



2N[®] IP Verso

Modular IP Intercom



Installation Manual

Version: 2.16

www.2n.cz

The 2N TELEKOMUNIKACE a.s. is a Czech manufacturer and supplier of telecommunications equipment.



The product family developed by 2N TELEKOMUNIKACE a.s. includes GSM gateways, private branch exchanges (PBX), and door and lift communicators. 2N TELEKOMUNIKACE a.s. has been ranked among the Czech top companies for years and represented a symbol of stability and prosperity on the telecommunications market for almost two decades. At present, we export our products into over 120 countries worldwide and have exclusive distributors on all continents.



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2N TELEKOMUNIKACE a.s. administers the FAQ database to help you quickly find information and to answer your questions about 2N products and services. On www.faq.2n.cz you can find information regarding products adjustment and instructions for optimum use and procedures „What to do if...“.



2N TELEKOMUNIKACE a.s. hereby declares that the 2N product complies with all basic requirements and other relevant provisions of the 1999/5/EC directive. For the full wording of the Declaration of Conformity see the CD-ROM (if enclosed) or our website at www.2n.cz.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



The 2N TELEKOMUNIKACE a.s. is the holder of the ISO 9001:2009 certificate. All development, production and distribution processes of the company are managed by this standard and guarantee a high quality, technical level and professional aspect of all our products.

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1. Product Overview

Here is what you can find in this section:

- 1.1 Components and Associated Products
- 1.2 Terms and Symbols

Basic Features

2N[®] IP Verso is an elegant and reliable intercom equipped with lots of useful functions. Thanks to SIP support and compatibility with major brands of PBX manufacturers, it can benefit from using VoIP networks. **2N[®] IP Verso** can be used as a door or special purpose intercom for office buildings, residential areas and other applications.

2N[®] IP Verso is a modular system: the user determines its configuration according to the needs of the particular installation. Unlike other intercoms, **2N[®] IP Verso** is not delivered as a compact unit. After choosing the installation mode and particular modules, the user gets separate parts to be assembled using the plug&play connections. This approach allows for unique individual combinations and also leaves space for adding of additional modules later on.

Wide angle HD camera - allows the tenant to see the calling person on his or her videophone or PC screen in high resolution. The camera itself is hidden behind a darkened glass, so it is not visible. The intercom is equipped with night vision, which automatically selects the night/day mode according to light.

Quick dial buttons - there are 146 quick dial buttons in total in multiple button modules. For each button, up to three separate phone numbers plus substitute users can be defined, which ensures that the called user is reached whenever needed. The buttons are backlit with a clear mechanical response. The nametag surface is scratch resistant.

Keypad - is a keypad module that allows the user to use the intercom as a code lock and dial a phone number or phonebook position of the called user.

RFID card reader - the card reader module brings the access control functionality according to the RFID card or keyfob. With the advanced features, other functions can be RFID card controlled too.

Electric lock control - as part of the access system, the electrical lock can be controlled by a code entered on the keypad or the called phone, with the RFID card, via a PC application, etc. When necessary, more electrical outputs can be added. Numerous parameters allow for a wide spectrum of applications.

Robustness - **2N[®] IP Verso** is designed as a vandal resistant intercom, which withstands mechanical or weather conditions with no need to purchase extra accessories.

Audio quality - using the automatic echo cancelling system, full duplex communication is available at any time.

The installation of 2N[®] IP Verso is very easy, all you have to do is assemble the required parts and modules and attach the network cable. The modules are plug&play, so there is no need to configure them manually. The intercom can be supplied from a 12 V DC power source, or using a PoE switch.

Use your PC with any internet browser to configure **2N[®] IP Verso** or apply the **2N[®] Access Commander** to configure extensive installations of multiple intercoms.

Advantages of Use

- Elegant design
- Weather resistant
- Various modes of installation (flush, surface, plasterboard)
- Sensitive microphone and loud speaker
- Both-way audio communication – acoustic echo cancellation
- Integrated colour HD camera with wide-angle lense and hidden night vision
- Selectable number of quick dial buttons with nametags and backlight
- Optional numeric keypad with backlight
- Option to have multiple modules of the same kind – for example, card reader for both entering and leaving the building
- Integrated switches of electric locks with wide setting options
- Optional integrated RFID card reader module
- PoE or 12 V DC power supply
- Configuration using web interface or dedicated PC application
- VoIP standard SIP 2.0 support
- 10 000 Phone Book positions
- 20 user time profiles
- Video codecs (H.263, H.263+, H.264, MPEG-4, MJPEG)
- Audio codecs (G.711, G.729, G.722, L16/16kHz)
- HTTP server for configuration
- SNTP client for time synchronisation
- RTSP server for audio and video streaming, ONVIF compatible
- SMTP client for email sending, Picture to Email feature
- TFTP/HTTP client for automated firmware and configuration upgrade and update

1.1 Components and Associated Products

Main Units

<p>2N Part No. 9155101</p> <p>Axis Part No. 01271-001</p>  A vertical, black, rectangular main unit with a camera lens at the top and a green PCB at the bottom.	<ul style="list-style-type: none">• Main unit• There must be just one (with/without a camera) main unit in every installation. The main unit installation requires two frame/box positions; the other position, however, is left for additional module installation.
<p>2N Part No. 9155101B</p> <p>Axis Part No. 01272-001</p>  A vertical, black, rectangular main unit with a camera lens at the top and a green PCB at the bottom, similar to the first unit but with a different internal component.	<ul style="list-style-type: none">• Main unit• There must be just one (with/without a camera) main unit in every installation. The main unit installation requires two frame/box positions; the other position, however, is left for additional module installation.• We do not recommend that the device should be installed where exposed to direct sunlight

<p>2N Part No. 9155101C</p> <p>Axis Part No. 01273-001</p> 	<ul style="list-style-type: none">• Main unit with camera• HD camera• There must be just one (with/without a camera) main unit in every installation. The main unit installation requires two frame/box positions; the other position, however, is left for additional module installation.
<p>2N Part No. 9155101CB</p> <p>Axis Part No. 01274-001</p> 	<ul style="list-style-type: none">• Main unit• HD camera• There must be just one (with/without a camera) main unit in every installation. The main unit installation requires two frame/box positions; the other position, however, is left for additional module installation.• We do not recommend that the device should be installed where exposed to direct sunlight.

**Caution**

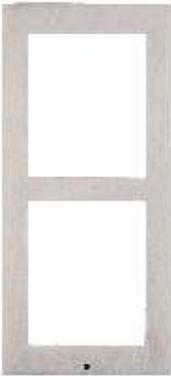
- There must be just one (with/without a camera) main unit in every installation. The main unit installation requires two frame/box positions; the other position, however, is left for additional module installation.
- One blind module is supplied with the main unit.

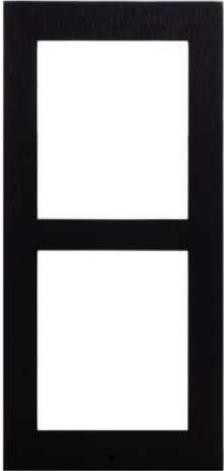
Frames

<p>2N Part No. 9155011</p> <p>Axis Part No. 01278-001</p> 	<ul style="list-style-type: none">• Flush mounting frame• 1 module• Covering frame for the 1-module brick/plasterboard flush mounting box. The 1-module frame is used when another module is added to the existing installation or when the module is mounted to an extended interconnecting cable for an outgoing reader, for example. Remember to order the frame when you order a 1-module flush mounting box, Part No. 9155014.
<p>2N Part No. 9155011B</p> <p>Axis Part No. 01279-001</p> 	<ul style="list-style-type: none">• Flush mounting frame• 1 module• Covering frame for the 1-module brick/plasterboard flush mounting box. The 1-module frame is used when another module is added to the existing installation or when the module is mounted to an extended interconnecting cable for an outgoing reader, for example. Remember to order the frame when you order a 1-module flush mounting box, Part No. 9155014.
<p>2N Part No. 9155012</p> <p>Axis Part No. 01281-001</p> 	<ul style="list-style-type: none">• Flush mounting frame• 2 modules• Covering frame for the 2-module brick/plasterboard flush mounting box. Remember to order the frame when you order a 2-module flush mounting box, Part No. 9155015.

<p>2N Part No. 9155012B Axis Part No. 01282-001</p> 	<ul style="list-style-type: none">• Flush mounting frame• 2 modules• Covering frame for the 2-module brick/plasterboard flush mounting box. Remember to order the frame when you order a 2-module flush mounting box, Part No. 9155015.
<p>2N Part No. 9155013 Axis Part No. 01282-001</p> 	<ul style="list-style-type: none">• Flush mounting frame• 3 modules• Covering frame for the 3-module brick/plasterboard flush mounting box. Remember to order the frame when you order a 3-module flush mounting box, Part No. 9155016.

<p>2N Part No. 9155013B Axis Part No. 01283-001</p> 	<ul style="list-style-type: none">• Flush mounting frame• 3 modules• Covering frame for the 3-module brick/plasterboard flush mounting box. Remember to order the frame when you order a 3-module flush mounting box, Part No. 9155016.
<p>2N Part No. 9155021 Axis Part No. 01287-001</p> 	<ul style="list-style-type: none">• Surface mounting frame• 1 module• The 1-module frame is used when another module is added to the existing installation or when the module is mounted to an extended interconnecting cable for an outgoing reader, for example.

<p>2N Part No. 9155021B Axis Part No. 01288-001</p> 	<ul style="list-style-type: none">• Surface mounting frame• 1 module• The 1-module frame is used when another module is added to the existing installation or when the module is mounted to an extended interconnecting cable for an outgoing reader, for example.
<p>2N Part No. 9155022 Axis Part No. 01289-001</p> 	<ul style="list-style-type: none">• Surface mounting box• 2 modules

<p>2N Part No. 9155022B Axis Part No. 01290-001</p> 	<ul style="list-style-type: none">• Surface mounting box• 2 modules
<p>2N Part No. 9155023 Axis Part No. 01291-001</p> 	<ul style="list-style-type: none">• Surface mounting box• 3 modules

<p>2N Part No. 9155023B</p> <p>Axis Part No. 01292-001</p> 	<ul style="list-style-type: none">• Surface mounting box• 3 modules
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✓ **Tip**

- The 1-module frame is used when another module is added to the existing installation or when the module is mounted to an extended interconnecting cable for an outgoing reader, for example.

✓ **Tip**

- Be sure to order the covering frame for the flush or plasterboard mounting box together with the flush mounting box.
 - 1-module frame (Part No. **9155011**) – 1-module flush mounting box (Part No. **9155014**)
 - 2-module frame (Part No. **9155012**) – 2-module flush mounting box (Part No. **9155015**)
 - 3-module frame (Part No. **9155013**) – 3-module flush mounting box (Part No. **9155016**)

Extending Modules

2N Part No. 9155030

Axis Part. No. 01252-001



- 2N[®] IP Verso - Info panel
- The Infopanel module helps you place such information into the intercom installation as house number, opening hours and similar data. The Infopanel backlight is software controlled.

2N Part No. 9155031

Axis Part No. 01253-001



- 2N[®] IP Verso - Keypad
- The numeric keypad module helps you dial users via their phonebook positions or phone numbers, control the lock and use other code-accessible functions. The keypad digits and symbols are backlit.

2N Part No. 9155031B

Axis Part No. 01254-001



- 2N[®] IP Verso - Keypad
- The numeric keypad module helps you dial users via their phonebook positions or phone numbers, control the lock and use other code-accessible functions. The keypad digits and symbols are backlit.

<p>2N Part No. 9155047</p> <p>Axis Part No. 01277-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Touch keypad • The numeric touch keypad module helps you dial users via their phonebook positions or phone numbers, control the lock and use other code-accessible functions. The keypad digits and symbols are backlit.
<p>2N Part No. 9155081</p> <p>Axis Part No. 01636-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Touch keypad & RFID reader 125kHz, 13.56MHz, NFC/HCE • The touch keypad and card reader module provides you with access control via contactless cards or keyfobs. The module supports the following 125 kHz and 13.56 MHz cards or other carriers (only the card serial number is read): <ul style="list-style-type: none"> • 125 kHz <ul style="list-style-type: none"> • EM4xxx • 13.56 MHz <ul style="list-style-type: none"> • ISO14443A (Mifare, DESFire) • PicoPass (HID iClass) • FeliCa • ST SR(IX) • 2N[®] Mobile Key

2N Part No. 9155082

Axis Part No. 01637-001



- 2N[®] IP Verso - Bluetooth & RFID reader
125kHz, 13.56MHz, NFC/HCE
- The Bluetooth and card reader module provides you with access control via contactless cards or keyfobs. The module supports the following 125 kHz and 13.56 MHz cards or other carriers (only the card serial number is read):
 - 125 kHz
 - EM4xxx
 - 13.56 MHz
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key

2N Part No. 9155083

Axis Part No. 01638-001



- **2N[®] IP Verso** - Touch keypad & RFID reader
125kHz, secured 13.56MHz, NFC/HCE
- The touch keypad and card reader module provides you with access control via contactless cards or keyfobs. The module supports the following 125 kHz and 13.56 MHz cards or other carriers (only the card serial number is read):
 - **125 kHz**
 - EM4xxx
 - **13.56 MHz**
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key
 - HID SE (Seos, iClass SE, Mifare SE)

2N Part No. 9155084

Axis Part No. 01639-001



- **2N[®] IP Verso** - Bluetooth & RFID reader
125kHz, secured 13.56MHz, NFC/HCE
- The Bluetooth card reader module provides you with access control via contactless cards or keyfobs. The module supports the following 125 kHz and 13.56 MHz cards or other carriers (only card serial number is read):
 - **125 kHz**
 - EM4xxx
 - **13.56 MHz**
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key
 - HID SE (Seos, iClass SE, Mifare SE)

<p>2N Part No. 9155032 Axis Part No. 01255-001</p>  A black, square-shaped RFID reader module with a white antenna symbol in the center and two small circular ports at the top.	<ul style="list-style-type: none">• 2N[®] IP Verso - RFID Reader, 125 kHz• The card reader module provides you with access control via contactless cards or keyfobs. The module supports the 125 kHz EM4xxx cards.
<p>2N Part No. 9137422E Axis Part No. 01402-001</p>  A small, rectangular external Bluetooth reader with a black plastic housing and a silver metal base. The silver base has technical markings and a CE mark.	<p>2N[®] IP external Bluetooth reader (USB interface)</p> <p>An external Bluetooth reader connecting to your computer via USB.</p> <p>It can be used to pair new users who want to use their smartphones and 2N[®] Mobile Key application for access to controlled areas.</p> <p>A USB driver is required for the external reader to work properly.</p>

2N Part No. 9155034

Axis Part No. 01257-001



- 2N[®] IP Verso - I/O
- The module provides logical inputs and outputs for sensor integration. The module is installed under another module, i.e. needs no separate position.
- Inputs and outputs
 - RELAY1 - RELAY1 terminals with accessible 30 V / 1 A AC/DC NO/NC contact
 - RELAY2 - RELAY2 terminals with accessible 30 V / 1 A AC/DC NO/NC contact
 - IN1 - IN1 terminals for input in passive/active mode (-30 V to +30 V DC)
OFF = open OR $U_{IN} > 1.5 \text{ V}$
ON = closed contact OR $U_{IN} < 1.5 \text{ V}$
 - IN2 - IN2 terminals for input in passive/active mode (-30 V to +30 V DC)
OFF = open OR $U_{IN} > 1.5 \text{ V}$
ON = closed contact OR $U_{IN} < 1.5 \text{ V}$
 - TAMPER - Tamper switch (9155038) input

<p>2N Part No. 9155035 Axis Part No. 01258-001</p> 	<ul style="list-style-type: none">• 2N[®] IP Verso - 5 buttons• A module with 5 mechanical quick dial buttons. The buttons are backlit and can include nametags.
<p>2N Part No. 9155036 Axis Part No. 01275-001</p> 	<ul style="list-style-type: none">• 2N[®] IP Verso - Touch Display• Touchscreen module allowing visitors to dial users in a smartphone-like way. In addition to a structured phonebook it also features a keypad.
<p>2N Part No. 9155037 Axis Part No. 01259-001</p> 	<ul style="list-style-type: none">• 2N[®] IP Verso - Wiegand• The module helps you interconnect your system with other systems via the Wiegand interface. The module is installed under another module, i.e. needs no separate position.

<p>2N Part No. 9155038 Axis Part No. 01260-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Tamper switch • The module secures your system against tampering by detecting intercom opening or top frame removing. The module is installed on a special place and needs no separate position. • Remember to purchase an I/O module, Part No. 9155034, together with the tamper switch.
<p>2N Part No. 9155039 Axis Part No. 01261-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Blind Panel • One blind panel module is supplied with the main unit.
<p>2N Part No. 9155040 Axis Part No. 01262-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - RFID Reader NFC/HCE support, 13.56 MHz • The card reader module provides you with access control via contactless cards or keyfobs. The module supports the following 13.56 MHz cards or other carriers (only card serial number is read): <ul style="list-style-type: none"> • ISO14443A (Mifare, DESFire) • PicoPass (HID iClass) • FeliCa • ST SR(IX) • 2N[®] Mobile Key

<p>2N Part No. 9155041</p> <p>Axis Part No. 01263-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Induction loop • The induction loop module is used to transmit an audio signal directly into a hearing aid via a magnetic field.
<p>2N Part No. 9155086</p> <p>Axis Part No. 01264-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Secured RFID Card Reader NFC /HCE support, 13.56 MHz • Compatible with firmware 2.13 and higher. • The card reader module provides you with access control via contactless cards or keyfobs. The module supports the following 13.56 MHz cards or other carriers (optionally, the card serial number or PAC ID is read): <ul style="list-style-type: none"> • ISO14443A (Mifare, DESFire) • PicoPass (HID iClass) • FeliCa • ST SR(IX) • 2N[®] Mobile Key • HID SE (Seos, iClass SE, Mifare SE)
<p>2N Part No. 9155046</p> <p>Axis Part No. 01266-001</p> 	<ul style="list-style-type: none"> • 2N[®] IP Verso - Bluetooth reader • The Bluetooth reader is used for reading users' secure ID numbers from Android and iOS smartphone applications.

<p>2N Part No. 9155045 Axis Part No. 01276-001</p>  A square, light-colored fingerprint reader with a dark sensor area in the center, mounted on a wall.	<ul style="list-style-type: none">• 2N[®] IP Verso - Fingerprint reader• The Fingerprint reader is used for verification of human fingers for access control and intercom control.
<p>2N Part No. 9155050 Axis Part No. 01267-001</p>  A black, coiled extension cable with gold-colored connectors at both ends.	<ul style="list-style-type: none">• 1 m extension cable• Only one extension cable allowed.• Maximum bus length is 7 m.
<p>2N Part. No. 9155051 Axis Part No. 01270-001</p>  A rectangular, light-colored blind button with a textured surface and two small protrusions on the left side.	<ul style="list-style-type: none">• Blind button

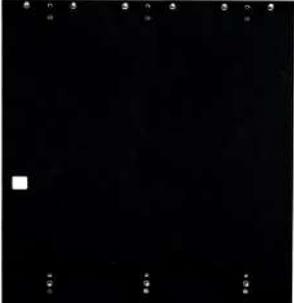
<p>2N Part No. 9155054 Axis Part No. 01268-001</p> 	<ul style="list-style-type: none">• 3 m extension cable• Only one extension cable allowed.• Maximum bus length is 7 m.
<p>2N Part No. 9155055 Axis Part No. 01269-001</p> 	<ul style="list-style-type: none">• 5 m extension cable• Only one extension cable allowed.• Maximum bus length is 7 m.

Mounting Accessories

<p>2N Part No. 9155014</p> <p>Axis Part No. 01284-001</p> 	<ul style="list-style-type: none">• Flush mounting box• 1 module• Designed for flush or plasterboard mounting of 1-module sets and delivered including accessories for multiple box assemblies.
<p>2N Part No. 9155015</p> <p>Axis Part No. 01285-001</p> 	<ul style="list-style-type: none">• Flush mounting box• 2 modules• Designed for flush or plasterboard mounting of 2-module sets and delivered including accessories for multiple box assemblies.
<p>2N Part No. 9155016</p> <p>Axis Part No. 01286-001</p> 	<ul style="list-style-type: none">• Flush mounting box• 3 modules• Designed for flush or plasterboard mounting of 3-module sets and delivered including accessories for multiple box assemblies

<p>2N Part No. 9155061 Axis Part No. 01293-001</p> 	<ul style="list-style-type: none">• Backplate, 1 module• For glass or uneven surface installation
<p>2N Part No. 9155062 Axis Part No. 01294-001</p> 	<ul style="list-style-type: none">• Backplate, 2 modules• For glass or uneven surface installation
<p>2N Part No. 9155063 Axis Part No. 01295-001</p> 	<ul style="list-style-type: none">• Backplate, 3 modules• For glass or uneven surface installation

<p>2N Part No. 9155064 Axis Part No. 01296-001</p> 	<ul style="list-style-type: none">• Backplate, 2 (w) x 2 (h) modules• For glass or uneven surface installation
<p>2N Part No. 9155065 Axis Part No. 01297-001</p> 	<ul style="list-style-type: none">• Backplate, 3 (w) x 2 (h) modules• For glass or uneven surface installation
<p>2N Part No. 9155066 Axis Part No. 01298-001</p> 	<ul style="list-style-type: none">• Backplate, 2 (w) x 3 (h) modules• For glass or uneven surface installation

<p>2N Part No. 9155067 Axis Part No. 01299-001</p> 	<ul style="list-style-type: none">• Backplate, 3 (w) x 3 (h) modules• For glass or uneven surface installation
<p>Part No. 9155072 Axis Part No. 01940-001</p> 	<ul style="list-style-type: none">• Wedge backplate• 25° gradient mounting backplate

Choose the proper frame and, if necessary, mounting box type depending on your particular **2N[®] IP Verso** installation needs. **2N[®] IP Verso** is designed for outdoor applications and requires no additional roof.

Internal Units and Accessories

<p>Part Nos:</p> <p>2N Part No. 91378375 Axis Part No. 01668-001</p> <p>2N Part No. 91378376 Axis Part No. 01670-001</p>  A black, rectangular intercom panel with a touchscreen display. The screen shows a digital clock at 12:45, a temperature of 19°C, and several circular icons for different functions like call, lock, and light.	<ul style="list-style-type: none">• 2N[®] Indoor Touch 2.0 - black• WiFi version (second Part No.)• 2N[®] Indoor Touch 2.0, an elegant internal touch panel, is suitable for all 2N IP intercoms. On the panel's display you can find out who is at the door, but also start a conversation with the visitor, open the lock or turn on the light in the entrance hall.
<p>Part No.</p> <p>2N Part No. 91378382 Axis Part No. 01425-001</p>  A black, L-shaped desk stand with a silver metal bracket on top. The bracket has two adjustable arms that can hold a device in a landscape or portrait orientation.	<ul style="list-style-type: none">• 2N[®] Indoor Touch desk stand black

<p>Part Nos.</p> <p>2N Part No. 91378375WH</p> <p>Axis Part No. 01669-001</p> <p>2N Part No. 91378376WH</p> <p>Axis Part No. 01671-001</p>  A white, square-shaped intercom panel with a large touchscreen display. The screen shows a user interface with icons for call, video, and temperature, along with the time 12:45 and temperature 19°C.	<ul style="list-style-type: none">• 2N[®] Indoor Touch 2.0 - white• WiFi version (second part no.)• 2N[®] Indoor Touch 2.0, an elegant internal touch panel, is suitable for all 2N IP intercoms. On the panel's display you can find out who is at the door, but also start a conversation with the visitor, open the lock or turn on the light in the entrance hall.
<p>Part Nos.:</p> <p>2N Part No. 91378382W</p> <p>Axis Part No. 01426-001</p>  A white, L-shaped desk stand for the intercom panel. It has a flat base and a vertical backrest. A metal bracket is attached to the top of the backrest to hold the panel.	<ul style="list-style-type: none">• 2N[®] Indoor Touch desk stand white

VoIP Phones

2N Part No. 91378357

Axis Part No. 01422-001



- Grandstream GXV3240 VoIP video telephone
- GXV3240 is the successor to the popular GXV3140 model, which allows for comfortable video calls in the IP network. Touchscreen and keypad control.

2N Part No. 91378358

Axis Part No. 01421-001



- Grandstream GXV3275 VoIP telephone
- GXV3275 is the successor to the popular GXV3175 model, which allows for comfortable video calls in the IP network. Touchscreen control.

Electric Locks

<p>2N Part No. 932071E</p> 	<ul style="list-style-type: none">• BEFO 11211• 12 V / 230 mA DC• low consumption
<p>2N Part No. 932081E</p> 	<ul style="list-style-type: none">• BEFO 11221 with momentum pin• 12 V / 230 mA DC• low consumption• A short electrical pulse is sufficient for unlocking. The lock then remains open until someone closes the door.
<p>2N Part No. 932091E</p> 	<ul style="list-style-type: none">• BEFO 11211MB with mechanical blocking• 12 V / 230 mA DC• low consumption• Enables to mechanically close or open the lock. When unlocked, the lock remains open all the time. When locked, it behaves as a standard electrical lock.

<p>2N Part No. 932061E</p> 	<ul style="list-style-type: none">• BEFO 211211 door signaling, low consumption• 12 V / 230 mA• A regular lock with a built-in contact to indicate whether the door is open or closed.
<p>2N Part No. 932072E</p> 	<ul style="list-style-type: none">• BEFO 31211 fail-safe• 12 V / 170 mA DC• The failsafe lock is closed when electricity is switched on. When electricity is interrupted, the lock is opened.
<p>2N Part No. 932062E</p> 	<ul style="list-style-type: none">• BEFO 321211 fail-safe, door signaling• 12 V / 170 mA• The failsafe lock is closed when electricity is switched on. When electricity is interrupted, the lock is opened.• It contains a built-in contact to indicate whether the door is open or closed.

✓ **Tip**

- FAQ: Electric locks - Difference between locks in 2N IP intercom accessories

Power Supply

<p>2N Part No. 91378100E</p> <p>2N Part No. 91378100US</p> <p>Axis Part No. 01403-001</p> 	<ul style="list-style-type: none"> • PoE injector - with EU cable (91378100E) • PoE injector - with US cable (91378100US) • For intercom power supply via an Ethernet cable where PoE switch is unavailable.
<p>2N Part No. 91341481E</p> 	<ul style="list-style-type: none"> • Stabilized 12 V / 2 A power supply needs to be used where no PoE is available.
<p>2N Part No. 932928</p> 	<ul style="list-style-type: none"> • 12 V transformer • For 230 V mains voltage. • For external power supply of the lock with 12 V AC voltage.

Two-Wire Connection

2N Part No. 9159014EU/UK

2N Part No. 9159014US

Axis Part No. 01404-001



- 2N[®] 2Wire
 - (set of 2 adaptors and power source for EU/US/UK)
 - The 2N[®] 2Wire converter allows you to use the existing wiring (2 wires) from your original doorbell or door intercom to connect any IP device. You don't have to configure anything, all you need is one 2N[®] 2Wire unit at each cable end and a power supply connected to at least one of these units.
- The 2N[®] 2Wire unit then provides PoE power not only to the second converter, but also to all the other connected IP end devices.

RFID 13 MHz

2N Part No. 9159031

Axis Part No. 01390-001



- External 13.56 MHz Mifare RFID card reader, Wiegand
- Secondary reader for connection to an internal reader. Allows for card entry control from both sides of the door. IP68 cover, also suitable for exteriors. Reads the following cards:
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key

2N Part No. 9137421E

Axis Part No. 01400-001



- External RFID Reader 13.56 MHz, 125 kHz + NFC/HCE (USB interface)
- External RFID card reader for connection to a PC via a USB interface. Suitable for system administration and adding 13.56 MHz/125 kHz cards and NHC/HCE supporting Android platform devices using the 2N IP intercom web interface or 2N[®] Access Commander application. It reads the same types of cards and devices as card readers in 2N IP intercoms:
 - 125 kHz
 - EM4xxx
 - 13.56 MHz
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key

<p>2N Part No. 9137424E Axis Part No. 01527-001</p> 	<ul style="list-style-type: none"> • External secured RFID Reader 13.56 MHz, 125 kHz + NFC /HCE (USB interface) • External secured RFID card reader for connection to PC using a USB interface. Suitable for system administration and adding 13.56 MHz, 125 kHz cards and NFC/HCE supporting Android platform devices using the 2N IP intercom web interface or 2N[®] Access Commander application. It reads the same types of cards and devices as card readers in 2N IP intercoms: <ul style="list-style-type: none"> • 125 kHz <ul style="list-style-type: none"> • EM4xxx • 13.56 MHz <ul style="list-style-type: none"> • ISO14443A (Mifare, DESFire) • PicoPass (HID iClass) • FeliCa • ST SR(IX) • 2N[®] Mobile Key • HID SE (Seos, iClass SE, Mifare SE)
<p>2N Part No. 9134173 Axis Part No. 01384-001</p> 	<ul style="list-style-type: none"> • Mifare Classic 1k RFID card, 13.56 MHz

<p>2N Part No. 9134174 Axis Part No. 01385-001</p> 	<ul style="list-style-type: none">• Mifare Classic 1k RFID fob, 13.56 MHz

RFID 125 kHz

<p>2N Part No. 9159030 Axis Part No. 01389-001</p>  A silver, rectangular external RFID card reader with a black front panel. It features a red indicator light at the top and a blue RFID symbol in the center.	<ul style="list-style-type: none">• External 125 kHz RFID card reader• Secondary reader for connection to an internal reader. Allows for card entry control from both sides of the door. IP67 cover, also suitable for exteriors. Reads EM4xxx cards.
<p>2N Part No. 9137420E Axis Part No. 01399-001</p>  A black, rectangular USB RFID card reader with a white RFID symbol in the center and the 2N logo at the top.	<ul style="list-style-type: none">• USB RFID card reader, 125 kHz• External RFID card reader for connection to a PC using a USB interface. Suitable for system management and addition of EM4xxx cards via the PC application, 2N[®] Access Commander.
<p>2N Part No. 9134165E Axis Part No. 01395-001</p>  A plain, light-colored rectangular RFID card.	<ul style="list-style-type: none">• RFID card, type EM4100, 125 kHz

<p>2N Part No. 9134166E Axis Part No. 01396-001</p> 	<ul style="list-style-type: none">• RFID fob, type EM4100, 125 kHz

Biometry

<p>2N Part No. 9137423E Axis Part No. 01401-001</p> 	<ul style="list-style-type: none">• 2N[®] IP intercom – external fingerprint reader (USB interface)
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External switches

<p>2N Part No. 9159010 Axis Part No. 01386-001</p> 	<ul style="list-style-type: none"> • 2N[®] Security Relay • A handy add-on that significantly enhances door entry security as it prevents tampering with the intercom and forced opening of the lock. To be installed between the intercom and lock, powered by the intercom.
<p>2N Part No. 9137410E Axis Part No. 01397-001</p> 	<ul style="list-style-type: none"> • External IP Relay - 1 output • Standalone IP device controlled by HTTP commands sent by the 2N IP intercom, which can thus control devices via unlimited distances.
<p>2N Part No. 9137411E Axis Part No. 01398-001</p> 	<ul style="list-style-type: none"> • External IP Relay - 4 outputs, PoE • Standalone IP device controlled by HTTP commands sent by the 2N IP intercom, which can thus control devices via unlimited distances.

<p>2N Part No. 9160501 Axis Part No. 0820-001</p> 	<ul style="list-style-type: none">• AXIS A9188 Network I/O relay module• Lift control relay module for up to 8 floors
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Induction Loop

<p>2N Part No. 9155043 Axis Part No. 01265-001</p> 	<ul style="list-style-type: none">• Induction loop module - antenna• The external antenna boosts the range of usability of the induction loop so that a hearing impaired user wearing a hearing aid with telecoil can receive the audio signal over a wider area. It has to be used with Part No. 9155041. A 40 cm long interconnecting cable is included.• Dimensions: 233 (W) x 233 (H) mm
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✓ Tip

- FAQ: Induction loop - How to connect it with 2N IP intercom

Sensors and Switches

2N Part No. 9159013



- Exit button
- A button for logic input connection for opening a door inside a building.

2N Part No. 9154004

Axis Part No. 01479-001



- Water-proof metal button

2N Part No. 9159012

Axis Part No. 01388-001



- Magnetic door contact
- Door installation set that enables the status of door opening to be ascertained. Used when the intercom is used for door protection to detect whether the door is open or opened by violence.

Additional Modules

2N Part No. 9159011

Axis Part No. 01387-001



- The **2N[®] Wiegand Isolator** is designed for galvanic isolation of two devices separately powered and interconnected via the Wiegand bus. The **2N[®] Wiegand Isolator** protects the interconnected devices against communication errors and/or damage.

License

2N Part No. 9137905 Axis Part No. 01376-001	<ul style="list-style-type: none">• Enhanced Audio
2N Part No. 9137906 Axis Part No. 01377-001	<ul style="list-style-type: none">• Enhanced Video
2N Part No. 9137907 Axis Part No. 01378-001	<ul style="list-style-type: none">• Enhanced Integration
2N Part No. 9137908 Axis Part No. 01379-001	<ul style="list-style-type: none">• Enhanced Security
2N Part No. 9137909 Axis Part No. 01380-001	<ul style="list-style-type: none">• Gold
2N Part No. 9137910 Axis Part No. 01381-001	<ul style="list-style-type: none">• InformaCast
2N Part No. 9137915 Axis Part No. 01382-001	<ul style="list-style-type: none">• NFC

2N Part No. 9137916 Axis Part No. 02001-001	<ul style="list-style-type: none">• Lift Module

✔ **Tip**

- Refer to the Configuration Manual for 2N IP intercoms, Subs. **3.2 Function Licensing** for details.

✔ **Tip**

- For more accessories and specific advice please contact your local distributor of 2N products.

1.2 Terms and Symbols

The following symbols and pictograms are used in the manual:

Safety

- Always abide by this information to prevent persons from injury.

Warning

- Always abide by this information to prevent damage to the device.

Caution

- Important information for system functionality.

Tip

- Useful information for quick and efficient functionality.

Note

- Routines or advice for efficient use of the device.

2. Description and Installation

Here is what you can find in this section:

- 2.1 Before You Start
- 2.2 Mechanical Installation
- 2.3 Electric Installation
- 2.4 Extending Module Connection
- 2.5 Completion

2.1 Before You Start

Product Completeness Check

Before you start please check whether the contents of the package of your new 2N[®] IP Verso complies with the following list.

- 1x 2N[®] IP Verso
- 1x brief guide
- 1x Certificate of ownership

2.2 Mechanical Installation

Mounting Types Overview

Refer to the table below for a list of mounting types and necessary components. You can assemble multiple units in all mounting types.

Flush mounting – classic bricks

- incl. hollow bricks, thermally insulated walls, etc.

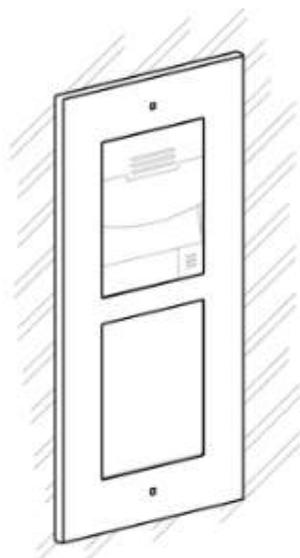
What you need for mounting:

- a properly cut hole as instructed in the box package
- Plaster, mounting glue, mounting foam or mortar as necessary
- 2N[®] IP Verso, flush mounting boxes and frames
 - 1 module: box Part No. **9155014**, frame Part No. **9155011**
 - 2 modules: box Part No. **9155015**, frame Part No. **9155012**
 - 3 modules: box Part No. **9155016**, frame Part No. **9155013**

Flush mounting – plasterboard

What you need for mounting:

- a properly cut hole as instructed in the box package
- 2N[®] IP Verso, flush mounting boxes and frames
 - 1 module: box Part No. **9155014**, frame Part No. **9155011**
 - 2 modules: box Part No. **9155015**, frame Part No. **9155012**
 - 3 modules: box Part No. **9155016**, frame Part No. **9155013**



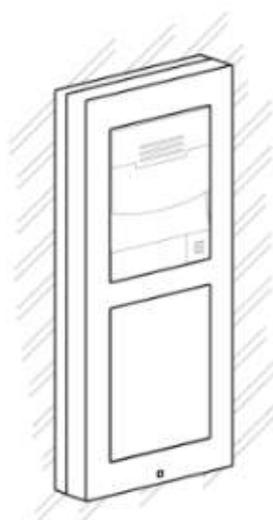
Surface mounting

- concrete and steel structures, entry barrier columns, interior, etc.

What you need for mounting:

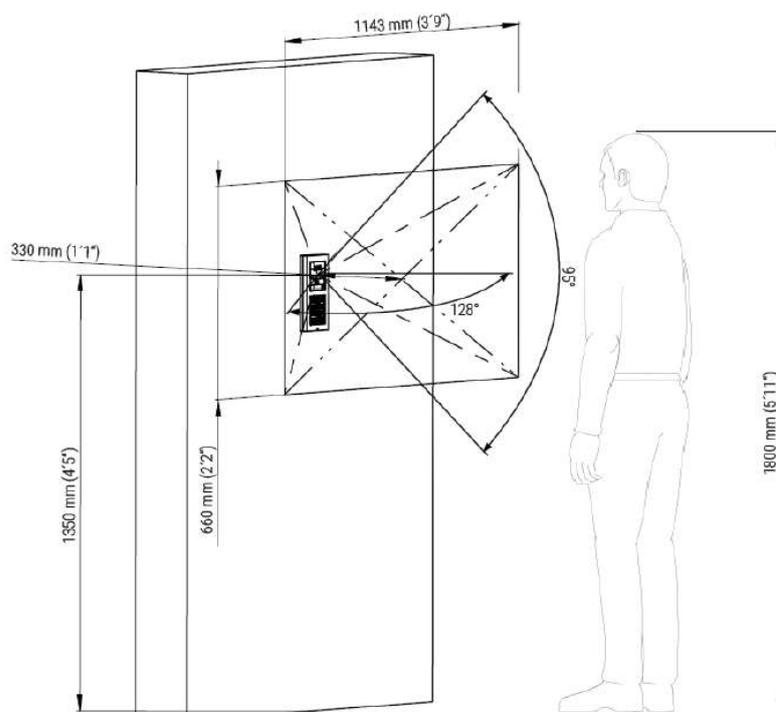
- 2N[®] IP Verso plus the respective frames
 - 1 module: frame Part No. **9155021**
 - 2 modules: frame Part No. **9155022**
 - 3 modules: frame Part No. **9155023**

For not flat surface use according to the module number backplate Part No **9155061-9155067**.





- The recommended standard installation height is 1350 mm from the ground to the device camera level. The installation height may vary depending on the device use.



⚠ Caution

- Before starting the mechanical installation on a selected place, make sure carefully that the preparations connected with it (drilling, wall cutting) cannot damage the electrical, gas, water and other existing wires and pipes.
- The warranty does not apply to the product defects and failures arisen as a result of improper mounting (in contradiction herewith). The manufacturer is neither liable for damage caused by theft within an area that is accessible after the attached electric lock is switched. The product is not designed as a burglar protection device except when used in combination with a standard lock, which has the security function.
- When the proper mounting instructions are not met, water might get in and destroy the electronics. It is because the communicator circuits are under continuous voltage and water infiltration causes an electro-chemical reaction. The manufacturer's warranty shall be void for products damaged in this way!
- Do not remove the plastic film on the seal inside the frame, otherwise water may leak and damage the electronic components.

General Mounting Principles**✓ Tip**

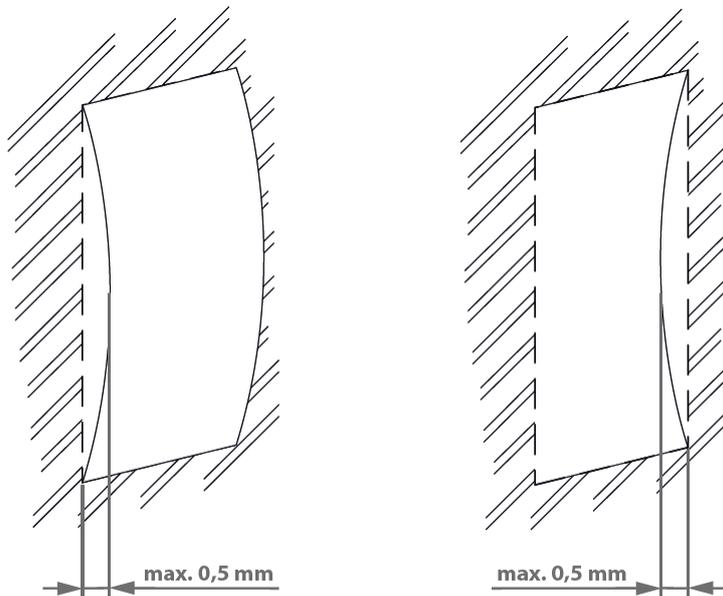
- Select flush mounting where possible to make your product elegant looking, more vandal resistant and more secure.
- You are advised to buy the flush mounting boxes in advance and commission your building company to do the masonry for you. This approach helps you put your intercom exactly in the vertical position.

 **Caution**

- Make sure that the diameter of the dowel holes is accurate to avoid falling out of the dowels! Use the mounting glue to secure the dowels if necessary.
- Make sure that the depth of the dowel holes is accurate!
- Do not use low-quality dowels to avoid their pulling out of the wall!
- Having removed the front panel, make sure that no dirt gets inside the product (especially onto the sealing surface).
- Never turn **2N[®] IP Verso** to align the box assembly after mounting. Make sure that the flush mounting boxes have been installed accurately.
- Check the plasterboard wall and room interior pressure values. If the difference between the values is too great (as a result, e.g., of overpressure ventilation), separate the intercom using, for example, the mounting box enclosed and seal the cable passage to avoid speaker damage.
- Surface mounting may cause problems on places exposed to potential vandalism (such as public garages, etc.). In this case, use steel anchoring elements instead of the dowels and screws included in the delivery.
- Make sure that the installation surface is perfectly flat with the maximum inequality of 0.5 mm. (e.g. boards, glass, cut stone, etc). If this is not the case, use a mounting backplate **Part No 9155061-9155067**, or level the wall surface.
- Always use an installation backplate for uneven installation surfaces.
- While flush mounting, make sure that the box is installed properly, i.e. with the box frame on the wall surface. There are snap-off protrusions on both sides of the flush mounting box to facilitate positioning. Make sure that the frame is placed precisely onto the flush mounting box off the wall to provide effective sealing and avoid water penetration into the intercom. Refer to the pictorial instructions inside the flush mounting box package.
- Any intentional mechanical damage (drilling, main unit tampering, etc.) results in a loss of warranty.

⚠ Warning!

- It is forbidden to use silicone or any other sealing material on the marked and hatched places.



! Safety

- Eliminate the risk of personal injury! Surface mounting is not recommended for narrow passages or places where people's attention is distracted by something else. The manufacturer shall not be liable for injuries in such cases!

Module Installation

- 2.2.1 One Module Box
- 2.2.2 Two Modules Box
- 2.2.3 More Two Module Boxes
- 2.2.4 Three Modules Boxes
- 2.2.5 Více krabic pro tři moduly
- 2.2.6 Tamper and I/O Modules
- 2.2.7 Module Dimensions

Mounting Backplate Installation

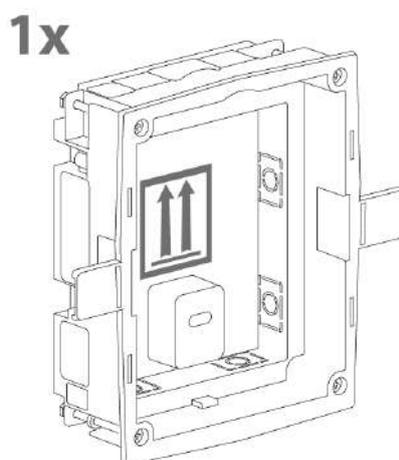
- 2.2.8 Example of Mounting Plate Installation

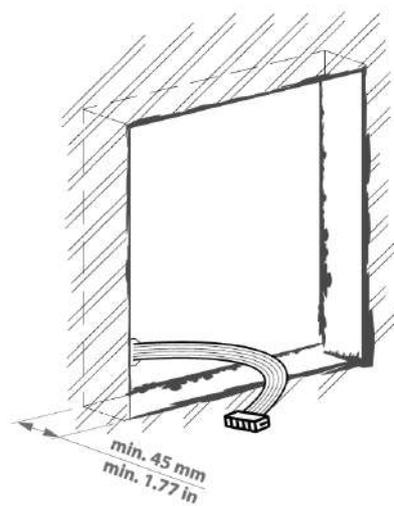
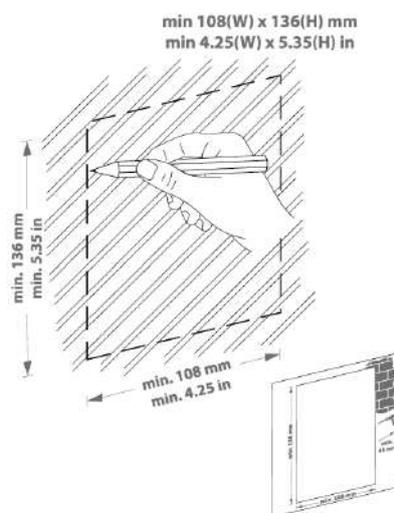
2.2.1 One Module Box

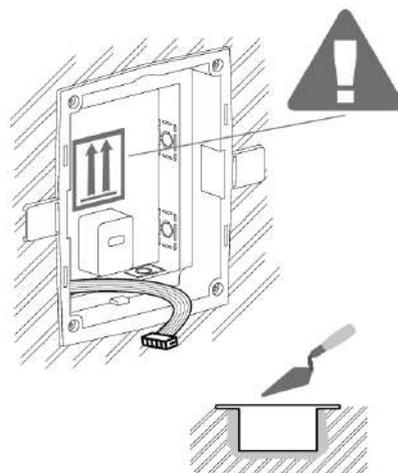
Caution

- The one-module box is designed for stand-alone installations of extending modules such as departure readers. A two-module box is required for the main unit installation.

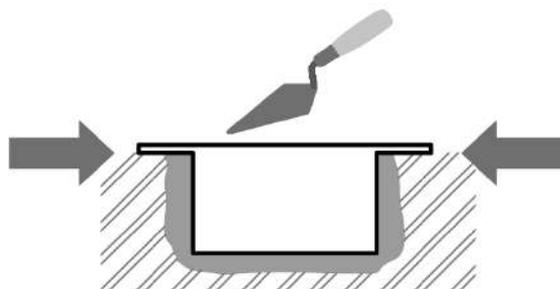
Flush mounting box mounting - classic bricks



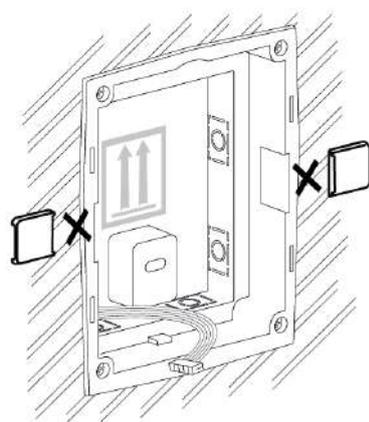




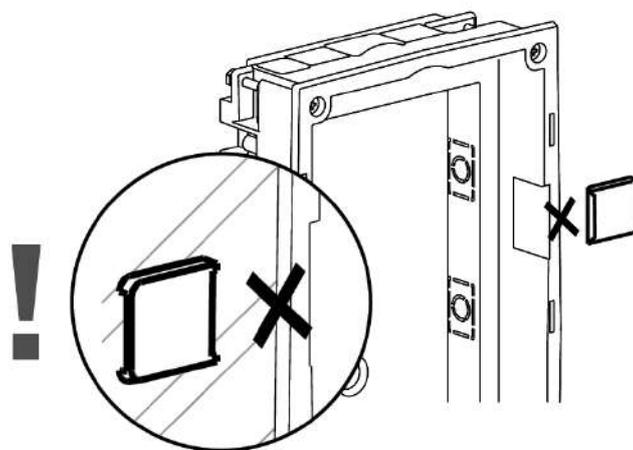
⚠ Warning



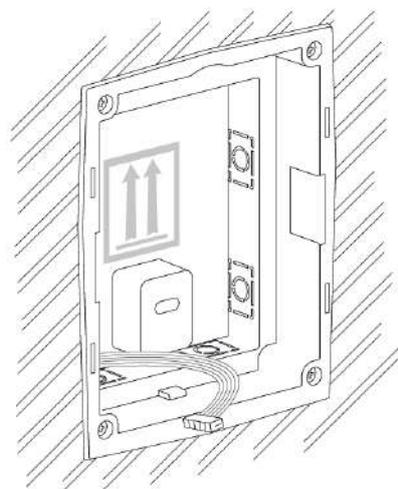
- Make sure that the flush mounting box is slightly above the wall surface not aligning with the wall. A wrong installation may lead to water penetration and subsequent damage of the device. Use the side protrusions to achieve the proper flush mounting.



 **Caution**

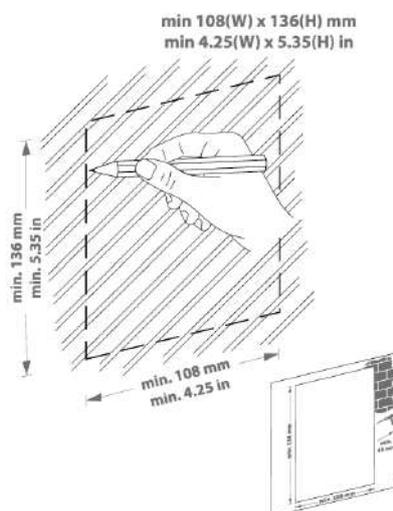
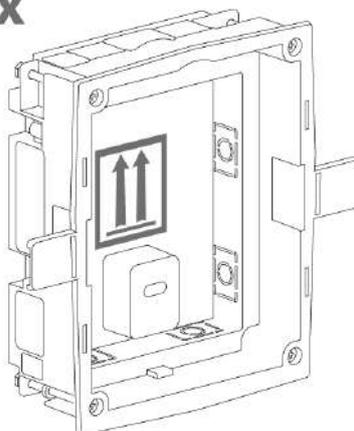


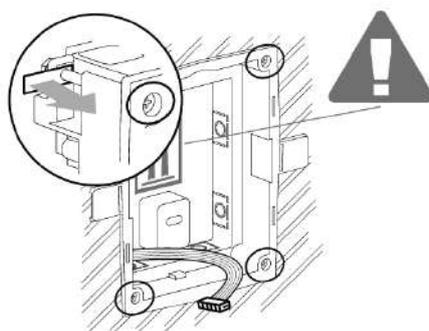
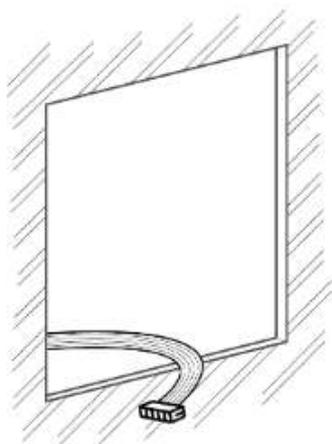
- Break off the side protrusions when the walling material has hardened.

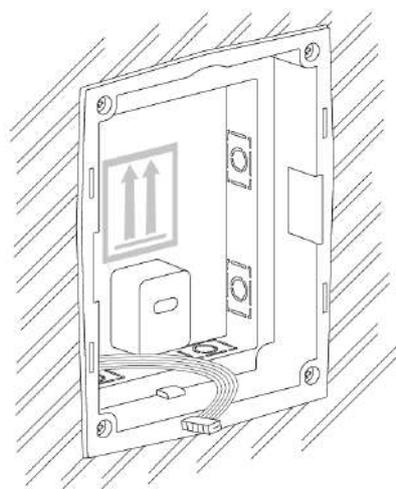
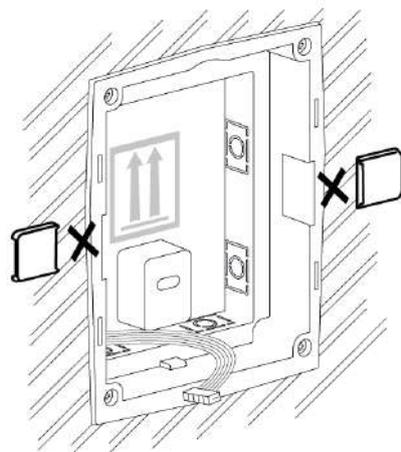


Flush mounting box mounting - plasterboard

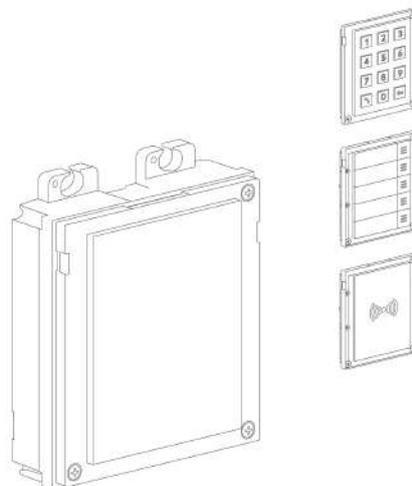
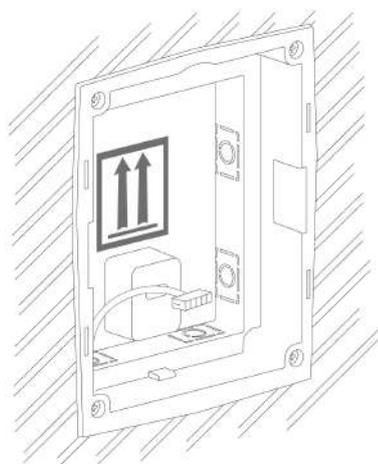
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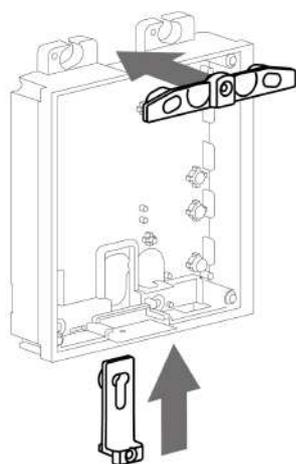
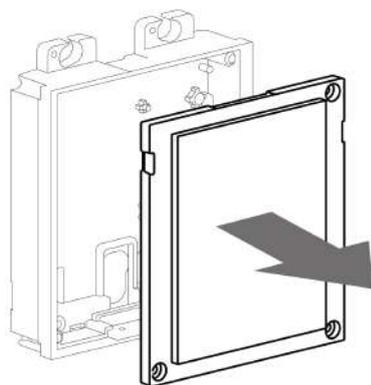


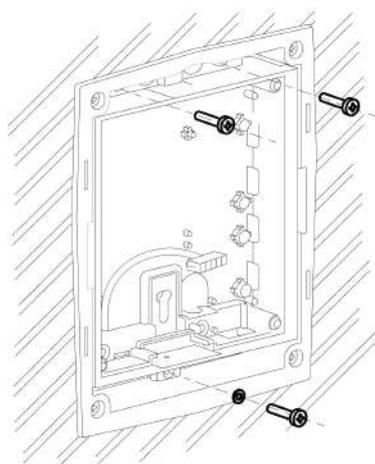
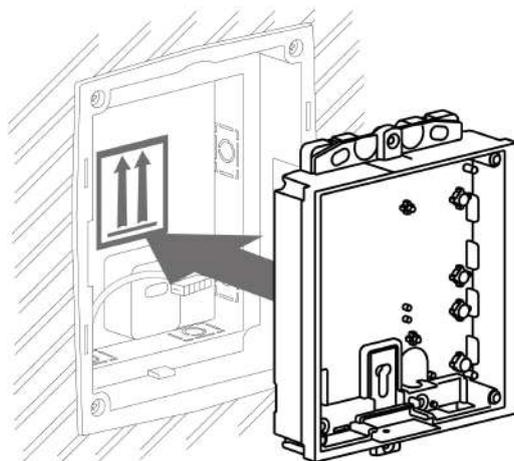


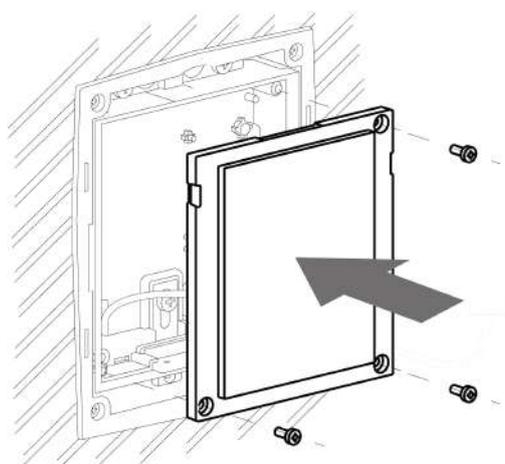
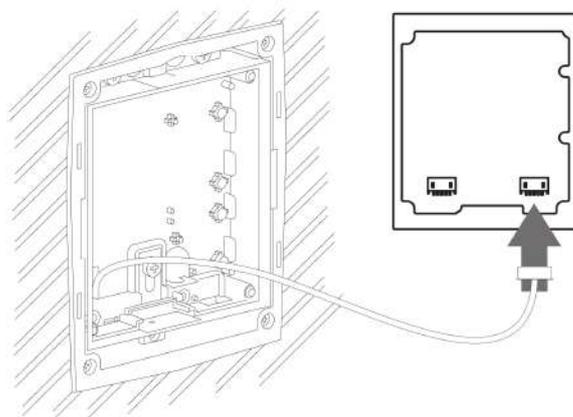


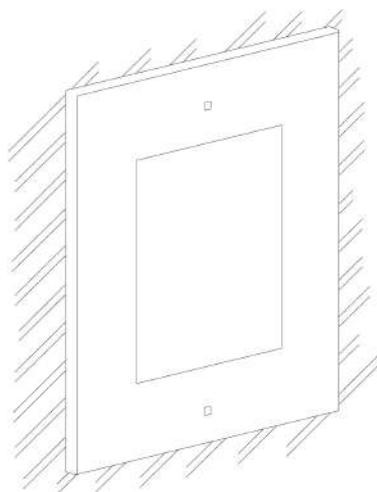
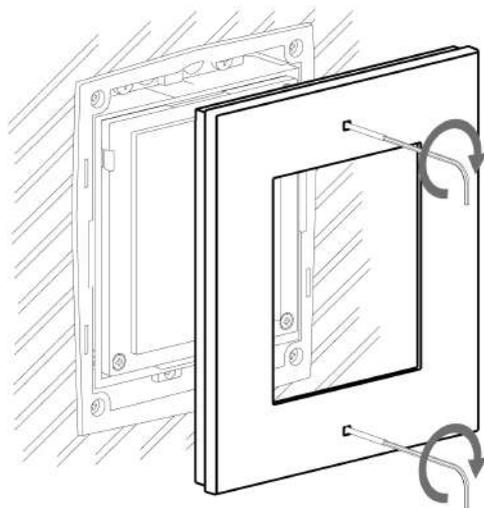
Flush module mounting



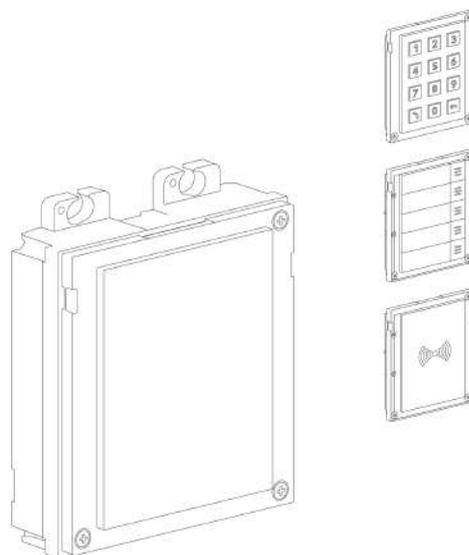
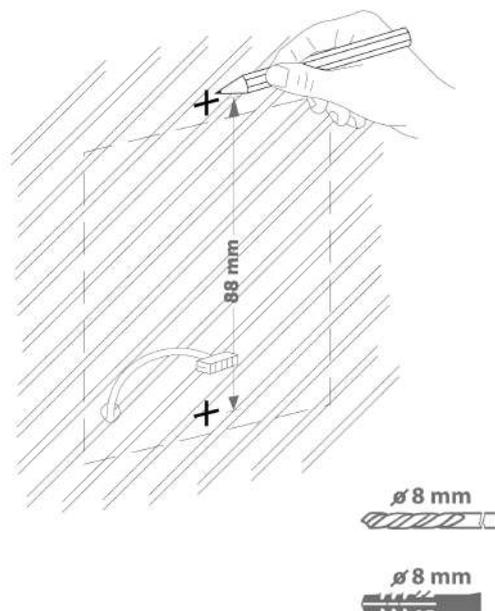


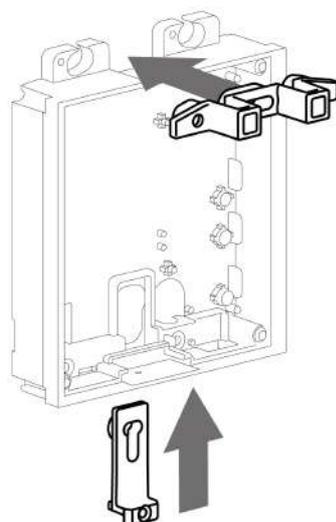
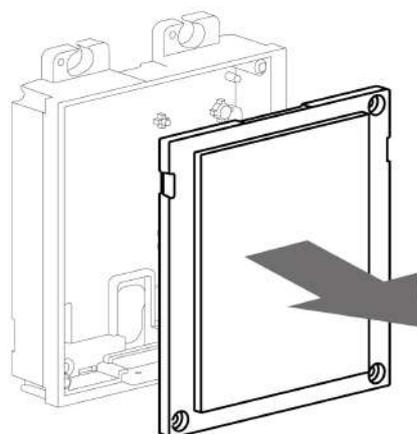


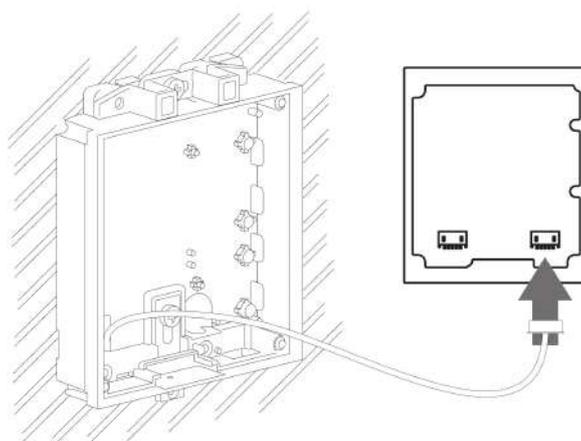
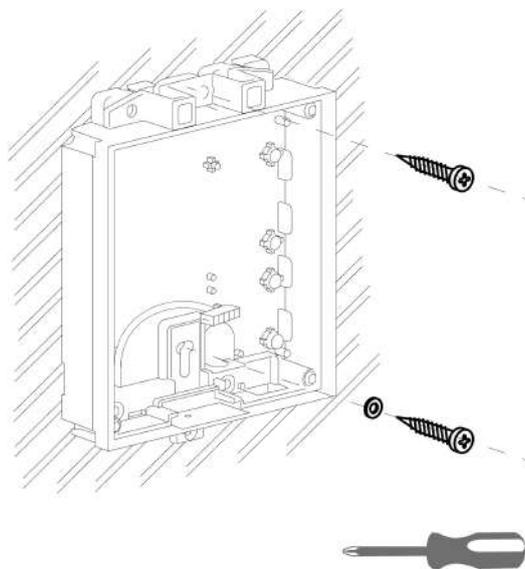


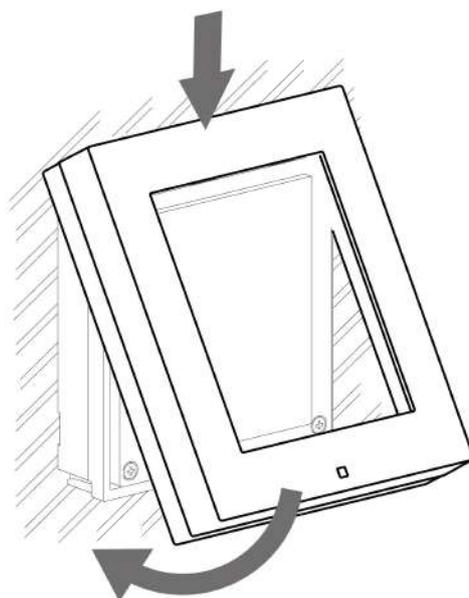
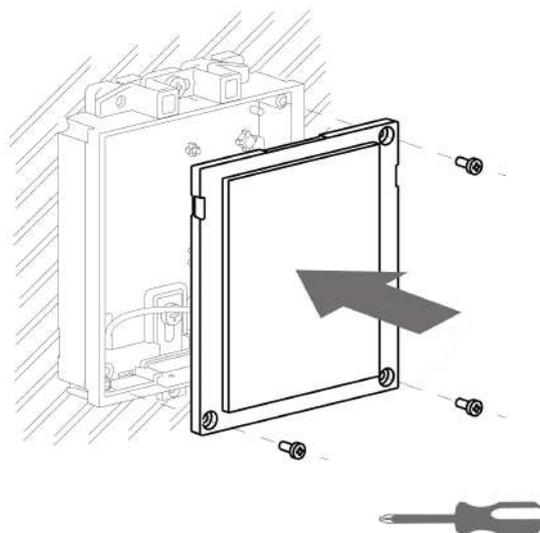


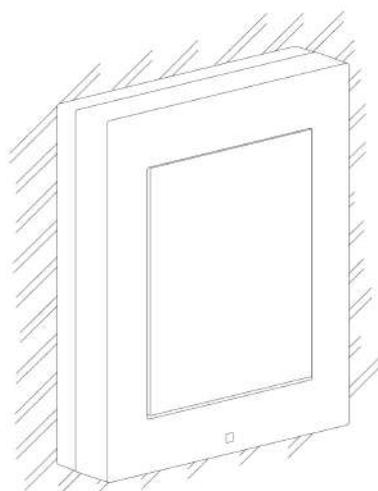
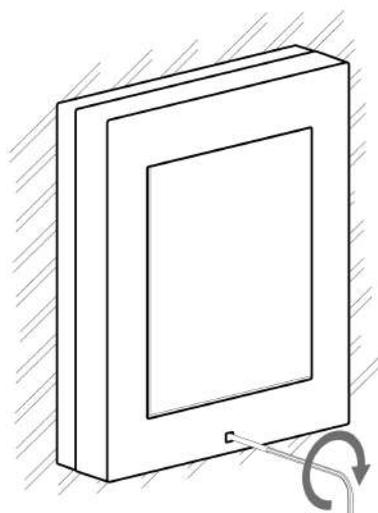
Surface module mounting





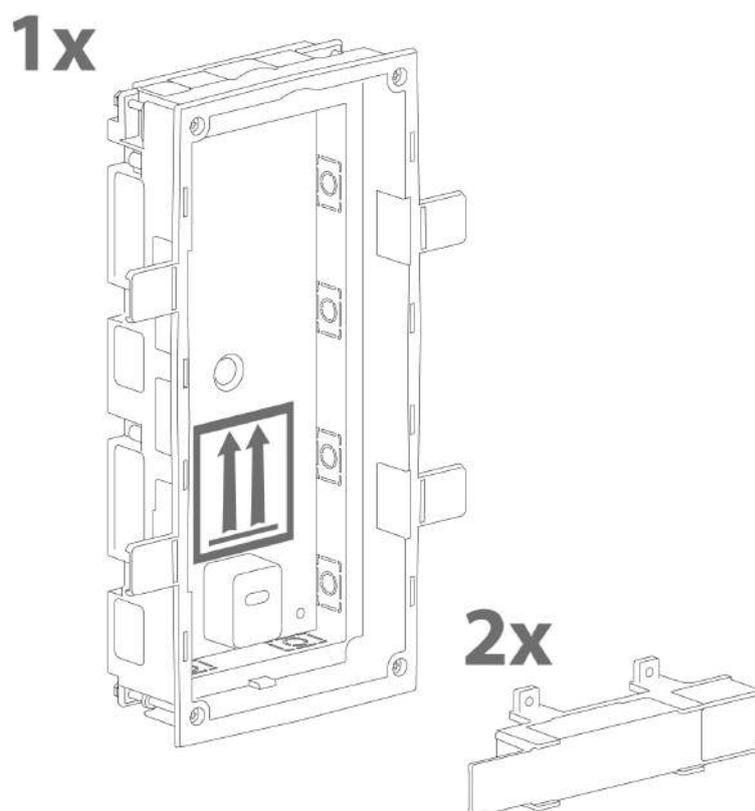




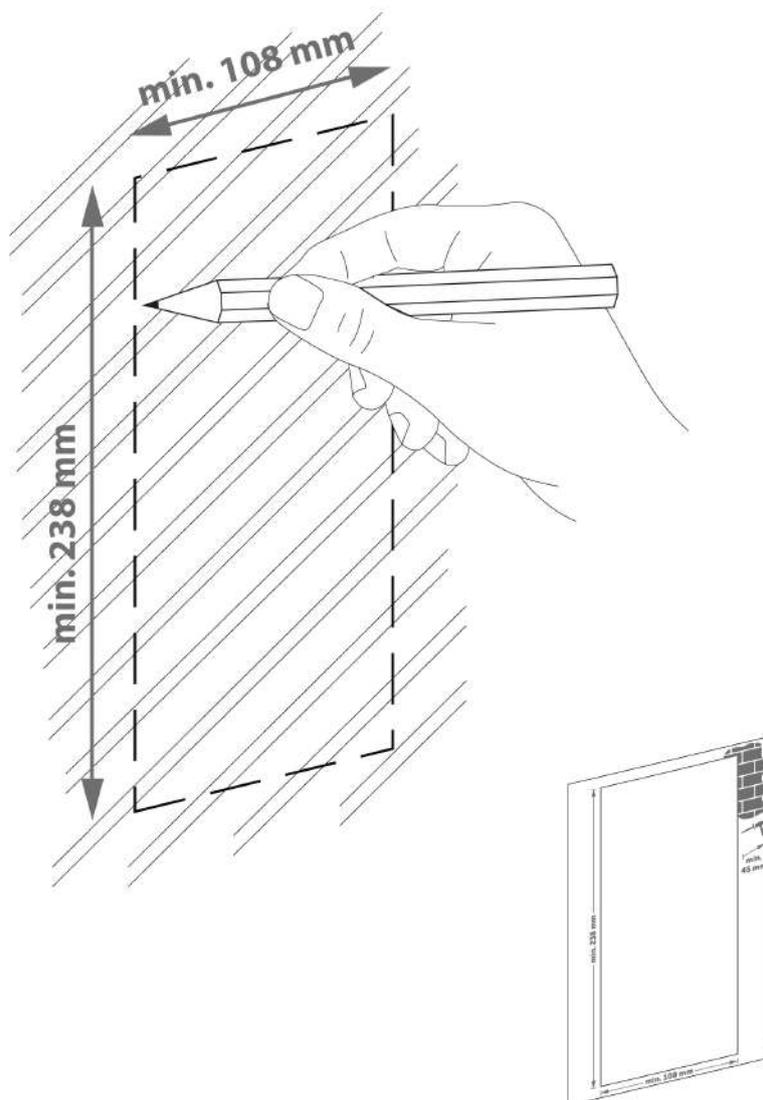


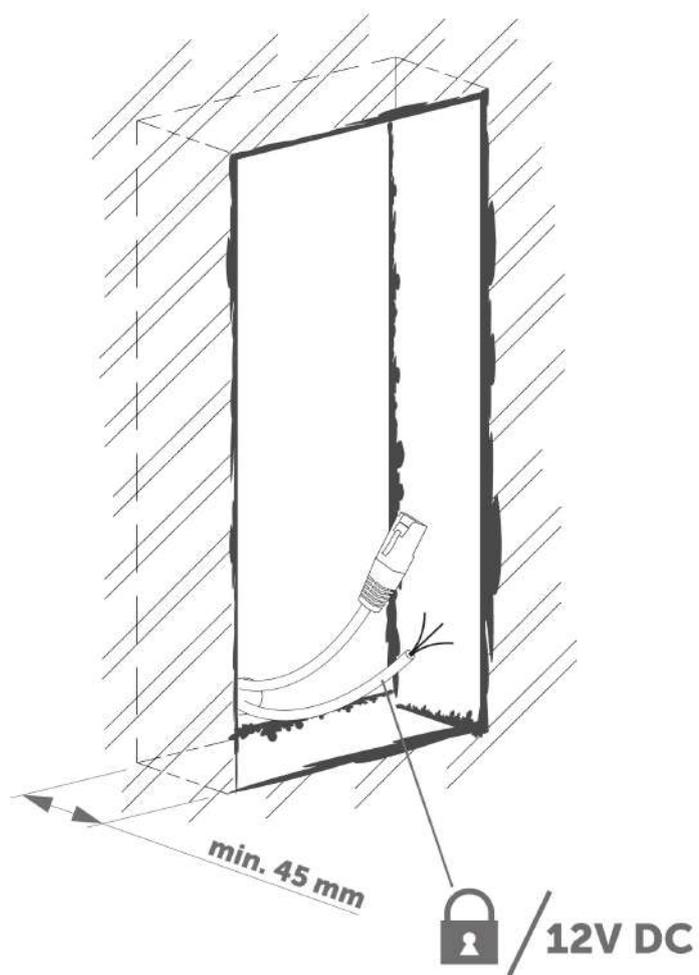
2.2.2 Two Module Box

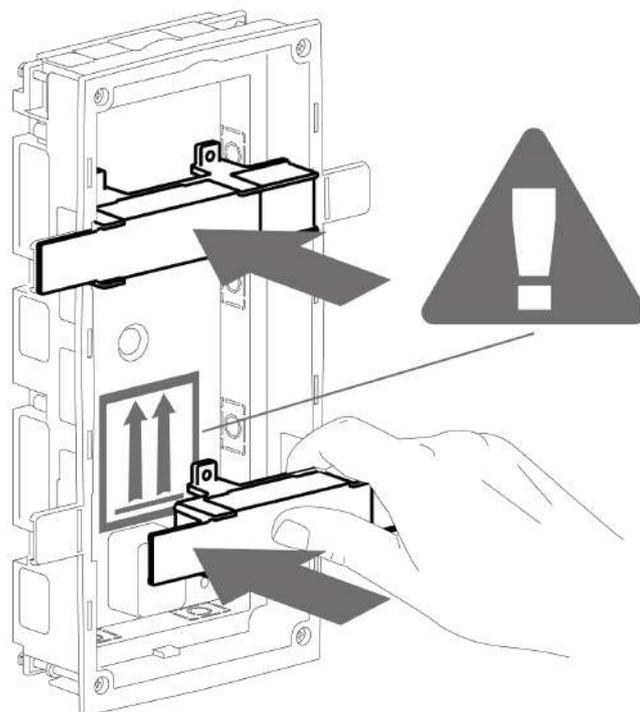
Flush mounting box mounting - classic bricks

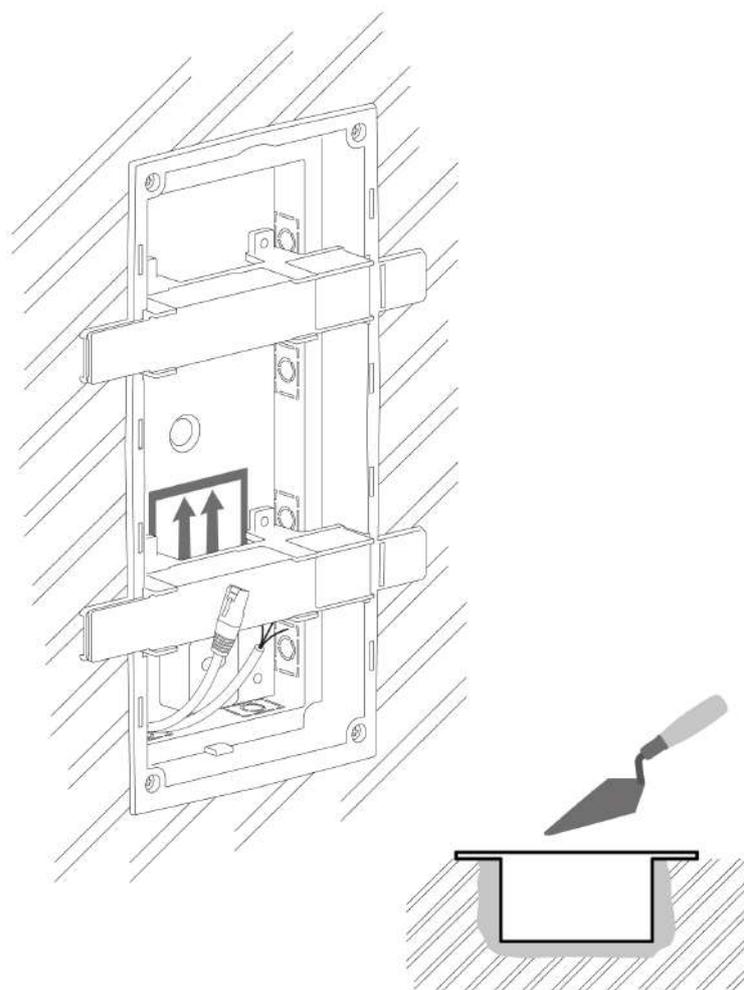


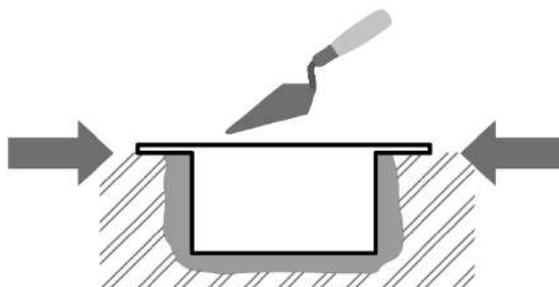
min 108(W) x 238(H) x 45(D) mm



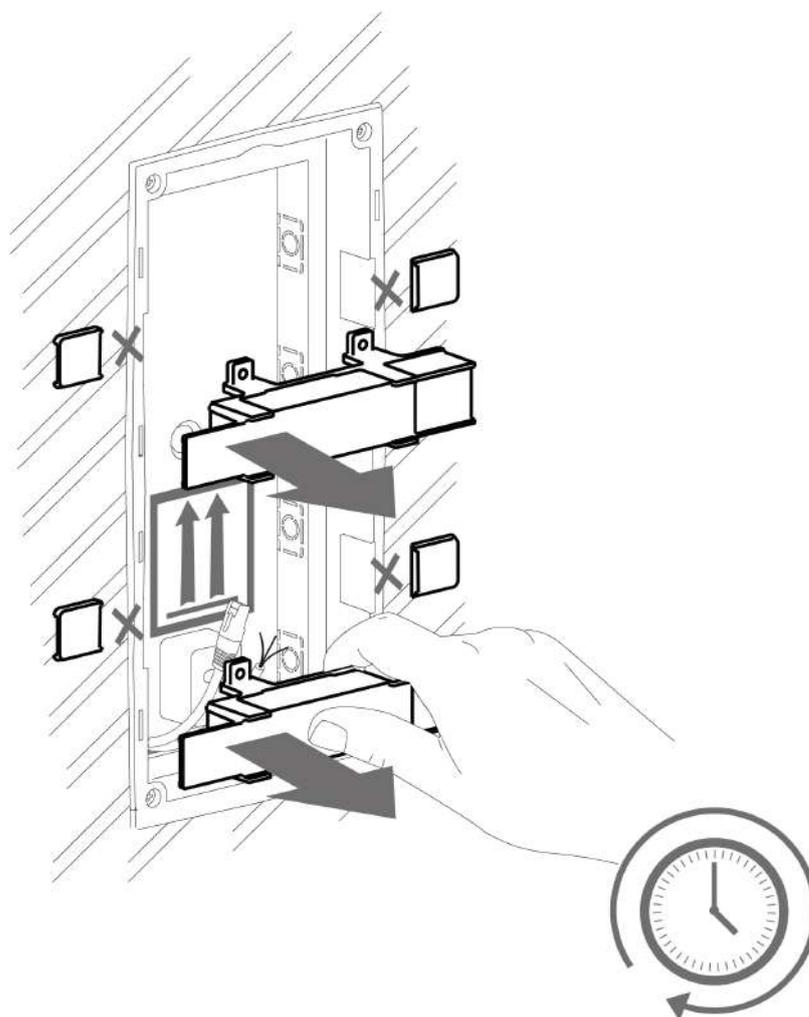




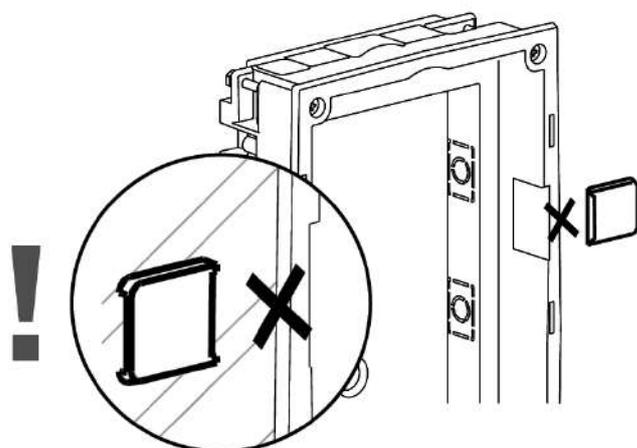


⚠ Warning

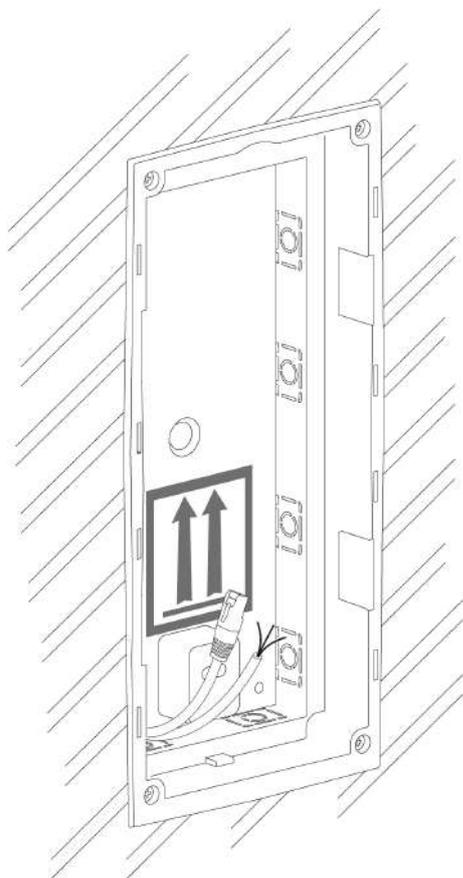
- Make sure that the flush mounting box is slightly above the wall surface not aligning with the wall. A wrong installation may lead to water penetration and subsequent damage of the device. Use the side protrusions to achieve the proper flush mounting.



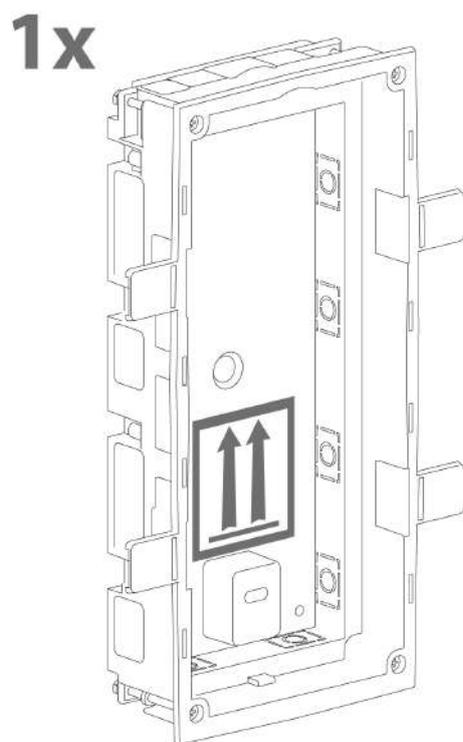
 **Caution**



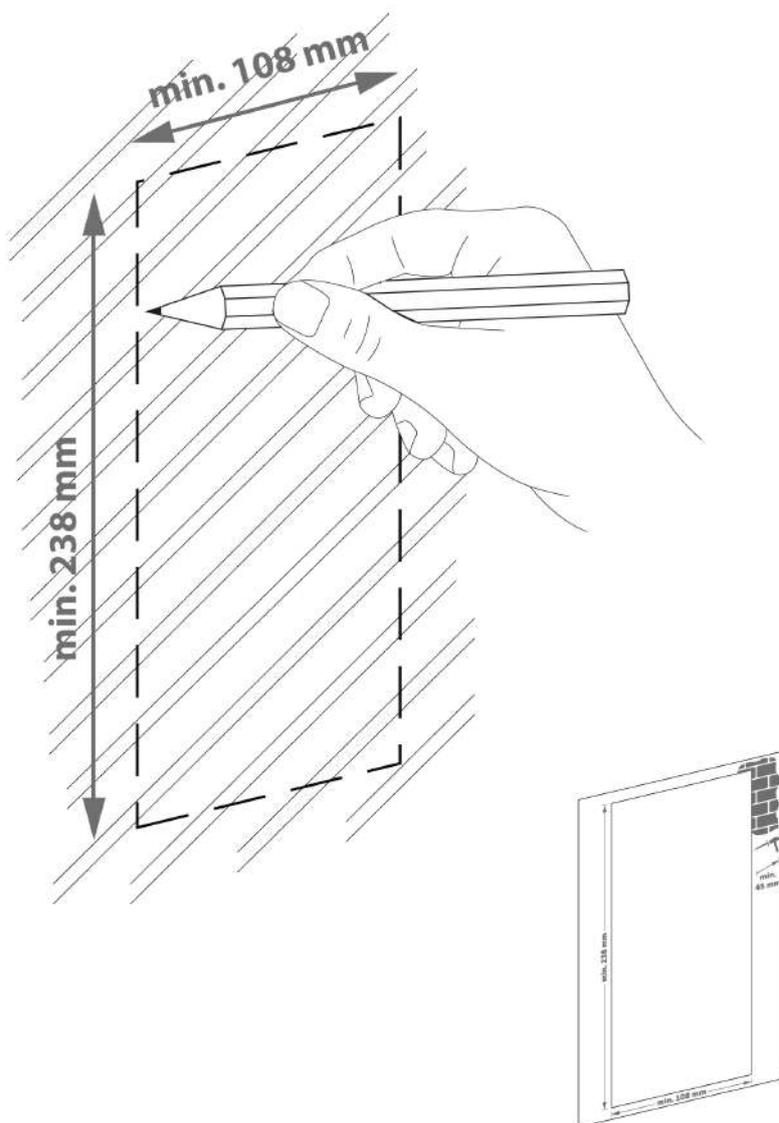
- Break off the side protrusions when the walling material has hardened.

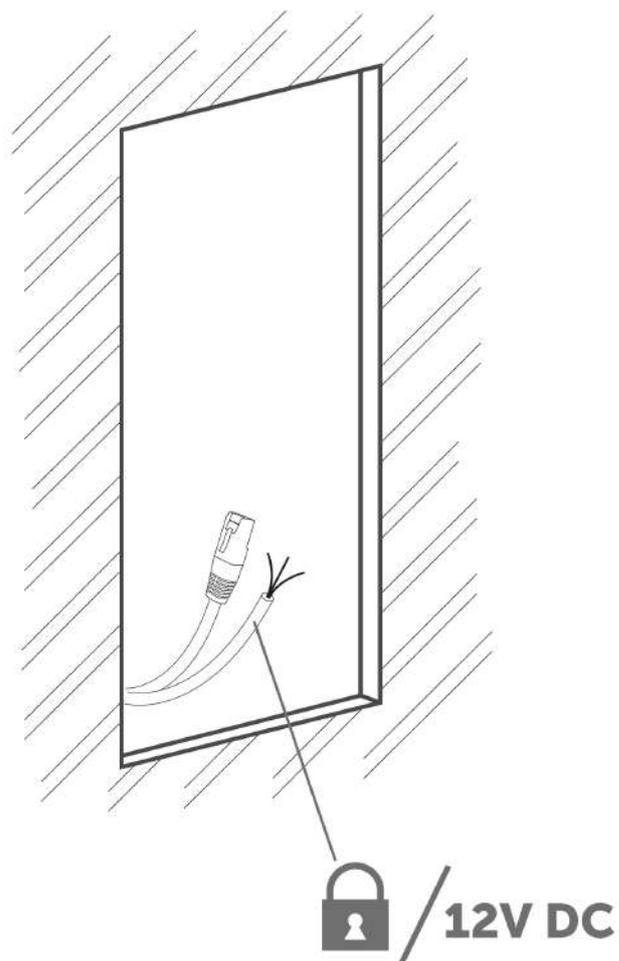


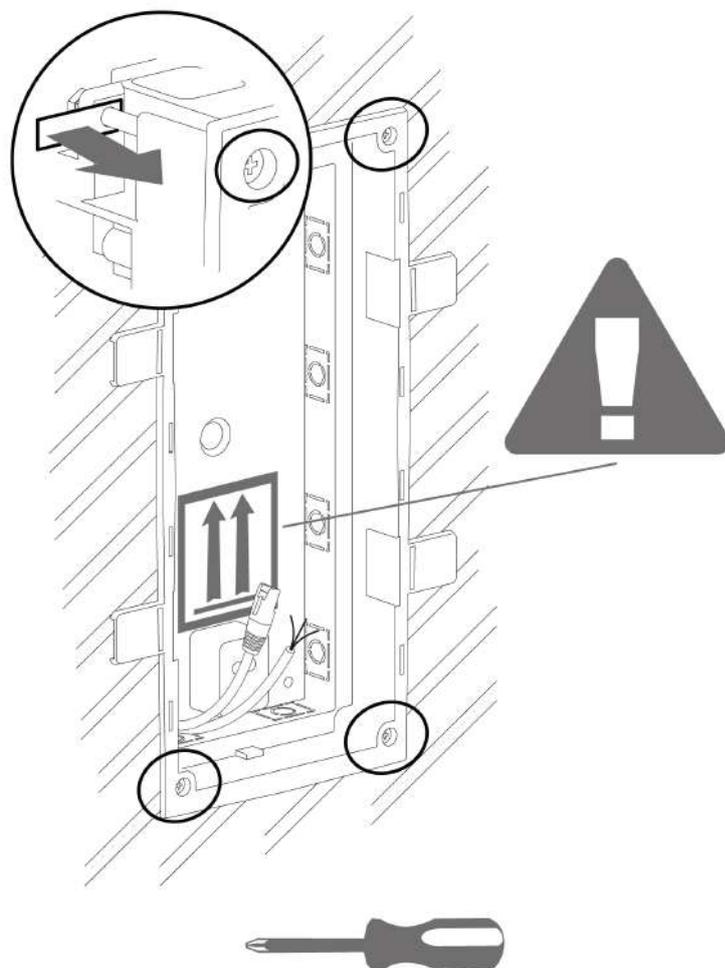
Flush mounting box mounting - plasterboard

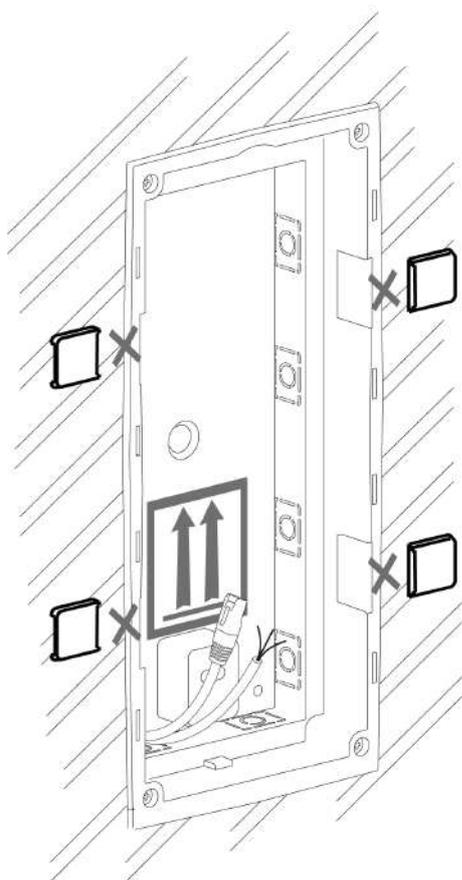


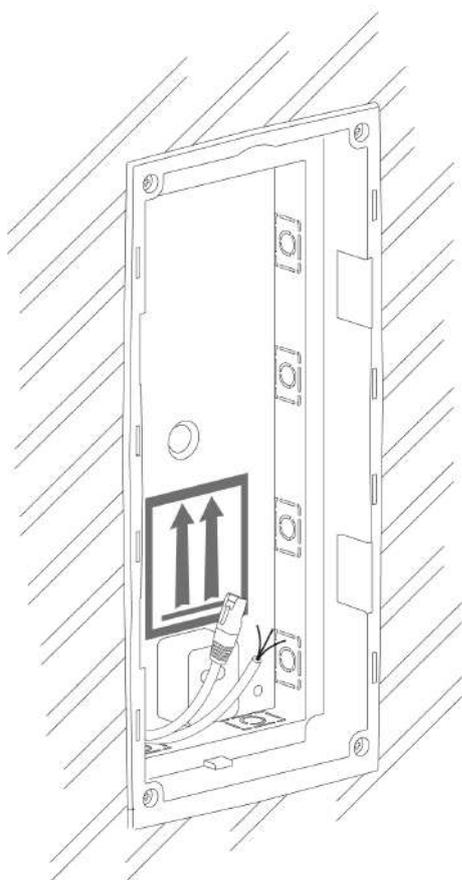
min 108(W) x 238(H) mm



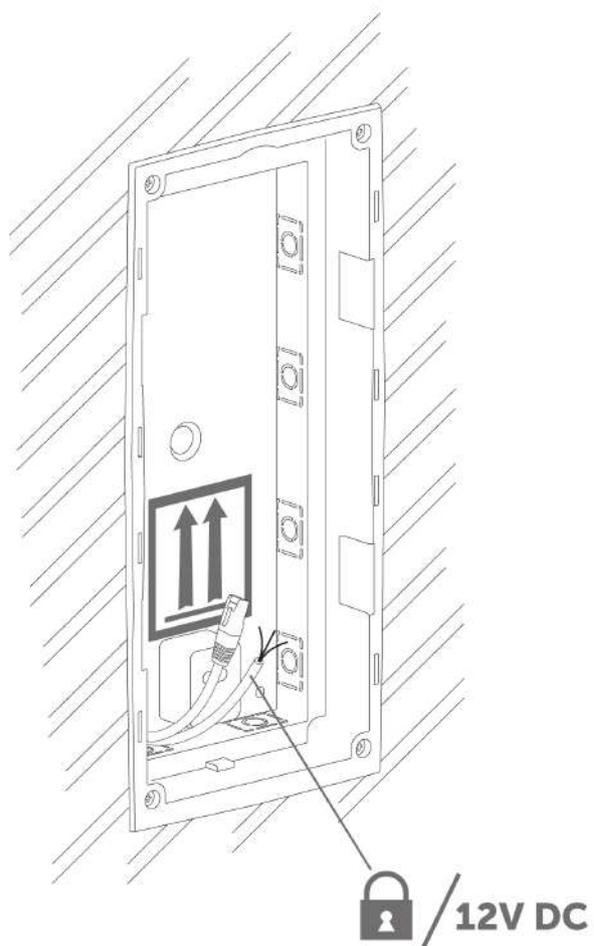


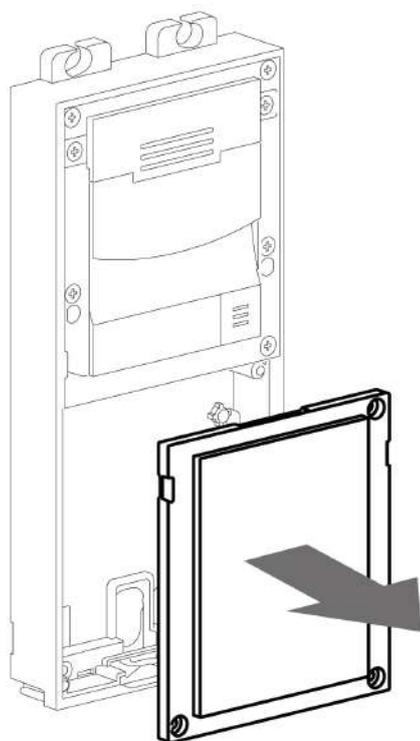


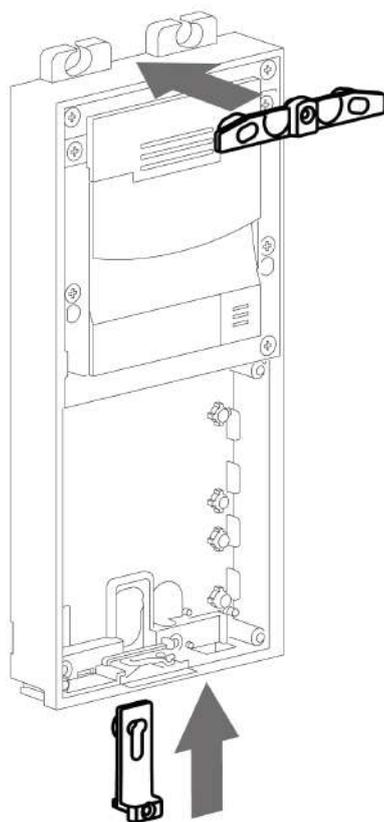


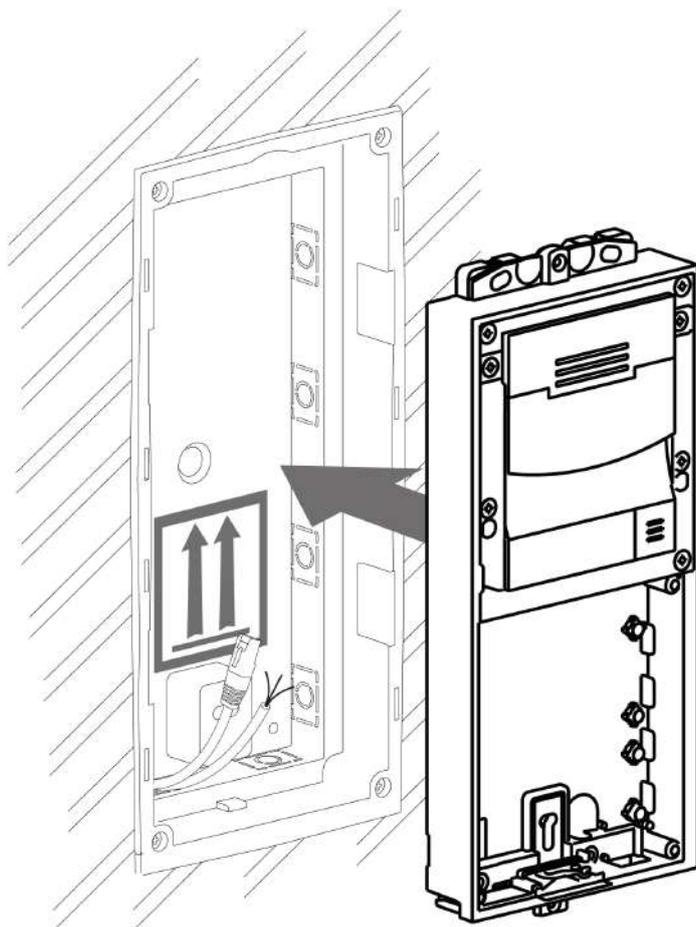


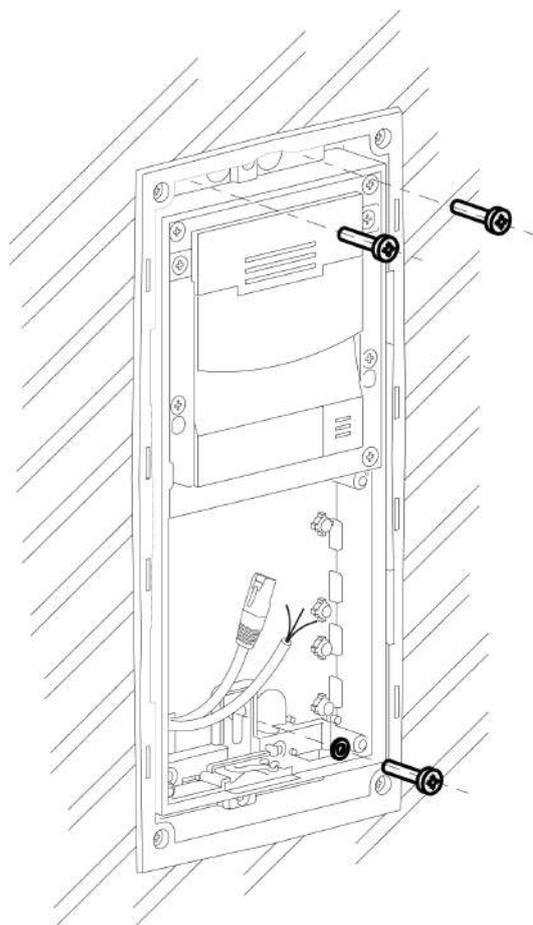
Flush module mounting

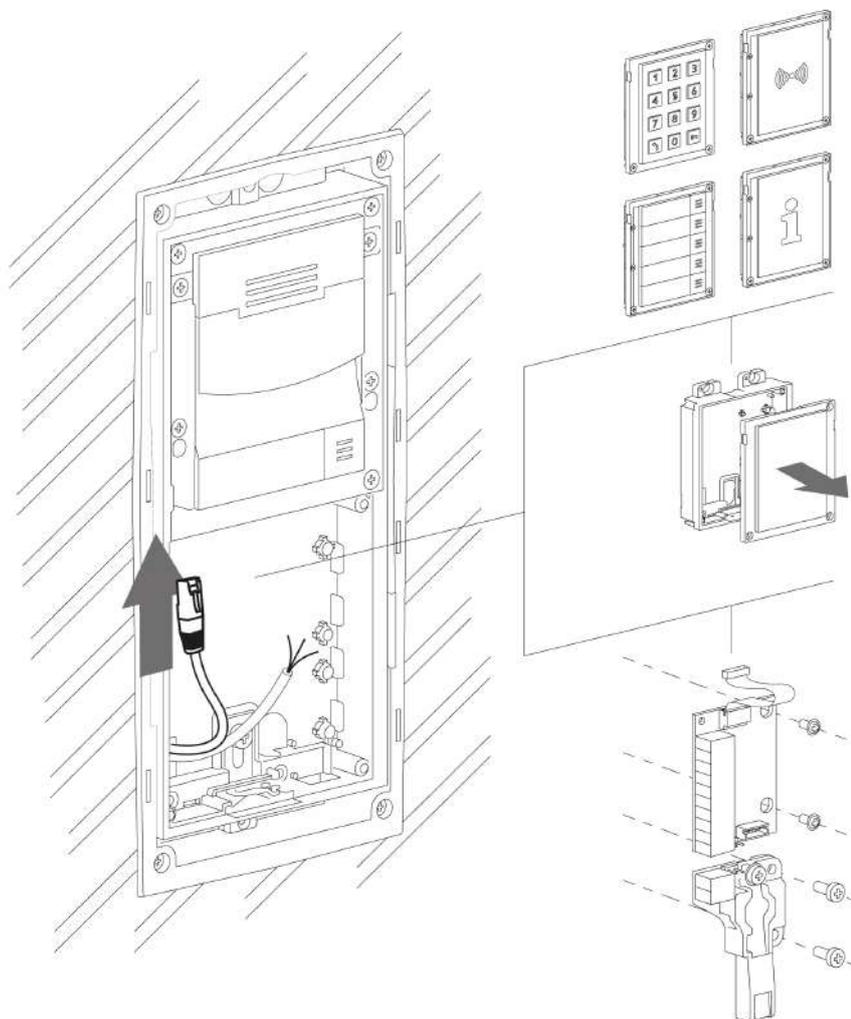


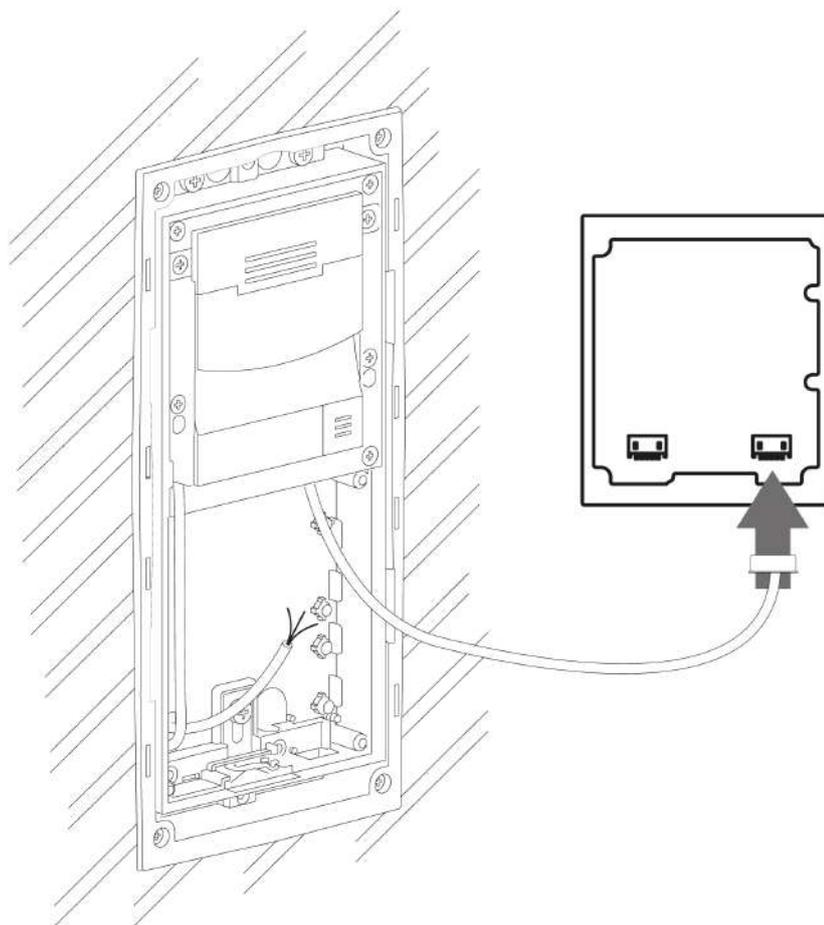


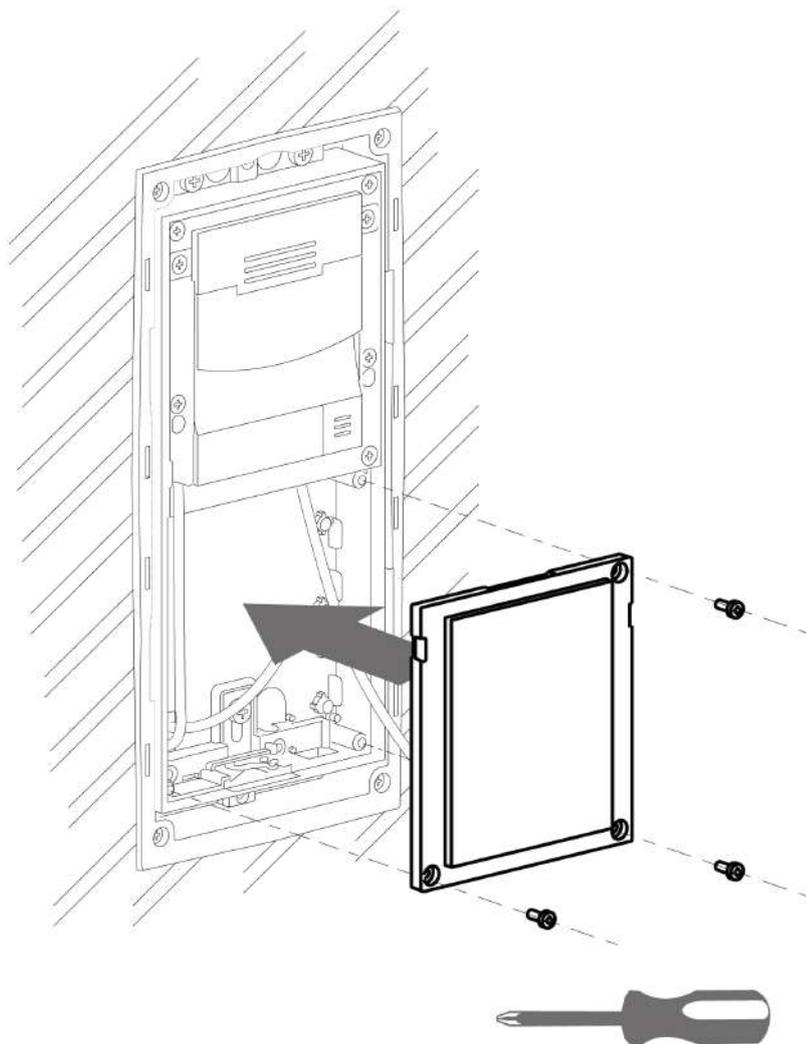


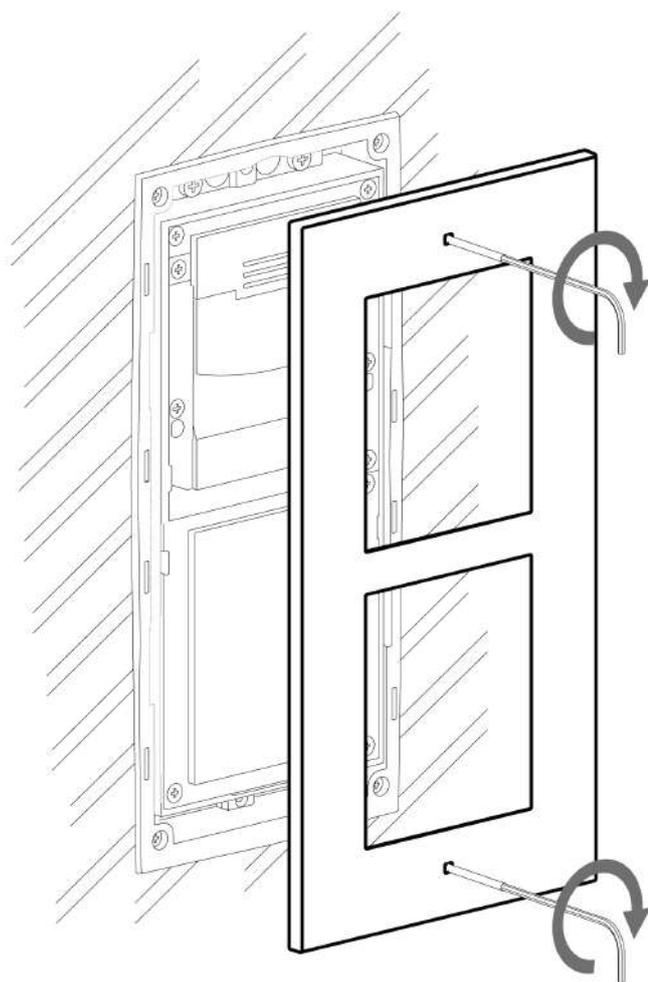


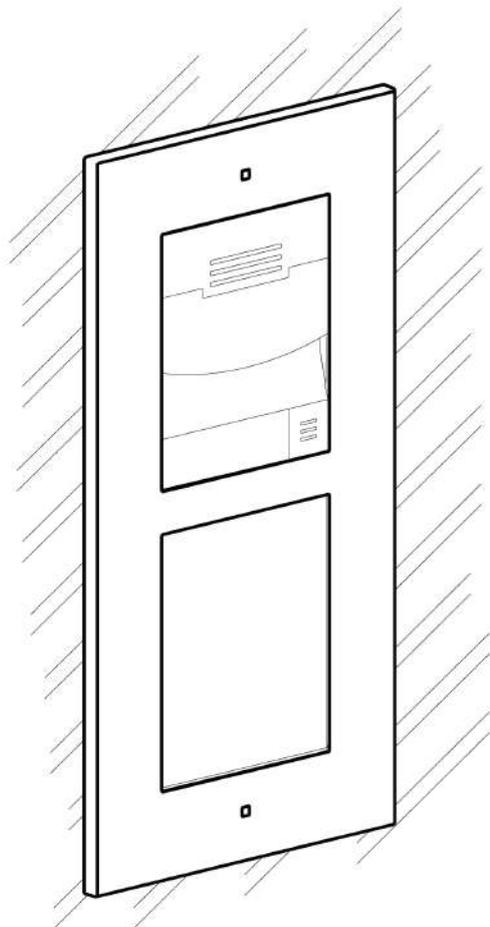




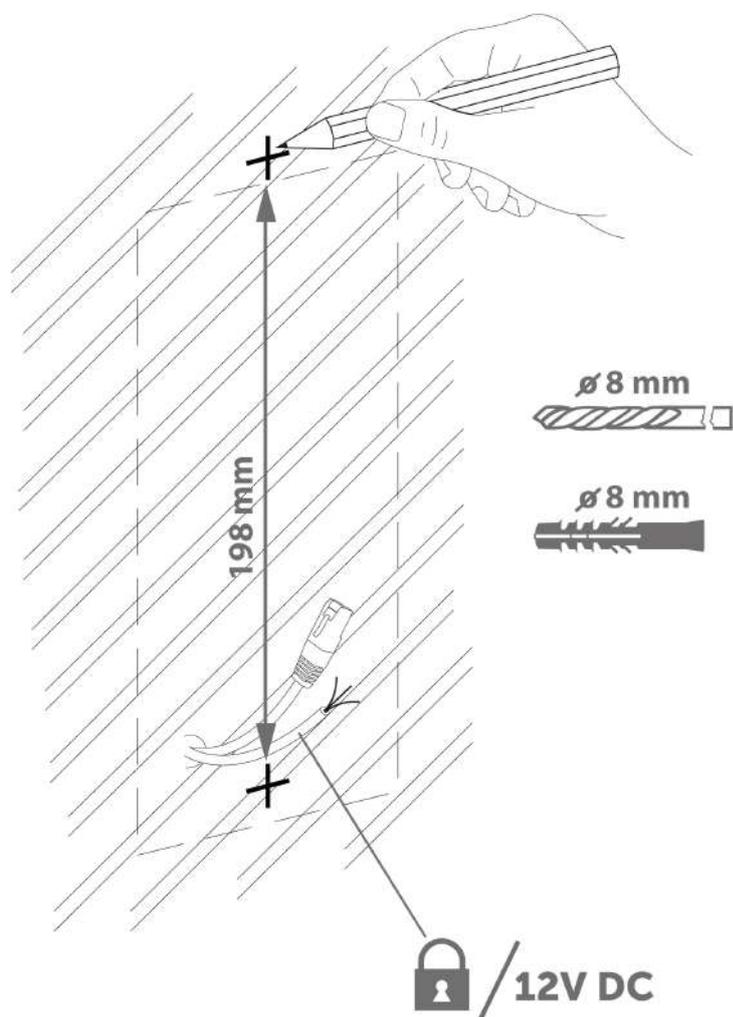


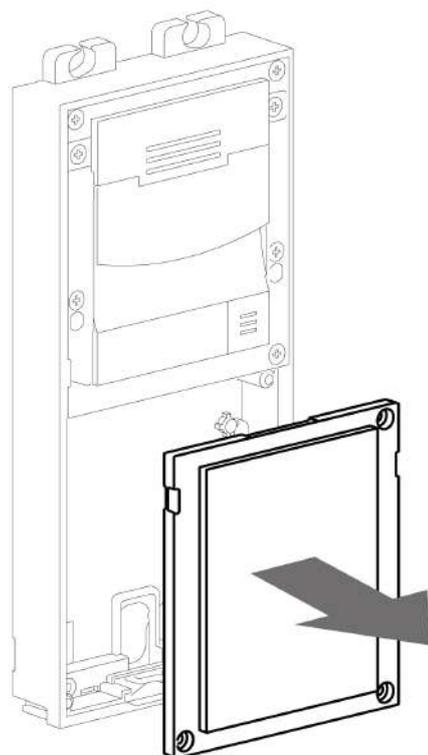


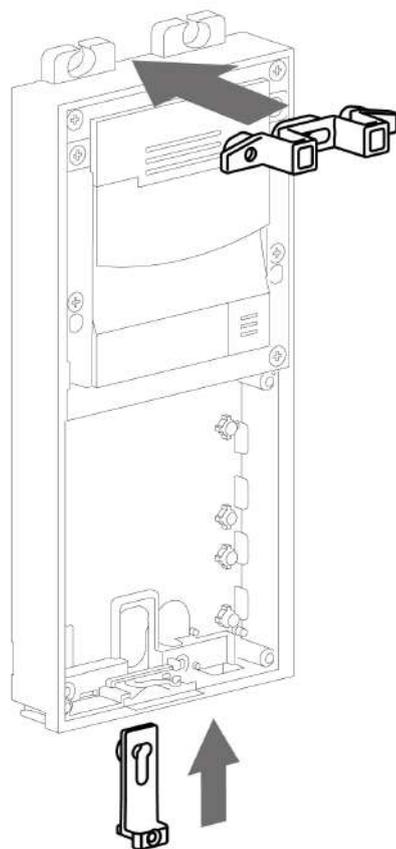


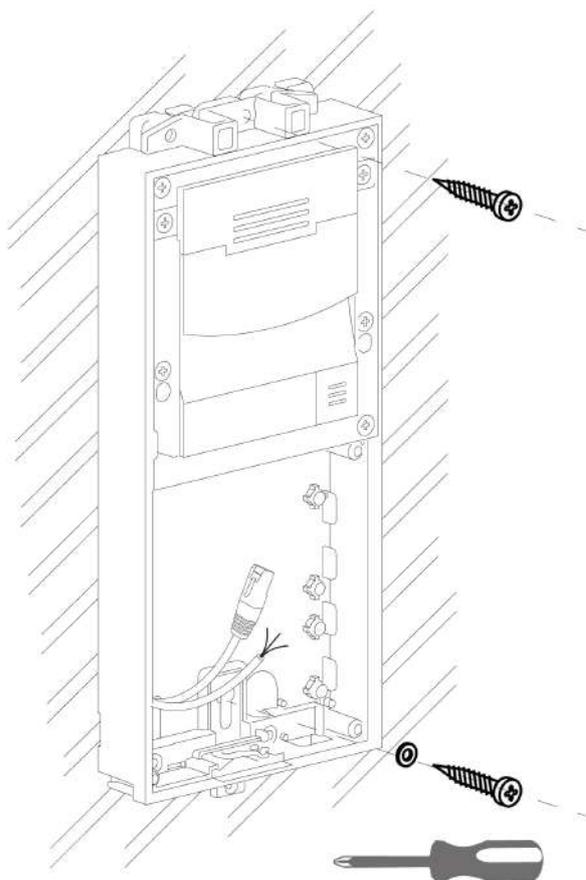


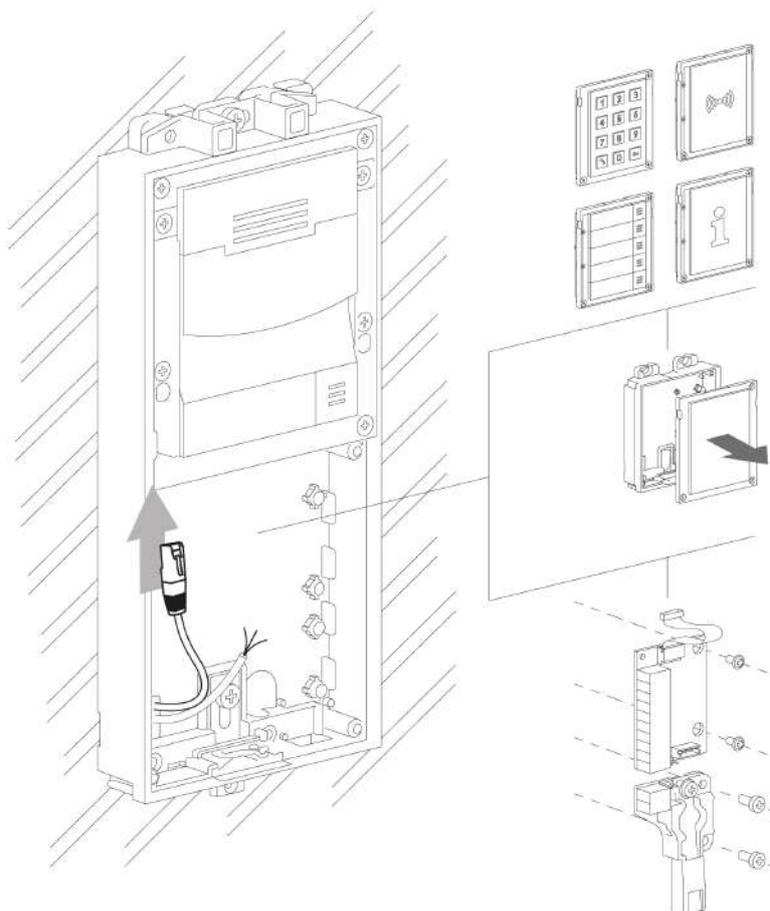
Surface module mounting

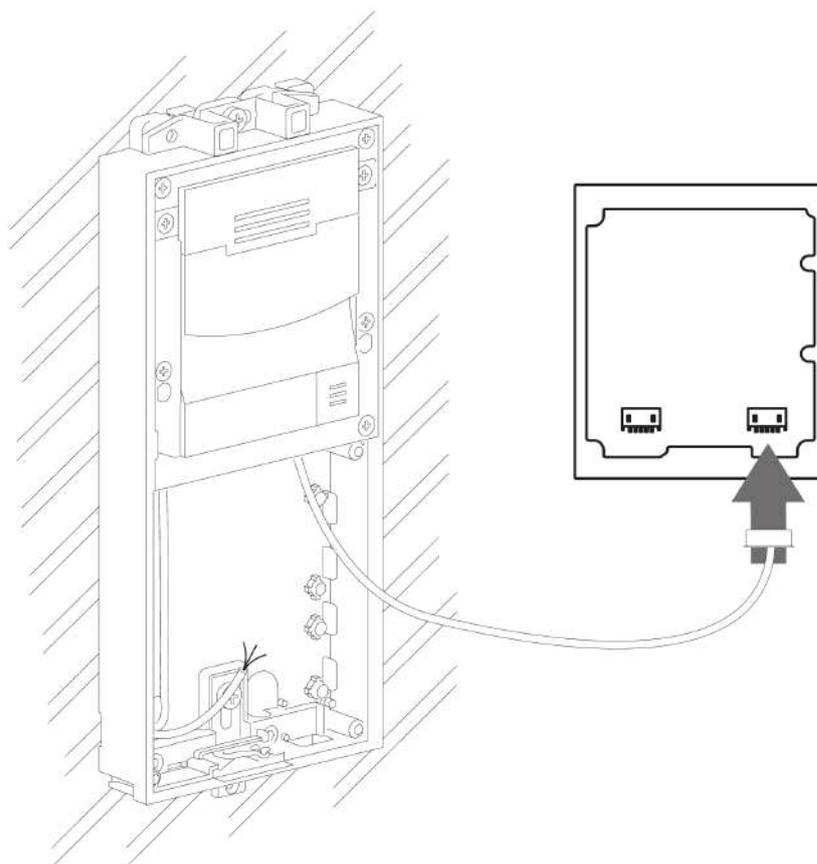


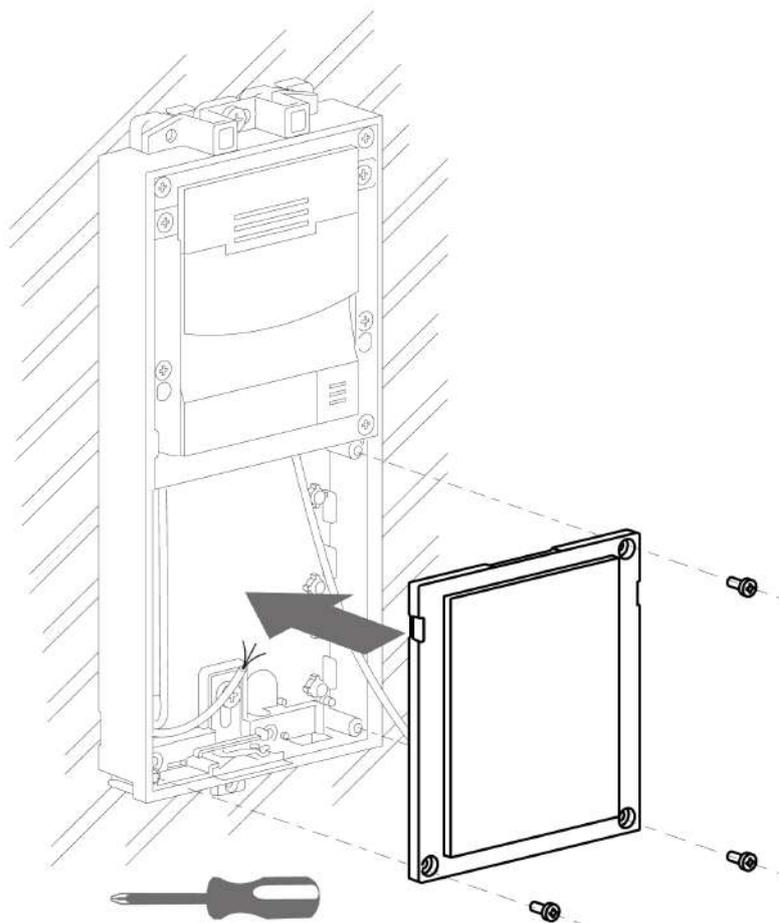


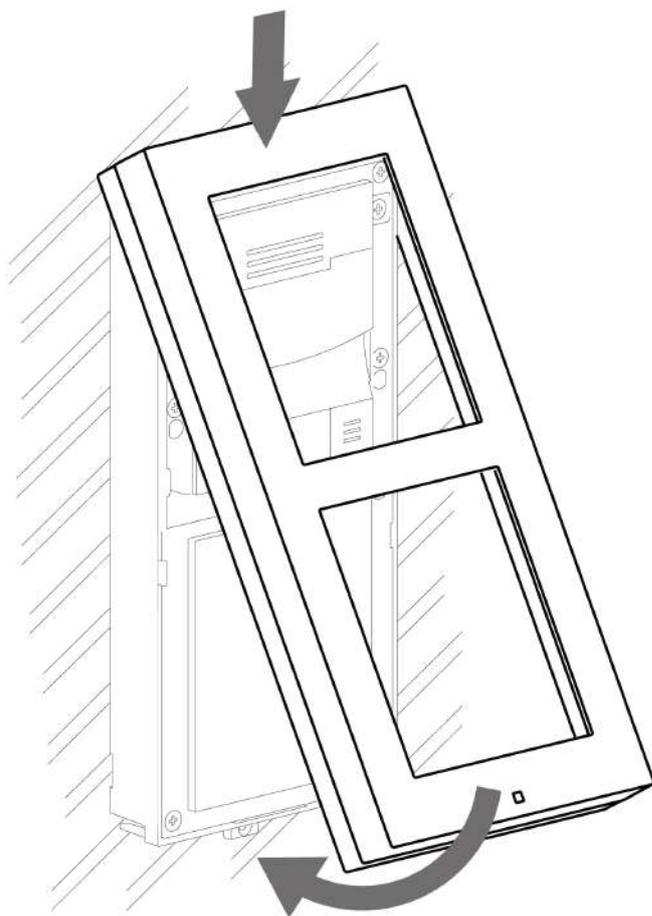


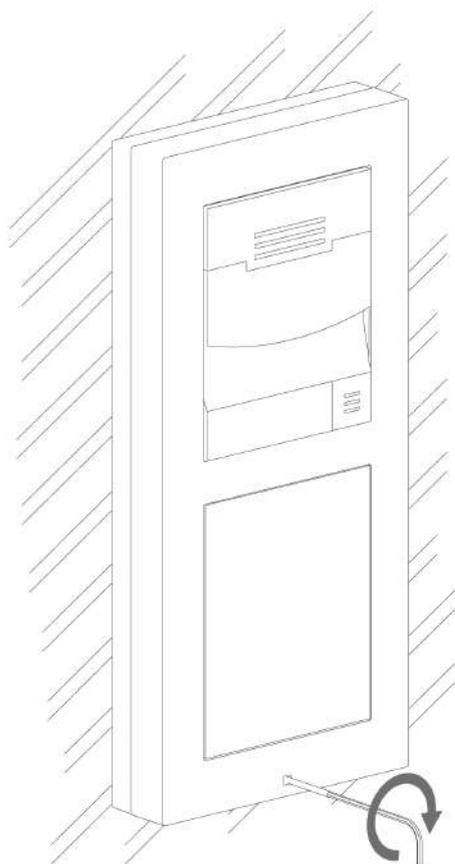


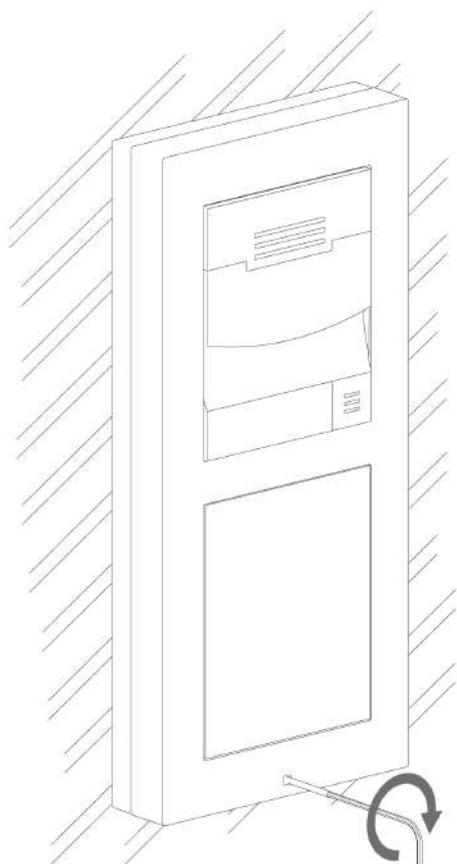






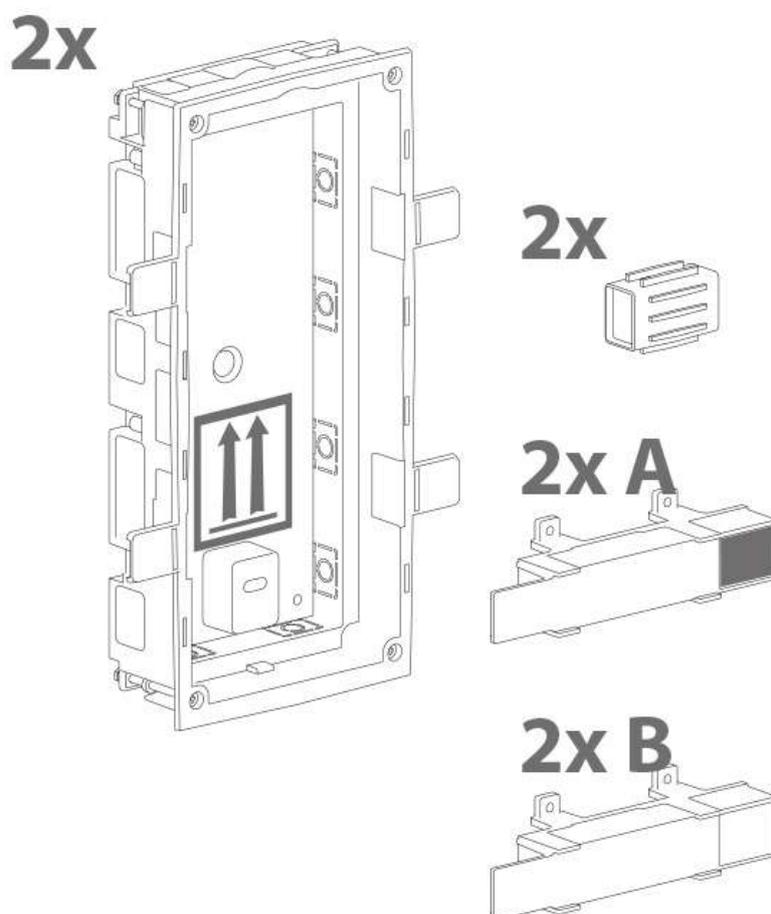




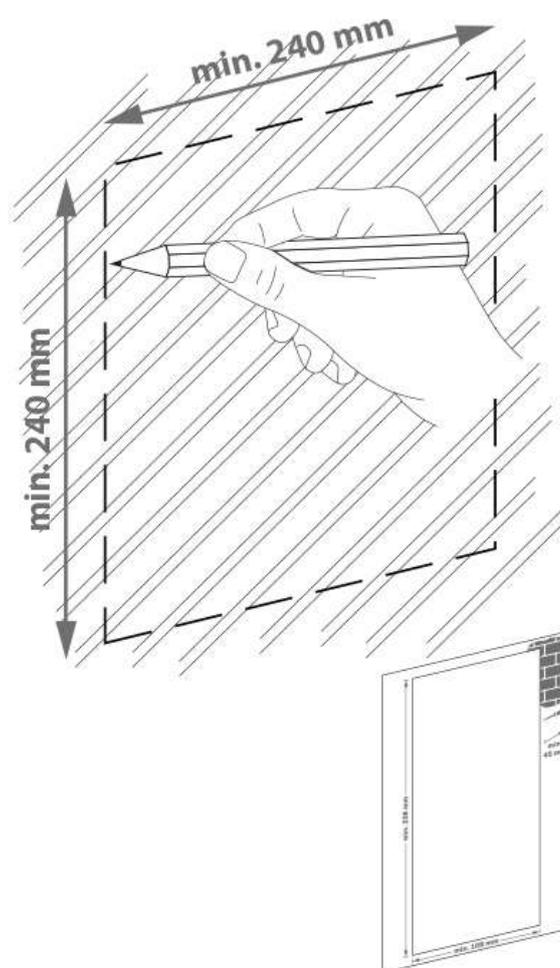


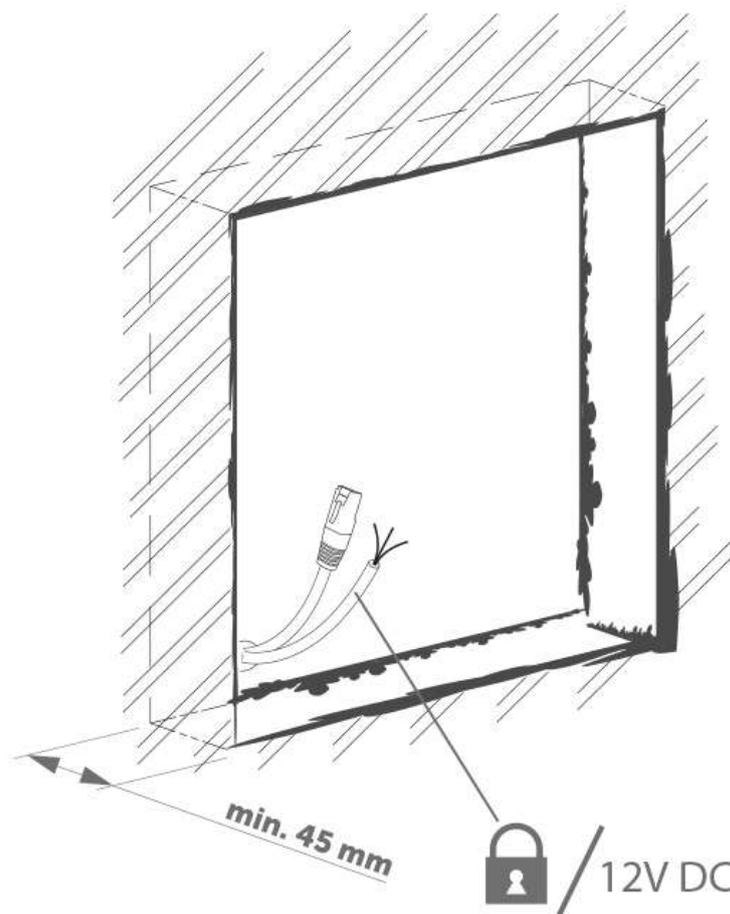
2.2.3 More Two Module Boxes

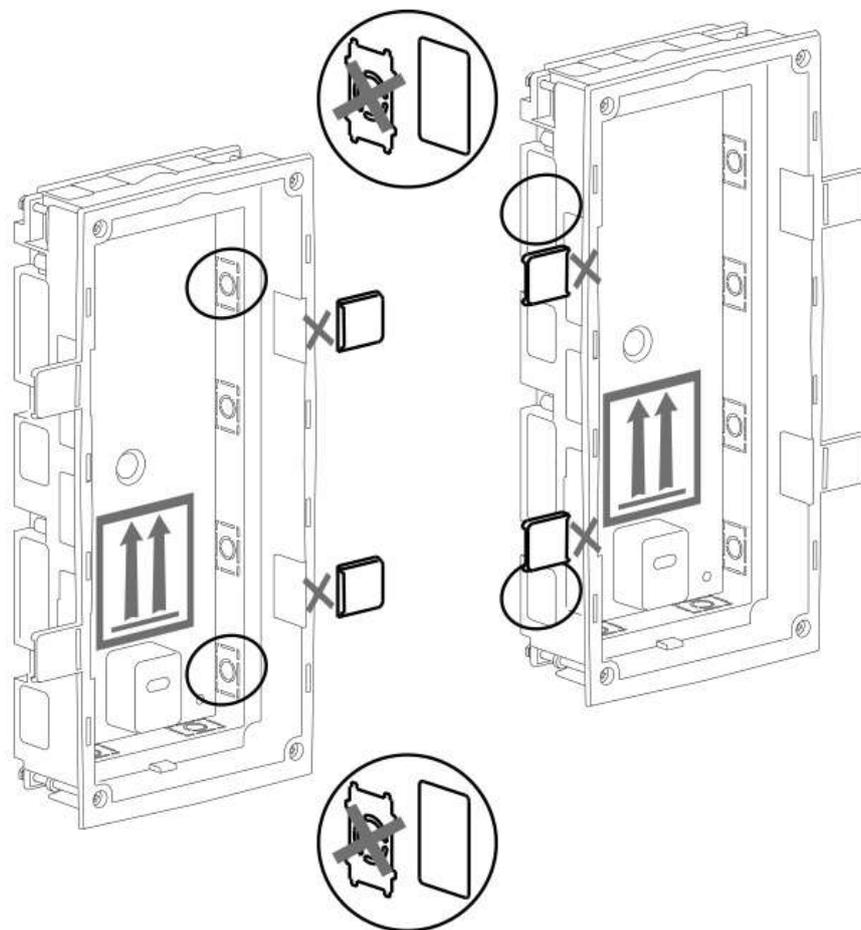
Flush mounting box mounting - classic bricks

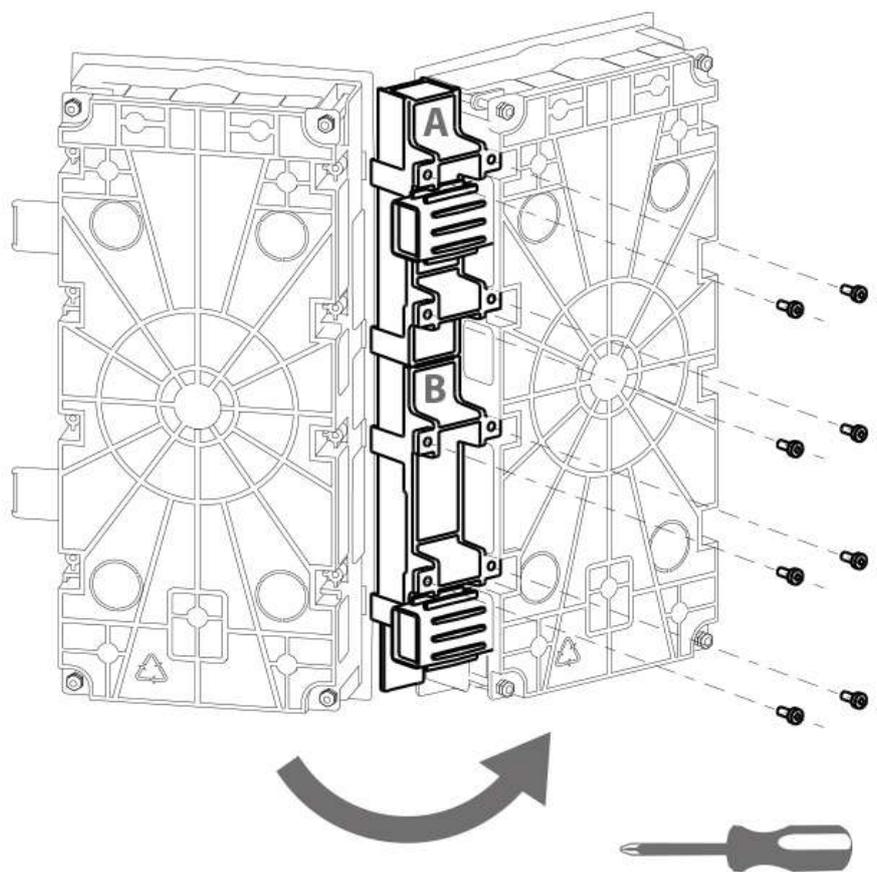


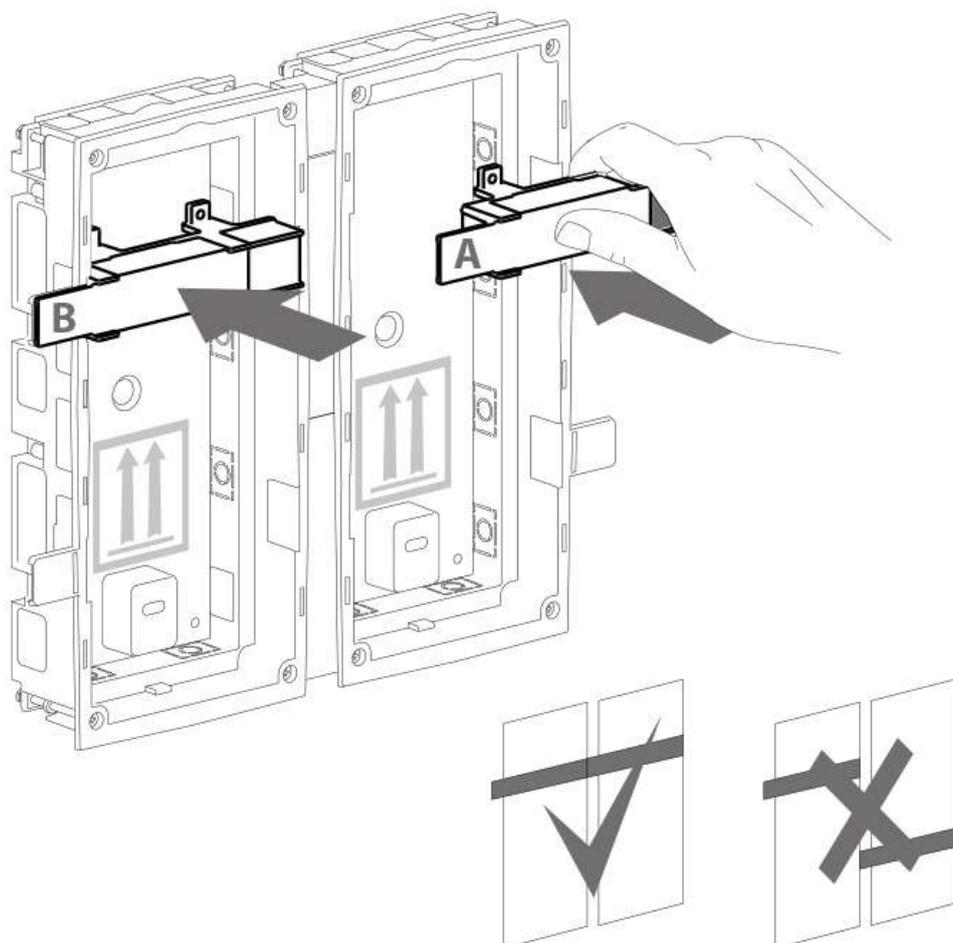
min 240(W) x 240(H) x 45(D) mm

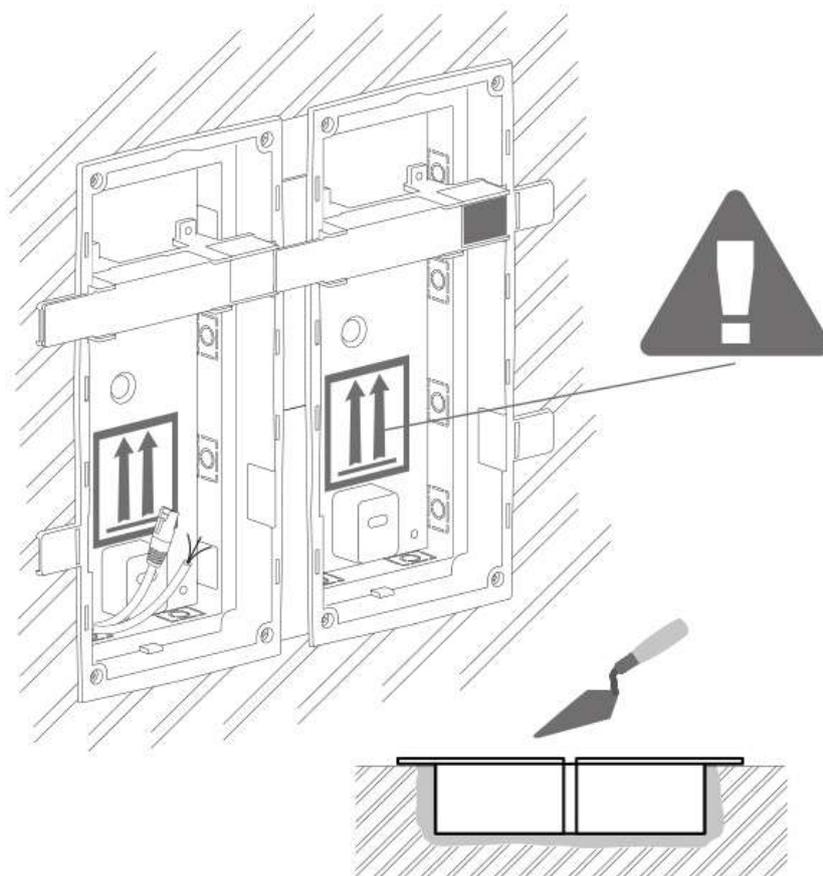


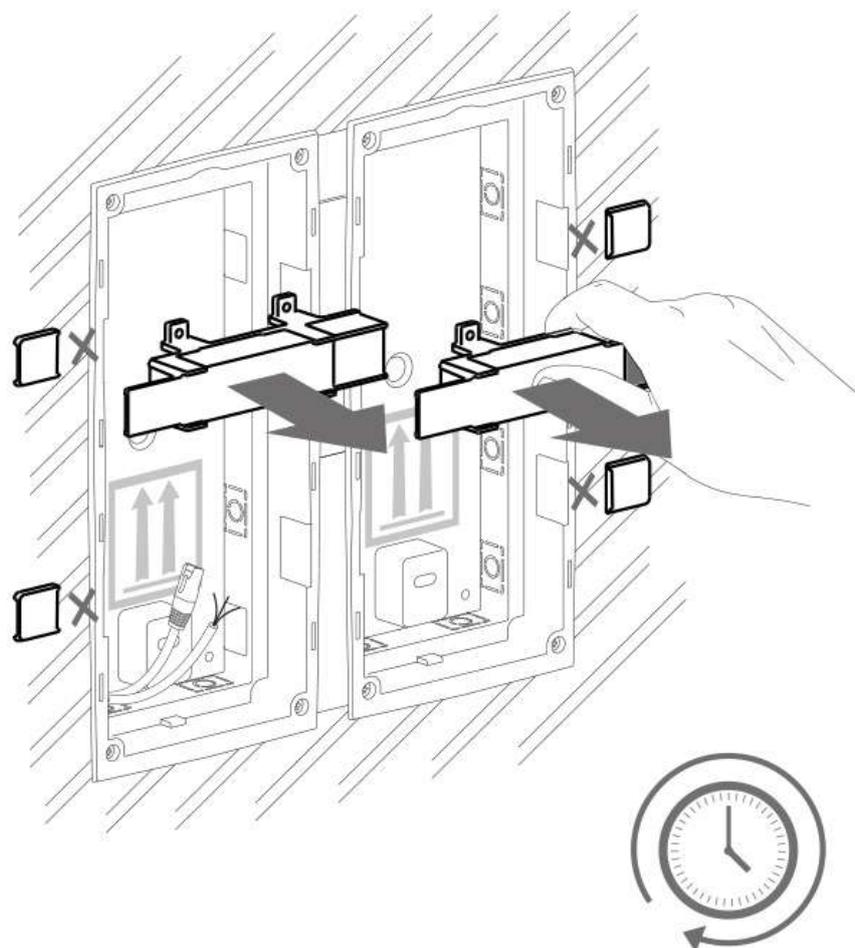


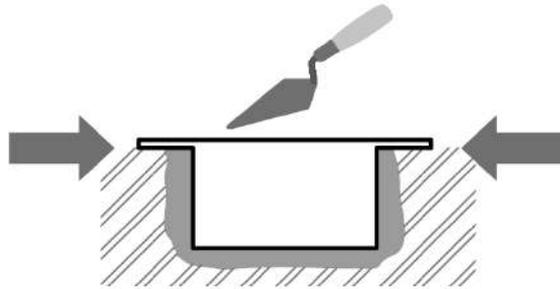




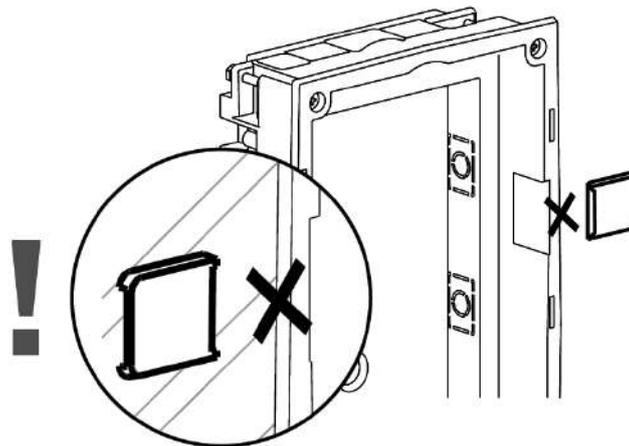




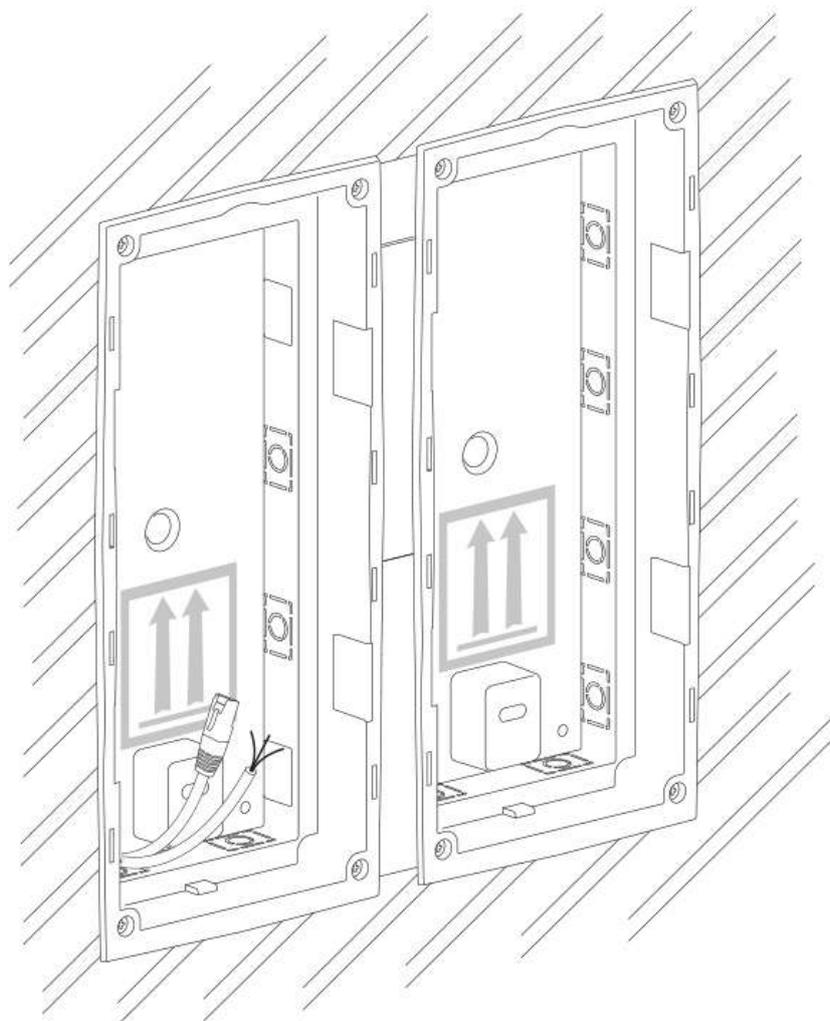


Warning

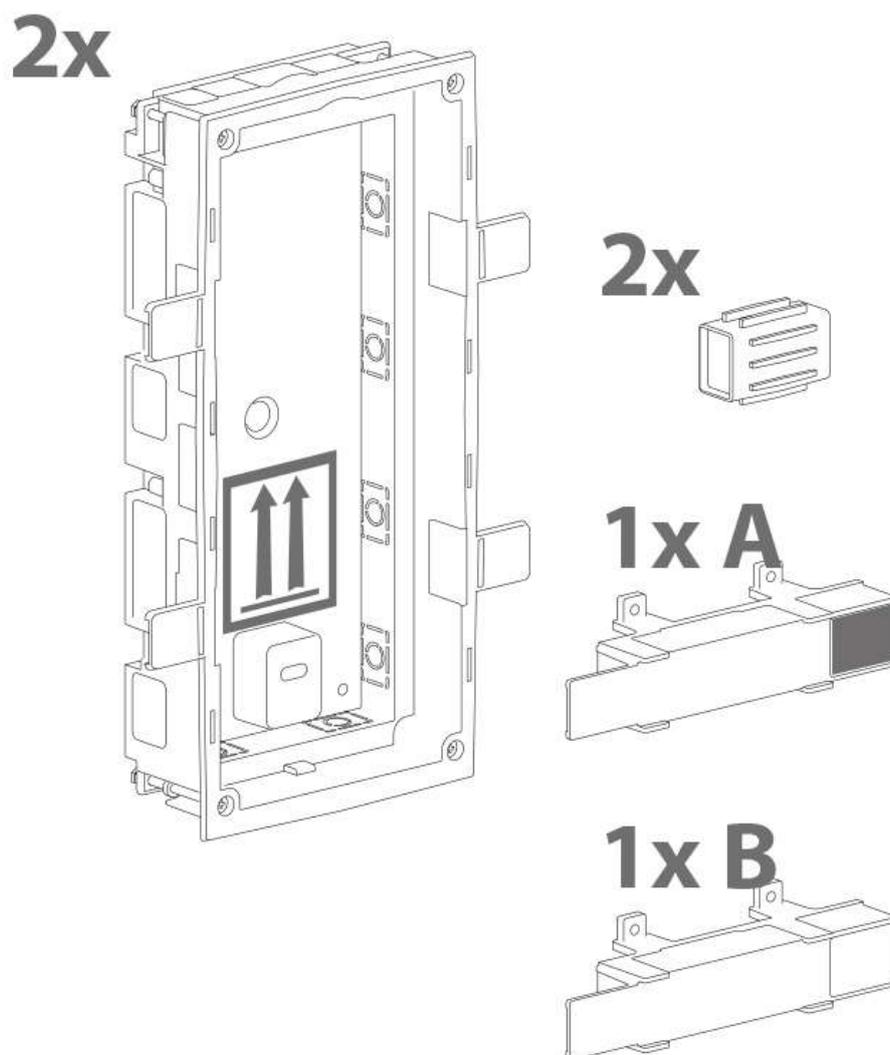
- Make sure that the flush mounting box is slightly above the wall surface not aligning with the wall. A wrong installation may lead to water penetration and subsequent damage of the device. Use the side protrusions to achieve the proper flush mounting.

Caution

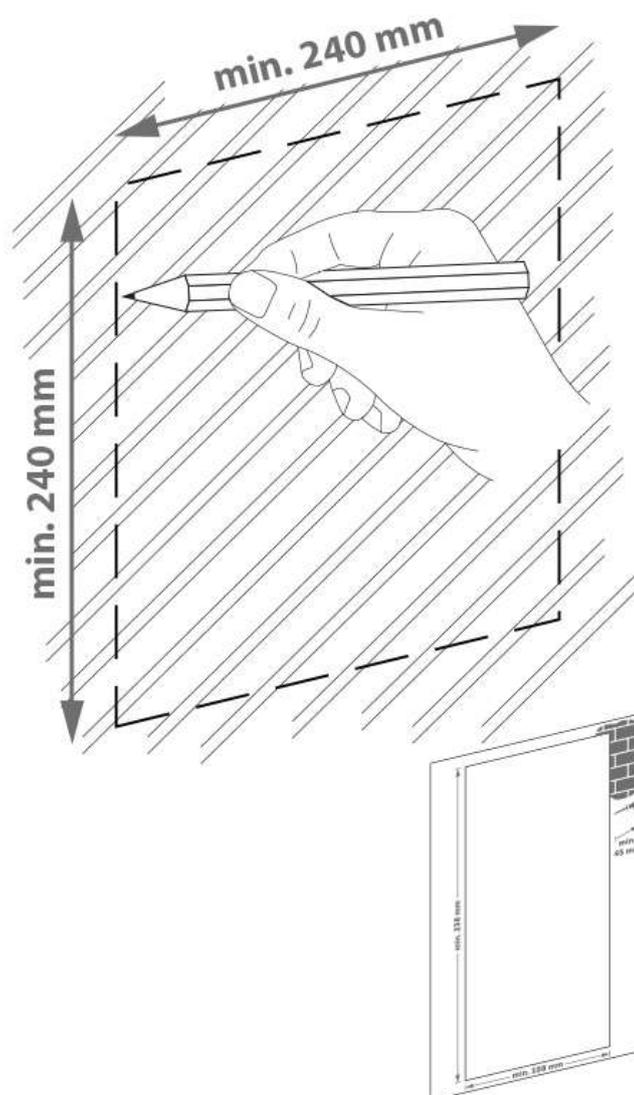
- Break off the side protrusions when the walling material has hardened.

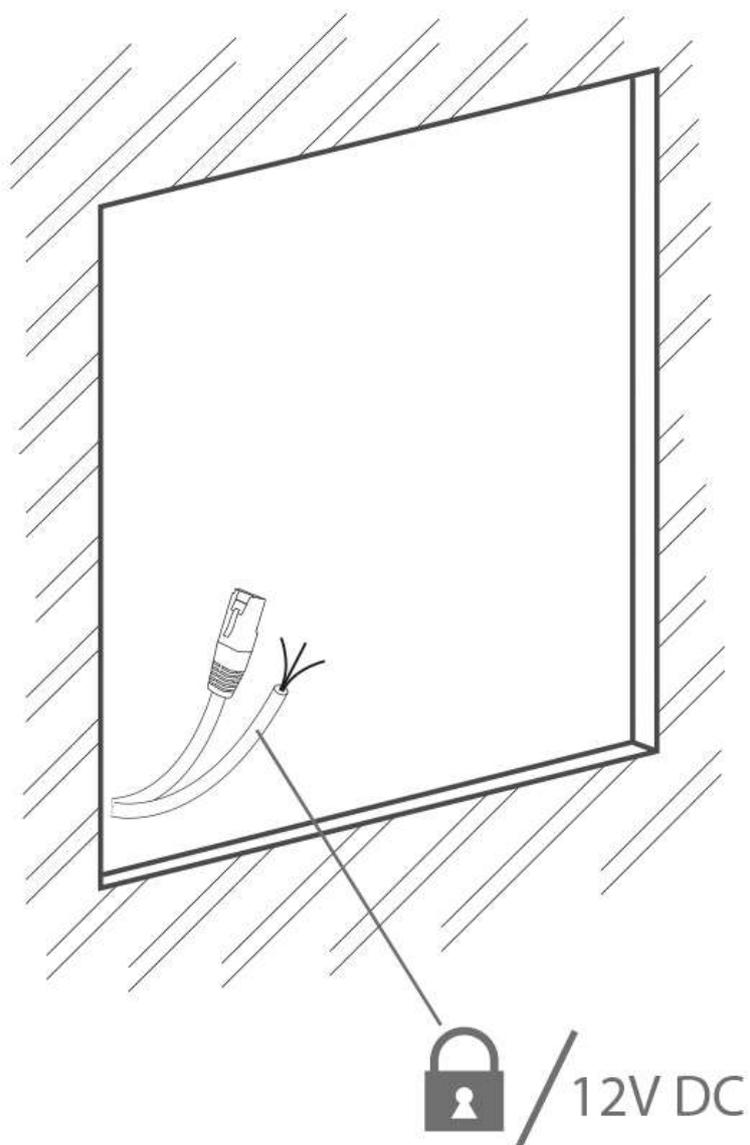


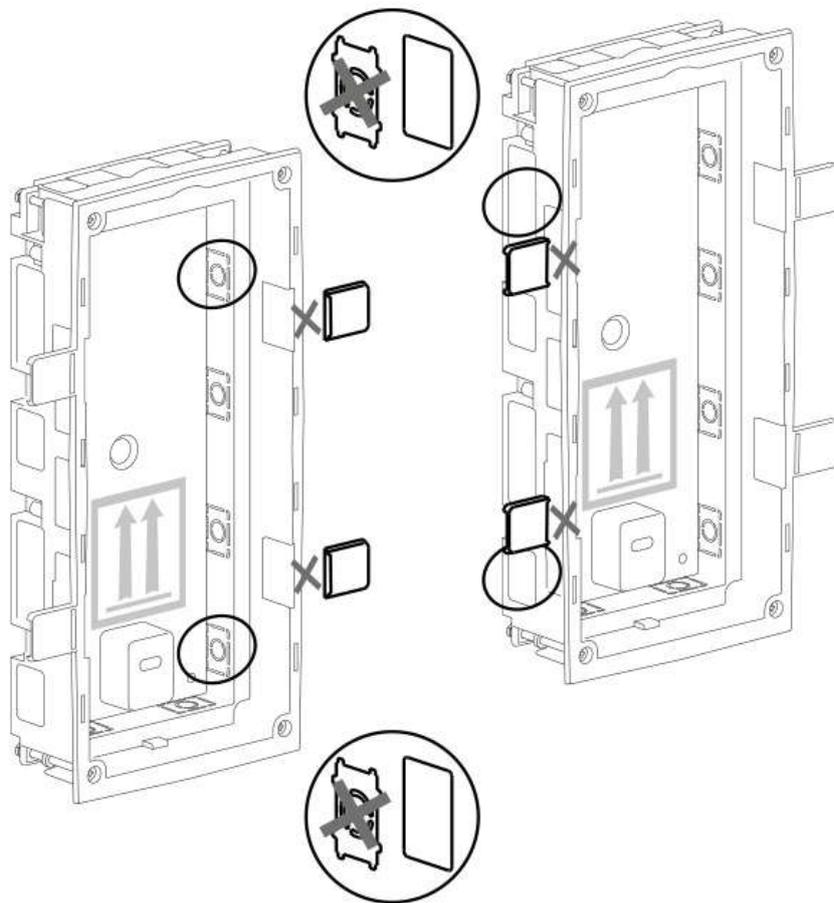
Flush mounting box mounting - plasterboard

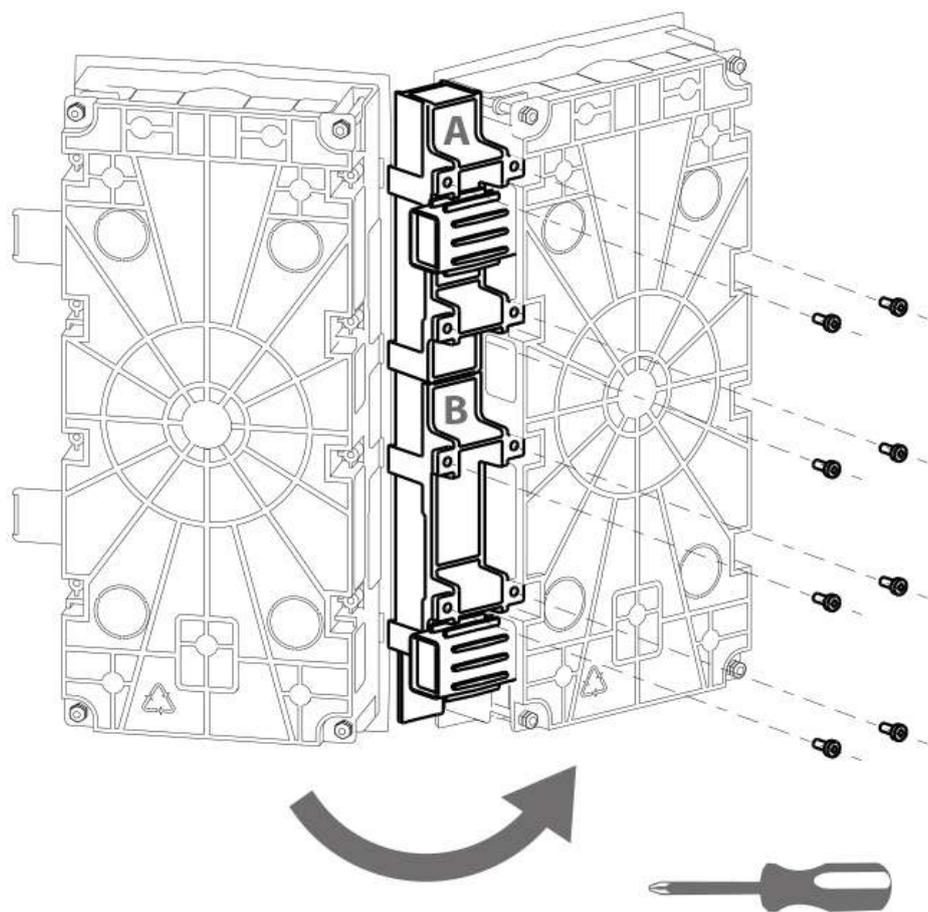


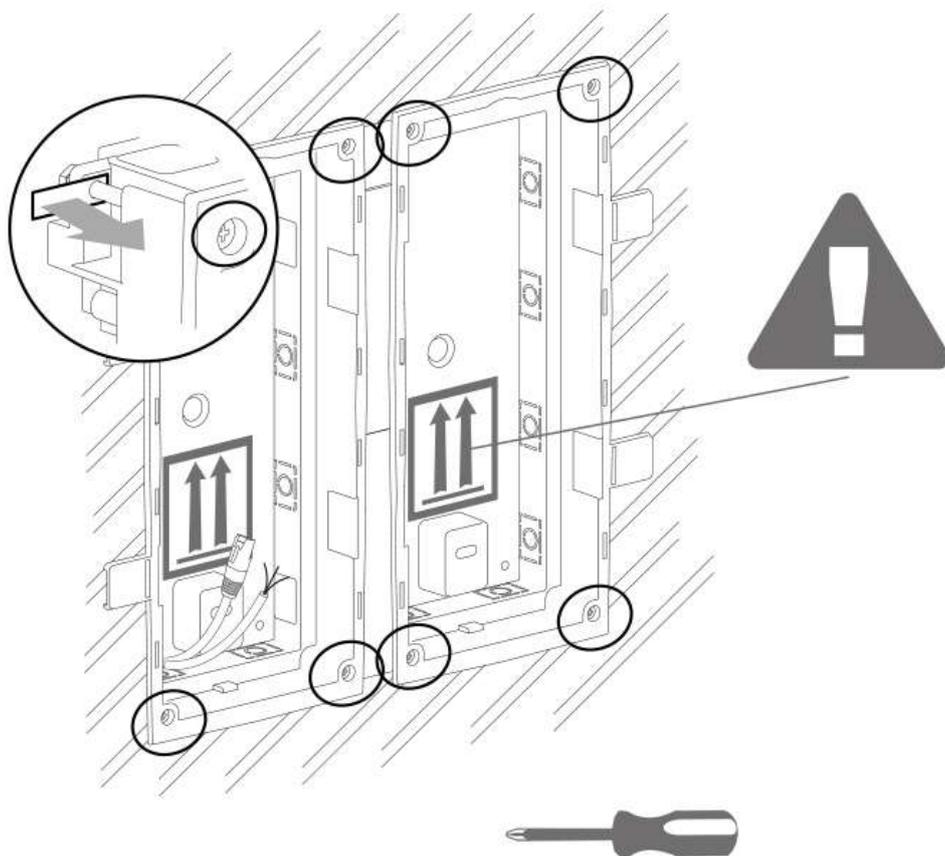
min 240(W) x 240(H)

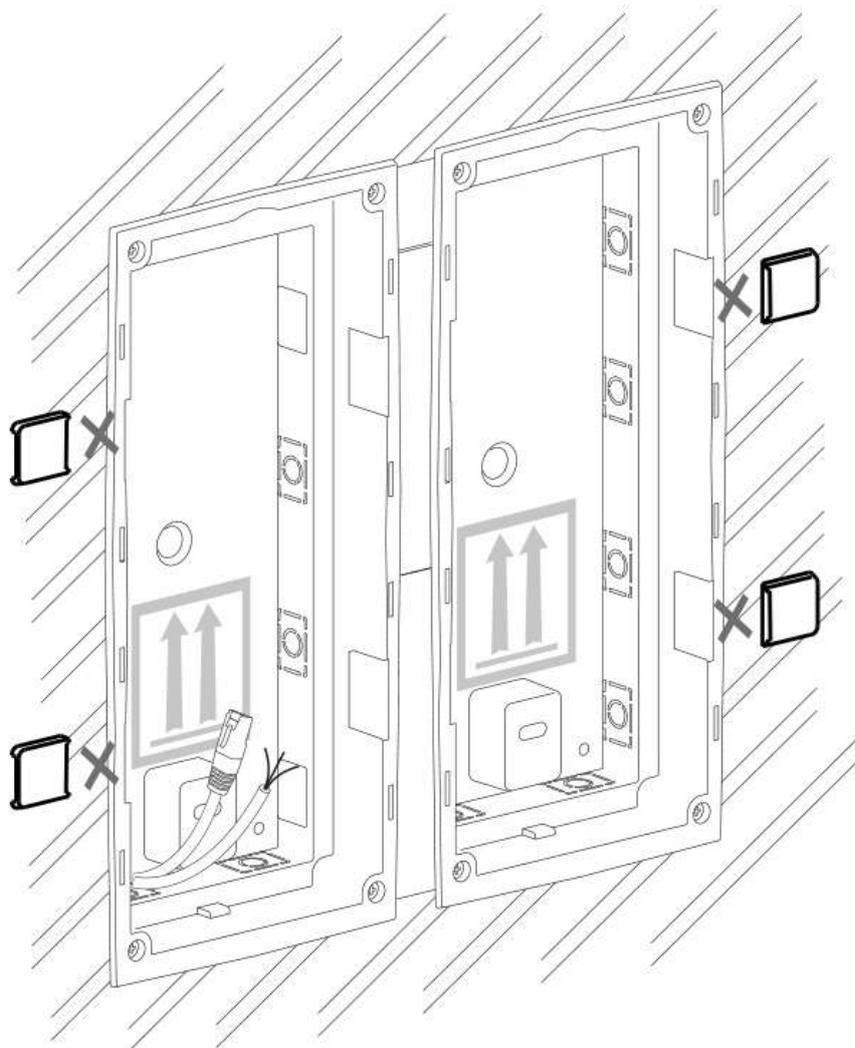


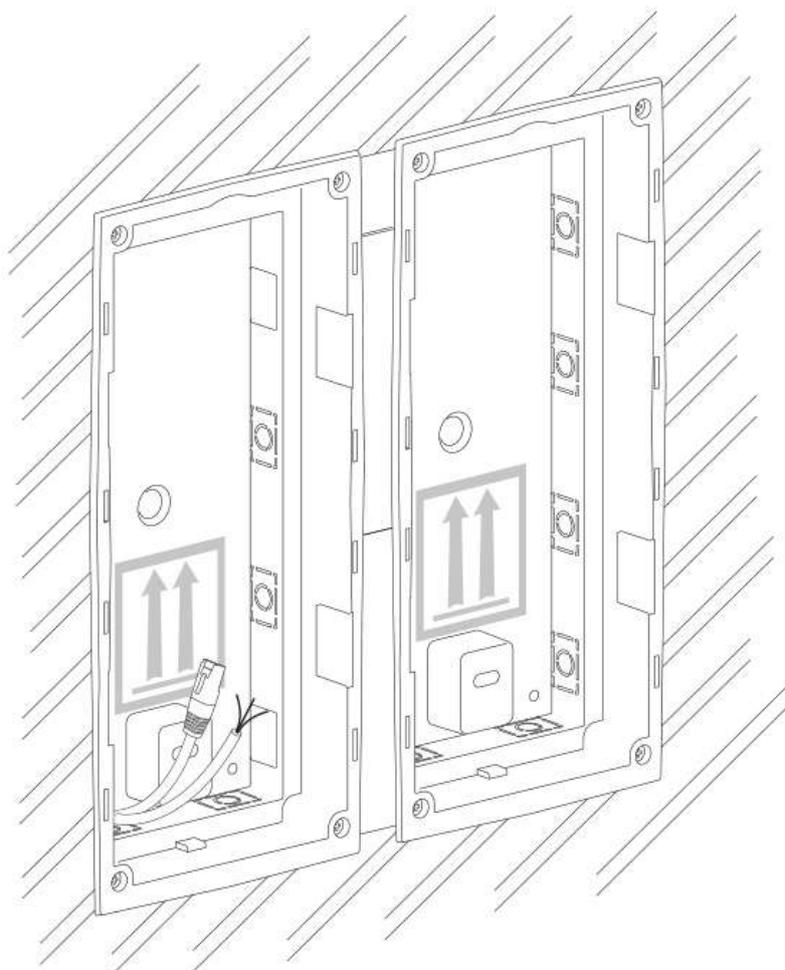




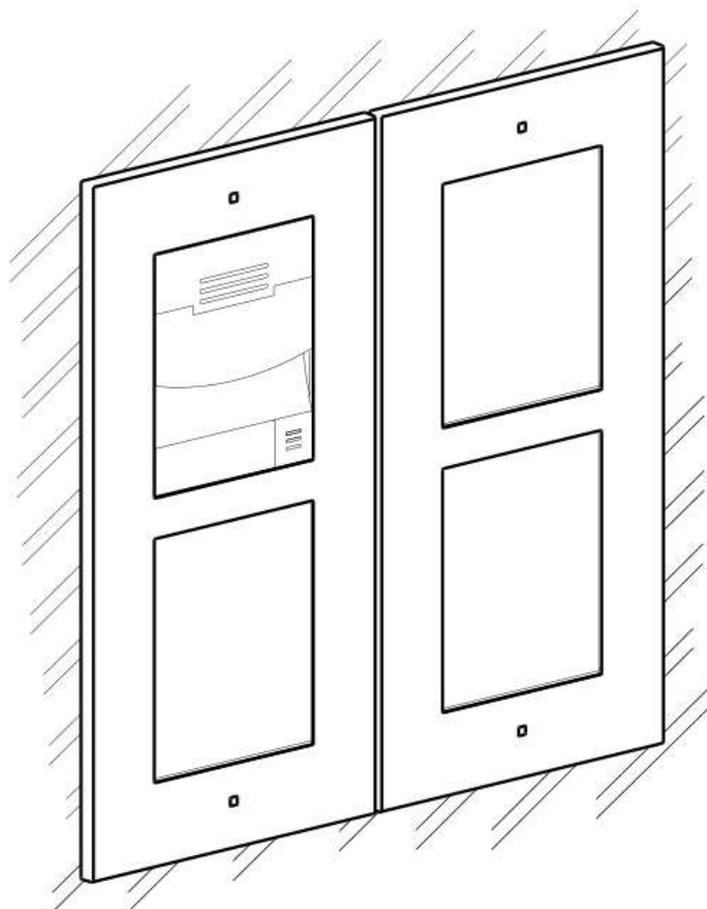


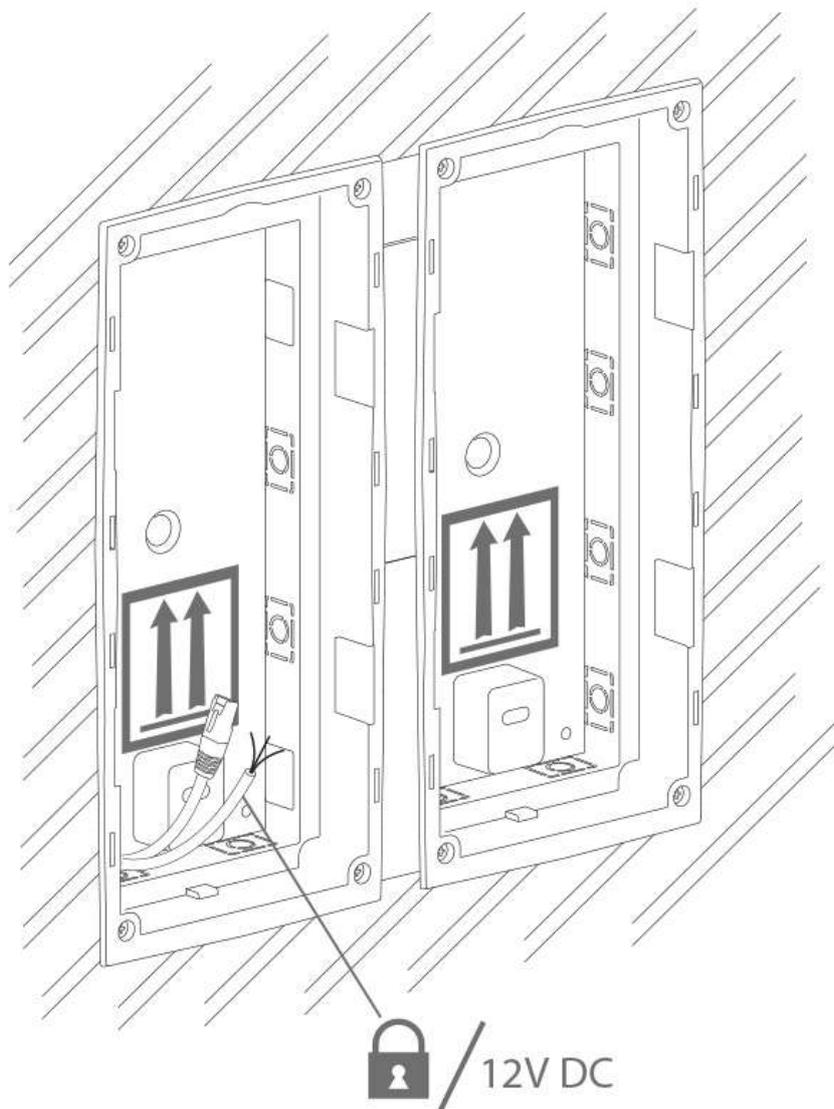


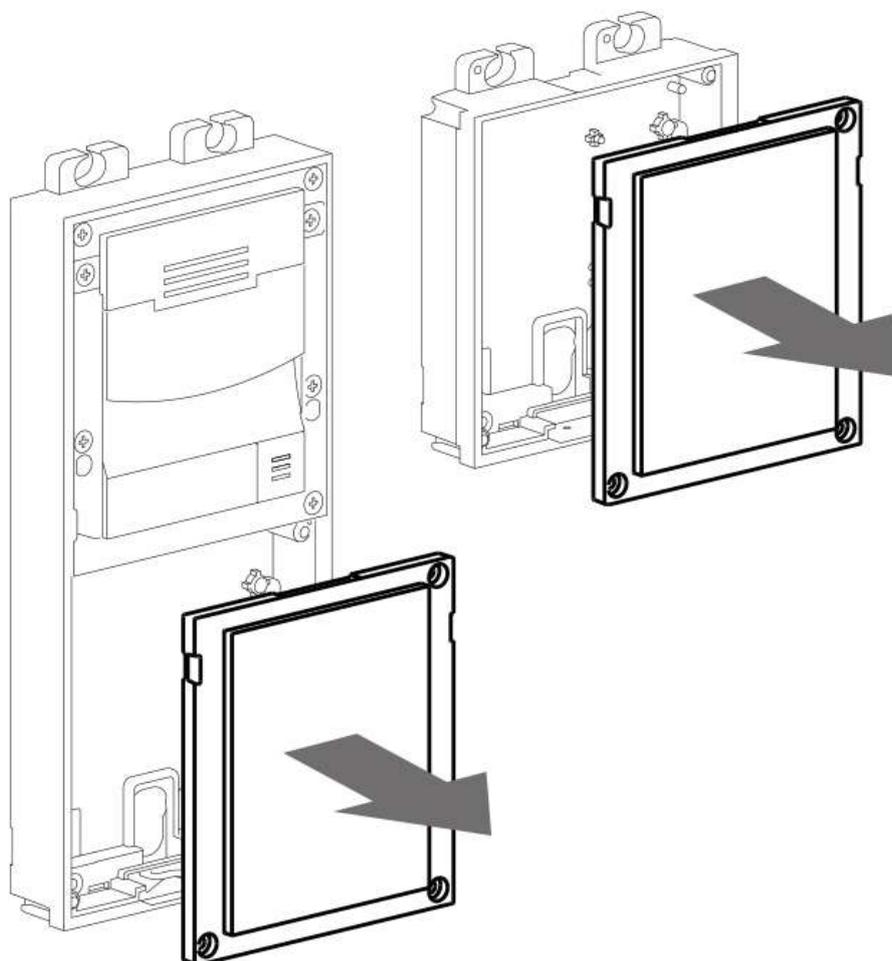


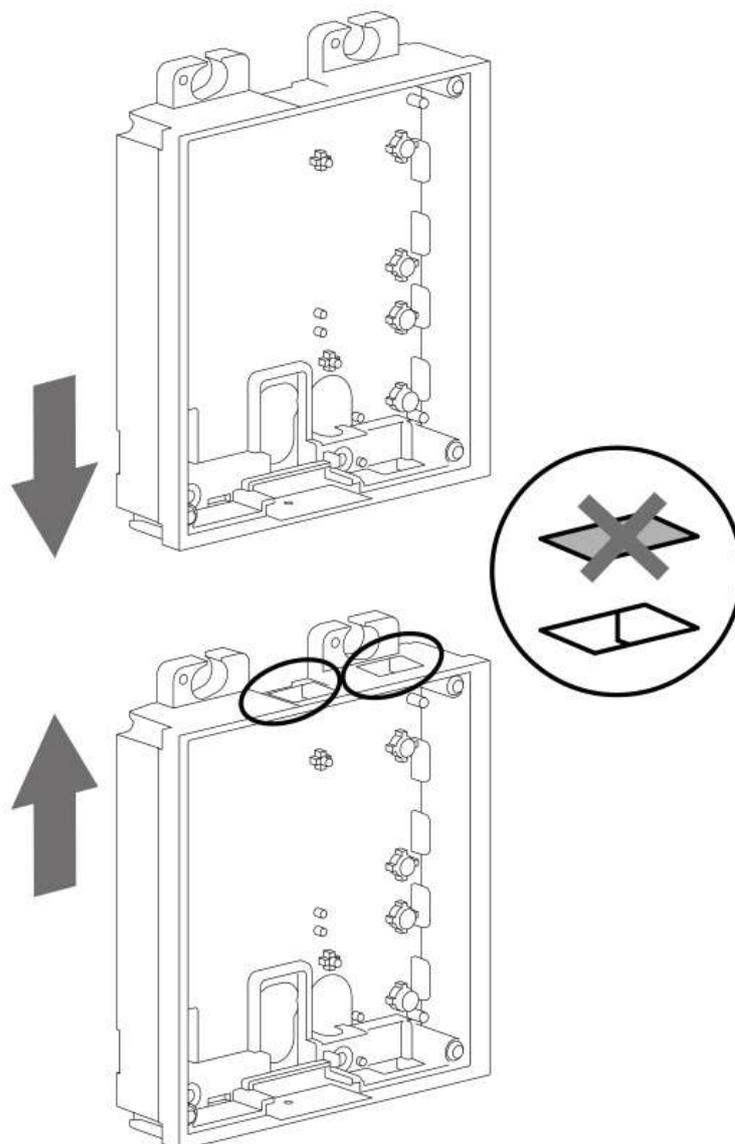


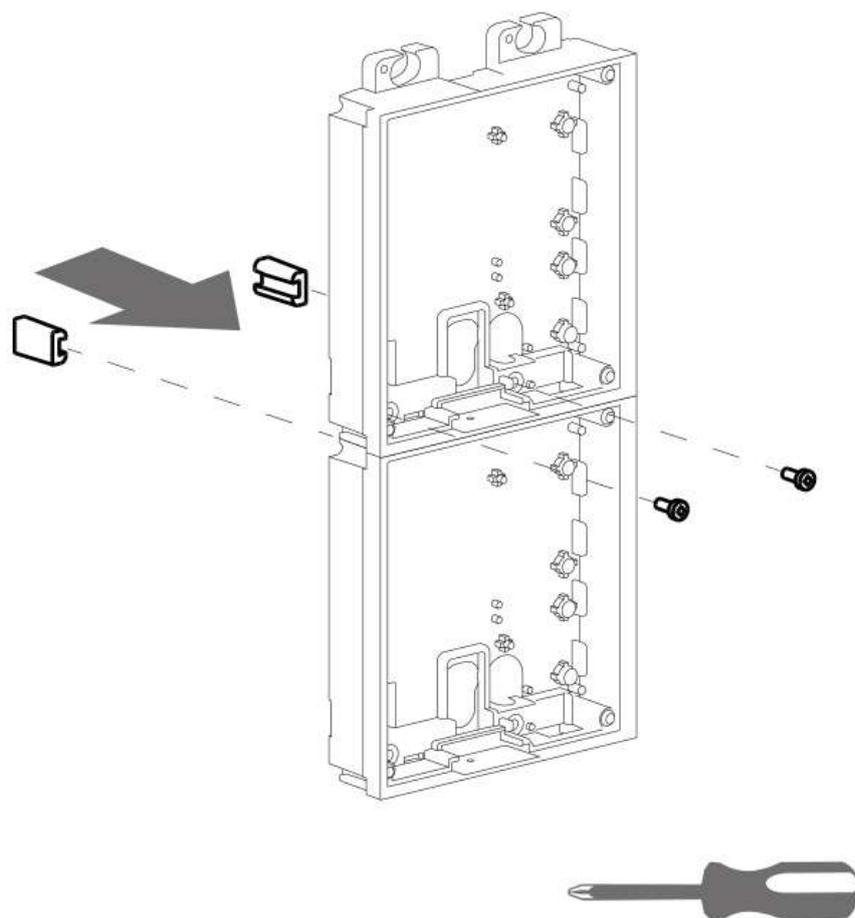
Flush module mounting

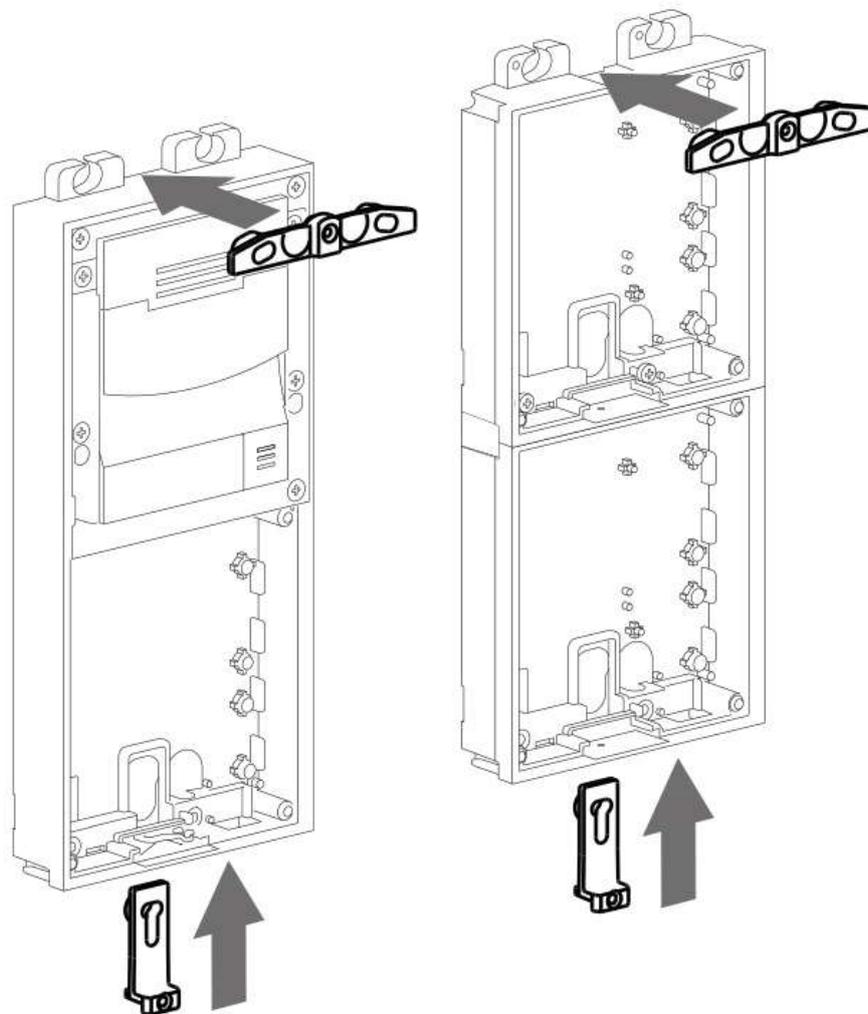


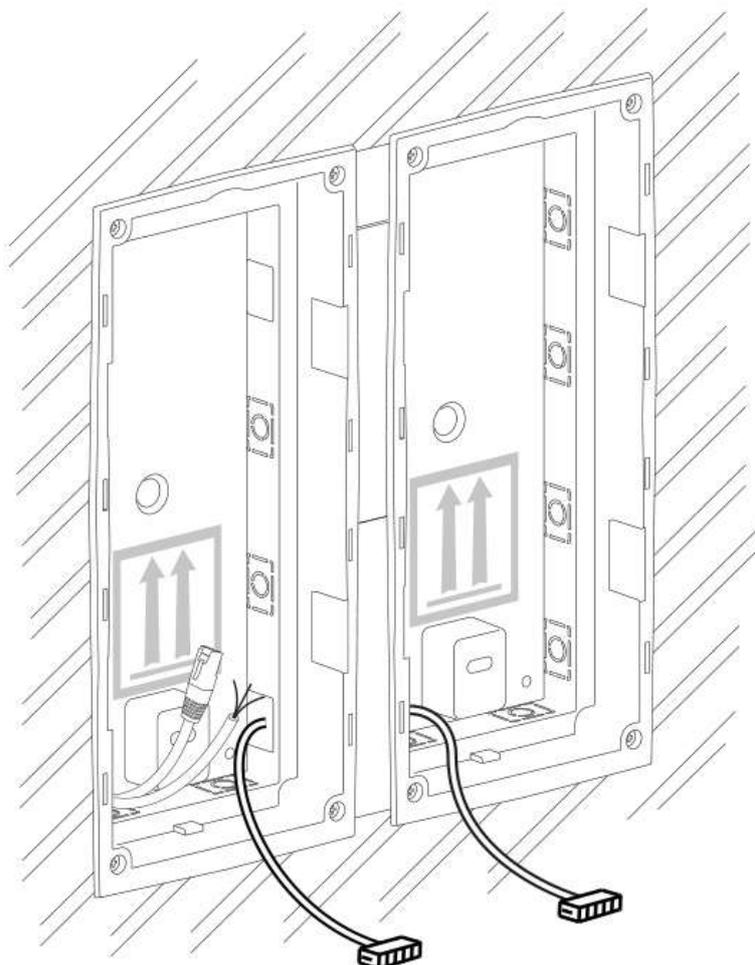


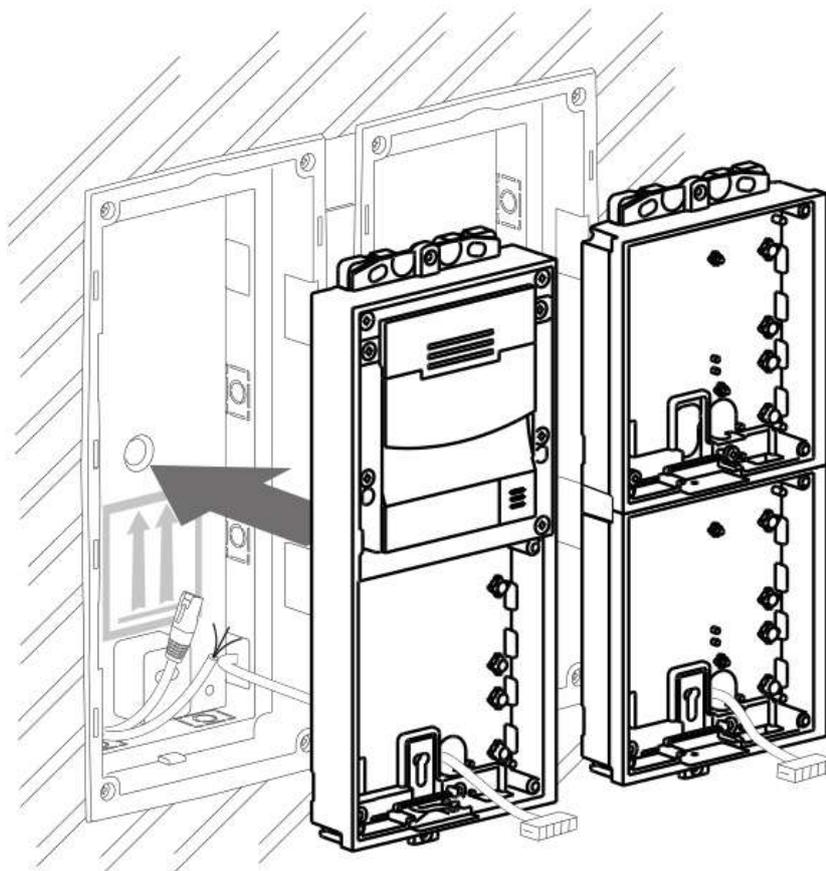


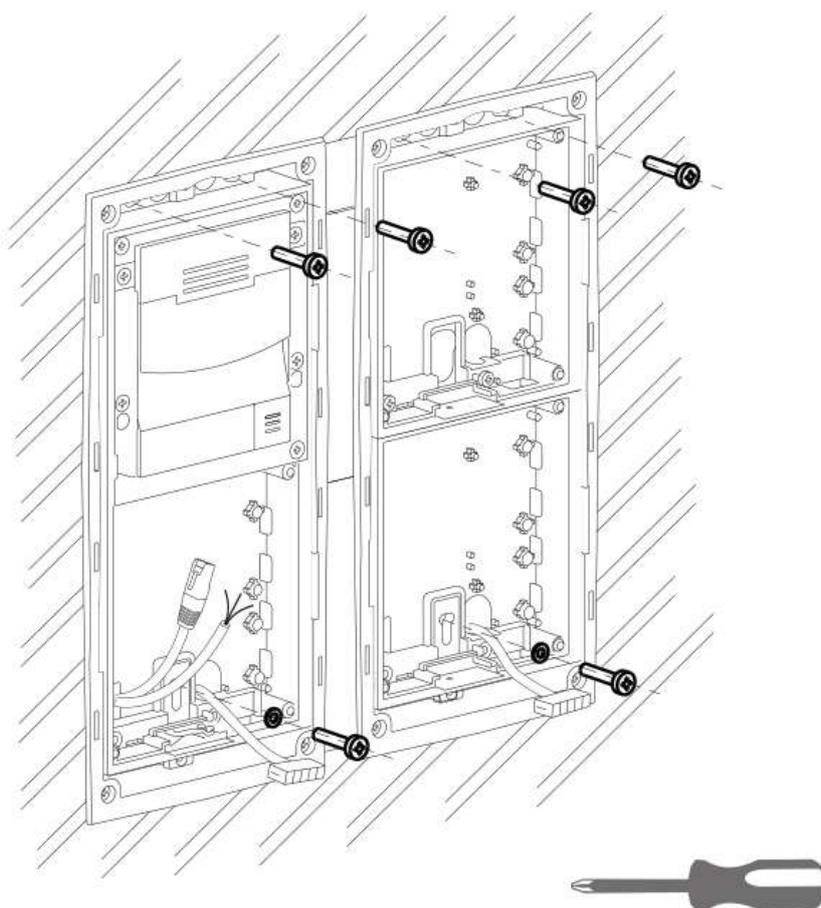


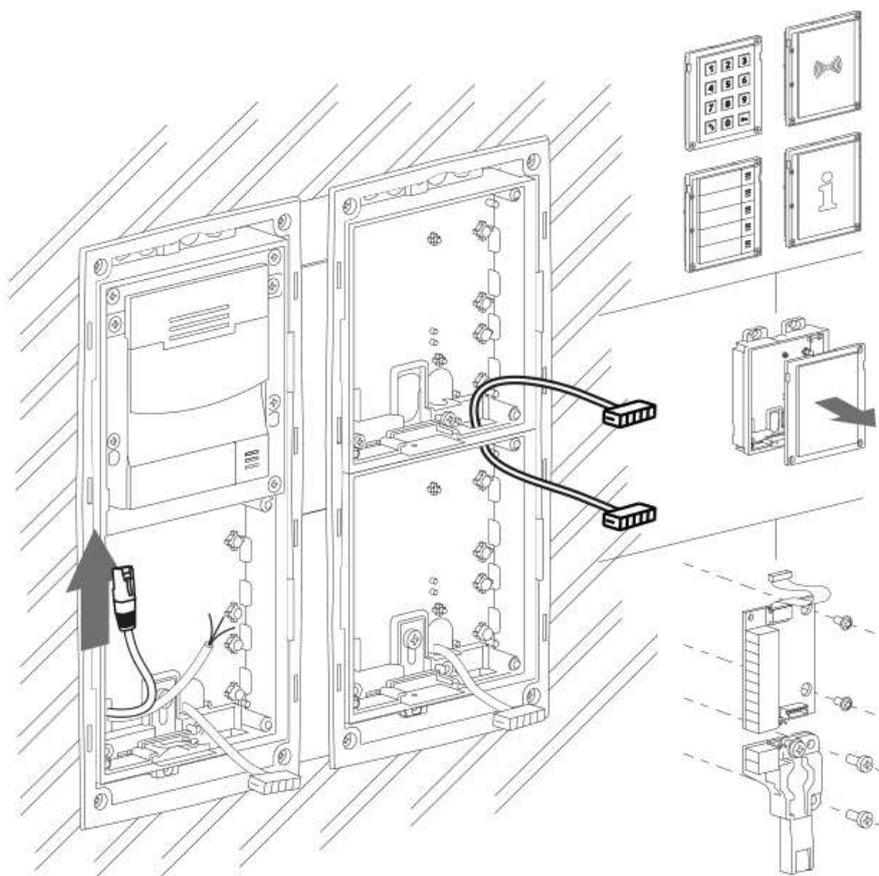


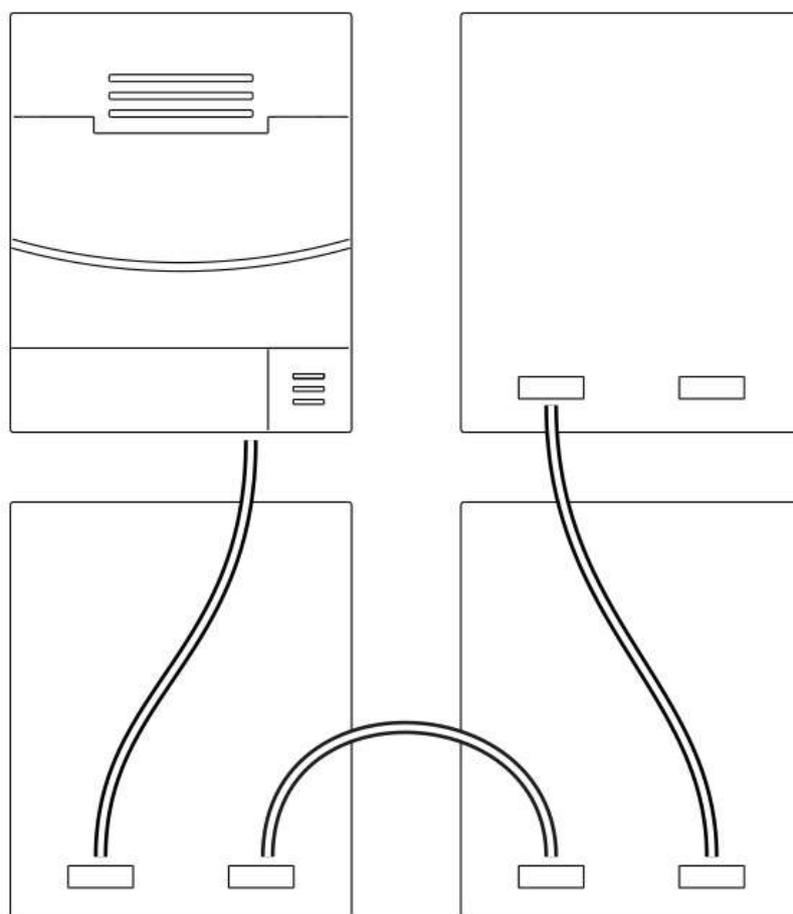


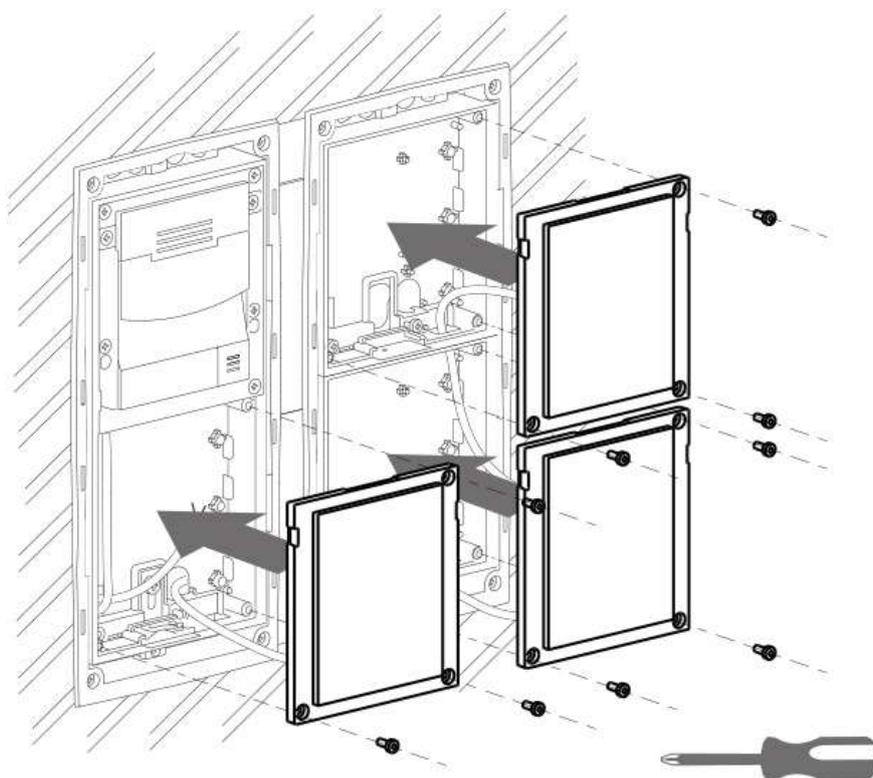


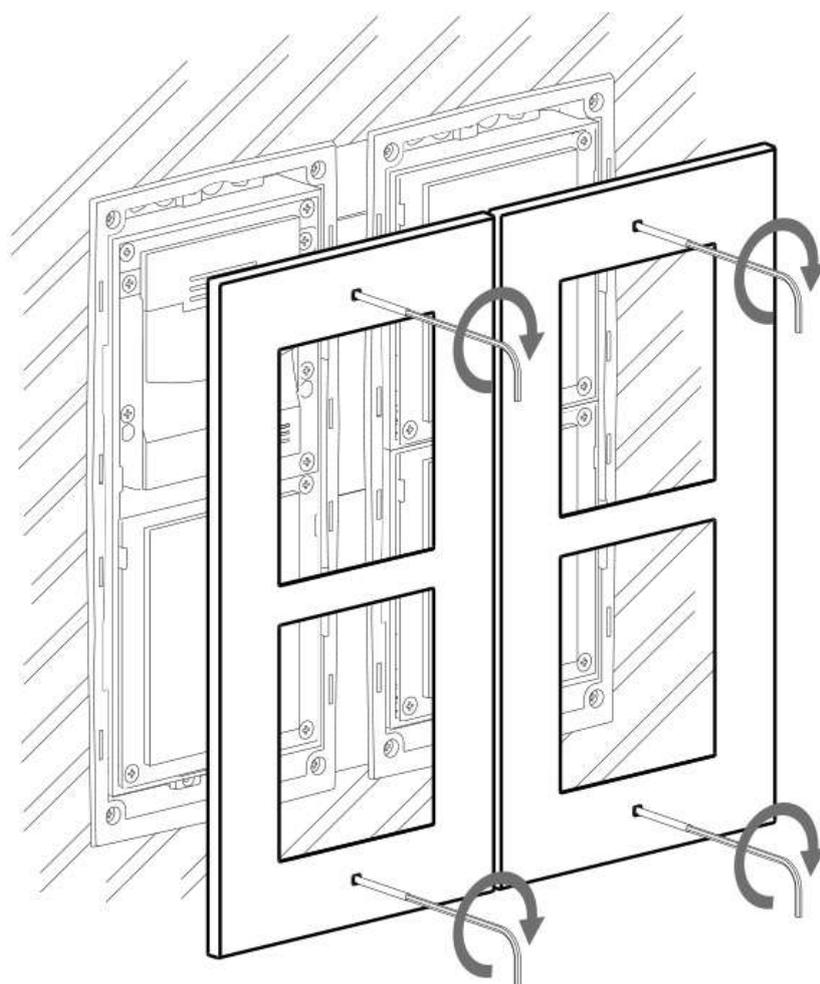




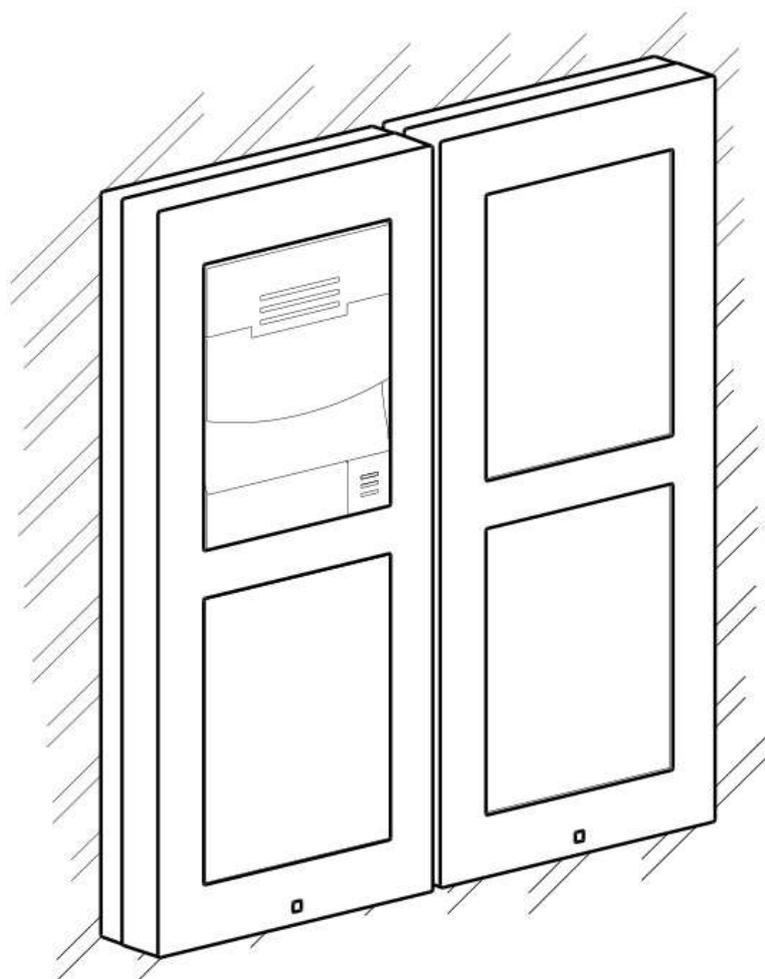


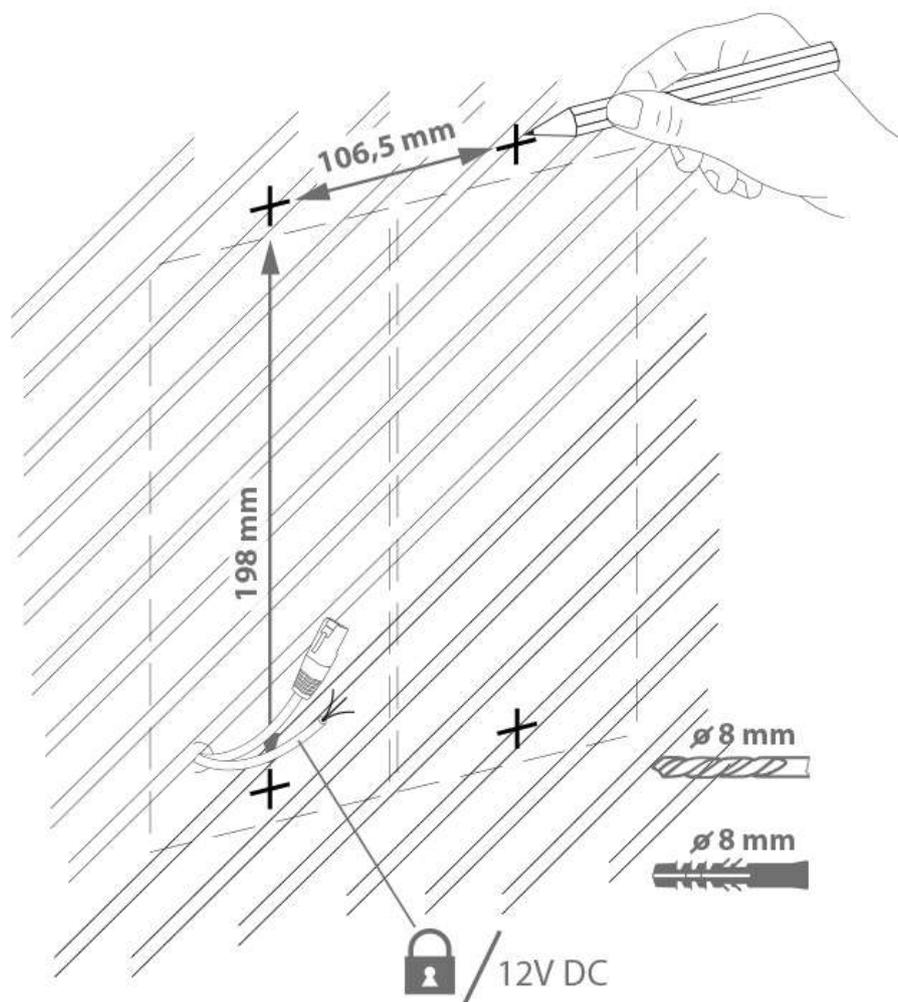


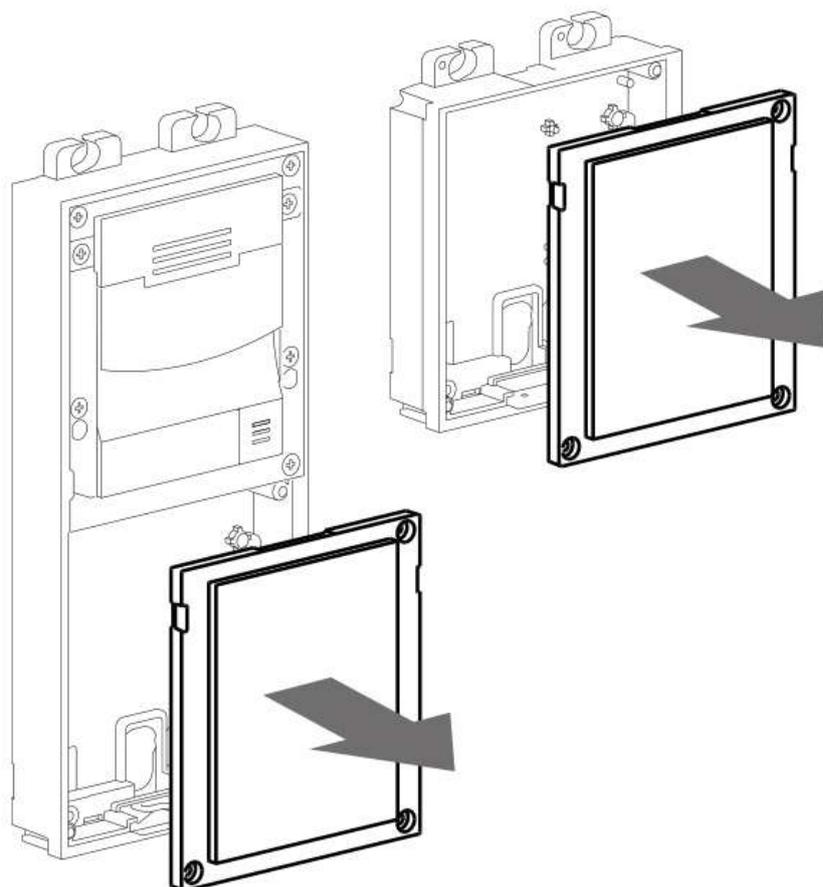


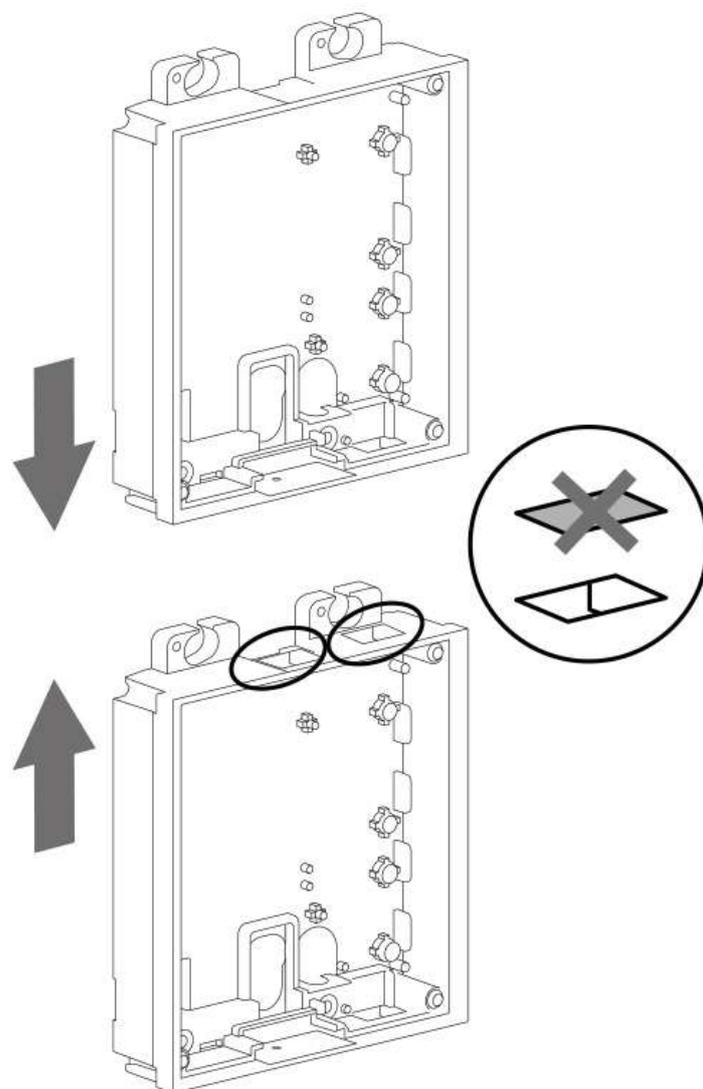


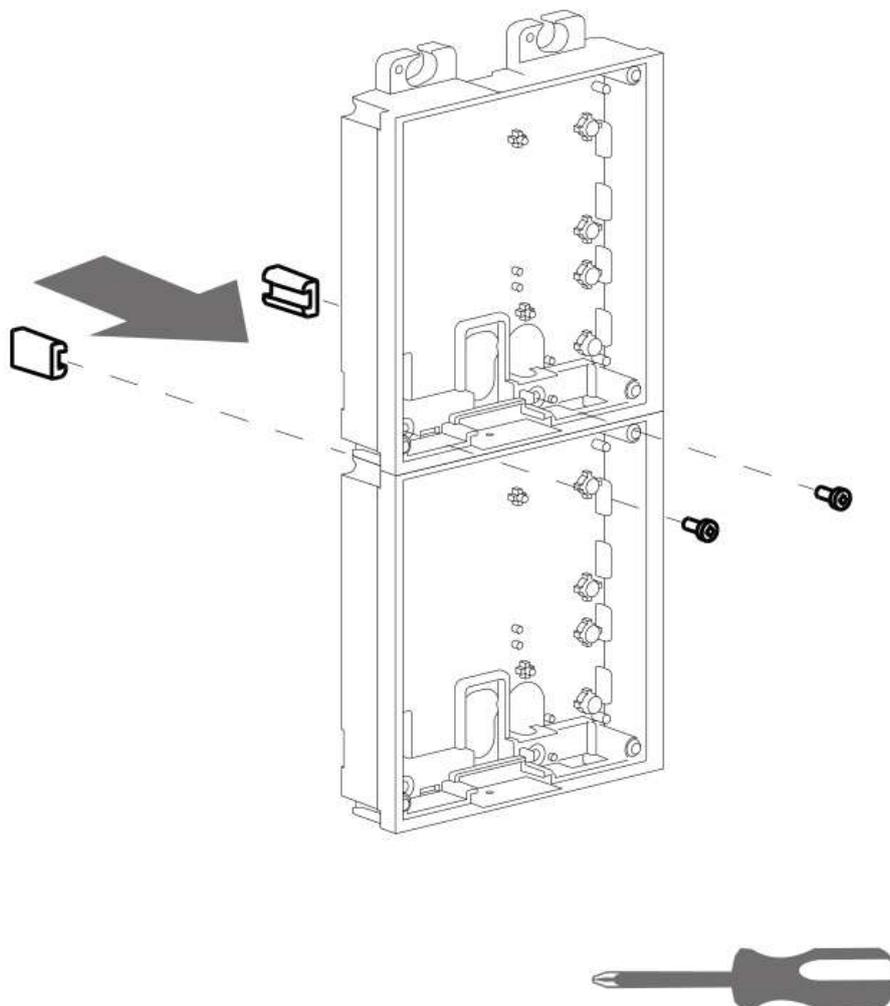
Surface module mounting

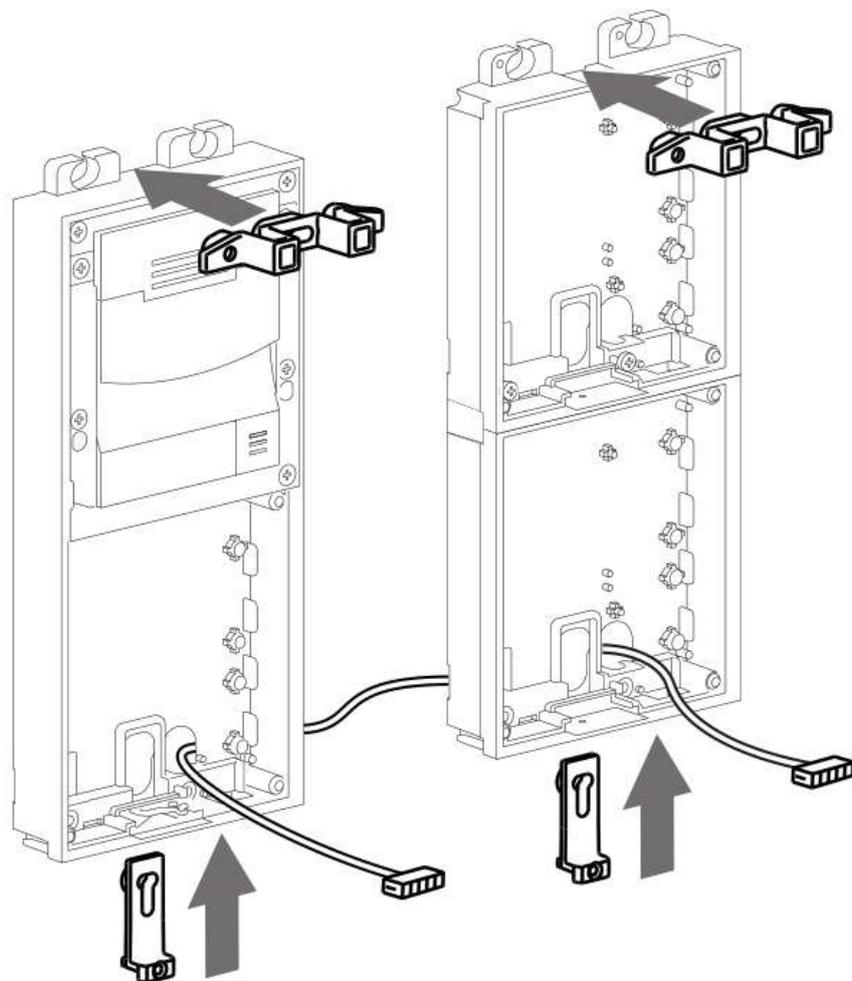


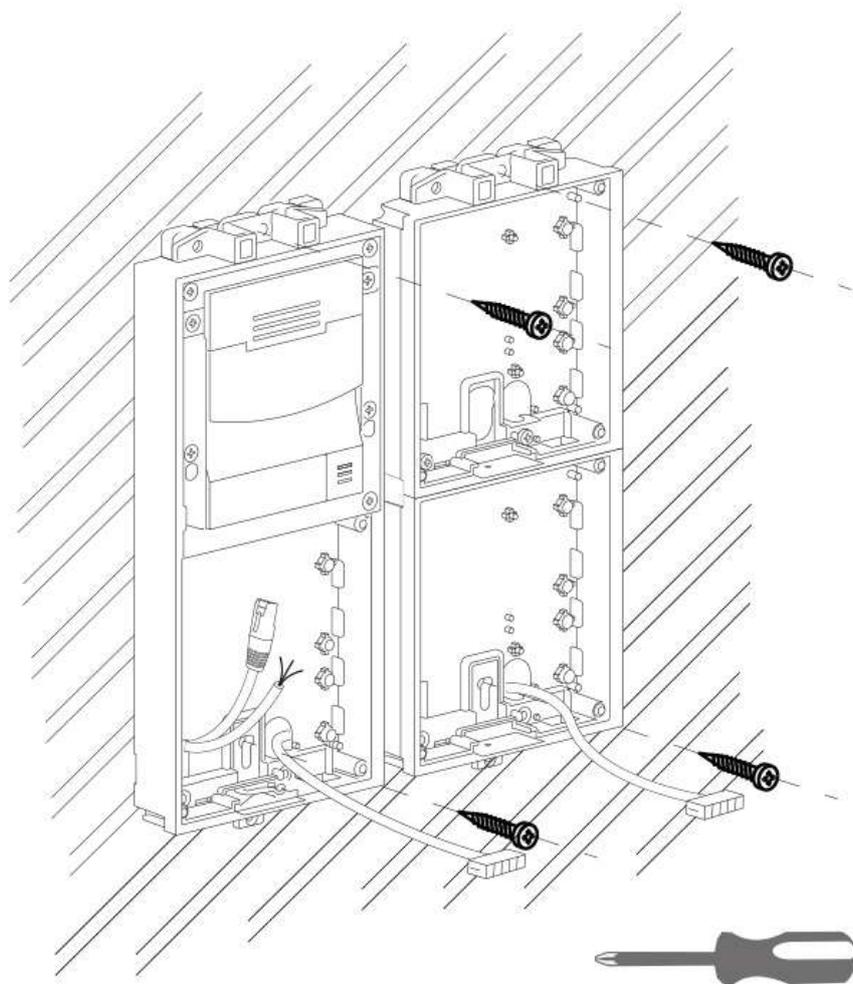


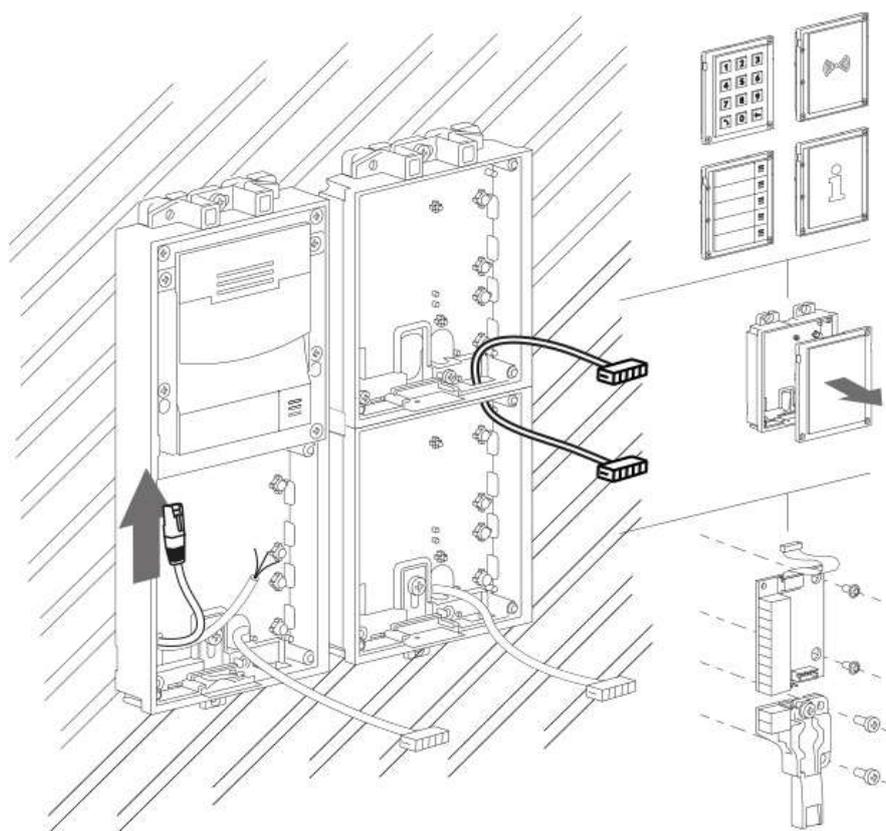


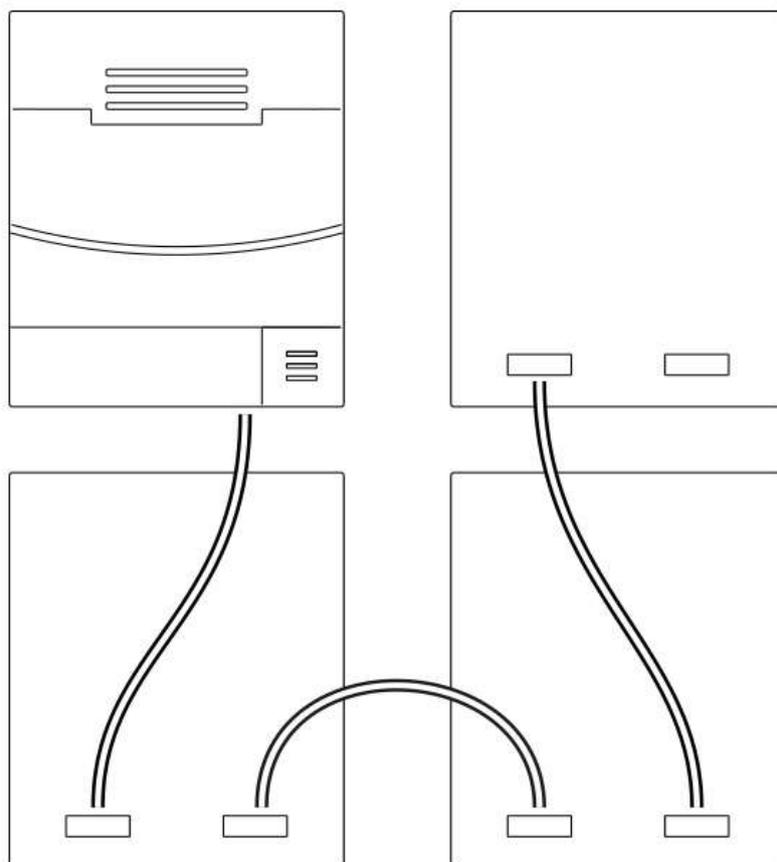


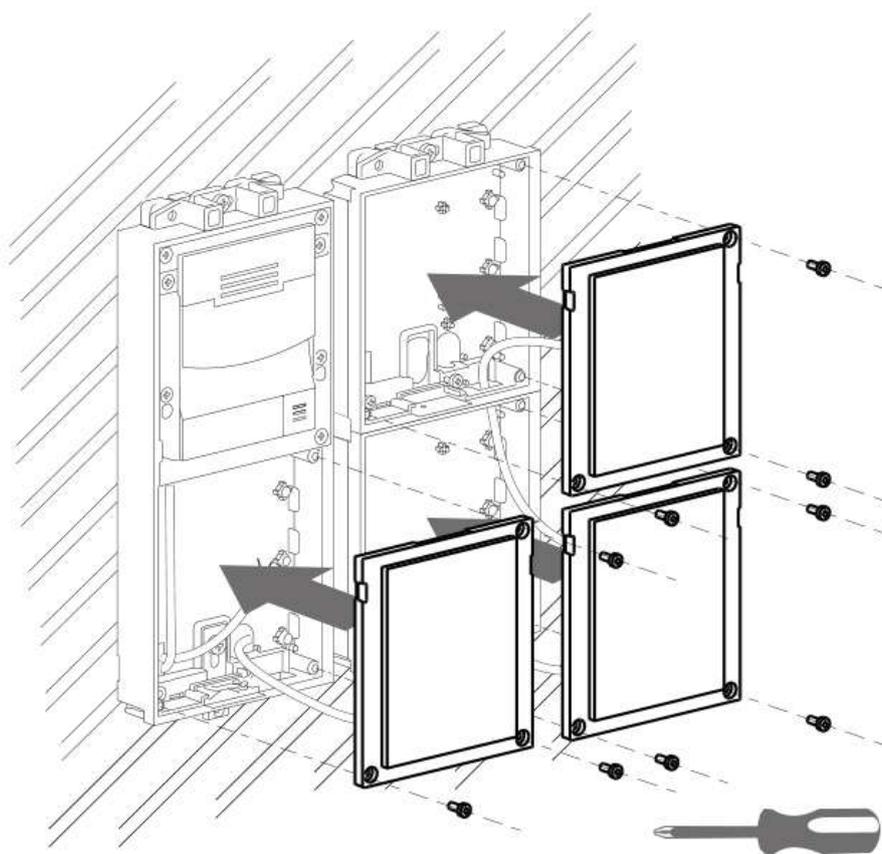


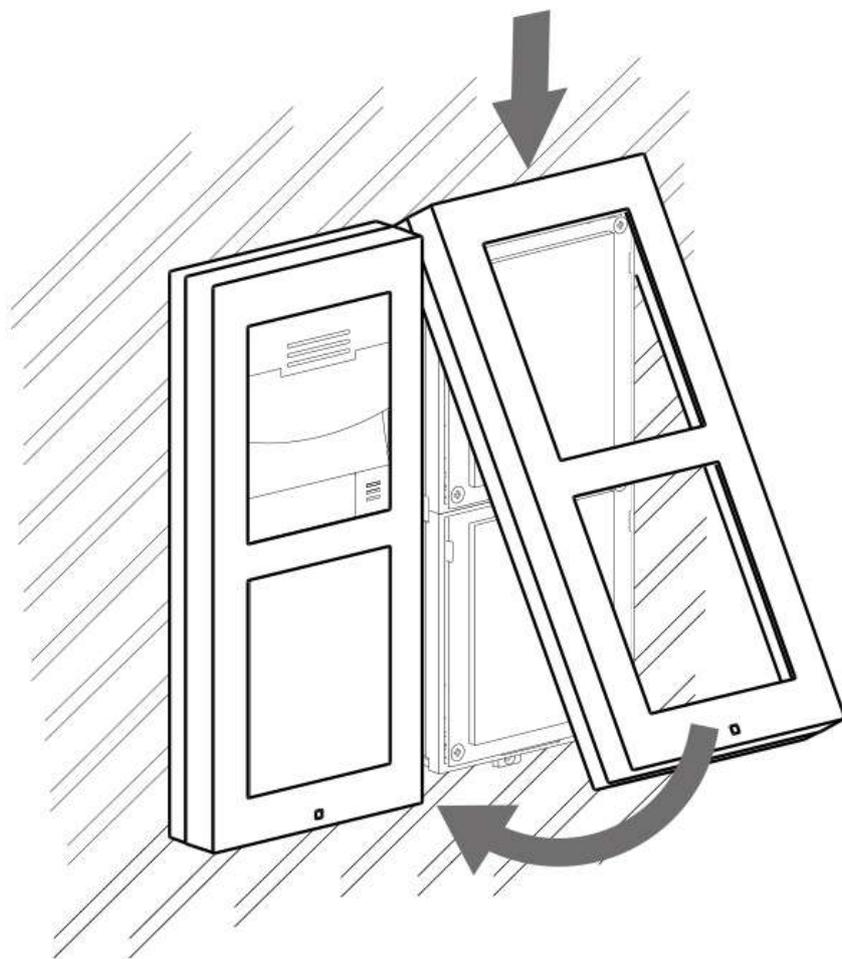


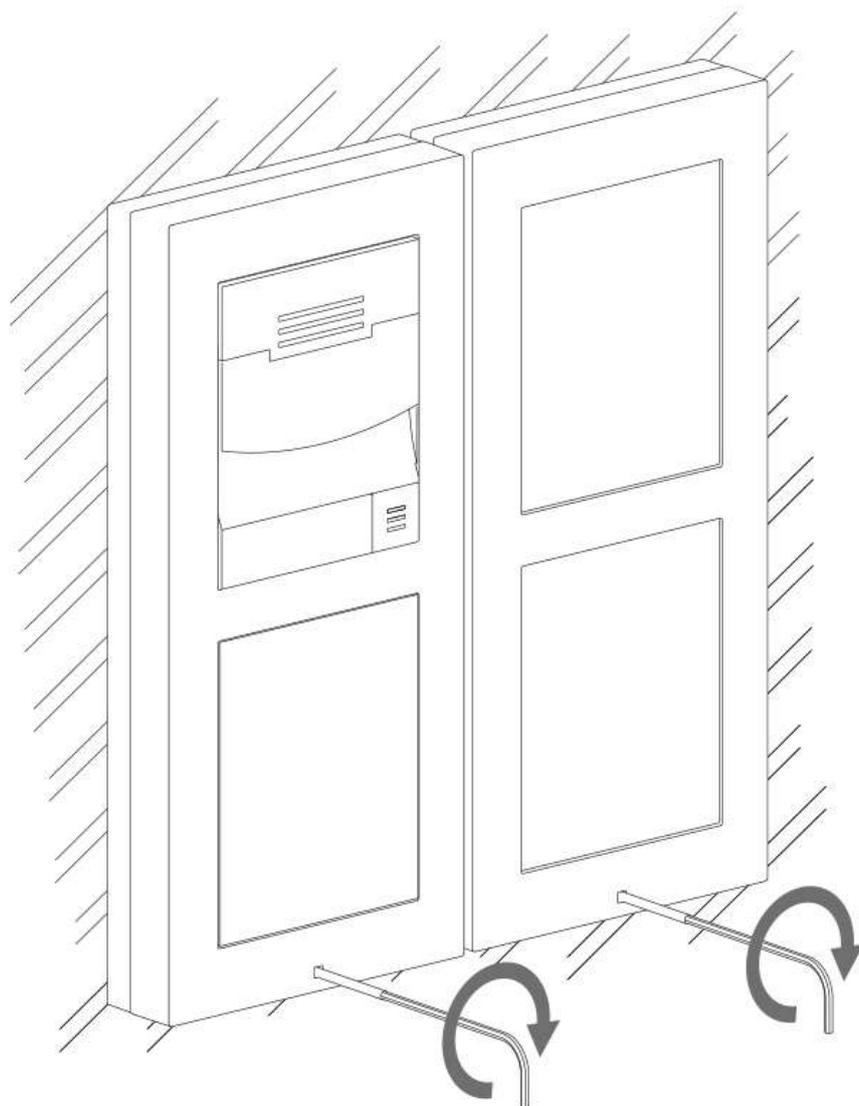








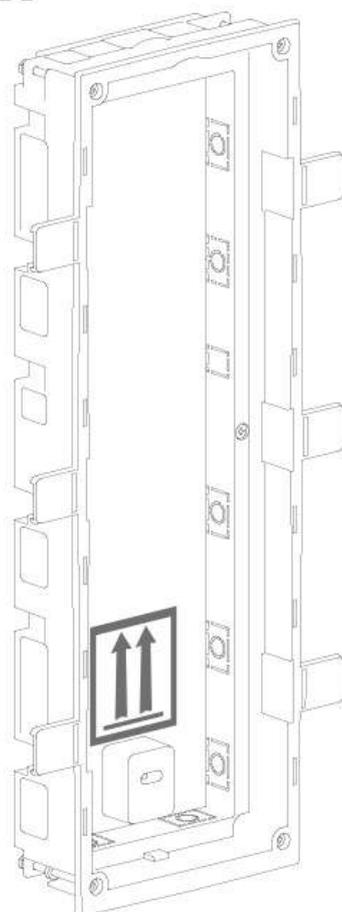




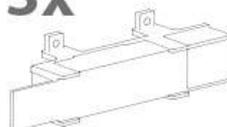
2.2.4 Three Module Box

Flush mounting box mounting - classic bricks

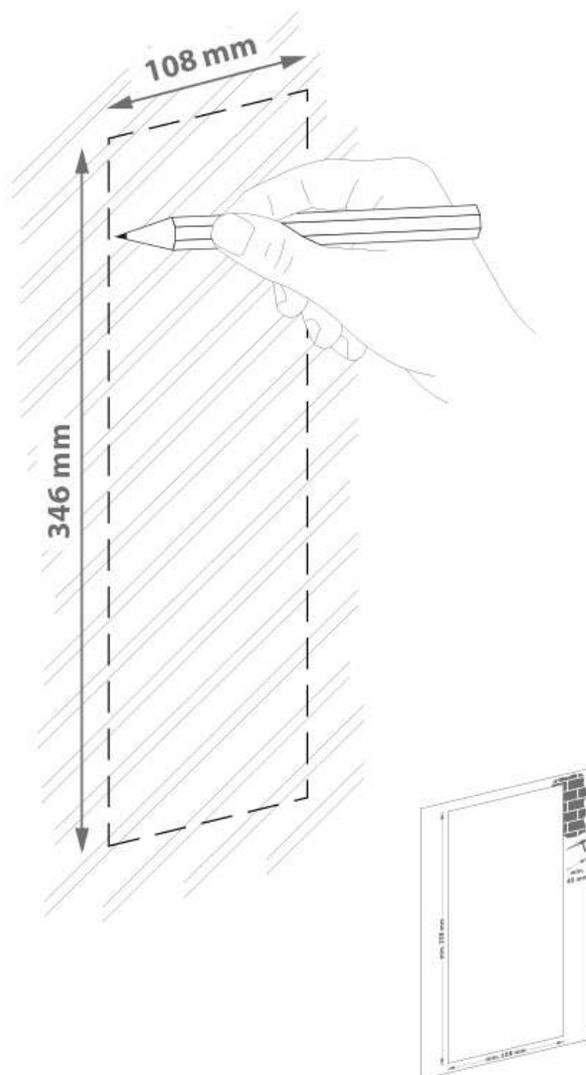
1x

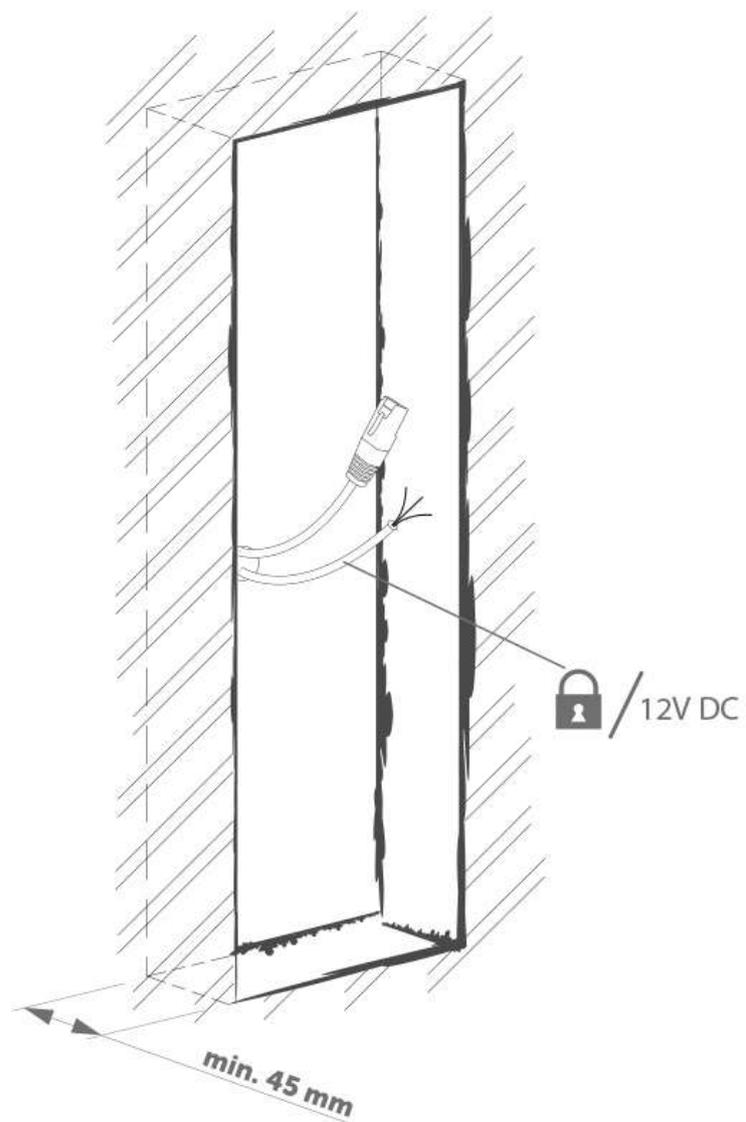


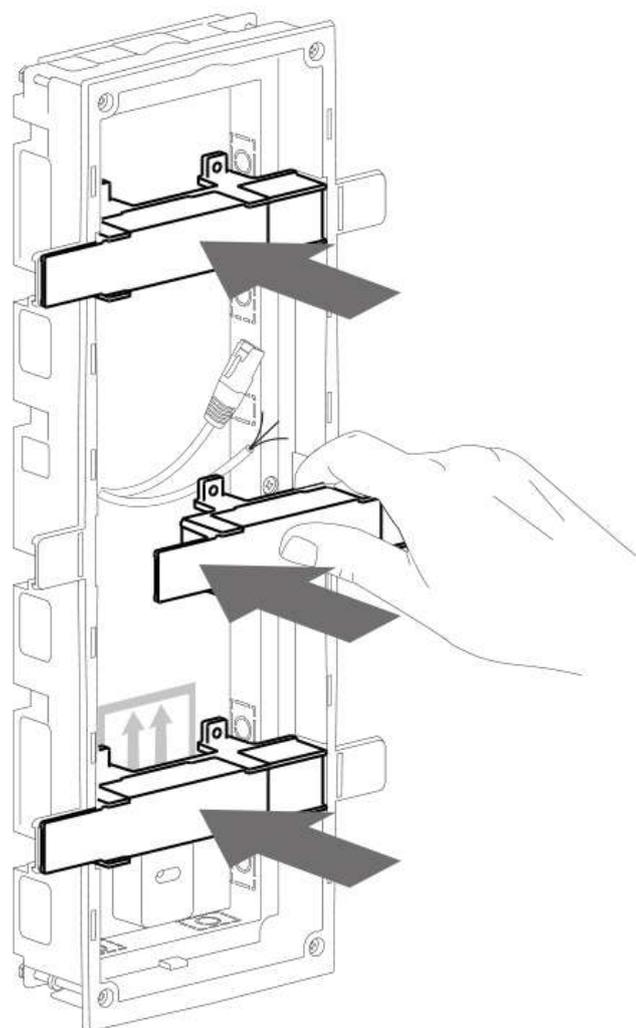
3x

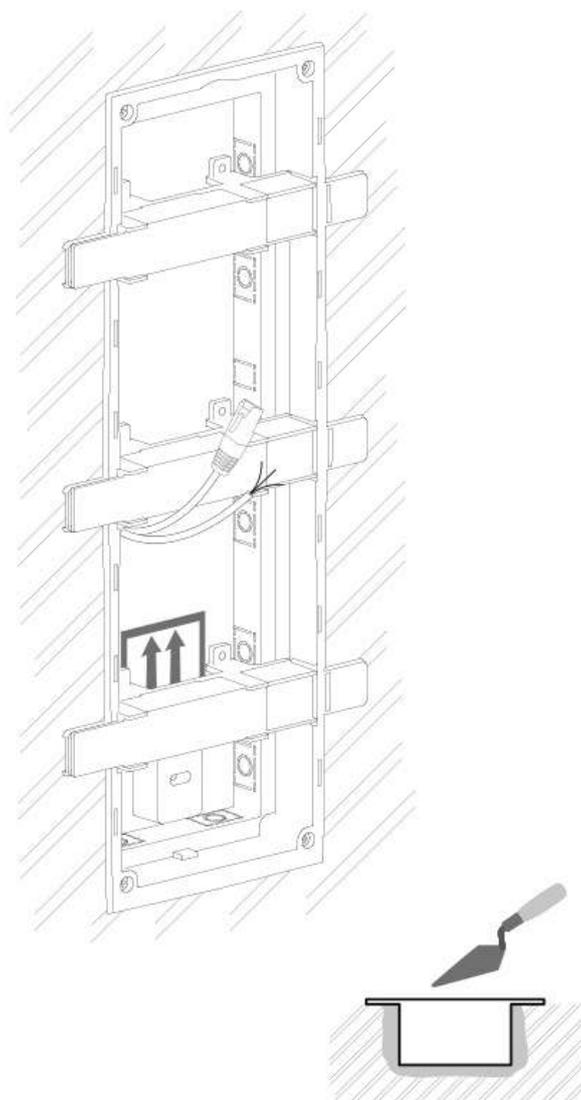


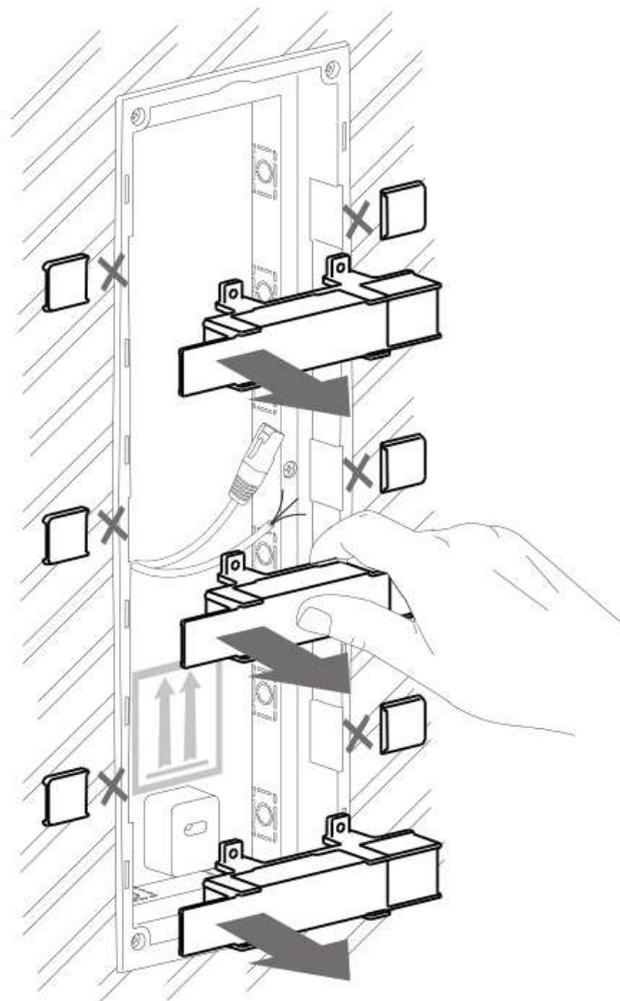
min 108(W) x 346(H) x 45(D) mm

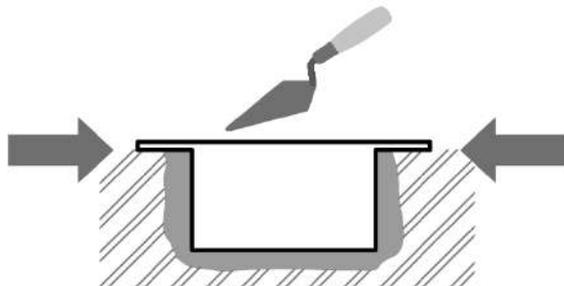




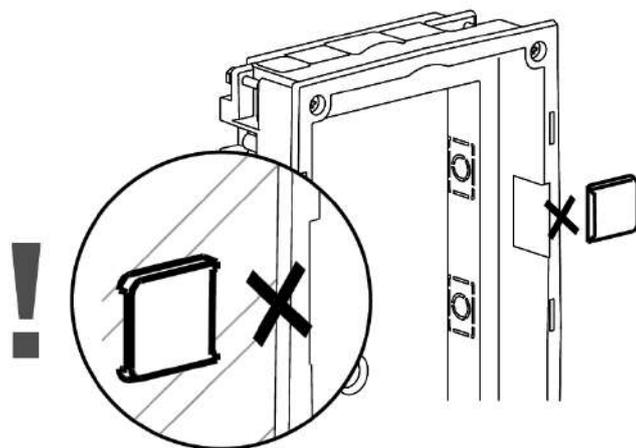




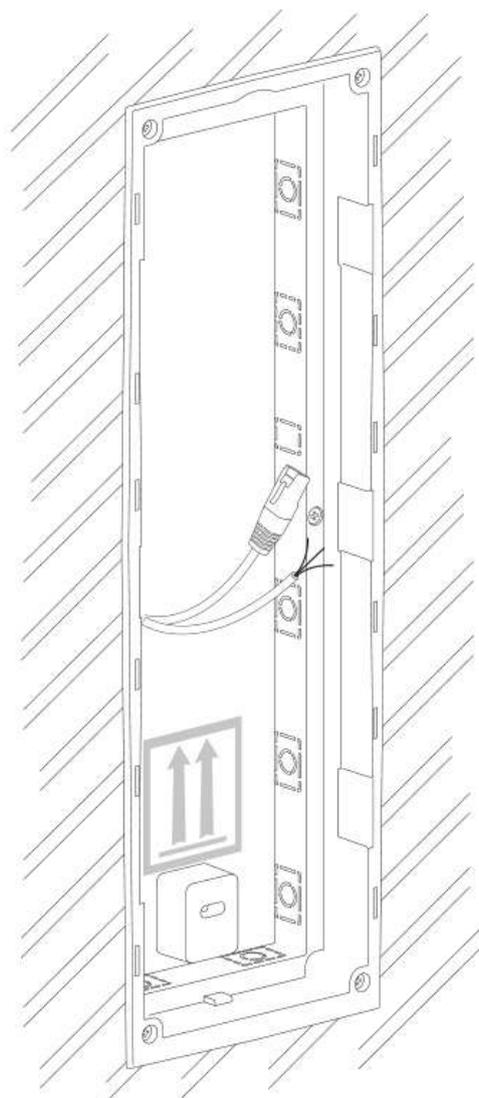


Warning

- Make sure that the flush mounting box is slightly above the wall surface not aligning with the wall. A wrong installation may lead to water penetration and subsequent damage of the device. Use the side protrusions to achieve the proper flush mounting.

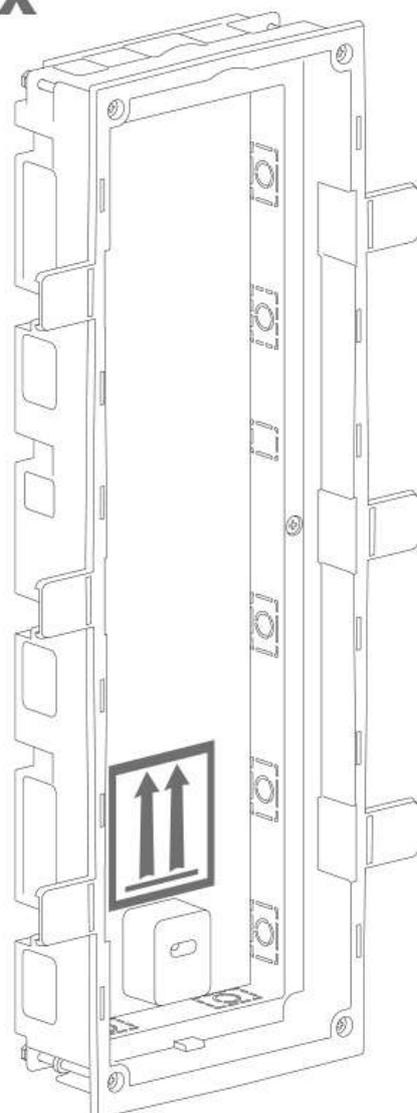
Caution

- Break off the side protrusions when the walling material has hardened.

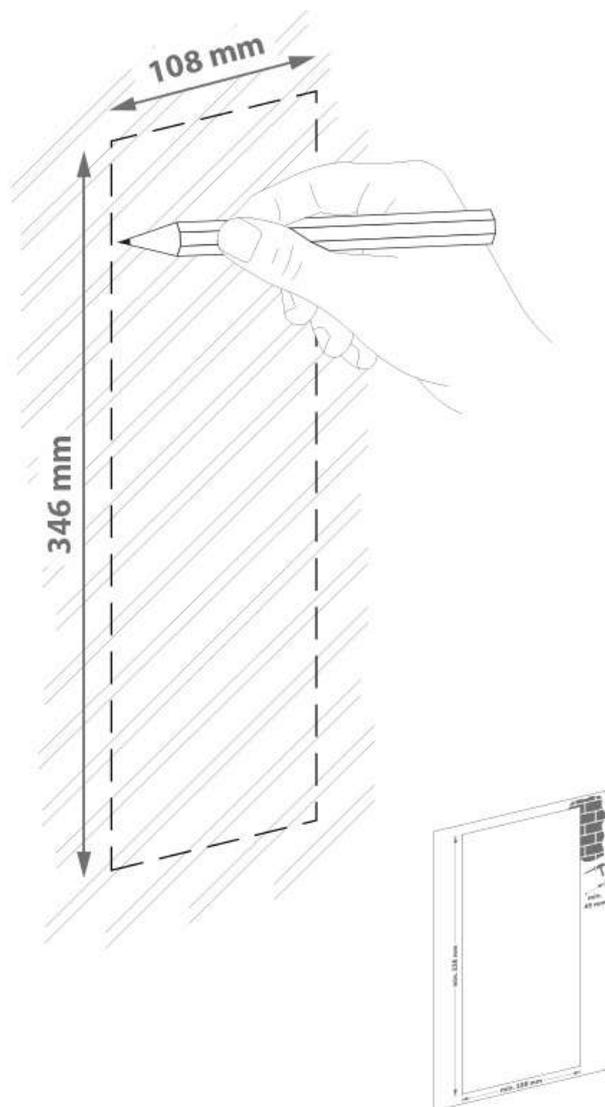


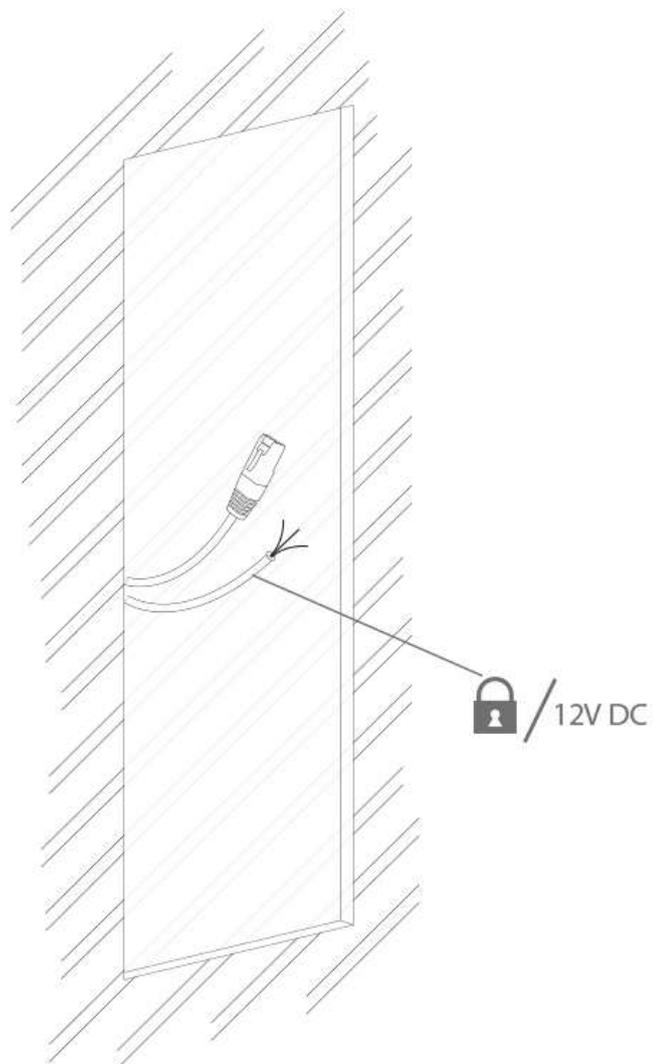
Flush mounting box mounting - plasterboard

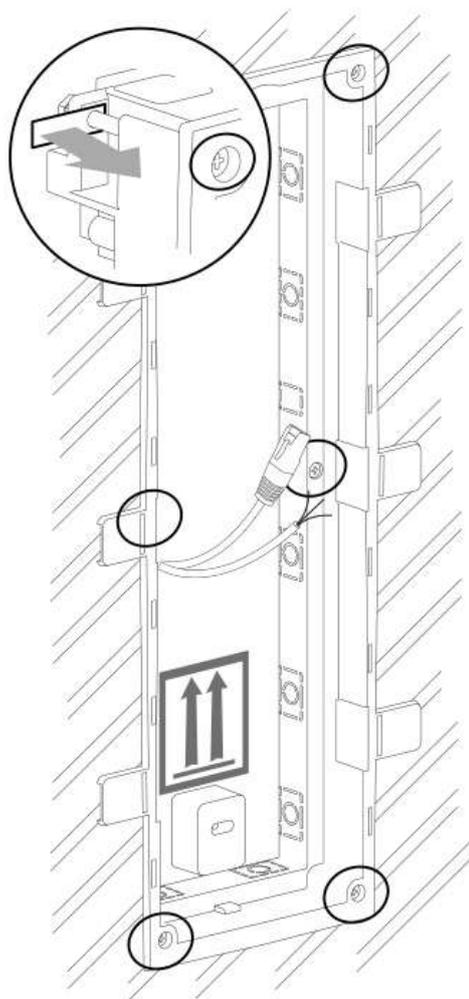
1x

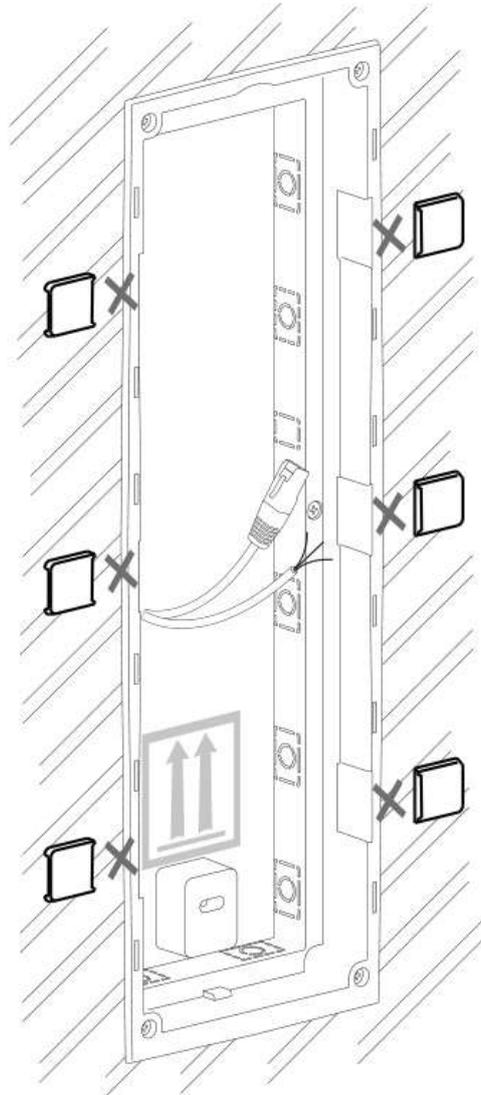


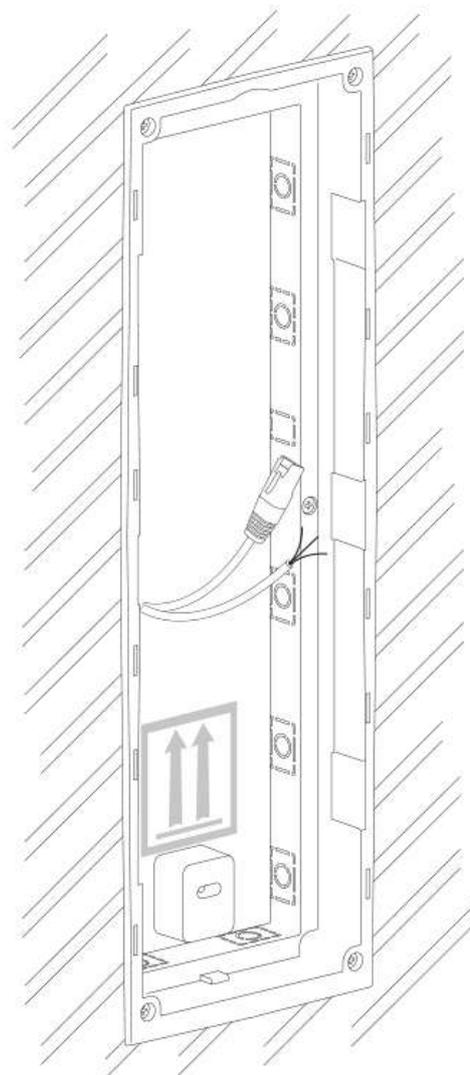
min 108(W) x 346(H) mm



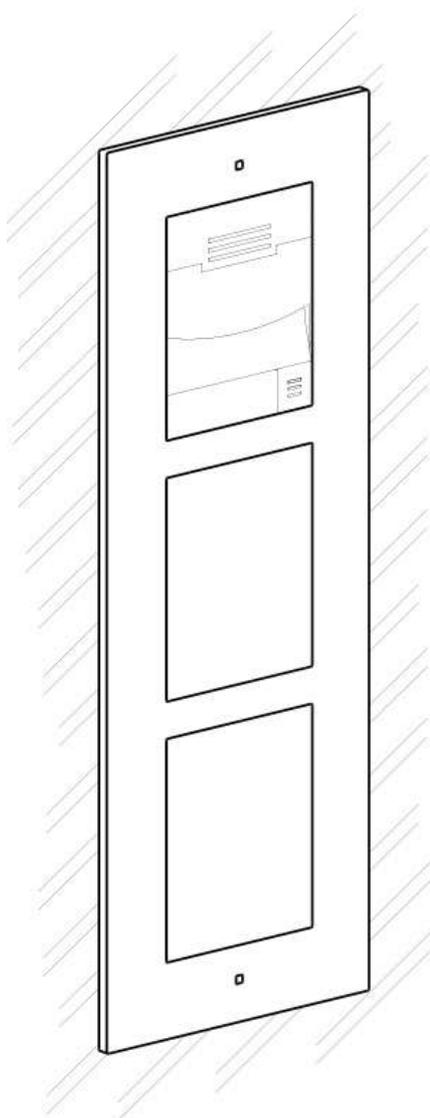


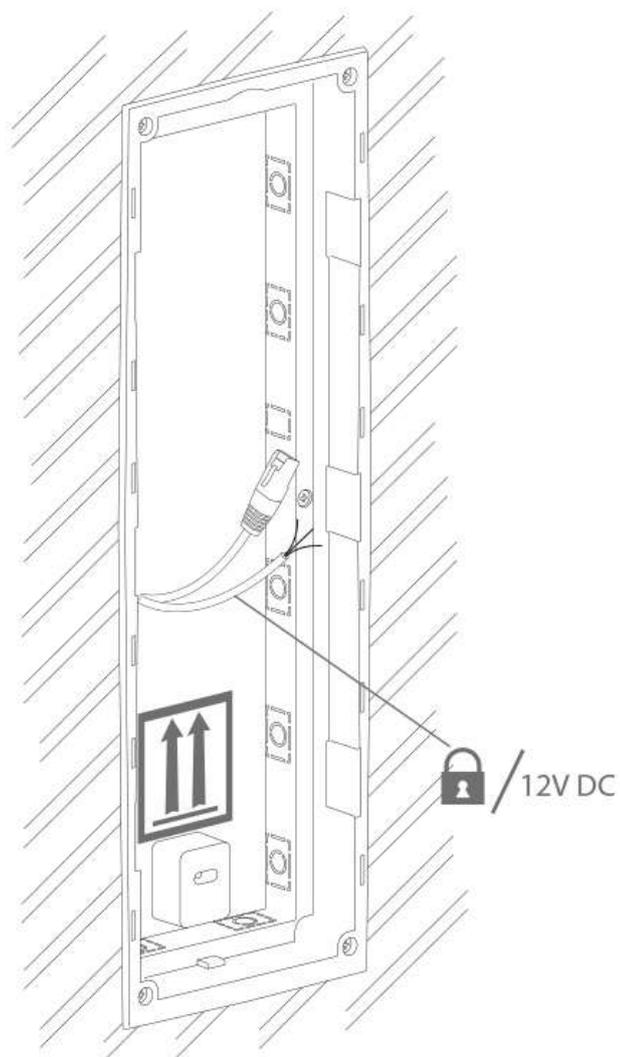


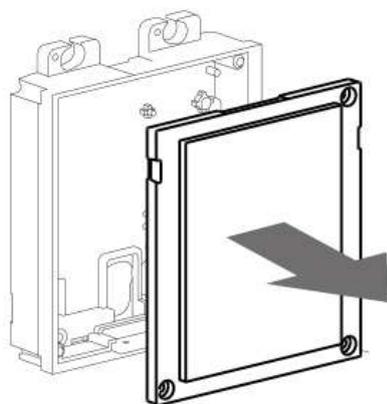
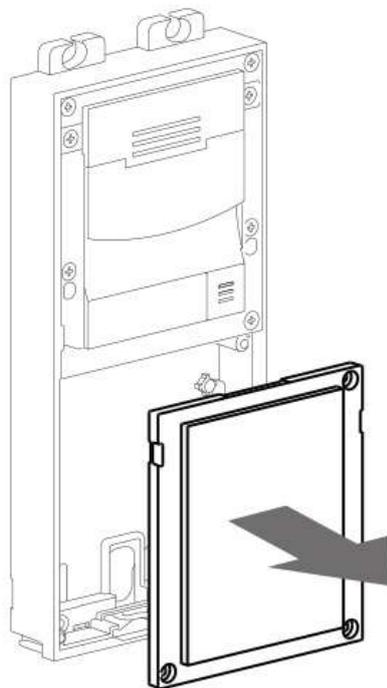


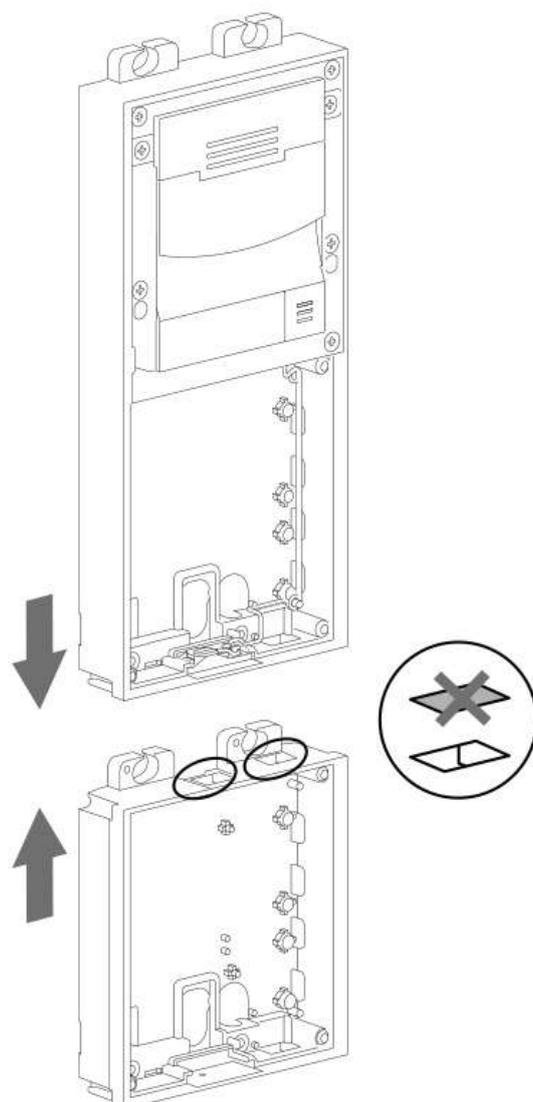


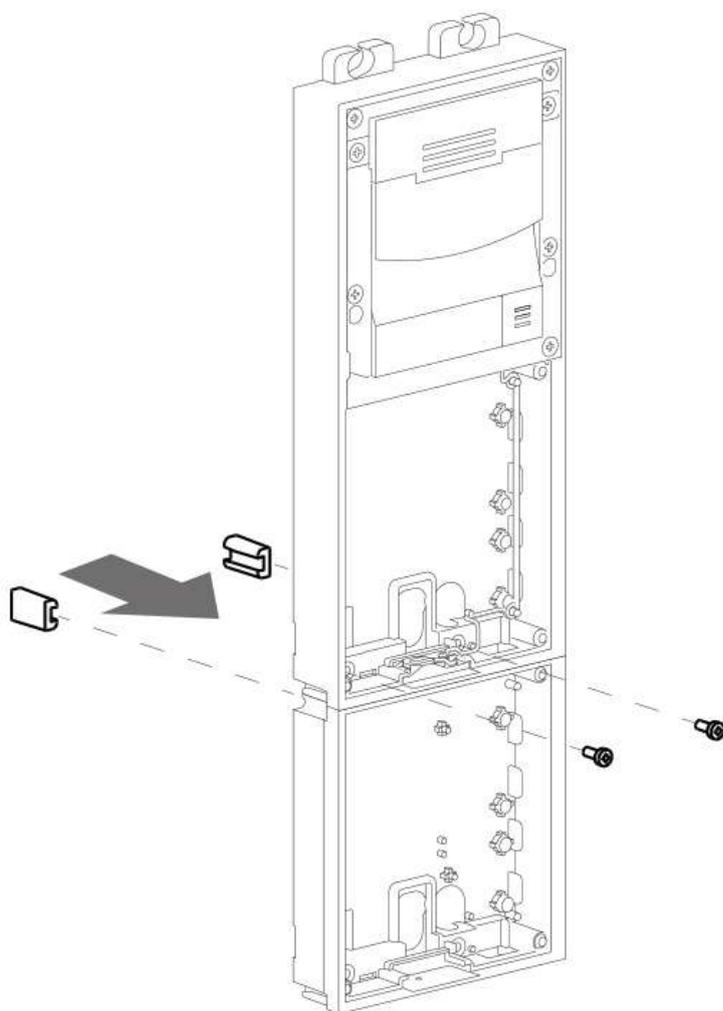
Flush module mounting

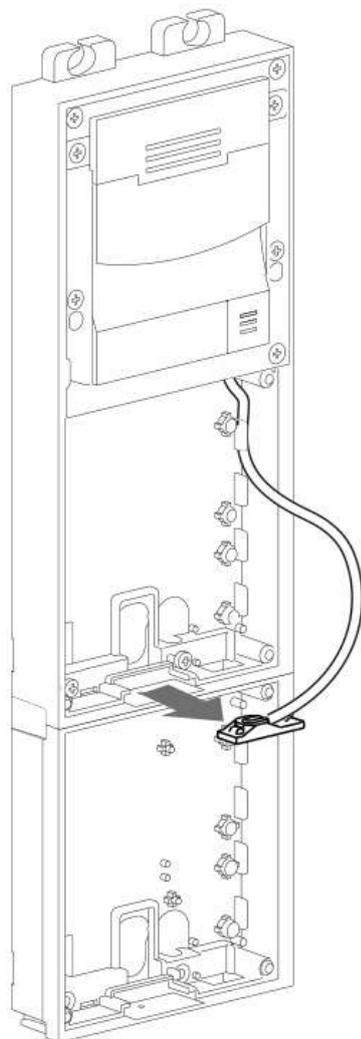


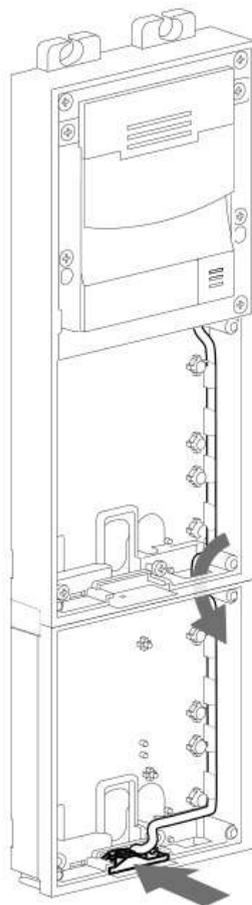


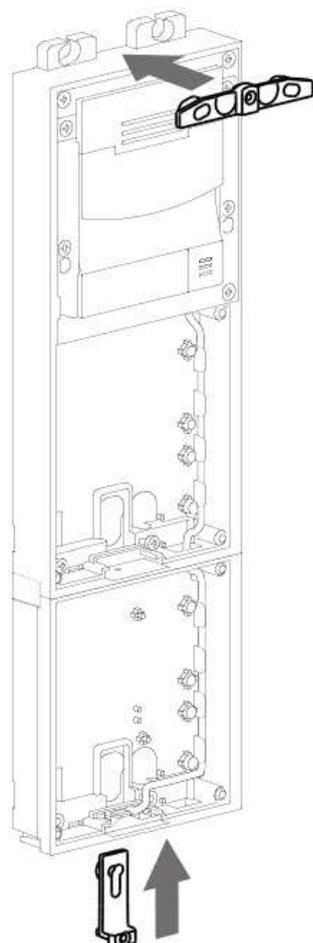




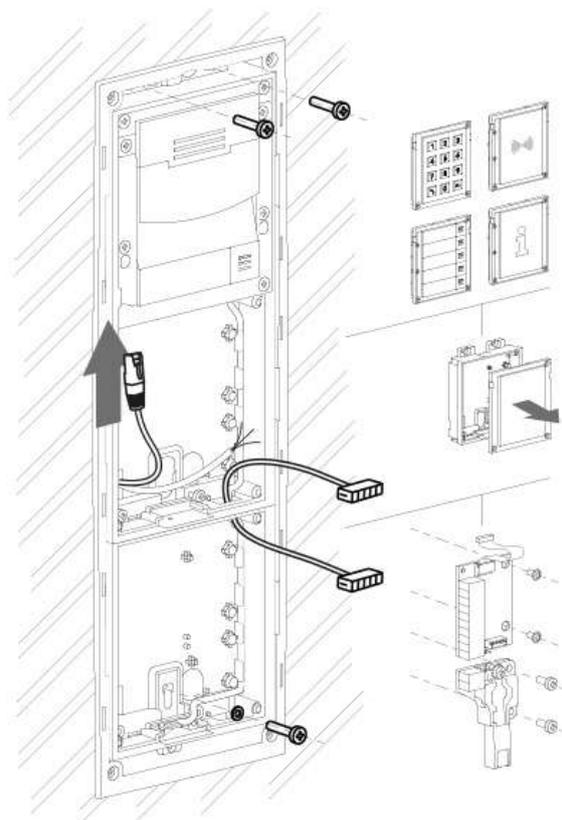


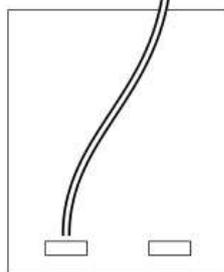
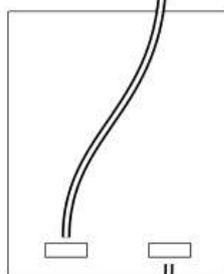
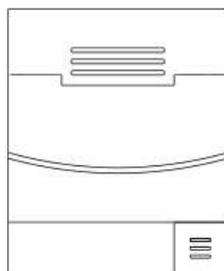


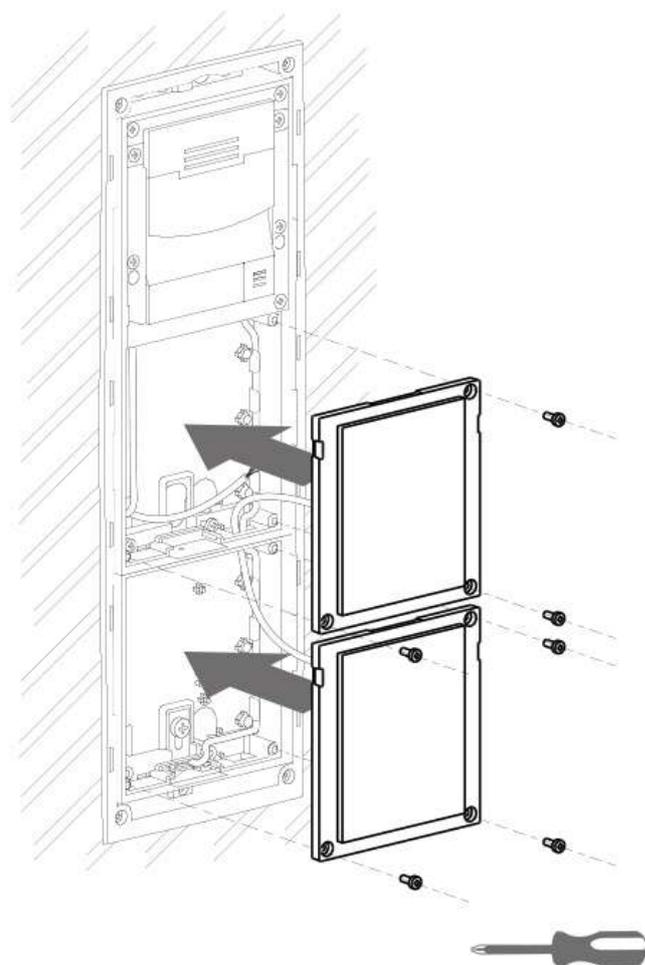






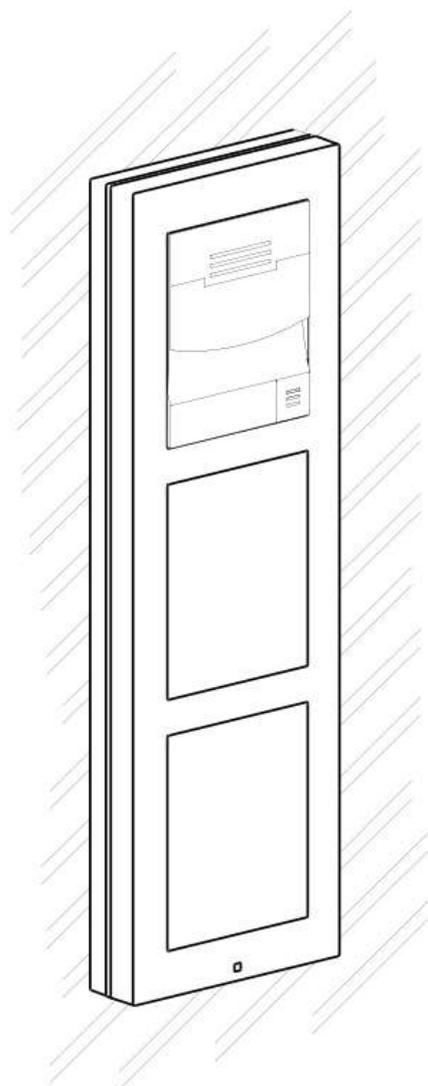


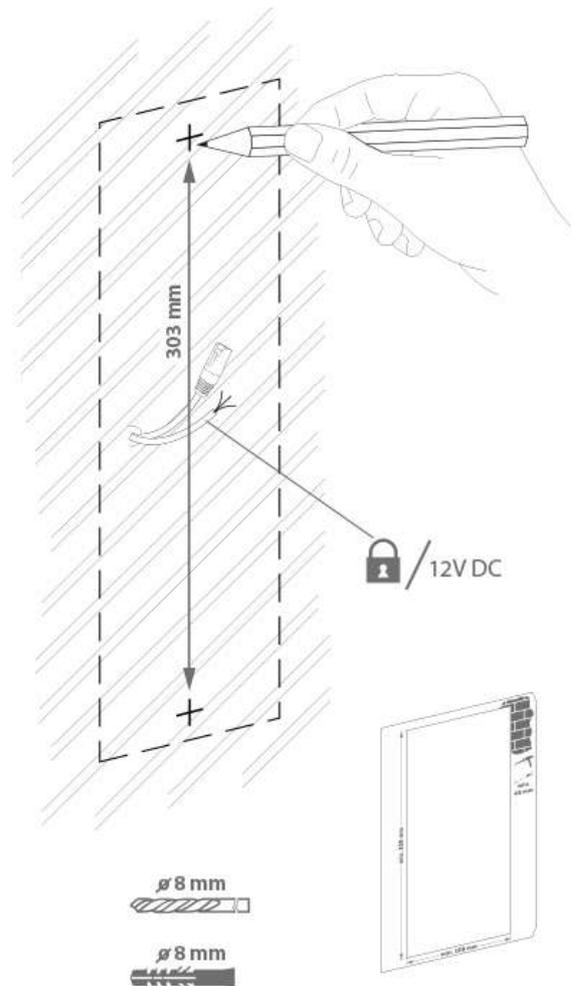


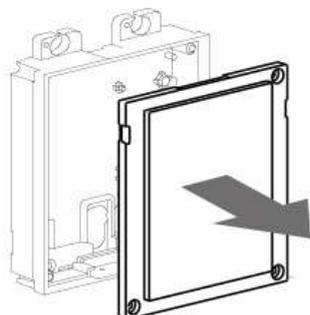
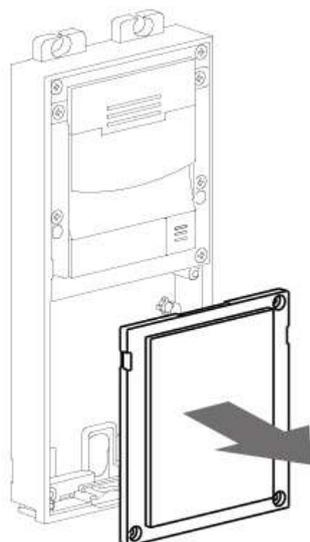


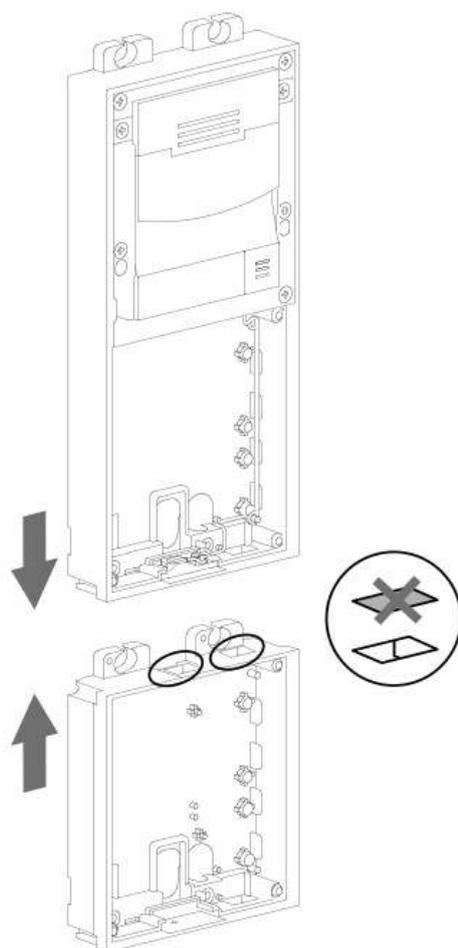


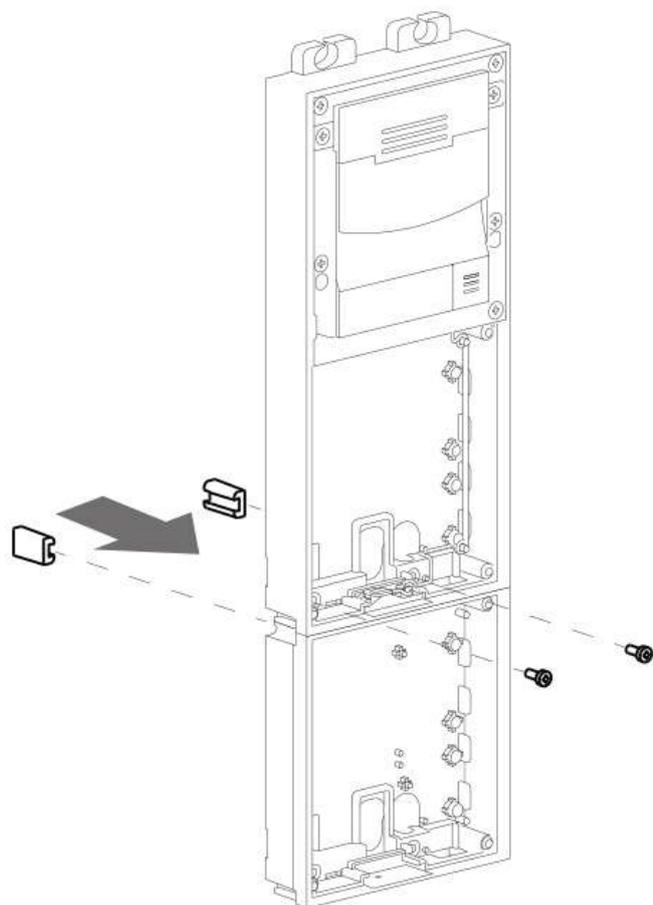
Surface module mounting

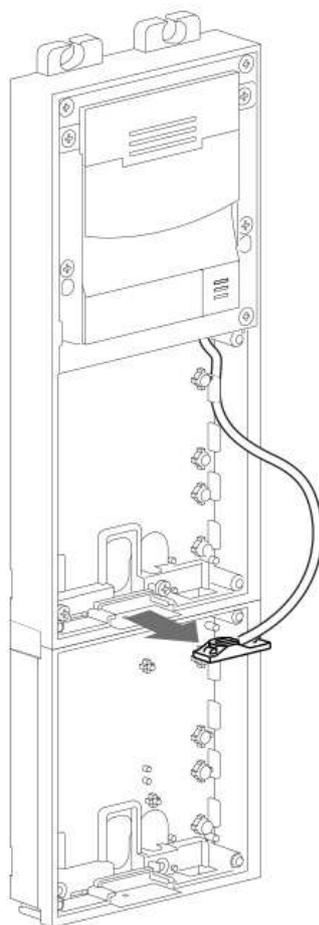


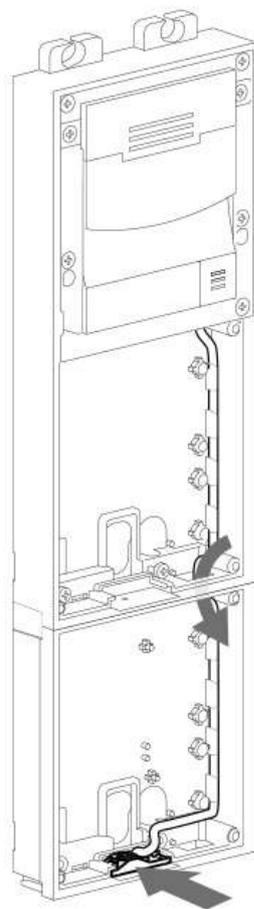


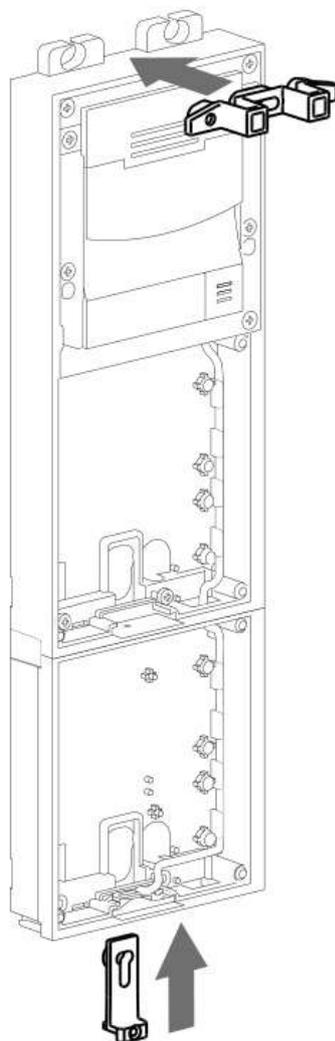


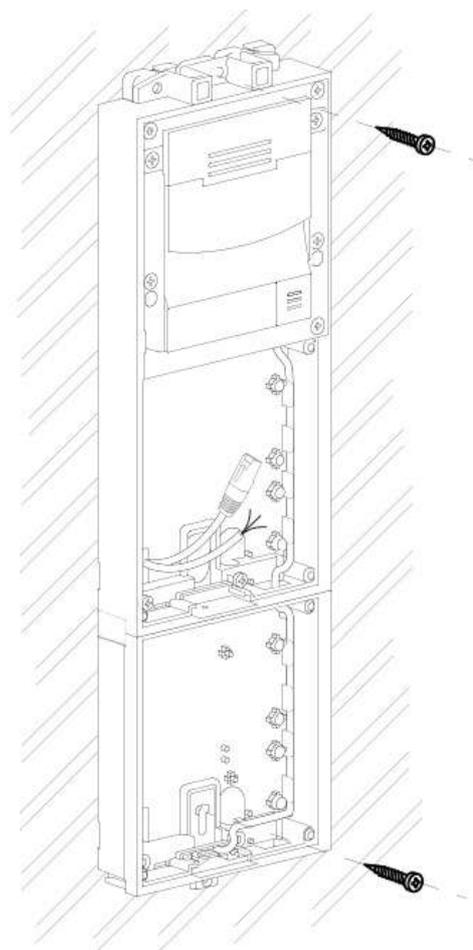


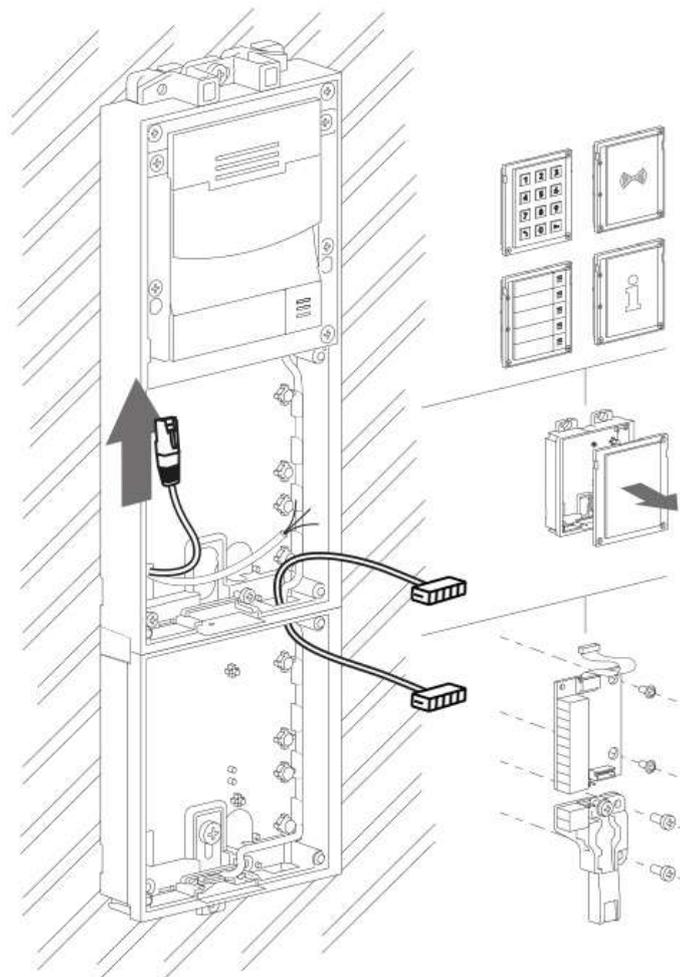


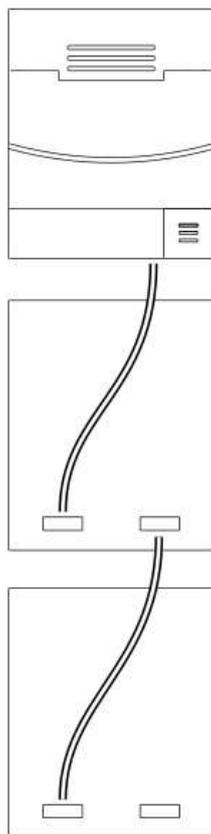


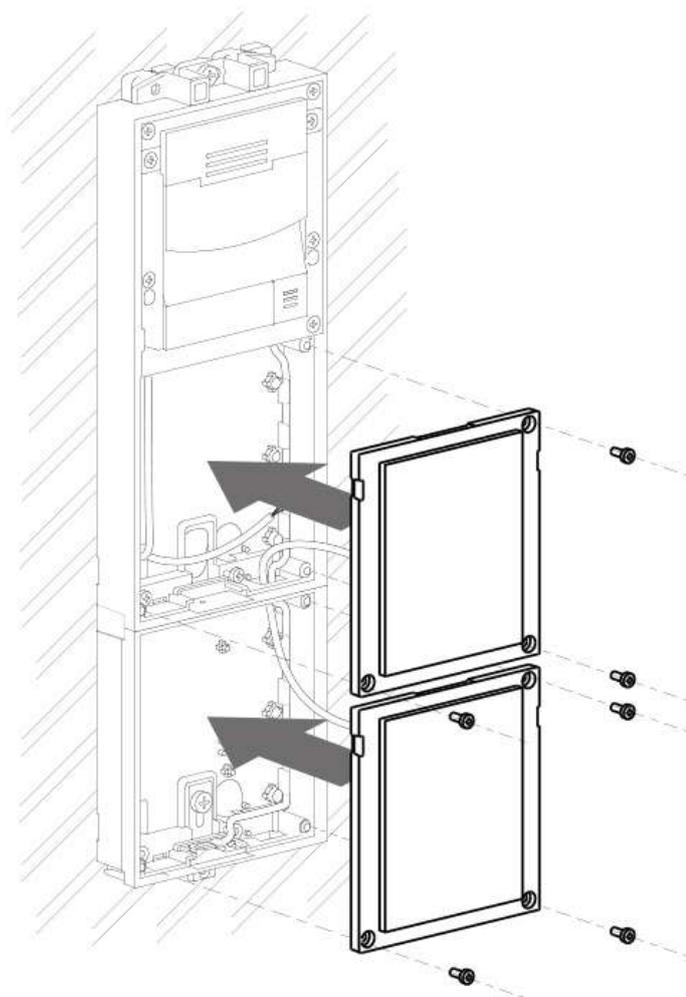


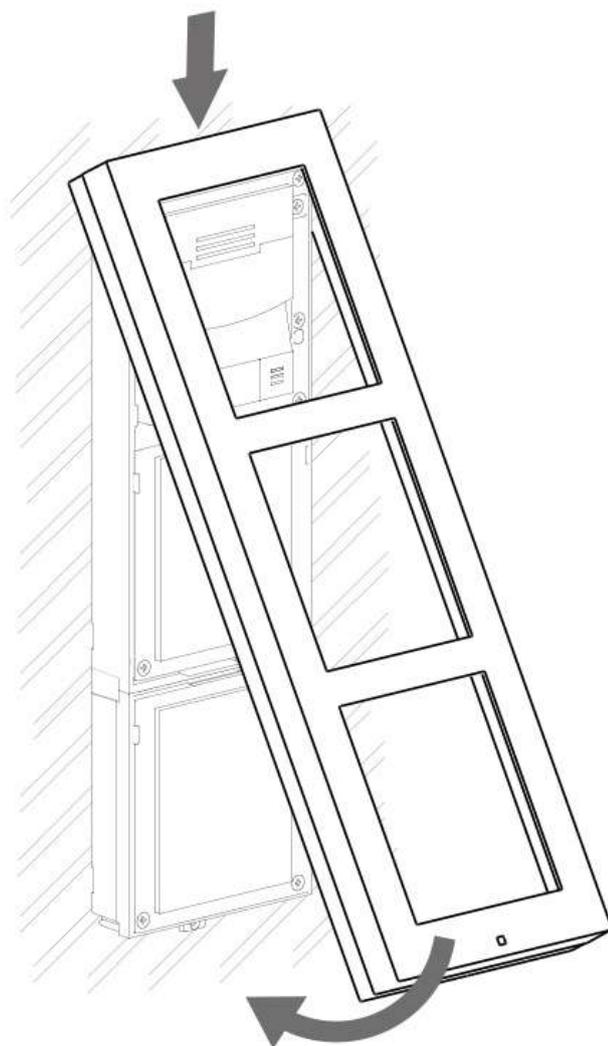


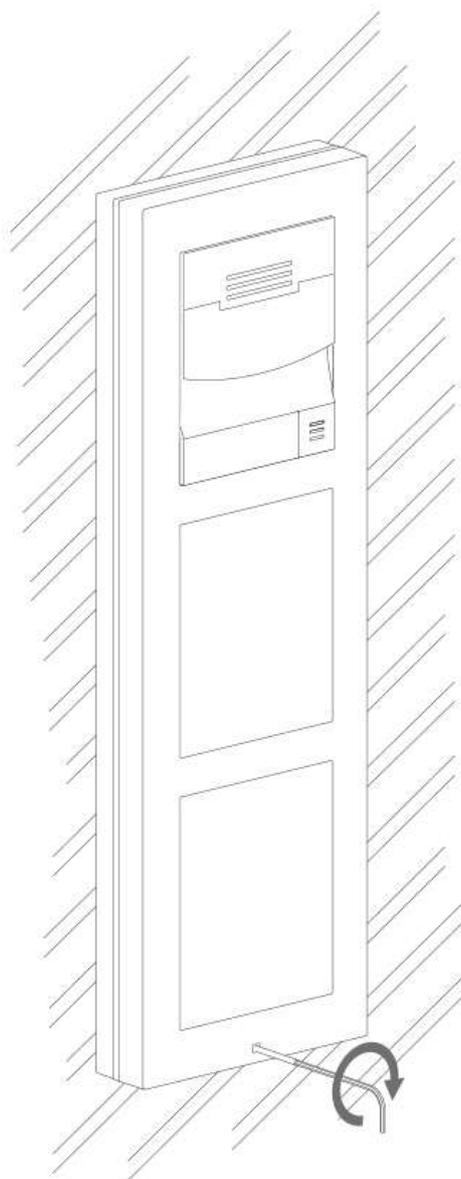








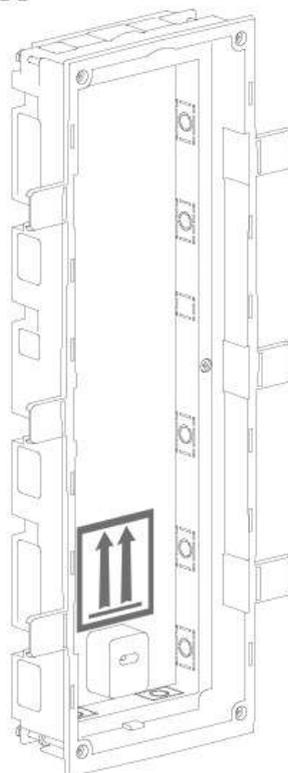




2.2.5 More Three Module Boxes

Flush mounting box mounting - classic bricks

2x



3x



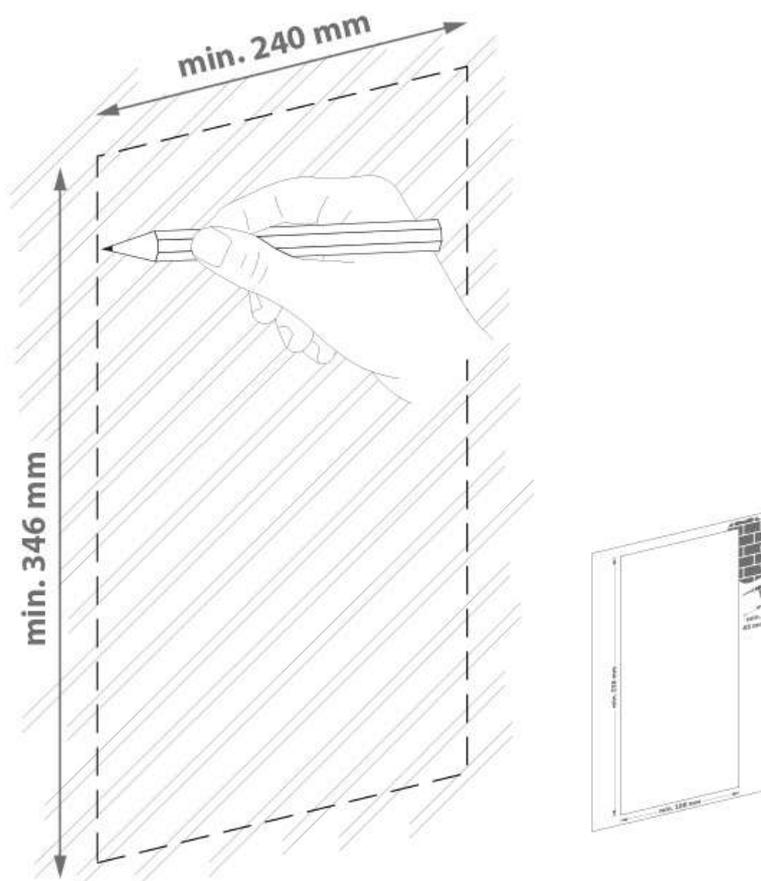
2x A

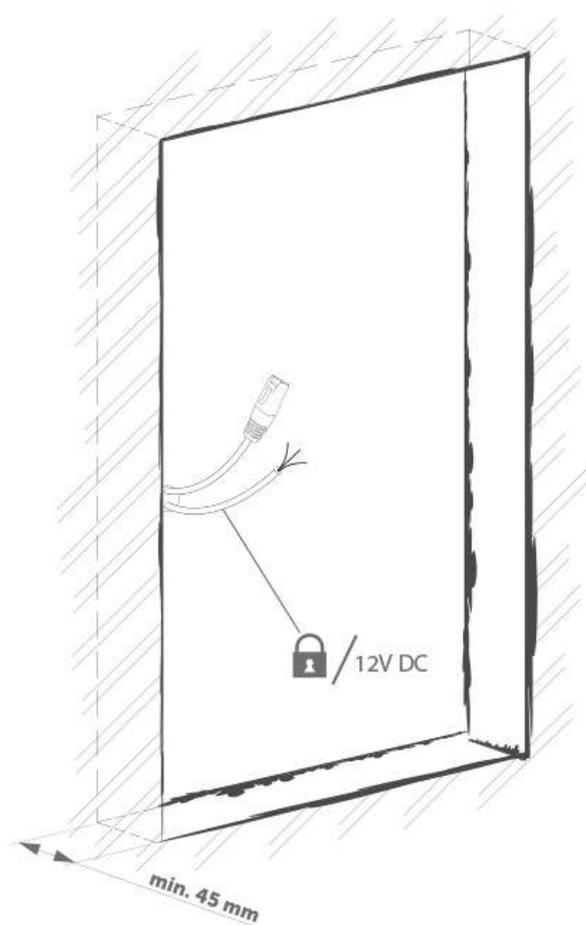


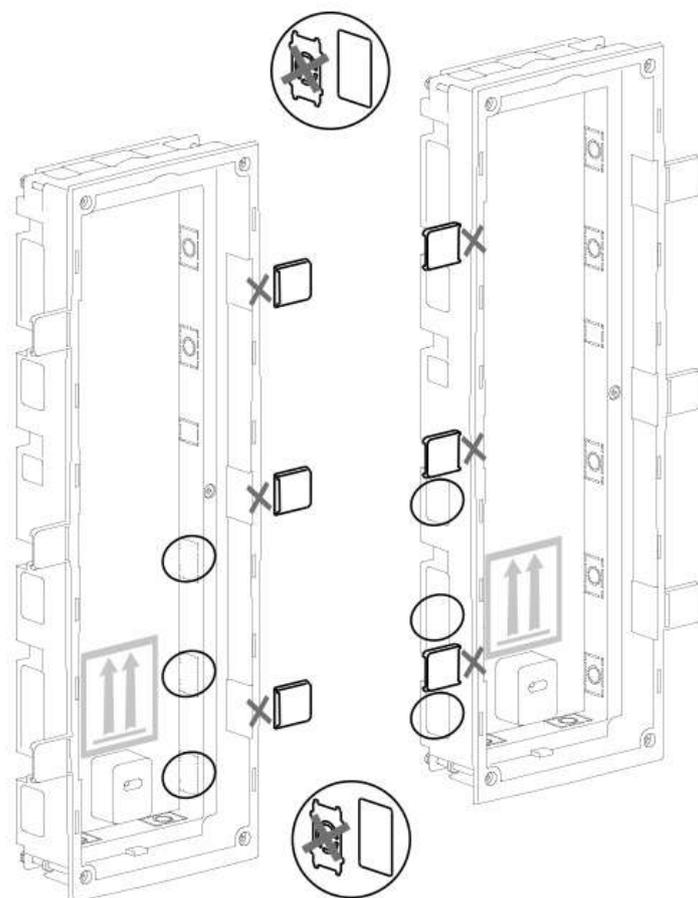
4x B

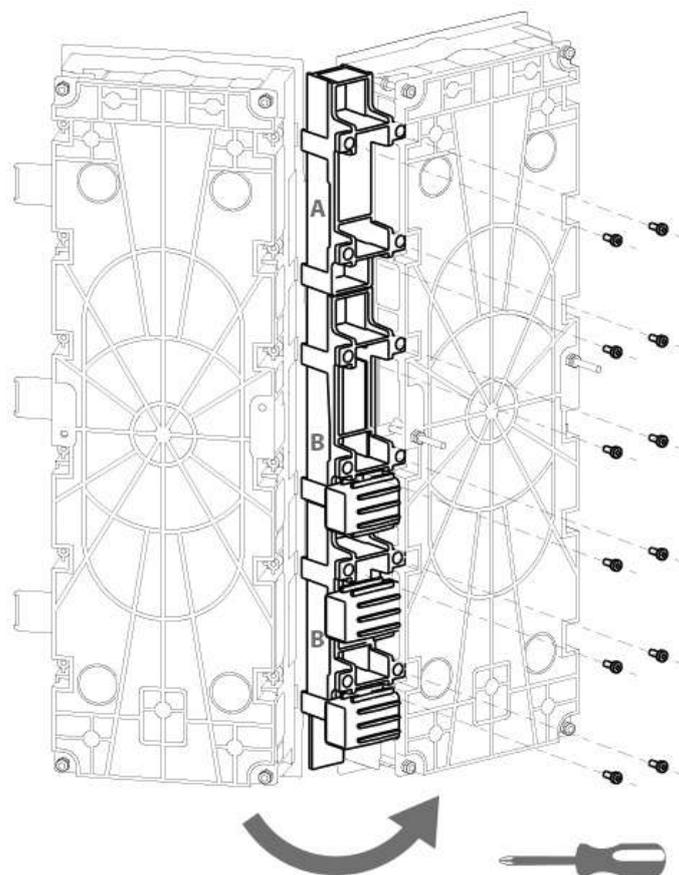


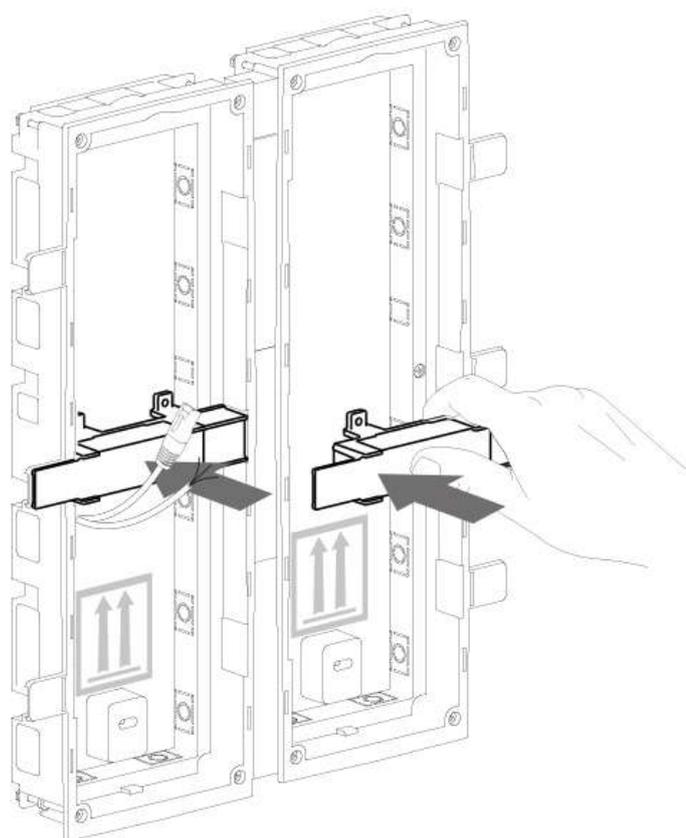
min 240(W) x 346(H) x 45(D) mm

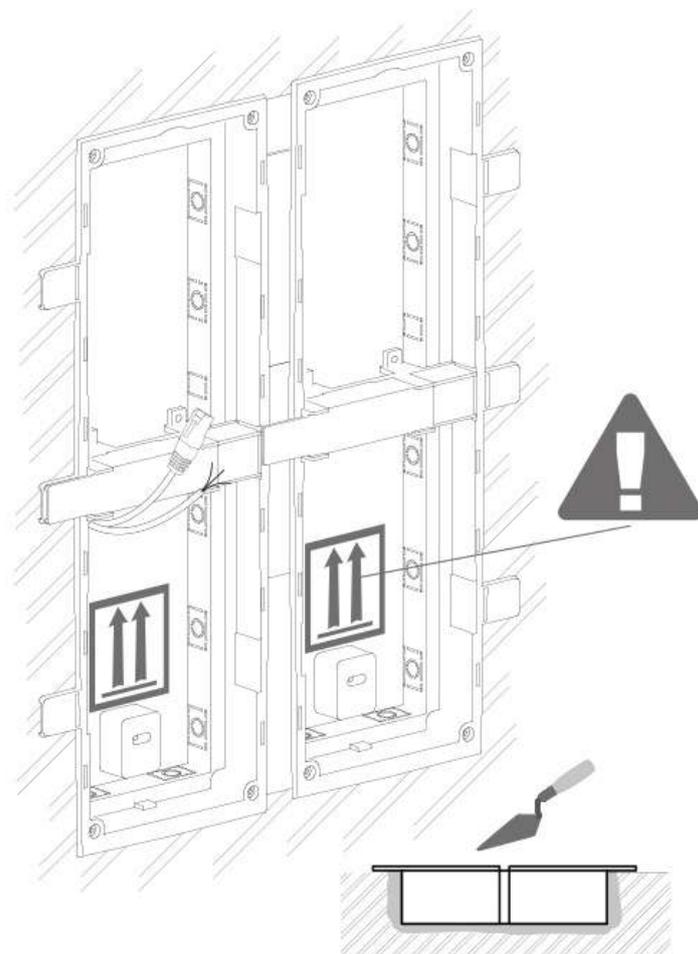


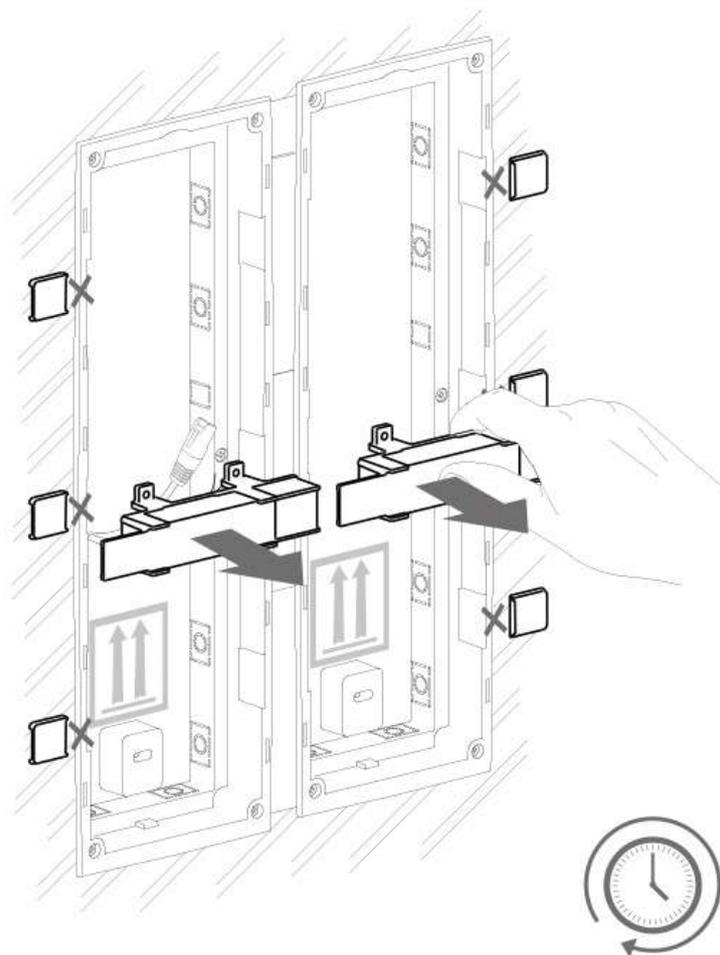


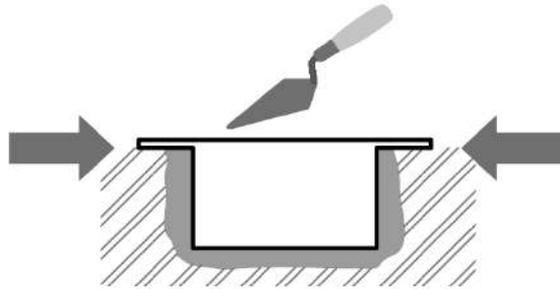




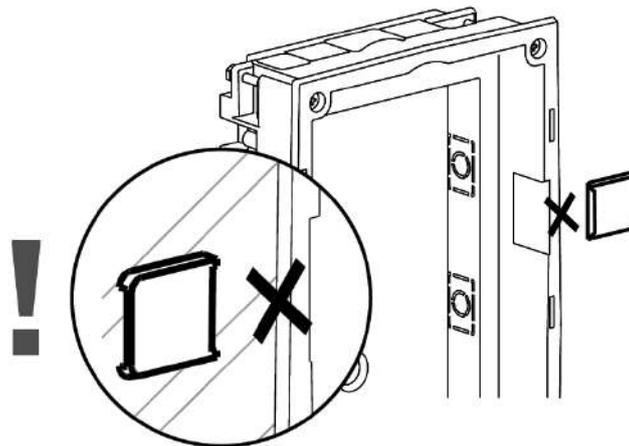




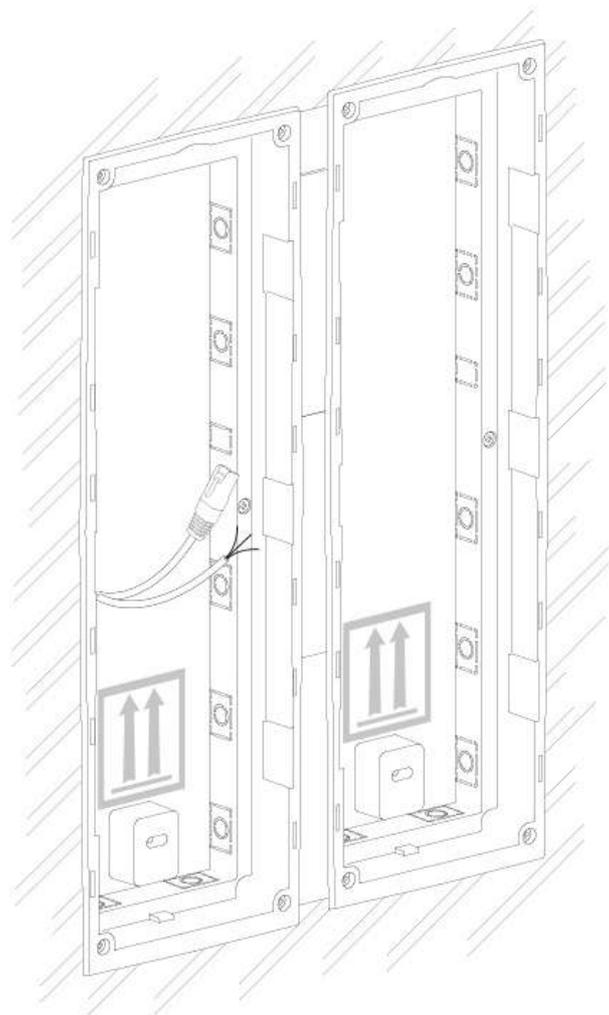


Warning

- Make sure that the flush mounting box is slightly above the wall surface not aligning with the wall. A wrong installation may lead to water penetration and subsequent damage of the device. Use the side protrusions to achieve the proper flush mounting.

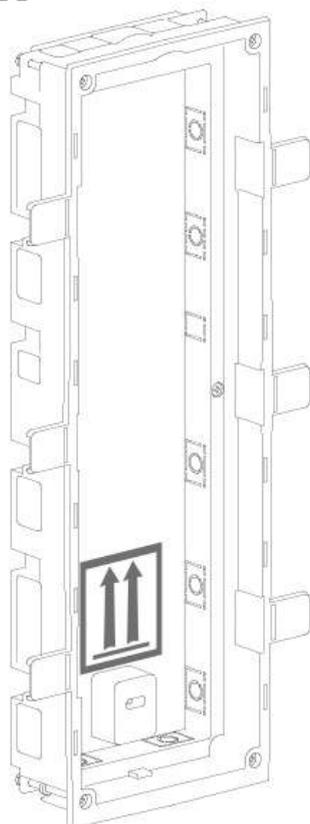
Caution

- Break off the side protrusions when the walling material has hardened.



Flush mounting box mounting - plasterboard

2x



3x



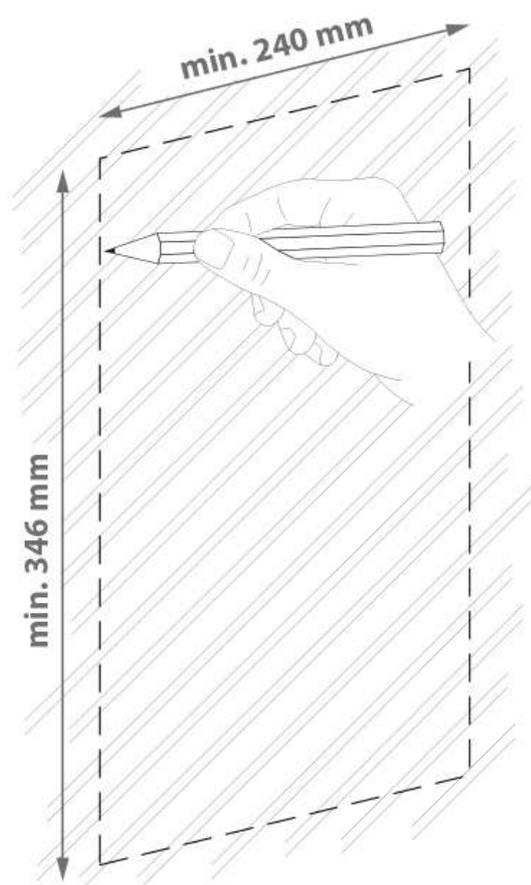
1x A

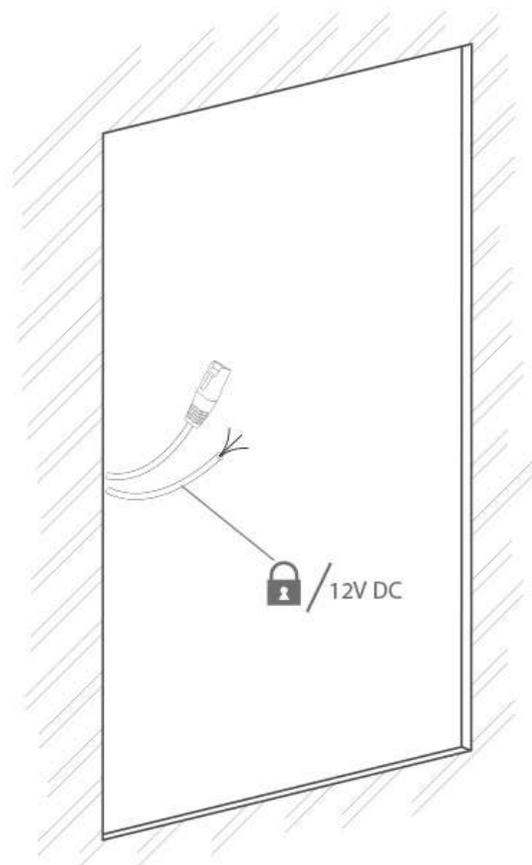


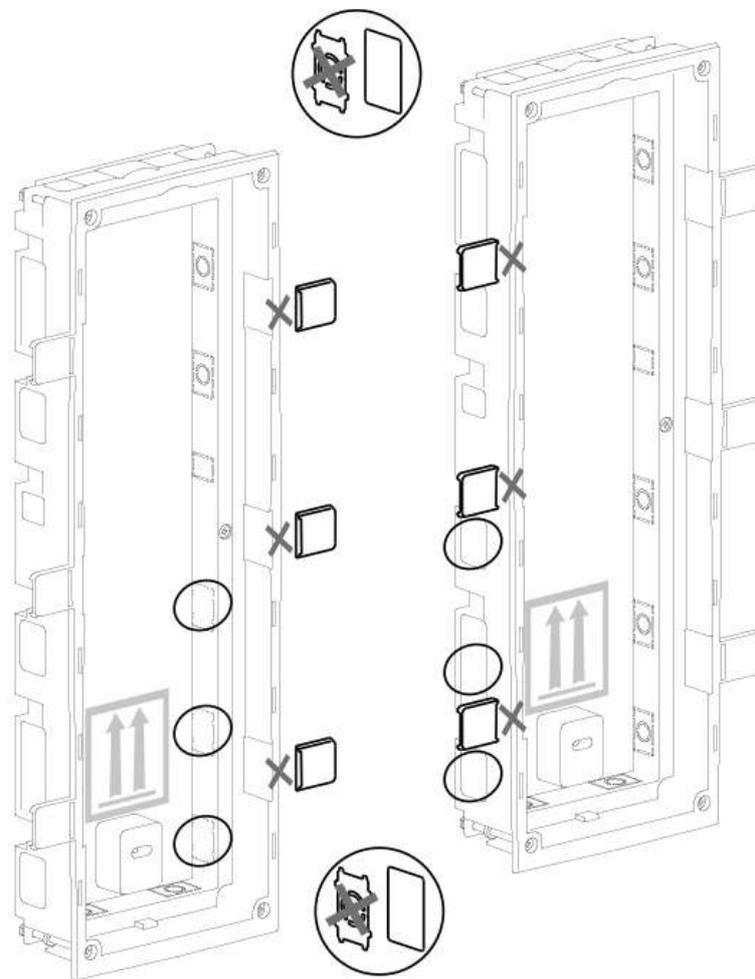
2x B

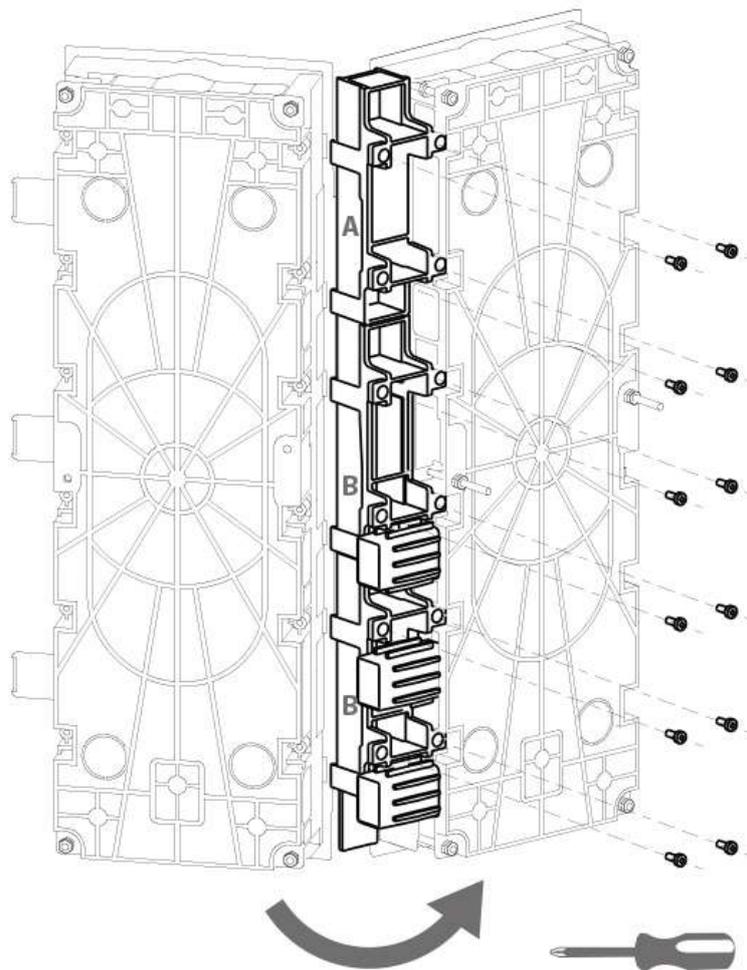


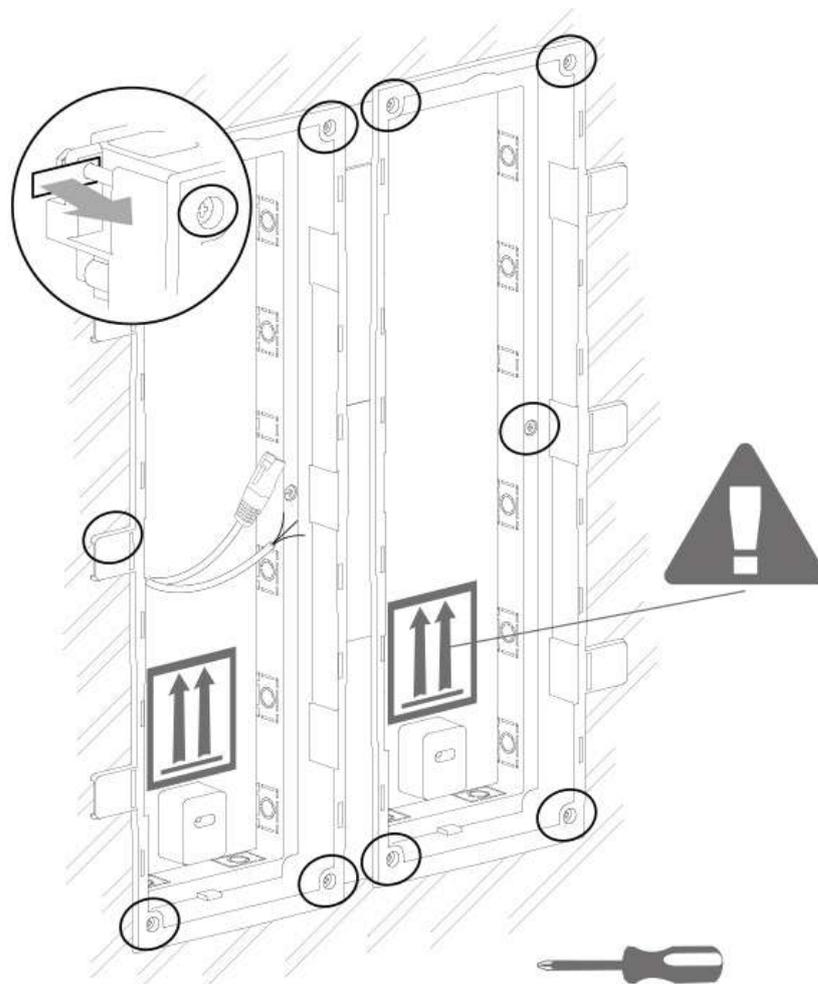
min 240(W) x 346(H) mm

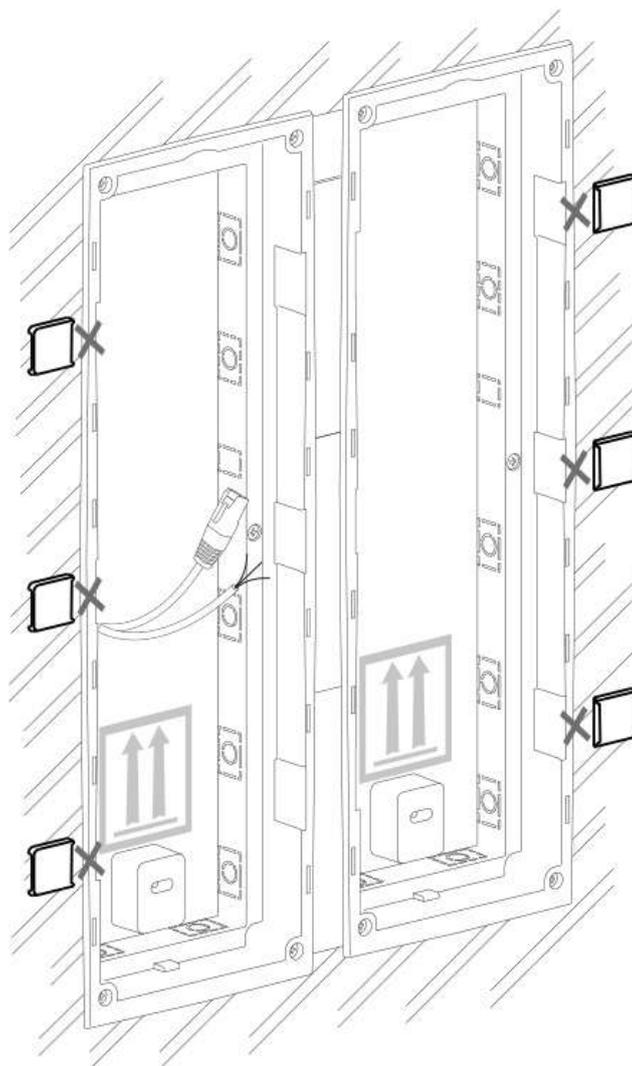


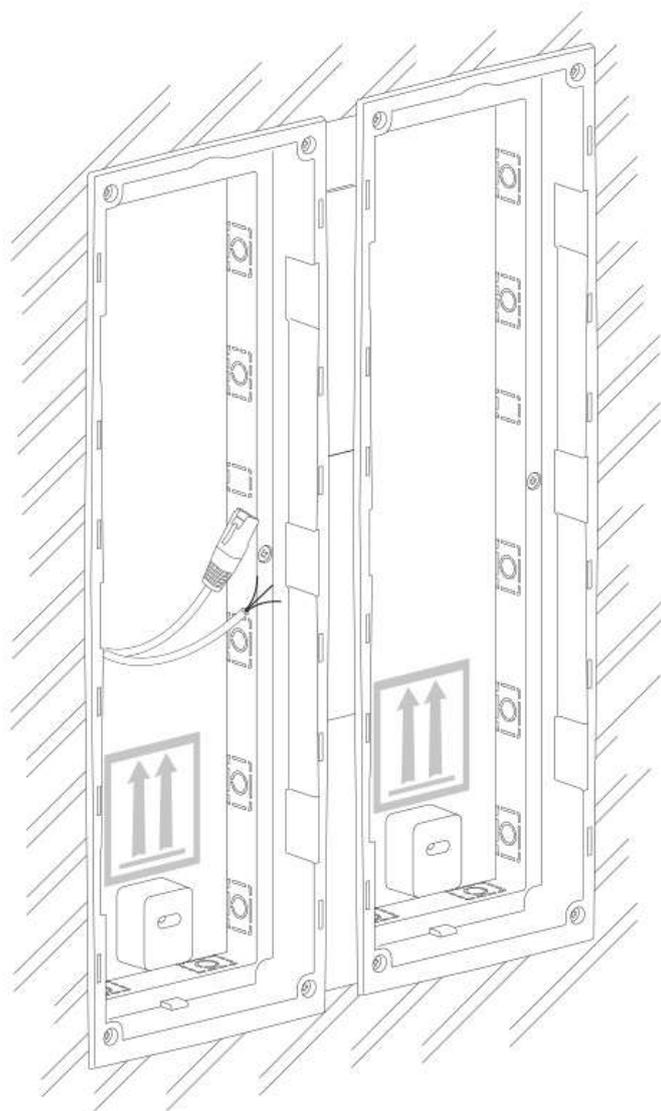




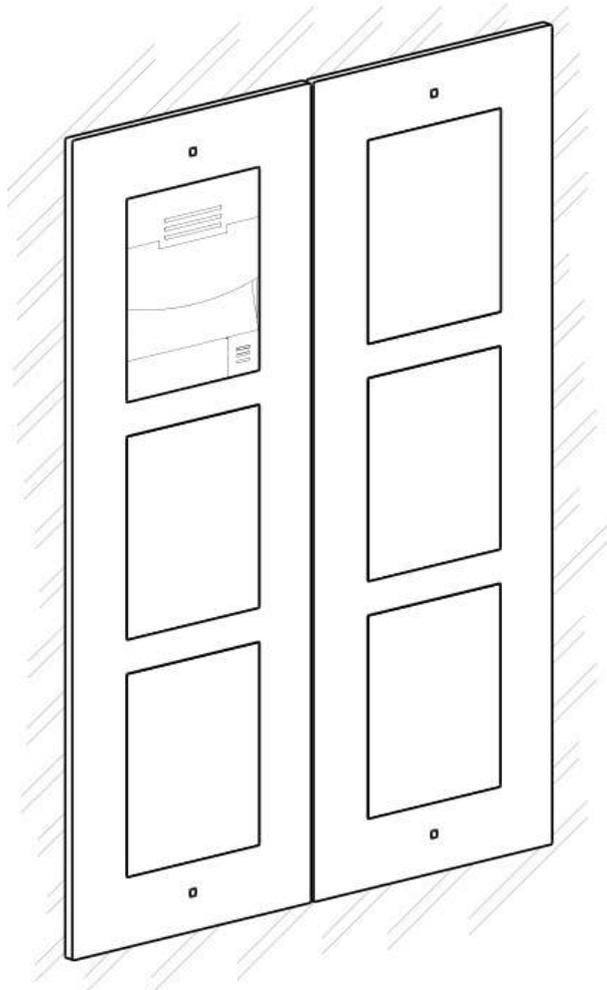


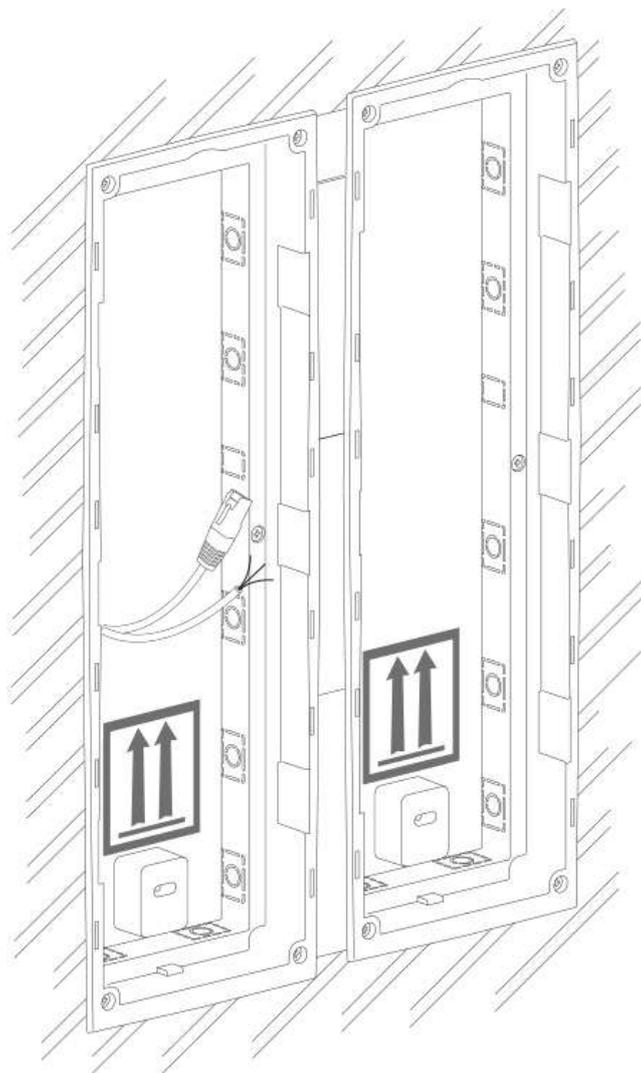


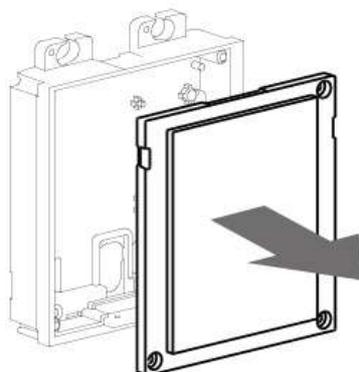
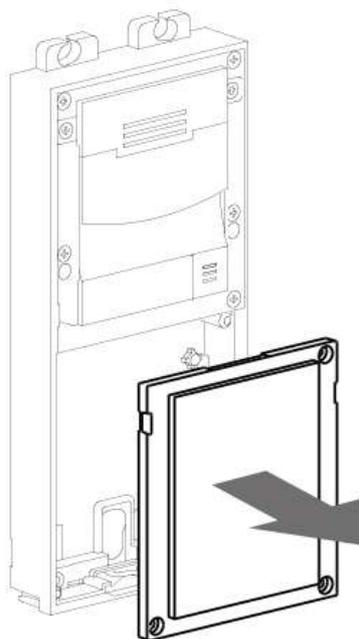


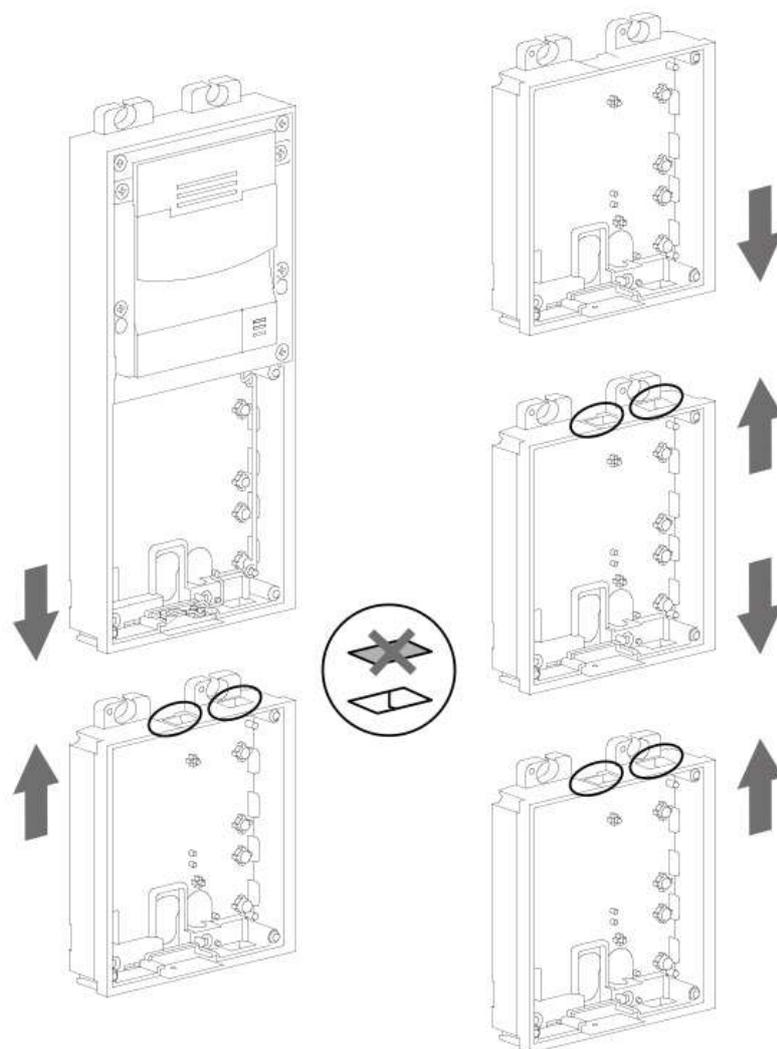


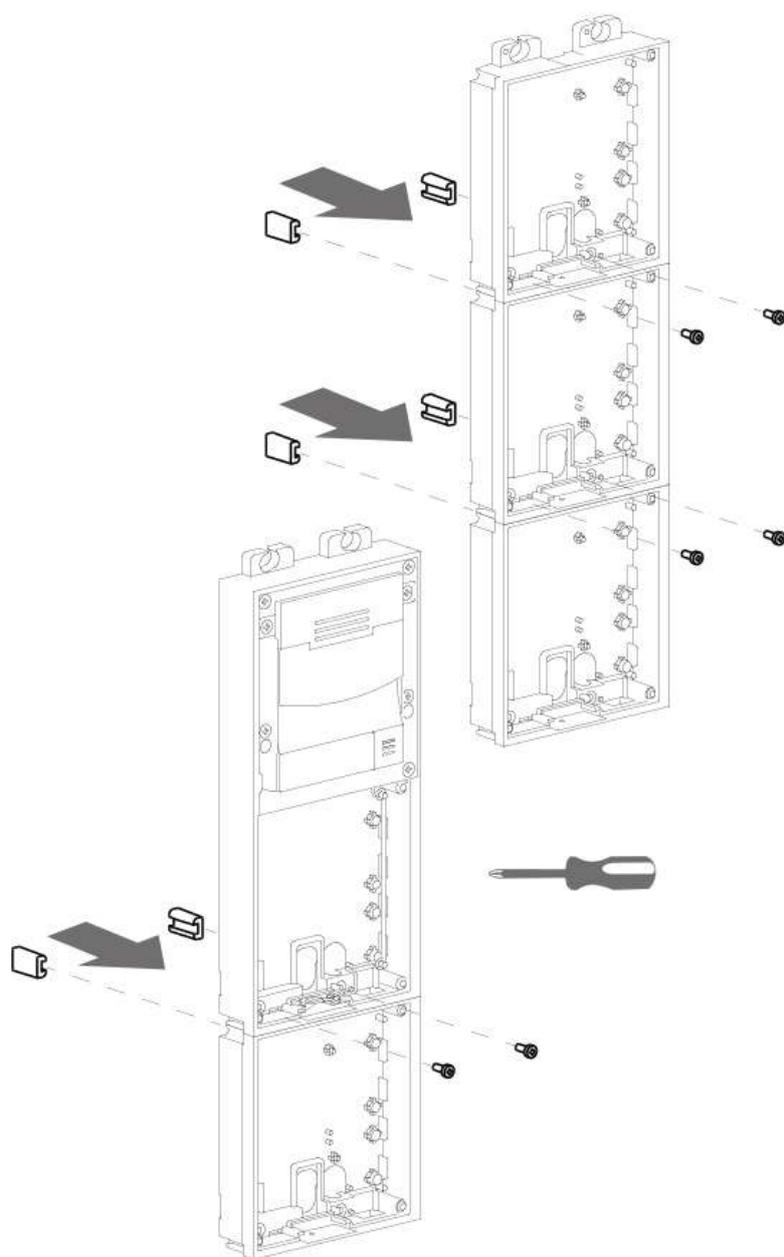
Flush module mounting

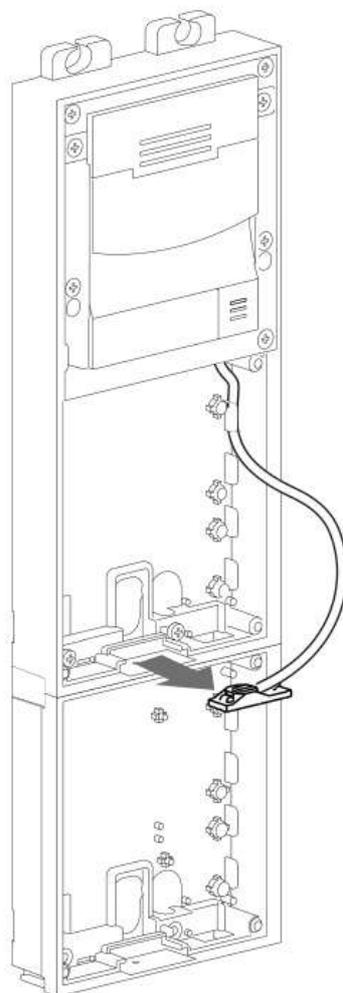


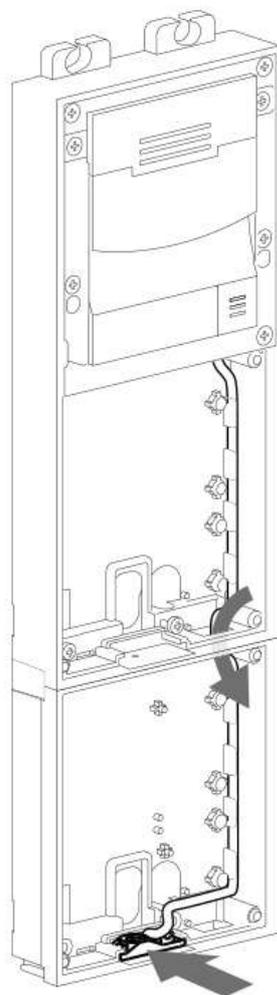


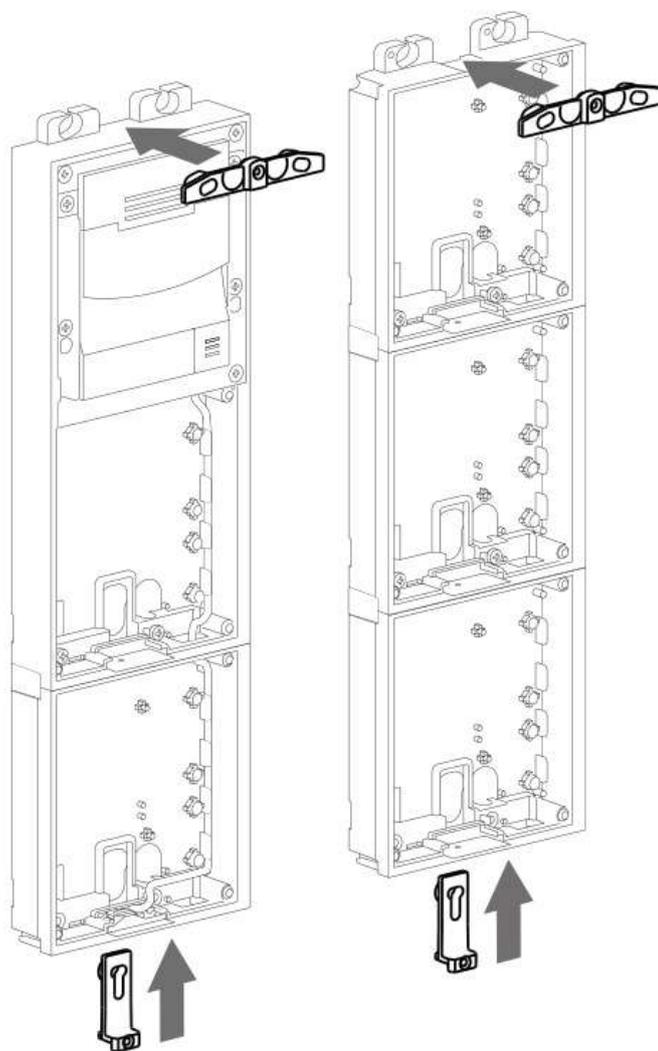


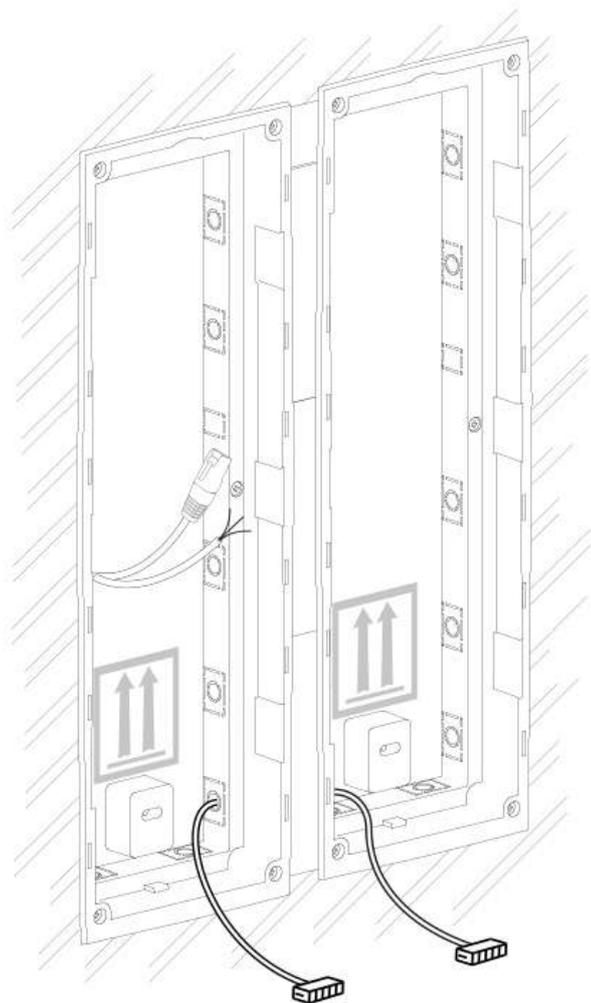


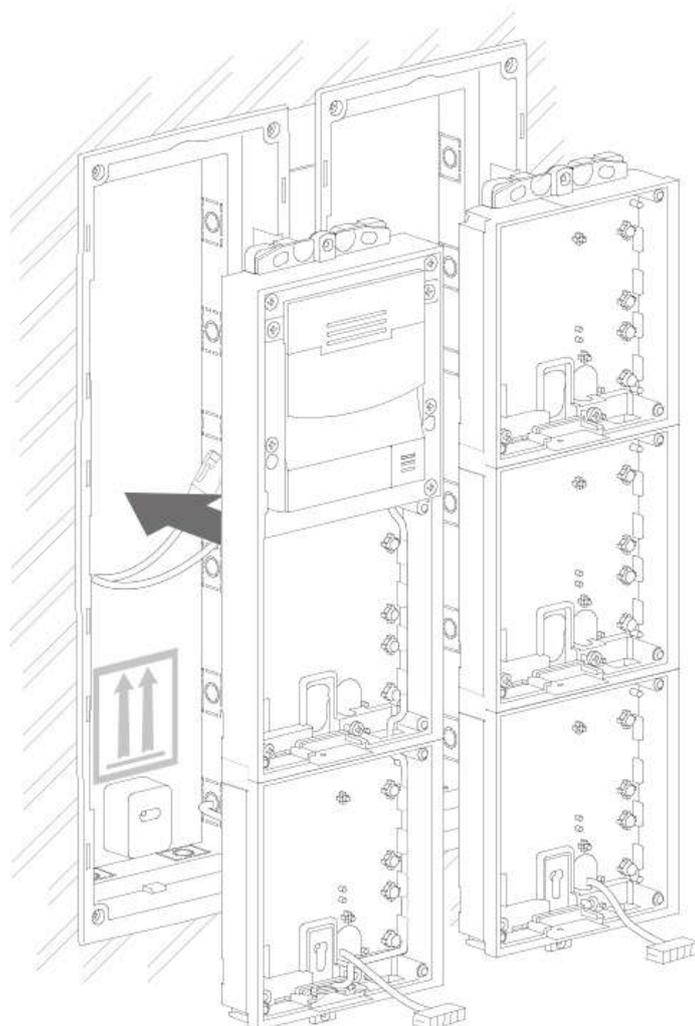


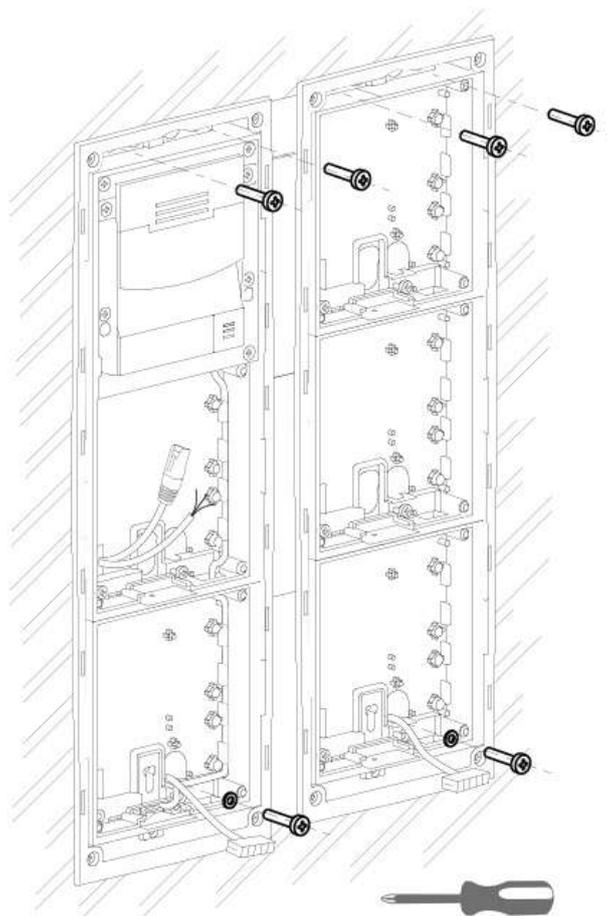


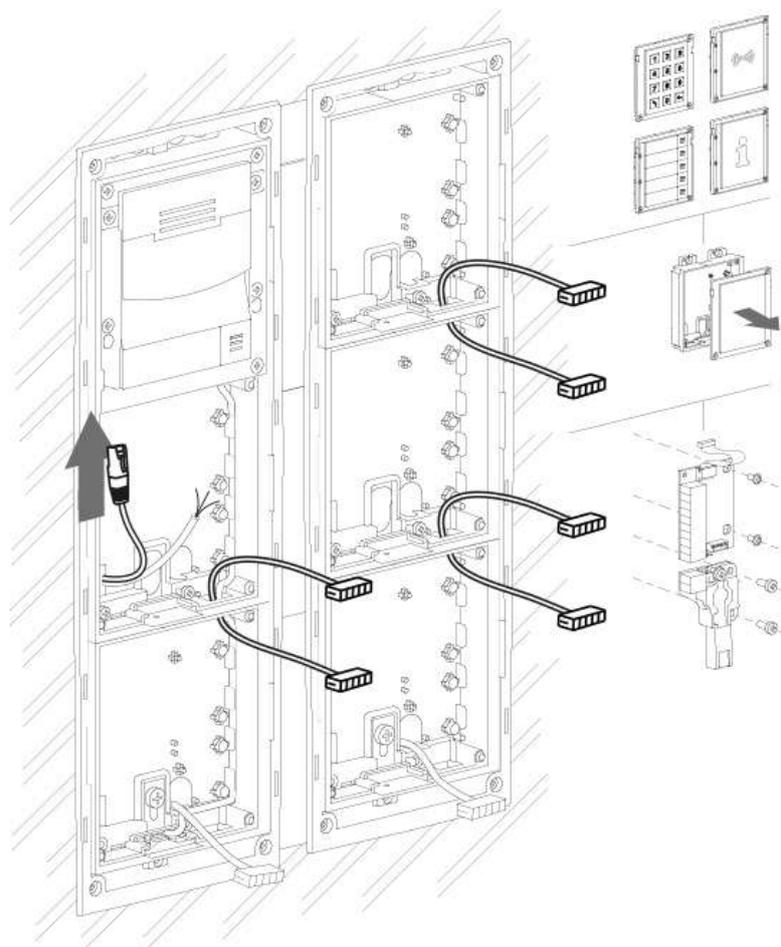


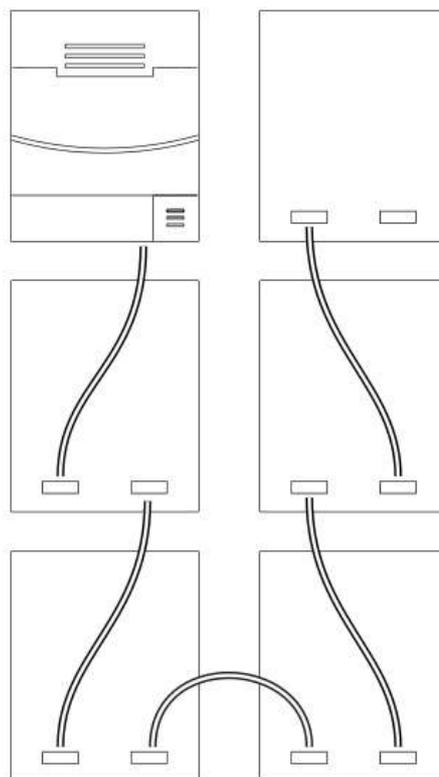


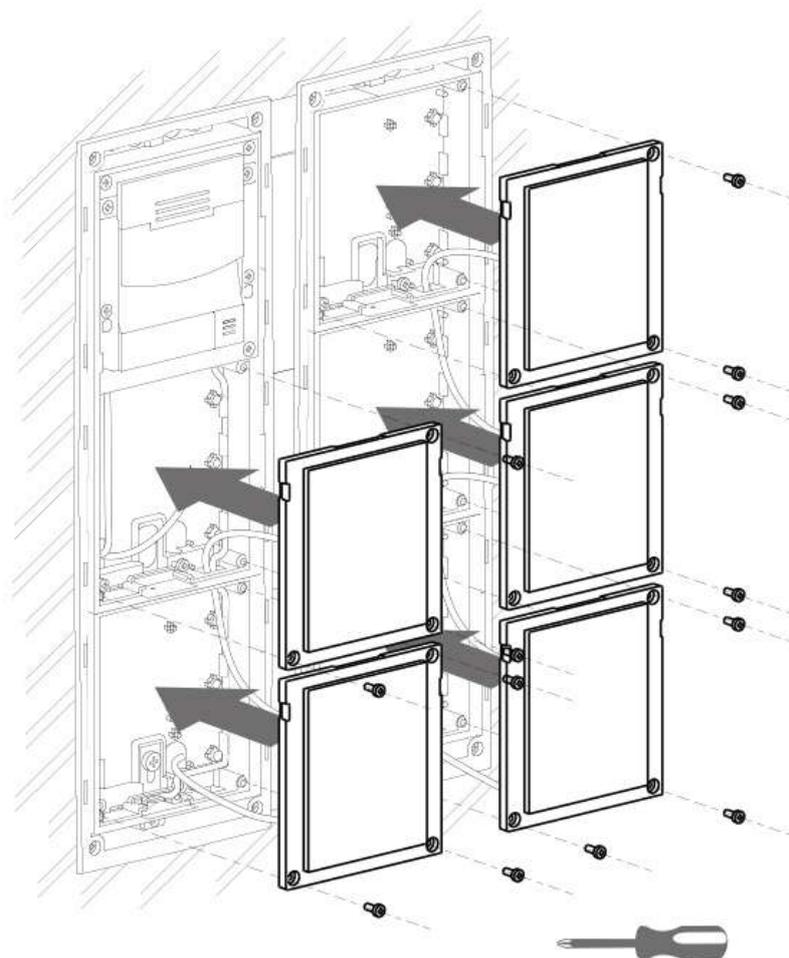


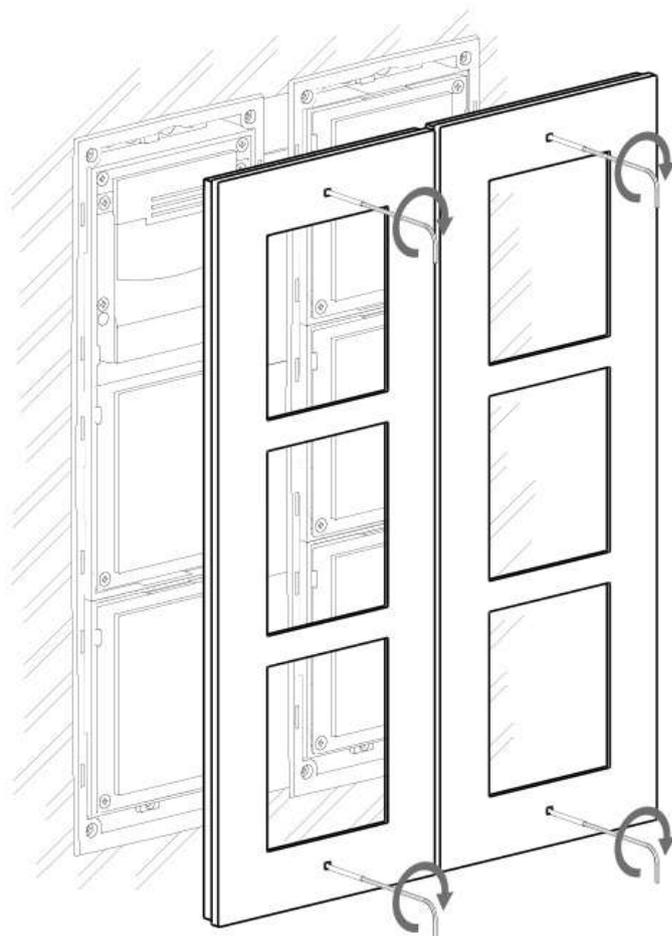






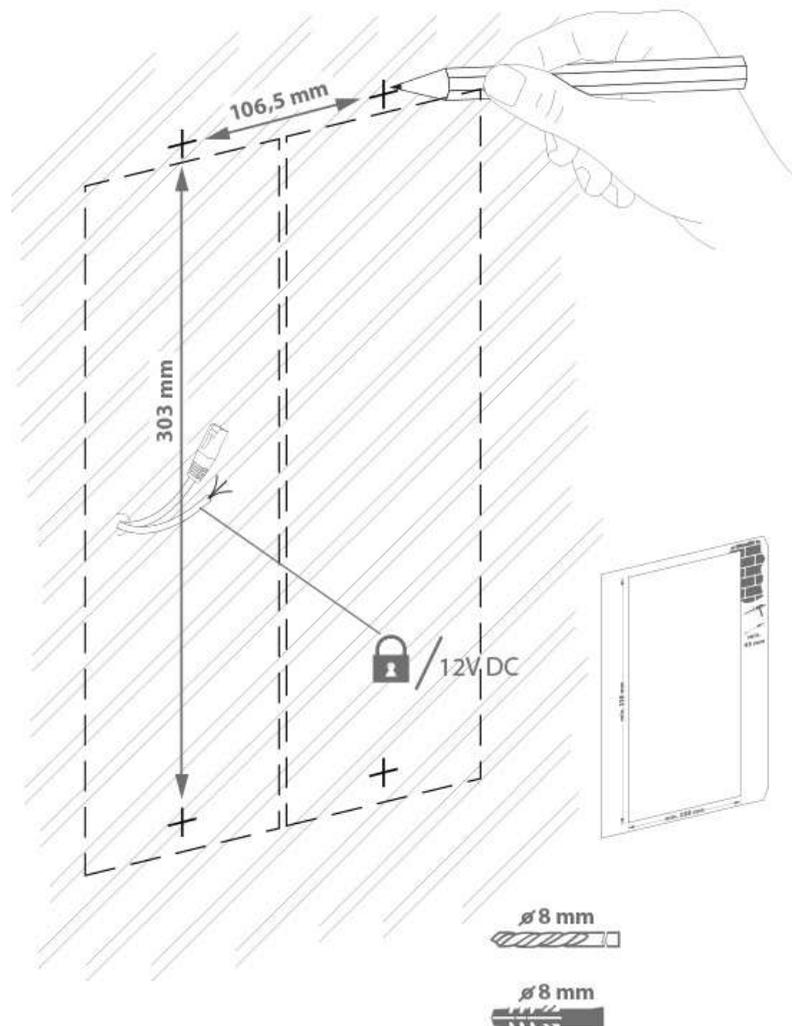


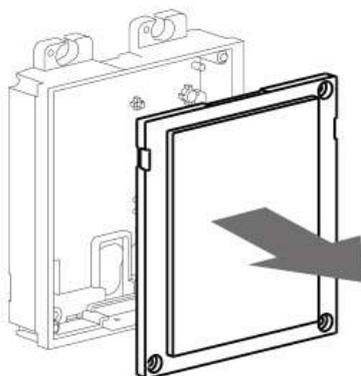
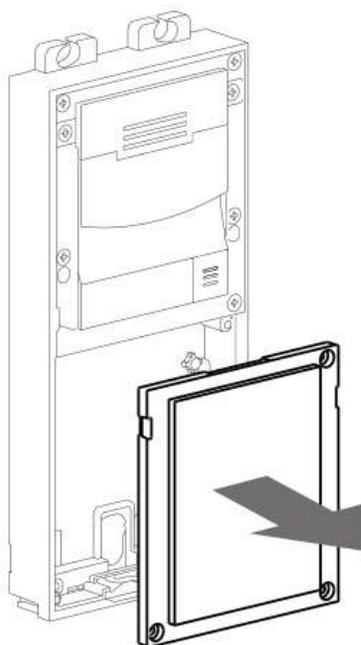


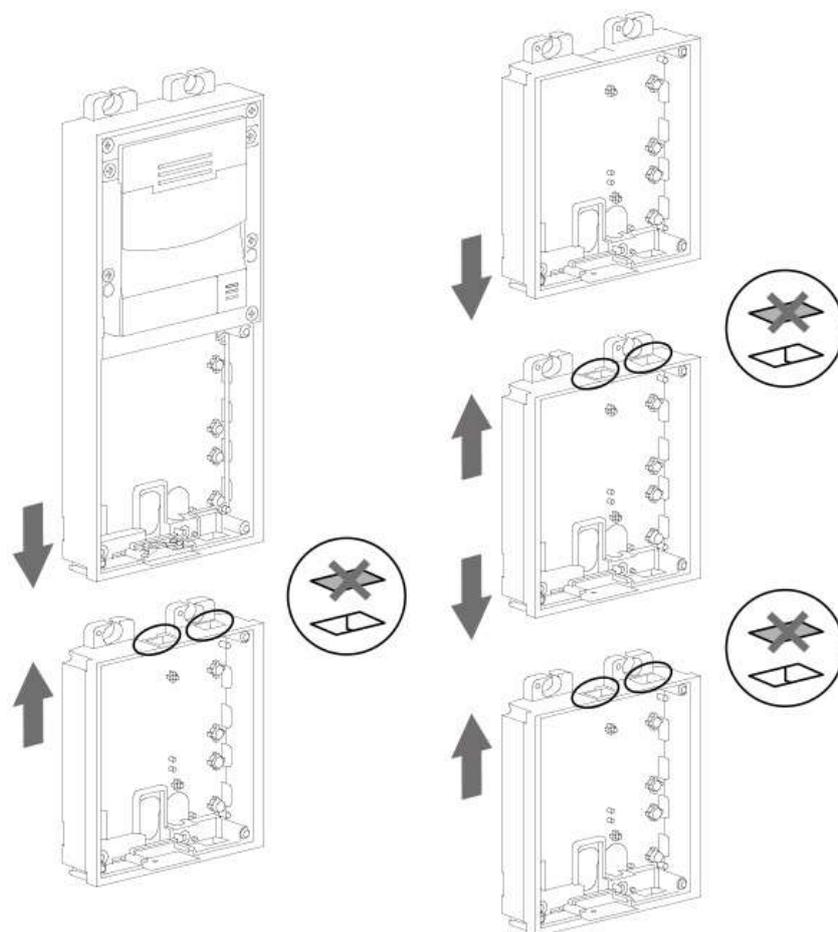


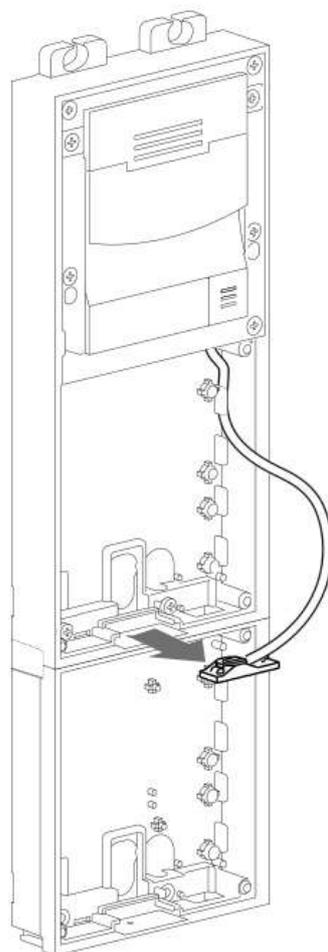
Surface module mounting

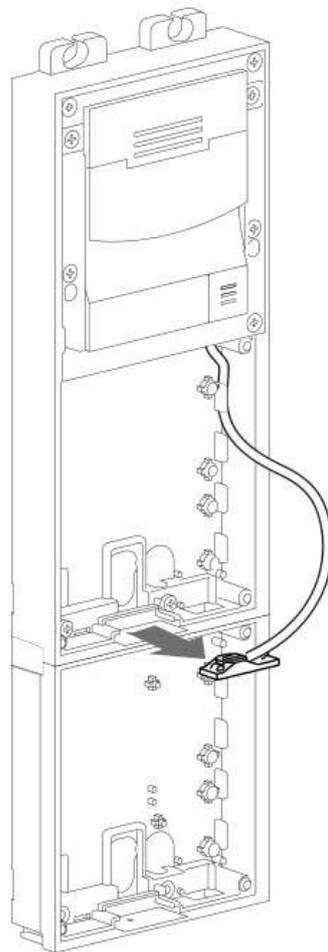


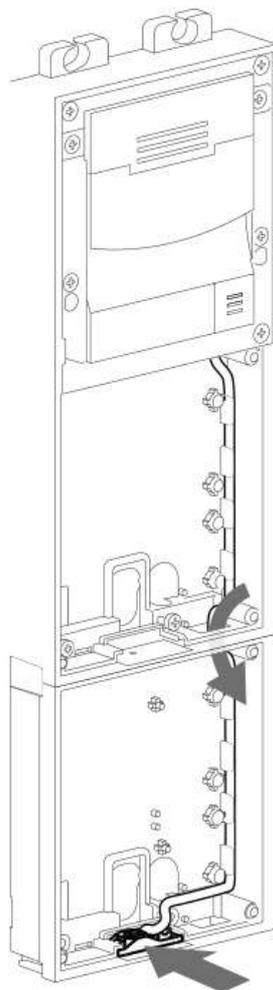


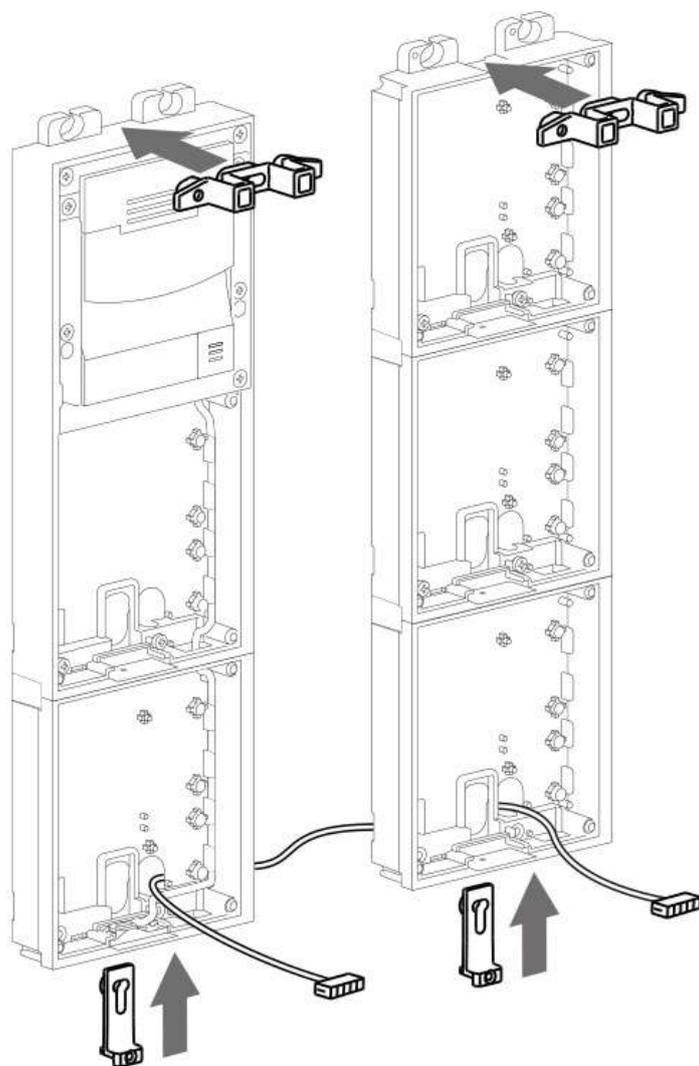


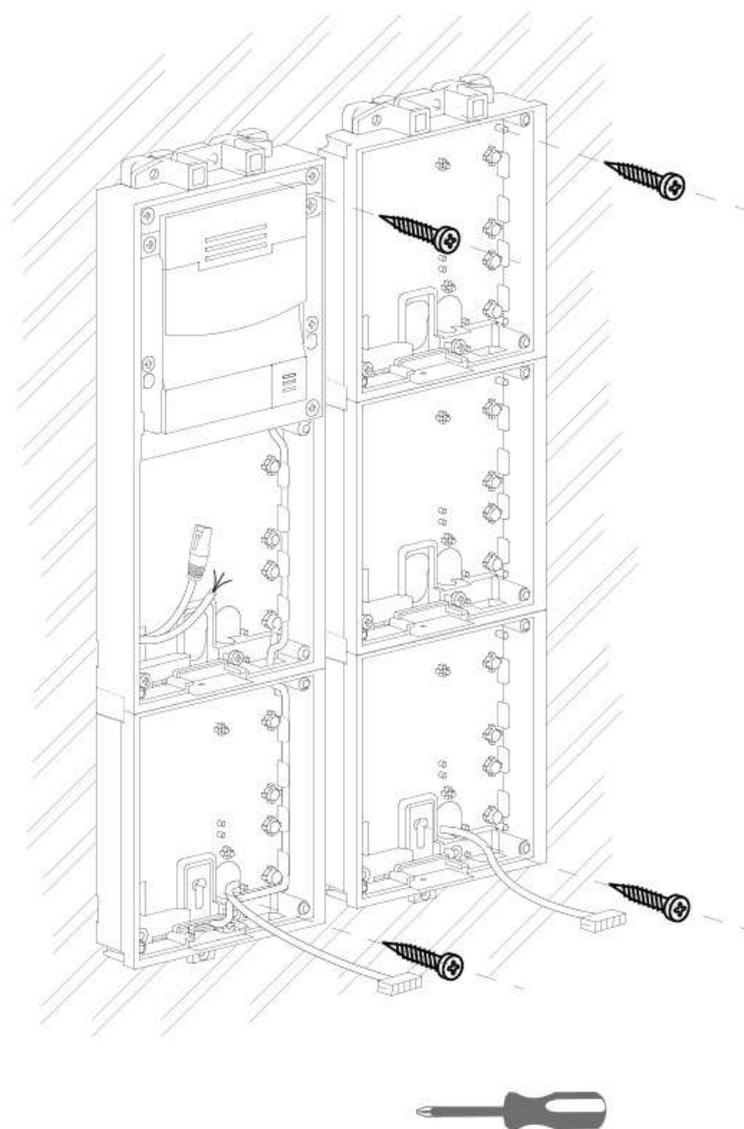


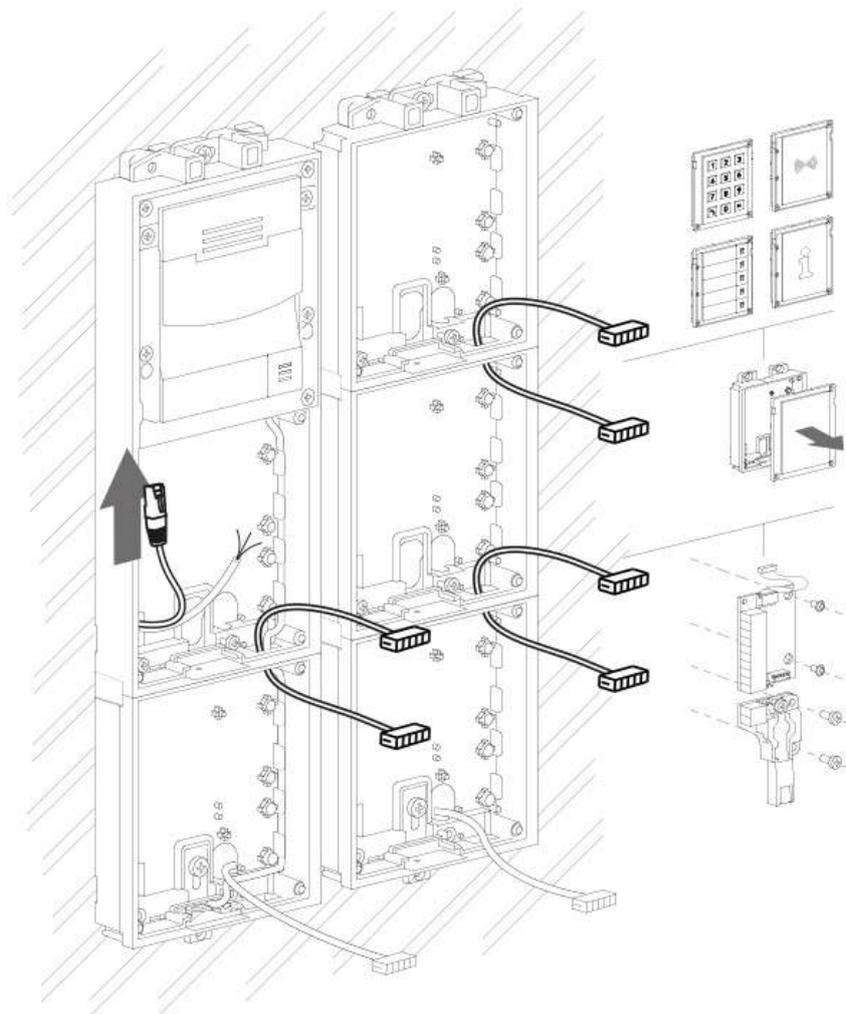


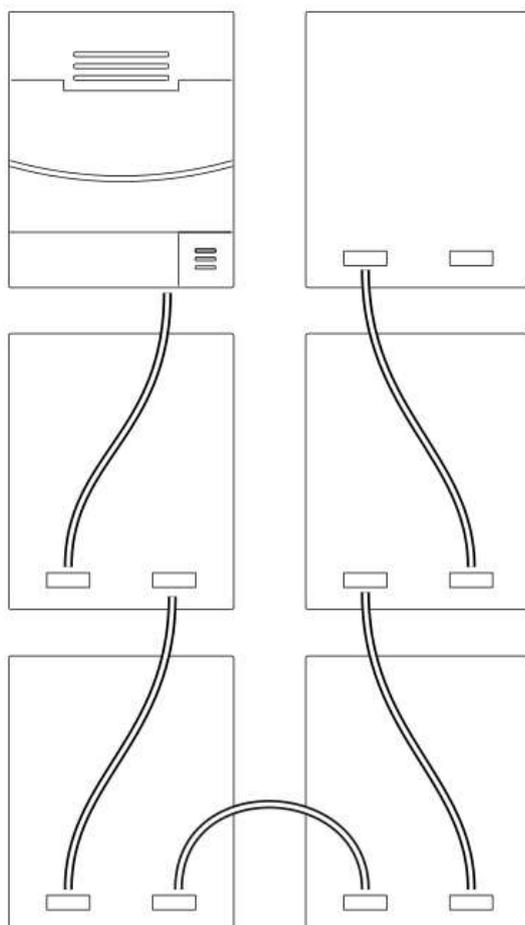


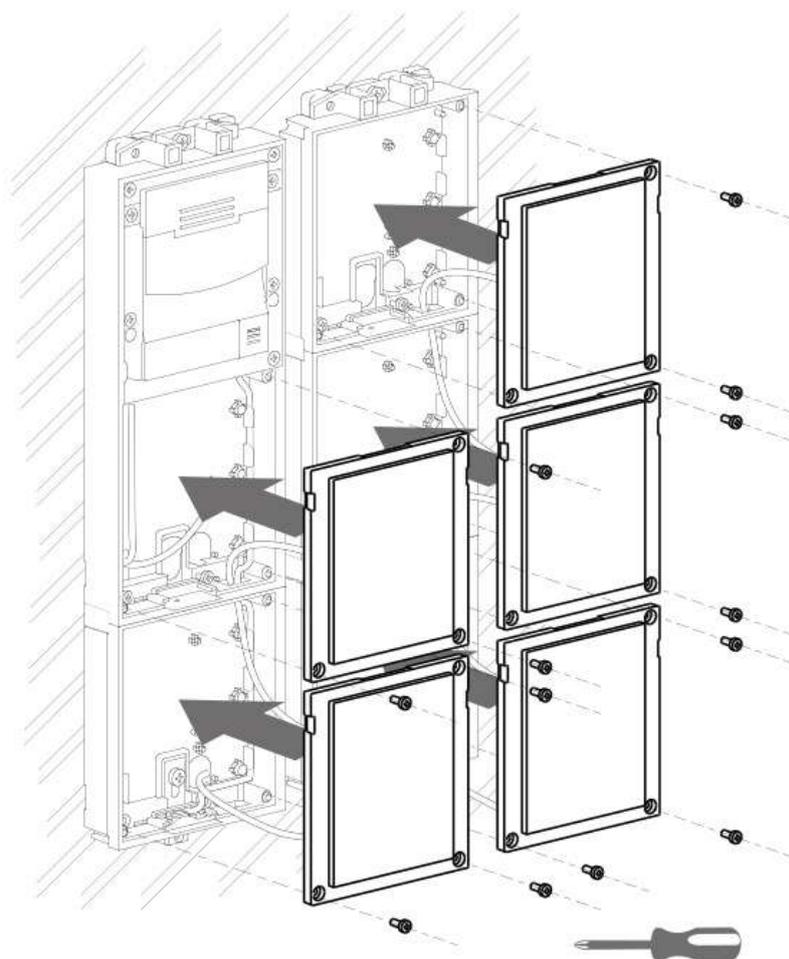


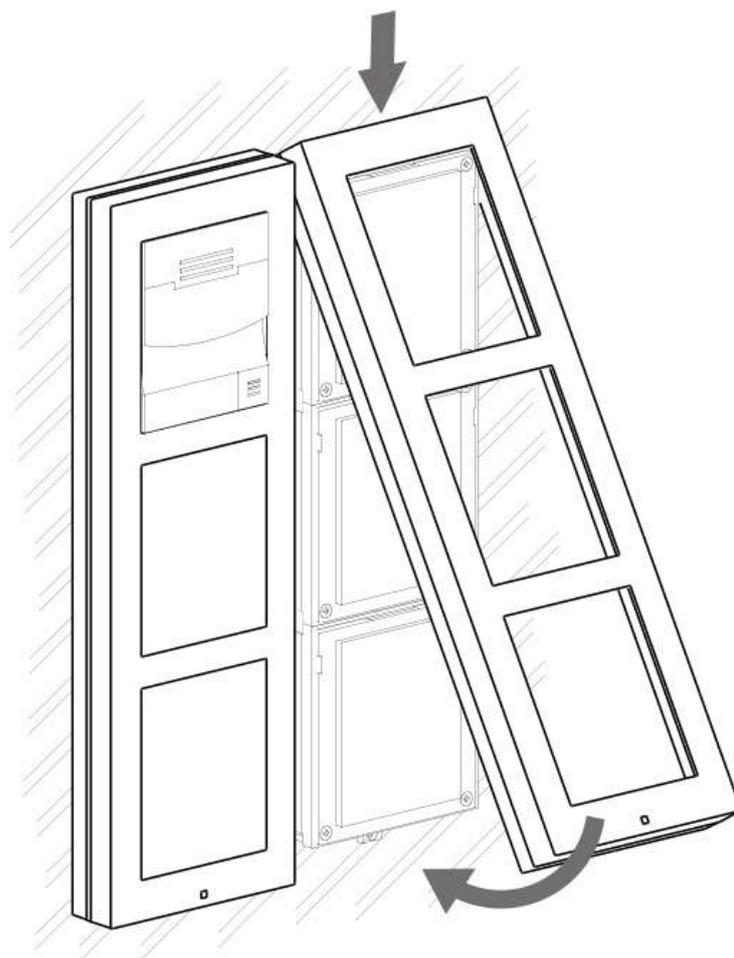






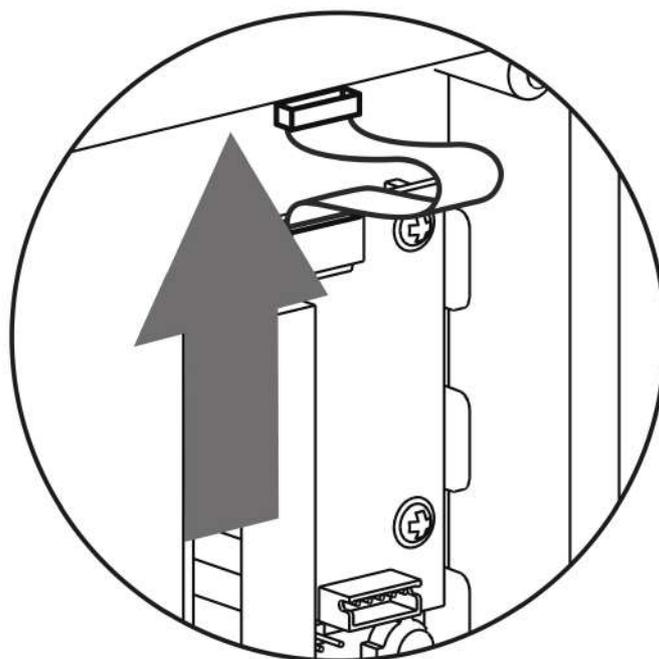
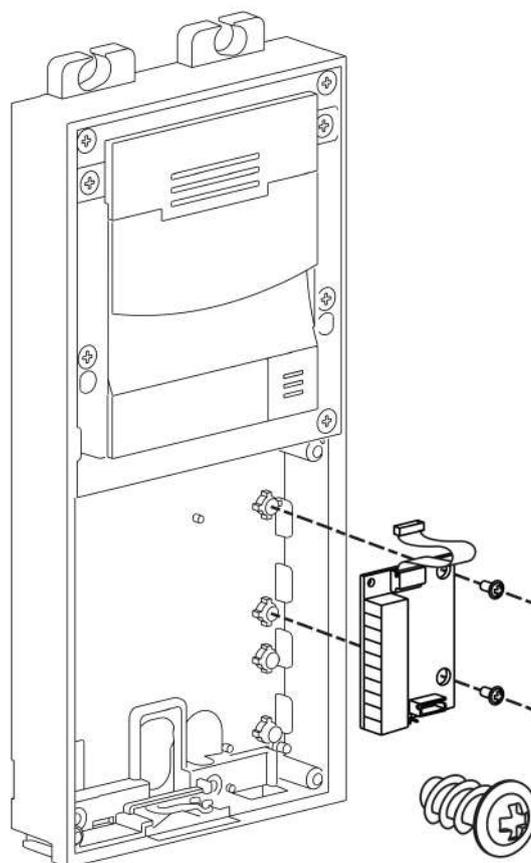


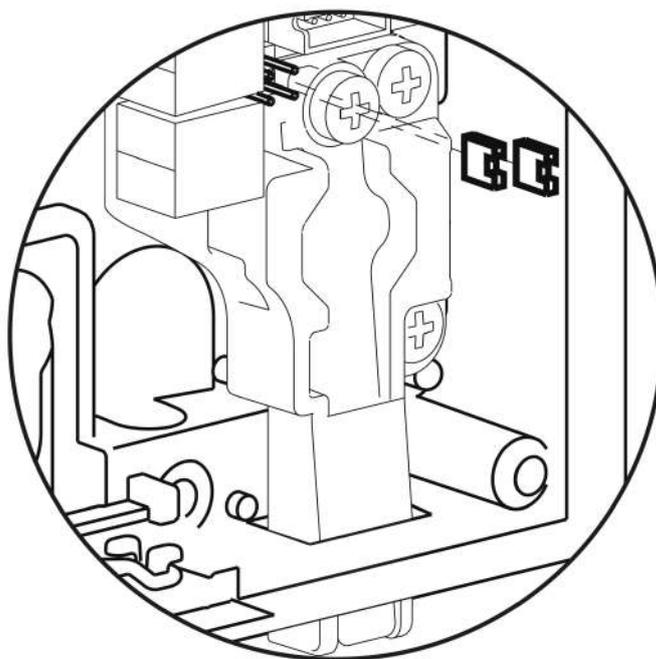
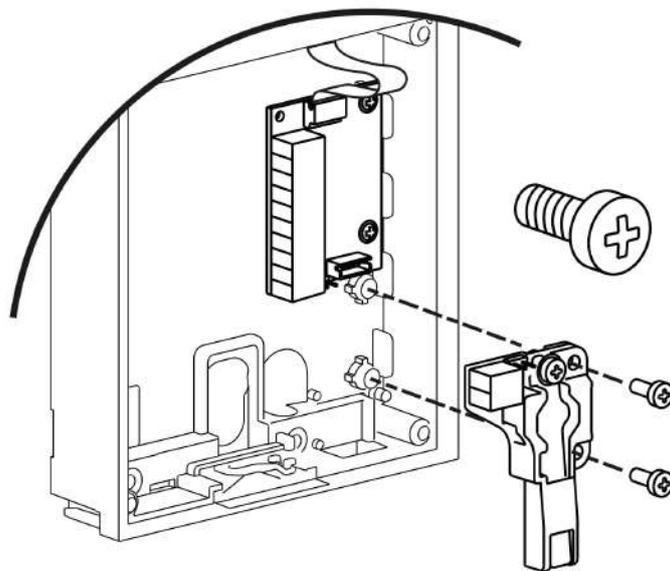






2.2.6 Tamper and I/O Modules





2.2.7 Module Dimensions

Frames

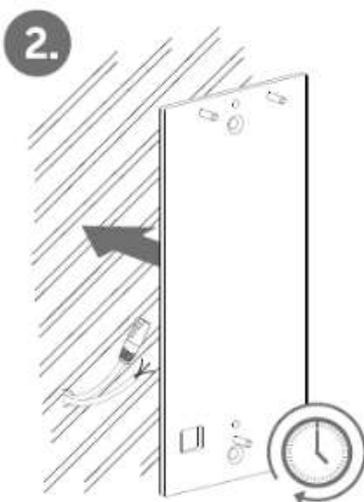
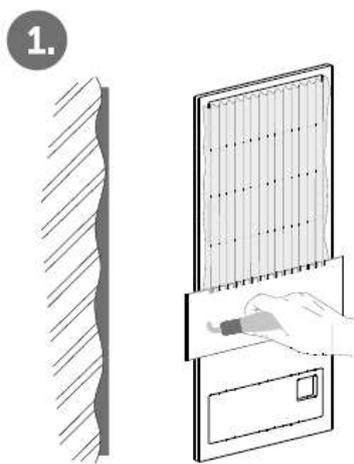
- 9155011 - Flush mounting frame, 1 module
- 9155012 - Flush mounting frame, 2 modules
- 9155013 - Flush mounting frame, 3 modules
- 9155021 - Surface mounting frame, 1 module
- 9155022 - Surface mounting frame, 2 modules
- 9155023 - Surface mounting frame, 3 modules

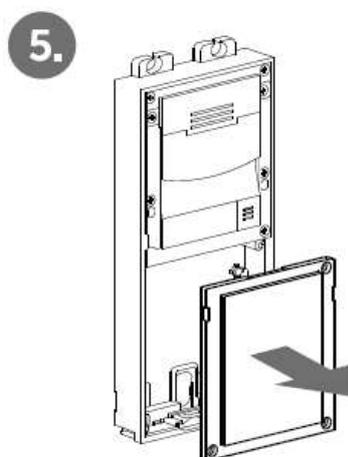
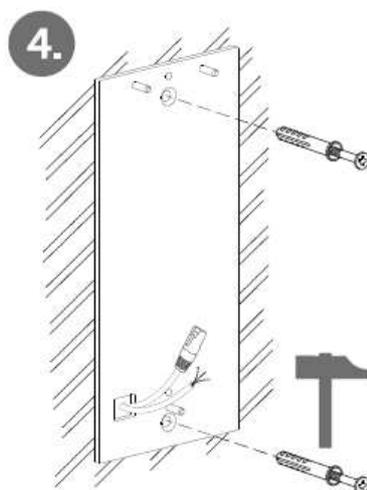
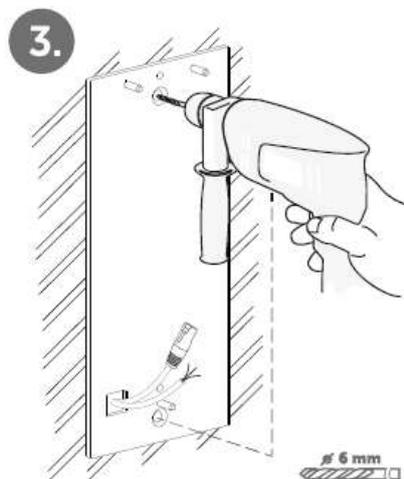
Backplates

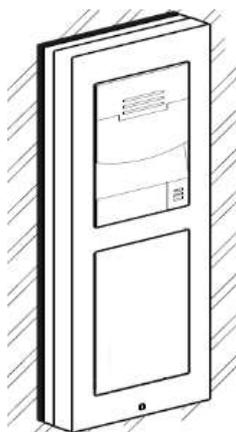
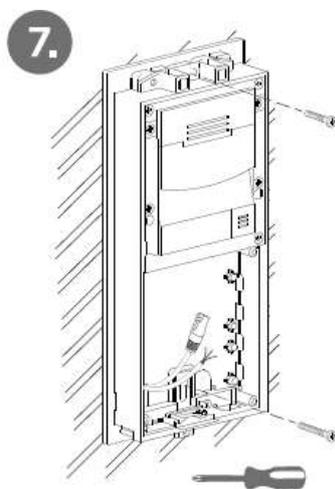
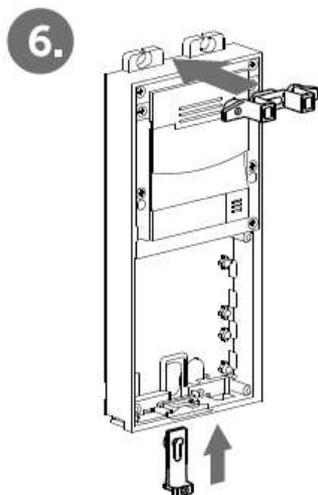
- 9155061 - 1 module
- 9155062 - 2 modules
- 9155063 - 3 modules
- 9155064 - 2x2 modules
- 9155065 - 3x2 modules
- 9155066 - 2x3 modules
- 9155067 - 3x3 modules

2.2.8 Example of Mounting Plate Installation

Wall installation



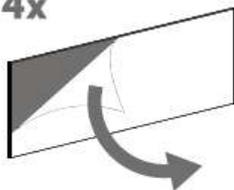




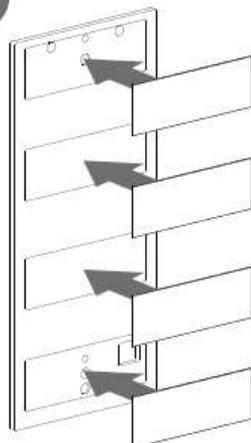
Glass surface installation

1.

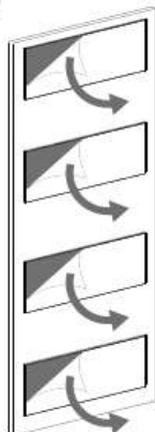
4x

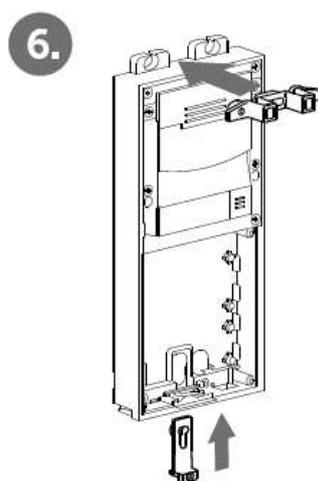
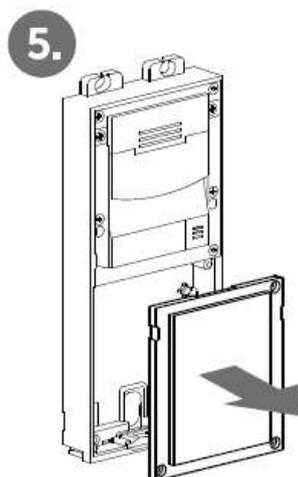
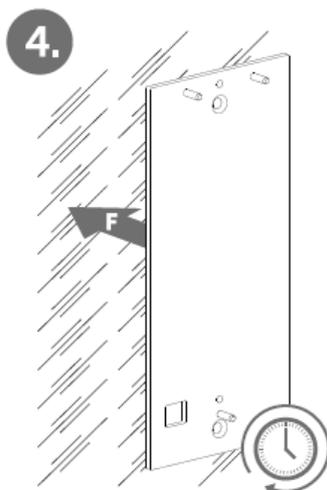


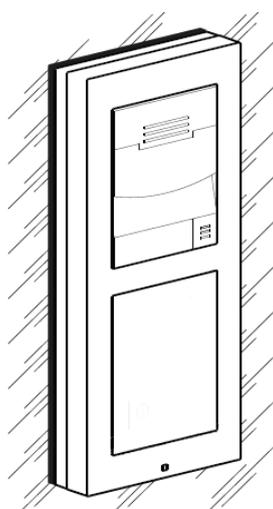
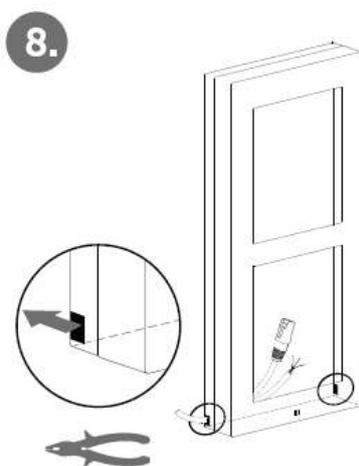
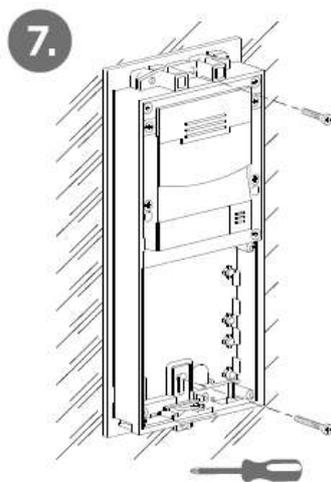
2.



3.







2.3 Electric Installation

This subsection describes how to install the modules, how to connect the 2N[®] IP Verso main unit to the power supply and LAN and how to connect other elements.

Caution

- The device must be part of the electrical system of the building.

Mounting Preparation

1. Unscrew the second module cover on the main unit base.
2. Use a flat screwdriver to take out the module cover.

Version A - 2-Module Base

1. Place the base on the flush mounting box / predrilled holes with dowels and pull the cables through the bottom holes. Pull the Ethernet cable including the connector through the bottom hole to the left if necessary.
2. Insert the metal fitting elements up and down and screw the base plate tight. You can level the base slightly if you are mounting just one base.

Version B - 3-Module Base

1. Unscrew the cover of the additional base.
2. Use a flat screwdriver to take out the cover.
3. Slide the additional base to the main unit base and secure its position with the small side wedges and screws.
4. Remove the microphone from the main unit base and loosen the microphone cable.
5. Lead the microphone to the third module base as shown in the figure.
6. Place the joined bases on the flush mounting box / predrilled holes with dowels and pull the cables through the bottom holes. Feed the Ethernet cable without the connector from the additional base to the main unit base if necessary.

Version C – Additional Columns

1. Unscrew the cover of the additional bases and take it out with a flat screwdriver.
2. Insert the bases into each other as projected and secure their position with the small side wedges and screws.
3. Place the cover on the flush mounting box / predrilled holes with dowels and pull the cables if any through the bottom holes.
4. Pull the bus using the cable bushing available in the flush mounting box.

Main Unit

Power Supply Connection

2N[®] IP Verso can be powered either from an external 12 V / 2 A DC source or directly from the LAN equipped with PoE 802.3af supporting network elements. Owing to different power outputs, the power supply selection affects the maximum count and applicability of the modules connected of the main unit.

External power supply

Use a 12 V \pm 15 % SELV supply dimensioned to the minimum current consumption of 2 A (Part No. 91341481E) to make your system work reliably. This power supply provides 2N[®] IP Verso with 24 W for feeding of the main unit and connected modules.

PoE Power Supply

2N[®] IP Verso is compatible with the PoE 802.3af (Class 0-12,95 W) technology and can be fed directly from the LAN via the compatible network elements. If your LAN does not support this technology, insert a PoE injector, Part No. 91378100, between 2N[®] IP Verso and the nearest network element. This power supply provides 2N[®] IP Verso with 12 W for feeding of the main unit and connected modules.

Combined Power Supply

2N[®] IP Verso can be fed from an external power supply and PoE at the same time. In this configuration, the maximum power for the connected modules is available.

LAN Connection

2N[®] IP Verso is connected to the Local Area Network (LAN) via the UTP/STP cable (Cat 5e or higher) terminated with an RJ-45 (LAN) connector. As the device is equipped with the Auto-MDIX function, both the straight and crossed cable can be used.

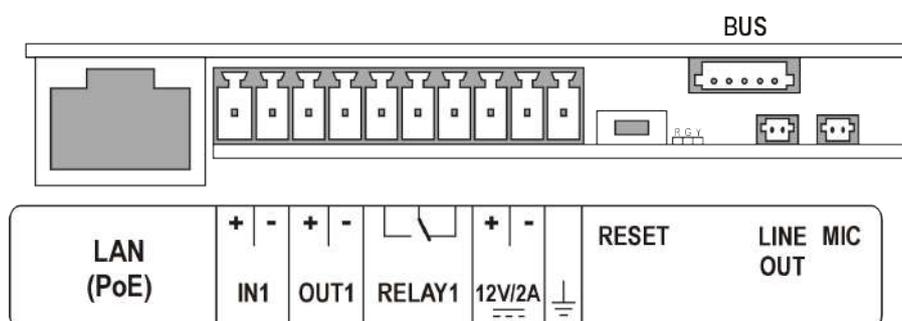
⚠ Caution

- We recommend the use of a LAN surge protection.
- We recommend the use of a shielded SSTP Ethernet cable with a shielded RJ-45 connector connected to the switch (with the grounding option) via the same shielded connector. This makes the device perfectly grounded.

✔ Tip

- Remove the connector protecting cover to pass through the UTP/STP cable RJ terminal to the device box more easily.

Main Unit Connector Configuration



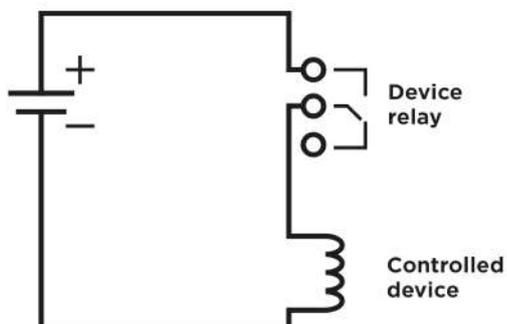
⚠ Caution

- We recommend you to use a grounding cable of the cross-section of 1.5 mm².

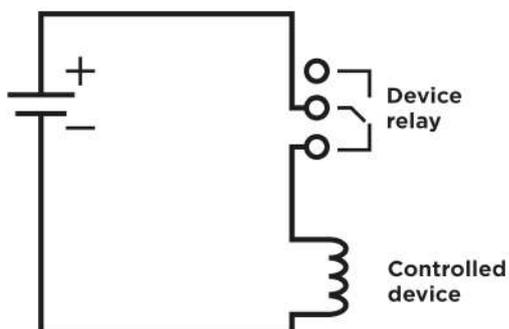
Legend	
LAN (PoE)	LAN (PoE according to 802.1af) connector
IN1	IN1 terminals for input in passive/ active mode (-30 V to +30 V DC) OFF = open OR $U_{IN} > 1.5 \text{ V}$ ON = closed contact OR $U_{IN} < 1.5 \text{ V}$
OUT1	OUT1 terminals of active input for 2N[®] Security Relay or electric lock connection 8 up to 12 V DC depending on power supply (PoE: 10 V; adaptor: power supply voltage minus 2 V), max 400 mA
RELAY1	RELAY1 terminals with accessible 30 V / 1 A AC/DC NO/NC contact. Used for connection of non-critical devices only (lights, e.g.).
12V/2A	External 12 V / 2 A DC supply terminals
GND	Grounding terminal
RESET	RESET / FACTORY RESET button
RGY	LED indicators (red/green/yellow)
LINE OUT	LINE OUT connector (1 V_{RMS}). Connector type JST SHR-02V-S.
MIC	MIC connector for microphone connection
BUS	2N[®] IP Verso bus connector

Tip

- Output wiring diagram for Relay terminals



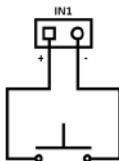
Wiring diagram for the controlled device's electric circuit closing



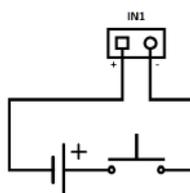
Wiring diagram for the controlled device's electric circuit opening

✓ **Tip**

- Wiring Diagram of IN1 connector in active mode



- Wiring Diagram of IN1 connector in passive mode



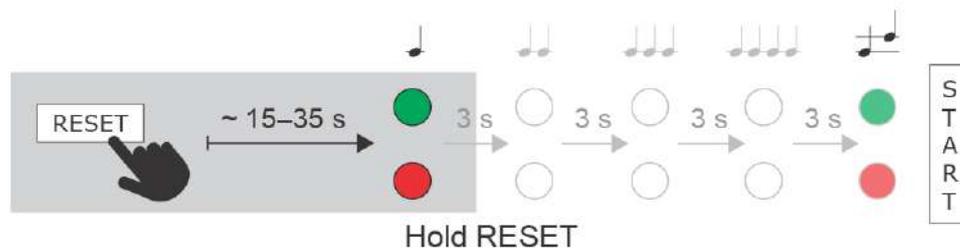
Reset Button

Located among the main unit connectors, the Reset button helps you reset the factory default values, restart the device, find the device IP address and switch the static /dynamic mode.

IP Address Finding

Follow the instructions below to **identify the current IP address**:

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously on the device and the acoustic signal  can be heard (approx. 15–35 s).
- Release the RESET button.
- The device automatically announces the current IP address.



Note

- The delay after pressing RESET till the first light and sound signalling is set to 15-35 s depending on the 2N IP intercom/answering unit model used.
 - 18 s is the valid value for 2N[®] IP Verso.

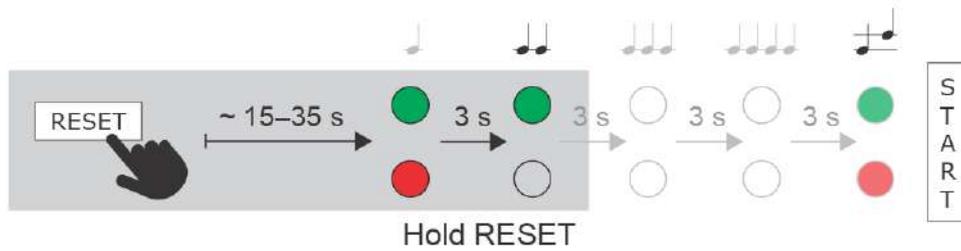
Static IP Address Setting

Follow the instructions below to switch on the **Static IP address** mode (DHCP OFF):

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously on the device and the acoustic signal  can be heard (approx. 15-35 s).
- Wait until the red LED goes off and the acoustic signal  can be heard (approx. for another 3 s).
- Release the RESET button.

The following network parameters will be set after restart:

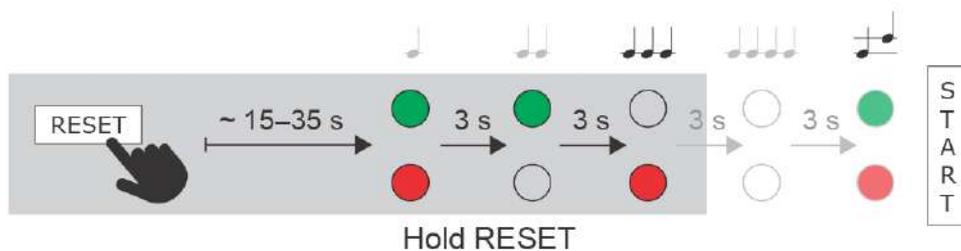
- IP address: 192.168.1.100
- Network mask: 255.255.255.0
- Default gateway: 192.168.1.1



Dynamic IP Address Setting

Follow the instructions below to switch on the **Dynamic IP address** mode (DCHP ON):

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously on the device and the acoustic signal  can be heard (approx. 15–35 s).
- Wait until the red LED goes off and the acoustic signal  can be heard (approx. for another 3 s).
- Wait until the green LED goes off and the red LED goes on again and the acoustic signal  can be heard (approx. for another 3 s).
- Release the RESET button.



Factory Reset

Follow the instructions below to **reset the factory default values**:

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously and the acoustic signal  can be heard (approx. 15–35 s).

Note

- The time interval between the short press of RESET and reconnection after restart is 26 s for 2N[®] IP Verso.

Available Switches

Location	Name	Description
Main Unit	Relay 1	Passive switch: NO/NC contact, up to 30 V / 1 A AC/DC. Used for connection of non-critical devices only (lights, e.g.).
	Output 1	Active switch output: 8 up to 12 V DC depending on power supply (PoE: 10 V; adaptor: power supply voltage minus 2 V), max 400 mA
I/O Module* (Part No. 9155034)	ext. relay1	Passive relay switch: NO and NC contacts, up to 30 V / 1 A AC/DC. Used for connection of non-critical devices only (lights, e.g.).
	ext. relay2	Passive relay switch: NO and NC contacts, up to 30 V / 1 A AC/DC. Used for connection of non-critical devices only (lights, e.g.).

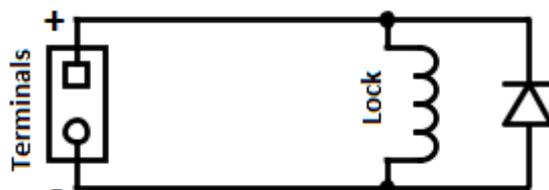
More modules marked by * can be used.

Security

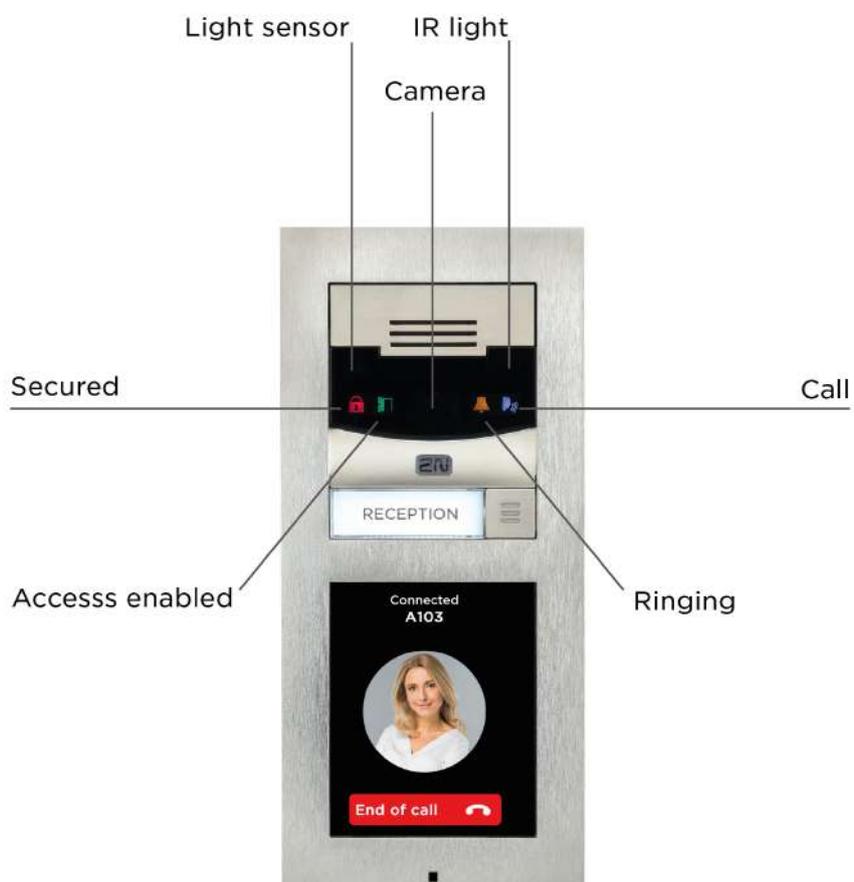
- The 12V output is used for lock connection. If, however, the unit (2N IP Intercom, 2N Access Unit) is installed where unauthorized tampering may happen, we strongly recommend that the 2N[®] Security Relay (Part No. 9159010) be used for enhanced installation security.

Warning

When you connect a device containing a coil, such as a relay or an electromagnetic lock, it is necessary to protect the intercom against voltage peak while switching off the induction load. For this way of protection we recommend a diode 1 A / 1000 V (e.g., 1N4007, 1N5407, 1N5408) connected antiparallel to the device.



Main Unit LED Pictograms



HW version 4 and higher



HW version 3 and lower

2.3.1 Overvoltage Protection

Recommendations for Additional Overvoltage Protector Installation

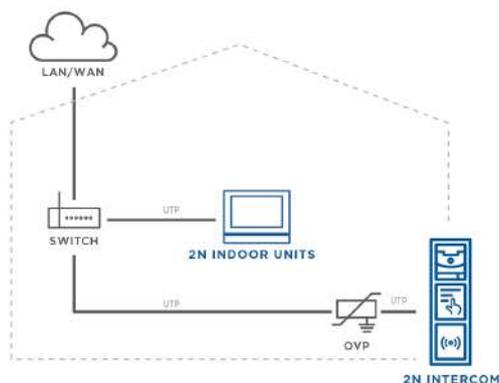
If running:

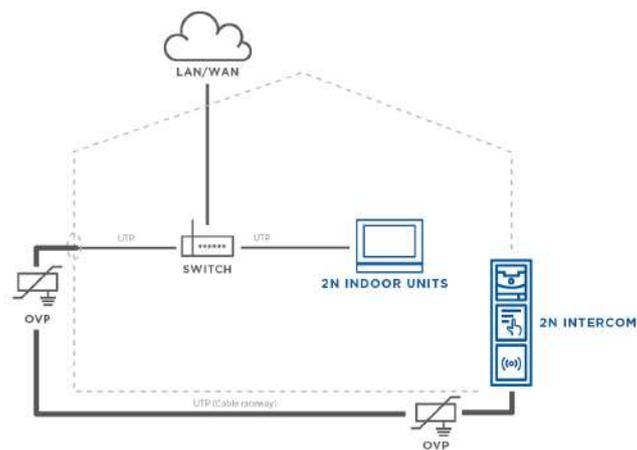
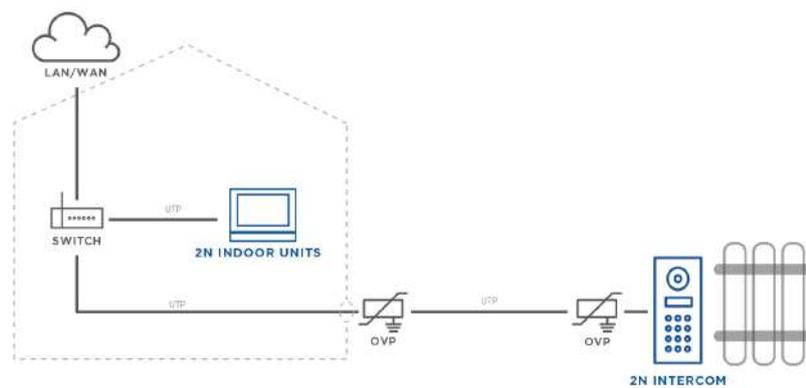
- a) outside a building,
- b) on/in an outer wall or roof,

the 2N device wiring may be exposed to atmospheric effects resulting in overvoltage that may subsequently damage any devices installed outside the building, on its outer wall or roof. Overvoltage may damage devices connected to these wires and installed inside the building as well. Therefore, we recommend that additional surge protectors be installed on all the wires leading outside buildings, on outer walls or roofs, namely:

- a) as close as possible to the device installed outside the building or on its outer wall /roof,
- b) as close as possible to the point where the wires leave the building.

Examples of overvoltage protection:





OVP = overvoltage protection

2.4 Extending Module Connection

2N[®] IP Verso allows you to connect the following extending modules:

- Infopanel
- Keypad
- Touch Keypad
- RFID Card Reader 125 kHz
- RFID Card Reader 13.56 MHz, NFC Support
- Secured RFID Card Reader 13.56 MHz, NFC Support
- Bluetooth & RFID Reader 125kHz, 13.56MHz, NFC
- Bluetooth & RFID Reader 125kHz, secured 13.56MHz, NFC
- Touch Keypad & RFID Reader 125kHz, 13.56MHz, NFC
- Touch Keypad & RFID Reader 125kHz, secured 13.56MHz, NFC
- Bluetooth Reader
- Touch Display
- Induction Loop
- Fingerprint Reader
- I/O Module
- 5-Button
- Wiegand Module
- Tamper Switch
- Blind Panel
- Security Relay

Module Bus Interconnection

All the 2N[®] IP Verso modules, except for the Tamper Switch, are interconnected via a bus. The bus starts on the main unit and goes over all the modules. The order of modules on the bus is irrelevant. And it also irrelevant which bus connector on the module is used as the input and which is used as the output.

The modules include a 220 mm long interconnecting cable; the Wiegand (9155037) and I/O modules (9155034) include an 80 mm long interconnecting cable.

It is possible to order separate bus cables of the lengths of 1 m, 3 m, or 5 m (**Part Nos. 9155050/9155054/9155055**), which are designed for remote **2N[®] IP Verso** module installations. Typically, they are used for an RFID card reader mounted on a wall opposite to the **2N[®] IP Verso** installation. The cable may be used only once on the bus. In extensive installations, the total bus cable length may not exceed 7 m.

The modules can be combined in each base as follows:

Module	Externally mounted (visible module)	Internally mounted (invisible module)	Internally mounted on bottom base edge
Infopanel	X		
Keypad	X		
Touch keypad	X		
RFID card reader 125 kHz	X		
RFID card reader 13.56 MHz	X		
RFID card reader 13.56 MHz NFC support	X		
Secured RFID card reader 13.56 MHz NFC	X		
Bluetooth & RFID reader 125kHz, 13.56MHz, NFC	X		
Bluetooth & RFID reader 125kHz, secured 13.56MHz, NFC	X		
Touch keypad & RFID reader 125kHz, 13.56MHz, NFC	X		
Touch keypad & RFID reader 125kHz, secured 13.56MHz, NFC	X		
Bluetooth reader	X		

Module	Externally mounted (visible module)	Internally mounted (invisible module)	Internally mounted on bottom base edge
Touch display	X		
Induction loop	X		
Fingerprint reader	X		
I/O module		X	
5-button	X		
Wiegand		X	
Tamper switch			X
Blind	X		
Security Relay		X	

Module Power Supply

Except for the protection switch module, all the 2N[®] IP Verso modules are powered from the bus. The available bus power output depends on the power supply type. Main units 571v3 and higher can use a 3A power supply to increase the bus power available for the modules connected.

Power supply	Specification	Available power
External supply	12 V ±15% / 2 A (3 A)	24 W (36 W)
PoE	802.3af (Class 0-12.95 W)	12 W
Combined	External supply + PoE	30 W (42 W)

The count of modules on the bus is limited by the available power supply output. The maximum count of the modules on the bus is 30.

Main unit (571v3)	Consumption [W] (Maximum value)
At relax	2.376
Infrared illumination	3.06
LED - call	0.072
LED - ringing	0.072
LED - lock	0.072
LED - secured	0.096
Button backlight	0.072
Name tag backlight	0.072
Unit backlight	0.072
Relay 1	0.132
OUT 1	4.8
Audio	2.94
Total	13.84

Module	Idle consumption [W] (Minimum value)	Full load [W] (Maximum value)	Special elements [W]
Main unit with camera	2.36	11.57	
Main unit without camera	2.12	11.57	
Infopanel	0.17	0.35	

Module	Idle consumption [W] (Minimum value)	Full load [W] (Maximum value)	Special elements [W]
Keypad	0.19	1.16	
RFID card reader 125 kHz	0.52	1.31	
RFID card reader 13.56 MHz	0.44	0.82	
RFID card reader 13.56 MHz NFC	0.44	0.82	
Secured RFID card reader 13.56 MHz NFC	0.44	0.82	
Bluetooth & RFID reader 125kHz, 13.56 MHz, NFC	1.34	2.74	
Bluetooth & RFID reader 125kHz, secured 13.56MHz, NFC	1.34	2.74	
Touch keypad & RFID reader 125kHz, 13.56MHz, NFC	1.38	2.52	
Touch keypad & RFID reader 125kHz, secured 13.56MHz, NFC	1.38	2.52	
Bluetooth reader	0.20	0.67	
Touch display	0.19	1.70	
Induction loop	0.18	0.84	
Fingerprint reader	0.73	1.54	
I/O	0.31	0.65	Closed relay 0.13
5-button	0.19	1.16	
Wiegand	0.46	0.46	

Module	Idle consumption [W] (Minimum value)	Full load [W] (Maximum value)	Special elements [W]
Tamper switch	0.31	0.65	
Blind panel	x	x	

Specimen configuration consumption computation

Module	Minimum consumption [W]	Maximum consumption [W]
Main unit with camera	2.36	11.57
RFID card reader 13.56 MHz	0.44	0.82
I/O	0.31	0.65
5-button	0.19	1.16
Touch display	1.16	2.02
I/O	0.31	0.65
Tamper switch	0.31	0.65
Wiegand	0.46	0.46
Bluetooth reader	0.20	0.67
Total	5.74	18.65

It is obvious from the specimen configuration that all the modules have sufficient outputs when an external power supply is used. When a PoE supply is used, the power output is insufficient for all the modules, which results in automatic decrease in backlight level, active output current supply, volume and LED intensity. Some modules need a specific power output for their specific activities: the I/O module, e.g., requires 0.13 W for relay closing (not calculated for minimum consumption).

Infopanel

The Infopanel (**Part No. 9155030**) is one of the **2N[®] IP Verso** intercom elements and is used for inserting and backlighting printed information.

- The module contains two **2N[®] IP Verso** bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.
- Nametag dimensions: 69,2 (W) x 86,7 (H) mm (dimensional tolerance: +0; – 0,5 mm).
- Refer to www.2n.cz for printing template.

Keypad

The Keypad (**Part No. 9155031**) is one of the **2N[®] IP Verso** intercom elements and provides a numerical input in the system.

- The module contains two **2N[®] IP Verso** bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

Touch Keypad

The Touch keypad (**Part No. 9155047**) is one of the **2N[®] IP Verso** intercom elements and provides a numerical input in the system.

- The module contains two **2N[®] IP Verso** bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

RFID Card Reader Module 125 kHz

The 125 kHz RFID card reader (Part No. 9155032) is one of the 2N[®] IP Verso intercom elements and is used for reading RFID card IDs in the 125 kHz band.

- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read:

- EM4xxx



Caution

- To increase the reader's reading distance in combination with a touch display in a single installation, we recommend you to pull the M-Bus and LAN cables through separate bushings to avoid their crossing.

RFID Card Reader 13.56 MHz, NFC Support

The 13.56 MHz RFID card reader (Part No. 9155040) is one of the 2N[®] IP Verso intercom elements and is used for reading RFID card IDs in the 13.56 MHz band.

- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read (only the card serial number is read):

- ISO14443A (Mifare, DESFire)
- PicoPass (HID iClass)
- FeliCa
- ST SR(IX)
- 2N[®] Mobile Key

Secured RFID Card Reader 13.56 MHz, NFC Support

The Secured RFID card reader 13.56 MHz NFC support (Part No. 9155086) is one of the 2N[®] IP Verso intercom elements and is used for reading RFID card IDs in the 13.56 MHz band.

- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read (optionally the card serial number or PAC ID is read):

- ISO14443A (Mifare, DESFire)
- PicoPass (HID iClass)
- FeliCa
- ST SR(IX)
- 2N[®] Mobile Key
- HID SE (Seos, iClass SE, Mifare SE)

Bluetooth & RFID Reader 125kHz, 13.56MHz, NFC

Bluetooth with a combined 125 kHz and 13.56 MHz card reader module (**Part No. 9155082**) is one of the 2N[®] IP Verso intercom elements and is used for Smartphone/2N[®] Mobile Key tablet/card access control, making user calls and/or other functions.

- NFC - a licensed function, for 2N[®] Mobile Key for Android only.
- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used either as inputs from the basic unit or outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read:

- 125 kHz
 - EM4xxx
- 13.56 MHz
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key

Tip

- To accelerate card reading, you are recommended to select the card types used by the user in the module settings.

Bluetooth & RFID Reader 125kHz, Secured 13.56MHz, NFC

Bluetooth with a combined 125 kHz and secured 13.56 MHz card reader (Part No. 9155084) is one of the 2N[®] IP Verso intercom elements and is used for Smartphone/2N[®] Mobile Key tablet/card access control, making user calls and/or other functions.

- NFC - a licensed function, for 2N[®] Mobile Key for Android only.
- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used either as inputs from the basic unit or outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read:

- 125 kHz
 - EM4xxx
- 13.56 MHz
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key
 - HID SE (Seos, iClass SE, Mifare SE)

Tip

- To accelerate card reading, you are recommended to select the card types used by the user in the module settings.

Touch Keypad & RFID Reader 125kHz, 13.56MHz, NFC

The touch keypad with a combined 125 kHz and 13.56 MHz card reader (Part No. 9155081) is one of the 2N[®] IP Verso intercom elements and is used for code/card access control, making user calls and/or other functions. The keypad surface is very sensitive yet weatherproof at the same time.

- NFC - a licensed function, for 2N[®] Mobile Key for Android only.
- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used either as inputs from the basic unit or outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read:

- 125 kHz
 - EM4xxx
- 13.56 MHz
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key

Tip

- To accelerate card reading, you are recommended to select the card types used by the user in the module settings.

Touch Keypad & RFID Reader 125kHz, Secured 13.56MHz, NFC

The touch keypad with a combined 125 kHz and secured 13.56 MHz card (Part No. 9155083) reader is one of the 2N[®] IP Verso intercom elements and is used for code /card access control, making user calls and/or other functions. The keypad surface is very sensitive yet weatherproof at the same time.

- NFC - a licensed function, for 2N[®] Mobile Key for Android only.
- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used either as inputs from the basic unit or outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

The following RFID cards can be read:

- 125 kHz
 - EM4xxx
- 13.56 MHz
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key
 - HID SE (Seos, iClass SE, Mifare SE)

Tip

- To accelerate card reading, you are recommended to select the card types used by the user in the module settings.

Bluetooth Reader

- The Bluetooth reader (**Part No. 9155046**) is one of the **2N[®] IP Verso** intercom elements and helps authenticate and subsequently open doors using Android and iOS based smartphones via the Bluetooth protocol 4.0 as RFID card replacement. Install the **2N[®] Mobile Key** application from **Google Play** and **Appstore** to make authentication work properly. The application requires phones with Android OS 6 and higher and iOS 12 and higher.
- The module contains two **2N[®] IP Verso** bus connectors.
- The two connectors are fully interchangeable and can be used both as inputs from the main unit or outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The package includes a 220 mm long interconnecting cable.
- The module uses the 2.4 GHz frequency.

IDs from the following smart phones can be read:

- Android 6 and higher
- iOS 12 and higher

Touch Display

The **Touch display** (**Part No. 9155036**) module is designed for the **2N[®] IP Verso** communicator. This module can be used as:

- Infopanel module – displays user defined image sequences
- Keypad module – virtual touch keypad
- Button module – virtual phone directory

Module connection options:

- The module contains two **2N[®] IP Verso** bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the basic unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

Technical specification:

- Resolution: 320 px x 214 px H x V
- Resolution slideshow: 214 px x 214 px
- Contrast ratio: 400
- Brightness: 350 cd/m²
- Weight: 280 g
- Working temperature: – 20 °C – 60 °C
- Resistance level: IK07

Induction Loop

The **Induction loop** (Part No. **9155041**) is one of the **2N[®] IP Verso** intercom elements and is used to transmit an audio signal directly into a hearing aid via a magnetic field.

- The module contains two **2N[®] IP Verso** bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.
- Used mode: Telecoil (also referred to as t-switch or t-coil)
- Maximum power: 2W
- Frequency range: 100 Hz – 5 kHz / ± 3 dB
- External antenna can be connected – Part No. **9155043**
- Short circuit resistance: without limitation

Fingerprint Reader

The **Fingerprint reader** (Part No. 9155045) is one of the **2N[®] IP Verso** intercom modules and is used for automated verification of human fingers for access control and intercom control.

- The module contains two **2N[®] IP Verso** bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.

Important module properties:

- FBI PIV and Mobile ID certification - FAP20
- Durable glass touch surface
- Rejects spoof fingerprints
- – 20 to 55 °C operating temperature range
- 0-90% relative humidity, noncondensing

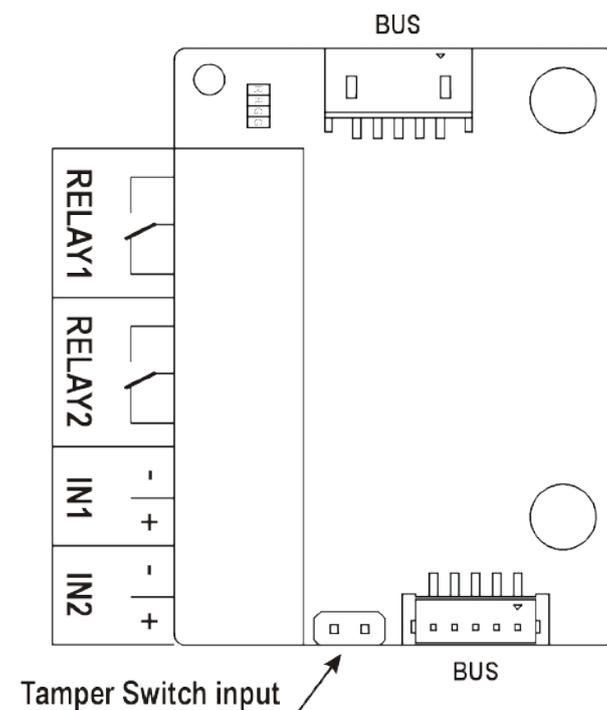
Note

- A higher moisture may deteriorate finger papillary line scanning. You are advised to dry your finger and the reader scanning surface for successful authentication.
- Fingerprint scanning can be rather difficult with older persons whose papillary lines are not so distinct (lower finger elasticity due to age requires a higher pressure for scanning and the fingerprint might be blurred).

I/O

The I/O (Part No. 9155034) is one of the 2N® IP Verso intercom elements and is used for extending the number of inputs and outputs.

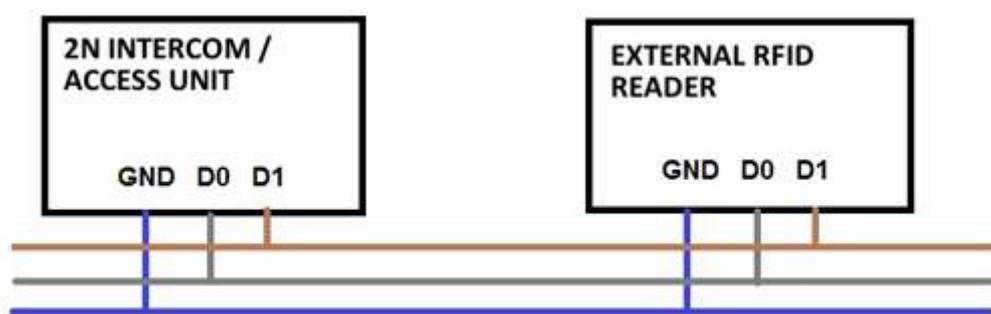
- The module contains two 2N® IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes an 80 mm long interconnecting cable.
- The inputs / outputs are addressed as follows: **<module_name>.<input/output_name>**, e.g. module5.relay1. The module name is configured in the Module name parameter in the Hardware / Extenders menu.



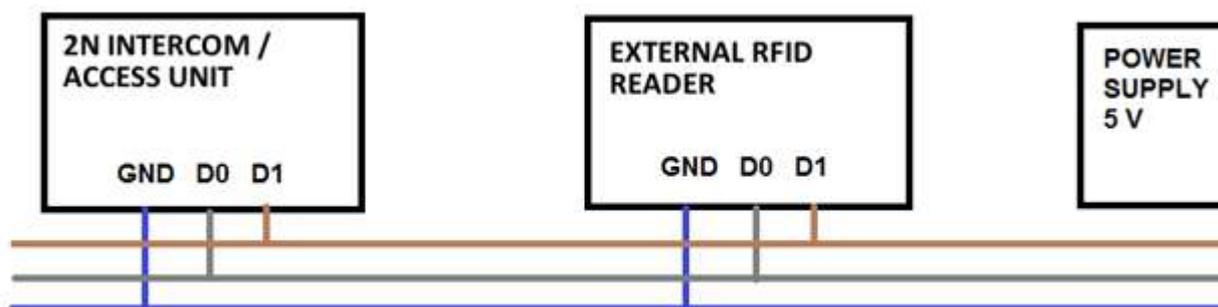
RELAY1	RELAY1 terminals with accessible 30 V / 1 A AC/DC NO/NC contact
RELAY2	RELAY2 terminals with accessible 30 V / 1 A AC/DC NO/NC contact

IN1	IN1 terminals for input in passive/ active mode (-30 V to +30 V DC) OFF = open OR $U_{IN} > 1.5 \text{ V}$ ON = closed contact OR $U_{IN} < 1.5 \text{ V}$
IN2	IN2 terminals for input in passive/active mode (-30 V to +30 V DC) OFF = open OR $U_{IN} > 1.5 \text{ V}$ ON = closed contact OR $U_{IN} < 1.5 \text{ V}$
TAMPER	Tamper switch (9155038) input

Wiegand Input Technical Parameters	
Current	5 mA
Input resistance	680 Ohm
Pulse length	50 μs
Delay between pulses	approx. 2 ms



Recommended Wiring Diagram for Reader with Bus Driver



Recommended Wiring Diagram for Reader with Open Collector (OC) Output

5-Button

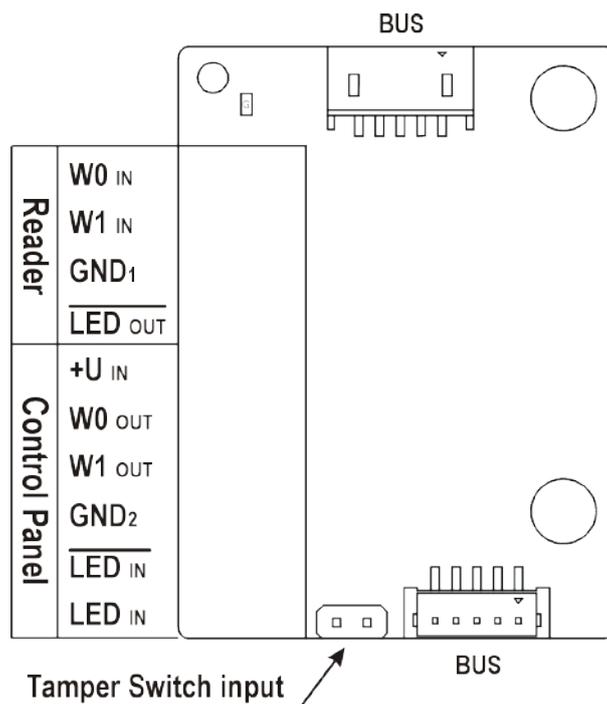
The 5-button (Part No. 9155035) is one of the 2N[®] IP Verso intercom elements and is used for extending the number of buttons.

- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes a 220 mm long interconnecting cable.
- Nametag dimensions:
 - 1 button: 52,0 (W) x 15.2 (H) mm (dimensional tolerance: +0; – 0.5 mm).
 - 5 buttons: 57.5 (W) x 89.0 (H) mm (dimensional tolerance: +0; – 0.5 mm).
- Refer to www.2n.cz for nametag printing template.

Wiegand

The Wiegand (Part No. 9155037) is one of the 2N[®] IP Verso intercom elements and is used for connecting an external Wiegand device (RFID card reader, fingerprint or other biometric data reader) and/or connecting the 2N[®] IP Verso system to an external security exchange. All the inputs and outputs are galvanically isolated from the 2N[®] IP Verso system with insulation strength of 500 V DC. It is necessary to feed +U IN on Wiegand OUT from the Control Panel.

- **Reader** – connects an external Wiegand-supporting reader. The reader sends information on the intercom card number.
- **Control Panel** – used for connection to the security PBX or access system to which the intercom sends information on the intercom card number.
- The module contains two 2N[®] IP Verso bus connectors.
- These two connectors are fully interchangeable and can be used both as inputs from the main unit and outputs to other modules.
- If this module is the last one on the bus, one of the connectors remains unconnected.
- The module package includes an 80 mm long interconnecting cable.
- The module name is configured in the Module name parameter in the Hardware / Extenders menu.
 - The input LED IN is addressed as follows: <module_name>.<input1>, e.g. module2.input1.
 - The input Tamper is addressed as follows: <module_name>.<tamper>, e.g. module2.tamper.
 - The output LED OUT (negated) is addressed as follows: <module_name>.<output1>, e.g. module2.output1.



Reader	WO IN, W1 IN, GND1	Isolated 2-wire WIEGAND IN
	LED OUT	Isolated open LED OUT switched against GND1 on WIEGAND IN side (up to 24 V / 50 mA)
Control Panel	+U IN	+U _{IN} (5 to 15 V DC) WIEGAND OUT power supply input
	WO OUT, W1 OUT, GND2	Isolated 2-wire WIEGAND OUT
	LED IN (negated)	Isolated input for open LED IN, input activated by GND2
	LED IN	Isolated input for open LED IN, input activated by +U
	G	+U _{IN} WIEGAND OUT active supply LED indicator
	TAMPER	Tamper switch (Part No. 9155038) input

Tamper Switch

The Tamper switch (Part No. 9155038) is one of the 2N[®] IP Verso intercom elements and helps secure the system against tampering.

- The module contains two switches that open whenever the front frame is removed:
 - One switch leads directly to the terminal board and is designed for connection to an external security exchange (32 V DC / 50 mA max).
 - The other switch, together with the I/O module (9155034) or Wiegand module (9155037), can be used for alarm signalling via the Automation interface in the 2N[®] IP Verso configuration.
- This module is not connected to the bus.

Caution

- Remember to purchase an I/O module, Part No. 9155034, together with the tamper switch.



Tamper Switch Mounting

Blind Panel

The Blind panel (Part No. 9155039) is used to cover an empty position.

Security Relay

The 2N[®] Security Relay (Part No. 9159010) is used for enhancing security between the intercom and the connected electric lock. The 2N[®] Security Relay is designed for any 2N IP intercom model with firmware versions 1.15 and higher. It significantly enhances security of the connected electric lock as it prevents lock opening by forced intercom tampering.



Function:

The 2N[®] Security Relay is a device installed between an intercom (outside the secured area) and the electric lock (inside the secured area). The 2N[®] Security Relay includes a relay that can only be activated if the valid opening code is received from the intercom.

Specifications:

Passive switch: NO and NC contacts, up to 30 V / 1 A AC/DC

Switched output:

- Where the security relay is fed from the intercom, 9 to 13 V DC is available on the output depending on the power supply (PoE: 9 V; adapter: source voltage of minus 1 V) / 400 mA DC.
- Where the security relay is fed from an external power supply, 12 V / 700 mA DC is available on the output.

Dimensions: (56 x 31 x 24) mm

Weight: 20 g

Installation:

Install the 2N[®] Security Relay onto a two-wire cable between the intercom and the electric lock inside the area to be secured (typically behind the door). The device is powered and controlled via this two-wire cable and so can be added to an existing installation. Thanks to its compact dimensions, the device can be installed into a standard mounting box.

Connection:

Connect the 2N[®] Security Relay to the intercom as follows:

- To the intercom active output (OUT1)

Connect the electric lock to the 2N[®] Security Relay output as follows:

- To the switched output.
- To the passive output in series with the external power supply.

The device also supports a Departure button connected between the 'PB' and '- Helios IP / intercom' terminals. Press the Departure button to activate the output for 5 seconds.

Status signalling:

Green LED	Red LED	Status
flashing	off	Operational mode
on	off	Activated output
flashing	flashing	Programming mode - waiting for initialisation
on	flashing	Error - wrong code received

Configuration:

- Connect the 2N[®] Security Relay to the properly set intercom switch output; refer to the **Configuration Manual for 2N IP intercoms**. Make sure that one LED at least on the 2N[®] Security Relay is on or blinking.
- Press and hold the 2N[®] Security Relay Reset button for 5 seconds to put the device in the programming mode (both the red and green LEDs are blinking).
- Activate the intercom switch using the keypad, telephone, etc. The first code sent from the intercom will be stored in the memory and considered valid. After code initialisation, the 2N[®] Security Relay will pass into the operational mode (the green LED is blinking).

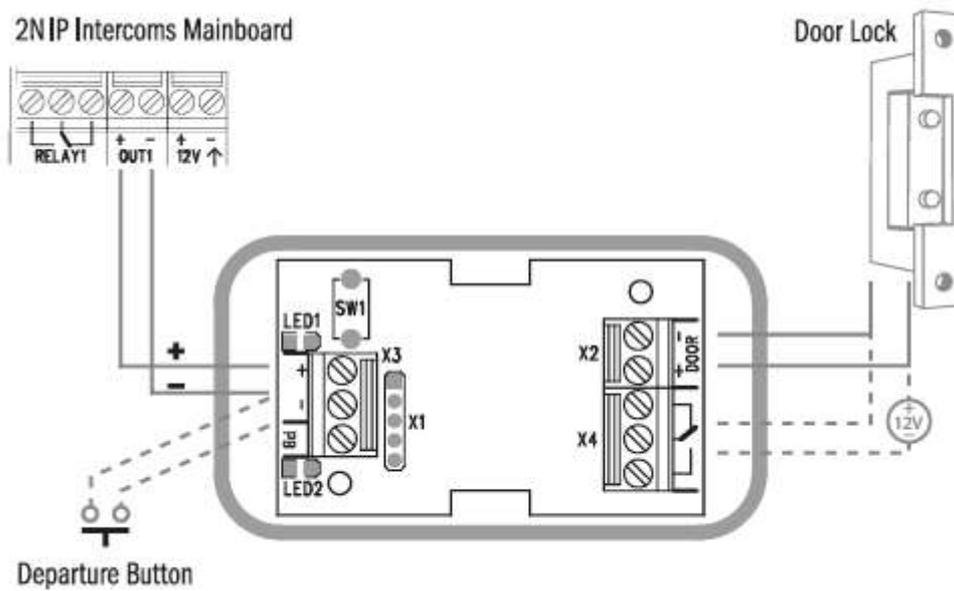
Caution

- In case of resetting the factory default settings on a device with a version of firmware 2.18 or higher it is necessary to reprogram the 2N[®] Security Relay using the instructions above.

Tip

- FAQ: 2N[®] Security Relay - what is it and how to use it with 2N IP intercom?

Connection:



2.5 Completion

Installation Completion

Check the connection of all wires and the RJ-45 plug to the board connector.

Caution

- All unused connectors have to have tightened screws in order to avoid vibration caused by sound.

Make sure before mounting that the black sealing ring is placed properly. We recommend you to fit the microphone with the screw included in the delivery.



Nametag Placing

Every intercom package includes a piece of transparent foil, which can be laser printed. Cut the printed foil and insert the nametags in the buttons.

We recommend you to use separate foil for every button in the 5-button module. Refer to section download for the nametag printing template.

Nametag dimensions for 5-button module:

- 1 button: 52.0 (W) x 15.2 (H) mm (dimensional tolerance: +0; -0.5 mm)
- 5 buttons: 57.5 (W) x 89.0 (H) mm (dimensional tolerance: +0; -0.5 mm)

Infopanel nametag dimensions: 69.2 (W) x 86.7 (H) mm (dimensional tolerance: +0; -0.5 mm).

⚠ Caution

- The area where nametags are placed is called a wet zone. After heavy rain, water can penetrate to the nametag. Water in this area does not affect the intercom functionality in any way and evaporates soon.
- Always use waterproof foil (enclosed or other) for the nametags. Never use paper or ink jet printing to avoid damage due to water leakage!

Nametag inserting/replacing:

1. Remove the frame.
2. Lift up the button door. The 5-button module buttons have just one door.
3. Remove the used nametag and insert a new one.
4. Close the button door.
5. Replace the frame.

Frame Replacement

Check the frame sealing before replacing the frame.

Version A

- Screw the flush mounting frame in the upper and bottom parts.

Version B

- Hang the surface mounting frame on the hook in the upper part and then screw it tight in the bottom part.

⚠ Caution

- Improper mounting may deteriorate the intercom waterproofness and water may damage the electronic part.
- Make sure that all holes are filled with some waterproof material - the top part, around the cables and the screws.
- Use silicone or some other sealant to seal the box against the wall if uneven to avoid water leakage and wall damping..

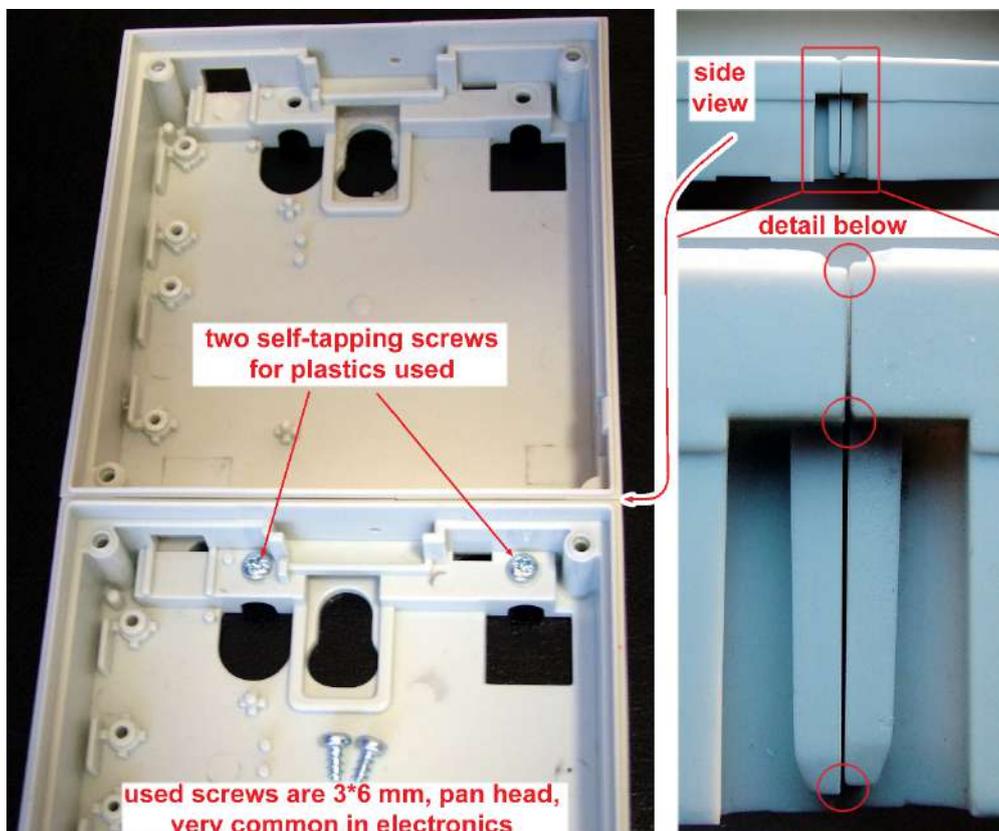
Most Frequent Mounting Errors

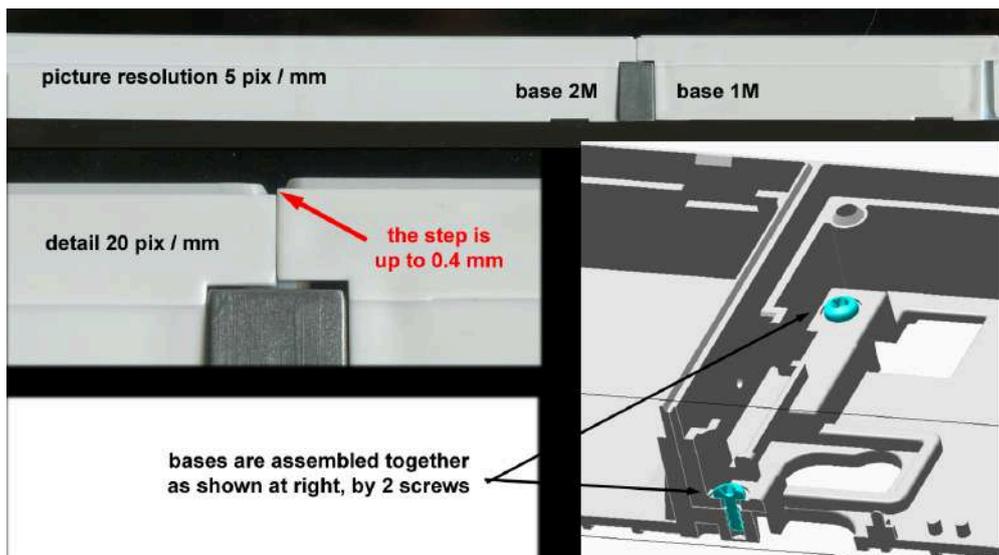
At first, mount the metal bolts, level the bases on an even surface and tighten the screws.

Caution

- Make sure that the bases are levelled properly to avoid water leakage and electronic damage.

The examples in the figures below show incorrectly assembled bases. This happens, in particular, where the screws are tightened first.





3. Function and Use

This section describes the basic and extending functions of the the 2N[®] IP Verso product.

Here is what you can find in this section:

- **3.1 Configuration**
- **3.2 Intercom Control as Viewed by External User**
- **3.3 Touch Display Intercom Control As Viewed by External User**
- **3.4 Intercom Control as Viewed by Internal User**
- **3.5 Maintenance**
- **3.6 Downloads**

3.1 Configuration

Configure **2N[®] IP Verso** using your PC with any internet browser:

- Launch your internet browser (Internet Explorer, Firefox, etc.).
- Enter the IP address of your intercom (<http://192.168.1.100/>, e.g.).
- Log in using the username **Admin** and password **2n**.

You have to know your intercom IP address to log in to the integrated web server.

Upon purchase, **2N[®] IP Verso** is set to the dynamic IP address mode – it retrieves the IP address automatically if there is a properly configured DHCP server in the LAN. If no DHCP is available, operate **2N[®] IP Verso** in the static IP address mode. Refer to the

Configuration Manual for the **2N[®] IP Verso** configuration details.

If your device remains inaccessible (you have forgotten the IP address, the network configuration has changed, etc.), you can change the network configuration using the device buttons.

IP Address Retrieval

Take the following steps to retrieve the **2N[®] IP Verso** IP address:

- Connect (or, if connected, disconnect and reconnect) **2N[®] IP Verso** to the power supply.
- Wait for the second sound signal .
- Press the quick dial button on the main unit 5 times.
- **2N[®] IP Verso** will read its IP address.
- If the address is 0.0.0.0, it means that the intercom has not obtained the IP address from the DHCP server.



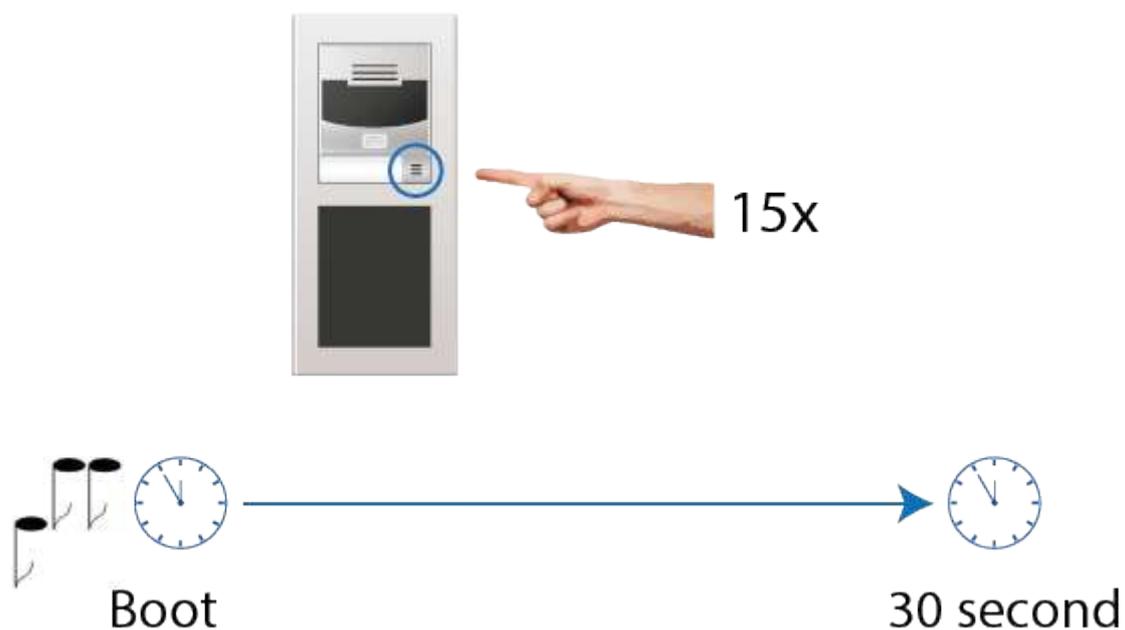
Note

- Be sure to press the button sequence within thirty seconds after the sound signal for security reasons. Up to 2 s intervals are allowed between the presses.

Network Setting Reset and Dynamic / Static IP Address Switch

To reset the network parameters and switch the dynamic / static IP address of 2N[®] IP Verso follow the instructions below:

- Connect (or, if connected, disconnect and reconnect) 2N[®] IP Verso to the power supply.
- Wait for the first sound signal .
- Press the quick dial button on the main unit 15 times.
- Switching is signalled with the sound signal .
- Wait until the device is restarted automatically.
- After restart, the static IP address mode is switched into the dynamic IP address and vice versa. Simultaneously, all the **System / Network** parameters are reset to default values. This is useful where it is impossible to connect to the device due to wrong VPN configuration, for example.



When the static IP address is set, the following default values of the basic network parameters are reset:

- IP address: 192.168.1.100
- Network mask: 255.255.255.0
- Default gateway: 192.168.1.1

Note

- Be sure to press the button sequence within thirty seconds after the sound signal for security reasons. Up to 2 s intervals are allowed between the presses.

3.2 Intercom Control as Viewed by External User

Quick Dial Buttons

Press the quick dial button on the main unit to dial the first position in the phone directory (Phone Book) depending on the model type. Use extending modules to extend the number of quick dial buttons to up to 146.

By pressing the quick dial buttons you dial the phone numbers assigned to the particular Phone Book position. Call setup is signalled by a long intermittent or any other tone depending on the configuration of the PBX connected.

Repeated pressing of one and the same quick dial button during call setup may initiate call hangup or call termination plus dialling the next phone number of the called subscriber, or may be assigned no function; refer to the Intercom Configuration / Hardware / Keypad subsection of Configuration Manual.

You can also press the  button anytime to hang up if enabled so in the **Button Function During Call** parameter; refer to the Intercom Configuration / Hardware / Keypad subsection of Configuration Manual.

Calling to Phone Book Position

The 2N[®] IP Verso Phone Book can contain up to 10 000 programmable positions. The quick dial buttons can only be used for positions 1 through 146, depending on the number of actually installed buttons. You can dial the other positions using the numeric keypad if the **Dial by Numeric Keypad** function is enabled; refer to the Intercom Configuration / Hardware / Keypad subsection of Configuration Manual.

Procedure:

- Enter the position number using the numeric keypad (05, 15, 200, e.g. – two digits at least and four digits at most) and press the  button for confirmation.
- You can also press the  button anytime to hang up if enabled so in the **Button Function During Call** parameter; refer to the Intercom Configuration / Hardware / Keypad subsection of Configuration Manual.

Calling to User-Defined Phone Number

If the **Telephone function enabled** (refer to the Intercom Configuration / Hardware / Keypad subsection of Configuration Manual) parameter is selected, you can dial a user-defined phone number using the 2N[®] IP Verso numeric keypad.

Procedure:

1. Press .
2. You will hear a continuous tone from the speaker.
3. Enter the phone number via the numeric keypad and press  again to confirm your dialling.
4. You can also press the  button anytime to hang up if enabled so in the **Button Function During Call** parameter; refer to the Intercom Configuration / Hardware / Keypad subsection of Configuration Manual.

Incoming Call Answering/Rejecting

If the automatic incoming call answering function is disabled (refer to the Intercom Configuration / Services / Phone / Calls subsection of Configuration Manual), the incoming call to 2N[®] IP Verso is signalled with loud ringing. Press  to answer the call and  to reject the call.

Door Opening (Switch Activation) by Code

2N[®] IP Verso is equipped with a door unlocking switch. Enter the valid code (refer to the Intercom Configuration / Hardware / Switches subsection of Configuration Manual) using the numeric keypad to activate this switch.

Procedure:

- Enter the switch activating numerical code using the numeric keypad and press  for confirmation.
- A valid code is notified visually and by a continuous switch activation tone or a predefined unlocking user sound. An invalid code or interruption longer than as defined in Timeout for Entering Numbers is signalled by the  sound or a user sound.

Door Opening (Switch Activation) by Biometric Reader

A biometric reader helps authenticate human fingerprints for control and management of access and third party devices. Refer to Directory / Users for how to load a fingerprint into a user profile.

Procedure:

- Apply your finger to the reader scanning area.
- Reader authentication light signalling:
 - Green - the fingerprint has been recognised successfully.
 - Green flashes to red - the fingerprint has been recognised but access is denied. Check the user time profile setting state and multiple authentication setting. Access can also be blocked by a previous tamper switch blocking.
 - Red - the fingerprint has not been recognised .



Note

- A higher moisture may deteriorate finger papillary line scanning. You are advised to dry your finger and the reader scanning surface for successful authentication.

3.3 Touch Display Intercom Control As Viewed by External User

The 2N[®] IP Verso model can be equipped with a colour LCD display, which displays the device states (call progress, door opening, etc.) and can work in several modes. Until the display configuration is loaded, 2N[®] IP Verso displays no users to be called in the Directory menu. If configured properly, the 2N[®] IP Verso starts displaying an Ad menu or the Directory/Keypad introductory menu or separate Directory or Keypad menus. Control a display-equipped 2N[®] IP Verso intercom by touching the display and browsing.

Presentation

In the Presentation mode, one or more images defined by the available display configuration are displayed. The Presentation mode is started automatically when the presentation delay timeout set in the 2N[®] IP Verso web interface expires. The mode can be terminated by a touch of the  icon, which moves 2N[®] IP Verso into the display introductory menu, or by an incoming call to 2N[®] IP Verso.

Contacts



In the Contacts mode, a structured list of users defined by the available display configuration is displayed. The user list can be divided into a practically arbitrary count of groups. Browse through the Directory by touching the display. Click



to return to the superior group or the display introductory menu. Touch the user name to make a call in the Contacts mode.

This mode helps you quick search contacts too. Touch the  display icon to switch the Contacts into the search mode and enter the string to be searched via the touchpad. See the string in the status line in the upper part of the display. Touch the  display icon to delete the currently last character of the text to be searched. The string is searched for in the current group and subgroup levels. See the count of found users in the right-hand upper corner of the display. Touch the found contacts and browse through the data.

The Contacts menu also includes a Help submenu in the right-hand bottom corner of the display, which provides tips and basic display controls for the Contacts mode.

Call

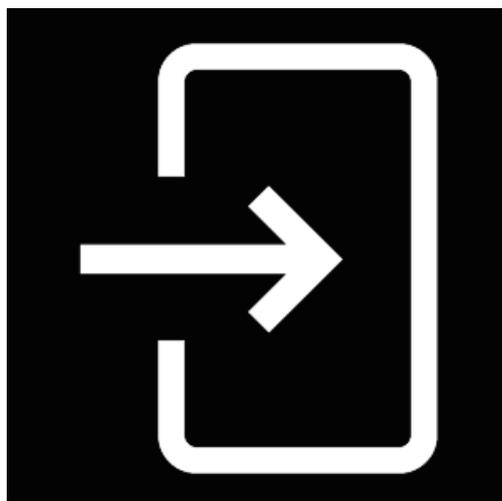


Use the Call mode to make calls to the intercom Directory users.

To call a user, set Dialling via keypad in the intercom web interface and select one of the following options: Disabled, User position number or User virtual number. If you set User position number or User virtual number, just enter the number and click 

for confirmation. Click  to get back to the display introductory menu.

Entry



The Entry mode helps you enter the switch codes. Enter the switch digital code and click

Open door 

for confirmation. You can also enable Scramble keypad in the Keypad mode via the web interface to scramble the numerical keypad buttons before every new display in order to prevent third persons from seeing the code to be entered.

3.4 Intercom Control as Viewed by Internal User

Call Answering

You can answer the incoming calls to the 2N[®] IP Verso intercom using your phone like any other calls. You can unlock the door, activate/deactivate a user/profile via your phone keypad during the call. The calls, however, are time-limited to avoid unintentional blocking of the 2N[®] IP Verso line. Set the maximum call duration in the **Call time limit** (refer to the Intercom Configuration / Services / Phone / Calls subsection of Configuration Manual). Press # on your phone anytime to extend the call time. The automatic call termination is signalled with a short beep 10 s before the call end.

Calling to 2N[®] IP Verso

2N[®] IP Verso allows you to answer incoming calls. Set the required parameters in the Incoming calls group; refer to the Intercom Configuration / Services / Phone / Calls subsection of Configuration Manual.

Door Opening (Switch Activation) by Code

2N[®] IP Verso is equipped with a door unlocking switch. Enter the valid code (refer to the Intercom Configuration / Hardware / Switches subsection of Configuration Manual) using your phone keypad to activate this switch.

Procedure:

- Enter the switch 1 or 2 activating code using your phone keypad and press  for confirmation. Confirmation is unnecessary if the **Lock code without confirmation** is enabled, refer to the Intercom Configuration / Hardware / Switches / Advanced subsection of Configuration Manual.
- A valid code is signalled by the  sound. An invalid code or interruption longer than as defined in **Timeout for Entering Numbers** is signalled by the  sound.

Profile Activation/Deactivation

Activate/deactivate a profile using your phone in order to route calls directly to the phone numbers tied with the profile, refer to the Intercom Configuration / Directory / Time Profiles subsection of Configuration Manual for details.

Procedure:

- Enter the profile activating/deactivating code using your phone keypad and press  for confirmation.
- A valid code is signalled by the  or  sound according to the code type. An invalid code or interruption longer than as defined in **Timeout for Entering Numbers** is signalled by the  sound.

3.5 Maintenance

Cleaning

If used frequently, the device surface, the keypad in particular, gets dirty. To clean it, use a piece of soft cloth moistened with clean water. We recommend you to follow these principles while cleaning:

- Never use aggressive detergents (such as abrasives or strong disinfectants).
- Use suitable cleaning agents for glass lens cleaning (cleaners for glasses, optic devices screens, etc.)
- Clean the device in dry weather in order to make waste water evaporate quickly.
- The electronics cleaning wipes are suitable.

Anticovid

- To keep your equipment surfaces clear of bacteria and viruses (Anti-Covid disinfection) and maintain the hygienic conditions of critical surfaces and touch points we recommend that you use the Zoono - Microbe Shield Surface Sanitiser Spray.

Warning

- Prevent water from getting inside the intercom.
- Do not use alcohol-based cleaners.
- Avoid peroxide-based cleaners.

Caution

- Always use the product for the purpose it was designed and manufactured for, in compliance herewith.
- The manufacturer reserves the right to modify the product in order to improve its qualities.
- **2N[®] Verso** contains no environmentally harmful components. When the product's service life is exhausted and you would like to dispose of it please do so in accordance with applicable legal regulations.

3.6 Downloads

Templates

Nameplates

Infopanel label

Software

2N[®] USB Driver

2N[®] IP Eye

2N[®] Network Scanner

4. Technical Parameters

Signalling protocol

- SIP (UDP, TCP, TLS)

Buttons

- **Button design:** white-backlit transparent buttons with replaceable nametags
- **Button count:** 1 and increments of 5
- **Button extenders:** up to 29 modules, limited by power supply
- **Numeric keypad:** optional

Audio

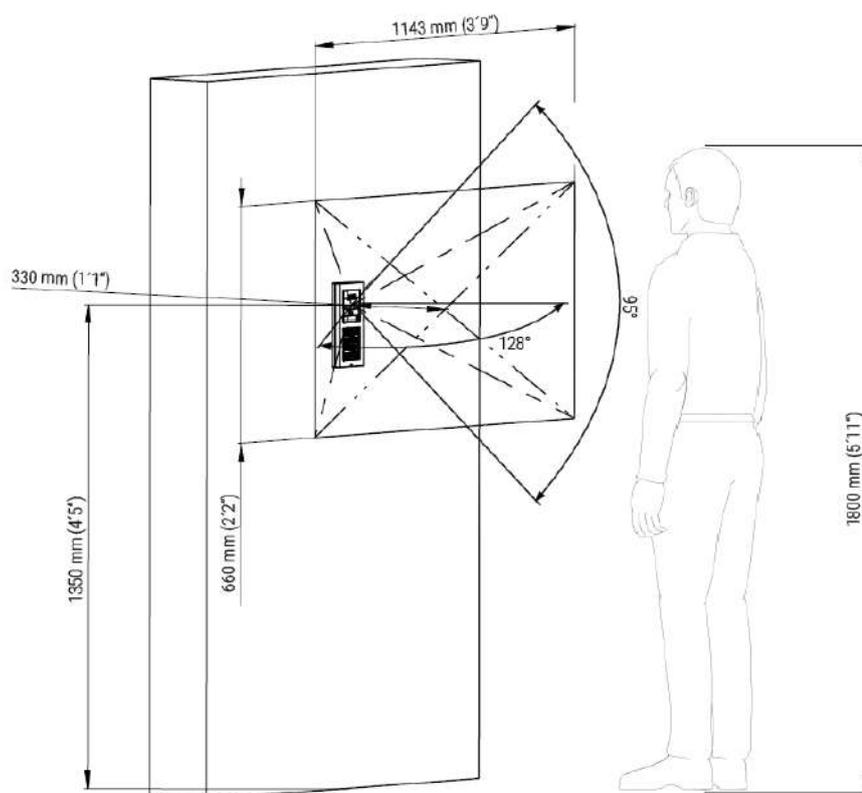
- **Microphone:** 1 integrated microphone
- **Amplifier:** 2 W (class D) amplifier
- **Speaker:** 2 W / 8 Ω
- **Sound pressure level (SPL max):** 78 dB (for 1 kHz, distance 1 m)
- **Output LINE OUT:** 1 VRMS / 600 Ω
- **Volume control:** adjustable with automatic adaptive mode
- **Full duplex:** yes (AEC)
- **Speech transmission index (STI):** 0.89

Audio stream

- **Protocols:** RTP / RTSP
- **Codecs:** G.711, G.729, G.722, L16/16 kHz

Camera

- **Sensor:** 1/3" colour CMOS
- **JPEG resolution:** up to 1280 (H) x 960 (V)
- **Video resolution:** 640 (H) x 480 (V)
- **Frame rate:** up to 30 snapshots/s
- **Sensor sensitivity:** 5.6 V/lux-sec (550 nm)
- **View angle:** 128 ° (H), 95 ° (V), 134 ° (D)
- **Infrared light:** yes
- **Sensor sensitivity without IR light:** 0,1 Lux ± 20 %
- **Focal length:** 2.25 mm



Video stream

- **Protocols:** RTP / RTSP / HTTP
- **Codecs:** H.263, H.263+, H.264, MPEG-4, M-JPEG
- **IP camera function:** yes, ONVIF v2.4 profile S compatible

Bandwidth

- **Audio codecs**

- PCMA, PCMU – 64 kbps (with 85.6 kbps headers)
- G.729 – 16 kbps (with 29.6 kbps headers)
- G.722 – 64 kbps (with 85.6 kbps headers)
- L16 / 16 kHz – 256 kbps (with 277.6 kbps headers)

- **V i d e o c o d e c s**

Set the video codec data flows in the Services / Phone / Video menu for calls and in the Services / Streaming / RTSP menu for streaming. The set bandwidth represents the value that the codec has to approach on a long-time average. The data flows can vary depending on the scene to be scanned.

The measured data flow values correspond to the test view of a person standing in front of the intercom.

- **H.264**

- Low quality: QVGA (320 x 240), 10 fps, 256 kbps: 181 kbps (with 190 kbps headers)
- Medium quality: VGA (640 x 480), 15 fps, 768 kbps: 600 kbps (with 661 kbps headers)
- High quality: VGA (640 x 480), 30 fps, 2048 kbps: 1319 kbps (with 1372 kbps headers)

- **MJPEG**

- Low quality: QVGA (320 x 240), 10 fps, quality 70: 435 kbps with headers
- Medium quality: VGA (640 x 480), 15 fps, quality 85: 506 kbps
- High quality: SXGA (1280 x 960), 15 fps, quality 95: 8 Mbps

Interface

- **Power supply:** 12 V \pm 15 % / 2 A DC or PoE
- **PoE:** PoE 802.3af (Class 0–12.95 W)
- **LAN:** 10/100BASE-TX with Auto-MDIX, RJ-45
- **Recommended cabling:** Cat-5e or higher
- **Supported protocols:** SIP2.0, DHCP opt. 66, SMTP, 802.1x, RTSP, RTP, TFTP, HTTP, HTTPS, Syslog, ONVIF
- **Passive switch:** NO/NC contact, up to 30 V / 1 A AC/DC
- **Active switch output:** 8 up to 12 V DC depending on power supply (PoE: 10 V; adaptor: power supply voltage minus 2 V), up to 400 mA

RFID card reader

- Optionally 125 kHz or 13.56 MHz
- Supported cards, 125 kHz, Part No. 9155032:
 - EM4xxx
- Supported cards on 13.56 MHz NFC version, Part No. 9155040 (only card serial number is read)
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key
- Supported cards on secured 13.56 MHz NFC version, Part No. 9155086 (optionally card serial number or PAC ID is read)
 - ISO14443A (Mifare, DESFire)
 - PicoPass (HID iClass)
 - FeliCa
 - ST SR(IX)
 - 2N[®] Mobile Key
 - HID SE (Seos, iClass SE, Mifare SE)
- Maximum H - field strength at 10 m for 125 kHz version: 66 dB μ A/m
- Maximum H - field strength at 10 m for 13.56 MHz version: 60 dB μ A/m

2N[®] IP Verso – Bluetooth module

- Bluetooth 4.0 Compliant (Bluetooth Low Energy, BLE)
- **Security:** asymmetric RSA-1024 and symmetric AES-128 encryption
- **RX sensitivity:** up to – 93 dBm
- **Range:** adjustable (short ~ 0.5m, medium ~ 2m, long ~ up to 10m)
- **Power consumption:** 20mA at 12V DC
- **Operational temperature range:** – 40°C ~ +60°C
- **Storage temperature range:** – 40°C ~ +70°C
- **Dimensions:** 97x105x30mm
- Compatible with 2N[®] IP Verso, 2N[®] LTE Verso and 2N[®] Access Unit
- **Mobile app. support:** Android 6 and higher, iOS 12 and higher

Touch display

- **Resolution:** 320 px x 214 px H x V
- **Resolution slideshow:** 214 px x 214 px
- **Contrast ratio:** 400
- **Brightness:** 350 cd/m²
- **Viewing angle:** 80 ° from any direction
- **Weight:** 280 g
- **Consumption min:** 1.36 W
- **Consumption max:** 2.40 W
- **Working temperature:** – 20 °C – 60 °C
- **Resistance level:** IK07

I/O module

- **Dimensions:** 43 (W) x 31.5 (H) x 1.5 (D) mm

Wiegand module

- **Dimensions:** 43 (W) x 31.5 (H) x 1.5 (D) mm

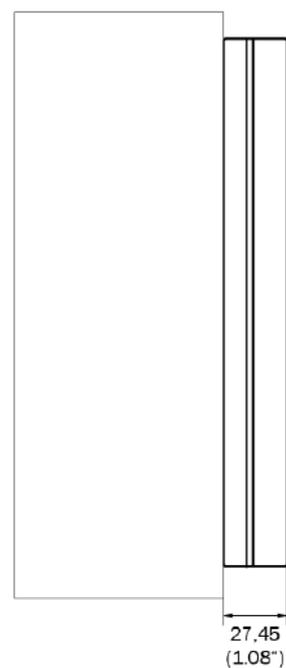
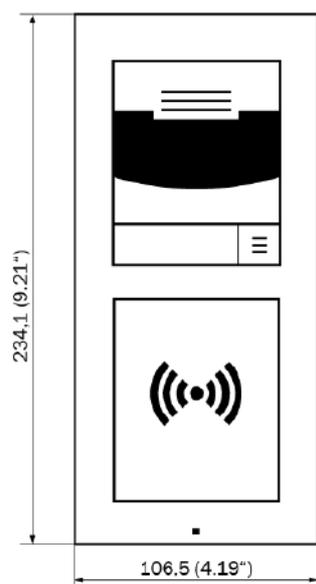
Mechanical properties

- **Cover:** robust zinc casting with surface finish (minor surface shade nuances are acceptable)
- **91550XX - NICKEL**
 - Material - Zamak 410 - Zn95Al4Cu1
 - Surface treatment - Zn/Cu20/Ni25b max. 80 µm
- **91550XXB - BLACK**
 - Material - Zamak 410 - Zn95Al4Cu1
 - Surface treatment - PUR Wet coating 15-25 µm, RAL 9005 Jet black
 - interior side - passivated zinc
- **Working temperature:** - 40 °C - 60 °C
- **Working relative humidity:** 10 % - 95 % (non-condensing)
- **Storing temperature:** - 40 °C - 70 °C
- **Dimensions**
 - **Surface mounting frame:**
 - 1 module: 107 (W) x 130 (H) x 28 (D) mm
 - 2 modules: 107 (W) x 234 (H) x 28 (D) mm
 - 3 modules: 107 (W) x 339 (H) x 28 (D) mm
 - **Flush mounting frame:**
 - 1 module: 130 (W) x 153 (H) x 5 (D) mm
 - 2 modules: 130 (W) x 257 (H) x 5 (D) mm
 - 3 modules: 130 (W) x 361 (H) x 5 (D) mm
 - **Flush mounting box (minimum hole dimensions):**
 - 1 module: 108 (W) x 131 (H) x 45 (D) mm
 - 2 modules: 108 (W) x 238 (H) x 45 (D) mm
 - 3 modules: 108 (W) x 343 (H) x 45 (D) mm
 - **Module internal cutout:** 72 (W) x 89.3 (H) mm / 2.83 (W) x 3.51 (H) inches
- **Weight:** max net weight: 2 kg / max gross weight: 2.5 kg - based on configuration
- **Covering level:** IP54
- **Resistance level:** IK08

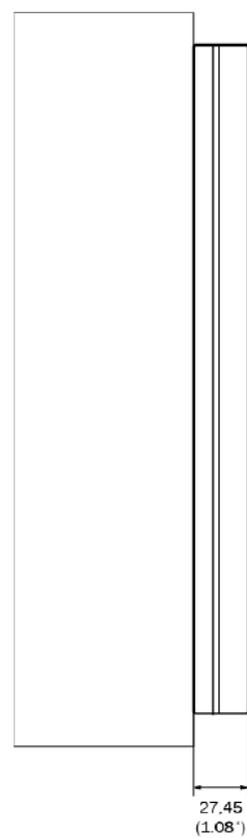
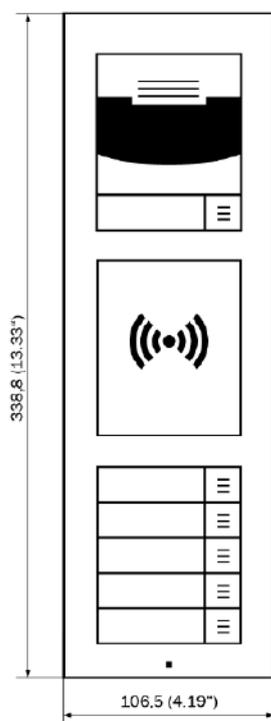
4.1 General drawings

Surface mounting

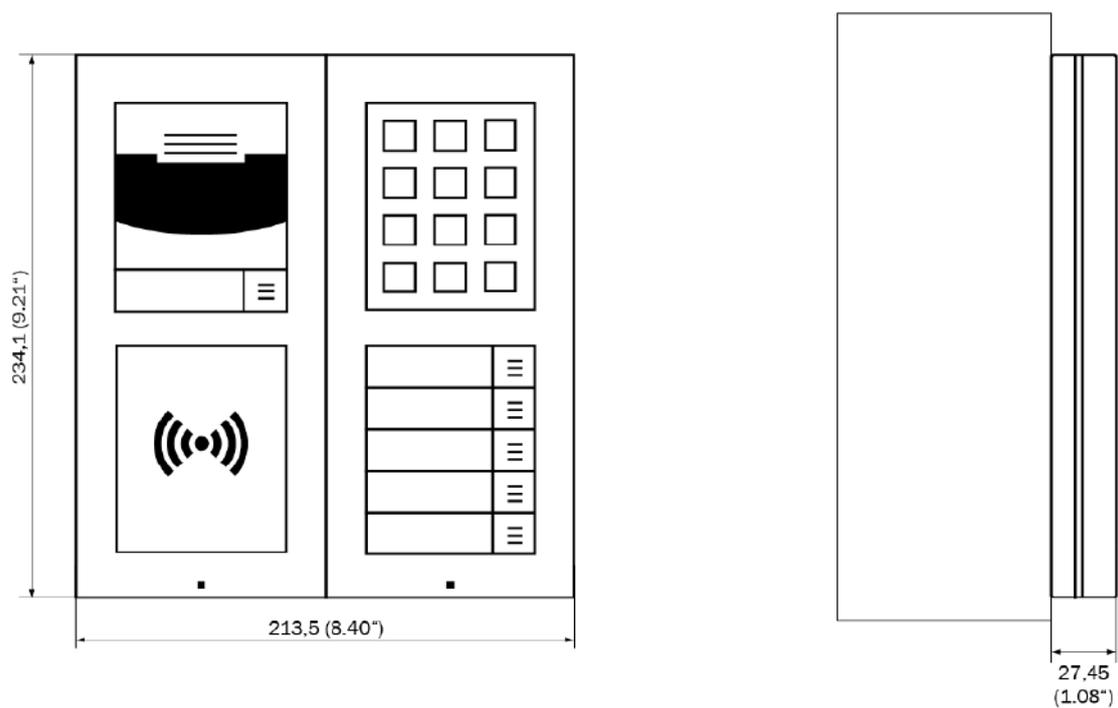
2 modules



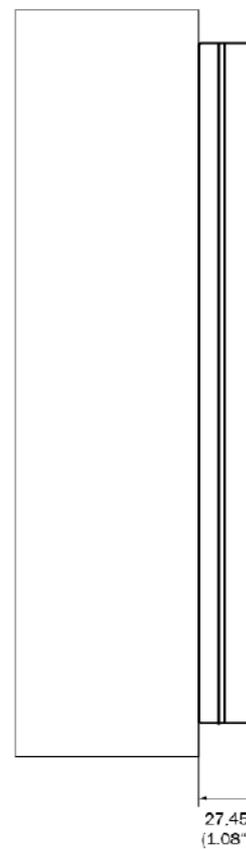
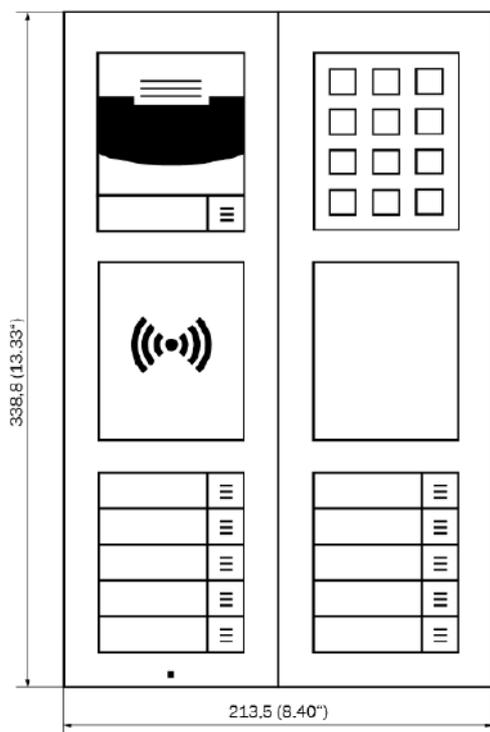
3 modules



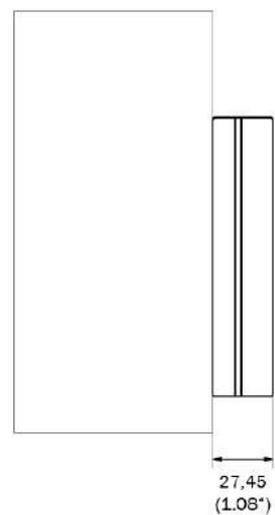
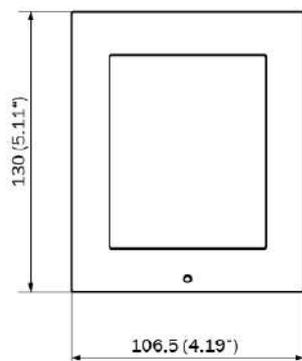
2 x 2 modules



3 x 2 modules

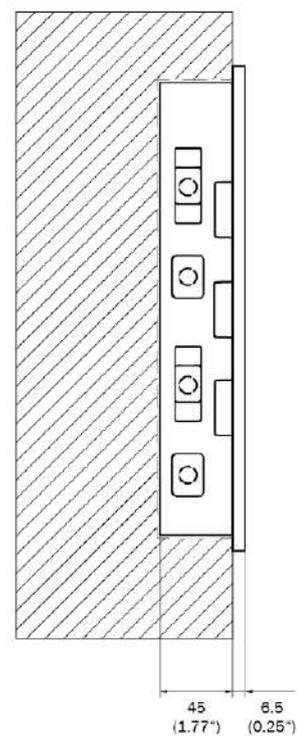
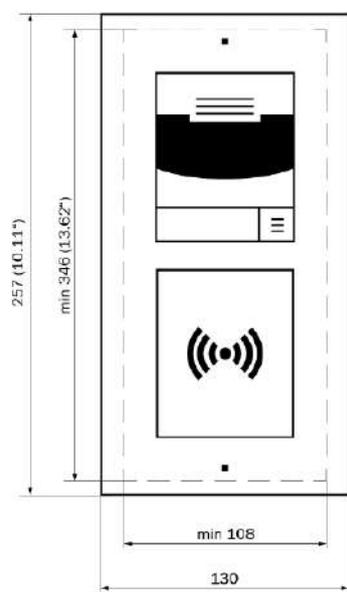


1 modul

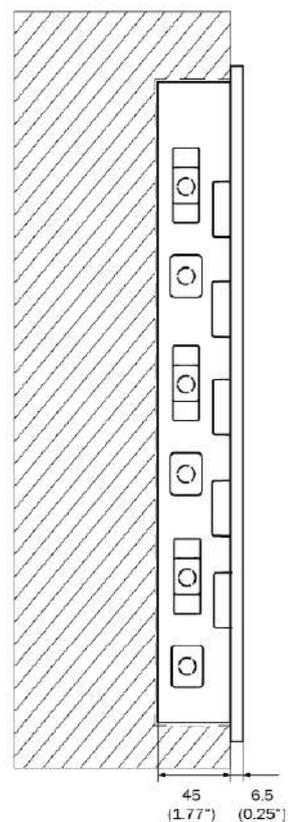
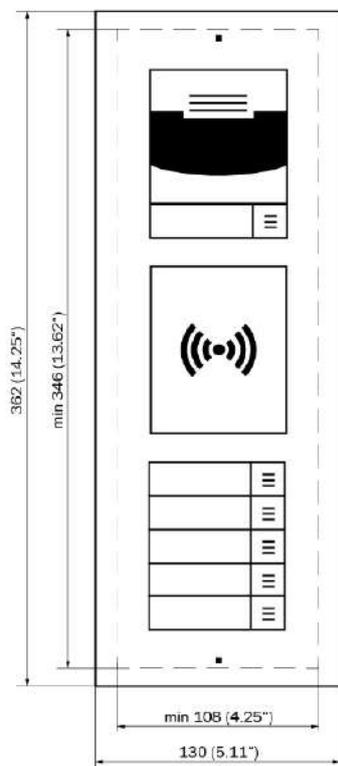


Flush mounting

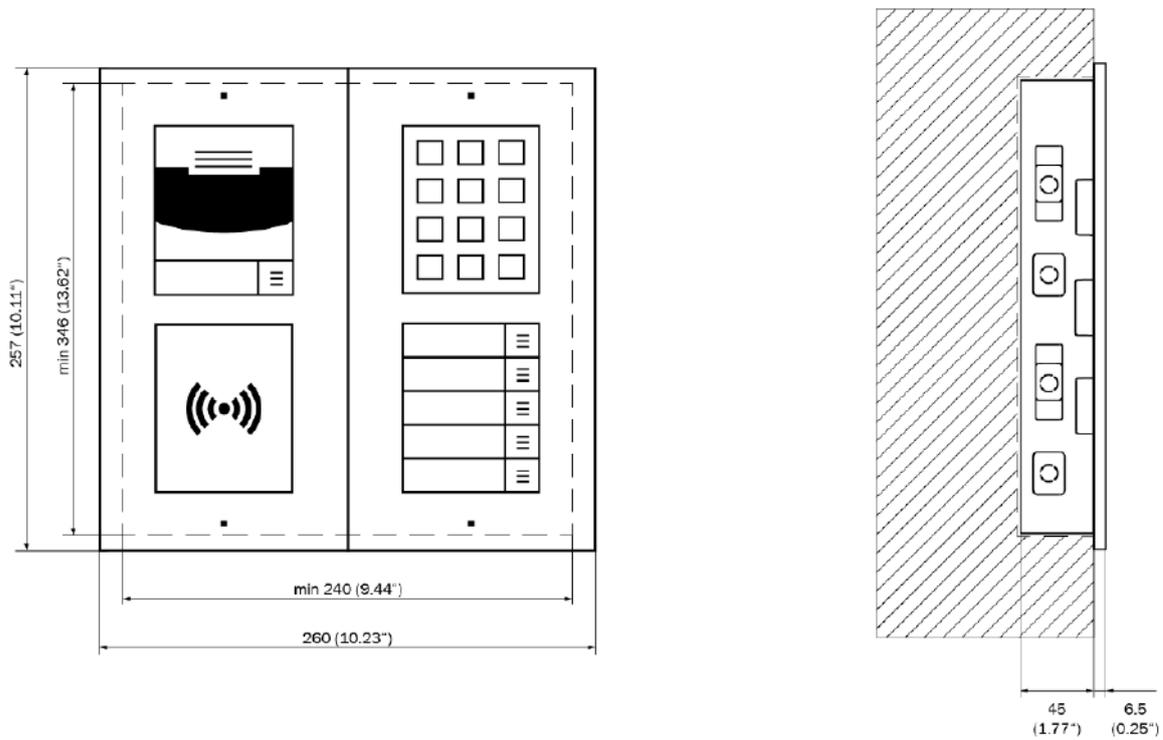
2 modules



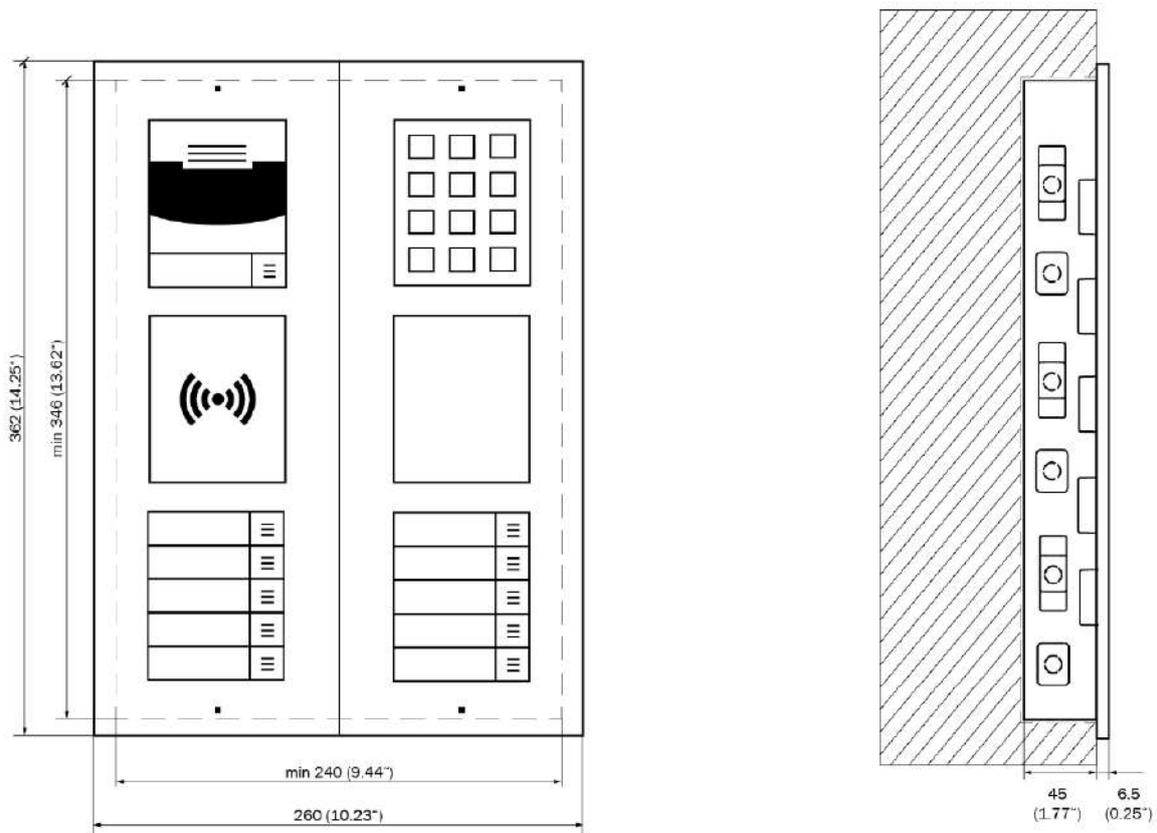
3 modules



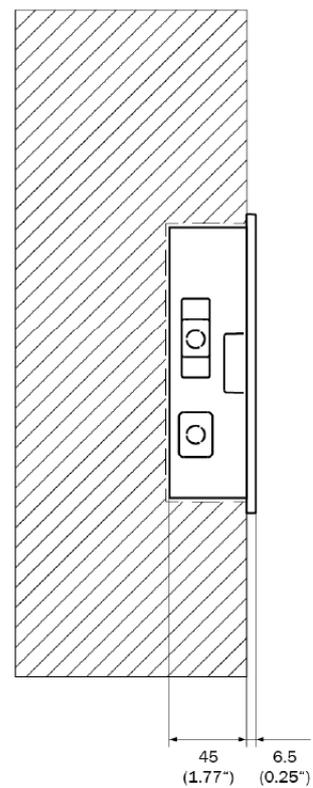
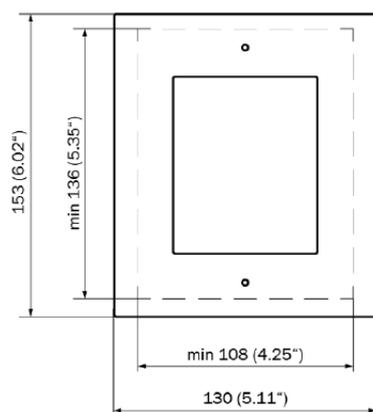
2 x 2 modules



3 x 2 modules



1 modul



5. Supplementary Information

Here is what you can find in this section:

- 5.1 Troubleshooting
- 5.2 Directives, Laws and Regulations
- 5.3 General Instructions and Cautions

5.1 Troubleshooting



For the most frequently asked questions refer to faq.2n.cz.

5.2 Directives, Laws and Regulations

2N[®] IP Verso conforms to the following directives and regulations:

- 2014/53/EU for radio equipment
- 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment
- 2012/19/EU on waste electrical and electronic equipment

Industry Canada

This Class B digital apparatus complies with Canadian ICES-003/NMB-003.

FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

NOTE: These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

DDA compliance:

2N TELEKOMUNIKACE intercoms comply with the Disability Discrimination Act 2005 (DDA) under the following conditions:

1. The intercoms are mounted so that their lower edge is between 100 and 120 centimeters above the floor.

2. The intercoms use a keyboard that has a mechanical protrusion on number 5.
3. The intercoms use electromagnetic loop as a hearing aid.

 **Caution**

Warning

In order to ensure the full functioning and guaranteed outputs we strongly recommend a verification of the timeliness of version of product or facility already during the installation process. The customer takes into consideration that the product or facility can achieve the guaranteed outputs and be fully operational pursuant to the producer's instructions only by using the most recent version of product or facility, which has been tested for full interoperability and has not been determined by the producer as incompatible with certain versions of other products, only in conformity with the producer's instructions, guidelines, manual or recommendation and only in conjunction with suitable products and facilities of the other producers. The most recent versions are available on the website https://www.2n.cz/cs_CZ/, or specific facilities, depending on their technical capacity, allow updating in the configuration interface. Should the customer use any other version of product or facility than the most recent one, or the version that has been determined by the producer as incompatible with certain versions of other producers' products of facilities, or the product or facility in a way incompatible with the producer's instructions, guidelines, manual or recommendation or in conjunction with unsuitable products or facilities of the other producers, he or she is aware of all potential limitations of functionality of such a product or facility and all relating consequences. Should the customer use any other than the most recent version of the product or facility, or the version that has been that has been determined by the producer as incompatible with certain versions of other producers' products of facilities, or the product or facility in a way incompatible with the producer's instructions, guidelines, manual or recommendation or in conjunction with unsuitable products or facilities of the other producers, he or she agrees that the company 2N TELEKOMUNIKACE a. s. is not liable neither for any limitation of such a product's functionality, nor for any damage, loss or injury relating to such a potential limitation of functionality.

5.3 General Instructions and Cautions

Please read this User Manual carefully before using the product. Follow all instructions and recommendations included herein.

Any use of the product that is in contradiction with the instructions provided herein may result in malfunction, damage or destruction of the product.

The manufacturer shall not be liable and responsible for any damage incurred as a result of a use of the product other than that included herein, namely undue application and disobedience of the recommendations and warnings in contradiction herewith.

Any use or connection of the product other than those included herein shall be considered undue and the manufacturer shall not be liable for any consequences arisen as a result of such misconduct.

Moreover, the manufacturer shall not be liable for any damage or destruction of the product incurred as a result of misplacement, incompetent installation and/or undue operation and use of the product in contradiction herewith.

The manufacturer assumes no responsibility for any malfunction, damage or destruction of the product caused by incompetent replacement of parts or due to the use of reproduction parts or components.

The manufacturer shall not be liable and responsible for any loss or damage incurred as a result of a natural disaster or any other unfavourable natural condition.

The manufacturer shall not be held liable for any damage of the product arising during the shipping thereof.

The manufacturer shall not make any warrant with regard to data loss or damage.

The manufacturer shall not be liable and responsible for any direct or indirect damage incurred as a result of a use of the product in contradiction herewith or a failure of the product due to a use in contradiction herewith.

All applicable legal regulations concerning the product installation and use as well as provisions of technical standards on electric installations have to be obeyed. The manufacturer shall not be liable and responsible for damage or destruction of the product or damage incurred by the consumer in case the product is used and handled contrary to the said regulations and provisions.

The consumer shall, at its own expense, obtain software protection of the product. The manufacturer shall not be held liable and responsible for any damage incurred as a result of the use of deficient or substandard security software.

The consumer shall, without delay, change the access password for the product after installation. The manufacturer shall not be held liable or responsible for any damage incurred by the consumer in connection with the use of the original password.

The manufacturer also assumes no responsibility for additional costs incurred by the consumer as a result of making calls using a line with an increased tariff.

Electric Waste and Used Battery Pack Handling



Do not place used electric devices and battery packs into municipal waste containers. An undue disposal thereof might impair the environment!

Deliver your expired electric appliances and battery packs removed from them to dedicated dumpsites or containers or give them back to the dealer or manufacturer for environmental-friendly disposal. The dealer or manufacturer shall take the product back free of charge and without requiring another purchase. Make sure that the devices to be disposed of are complete.

Do not throw battery packs into fire. Battery packs may not be taken into parts or short-circuited either.



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