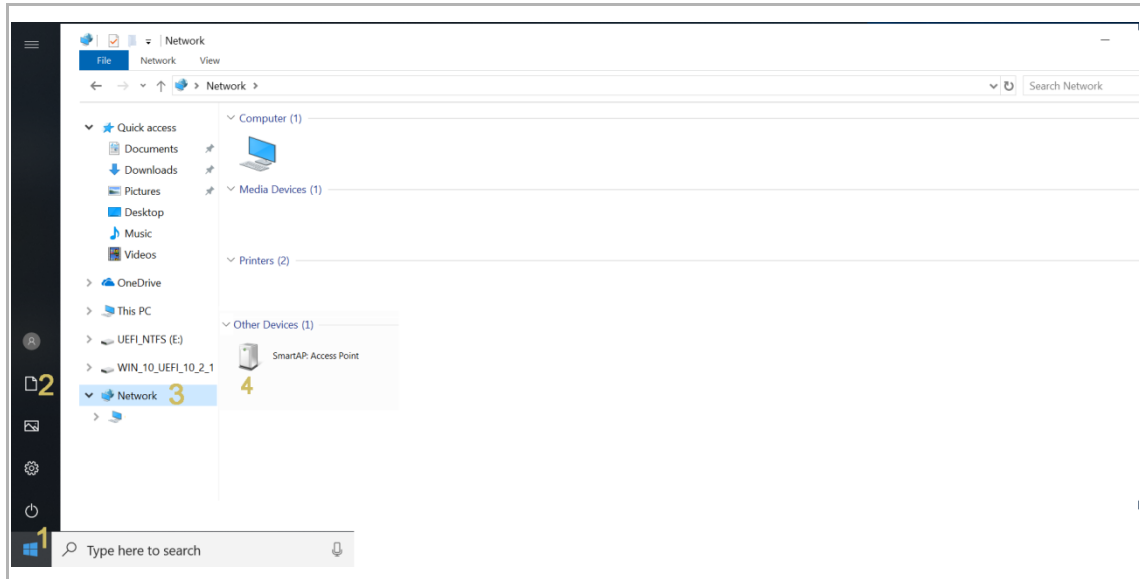
##### Precondition

- There is a DHCP server on the network, e.g. integrated DHCP is used in the router.
- The SmartAP is connected to the router by a LAN cable.
- The computer is connected to the router by LAN connection or WiFi connection.
- The SmartAP is powered on and ready for operation.



**Accessing SmartAP (Window 10 system as an example)**

- [1] Click "Start", followed by "Documents", "Network" to access the "Network" screen.
- [2] Double click the SmartAP icon.

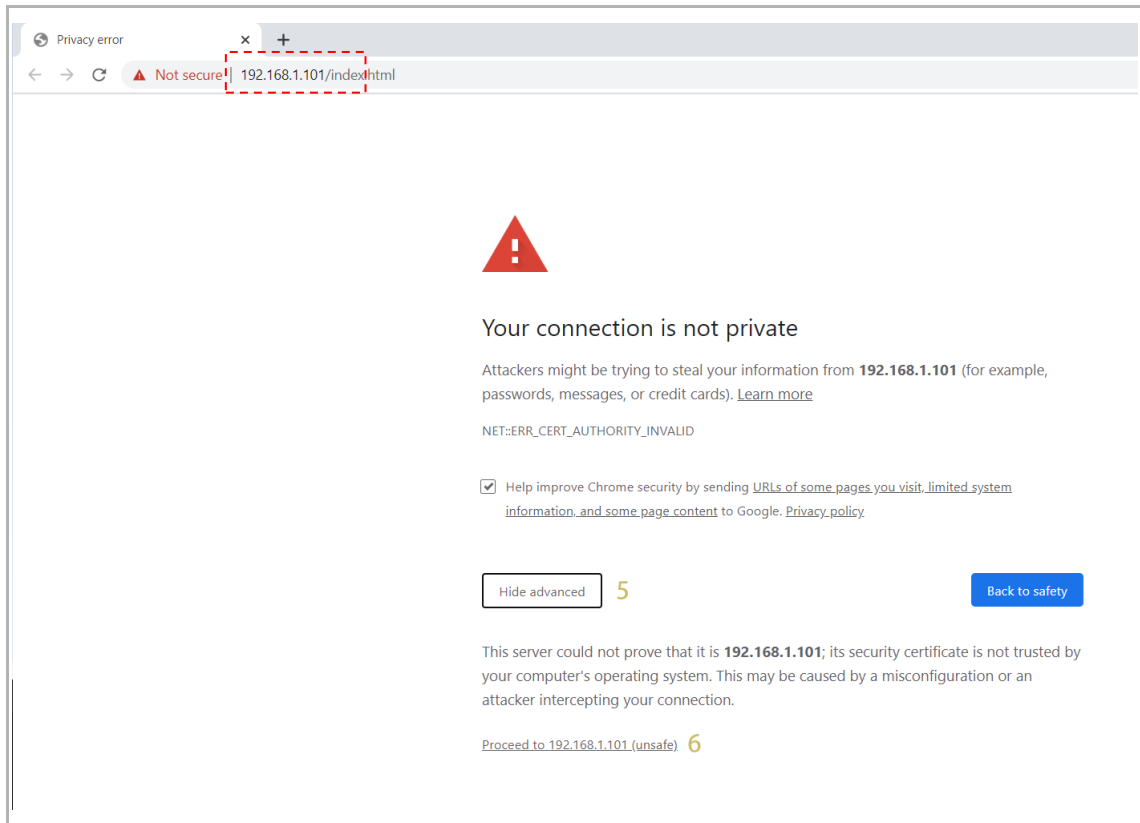
**Note**

If the SmartAP icon is not displayed, please check the Windows firewall or ask for help from your IT engineers.



### [3] Switch to Security Login

- Http connection is insecure. It is recommended to use an https connection.
- Click "Advanced", followed by "Proceed to ...." to access the web-based user interface of SmartAP. (Google Chrome, for example)
- IP address of SmartAP can be viewed on the page.



2. By entering the IP address

### Precondition

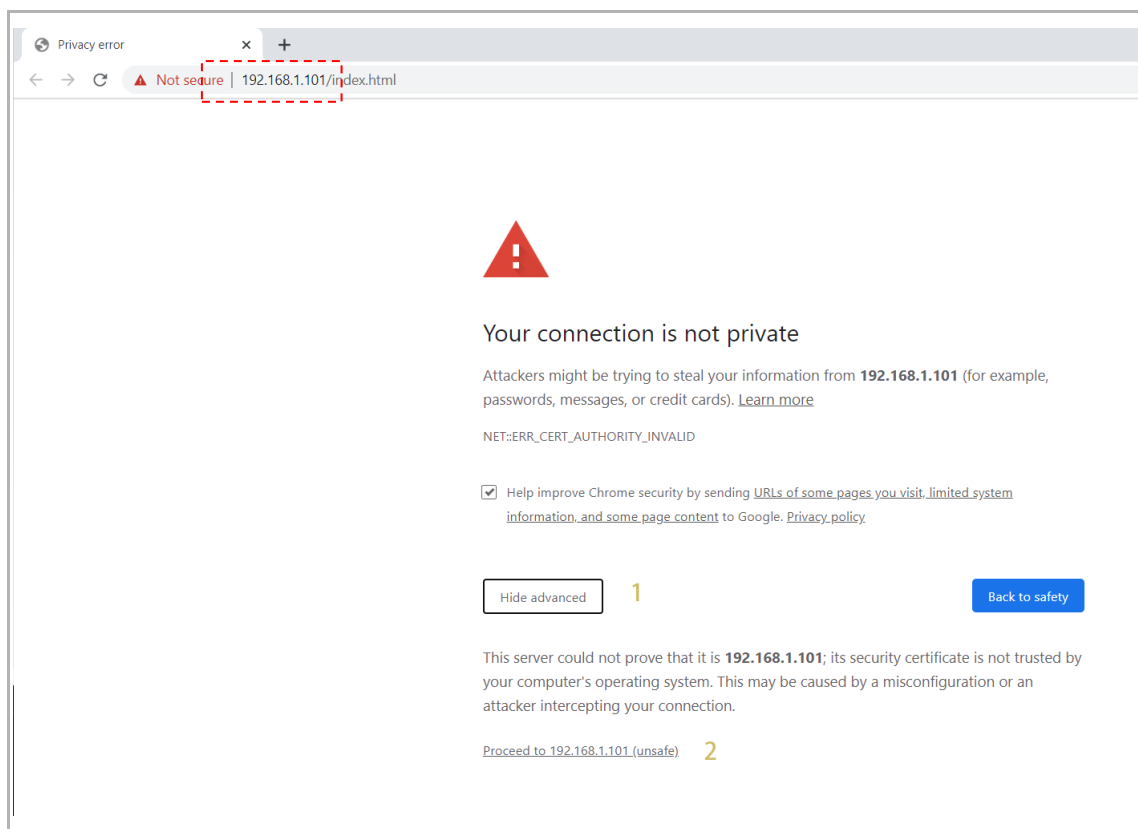
You can check the IP address of SmartAP on the router configuration website. Each router usually has its own management web interface where you can obtain the information. Please check your router's handbook.

### Accessing SmartAP (Window 10 system as an example)

[1] Enter the IP address of SmartAP (e.g. "192.168.1.101") on the website.

[2] Switch to Security Login

- Http connection is insecure. It is recommended to use an https connection.
- Click "Advanced", followed by "Proceed to ...." to access the web-based user interface of SmartAP. (Google Chrome, for example)

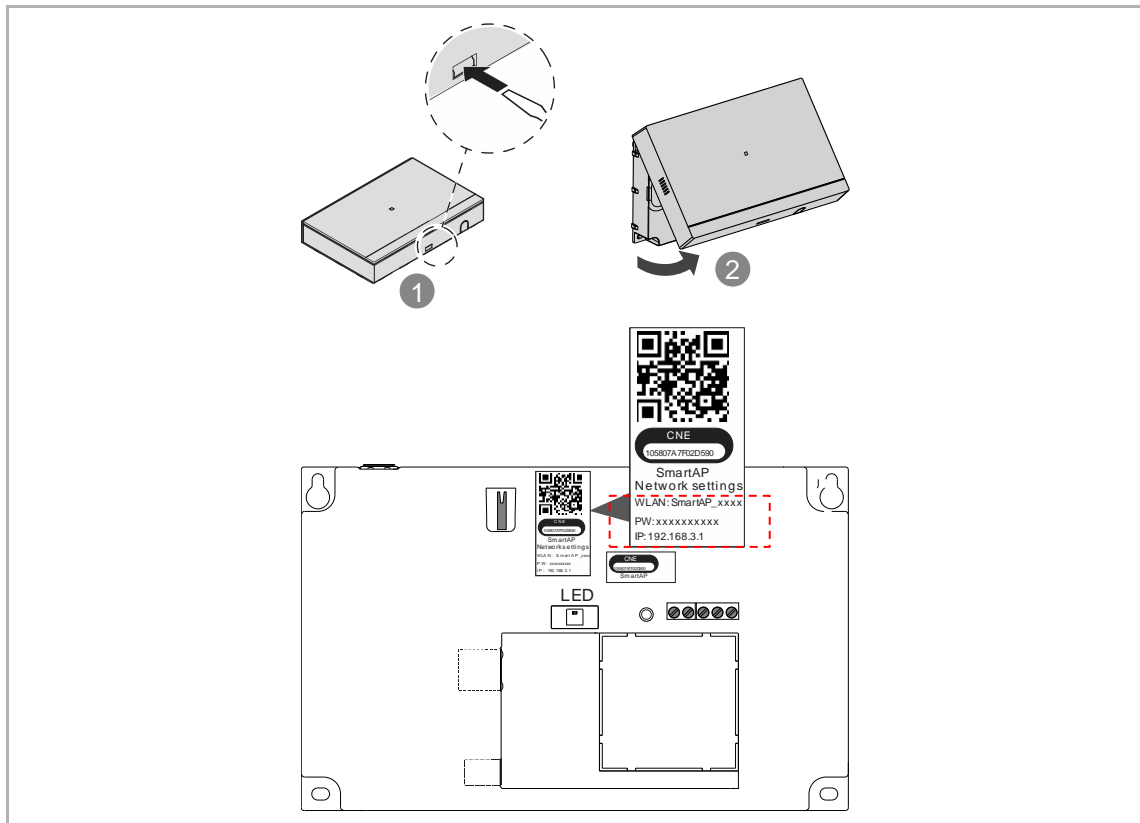


### 3. By using the WiFi Access Point hotspot

#### Precondition

- Ensure network settings are obtained from the SmartAP
  - WLAN name (SSID)
  - Password
  - IP address

Please open the front shell of SmartAP and obtain the data above from the sticker.



- Ensure the alarm (e.g. tamper alarm) is not activated

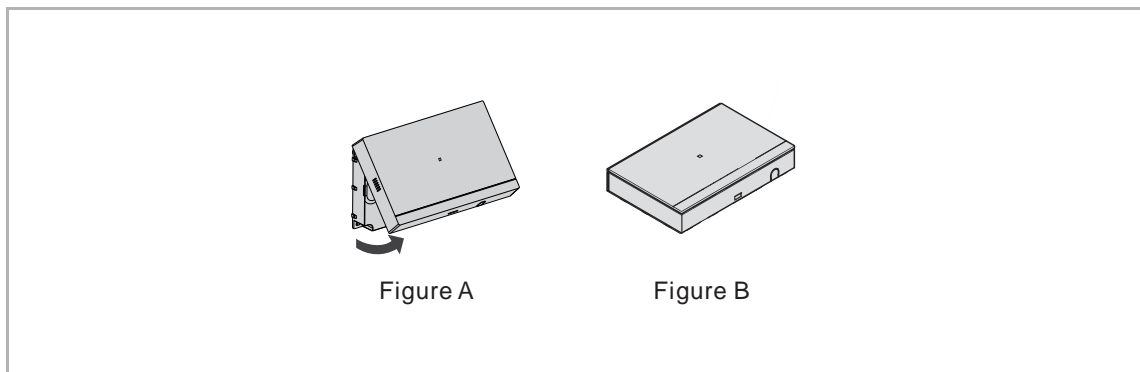


**Note**

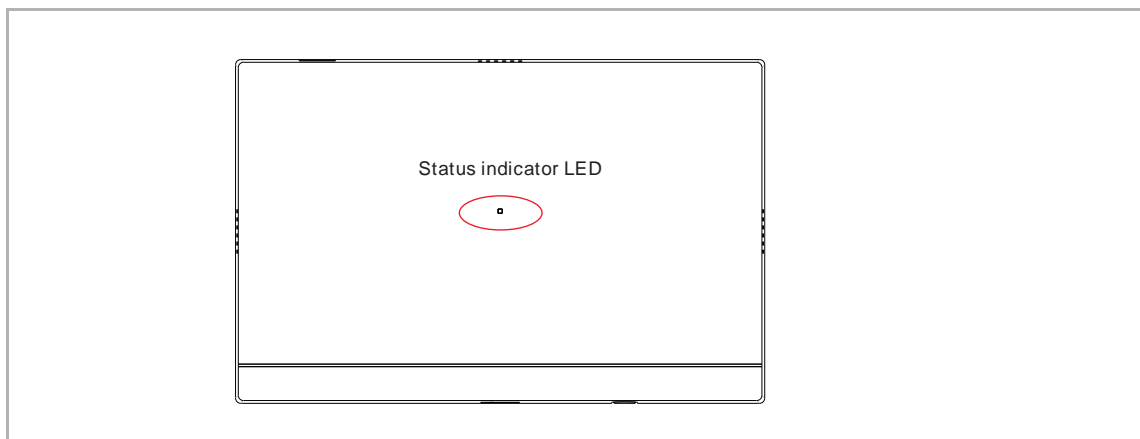
Status indicator LED light priority (in the sequence, high>>middle>>low):

Alarm (flash white quickly) >> Initial setup (light white on) >> WiFi Access Point mode is activated (flash red) >> Security mode is activated (light red on)

Tamper alarm will be activated if the front cover of SmartAP is open. (Figure A) In this case, status indicator LED will flash white quickly and it is impossible to tell if WiFi Access Point mode is activated. Please close the front shell after you have obtained the SSID information. (Figure B)



- Ensure that the WiFi Access Point mode has been activated
  - During the initial setup: Status indicator LED lights up white.
  - After the initial setup: Status indicator LED flashes red.
- SmartAP is powered on and ready for operation.

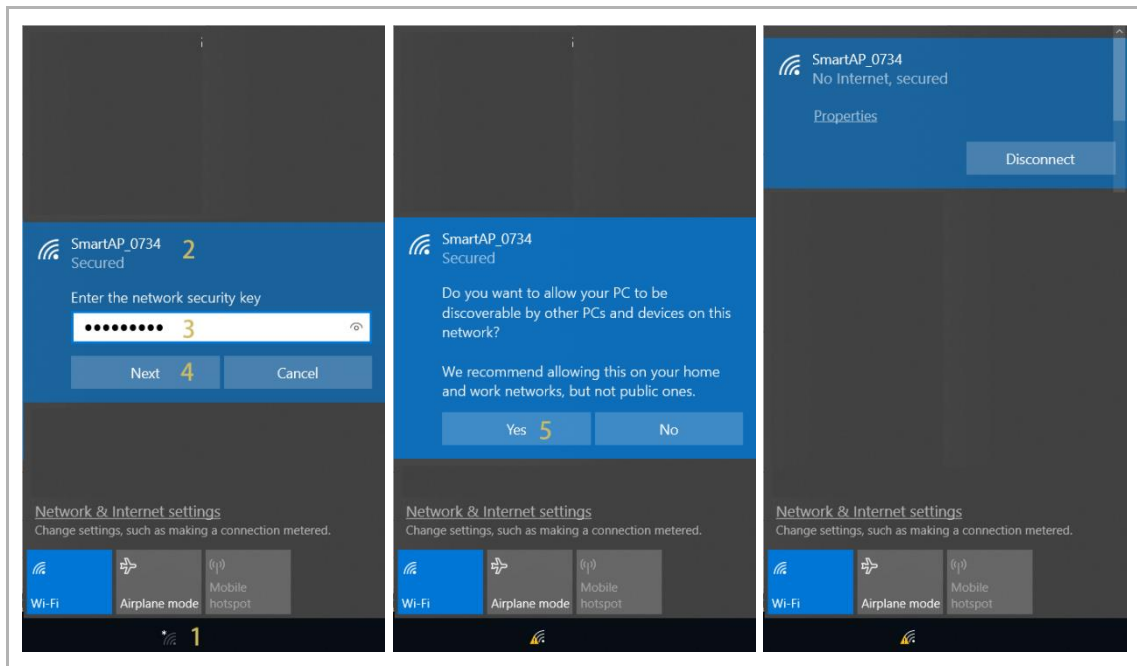


**Note**

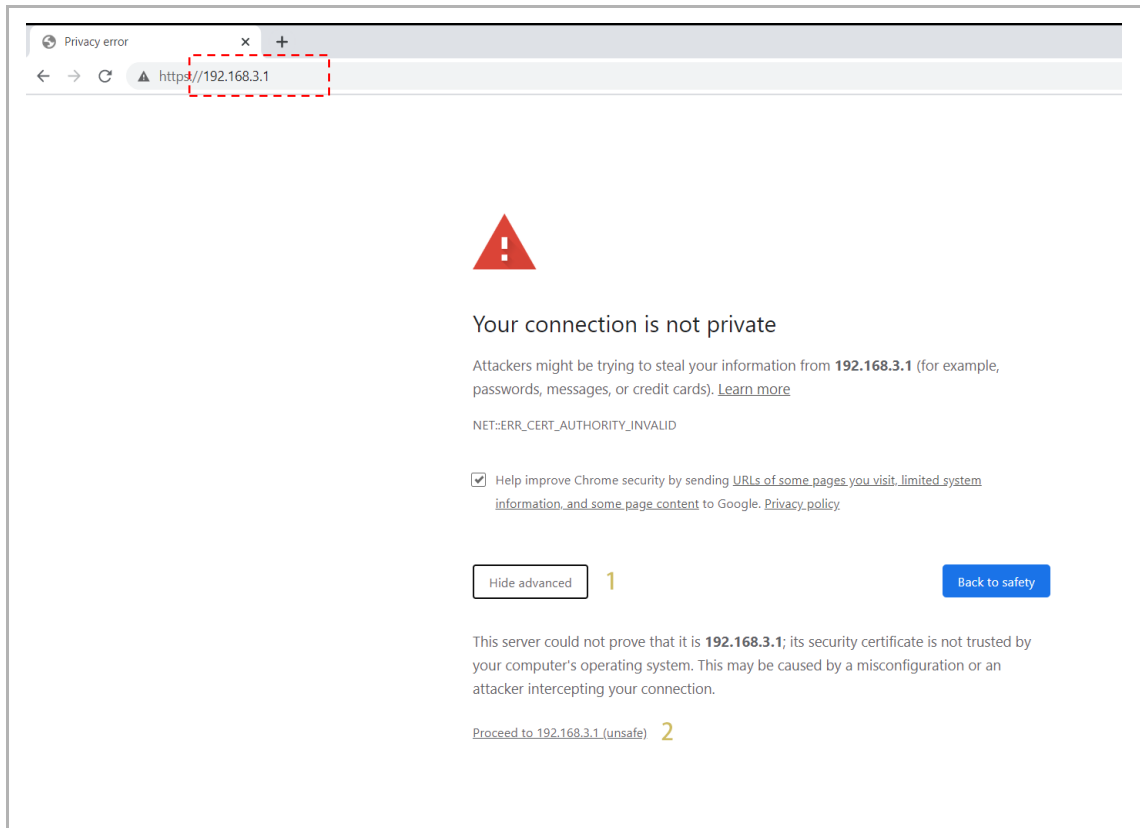
SmartAP works like a central WiFi router when it works in WiFi Access Point mode.

**Accessing SmartAP (Window 10 system as an example)**

- [1] Click "Internet access" icon.
- [2] Click the WLAN name (SSID) of SmartAP.
- [3] Enter the password.
- [4] Click "Next".
- [5] Click "Yes" to connect your computer to the WiFi hotspot of SmartAP.



- [6] Enter "192.168.3.1" on the website to access SmartAP.
- [7] Switch to Security Login
- Http connection is insecure. It is recommended to use an https connection.
  - Click "Advanced", followed by "Proceed to ...." to access the web-based user interface of SmartAP. (Google Chrome, for example)

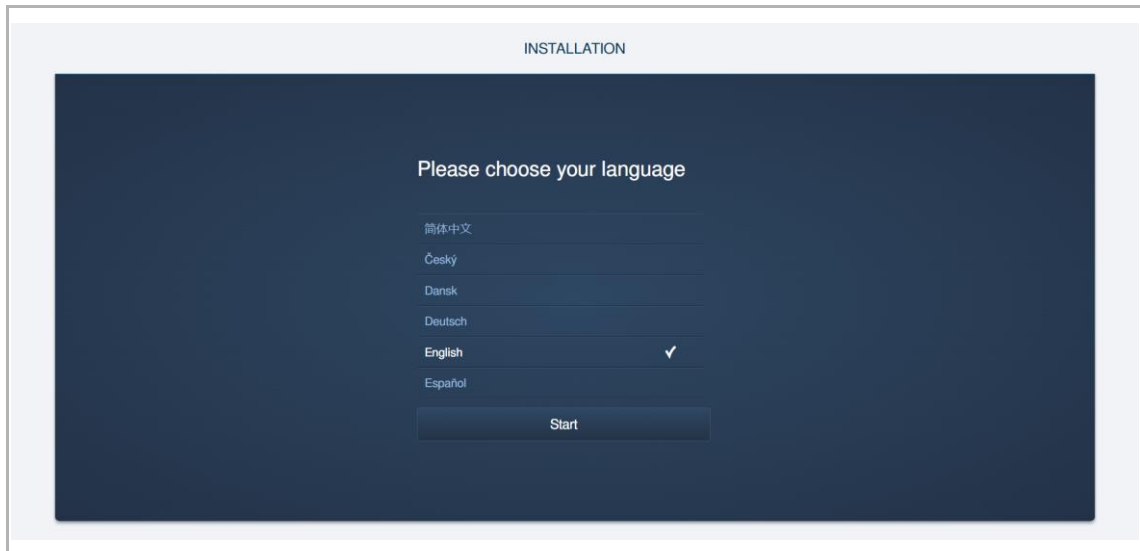


### 7.1.2 Initial setup

You need to do the initial setup the first time the SmartAP is powered on or the SmartAP is reset to the factory defaults.

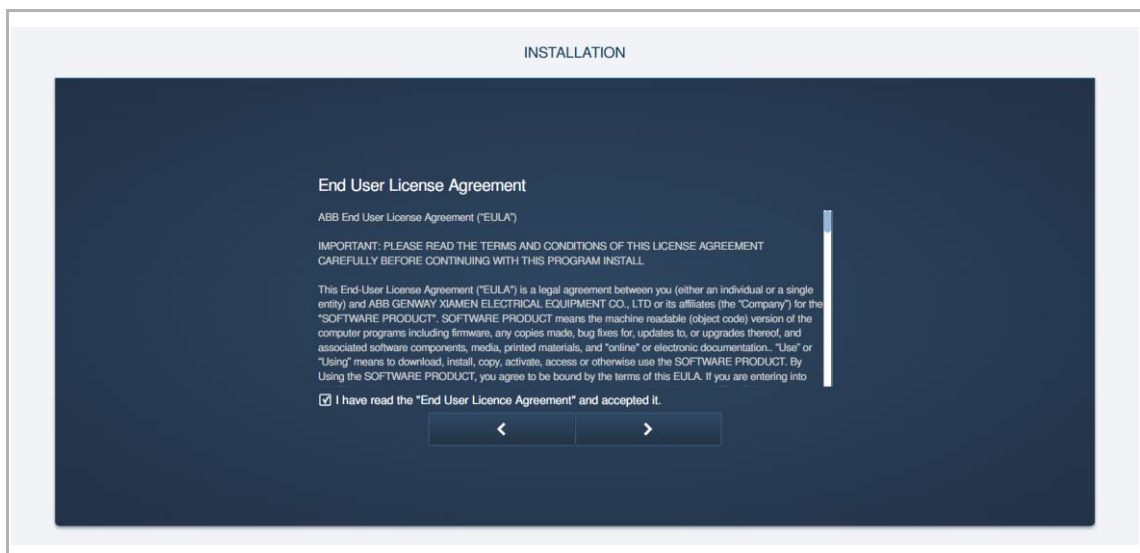
Follow the steps below on the web-based user interface of the SmartAP.

1. Select the language



2. Accepting EULA

Tick the checkbox to accept the licence. Then click ">" to continue.



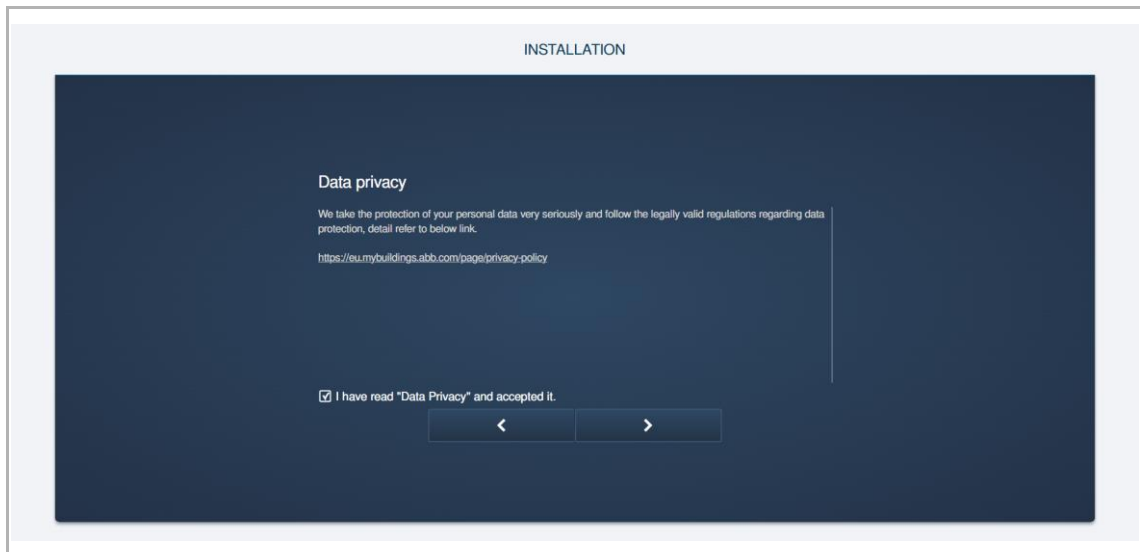
### 3. Accepting the licence for software.

Tick the checkbox to accept the licence. Then click ">" to continue.



### 4. Accepting data privacy

Tick the checkbox to accept the licence. Then click ">" to continue.





## 5. Configuring the location

Select the time zone from the drop-down list.

The screenshot shows the 'INSTALLATION' screen with the title 'Please define your location'. It features a 'Time zone' dropdown menu set to '(UTC+08:00) Beijing, Chong...' and a 'Date and time' field showing '2024-03-22 15:02:25'. There are navigation arrows at the bottom.

## 6. Configuring WiFi access point mode settings and the country code

It is compulsory to change the password in the initial setup. The password rule is displayed in a pop-up window when you enter the password.



### Attention!

Please ensure that the country code is configured correctly according to the device location.

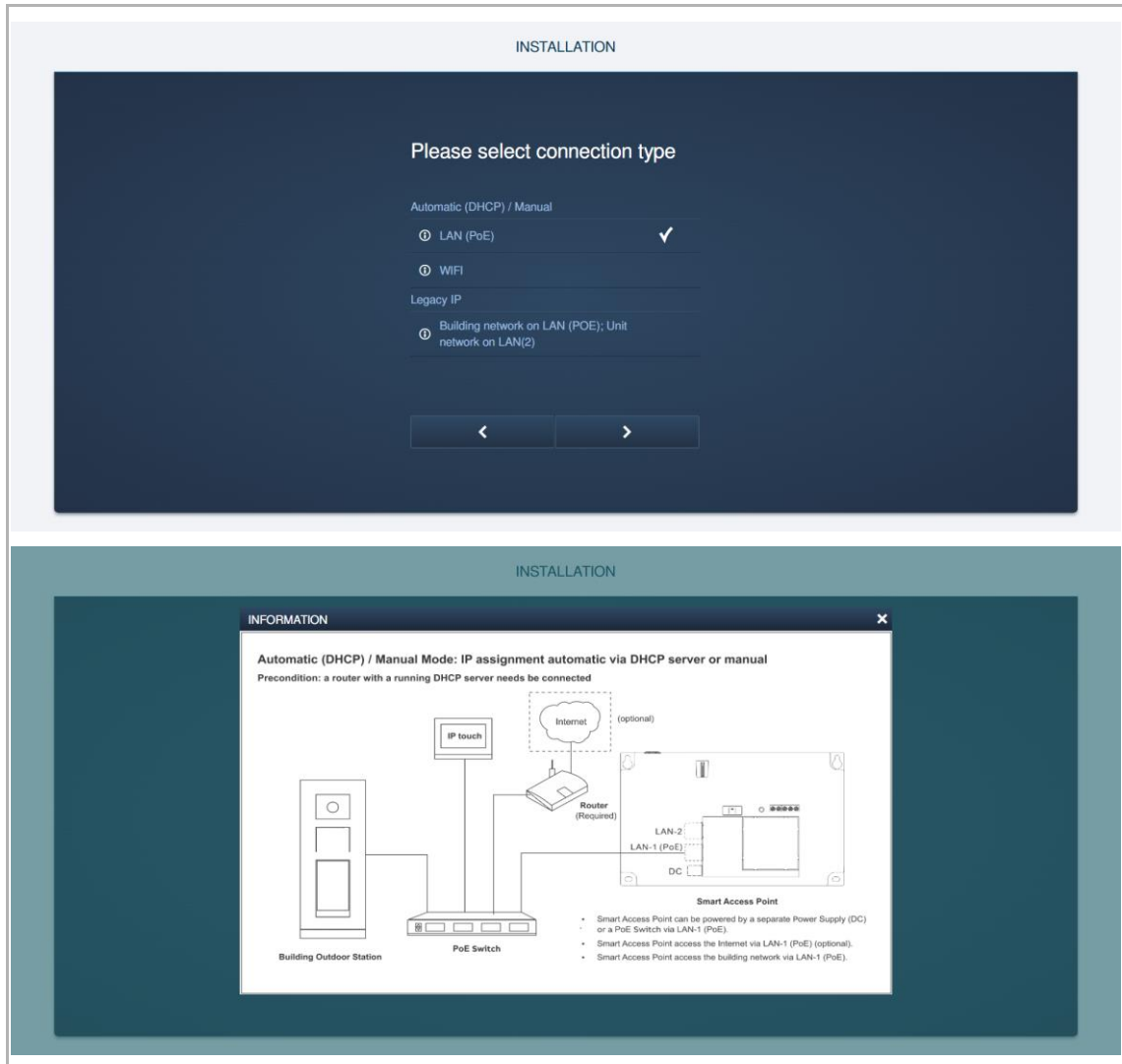
The "Country code" setting ensures that your router will only enable Wi-Fi radio settings that conform with the country's official regulatory laws.

The screenshot shows the 'INSTALLATION' screen with the title 'Wi-Fi access point mode settings'. It includes fields for 'SSID' (SmartAP\_7FEE), 'Password', 'Repeat password', and 'Country code' (China). A red pop-up window displays password requirements: 'At least 10 characters', 'Upper case to lowercase letters', 'At least one special character', and 'At least one number'. Navigation arrows are at the bottom.

## 7. Selecting the connection type

There are 3 options to set the connection type for the SmartAP.

- Tap " ⓘ " to view the topology for reference.



### Establish LAN connection

If LAN (PoE) is selected, you need to set IP address to establish the LAN connection.

By activating the "Obtain IP address automatically" check box, SmartAP will work as a DHCP client. The IP address needs to be assigned from DHCP server (such as router with DHCP enabled).

By deactivating the checkbox "Obtain IP address automatically", network parameters need to be configured including IP address, subnet mask and default gateway.

The screenshot shows the 'INSTALLATION' screen with the title 'Please establish LAN connection'. Under the heading 'LAN (PoE):', there is a checked checkbox labeled 'Obtain IP address automatically'. Below this, there are three input fields: 'IP address' with the value '192.168.1.102', 'Subnet mask' with the value '255.255.255.0', and 'Default gateway' with the value '192.168.1.1'. At the bottom of the form are two navigation buttons: a left arrow and a right arrow.

### Connect to a WiFi Network

If WiFi connection is selected, you need to connect to a WiFi network.

All available nearby WiFi networks will be displayed in the list. If you can't find the designated nearby WiFi network, click the "Refresh" button to search again.

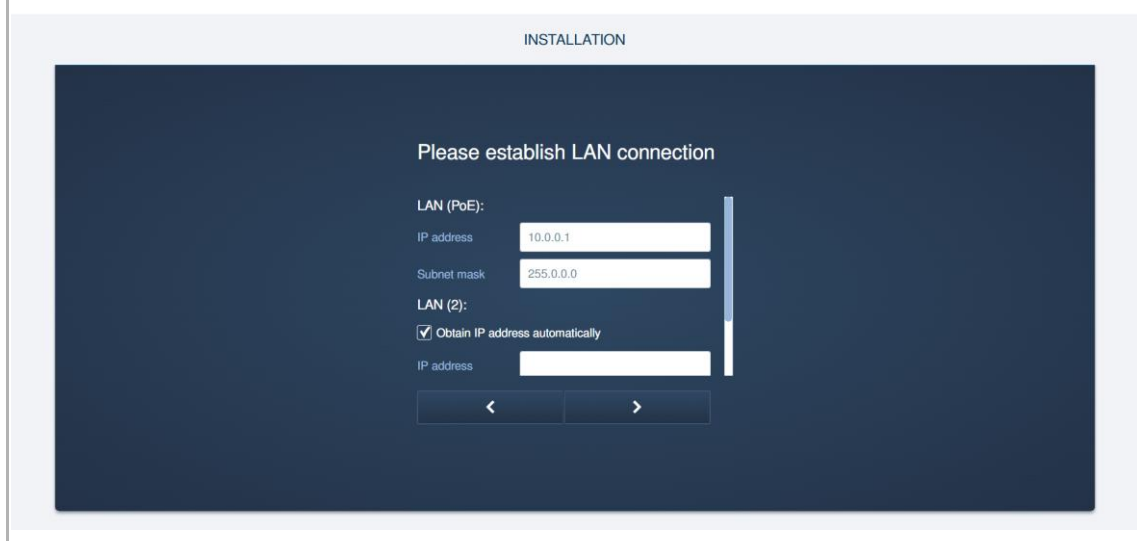
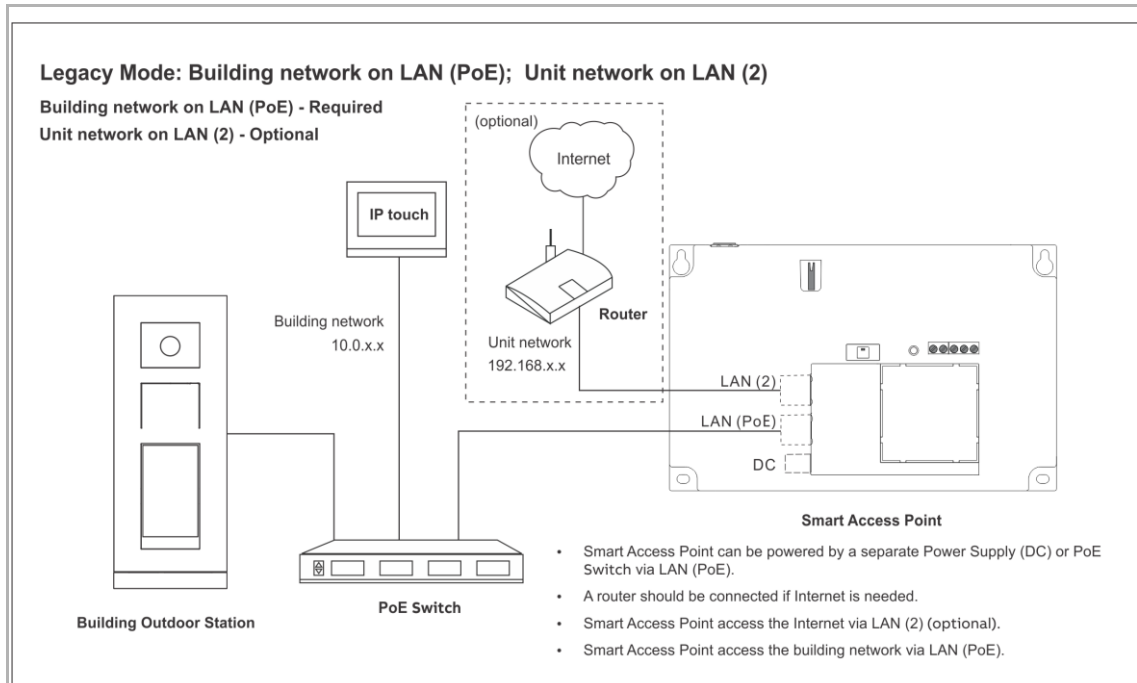
Click the designated WLAN name (SSID) in the list, enter the password, followed by "Connect" to connect the WiFi network.

The screenshot shows the 'INSTALLATION' screen with the title 'Please connect to a Wi-Fi network'. It displays a list of nearby WiFi networks, each with its SSID and a signal strength indicator. The first network is selected, and its password field is visible with masked characters. At the bottom of the screen are three buttons: a left arrow, a 'Refresh' button, and a 'Connect' button.

### Legacy IP network

If "Legacy IP" is selected, the default topology is used as follow.

- LAN (PoE) will be set to 10.0.x.x, LAN (2) will be connected to the router to obtain the IP address.



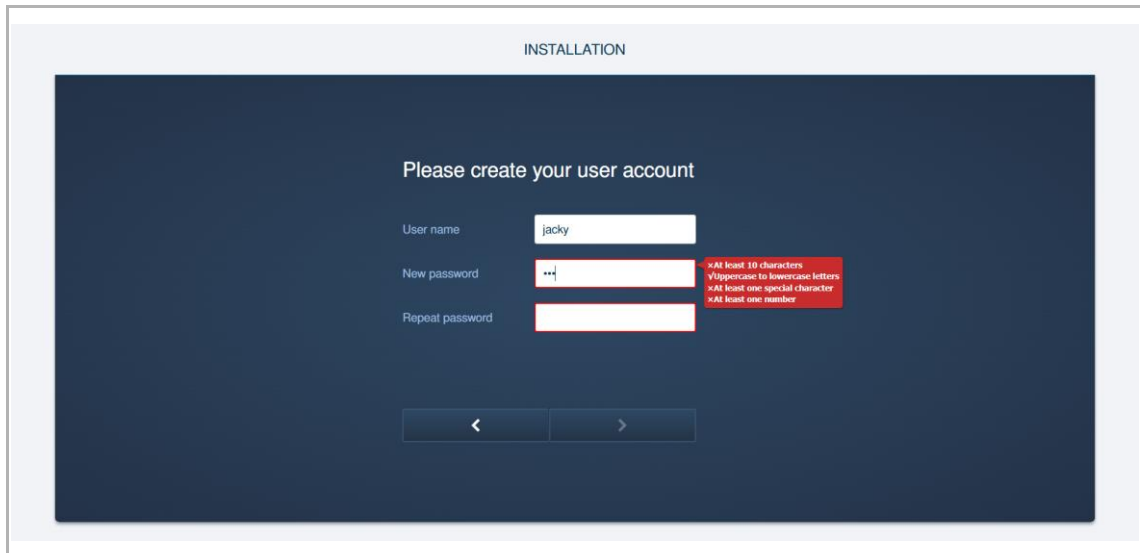
## 8. Creating the first admin user

Enter the username and the password twice to create the first admin user.



### Note

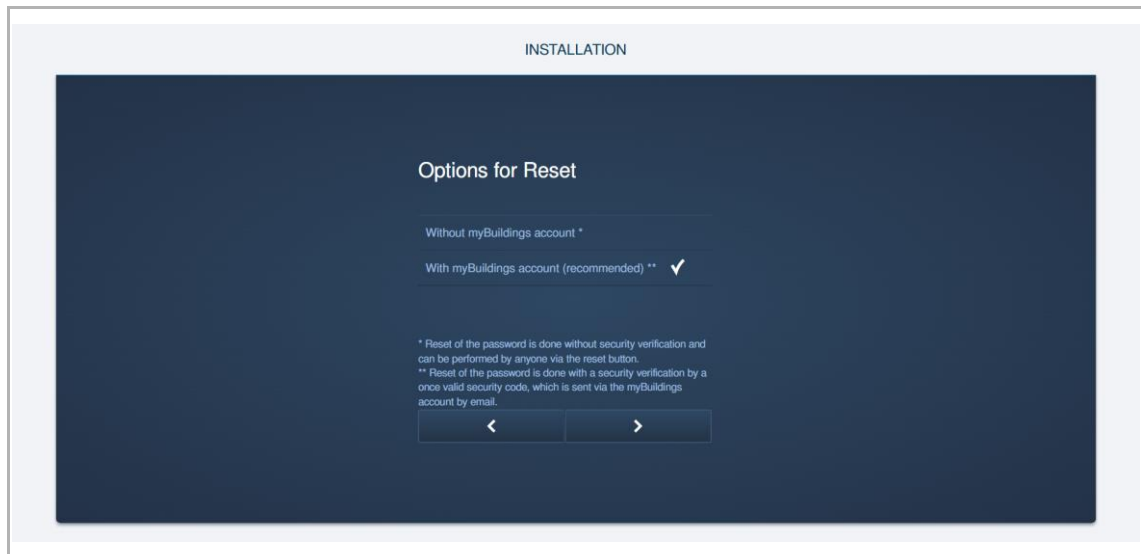
The first admin user cannot be deleted. It manages all other users.



The screenshot shows a web interface titled "INSTALLATION" with a dark blue background. The main heading is "Please create your user account". There are three input fields: "User name" with the text "jacky", "New password" with masked characters, and "Repeat password" which is empty. A red error box on the right side of the password fields lists requirements: "At least 10 characters", "Uppercase to lowercase letters", "At least one special character", and "At least one number". At the bottom, there are two navigation buttons: a left arrow and a right arrow.

## 9. Selecting the reset option

You can select the reset option according to the use scenario.



### Reset option = Without MyBuildings account

- If this option is selected, anyone can reset the password for the first admin user by pressing the reset button.
- It is used for the scenario that SmartAP is installed in a private area and is not physically accessible to unauthorised users.

### Reset option = With MyBuildings account

- If this option is selected, a one-time validity security code is needed when someone want to reset the password for the first admin user by pressing the reset button. And this security code will only be sent to the email set in the initial setup.
- It is used for the scenario that SmartAP is installed in a public area and is physically accessible to unauthorised users.



#### Attention!

The reset option can only be set in the initial setup and cannot be changed after the initial setup.

The reset option can only be changed when you restore SmartAP to the factory defaults.

## 10. MyBuildings settings

**Reset option = Without MyBuildings account**

If the reset option is set to "Without MyBuildings account", you will access this screen.

INSTALLATION

Please connect to MyBuildings

User name

Password

Friendly name

Remote access  Enable

If you do not have a MyBuildings account yet, you can [register here](#).

< Skip

- [1] Click "Skip" to turn to next step if you don't want to connect to MyBuildings currently.
- [2] Click "Register here" to access the MyBuildings portal to register an account.
- [3] Enter the username, password and friendly name, followed by "Connect" to connect to the MyBuildings portal.
- [4] If you want to access SmartAP from the MyBuildings portal, you need to tick the "Enable" checkbox to enable the remote access function.

**Reset option = With MyBuildings account**

If the reset option is set to "With MyBuildings account", you will access this screen.



The screenshot shows a dark blue screen titled "INSTALLATION" with the heading "Please connect to MyBuildings". It contains a registration form with the following fields and options:

- User name: [input field] (marked with a yellow '2')
- Email: [input field] (marked with a red '3')
- Password: [input field]
- Friendly name: [input field]
- Remote access:  Enable (marked with a yellow '4')

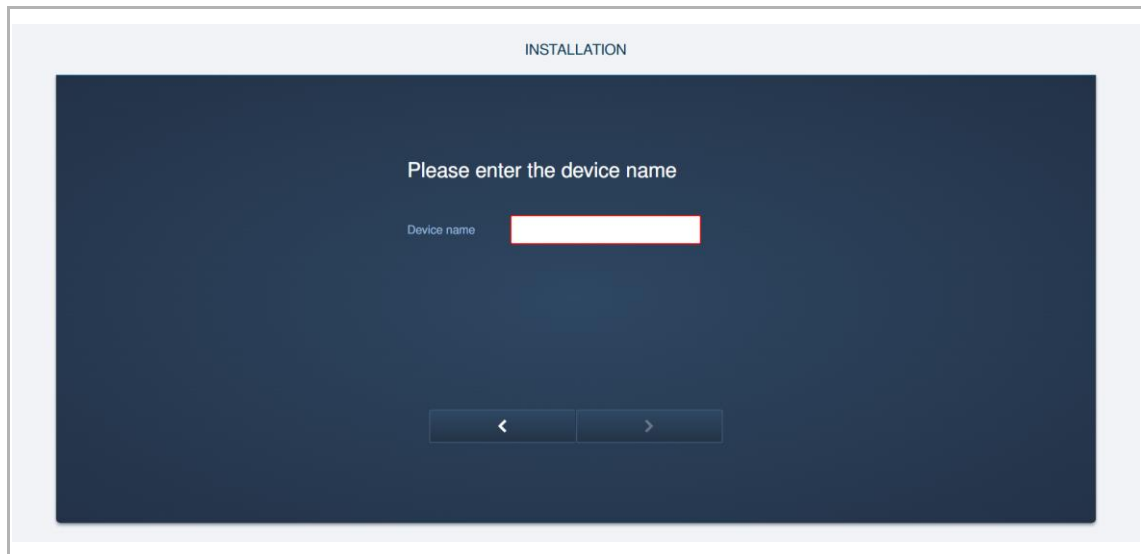
At the bottom, there is a blue link "1 Register here" and a "Connect" button.

- [1] Click "Register here" to access the MyBuildings portal to register an account.
- [2] Enter the username, password and friendly name, followed by "Connect" to connect to the MyBuildings portal.
- [3] Enter the email address used to activate the MyBuildings account. This email address will receive a security code when you want to reset the first admin user. see chapter 7.6 "Resetting the password for the primary admin" on page 238.
- [4] If you want to access SmartAP from the MyBuildings portal, you need to tick the "Enable" checkbox to enable the remote access function.



### 11. Setting the device name

Enter the name for the device and this name will be displayed on the log in screen.

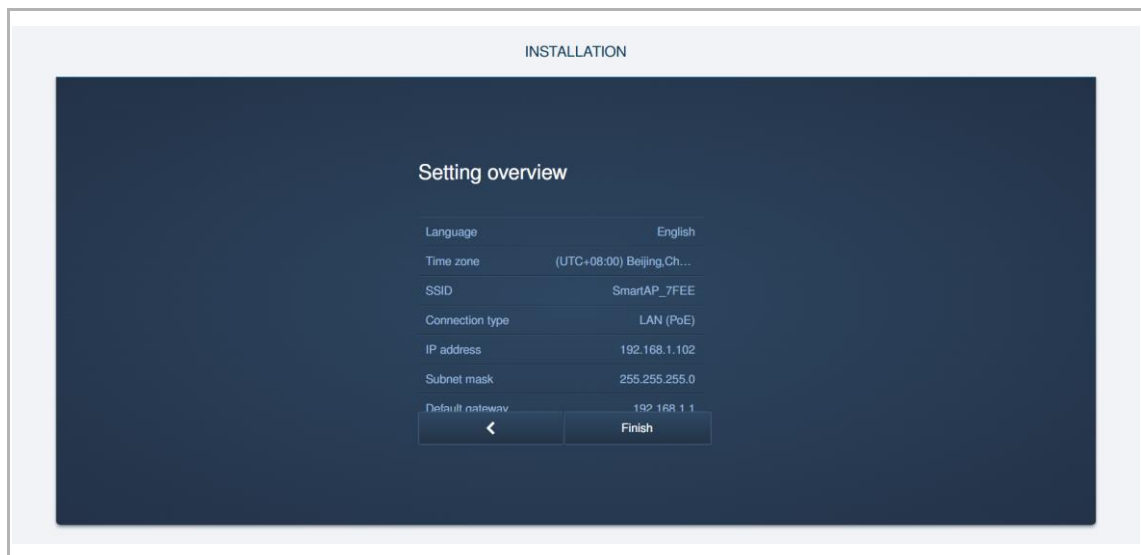


The screenshot shows a dark blue screen titled "INSTALLATION". The main text reads "Please enter the device name". Below this, there is a label "Device name" followed by a white text input field with a red border. At the bottom of the screen, there are two dark blue buttons: one with a left-pointing chevron (<) and one with a right-pointing chevron (>).

### 12. Confirming the settings

You can check all the settings again on the overview screen. You can click "<" to return to the previous screens to edit the settings.

Click "Finish" to complete the initial setup.



The screenshot shows a dark blue screen titled "INSTALLATION". The main text reads "Setting overview". Below this, there is a table of settings:

Language	English
Time zone	(UTC+08:00) Beijing,Ch...
SSID	SmartAP_7FEE
Connection type	LAN (PoE)
IP address	192.168.1.102
Subnet mask	255.255.255.0
Default gateway	192.168.1.1

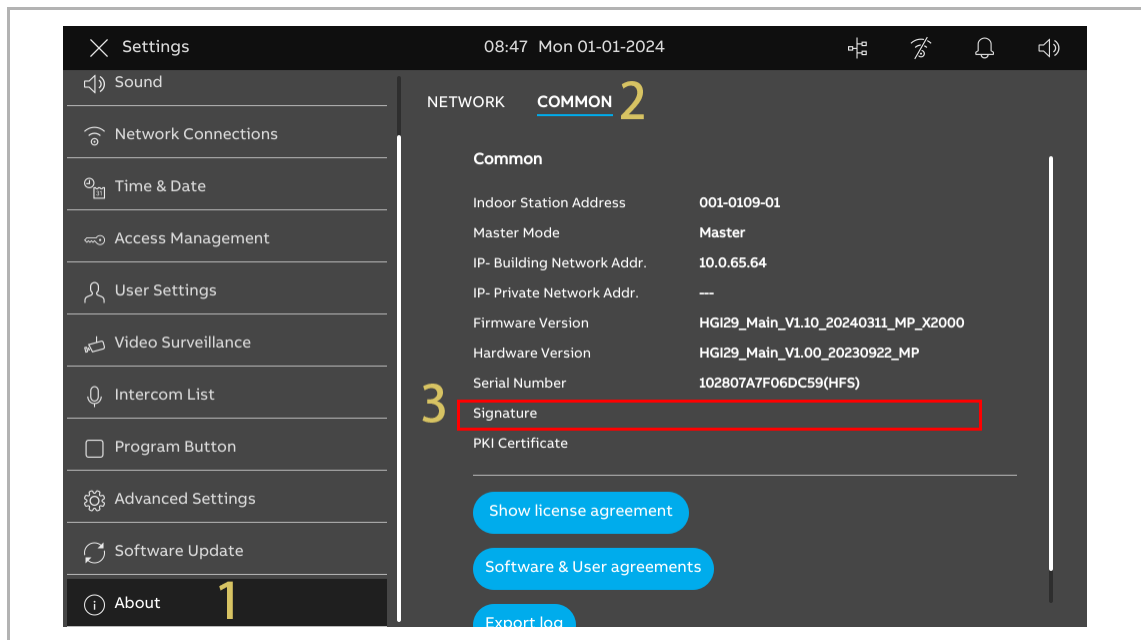
At the bottom of the screen, there are two dark blue buttons: one with a left-pointing chevron (<) and one labeled "Finish".

## 7.2 Viewing the signature of the device

### 7.2.1 Video IS

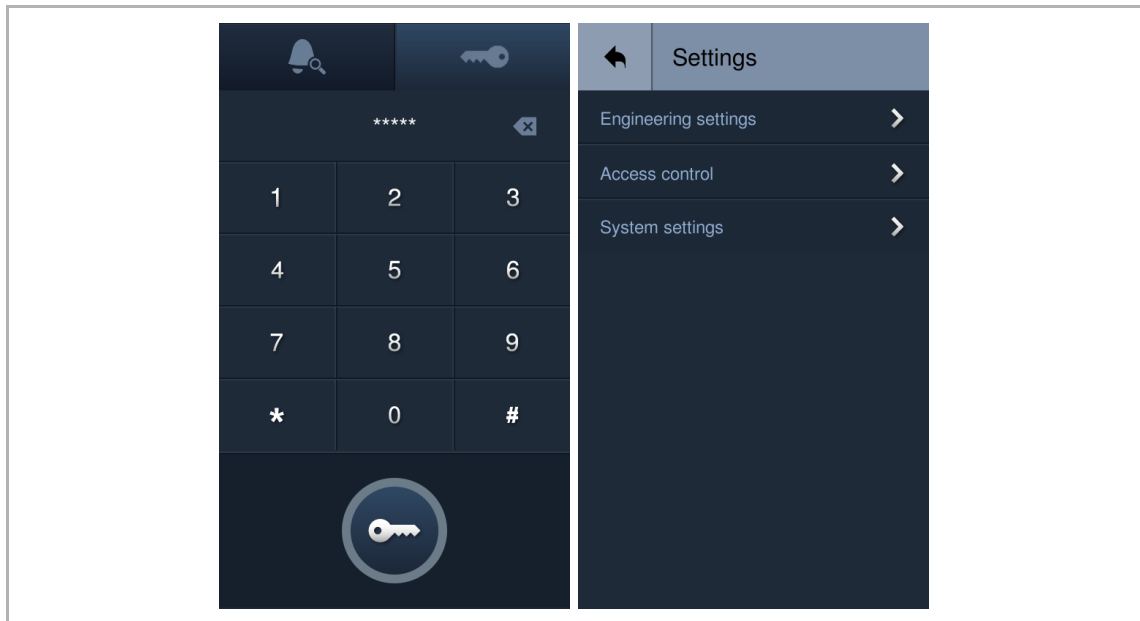
Please follow the steps below:

- [1] On the "Settings" screen, tap "About".
- [2] Tap "Common".
- [3] Go to the "Signature" section to check the signature.



### 7.2.2 IP Touch 5 OS

- On the home screen, tap "🔑", followed by [#] [\*] [engineering password] [#] to access the "Settings" screen.
- On the "Settings" screen, tap "Engineering settings", "Help" to view the signature.



### 7.2.3 IP Pushbutton OS

This device can be configured on Video IS.

#### IP Pushbutton OS entering engineering mode

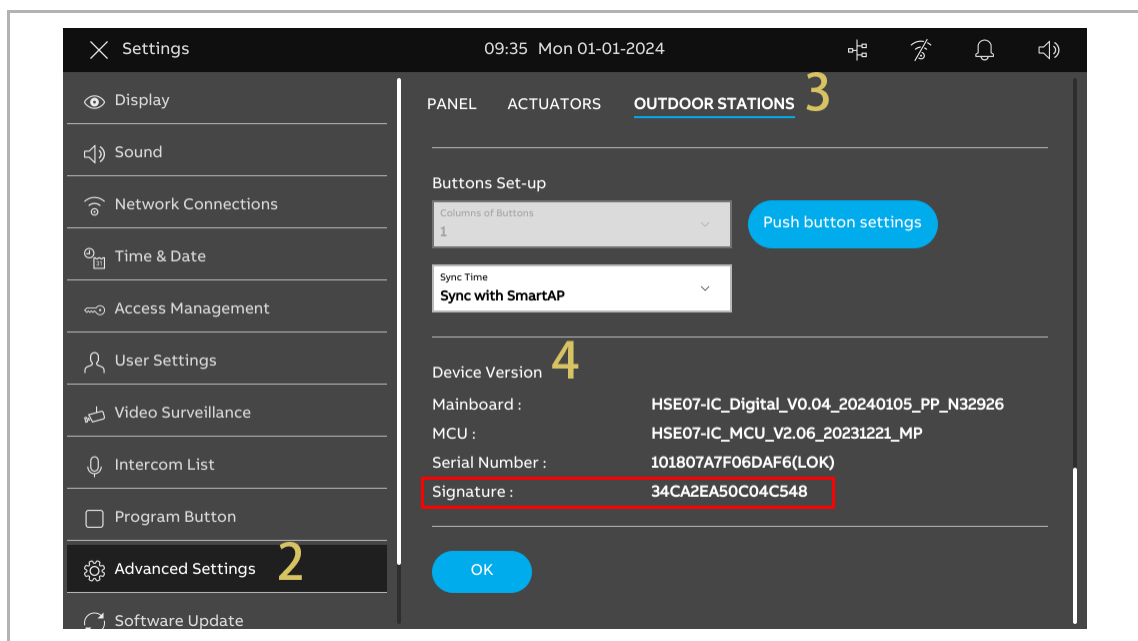
Please follow the steps below:

- [1] Power on the IP Pushbutton OS, wait until all 3 LED indicators go out.
- [2] Press and hold the first pushbutton for 10 seconds until all 3 LED indicators flash.

#### Video IS accessing the "Outdoor Stations" screen

Please follow the steps below:

- [1] Ensure that IP Pushbutton OS is in engineering mode.
- [2] On the "Settings" screen of the panel, tap "Advanced settings".
- [3] Tap "Outdoor Stations" to access the corresponding screen.
- [4] On the "Outdoor Stations" screen, go to "Device Version" section to view the signature.



## 7.2.4 Mini OS

This device could be configured on Video IS.

### IP Pushbutton OS entering engineering mode

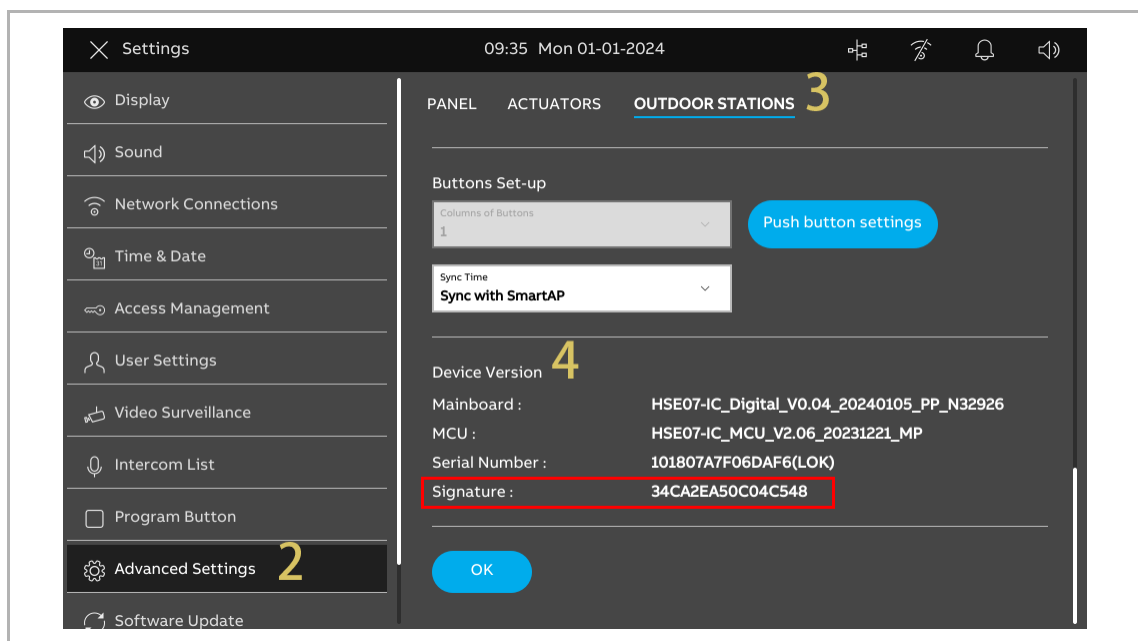
Please follow the steps below:

- [1] Power on the Mini OS, wait until all 3 LED indicators go out.
- [2] Press and hold the first pushbutton for 5 seconds until all 3 LED indicators flash.

### Video IS accessing the "Outdoor Stations" screen

Please follow the steps below:

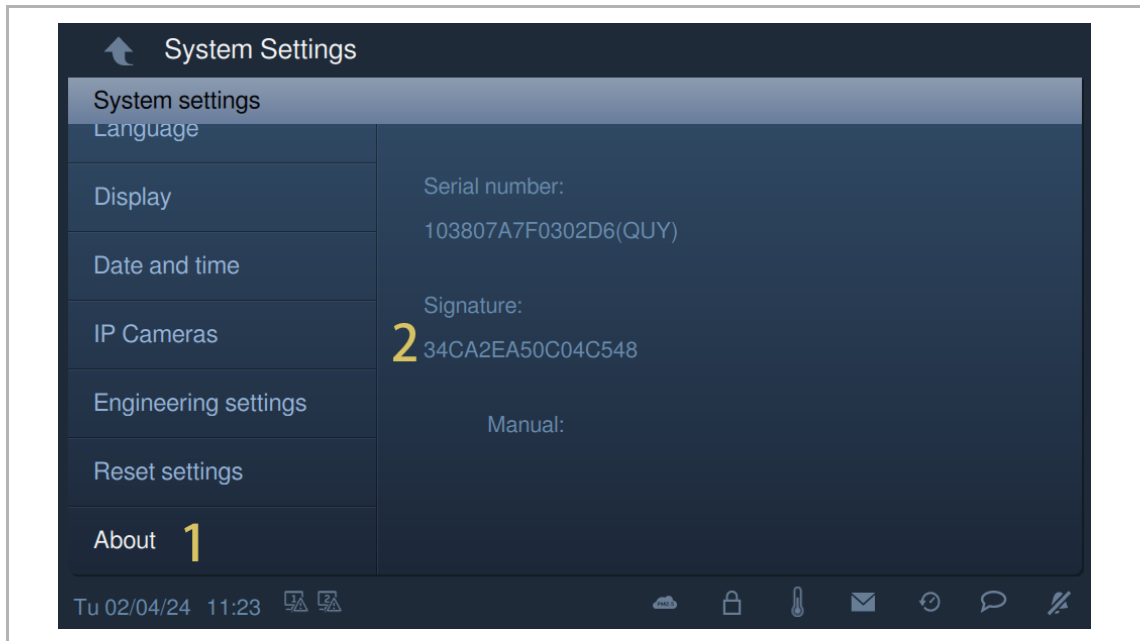
- [1] Ensure that Mini OS is in engineering mode.
- [2] On the "Settings" screen of the panel, tap "Advanced settings".
- [3] Tap "Outdoor Stations" to access the corresponding screen.
- [4] On the "Outdoor Stations" screen, go to "Device Version" section to view the signature.



### 7.2.5 Guard Unit

Please follow the steps below:

- [1] On the "System Settings" screen, tap "About".
- [2] Go to "Signature" section to check the signature.

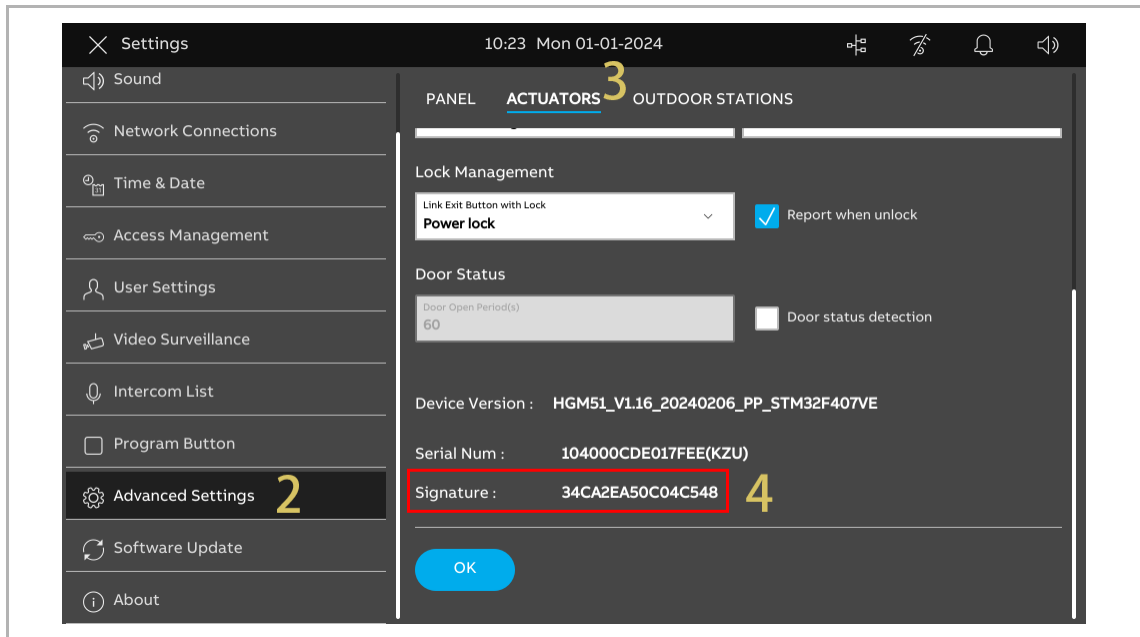


## 7.2.6 IP Actuator

This device could be configured on Video IS.

Please follow the steps below:

- [1] Press the reset button of the IP Actuator once during normal operation; the LED flashing green means that the IP actuator has entered engineering mode.
- [2] On the "Settings" screen of the panel, tap "Advanced settings".
- [3] Tap "Actuators" to access the corresponding screen.
- [4] On the "Actuators" screen, go to the "Signature" section to view the signature.



### 7.3 Clearing the signature of the device

The signature will be empty as one of the following scenarios:

- The device is powered on the first time.
- The device is restored to factory default settings.see chapter 7.5 “Restoring to factory default“ on page 229.
- The device changed its physical address.see chapter 7.4 “Configuring the physical address and IP mode“ on page 217.

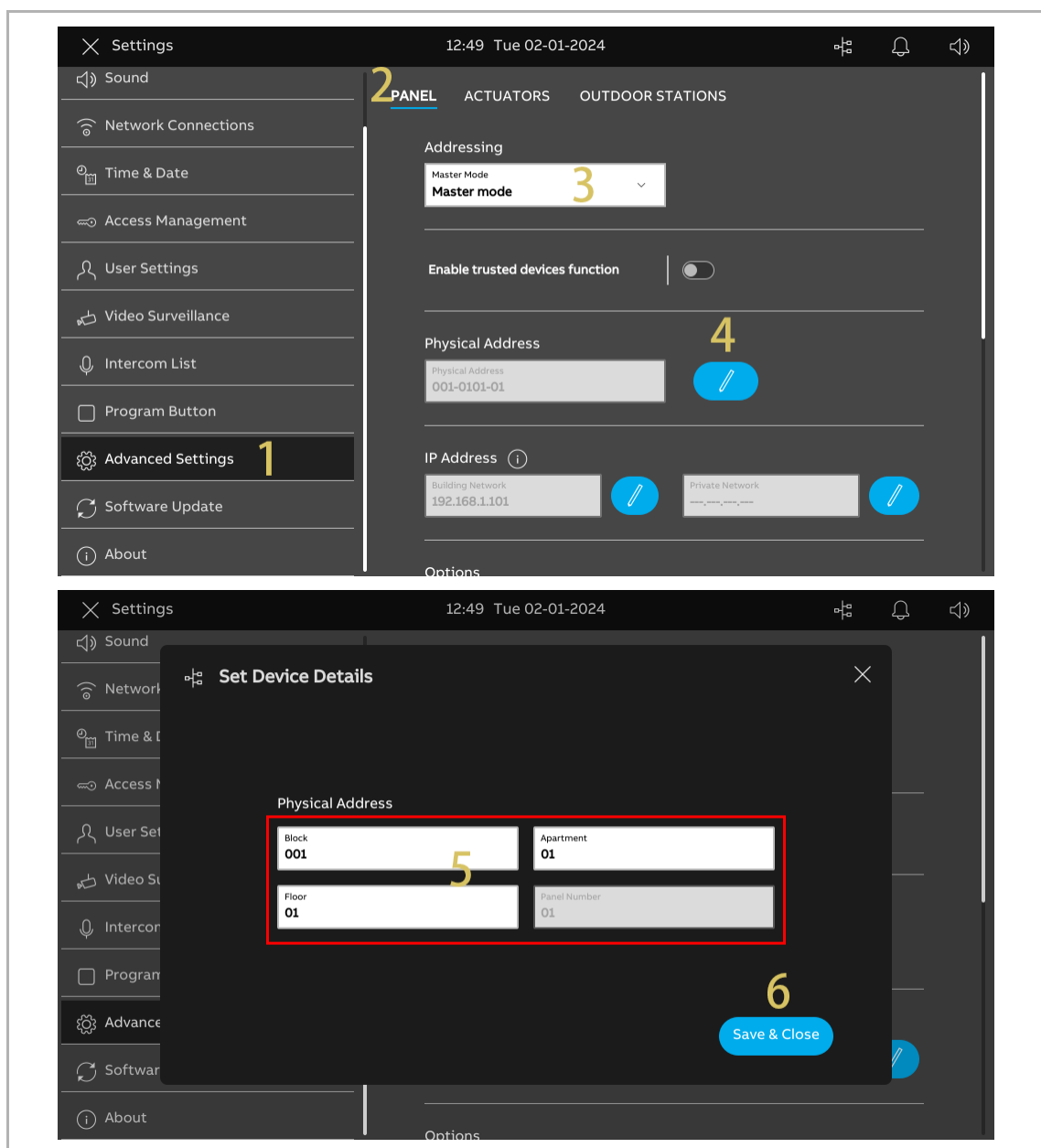



## 7.4 Configuring the physical address and IP mode

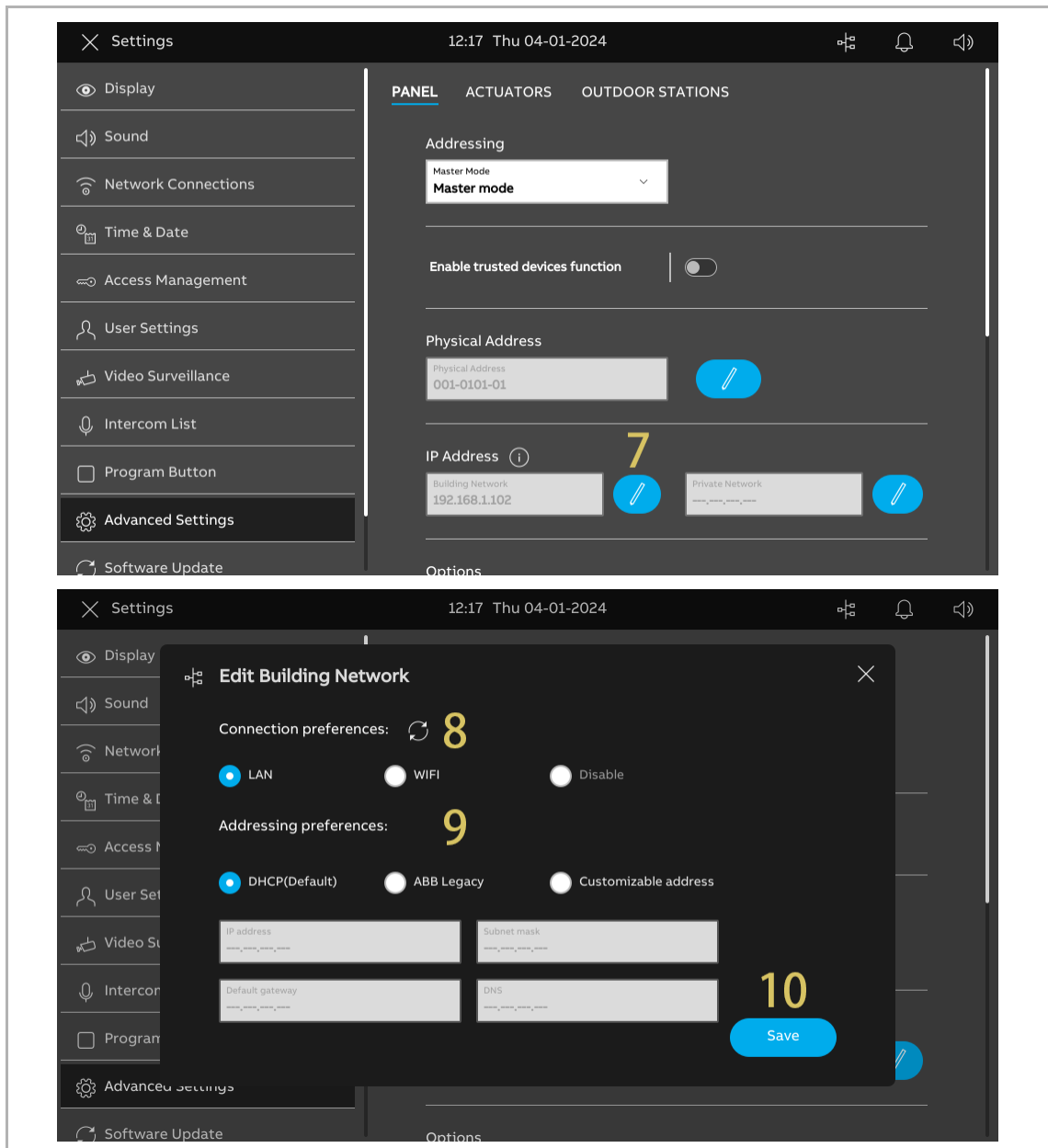
### 7.4.1 Video IS

Please follow the steps below:

- [1] On the "Settings" screen, tap "Advanced settings" and enter the advanced password (The system default advanced password is 345678) to access the corresponding screen.
- [2] On the "Advanced settings" screen, tap "Panel".
- [3] Go to the "Addressing" section, select the device type from the drop-down list.
- [4] Go to the "Physical address" section, tap "✎".
- [5] Edit the physical address.
- [6] Tap "Save & Close".



- [7] Go to the "IP Address" section, tap " ".
- [8] Select the connection type, it can be set to "LAN" or "WiFi".
- [9] Select the network type, it can be set to "DHCP", "Customizable address" or "ABB Legacy".
- If "ABB Legacy" is selected, the IP address will be "10.0.x.x". Its network type should be the same as the SmartAP.
  - If the network type of the SmartAP is set to "Legacy IP", you should select "ABB Legacy" to avoid unknown errors.
- [10] Tap "Save".



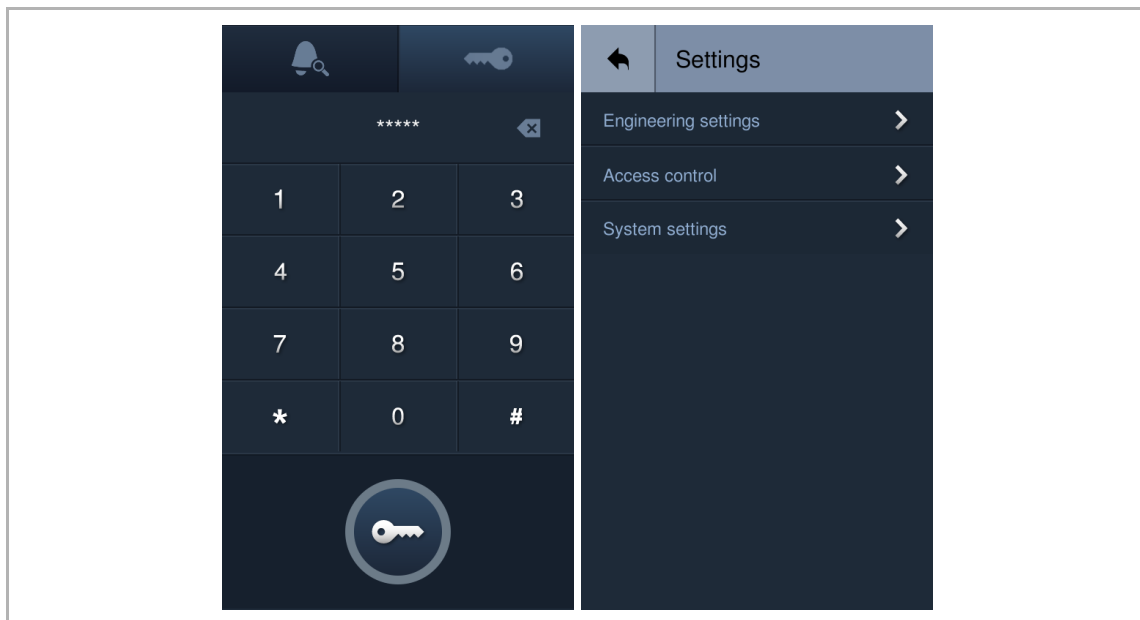
#### **7.4.2 Audio IS**

This device configures the physical address via SmartAP.

### 7.4.3 IP Touch 5 OS

Please follow the steps below:

- [1] On the home screen, tap "🔑", followed by [#] [\*] [engineering password] [#] to access the "Settings" screen.
- [2] On the "Settings" screen, tap "Engineering settings".
- [3] On the "Engineering settings" screen, tap "Device attribute" to edit the device type & physical address.
- [4] On the "Engineering settings" screen, tap "IP address setting" to edit the network type. It can be set to "DHCP", "Customizable address" or "ABB Legacy".
  - If "ABB Legacy" is selected, the IP address will be "10.0.x.x". Its network type should be the same as the SmartAP.
  - If the address type of the SmartAP is set to "Legacy IP", you should select "Legacy IP" to avoid unknown errors.



#### 7.4.4 IP Pushbutton OS

This device could be configured on Video IS.

##### IP Pushbutton OS entering engineering mode

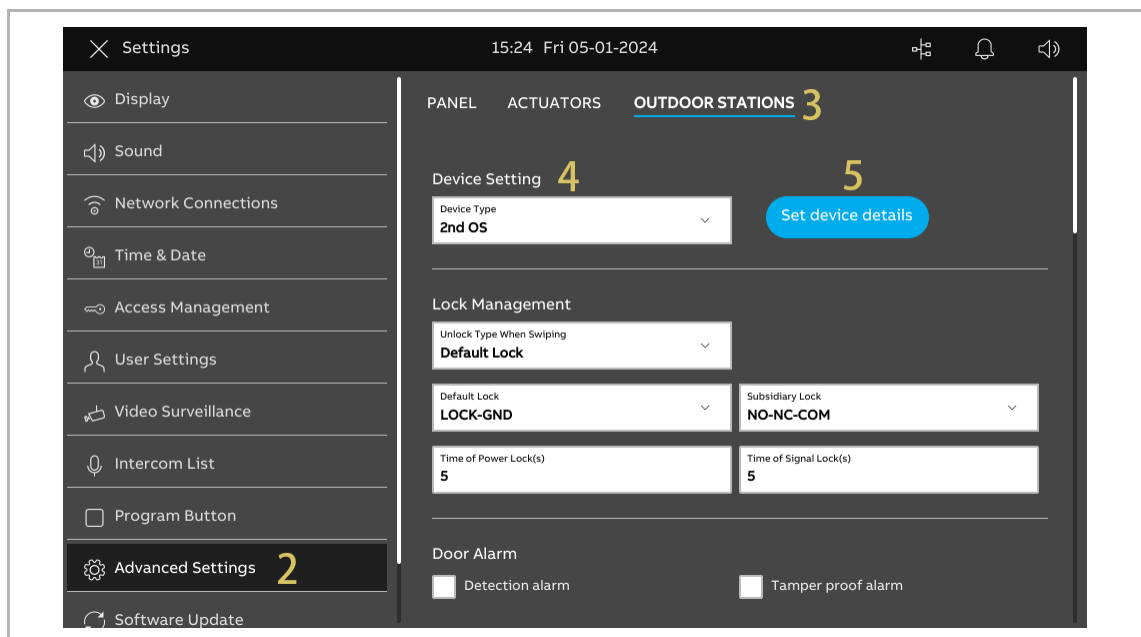
Please follow the steps below:

- [1] Power on the IP Pushbutton OS, wait until all 3 LED indicators go out.
- [2] Press and hold the first pushbutton for 10 seconds until all 3 LED indicators flash.

##### Video IS accessing the "Outdoor Stations" screen

Please follow the steps below:

- [1] Ensure that IP Pushbutton OS is in engineering mode.
- [2] On the "Settings" screen of the panel, tap "Advanced settings".
- [3] Tap "Outdoor Stations" to access the corresponding screen.
- [4] On the "Outdoor Stations" screen, go to "Device Version" section to select the device type.
- [5] Tap "Set device details".



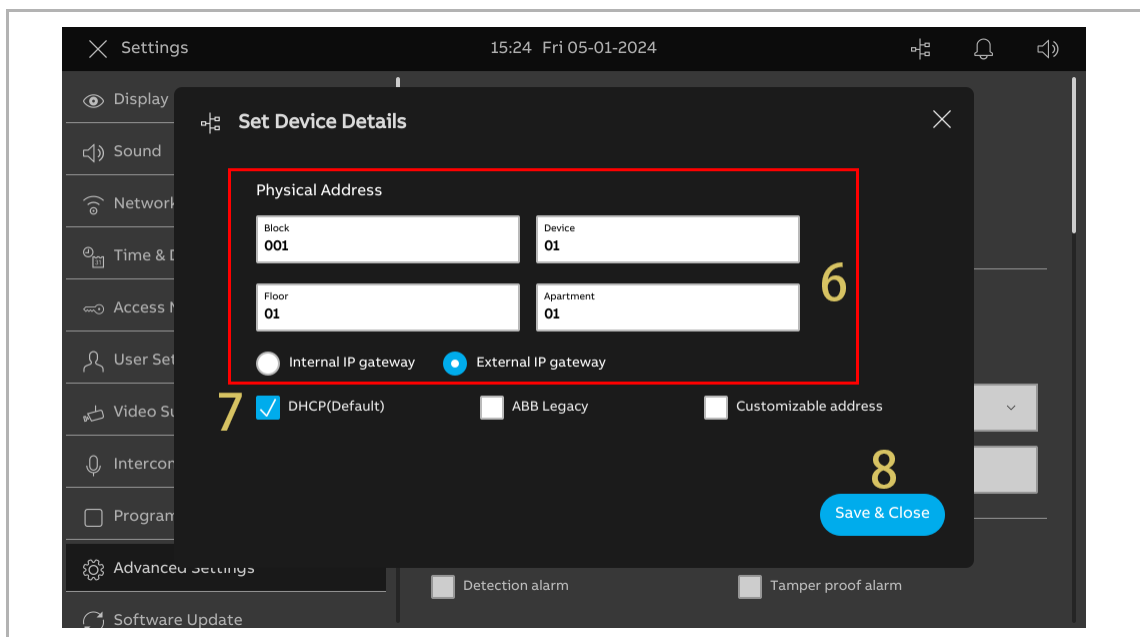
[6] Select the connection type and edit the physical address.

- If IP pushbutton OS is connected to the building network, "External IP gateway" should be selected.
- If IP pushbutton OS is connected to the private network, "Internal IP gateway" should be selected.

[7] Select the network type, it can set to "DHCP", "Customizable address" or "ABB Legacy".

- If "ABB Legacy" is selected, the IP address will be "10.0.x.x". Its network type should be the same as the SmartAP.
- If the address type of the SmartAP is set to "Legacy IP", you should select "ABB Legacy" to avoid unknown errors.

[8] Tap "Save & Close".



### 7.4.5 Mini OS

This device can be configured on Video IS.

#### IP Pushbutton OS entering engineering mode

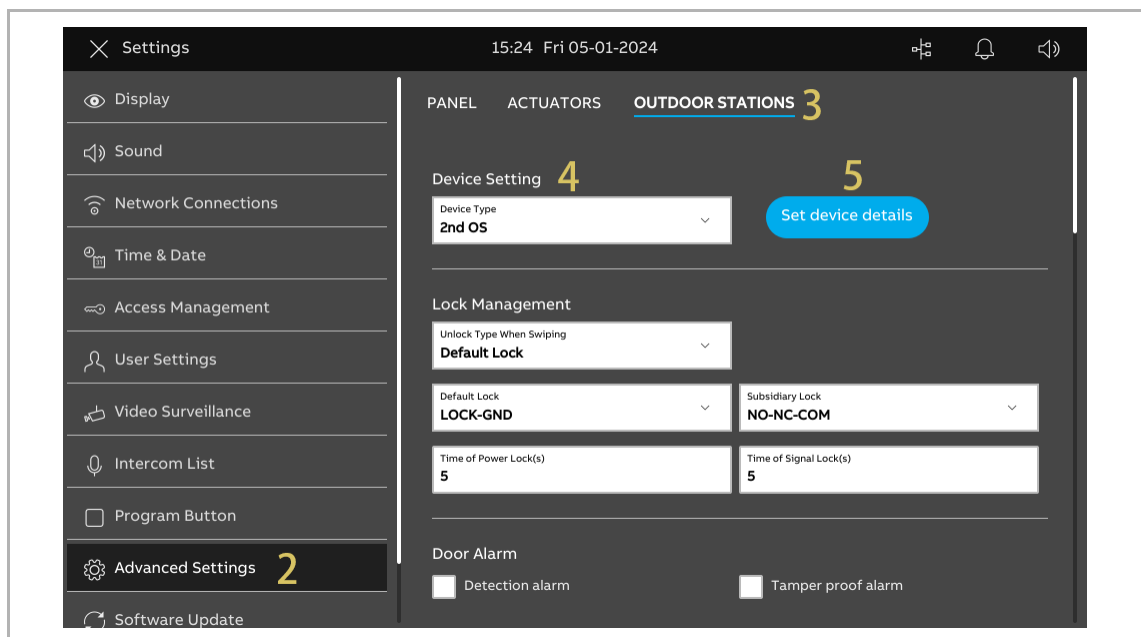
Please follow the steps below:

- [1] Power on the Mini OS, wait until all 3 LED indicators go out.
- [2] Press and hold the first pushbutton for 5 seconds until all 3 LED indicators flash.

#### Video IS accessing the "Outdoor Stations" screen

Please follow the steps below:

- [1] Ensure that Mini OS is in engineering mode.
- [2] On the "Settings" screen of the panel, tap "Advanced settings".
- [3] Tap "Outdoor Stations" to access the corresponding screen.
- [4] On the "Outdoor Stations" screen, go to "Device Version" section to select the device type.
- [5] Tap "Set device details".



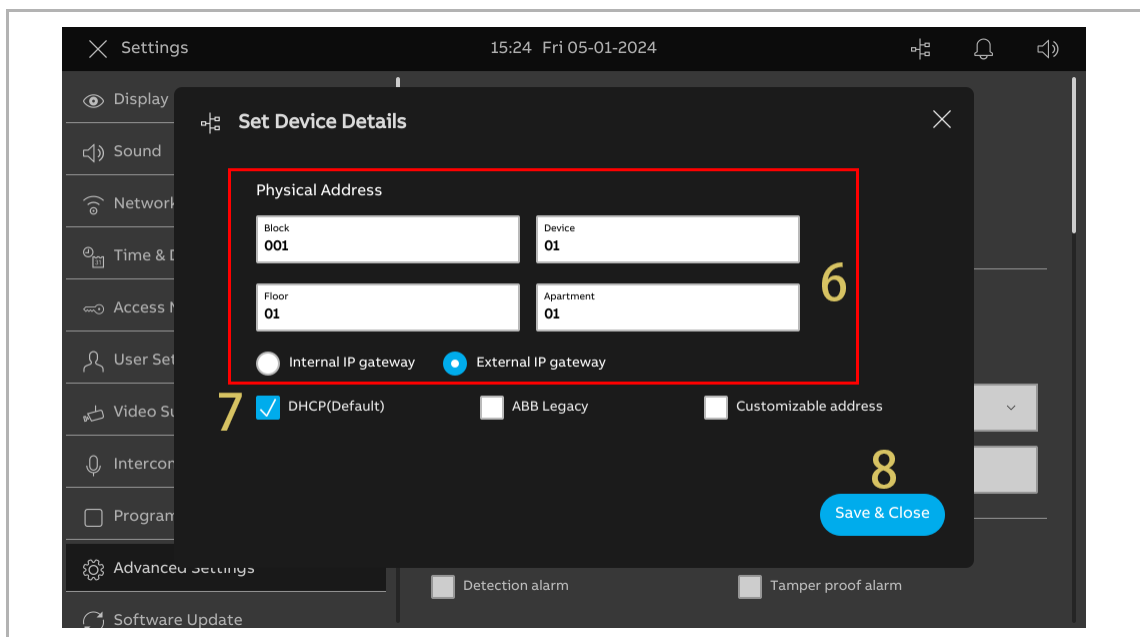
[6] Select the connection type and edit the physical address.

- If IP pushbutton OS is connected to building network, "External IP gateway" should be selected.
- If IP pushbutton OS is connected to private network, "Internal IP gateway" should be selected.

[7] Select the network type, it can set to "DHCP", "Customizable address" or "ABB Legacy".

- If "ABB Legacy" is selected, the IP address will be "10.0.x.x". Its network type should be the same as the SmartAP.
- If the address type of the SmartAP is set to "Legacy IP", you should select "ABB Legacy" to avoid unknown errors.

[8] Tap "Save & Close".

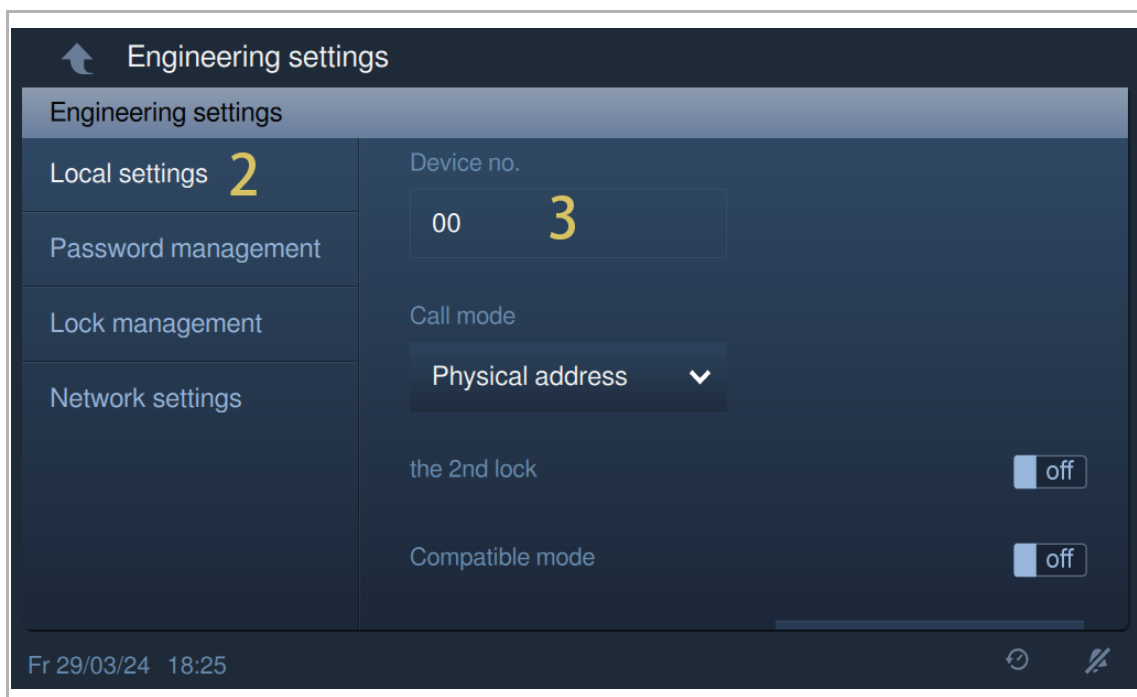


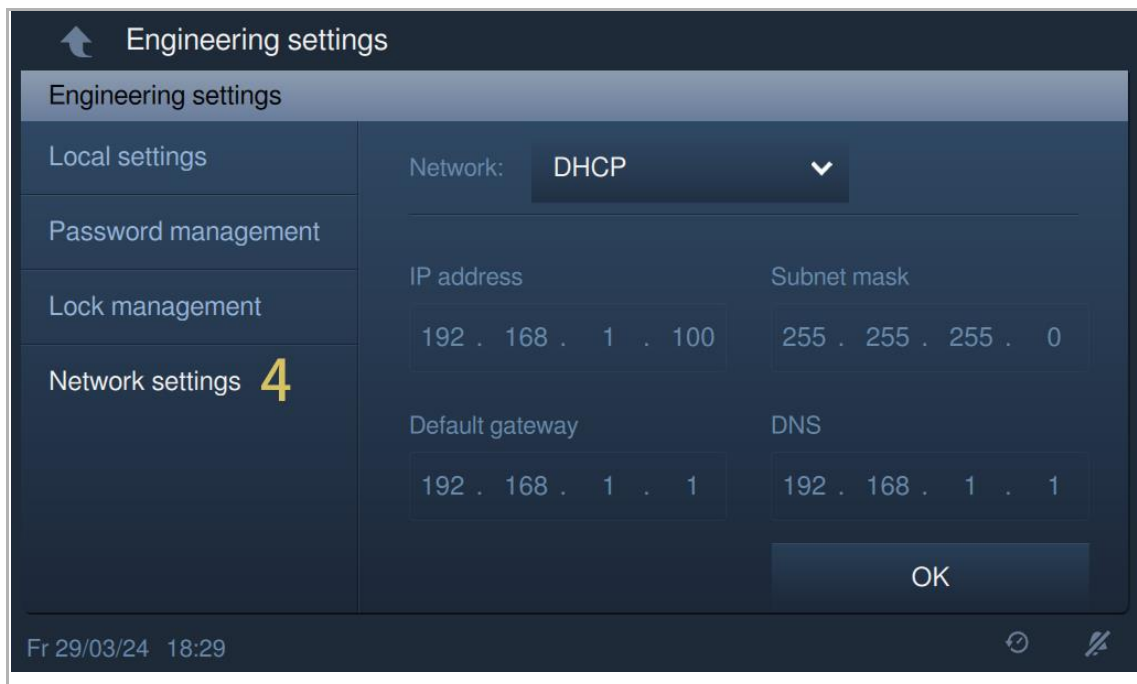


### 7.4.6 Guard Unit

Please follow the steps below:

- [1] On the "System settings" screen, click "Engineering settings", enter the engineering password to access the settings.
- [2] On the "Engineering settings" screen, tap "Local settings".
- [3] Go to "Device no." section, edit the physical address.
- [4] Tap "Network settings", select the network type, it can set to "DHCP", "Customizable address" or "Legacy IP".
  - If "ABB Legacy" is selected, the IP address will be "10.0.x.x". Its network type should be the same as the SmartAP.
  - If the network type of the SmartAP is set to "Legacy IP", you should select "Legacy IP" to avoid unknown errors.



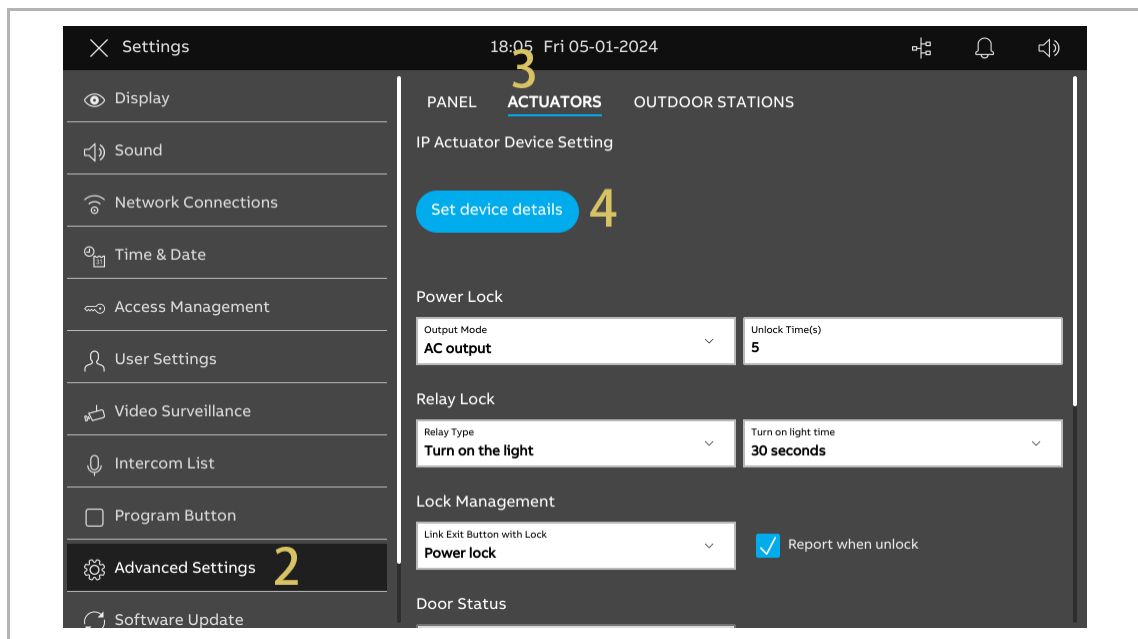


### 7.4.7 IP Actuator

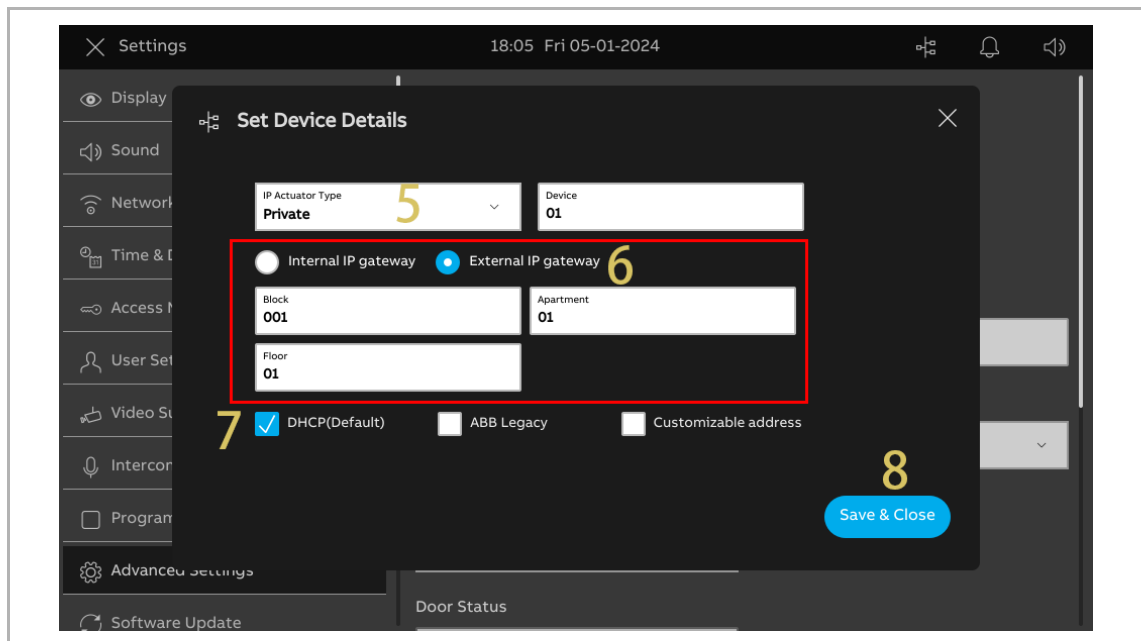
This device could be configured on Video IS.

Please follow the steps below:

- [1] Press the reset button of the IP Actuator once during normal operation; the LED flashing green means that the IP actuator has entered engineering mode.
- [2] On the "Settings" screen of the panel, tap "Advanced settings".
- [3] Tap "Actuators" to access the corresponding screen.
- [4] On the "Actuators" screen, go to the "IP Actuator device setting" section, tap "Set device details".



- [5] Select the device type from the drop-down list and enter the device number.
- [6] Select the connection type and edit the physical address.
- If IP Actuator is connected to building network, "External IP gateway" should be selected.
  - If IP Actuator is connected to private network, "Internal IP gateway" should be selected.
- [7] Select the network type, it can set to "DHCP", "Customizable address" or "ABB Legacy".
- If "ABB Legacy" is selected, the IP address will be "10.0.x.x". Its network type should be the same as the SmartAP.
  - If the network type of the SmartAP is set to "Legacy IP", you should select "ABB Legacy" to avoid unknown errors.
- [8] Tap "Save & Close".



## 7.5 Restoring to factory default

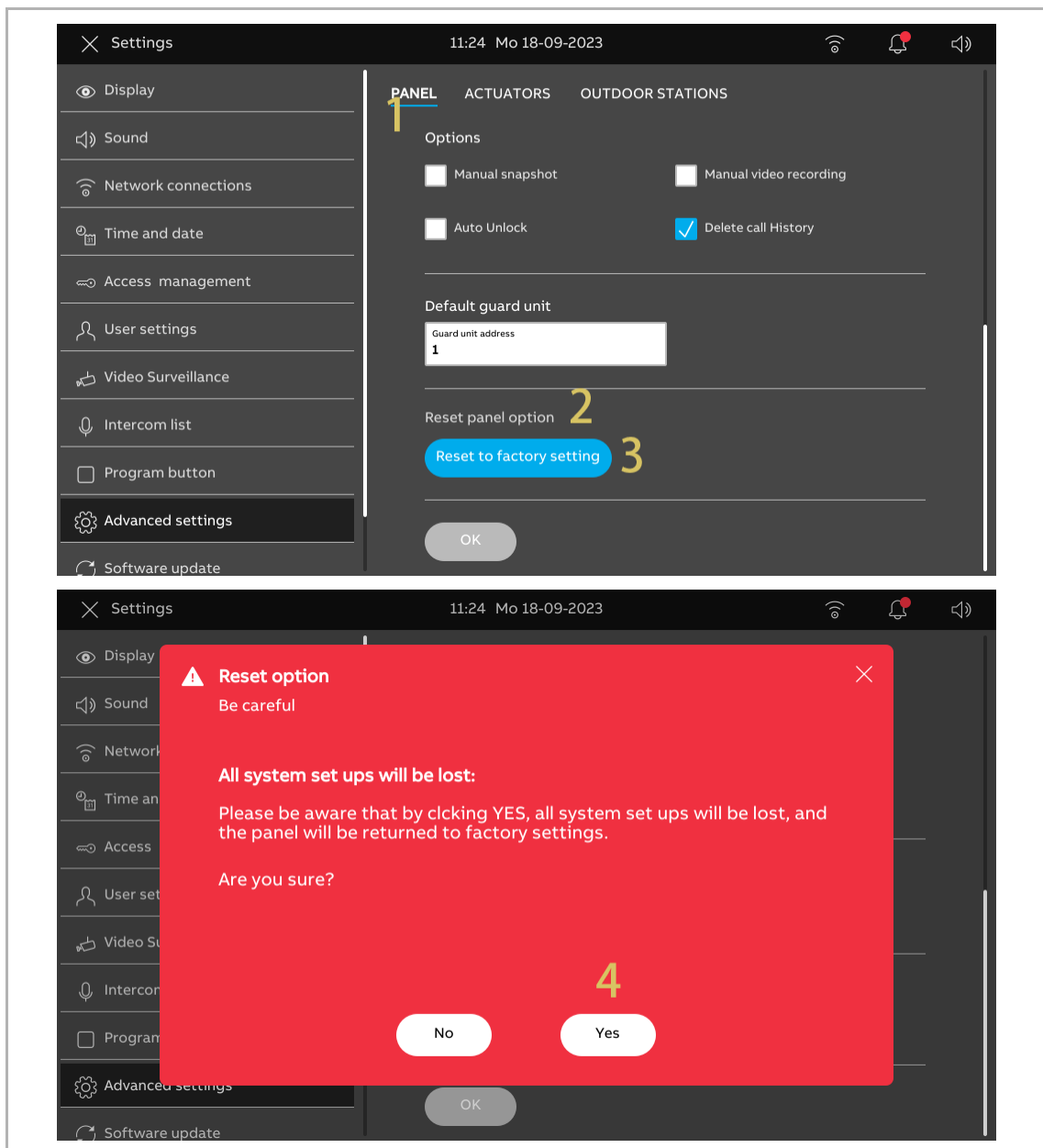
**Note**

Building address, signature and all parameters will be restored to the factory default settings after the reset operation.

### 7.5.1 Video IS

Please follow the steps below:

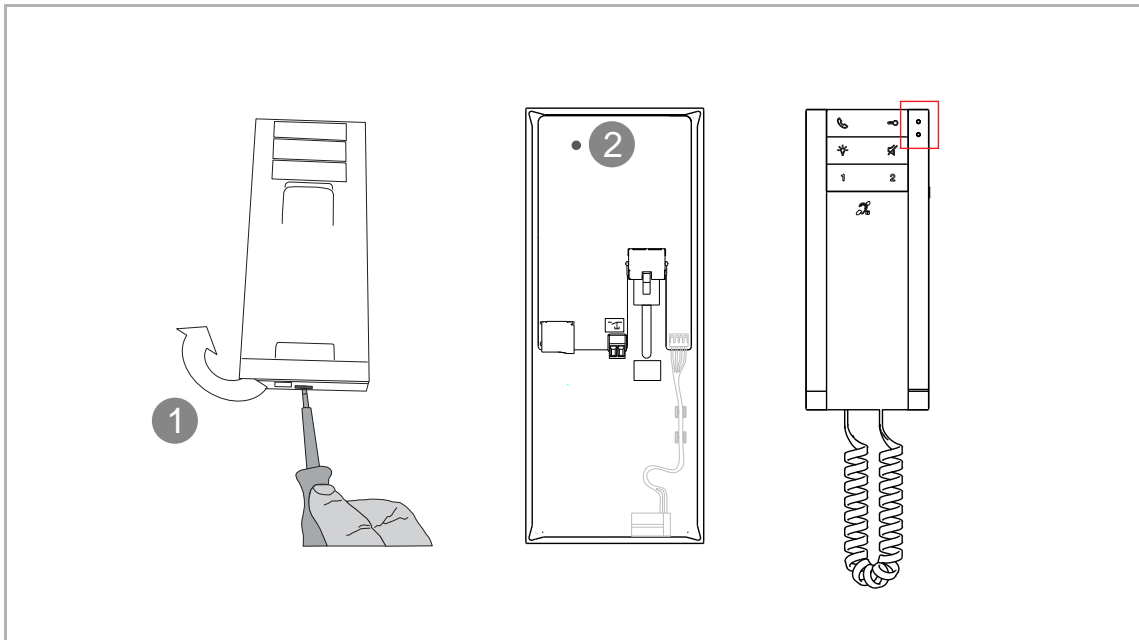
- [1] Within 2 minutes of powering on the IS, on the "Advanced settings" screen, tap "Panel".
- [2] Go to the "Reset panel option" section.
- [3] Tap "Reset to factory setting".
- [4] Tap "Yes".



### 7.5.2 Audio IS

Please follow the steps below:

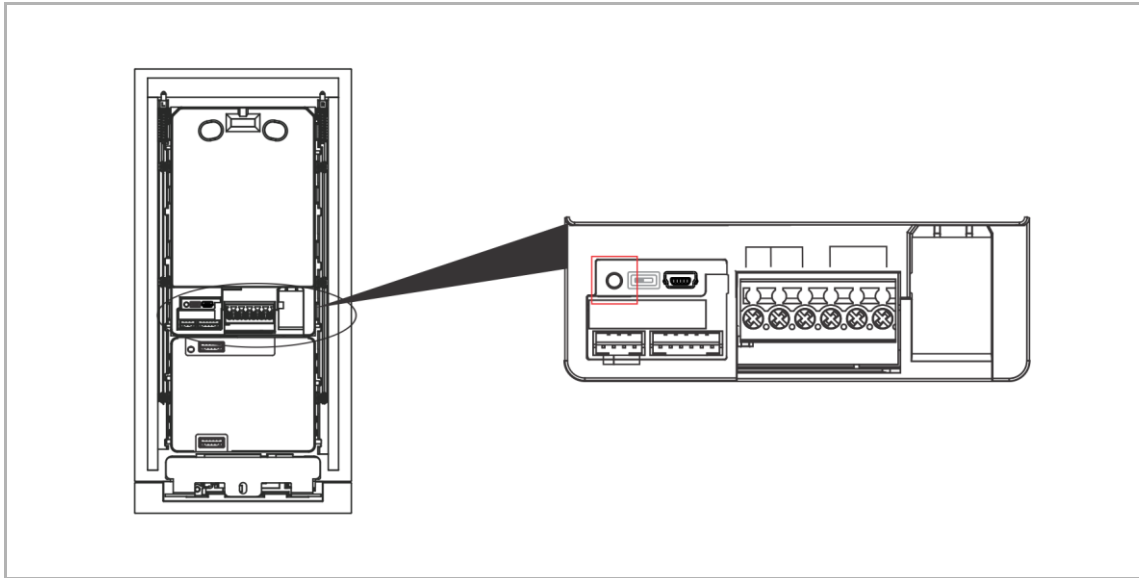
- [1] Disassemble the upper part from the bottom part by using a screwdriver.
- [2] Within 2 minutes of powering on the Audio IP, press and hold the reset button (located on the upper part) for 3 seconds until the 2 LED indicators turn on and then off.
- [3] After a while, the 2 LED indicators will flash to indicate the initial status.



### 7.5.3 IP Touch 5 OS

Please follow the steps below:

- [1] Power on the OS, wait until all 3 LED indicators go out.
- [2] Within 2 minutes of powering on the OS, press and hold the reset button for 10 seconds until the 3 LED indicators are lit continuously.

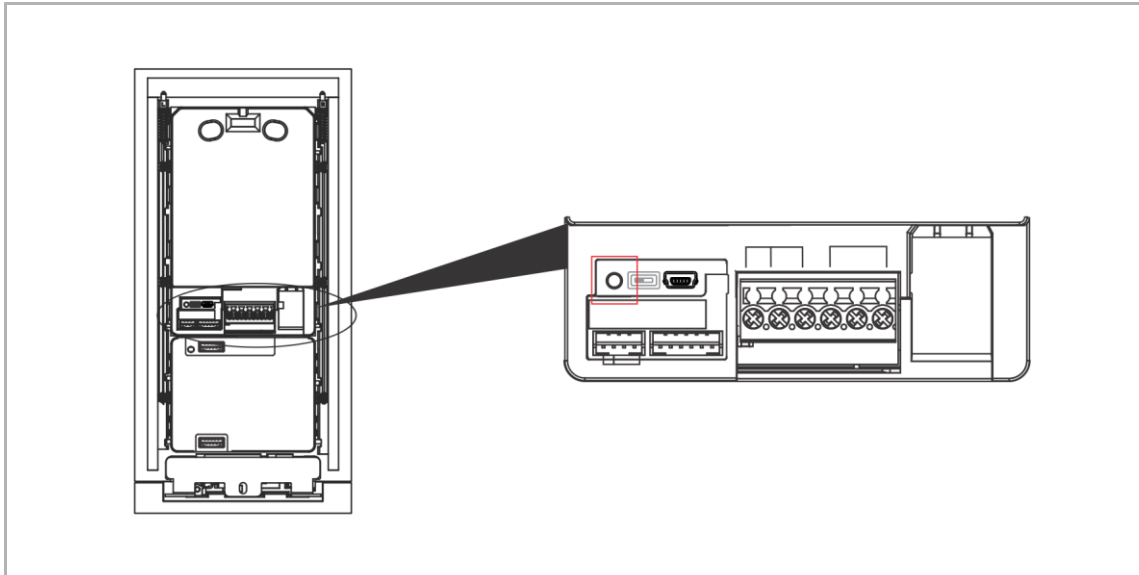




#### 7.5.4 IP Pushbutton OS

Please follow the steps below:

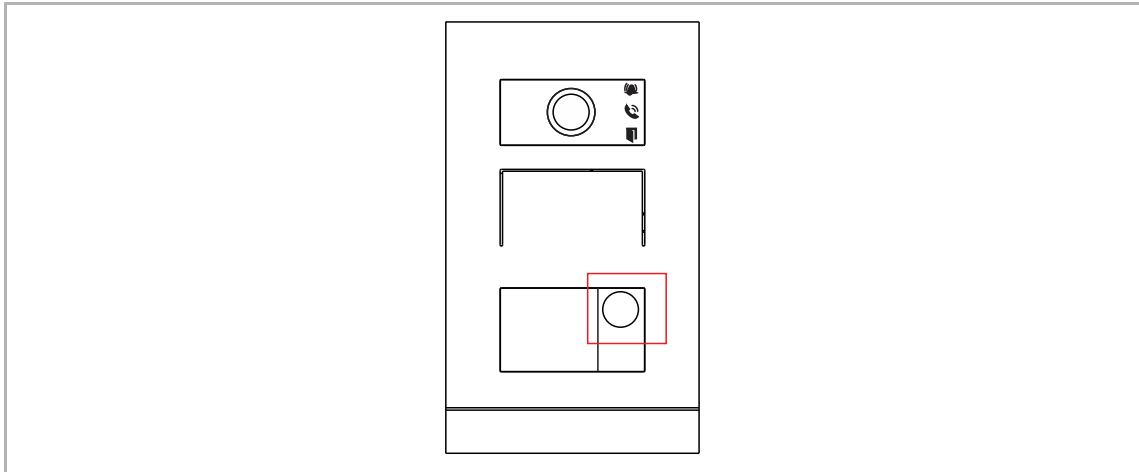
- [1] Power on the OS, wait until all 3 LED indicators go out.
- [2] Within 2 minutes of powering on the OS, press and hold the reset button for 10 seconds until the 3 LED indicators are lit continuously.



### 7.5.5 Mini OS

Please follow the steps below:

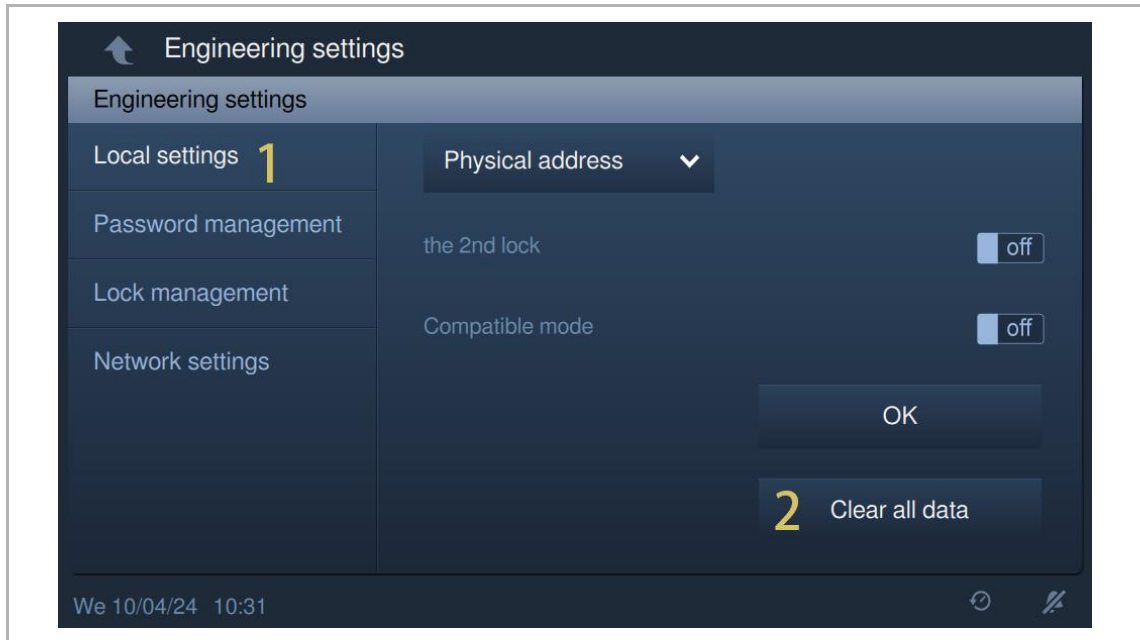
- [1] Power on the mini OS with IC, wait until all 3 LED indicators go out.
- [2] Within 2 minutes of powering on the mini OS with IC, press and hold the first pushbutton for 5 seconds until all 3 LED indicators flash.
- [3] Press and hold the first pushbutton again for the 10 seconds until the mini OS with IC emits a "di" sound and the 3 LED indicators go out.



### 7.5.6 Guard Unit

Please follow the steps below:

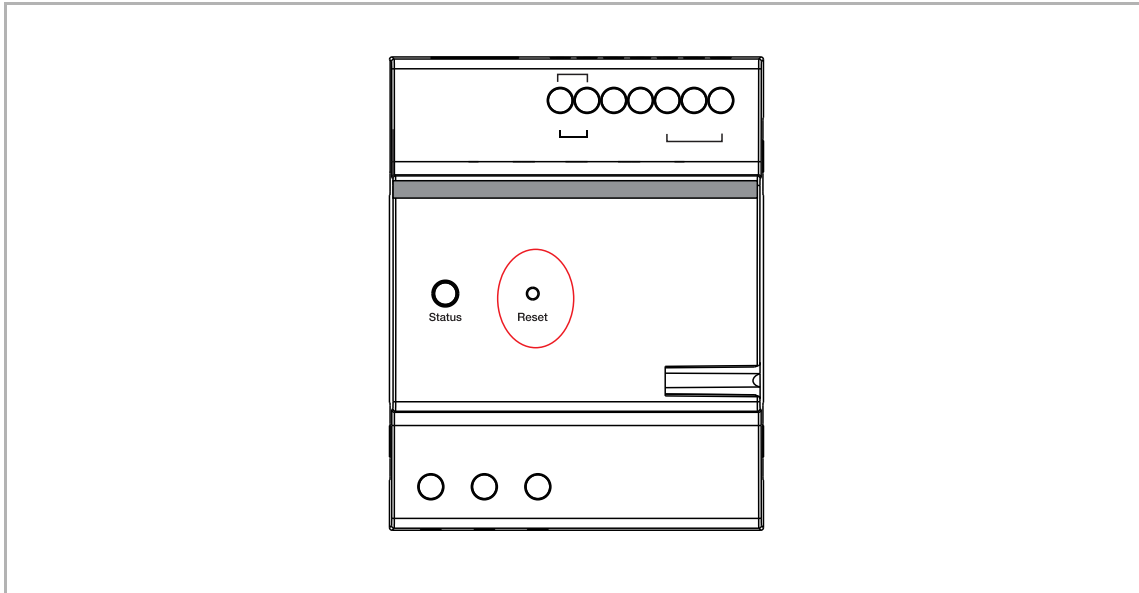
- [1] Within 2 minutes of powering on the Guard Unit, on the "Engineering settings" screen, tap "Local settings".
- [2] Tap "Clear all data".



### 7.5.7 IP Actuator

Please follow the steps below:

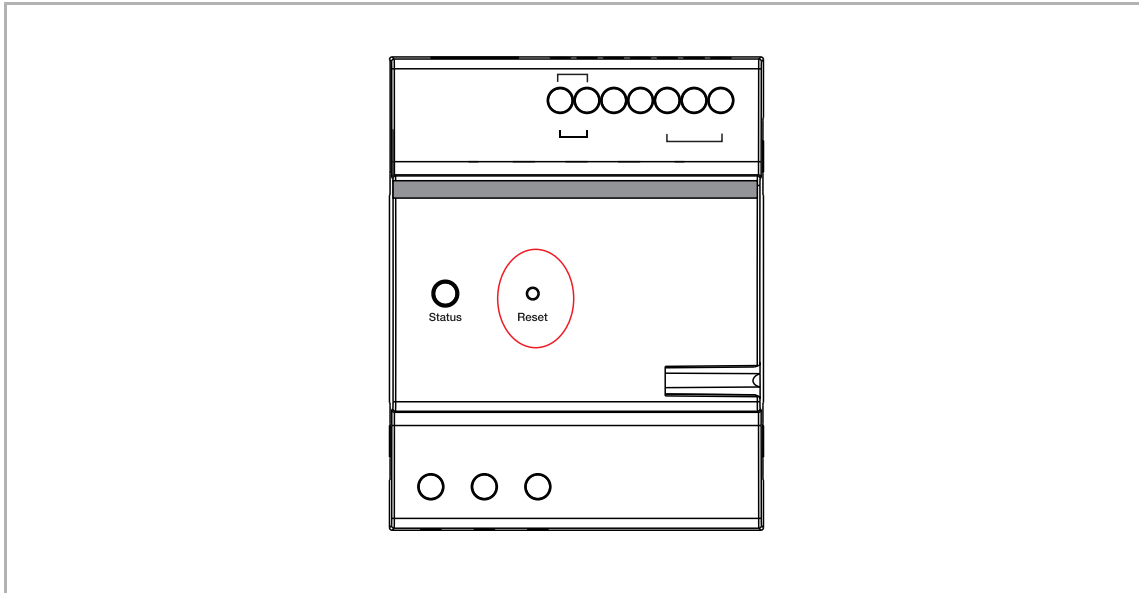
- [1] Within 2 minutes of powering on the IP Actuator, press and hold the reset button for 10 seconds until the indicator goes out.
- [2] After a while, the indicator flashes green again.



### 7.5.8 IP Elevator Controller

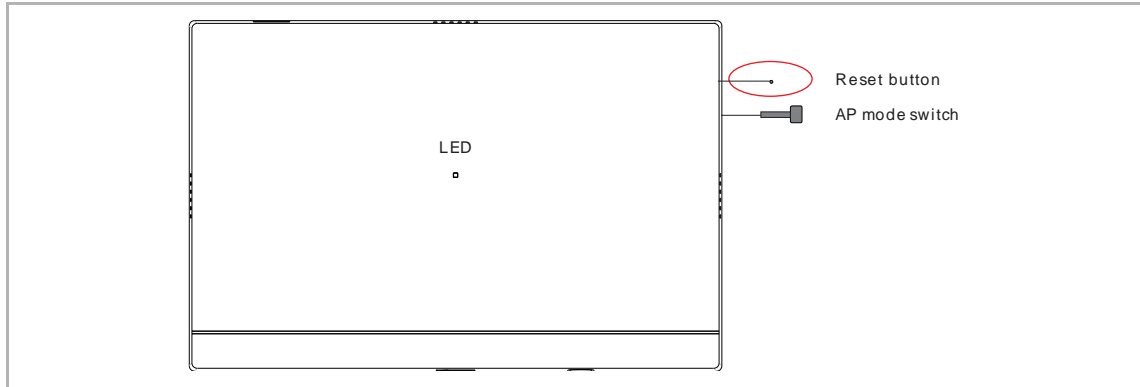
Please follow the steps below:

- [1] Within 2 minutes of powering on the IP Elevator Controller, press and hold the reset button for 10 seconds until the indicator goes out.
- [2] After a while, the indicator flashes green again.



## 7.6 Resetting the password for the primary admin

Press and hold the reset button for 10 seconds to reset the password for the primary admin and reset AP password in the same time.



### 1. Reset option = Without MyBuildings account

If the reset option is set to "Without MyBuildings account" in the initial setup, you can change the password for the primary admin directly by entering a new password twice.

The screenshot shows a dark blue background with the text "Please change password first!" at the top. Below this, there are three input fields: "User name" with the value "jacky", "Password", and "Repeat passw...". The "Password" and "Repeat passw..." fields are highlighted with red borders. At the bottom, there is a "Finish" button.

## 2. Reset option = With MyBuildings account

If the reset option is set to "With MyBuildings account" in the initial setup, besides entering a new password twice, a verification code is also needed.



### Note

If you have set an email to receive the verification code in the initial setup, you can obtain the verification code sent by email.

The screenshot shows a two-part interface. The top part is a white box representing an email preview with the following text:

Verification code: 92OJJ88K.

Sent by: Jacky's SmartAP (cac28e69-816b-4bc9-ac77-2140adf9ea2c / ivanstagecn)

For your information. A maximum of 25 e-mails per day can be sent via your free@home system.

The bottom part is a dark blue form titled "Please change password first!". It contains the following fields:

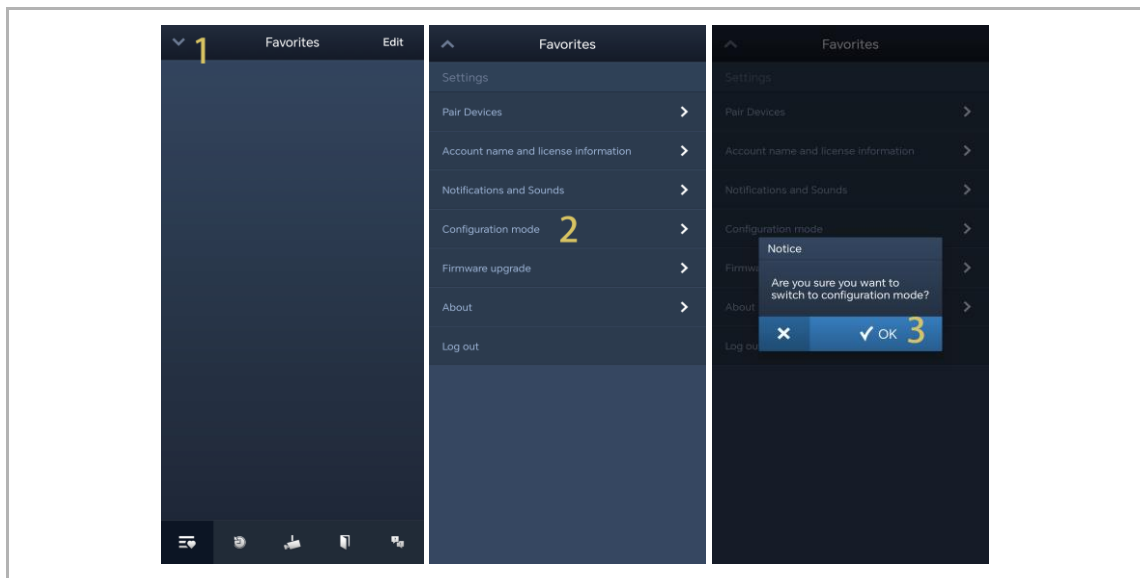
- User name: jacky
- Password: .....
- Repeat passw...: .....
- Verify code: 92OJJ88K

At the bottom of the form are two buttons: "52s" and "Finish". A red dashed line with an arrow points from the verification code "92OJJ88K" in the email preview to the "Verify code" field in the form.

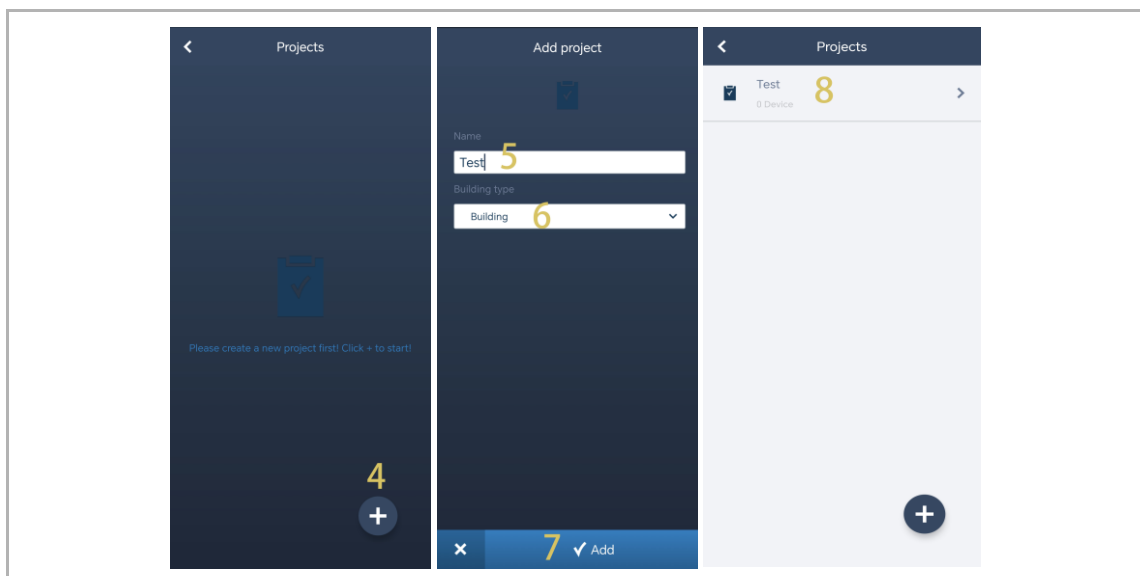
## 7.7 Creating a building on the APP

Please follow the steps below:

- [1] On the home screen of the APP, tap "☰".
- [2] Tap "Configuration mode".
- [3] Tap "OK" to access configuration mode.

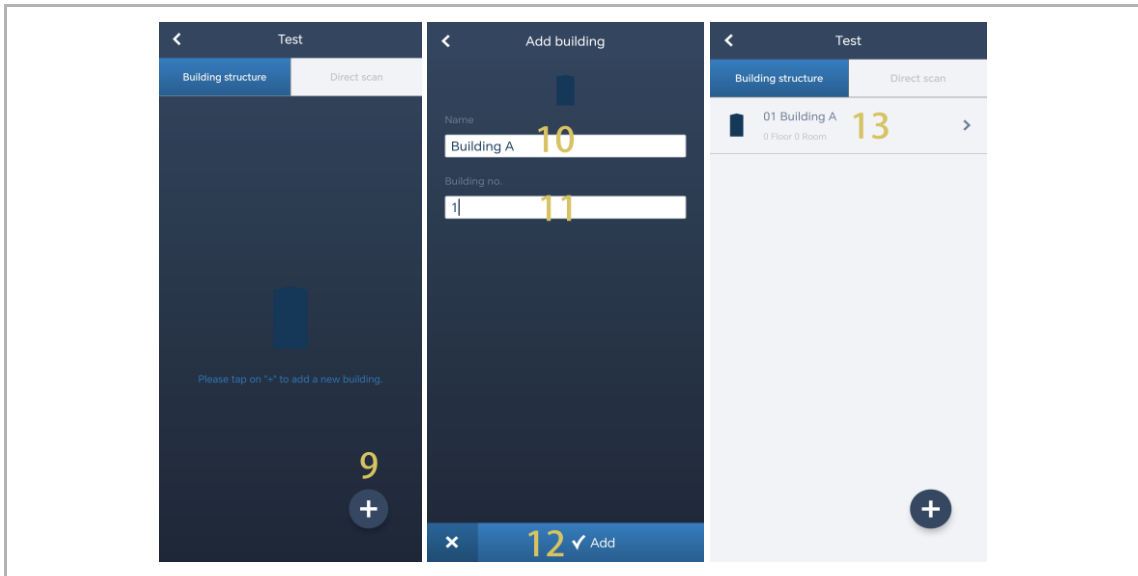


- [4] On the "Projects" screen, tap "+".
- [5] On the "Add project" screen, enter the project name.
- [6] Select the building type according to the system topology. It must be set to "Building".
- [7] Tap "Add" to create a new project.
- [8] Tap the designated project.

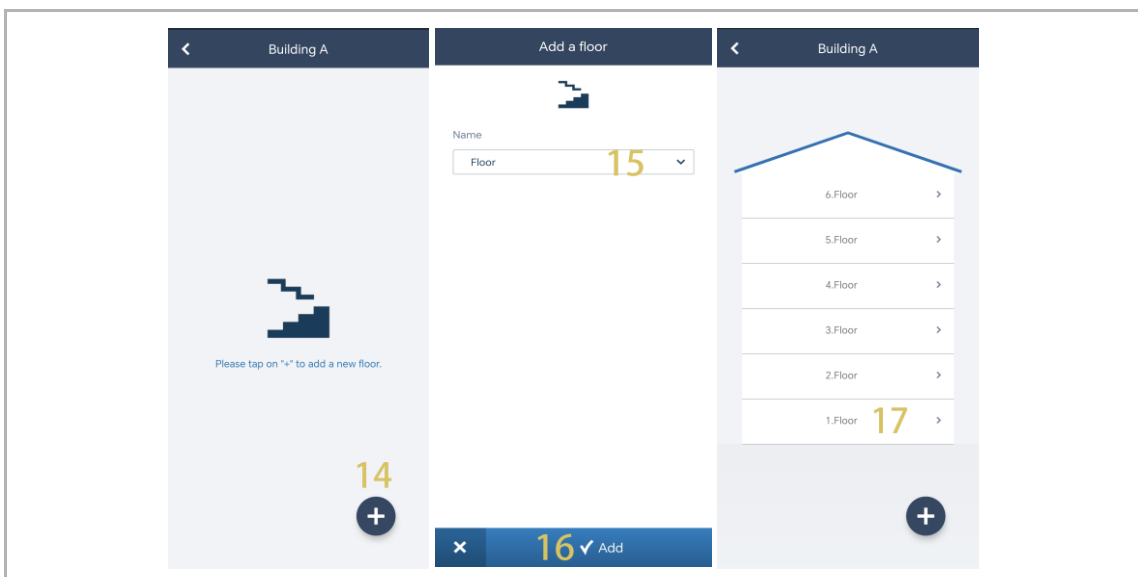




- [9] On the designated project screen, tap " + " .
- [10] On the "Add building" screen, enter the building name.
- [11] Enter the building number.
- [12] Tap "Add" to create a new building.
- Repeat steps 9~12 to create multiple buildings.
- [13] Tap the designated building.



- [14] On the designated building screen, tap " + " .
- [15] On the "Add a floor" screen, select the floor name from the drop-down list. It can be set to "Floor" or "Ground floor".
- [16] Tap "Add" to create a new floor.
- Repeat steps 15~16 to create multiple floors for the designated building.
- [17] Tap the designated floor.



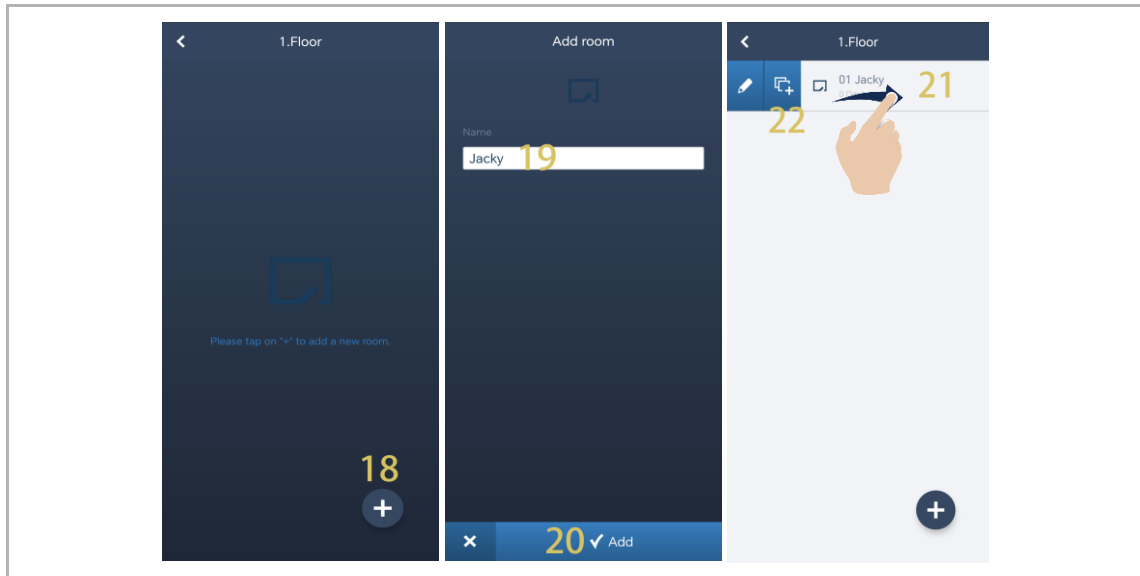
[18] On the designated floor screen, tap " + " to add a room.

[19] Enter the alias name for the designated room.

[20] Tap "Add" to create a new room.

[21] On the designated floor screen, swipe a room name to the right.

[22] Tap " + " to create multiple rooms as a batch.




[23] Enter the duplicate number.

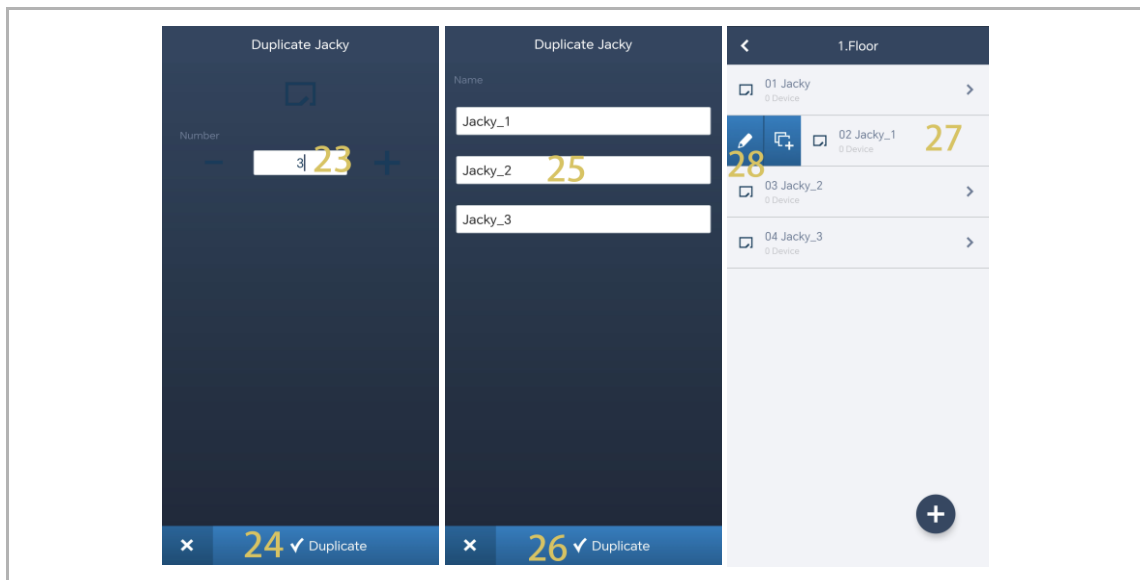
[24] Tap "Duplicate".

[25] Enter the alias name for each room now or do it later.

[26] Tap "Duplicate".

[27] On the designated floor screen, swipe the designated room name to the right.

[28] Tap "  " to set the alias name for the designated room.

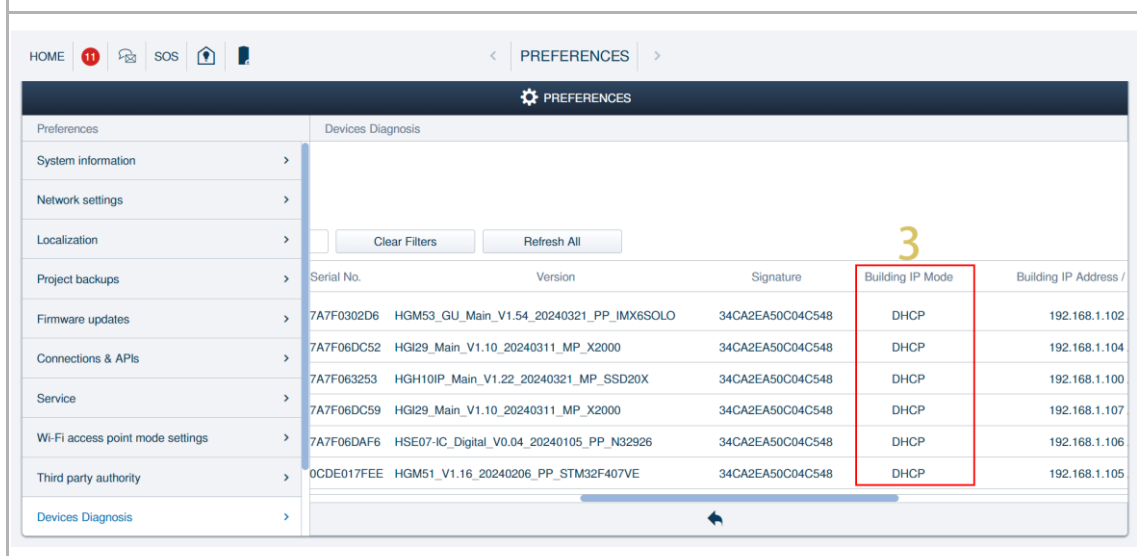
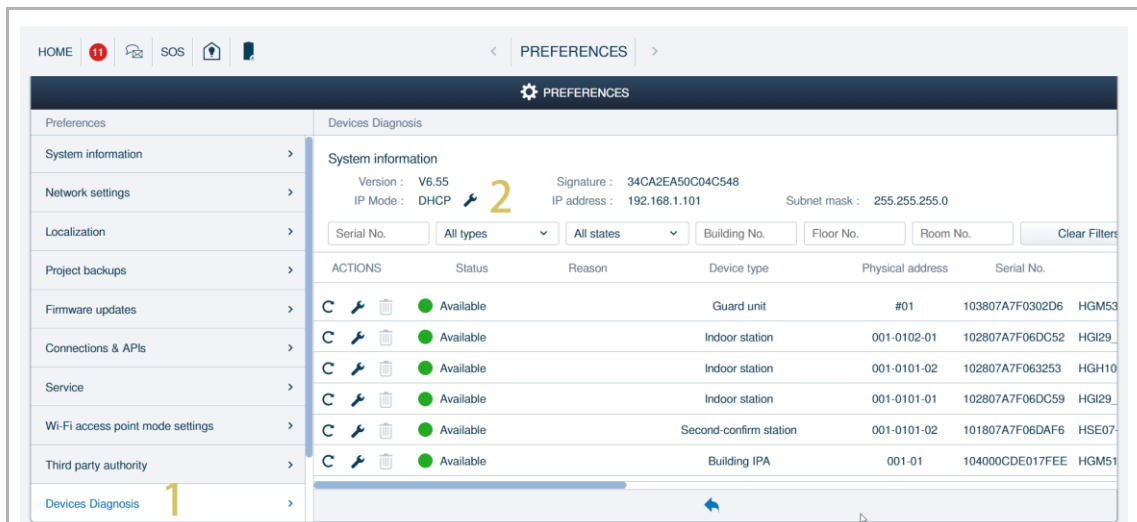


## 7.8 Configuring the IP mode

### 7.8.1 Viewing the IP mode

Please follow the steps below:


- [1] On the "Preferences" screen, click "Devices Diagnosis".
- [2] Display the IP mode of the SmartAP.
- [3] Drag the scroll bar to the right to view the IP mode of the designated device.

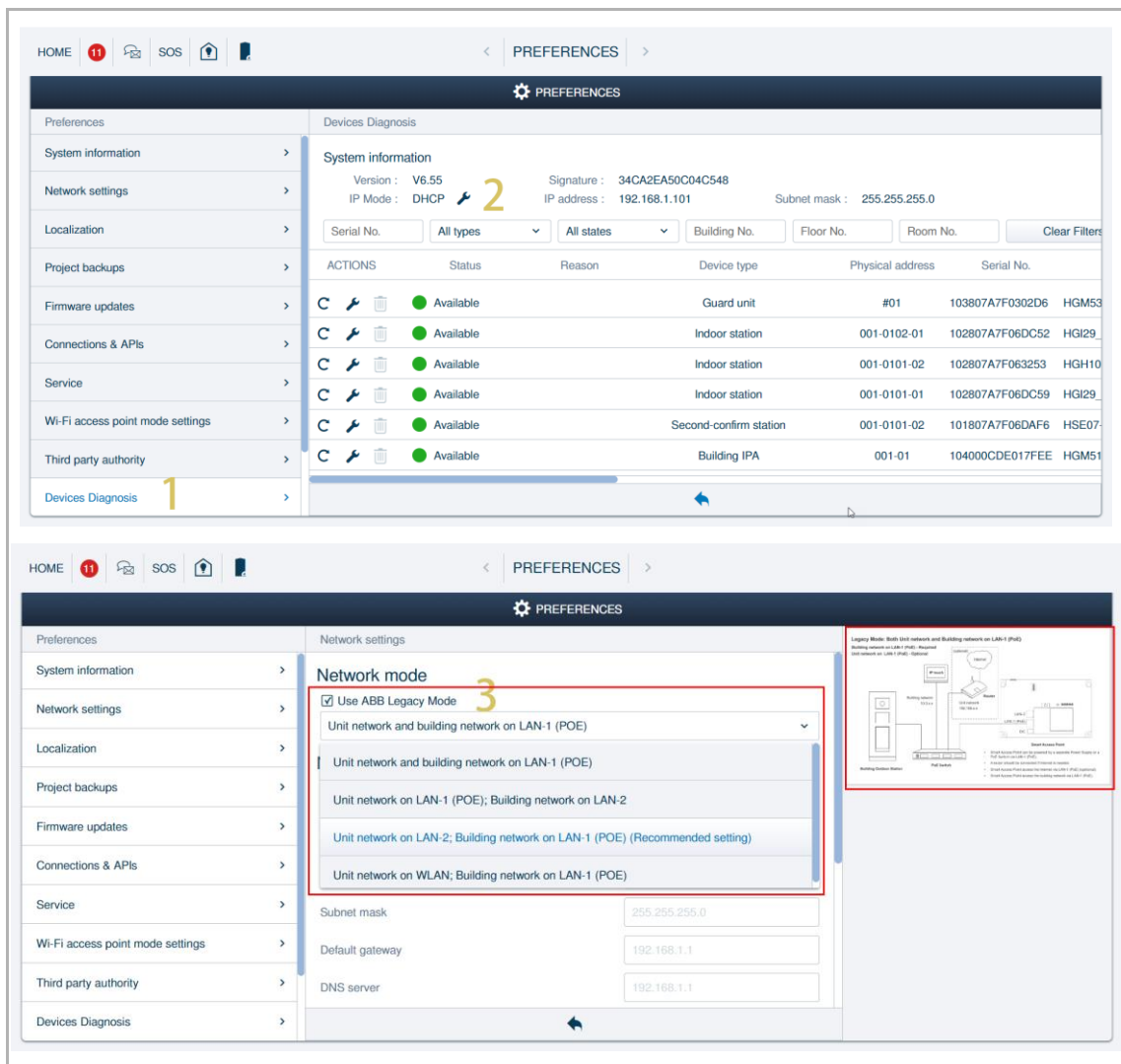


## 7.8.2 Changing the IP mode from "DHCP" to "Legacy IP" for all devices

Changing the IP mode of the SmartAP will change the IP mode of all devices in the system.

Please follow the steps below:

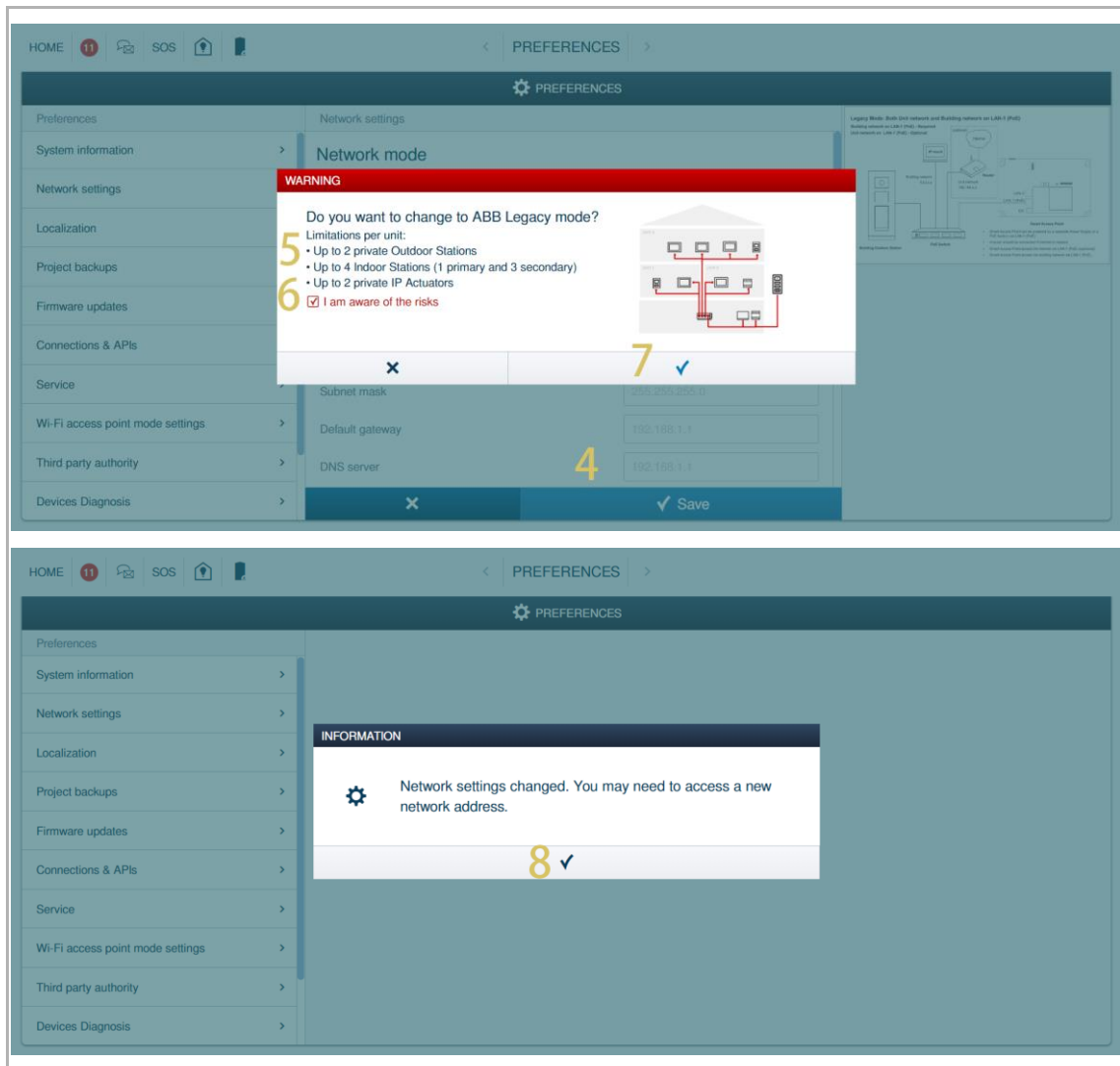
- [1] On the "Preferences" screen, click "Devices Diagnosis".
  - [2] Click "  " to go to "Network settings" screen.
  - [3] On the "Network settings" screen, tick the check box to enable "Legacy IP".
- There are 4 network connections type could be select from the drop-down list. Click the diagram on the right to view the details.



The first screenshot shows the "Preferences" screen with the "Devices Diagnosis" tab selected. The "System information" section displays the current IP Mode as "DHCP". A yellow number "2" is placed over the wrench icon next to the IP Mode label. Below this, a table lists various devices with their status, reasons, device types, physical addresses, and serial numbers.

The second screenshot shows the "Network settings" screen. The "Network mode" section has the "Use ABB Legacy Mode" checkbox checked, with a yellow number "3" placed over it. A dropdown menu is open, showing four options for network configurations. A red box highlights this dropdown menu. To the right of the settings, there is a diagram titled "Legacy Mode: Both Unit network and Building network on LAN-1 (POE)" which illustrates the network topology for this mode.

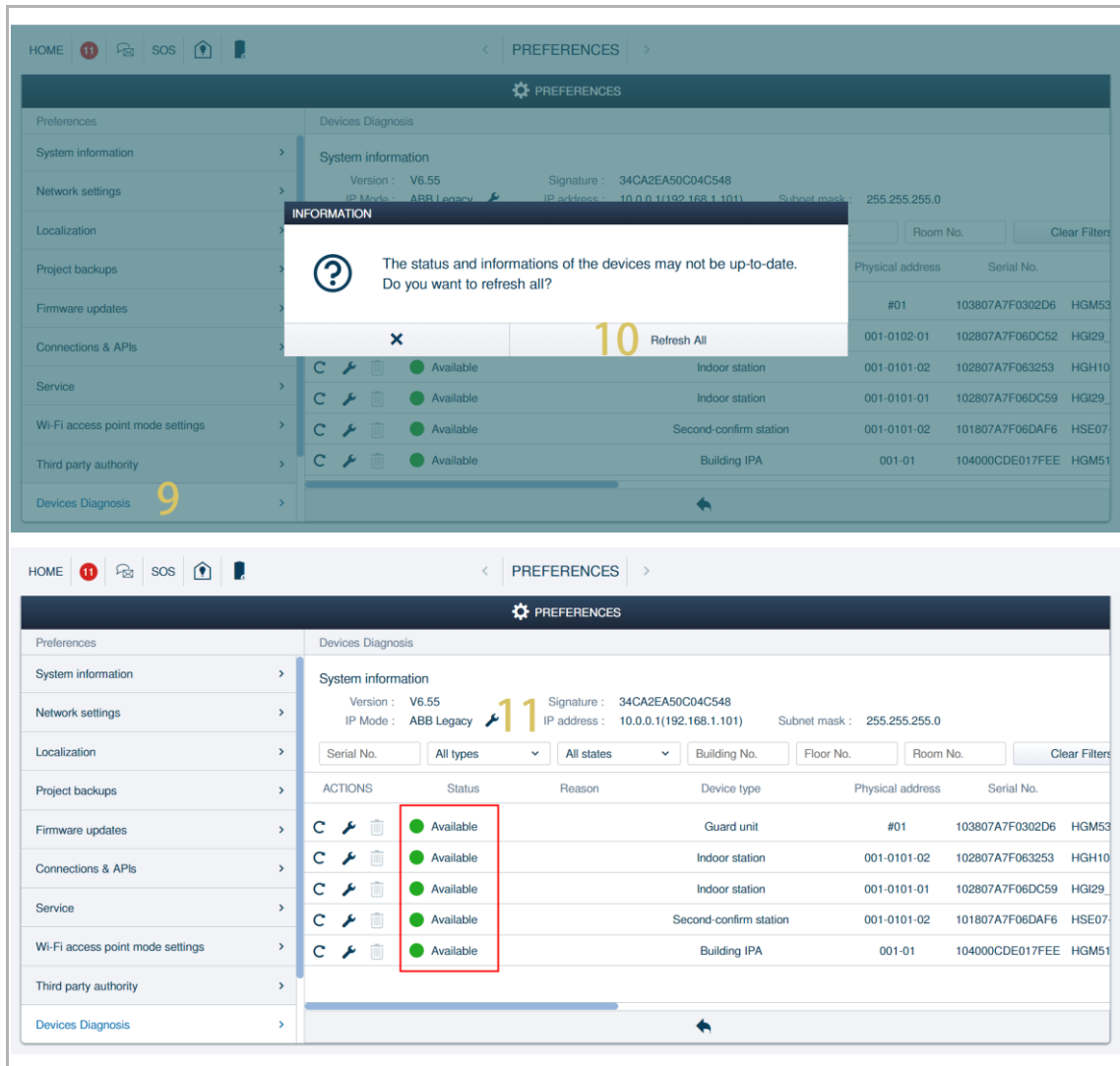
- [4] Click "Save" to save the settings.
- [5] A warning window will pop up to display the notice.
- [6] Tick the check box if you want to continue.
- [7] Click "✓" to continue.
- [8] Click "✓" to access the SmartAP again.



[9] On the "Preferences" screen, click "Devices Diagnosis".

[10] Click "Refresh All".

[11] "ABB Legacy" will be displayed on the screen and all the devices will be available after this change.



[12]The IP mode of all the devices will be changed to "Legacy IP" at the same time.

The screenshot shows the 'PREFERENCES' screen with a sidebar on the left and a main content area. The sidebar includes options like 'System information', 'Network settings', 'Localization', 'Project backups', 'Firmware updates', 'Connections & APIs', 'Service', 'Wi-Fi access point mode settings', 'Third party authority', and 'Devices Diagnosis'. The main content area is titled 'Devices Diagnosis' and contains a table with columns: 'Serial No.', 'Version', 'Signature', 'Building IP Mode', and 'Building IP Address'. The 'Building IP Mode' column for all devices is set to 'Legacy IP', which is highlighted by a red box and the number 12. There are also 'Clear Filters' and 'Refresh All' buttons above the table.


Serial No.	Version	Signature	Building IP Mode	Building IP Address
307A7F0302D6	HGM53_GU_Main_V1.54_20240321_PP_IMX6SOLO	34CA2EA50C04C548	Legacy IP	10.0.1.
307A7F063253	HGH10IP_Main_V1.22_20240321_MP_SSD20X	34CA2EA50C04C548	Legacy IP	10.0.65.
307A7F06DC59	HGI29_Main_V1.10_20240311_MP_X2000	34CA2EA50C04C548	Legacy IP	10.0.65.
307A7F06DAF6	HSE07-IC_Digital_V0.04_20240105_PP_N32926	34CA2EA50C04C548	Legacy IP	10.0.65.
000CDE017FEE	HGM51_V1.16_20240206_PP_STM32F407VE	34CA2EA50C04C548	Legacy IP	10.0.64.5

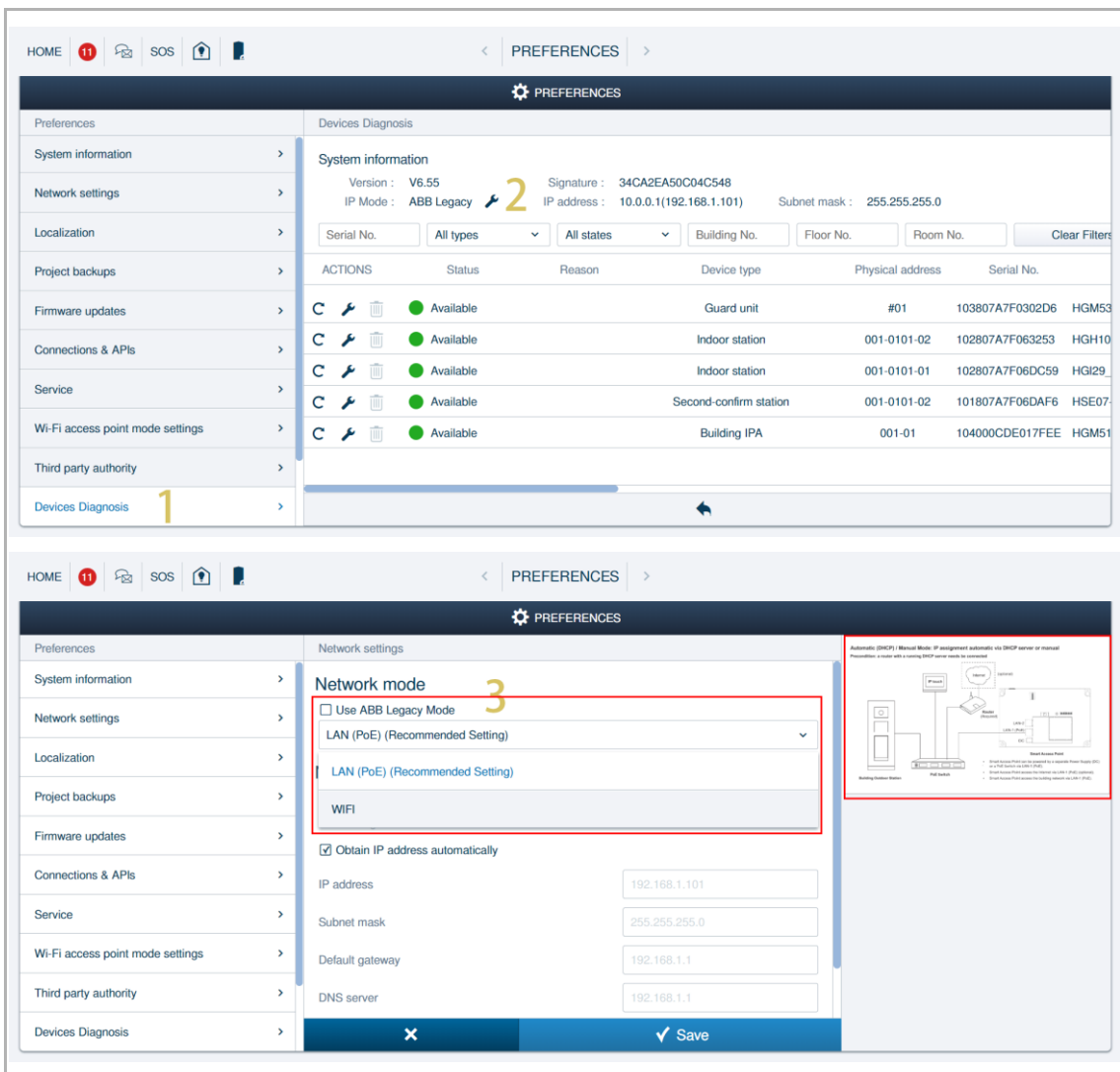


### 7.8.3 Changing the IP mode from "Legacy IP" to "DHCP" for all devices

Changing the IP mode of the SmartAP will change the IP mode of all devices on the system.

Please follow the steps below:

- [1] On the "Preferences" screen, click "Devices Diagnosis".
- [2] Click "  " to go to "Network settings" screen.
- [3] On the "Network settings" screen, untick the check box to disable "Legacy IP".
  - There are 2 network connections type could be select from the drop-down list. Click the diagram on the right to view the details.



The image shows two screenshots of the ABB SmartAP web interface. The top screenshot shows the 'Devices Diagnosis' screen, and the bottom screenshot shows the 'Network settings' screen.

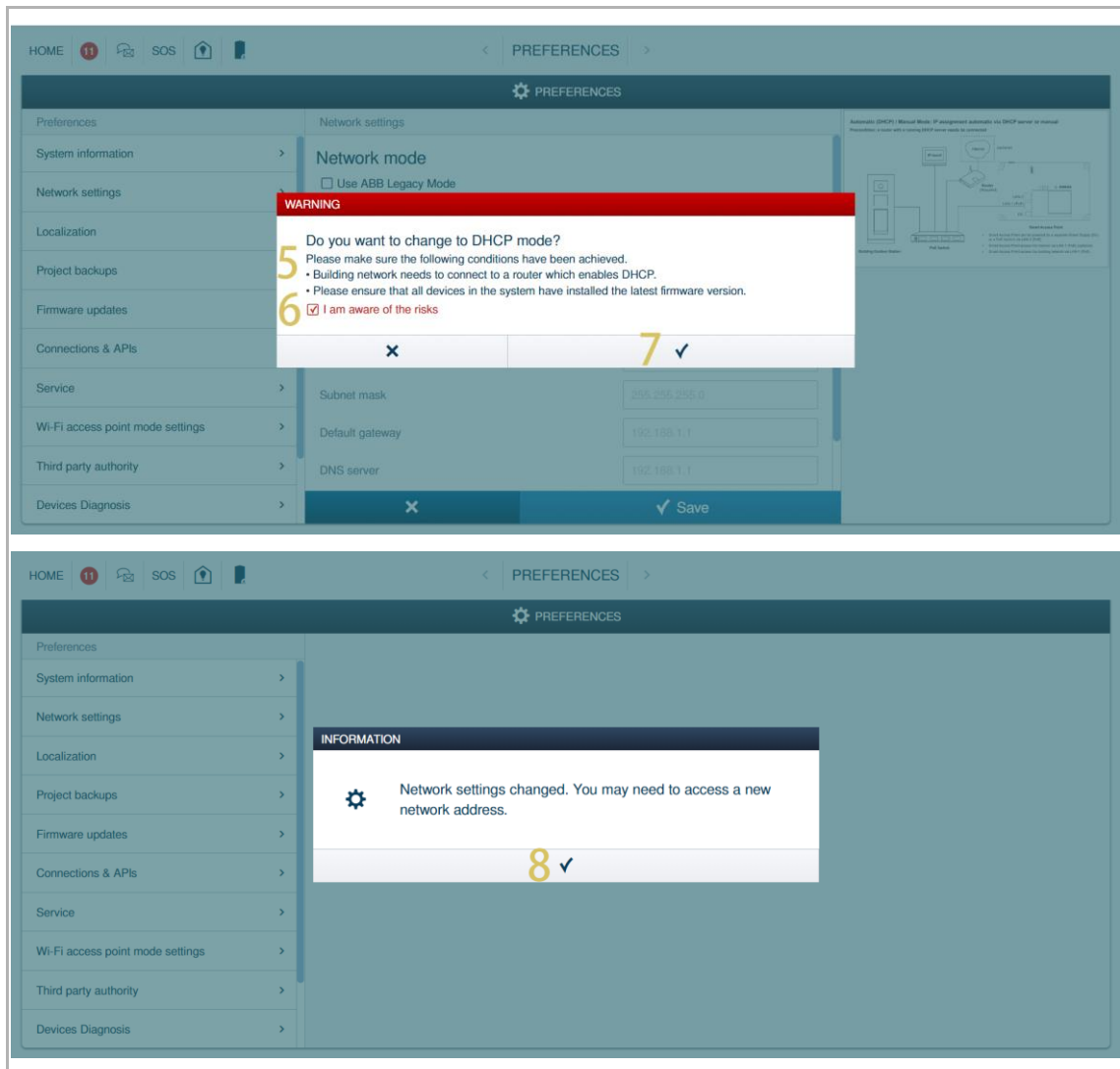
**Top Screenshot: Devices Diagnosis**

The 'Devices Diagnosis' screen displays system information and a table of devices. The 'IP Mode' is currently set to 'ABB Legacy'. A yellow '2' is placed next to the 'IP Mode' label.

**Bottom Screenshot: Network settings**

The 'Network settings' screen shows the 'Network mode' dropdown menu. The 'Use ABB Legacy Mode' checkbox is checked. A yellow '3' is placed next to the 'Use ABB Legacy Mode' checkbox. The 'LAN (PoE) (Recommended Setting)' option is selected in the dropdown. A red box highlights the 'Use ABB Legacy Mode' checkbox and the 'LAN (PoE) (Recommended Setting)' option. To the right, there is a diagram of a network topology with a red box around it.

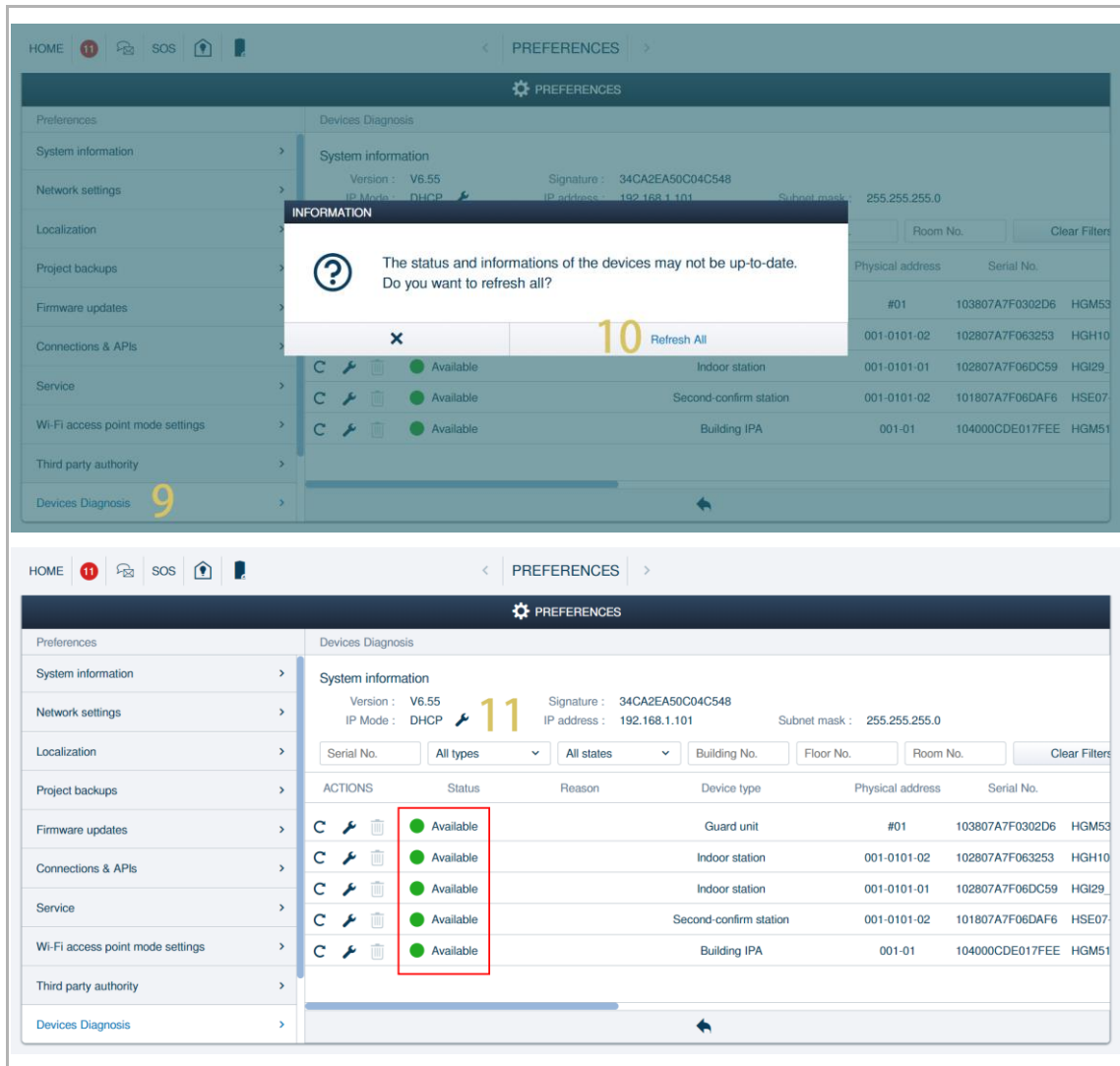
- [4] Click "Save" to save the settings.
- [5] A warning window will pop up to display the notice.
- [6] Tick the check box if you want to continue.
- [7] Click "✓" to continue.
- [8] Click "✓" to access the SmartAP again.



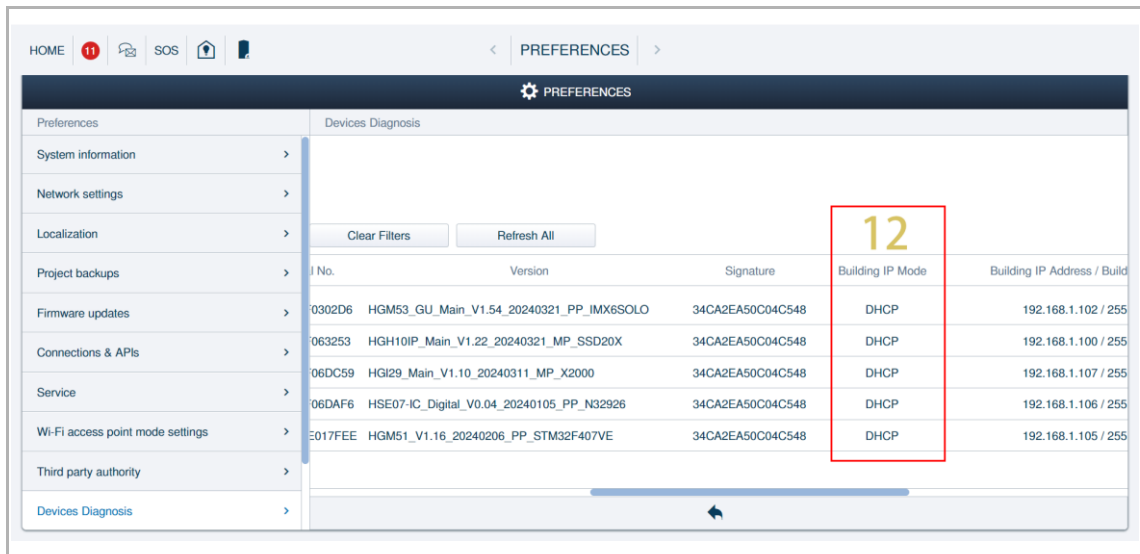
[9] On the "Preferences" screen, click "Devices Diagnosis".

[10] Click "Refresh All".

[11] "DHCP" will be displayed on the screen and all the devices will be available after this change.



[12]The IP mode of all the devices will be changed to "DHCP" at the same time.



The screenshot displays a web interface for device management. The top navigation bar includes 'HOME', 'SOS', and 'PREFERENCES'. The main content area is titled 'PREFERENCES' and 'Devices Diagnosis'. A table lists device information with columns for 'J No.', 'Version', 'Signature', 'Building IP Mode', and 'Building IP Address / Build'. The 'Building IP Mode' column is highlighted with a red box, and a yellow number '12' is overlaid on it. The table shows five devices, all with 'DHCP' as their Building IP Mode.

J No.	Version	Signature	Building IP Mode	Building IP Address / Build
0302D6	HGM53_GU_Main_V1.54_20240321_PP_IMX6SOLO	34CA2EA50C04C548	DHCP	192.168.1.102 / 255
063253	HGH10IP_Main_V1.22_20240321_MP_SSD20X	34CA2EA50C04C548	DHCP	192.168.1.100 / 255
06DC59	HGI29_Main_V1.10_20240311_MP_X2000	34CA2EA50C04C548	DHCP	192.168.1.107 / 255
06DAF6	HSE07-IC_Digital_V0.04_20240105_PP_N32926	34CA2EA50C04C548	DHCP	192.168.1.106 / 255
E017FEE	HGM51_V1.16_20240206_PP_STM32F407VE	34CA2EA50C04C548	DHCP	192.168.1.105 / 255

### 7.8.4 Changing IP mode for the designated device

Please follow the steps below:

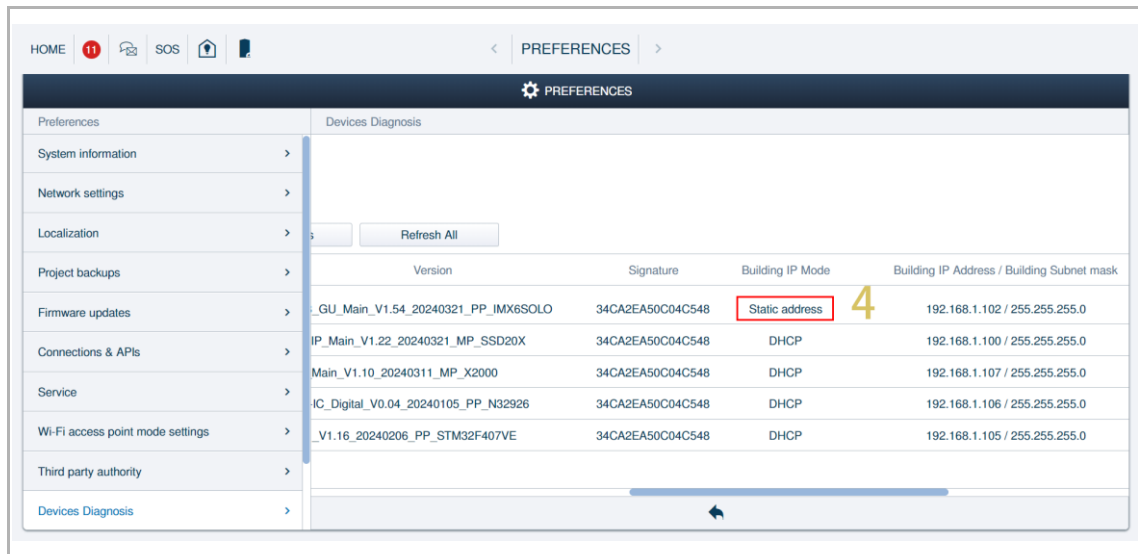
- [1] On the "Device Diagnosis" screen, click "🔧".
- [2] Changing the IP mode.
  - If "Static address" is selected, you need to enter the IP address manually or accept the default value.
- [3] Click "Save".

The top screenshot shows the 'Devices Diagnosis' screen. The 'System information' section displays: Version: V6.55, Signature: 34CA2EA50C04C548, IP Mode: DHCP, IP address: 192.168.1.101, and Subnet mask: 255.255.255.0. Below this is a table of devices with columns for ACTION, Status, Reason, Device type, Physical address, and Serial No. A yellow arrow points to the wrench icon in the 'ACTION' column of the first row.

ACTION	Status	Reason	Device type	Physical address	Serial No.
C 🔧 🗑️	Available		Guard unit	#01	103807A7F0302D6 HGM53
C 🔧 🗑️	Available		Indoor station	001-0101-02	102807A7F063253 HGH10
C 🔧 🗑️	Available		Indoor station	001-0101-01	102807A7F06DC59 HGI29
C 🔧 🗑️	Available		Second-confirm station	001-0101-02	101807A7F06DAF6 HSE07
C 🔧 🗑️	Available		Building IPA	001-01	104000CDE017FEE HGM51

The bottom screenshot shows a modal dialog titled 'PREFERENCES'. The 'Building IP Mode' section has three radio buttons: DHCP (unselected), Static address (selected), and Legacy IP (unselected). A yellow '2' is next to the 'Static address' option. Below this are four input fields for 'Building Network' with the values: 192.168.1.102, 255.255.255.0, 192.168.1.1, and 192.168.1.1. An 'Export logs' button is visible. At the bottom, there are 'Cancel' and 'Save' buttons, with a yellow '3' next to the 'Save' button.

[4] New IP mode of the designated device will be displayed on the screen.



### IP mode matching

- If the IP mode of the SmartAP is set to "DHCP", the IP mode the designated device could be "DHCP" or "Static address".
- If the IP mode of the SmartAP is set to "Legacy IP", the IP mode the designated device must be "Legacy IP" as well.
- If the IP mode is not matched between the designated device and the SmartAP, "Error" will be displayed on the screen.

## 7.9 Managing the trusted devices

### 7.9.1 Managing the trusted devices for outdoor station

If you want to release the lock on the outdoor station, you need to check:

- If the Indoor Station and the Outdoor Station have been signed on the SmartAP.
- If the Indoor Station has been added on the trusted list of the Outdoor Station.

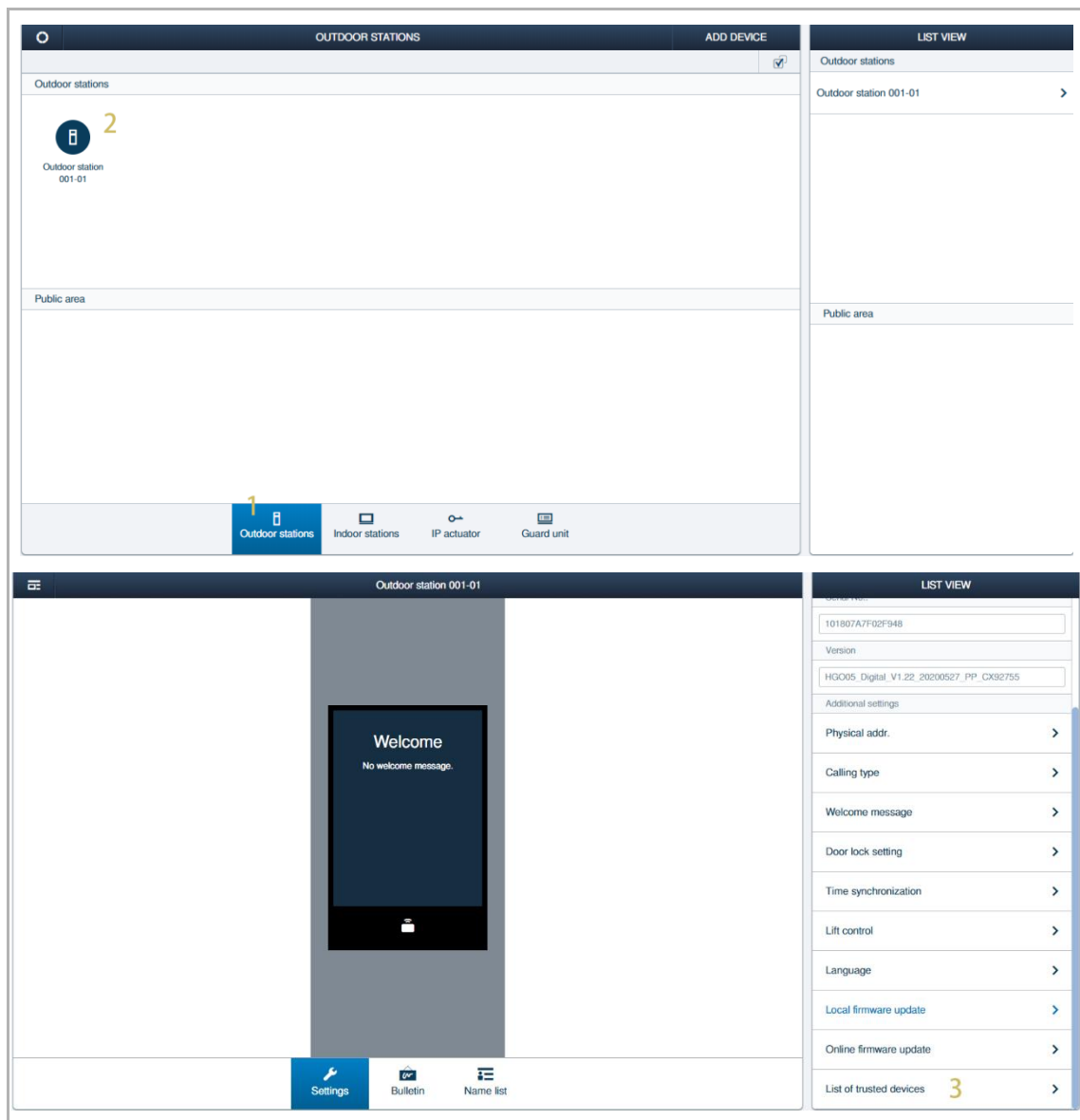
#### 1. Adding the trusted devices

Please follow the steps below:

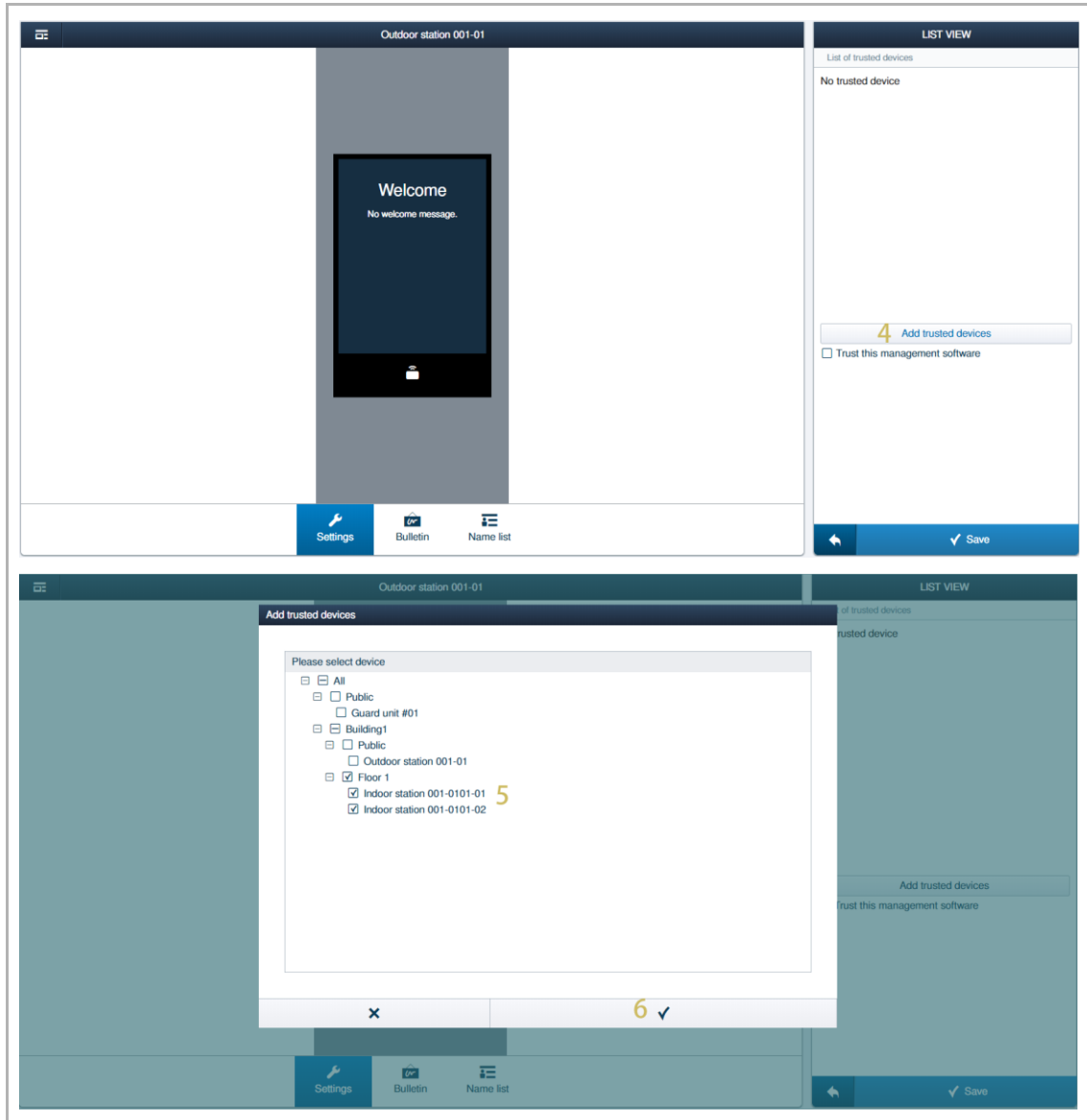
[1] On the "Door Entry System" screen, click "Outdoor stations".

[2] Click the designated Outdoor Station.

[3] Scroll down the list and click "List of trusted devices".



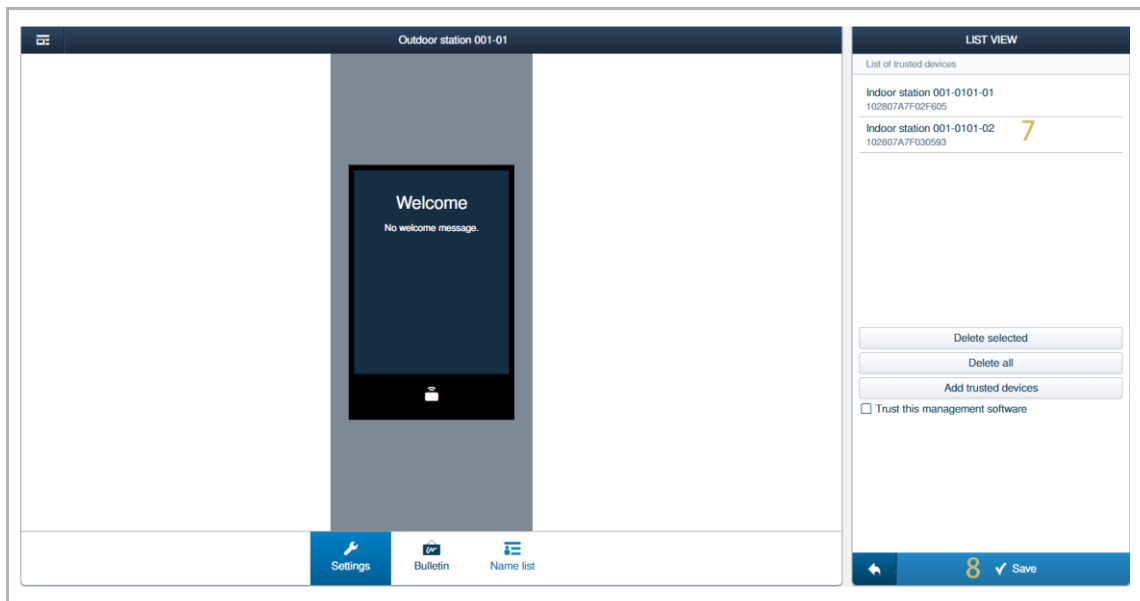
- [4] Click "Add trusted devices".
- [5] Tick the check boxes to select the devices to be trusted.
- [6] Click "✓" to confirm.





[7] The result is displayed on the screen.

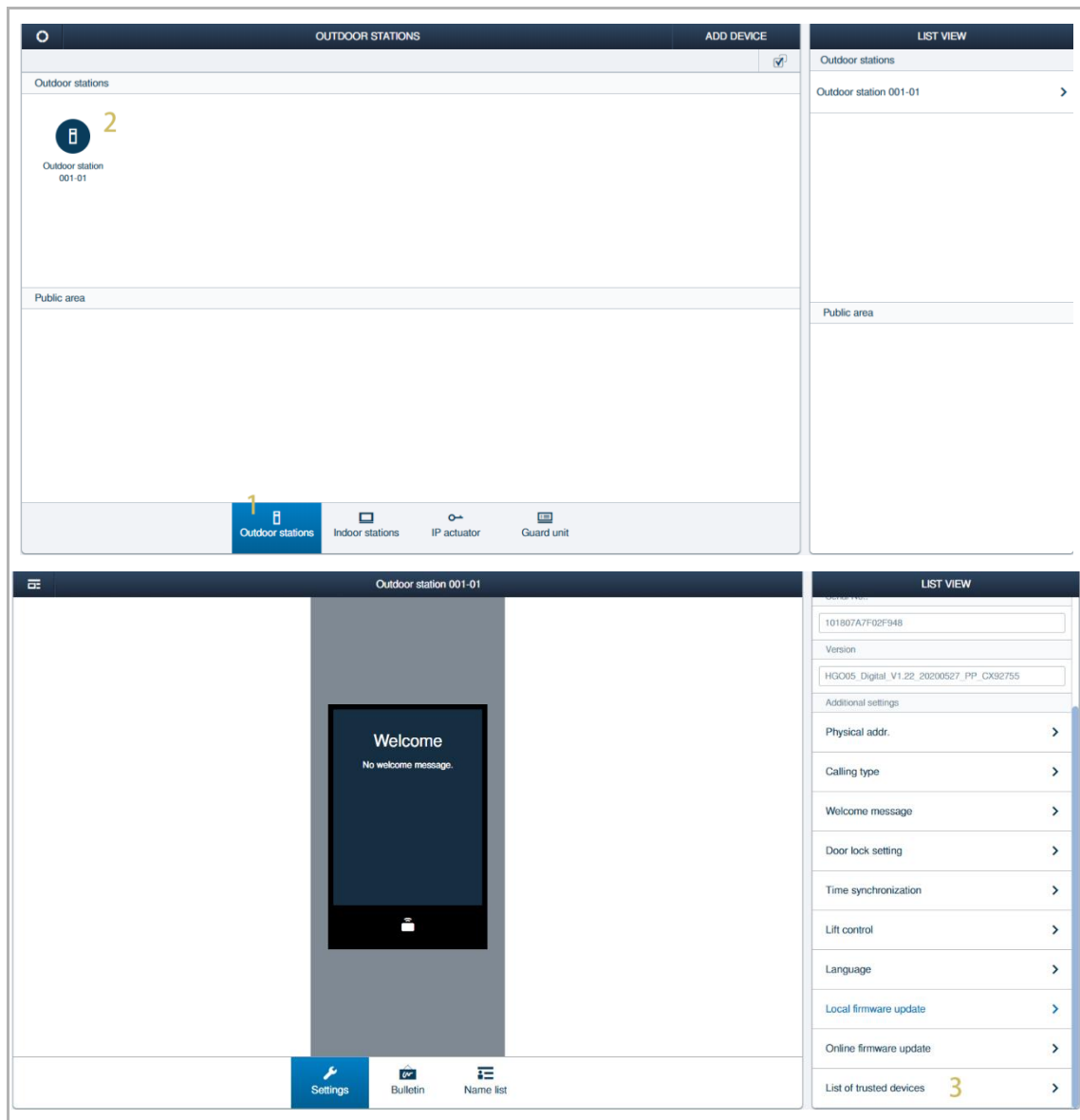
[8] Click "Save" to save.



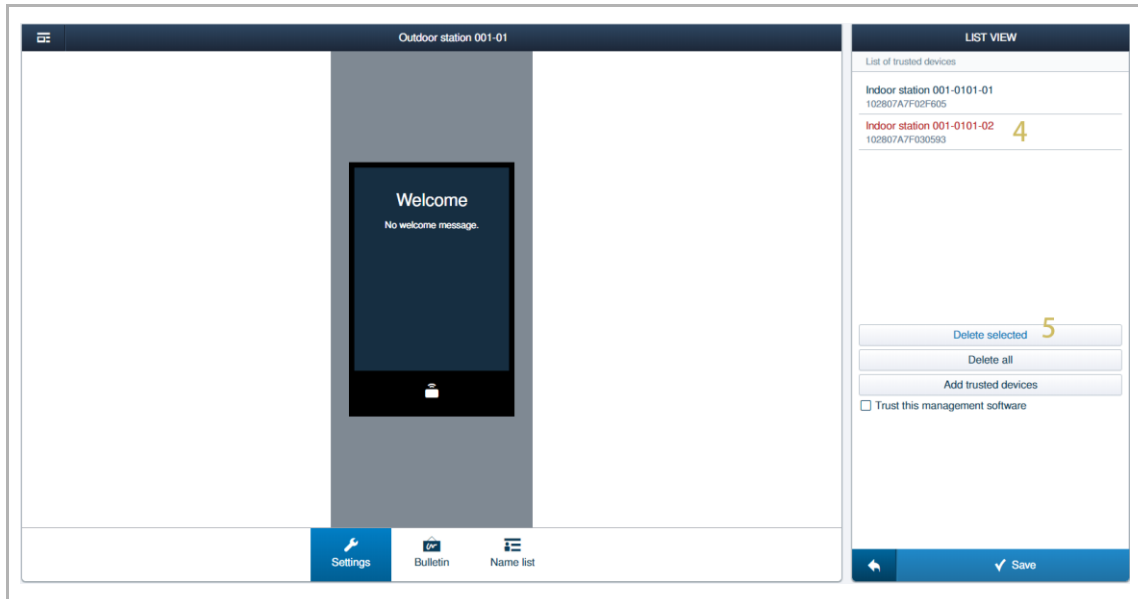
## 2. Removing the trusted devices

Please follow the steps below:

- [1] On the "Door Entry System" screen, click "Outdoor stations".
- [2] Click the designated outdoor station.
- [3] Scroll down the list and click "List of trusted devices".



- [4] Click the designated devices to select one by one (the selected devices are highlighted in red).
- [5] Click "Delete selected".



## 7.9.2 Managing the trusted devices for IP actuator

If you want to release the lock on the IP actuator, you need to check:

- If the indoor station and the IP actuator are signed on "Smart Access Point".
- If the indoor station has been added to the trusted list on the IP actuator.

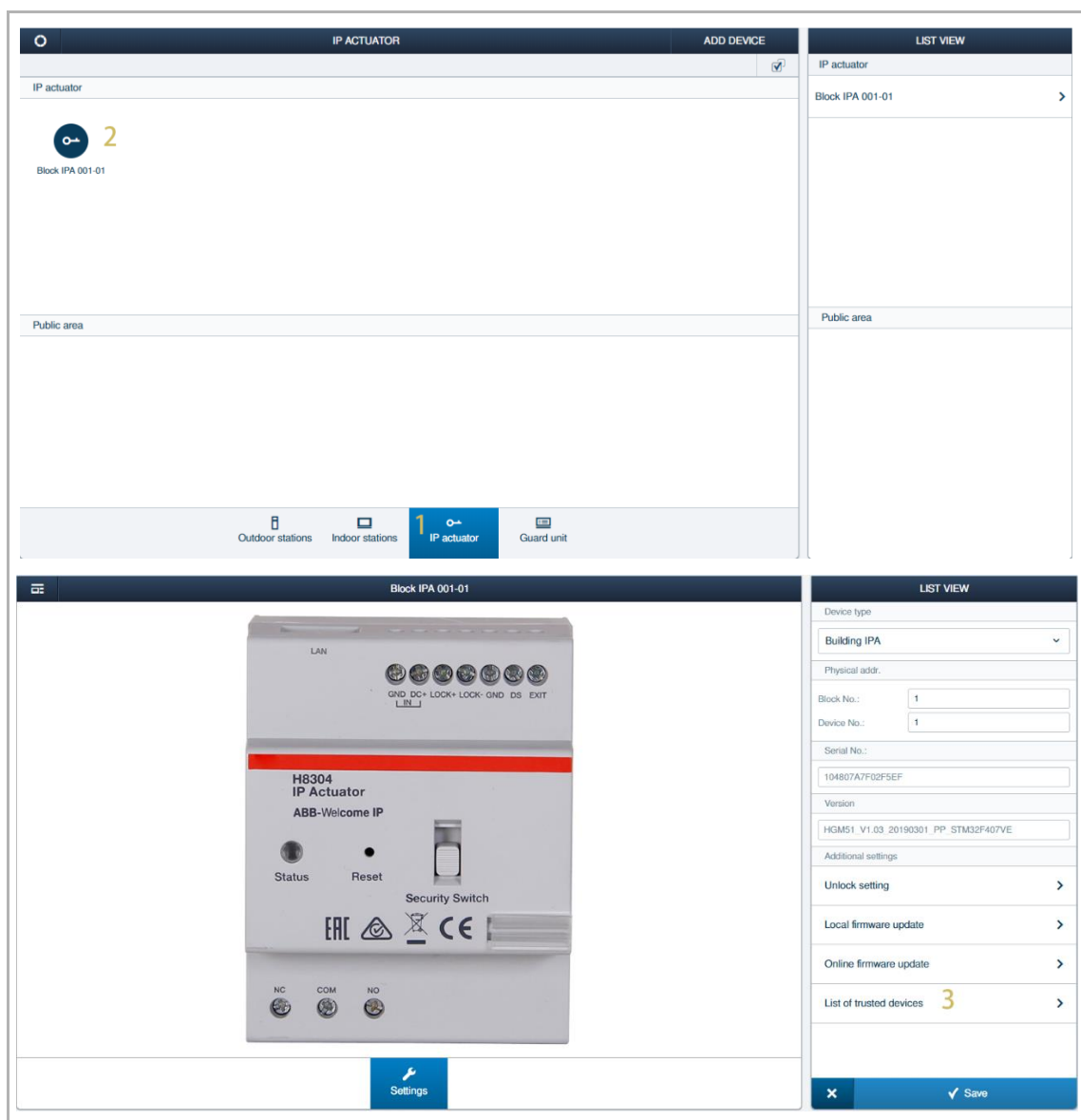
### 1. Adding the trusted devices

Please follow the steps below:

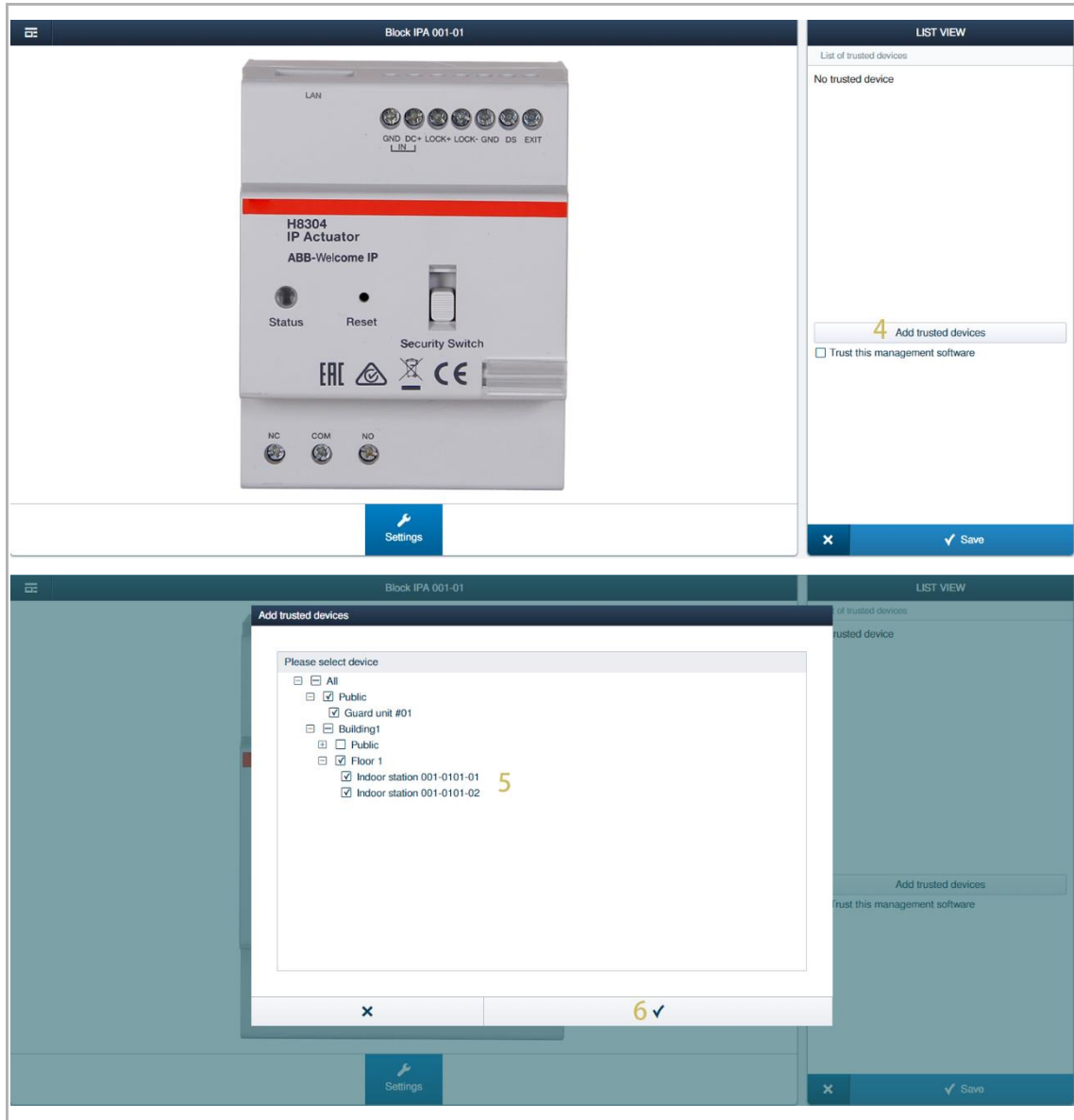
[1] On the "Door Entry System" screen, click "IP actuator".

[2] Click the designated IP actuator.

[3] Click "List of trusted devices".

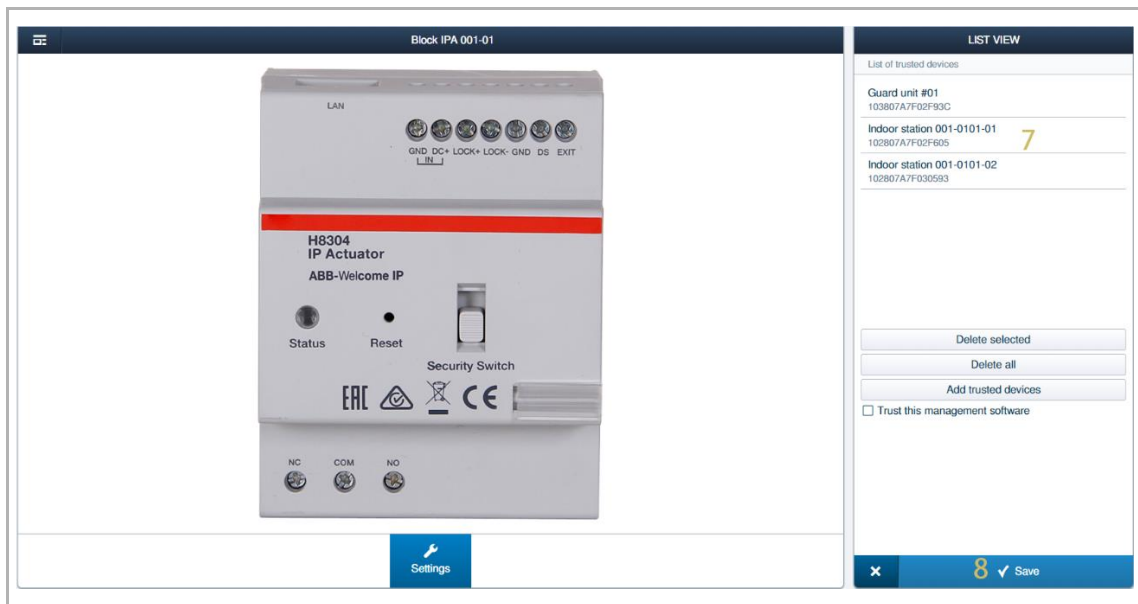


- [4] Click "Add trusted devices".
- [5] Tick the check boxes to select the devices to be trusted.
- [6] Click "✓" to confirm.



[7] The result is displayed on the screen.

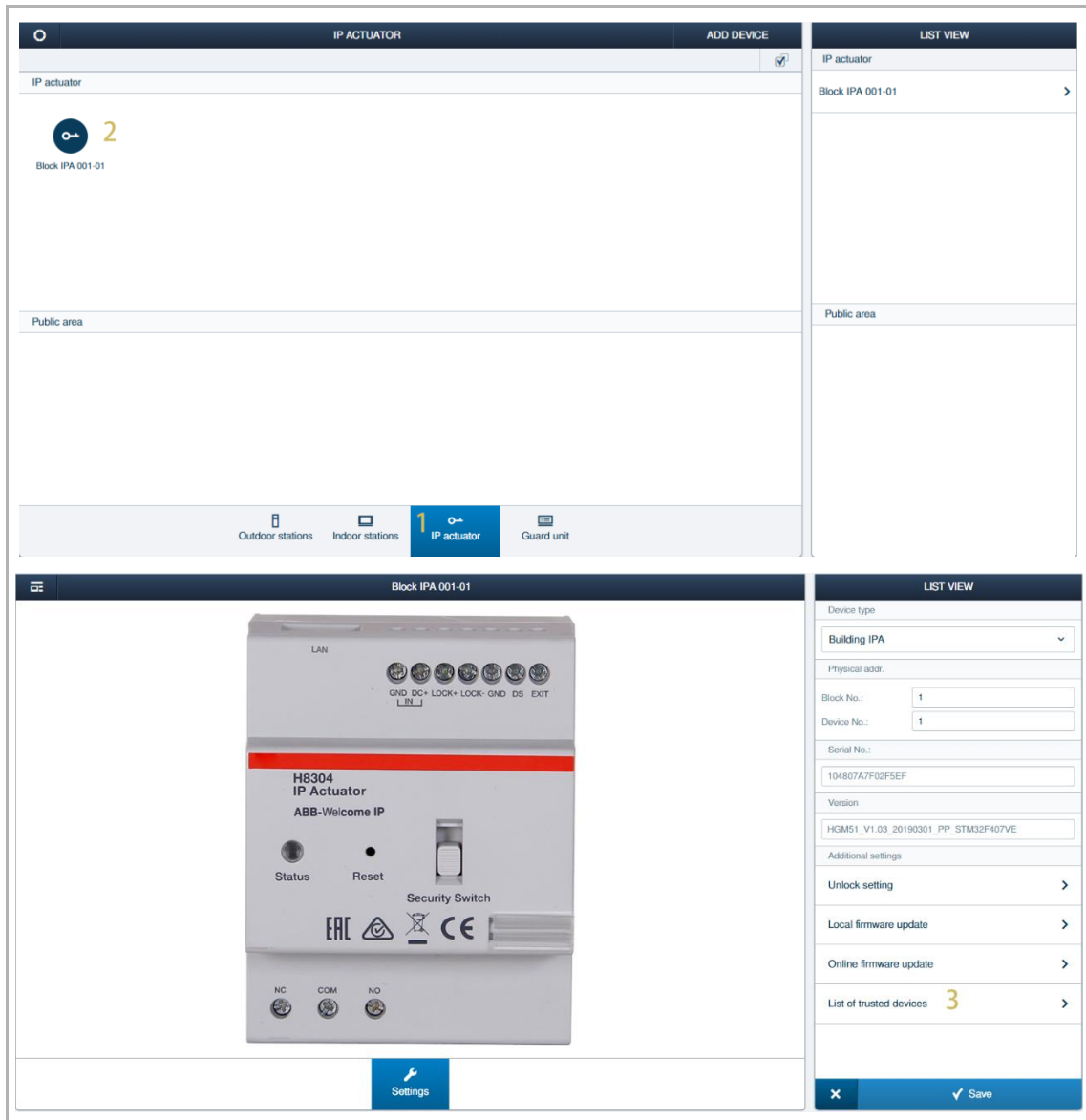
[8] Click "Save" to save.



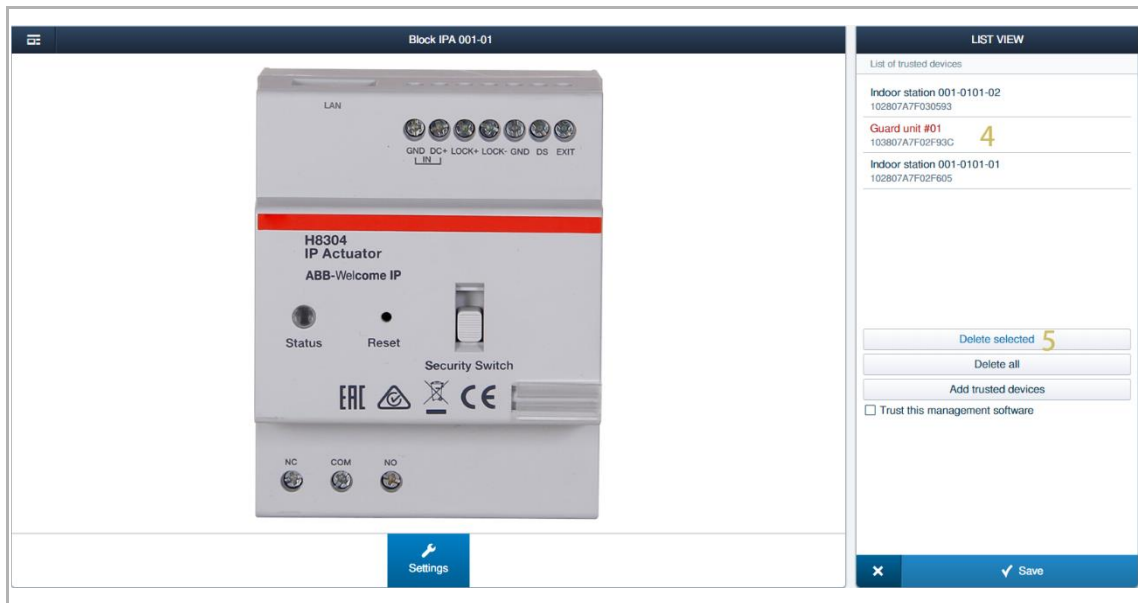
2. Removing the trusted devices

Please follow the steps below:

- [1] On the "Door Entry System" screen, click "IP actuator".
- [2] Click the designated IP actuator.
- [3] Click "List of trusted devices".



- [4] Click the designated devices to select one by one (the selected devices are highlighted in red).
- [5] Click "Delete selected".



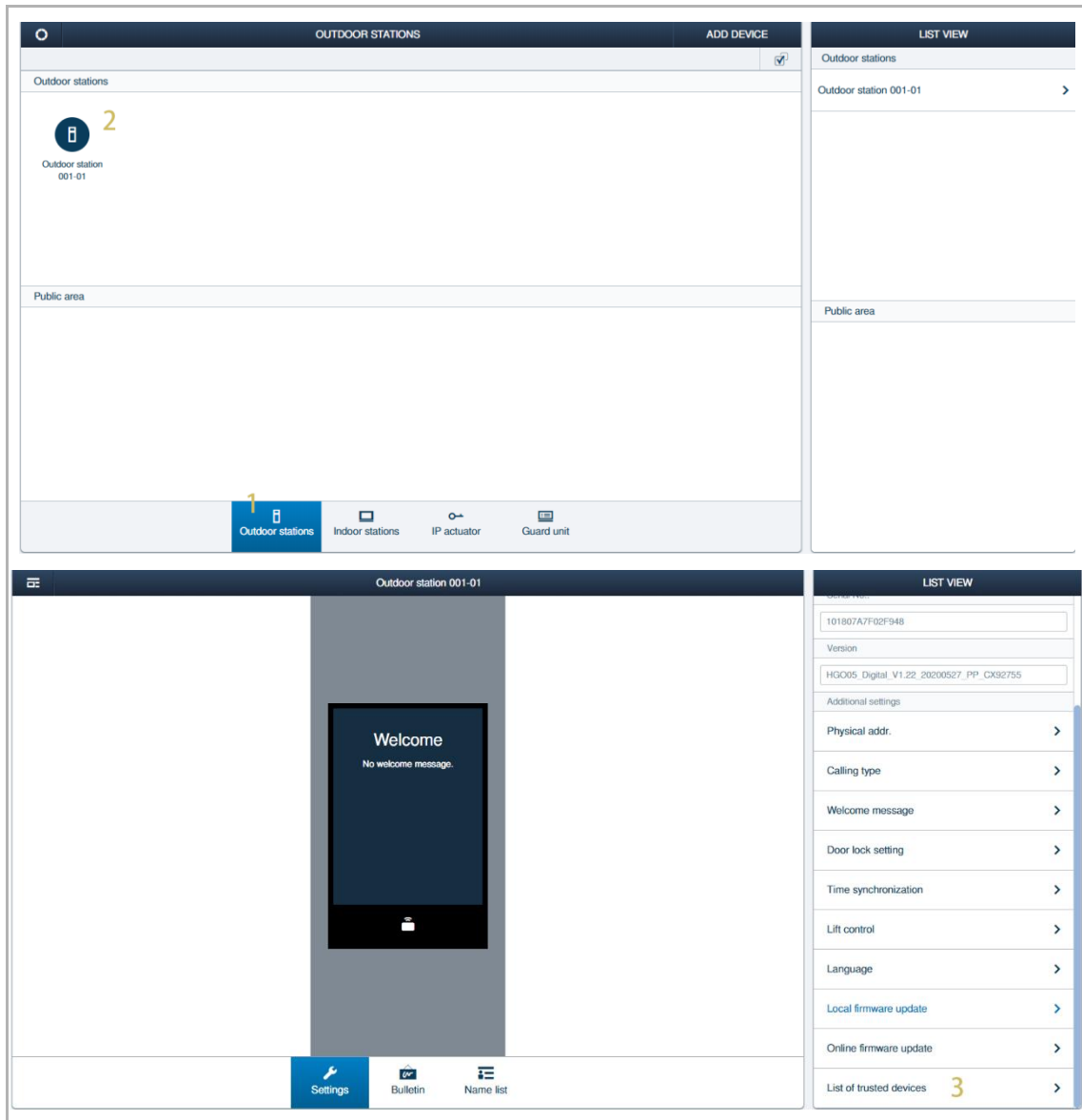


### 7.9.3 Managing the trusted devices for the SmartAP

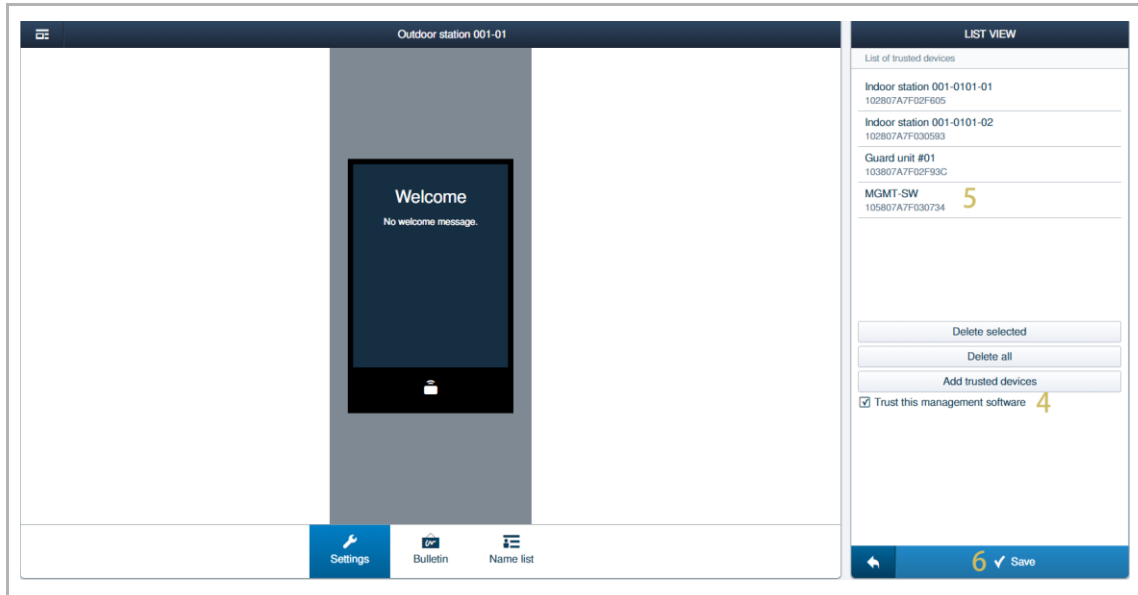
#### 1. Trusting the designated outdoor stations

Please follow the steps below:

- [1] On the "Door Entry System" screen, click "Outdoor stations".
- [2] Click the designated outdoor station.
- [3] Scroll down the list and click "List of trusted devices".



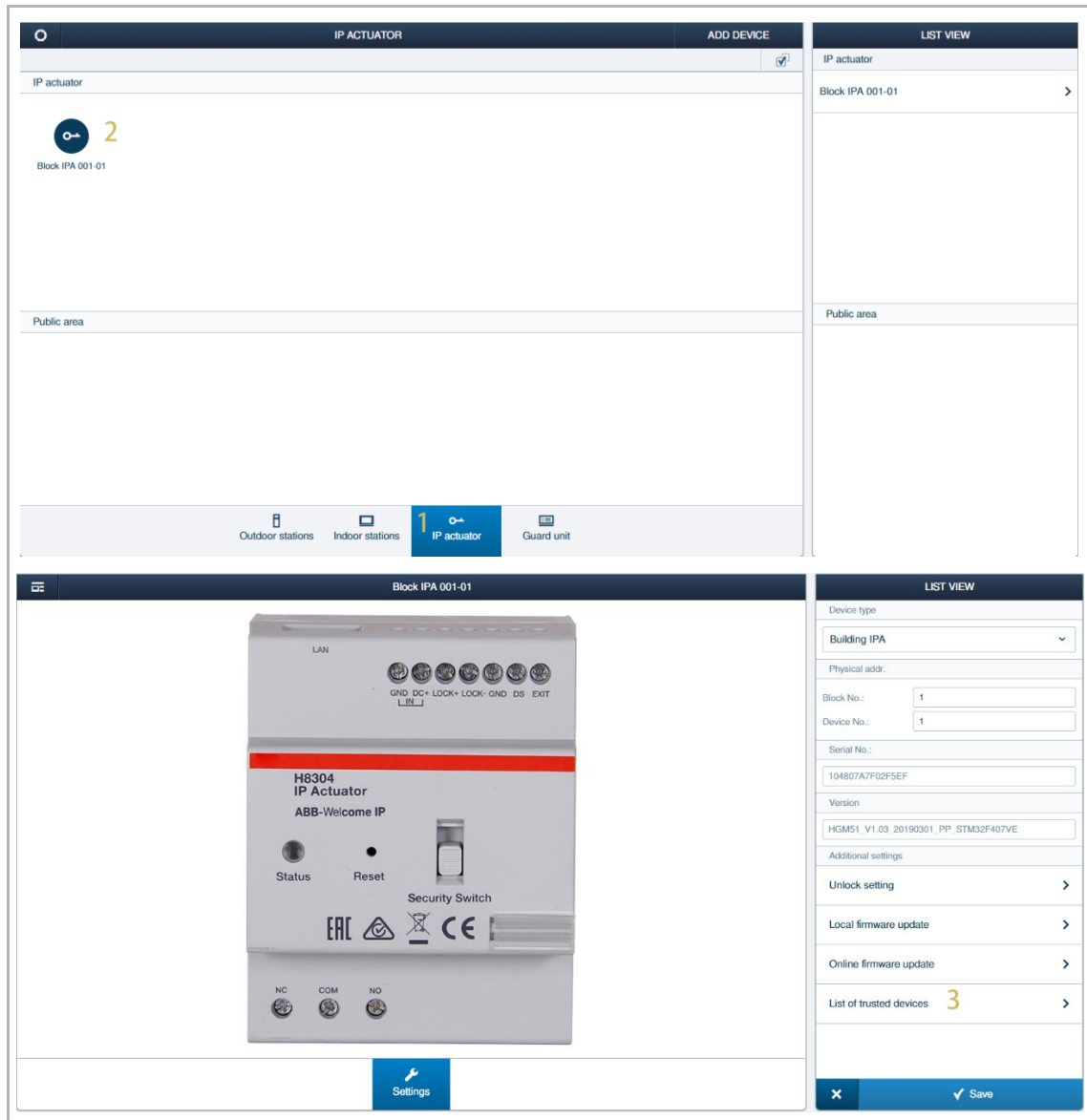
- [4] Click "Trust this management software".
- [5] The result is displayed on the list.
- [6] Click "✓" to save.



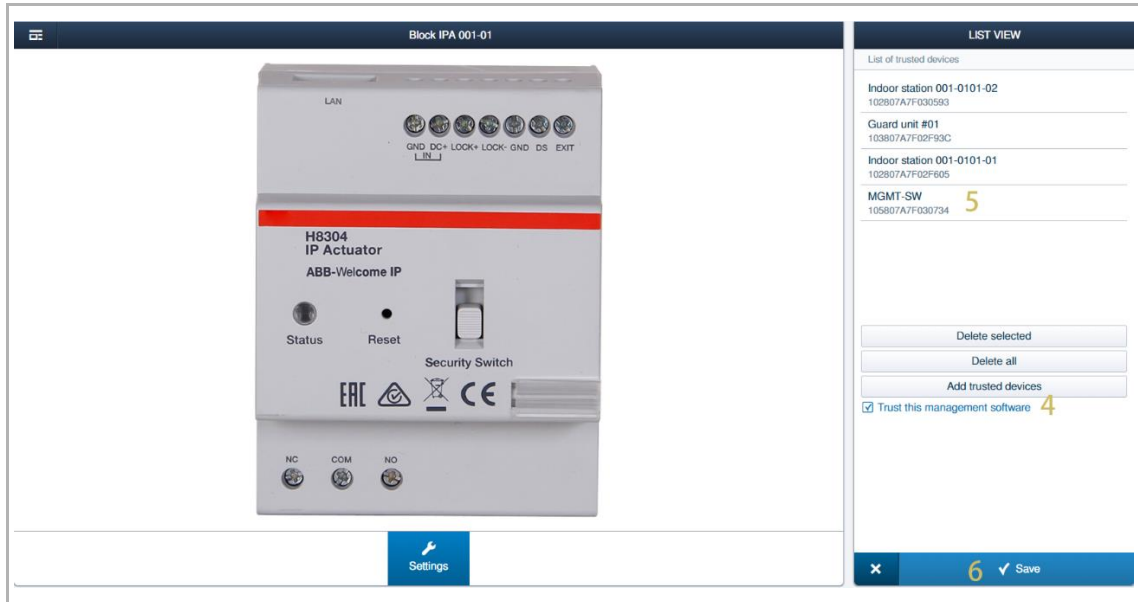
## 2. Trusting the designated IP Actuators

Please follow the steps below:

- [1] On the "Door Entry System" screen, click "IP actuator".
- [2] Click the designated IP actuator.
- [3] Click "List of trusted devices".



- [4] Click "Trust this management software".
- [5] The result is displayed on the list.
- [6] Click " ✓ " to save.



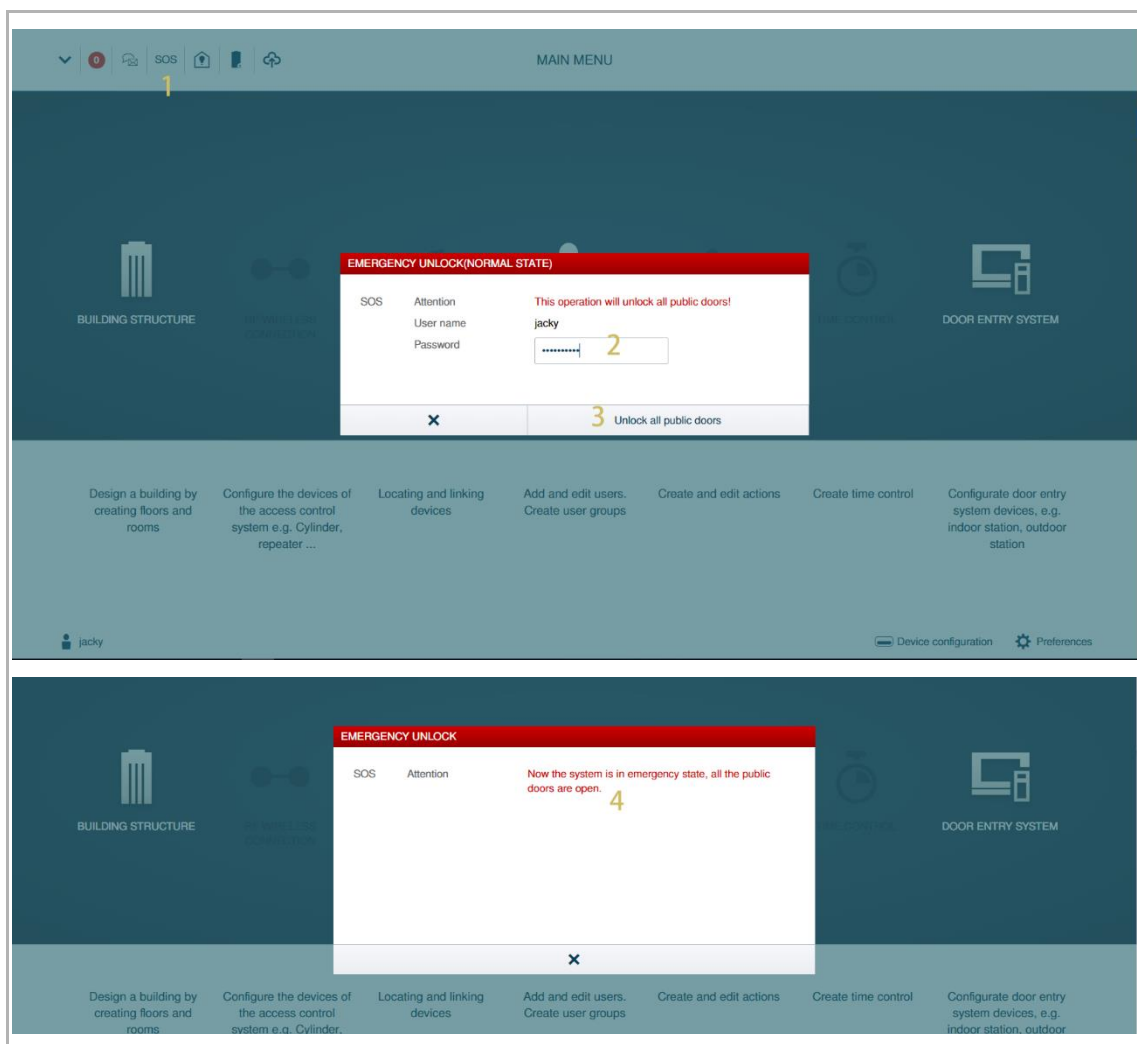
### 7.9.4 Emergency unlock

In some emergency cases, you may need to release all public doors. To achieve this, you need to add all outdoor stations and all public IP actuators to "Smart Access Point".

#### Release all public doors

Please follow the steps below:

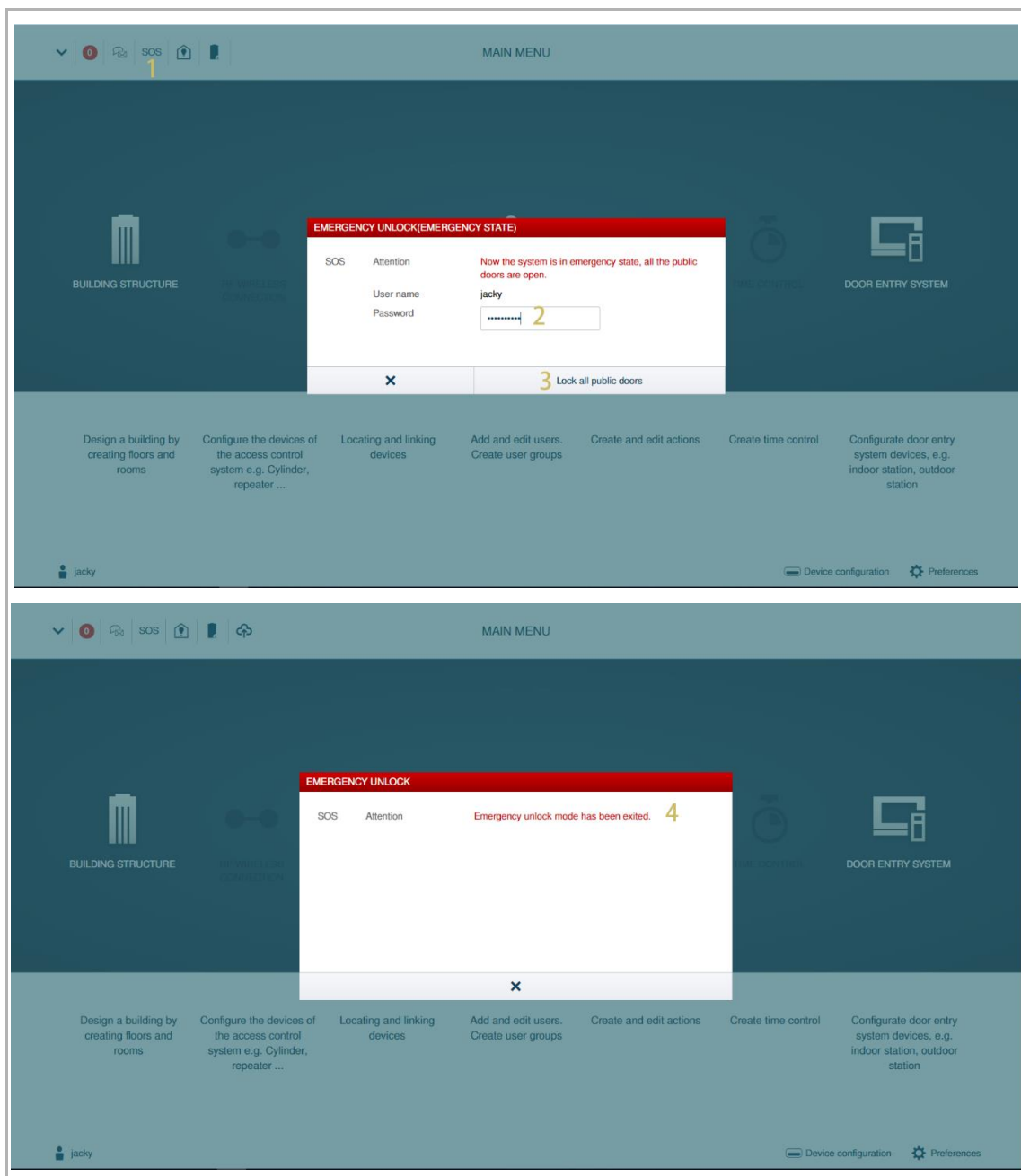
- [1] On the configuration screen, click "SOS".
- [2] Enter the password for current admin user.
- [3] Click "Unlock all public doors".
- [4] The result status is displayed on the screen.



## Close all public doors

Please follow the steps below:

- [1] On the configuration screen, click "SOS".
- [2] Enter the password for the current admin user.
- [3] Click "Lock all public doors".
- [4] The result status is displayed on the screen.







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Approvals and Compliances

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