2N Access Unit QR

Installation Manual

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Symbols and Terms Used

The following symbols and pictograms are used in the manual:

DANGER
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.

Product Description

In this section, we introduce the **2N Access Unit QR** product, outline its application options and highlight the advantages following from its use.

Basic Features

2N Access Unit QR is an access unit equipped with a full HD camera used as an elegant QR code reader. Thanks to modularity, the assembly can be complemented with another **2N Access Unit 2.0** module (including the compatible **2N IP Verso** modules except for **2N IP Verso – Induction Loop**) and assembled according to individual needs. It provides a reliable and innovative building access control and easy interoperability with other systems for enhanced building security. **2N Access Unit QR** can be used as an access unit for office buildings, residential areas or other applications.

The user specifies a list of modules and accessories that meet their particular needs and assembles them using the plug&play connections. This approach allows for individual system configurations and also leaves space for additional functionality if necessary.

The device has the Gold license, which includes the Enhanced Video, Enhanced Integration and Lift Control licenses.

The main advantages of this device are:

Wide Angle Camera with Full HD Resolution – provides visitors with a simplified access based on QR code reading. The camera is elegantly hidden behind darkened glass, so it is not visible. The camera can also be used for VMS connection.

Keypad – the device can be equipped with a numeric keypad module, which turns the device into a code lock for lock switch activation.

Card Reader – the device can be equipped with a card reader module, which provides access control functionality based on RFID cards or chips. With additional software features, functions other than the door lock can be RFID card controlled too.

Electric Lock Switch – this switch can be controlled using QR codes, the numeric keypad or a PC application. The switch can be completed with additional module outputs if necessary. A wide range of switch settings allows for a variety of applications.

Robustness – the device is designed as a robust, mechanically resistant intercom, which withstands weather conditions without needing extra accessories.

Device Installation – is very easy. All you have to do is assemble the required modules and connect the assembly to your LAN with a network cable. The modules are plug&play, so there is no need to configure them manually. The device can be supplied either from a 12 V DC power source or using PoE if supported by your LAN.

Device Configuration – use a PC equipped with any internet browser for configuration.

Other advantages of the device

- elegant design,
- weather resistance,
- variable mounting options (brick/plasterboard flush mounting, surface mounting),
- sensitive microphone for noise detection and speakerphone for playing preset messages,
- integrated color FullHD camera with a wide-angle lens,

- optional numeric keypad with backlight,
- option to have multiple modules of the same kind – for example, a card reader for both entering and leaving the building,
- integrated electronic lock switches with wide setting options,
- optional integrated RFID card reader module,
- LAN (PoE) or external 12 V power supply
- configuration via web interface,
- up to 10,000 users to be added,
- up to 20 user time profiles,
- HTTPS server for configuration,
- SNTP client for server time synchronization,
- SMTP client for e-mail sending,
- RTSP server for video streaming,
- TFTP/HTTP client for automated configuration update.

Product Versions

Part No. 916201

Axis Part No. 03089-001

2N Access Unit QR

It provides access control via a QR code.

One blind module is always supplied with the device.

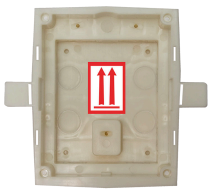
Accessories

Accessories for Installation

2N Access Unit QR is designed for both outdoor and indoor applications and requires no additional roof.

The **2N IP Verso** accessories are compatible with **2N Access Unit 2.0 and 2N Access Unit QR**.

Choose the proper frame and, if necessary, other accessories for your particular installation needs.



Part No. 9155014

Axis Part No. 01284-001

Flush mounting box, 1-module

The box is designed for brick/plasterboard flush mounting of 1-module.

Delivered including accessories for multiple box assemblies.

Remember to order it together with a 1-module flush mounting frame (9155011/9155011B, 01278-001/01279-001).

Part No. 9155015

Axis Part No. 01285-001

Flush mounting box, 2-module

The box is designed for brick/plasterboard flush mounting of 2-module.

Delivered including accessories for multiple box assemblies.

Remember to order it together with a 2-module flush mounting frame (9155012/9155012B, 01280-001/01281-001).

Part No. 9155016

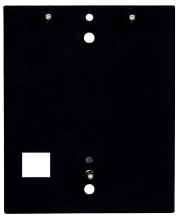
Axis Part No. 01286-001

Flush mounting box, 3-module

The box is designed for brick/plasterboard flush mounting of 3-module.

Delivered including accessories for multiple box assemblies.

Remember to order it together with a 3-module flush mounting frame (9155013/9155013B, 01282-001/01283-001).



Part No. 9155061

Axis Part No. 01293-001

1-module mounting backplate

Mounting backplate for glass/uneven surface mounting of 1 module.

Part No. 9155062

Axis Part No. 01294-001

2-module mounting backplate

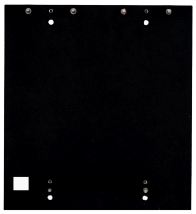
Mounting backplate for glass/uneven surface mounting of 2 modules.

Part No. 9155063

Axis Part No. 01295-001

3-module mounting backplate

Mounting backplate for glass/uneven surface mounting of 3 modules.

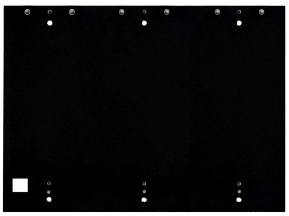


Part No. 9155064

Axis Part No. 01296-001

2 x 2-module mounting backplate

Mounting backplate for glass/uneven surface mounting of 2 (w) x 2 (h) modules.



Part No. 9155065

Axis Part No. 01297-001

3 x 2-module mounting backplate

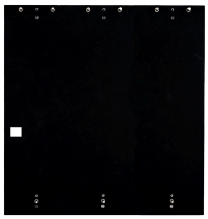
Mounting backplate for glass/uneven surface mounting of 3 (w) x 2 (h) modules.

Part No. 9155066

Axis Part No. 01298-001

2 x 3-module mounting backplate

Mounting backplate for glass/uneven surface mounting of 2 (w) x 3 (h) modules.



Part No. 9155067

Axis Part No. 01299-001

3 x 3-module mounting backplate

Mounting backplate for glass/uneven surface mounting of 3 (w) x 3 (h) modules.

Part No. 9155072

Axis Part No. 01940-001

2-module slope board

The 2-module slope board is used as a backplate for installations with a tilt of 25°.

Part No. 9155050/9155054/9155055

Axis Part No. 01267-001/01268-001/01269-001

1/3/5 m interconnecting cable

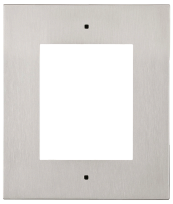
Interconnection cable for distant module installation.

Only one interconnecting cable is allowed per installation.

The maximum bus length is 7 m.

Frames

The **2N IP Verso** accessories are compatible with **2N Access Unit 2.0 and 2N Access Unit QR**.



Part No. 9155011

Axis Part No. 01278-001

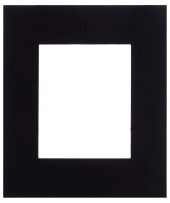
Flush mounting frame, 1 module

Covering frame for the 1-module brick/plasterboard flush mounting box.

The 1-module frame is used, for example:

- When an additional module is added to an existing installation.
- When the module is mounted onto an extended interconnecting cable, for an OUT card reader, for example.

Remember to order the frame when you order a 1-module flush mounting box (9155014, 01284-001)



Part No. 9155011B

Axis Part No. 01279-001

Flush mounting frame, 1 module – black

Covering frame for the 1-module brick/plasterboard flush mounting box.

The 1-module frame is used, for example:

- When an additional module is added to an existing installation.
- When the module is mounted onto an extended interconnecting cable, for an OUT card reader, for example.

Remember to order the frame when you order a 1-module flush mounting box (9155014, 01284-001)

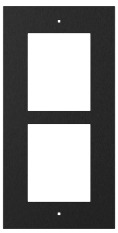
Part No. 9155012

Axis Part No. 01280-001

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 (9155015, 01285-001).



Part No. 9155012B

Axis Part No. 01281-001

Flush mounting frame, 2 modules – black

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 (9155015, 01285-001).

Part No. 9155013

Axis Part No. 01282-001

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 (9155016, 01286-001).

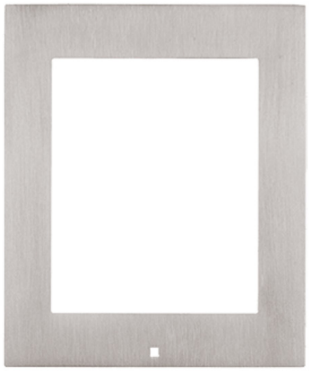
Part No. 9155013B

Axis Part No. 01283-001

Flush mounting frame, 3-module – black

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 (9155016, 01286-001).



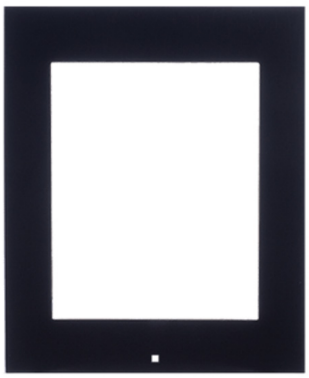
Part No. 9155021

Axis Part No. 01287-001

Surface mounting frame, 1 module

The 1-module frame is used, for example:

- when an additional module is added to an existing installation,
- when the module is mounted onto an extended interconnecting cable, for an OUT card reader, for example.



Part No. 9155021B

Axis Part No. 01288-001

Surface mounting frame, 1 module – black

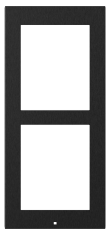
The 1-module frame is used, for example:

- when an additional module is added to an existing installation,
- when the module is mounted onto an extended interconnecting cable, for an OUT card reader, for example.

Part No. 9155022

Axis Part No. 01289-001

Surface mounting frame, 2 modules



Part No. 9155022B

Axis Part No. 01290-001

Surface mounting frame, 2 modules – black

Part No. 9155023

Axis Part No. 01291-001

Surface mounting frame, 3 modules

Part No. 9155023B

Axis Part No. 01292-001

Surface mounting frame, 3 modules – black

Extenders

NOTE
2N Access Unit QR also supports the **2N IP Verso** extending modules.

Part No. 9155030

Axis Part No. 01252-001

2N IP Verso – Infopanel

The Infopanel module helps you place such information into the device installation as house number, opening hours and similar data.

The Infopanel backlight is software controlled.

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. Also, it helps you control the lock and other functions via a numeric code.

The digits and symbols are backlit.

Part No. 9155031B

Axis Part No. 01254-001

2N IP Verso – Keypad – black

The numeric keypad module helps you dial users via their phonebook positions or phone numbers. Also, it helps you control the lock and other functions via a numeric code.

The digits and symbols are backlit.

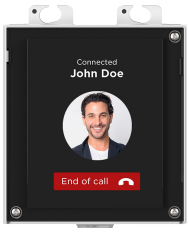
Part No. 9155047

Axis Part No. 01277-001

2N IP Verso – Touch Keypad

The numeric touch keypad module helps you dial users via their phone-book positions or phone numbers, Also, it helps you control the lock and other functions via a numeric code.

The digits and symbols are backlit.



Part No. 9155036

Axis Part No. 01275-001

2N IP Verso – Touch Display

The touch display module allows visitors to dial users in a smartphone-like way.

In addition the display also features a keypad.

Part No. 91550941

2N IP Verso 125 kHz

It provides access control via contactless cards or key fobs.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Part No. 91550941US

Axis Part No. 02140-001

2N IP Verso 125 kHz

It provides access control via contactless cards or key fobs.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Part No. 91550942

Axis Part No. 02139-001

2N IP Verso 13.56 MHz, NFC ready

It provides access control via contactless cards or key fobs. The module supports the following 13.56 MHz cards or other carriers:

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Part No. 91550942-S

Axis Part No. 02141-001

2N IP Verso 13.56 MHz, secured NFC ready

It provides access control via contactless cards or key fobs. The module supports the following 13.56 MHz cards or other carriers:

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

Part No. 9155045

Axis Part No. 01276-001

2N IP Verso – Biometric Fingerprint Reader

Used for verification of human fingerprints for access control and intercom/third party equipment control.

Part No. 9155086

Axis Part No. 01712-001

2N IP Verso RFID – secured 13.56 MHz, NFC

It provides access control via contactless cards or key fobs. The module supports the following 13.56 MHz cards or other carriers:

Compatible with firmware version 2.13 and higher.

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Part No. 91550945

Axis Part No. 02778-001

2N IP Verso Bluetooth & RFID – 125 kHz, 13.56 MHz, NFC

A combined Bluetooth & card reader module helps you control access using a numeric code, contactless cards or key fobs. The module supports the 125 kHz and 13.56 MHz cards and/or other carriers.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Part No. 91550945-S

Axis Part No. 02444-001

2N IP Verso Bluetooth & RFID – 125 kHz, secured 13.56 MHz, NFC

A combined Bluetooth – card reader module helps you control access using an access code, **My2N** in your smartphone or an access card. The module supports the 125 kHz and 13.56 MHz cards and/or other carriers.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

Part No. 91550946

Axis Part No. 02779-001

2N IP Verso Touch keypad & RFID – 125 kHz, 13.56 MHz, NFC

A combined touch keypad – card reader module helps you control access using a numeric code, contactless cards or key fobs. The module supports the 125 kHz and 13.56 MHz cards and/or other carriers.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Part No. 91550946-S

Axis Part No. 02443-001

2N IP Verso Touch keypad & RFID – 125 kHz, secured 13.56 MHz, NFC

A combined touch keypad – card reader module helps you control access using a numeric code, contactless cards or key fobs. The module supports the 125 kHz and 13.56 MHz cards and/or other carriers.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2
- HID Prox

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

Part No. 91550947

Axis Part No. 02781-001

2N IP Verso Touch keypad & Bluetooth & RFID – 125 kHz, 13.56 MHz, NFC

A combined touch keypad – Bluetooth – card reader module helps you control access using an access code, **My2N** in your smartphone or an access card. The module supports the 125 kHz and 13.56 MHz cards and/or other carriers.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Part No. 91550947-S

Axis Part No. 02782-001

2N IP Verso Touch keypad & Bluetooth & RFID - 125 kHz, secured 13.56 MHz, NFC

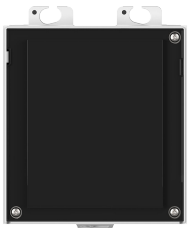
A combined touch keypad – Bluetooth – card reader module helps you control access using an access code, **My2N** in your smartphone or an access card. The module supports the 125 kHz and 13.56 MHz cards and/or other carriers.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2
- HID Prox

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DES-Fire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**



Part No. 9155039

Axis Part No. 01261-001

2N IP Verso – Blind Panel

The blind panel module helps fill up redundant space in installations.

The main unit is supplied with one blind panel module.

Part No. 9155034

Axis Part No. 01257-001

I/O Module

The module provides logical inputs and outputs for integration of sensors or other devices.

The module is installed under another module, i.e. needs no separate position.

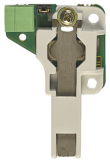
Part No. 9155037

Axis Part No. 01259-001

Wiegand Module

The Wiegand 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.



Part No. 9155038

Axis Part No. 01260-001

Tamper Switch

Tamper Switch is a module which detects that the device has been opened or the top cover removed.

The module is installed under another module, i.e. needs no separate position.

Remember to purchase the I/O module (9155034, 01257-001), along with the Tamper Switch.

Part No. 9159010

Axis Part No. 01386-001

Security Relay

A handy add-on that significantly enhances security. It prevents lock tampering.

To be installed between the protected device from which it is also powered and the lock controlled by it.

Part No. 9155198SET

Axis Part No. 01975-001

Security Package for 2N Devices

The security package provides increased door security.

The safety package includes a safety relay, a protection switch and an I/O module.

Power Supply

Part No. 91378100E (with EU cable)

Part No. 91378100US (with US cable)

Axis Part No. 01403-001

One-port PoE injector

For intercom supply via Ethernet cable where the PoE switch is absent.

Part No. 91341481E (with EU cable)

Part No. 91341481US (with US cable)

Axis Part No. 02520-001

Stabilized 12 V / 2 A power supply

The supply must be used where PoE is not used.

Part No. 932928

Axis Part No. 02529-001

12 V transformer

For 230 V mains voltage.

Designed for external supply of electric locks.

Licenses

Part No. 9137909

Axis Part No. 01380-001

Gold License

Includes the Enhanced Video, Enhanced Integration and Lift Control licenses.

Part No. 9137910

Axis Part No. 01381-001

InformaCast License

TIP

Other accessories

Part No. 9159013

Axis Part No. 02523-001

Departure button

The departure button is connected to the device logic input for opening the door from inside the building.

Part No. 9159012

Axis Part No. 01388-001

Magnetic door contact

Set for installation on a door, enabling the status of door opening to be ascertained. Used where the device is used for door protection, open door detection or forced opening.

Part No. 9134173

Axis Part No. 01384-001

MIFARE RFID chip card, 13.56 Hz

RFID chip card, MIFARE Classic 1k, 13.56 MHz.

Part No. 9134174

Axis Part No. 01385-001

MIFARE RFID chip fob, 13.56 MHz

RFID chip fob, MIFARE Classic 1k, 13.56 MHz.

Part No. 9134165E

Axis Part No. 01395-001

EM RFID chip card, 125 Hz

RFID chip card, type EM4100, 125 kHz.

Part No. 9134166E

Axis Part No. 01396-001

EM RFID chip fob, 125 kHz

RFID chip fob, type EM4100, 125 kHz.

Part No. 11202601

Axis Part No. 02787-001

MIFARE DESFire RFID chip card, 13.56 MHz

RFID chip fob, type MIFARE DESFire EV3 4 K, 13.56 MHz (ISO/IEC14443A).

Suitable for data encryption in **PICard Commander**.

The package includes 10 pieces.

Part No. 11202602

Axis Part No. 02788-001

MIFARE DESFire RFID fob, 13.56 MHz

RFID fob, type MIFARE DESFire EV3 4 K, 13.56 MHz (ISO/IEC14443A).

Suitable for data encryption in **PICard Commander**.

The package includes 10 pieces.

Part No. 9137420E

Axis Part No. 01399-001

External RFID reader, 125 kHz

External RFID card reader connectable to a PC via a USB interface.

Suitable for system administration and adding of EM41xx cards (125 kHz) using the device web configuration or **PICard Commander**.

Part No. 9137421E

Axis Part No. 01399-001

External RFID reader, 13.56 MHz + 125 kHz, NFC/HCE

External RFID card reader connectable to a PC via a USB interface.

Suitable for system administration and adding of 13.56 MHz/125 kHz cards and Android devices with NFC/HCE support using the device web configuration or the**Access Commander**.

Suitable for uploading of MIFARE DESFire cards into the **PICard Commander** encryption application.

The following RFID cards can be read:

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

The device can also read the 13.56 MHz 2N PICard RFID cards.

Part No. 9137424E

Axis Part No. 01527-001

External secured RFID reader, 13.56 MHz + 125 kHz, NFC/HCE

External secured RFID card reader connectable to a PC via a USB interface.

Suitable for system administration and adding of 13.56 MHz/125 kHz cards and Android devices with NFC/HCE support using the device web configuration or the**Access Commander**.

Suitable for uploading of MIFARE DESFire cards into the **PICard Commander** encryption application.

The following RFID cards can be read:

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2
- HID Prox

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DES-Fire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

Part No. 9137410E

Axis Part No. 01397-001

External IP relay, 1 output

Stand-alone IP relay, which can be controlled from an intercom via HTTP commands and helps control devices from an unlimited distance.

Part No. 9159014EU/US/UK

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 2-wire cabling from your original doorbell or door intercom for connecting any IP device. You do not have to configure anything, all you need is one 2N 2Wire unit at each end of the cable 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 to all of the connected IP end devices.

Part No. 1120103/1120103EU

Axis Part No. 02318-001

NVT PoLRE LPC Switch

The switch provides an IP solution with analog cabling.

The package includes 2 SIP adapters. Additional adapters can be ordered (1120104, 02319-001).

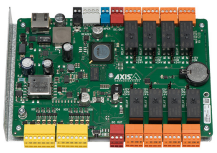
Part No. 1120104

Axis Part No. 02319-001

NVT PhyLink Adapter

SIP adapter for switch use (1120103, 02318-001).

The package includes 6 pieces.



Part No. 9160501

Axis Part No. 0820-001

AXIS A9188 Network I/O Relay Module

The relay is part of the lift access solution. One relay can control up to 8 floors. Intercom or access unit can be interconnected with up to 8 AXIS A9188 lift relays. The solution is thus suitable for up to 64 floors.

Part No. 9137422E

Axis Part No. 01402-001

2N IP Intercom – External Bluetooth reader (USB interface)

An external Bluetooth reader is connected to your computer via USB. It can be used for pairing the new users who want to use their smart-phones with the **2N My2N** application for access to controlled areas.

A USB driver is required for the external reader to work properly.

Part No. 9155051

Axis Part No. 01270-001

2N Access Unit QROne-button blind

The one-button blind helps blind a button on the main unit.

Part No. 9155051B

Axis Part No. 01523-001

2N Access Unit QROne-button blind, black version

The one-button blind helps blind a button on the main unit.

Package Completeness Check

Please check the product delivery before installation. Contents:

1x	**2N Access Unit QR**
1x	Certificate of ownership
1x	Brief Manual

Module / Frame Package Completeness Check

The package of modules for **2N Access Unit QR** includes:

3x	3 x 8 mm stainless steel thread-forming lens head screw for plastic

The package of frames for **2N Access Unit QR** includes:

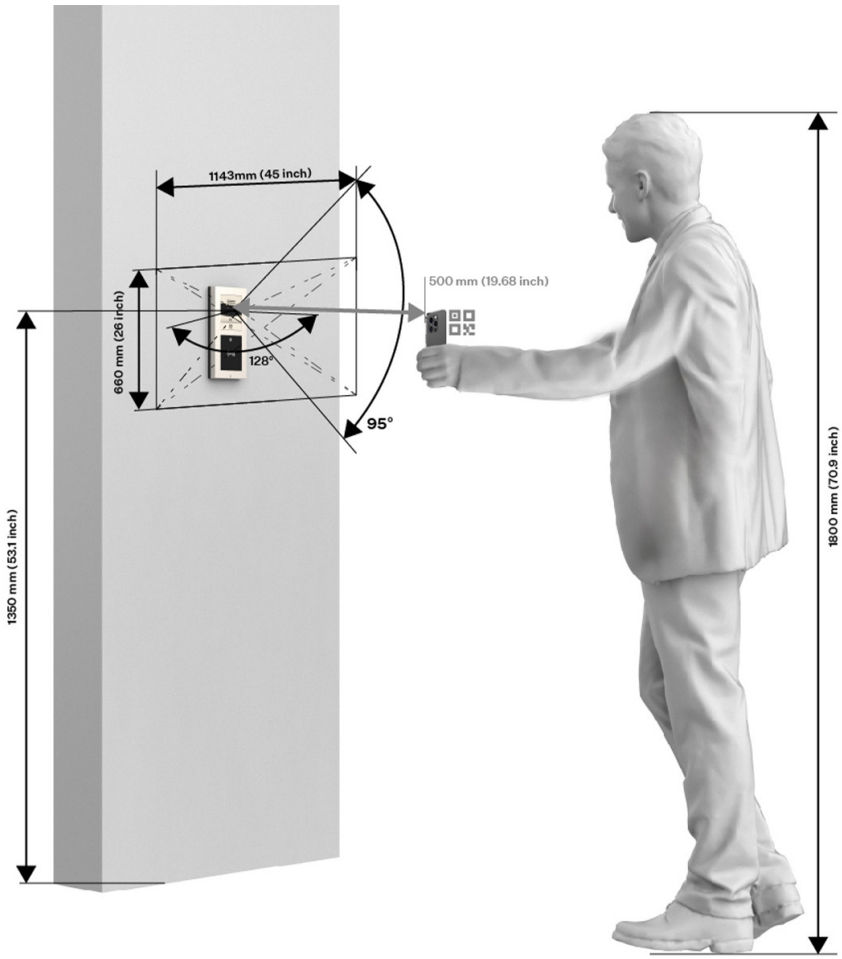
Part Nos. 9155011, 9155011B, 9155012, 9155012B, 9155013, 9155013B Axis Part Numbers 01278-001, 01279-001, 01280-001, 01281-001, 01282-001, 01283-001	
3x	4 x 20 mm stainless steel thread-forming lens head screw for plastic

Part Nos. 9155021, 9155021B, 91555022, 9155022B, 9155023, 9155023B Axis Part Numbers 01287-001, 01288-001, 01289-001, 01290-001, 01291-001, 01292-001	
2x	4 x 50 mm stainless steel flat head screw
2x	8 x 40 mm dowel

CAUTION
If spare accessories other than the specified types are used, the device warranty might become null and void.

Installation

For optimum functionality, it is recommended that the device is placed at a height according to the following scheme:



Mechanical Installation

Installation Conditions

Make sure that the following 2N Access Unit QR installation conditions are met.

- There must be enough space for the device installation.
- Make sure that the dowel holes have the required diameter. If the diameters are too large, the dowels may get loose! Use the mounting glue to secure the dowels if necessary.
- Do not use low-quality dowels to avoid their falling out of the wall!
- Make sure that the depths of the dowel holes are accurate!
- Before starting the mechanical installation on a selected place, make sure carefully that the preparations associated with it (drilling, wall cutting) cannot damage the electrical, gas, water and other existing wires and pipes.
- The device is designed for vertical wall mounting (perpendicular to the floor) in the height of up to 1350 mm above the floor. If necessary, operate the device in a position other than as aforementioned for a short time only, for quick testing purposes in a servicing center, for example.

- Make sure that the plasterboard interior does not show a pressure value significantly different from that of the room, e.g. that it is not connected with overpressure ventilation. If the difference is too great, separate the device in terms of pressure (using, e.g., a mounting box) and seal the cable passage.
- The device is not designed for environments with increased vibrations such as means of transport, machine rooms and so on.
- The device is not intended for dusty environments and places with unstable humidity and abrupt temperature changes.
- The device may not be exposed to aggressive gas, acid vapors, solvents, etc.
- The device is not intended for direct connection into the Internet/WAN. The device must be connected to the Internet/WAN via a separating active network element (switch/router).
- The device cannot be operated on places exposed to direct sunshine and near heat sources.
- Keep some free space above and below the device to allow air to flow and conduct heat away.
- Having removed the front panel, make sure that no dirt gets inside the product, especially onto the sealing surface.
- Avoid strong electromagnetic radiation on the installation site.
- Make sure that the VoIP connection is configured properly according to the SIP and other VoIP recommendations.

WARNING

- Make sure that the main unit is not removed from its base, that is why never remove the marked screw covered in resin in the right-hand upper corner. Any screw tampering results in the warranty becoming null and void.
- The grounding element in the left-hand upper corner of the unit must remain undamaged and stuck all the time.

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

CAUTION

- When the proper installation instructions are not met, water might get in and destroy the electronics. As the device circuits are constantly under voltage water leakage causes electrochemical reaction. The manufacturer‘s warranty shall be void for products damaged in this way!
- Exceeding the allowed operating temperature may not affect the device immediately but leads to premature ageing and lower reliability. For the acceptable range of operating temperatures and relative humidity values refer to S.Technical Parameters.
- Any intentional mechanical damage to the device (drilling, main unit tampering, etc.) results in a loss of warranty.
- The device installation and setting should only be performed by professionally qualified persons.

Installation Tips

- The recommended height is 135 cm for standard installations (100–120 cm for disabled persons) from the floor to the device camera level. The installation heights may vary depending on the device use.

Viewing angle	125° (H), 105° (V)

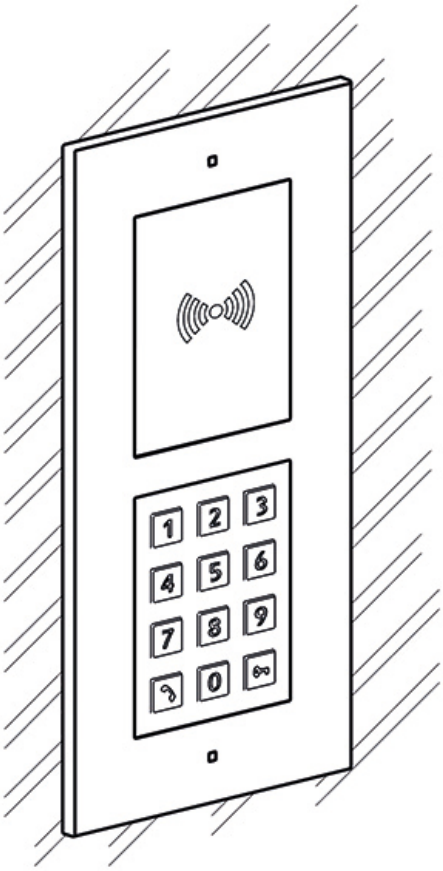
Flush mounting

While flush mounting, make sure that the box is installed properly, i.e. with the box edge on the wall surface. There are stops on the box sides to secure a proper position. Remember to break them off after walling in. Make sure that the frame is placed precisely on the box without touching the wall to make the sealing fully functional. Refer to the detailed pictorial instructions inside the package.

WARNING

It is forbidden to use silicone or any other sealing material on the marked and hatched places (on the device bottom in particular).

Flush mounting – into classic bricks, hollow bricks, thermally insulated fronts, etc.



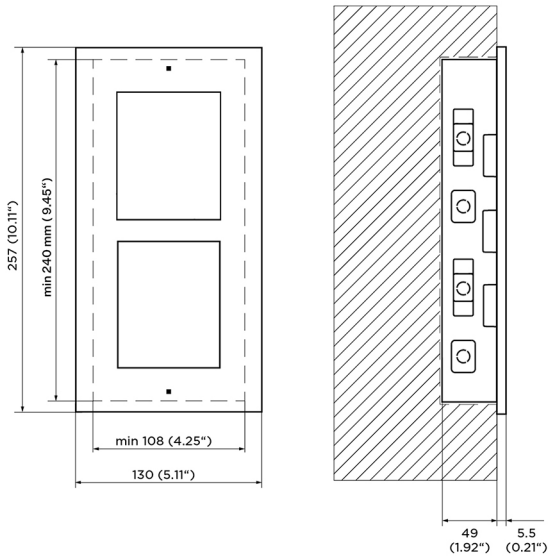
What you need for mounting:

- **2N Access Unit QR**
- a properly cut hole as instructed in the box package
- plaster, mounting glue, mounting foam or mortar as necessary
- flush mounting box and frame
  - for 1-modules: box (9155014, 01284-001) frame (9155011/9155011B, 01278-001/01279-001)
  - for 2-modules: box (9155015, 01285-001), frame (9155012/9155012B, 01280-001/01281-001)
  - for 3-modules: box (9155016, 01286-001), frame(9155013/9155013B, 01282-001/01283-001)

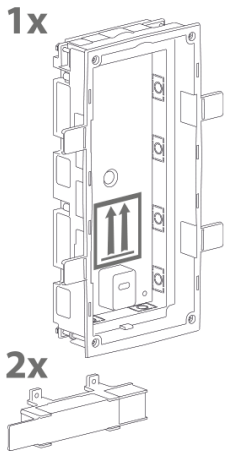
NOTE
The one-module frame is designed for stand-alone installations of extending modules such as OUT readers, etc. A 2-module frame is required for the main unit installation.

To install a device **2N Access Unit QR** into a wall, mount the flush mounting box first. Then install the device into it.

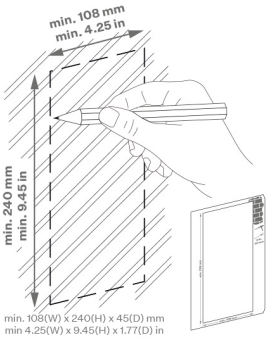
2-Module Installation



Box Installation



1.



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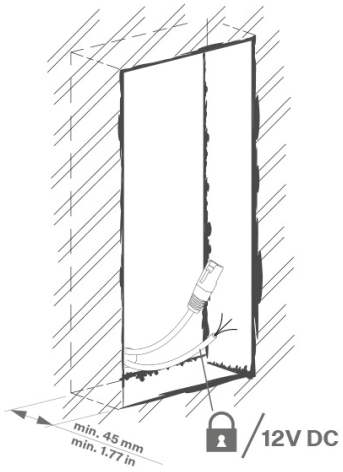

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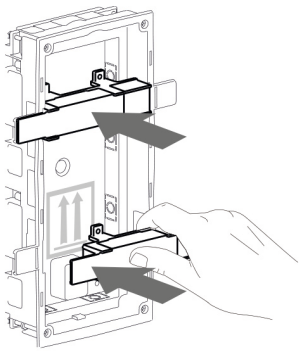

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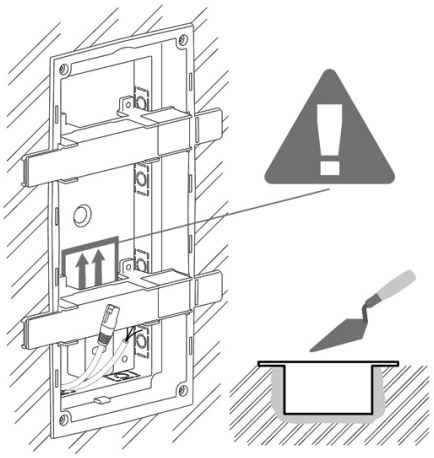

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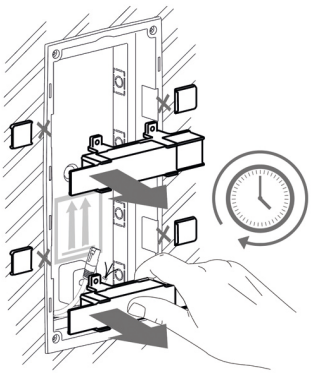

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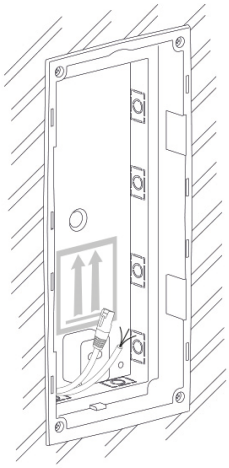
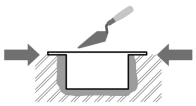
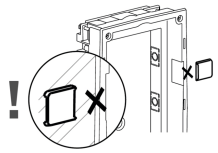


WARNING



Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

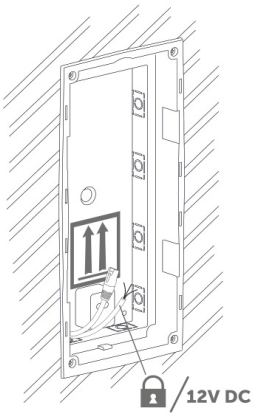
CAUTION



When the walling material has hardened, break off the side stops.

2-Module Installation into Box

1.



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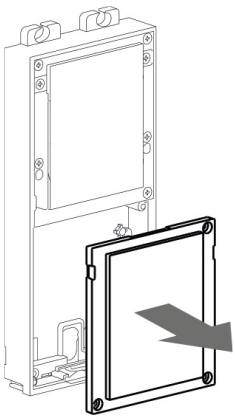

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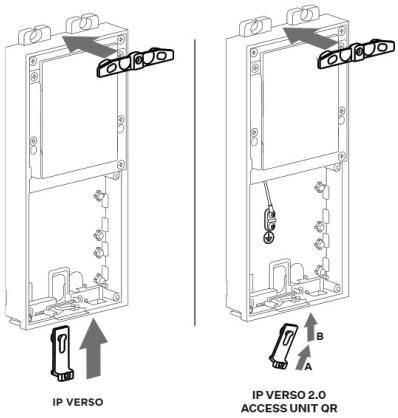

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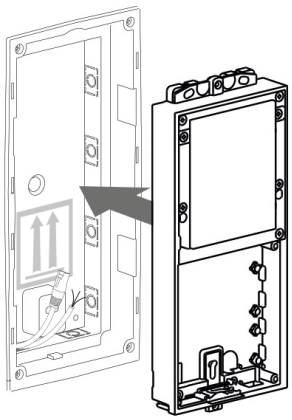

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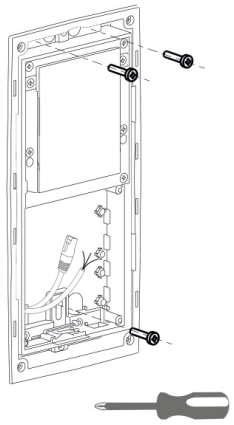

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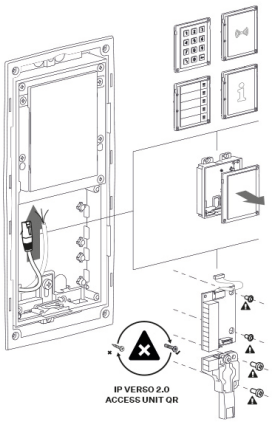

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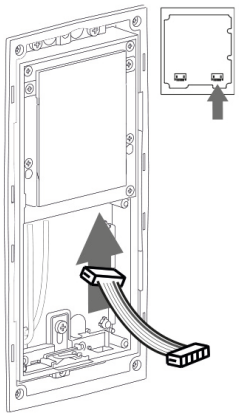

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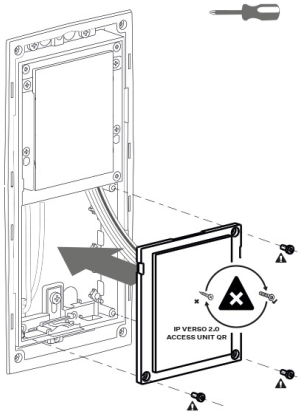
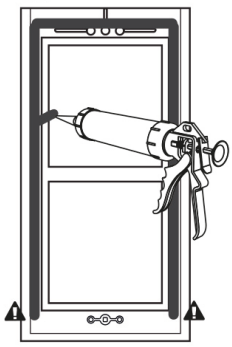


9.

a.



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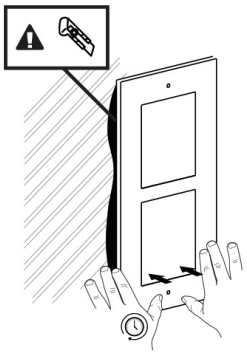

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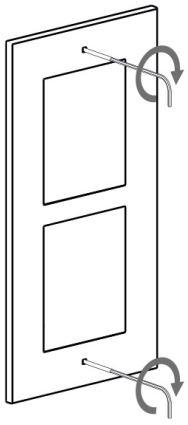
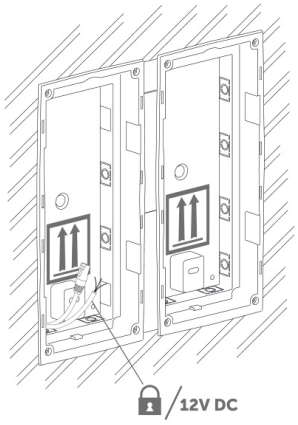


Installation of Multiple 2-Modules into Box

1.



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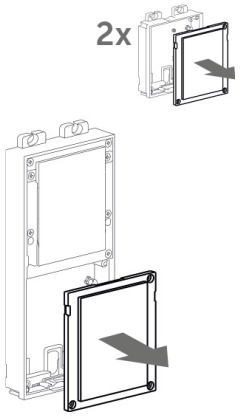

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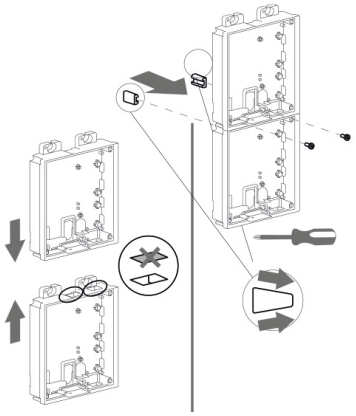

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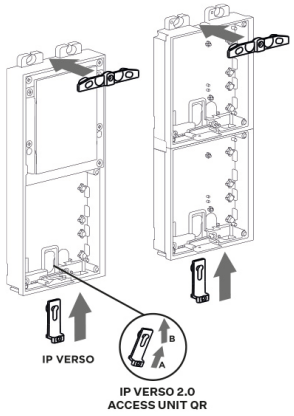
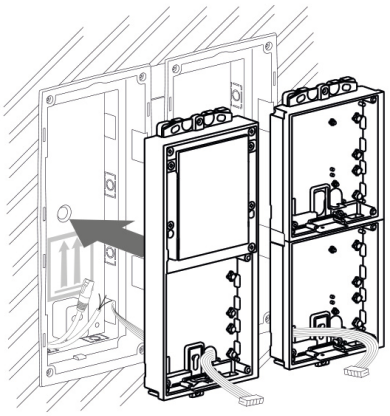


5.

6.



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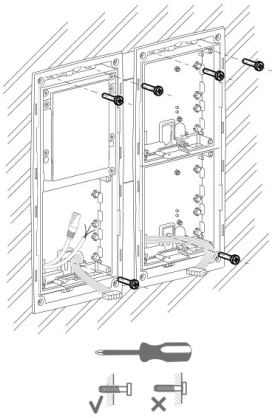

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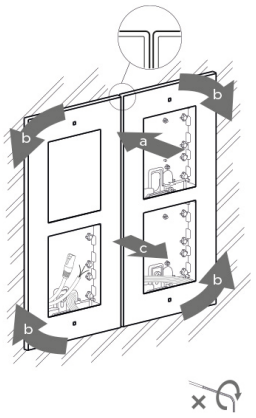

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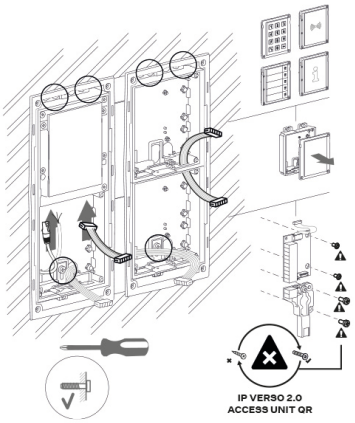

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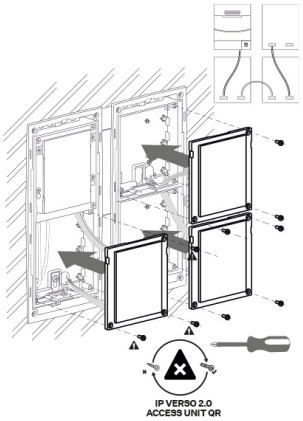

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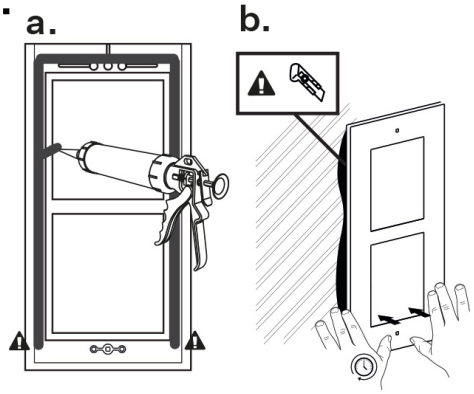

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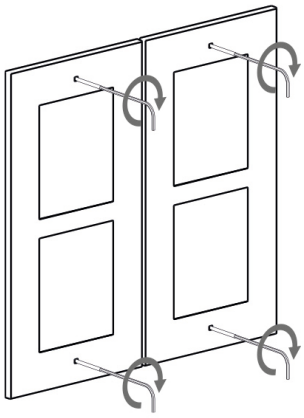


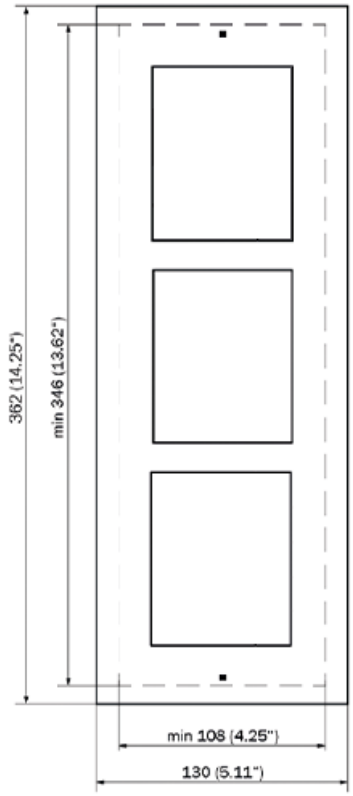
Frame Attachment

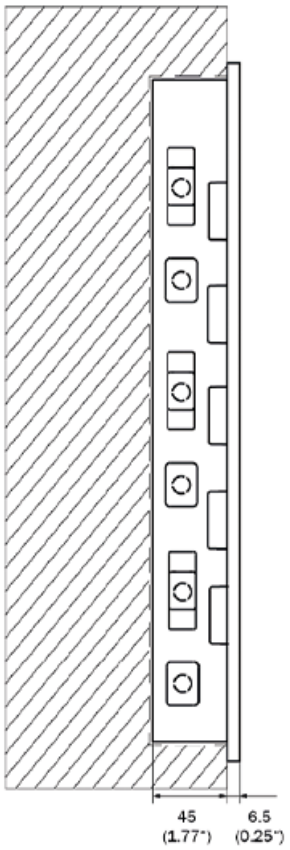
Check the frame sealing before fitting the frame.

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

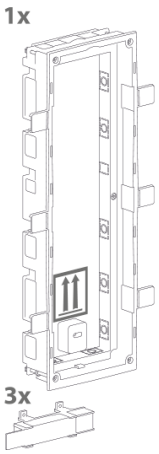
Hang the surface mounting frame on the hook in the upper part and then screw it tight in the bottom part.

3-Module Installation





Box Installation



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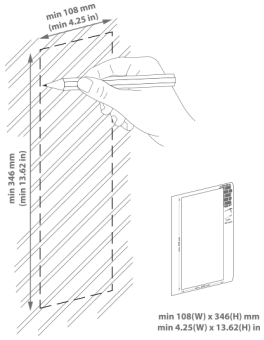

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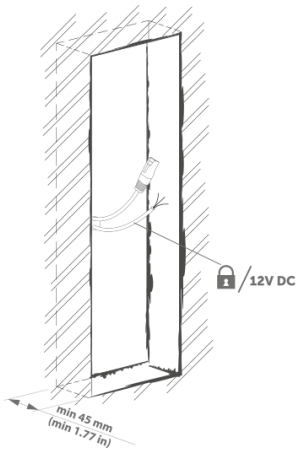

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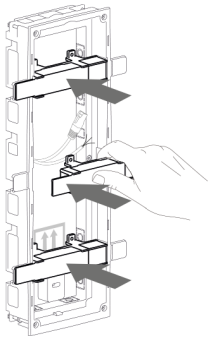

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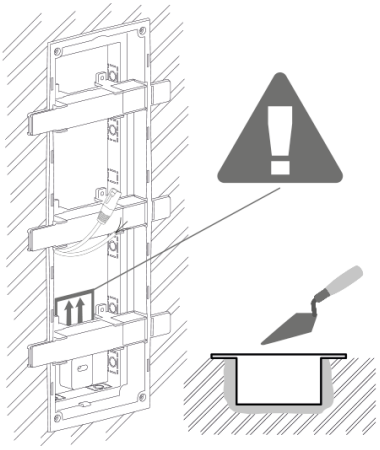

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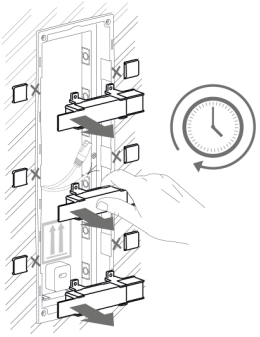

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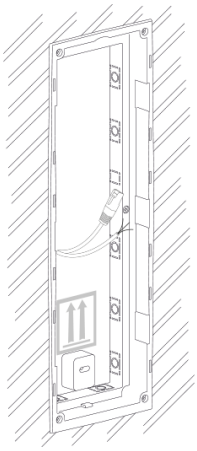

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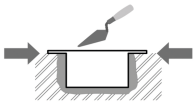
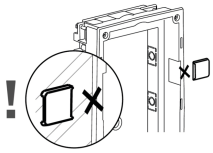


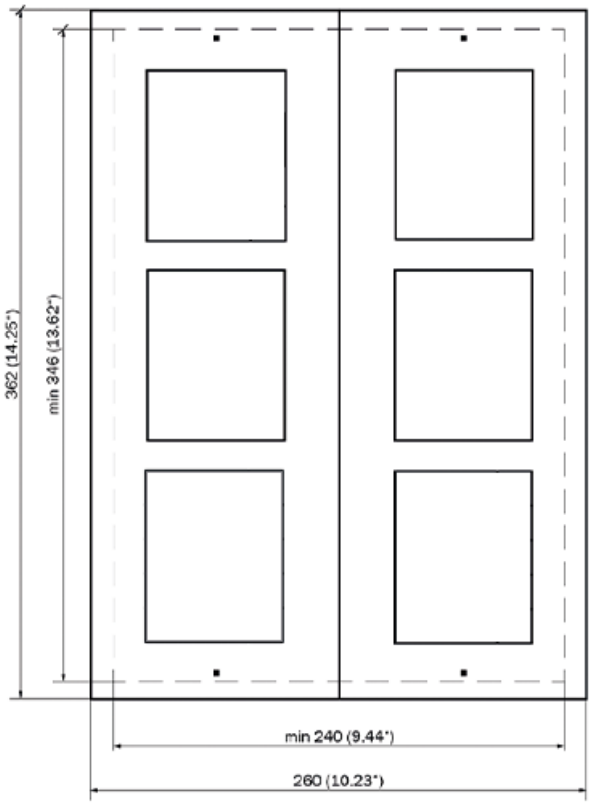
Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

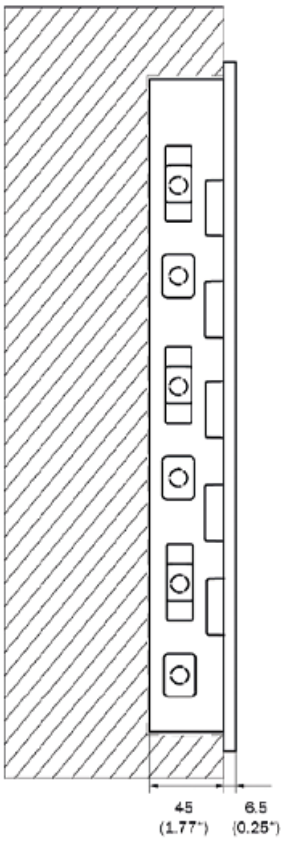
CAUTION

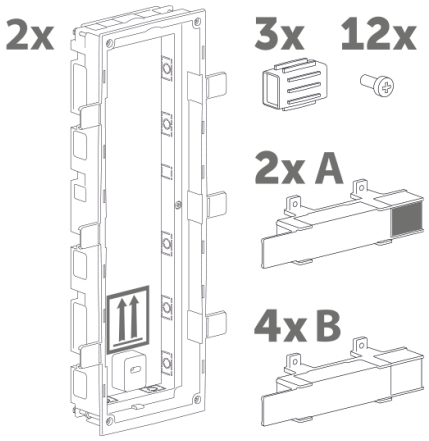


When the walling material has hardened, break off the side stops.

Installation of Multiple 3-Module Boxes Next to Each Other







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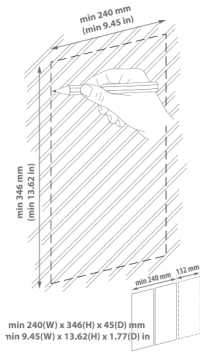

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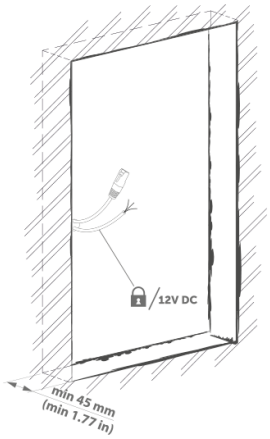

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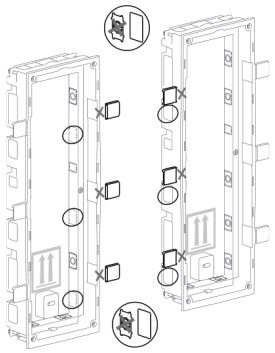

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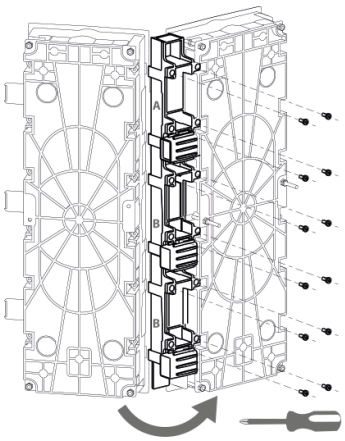

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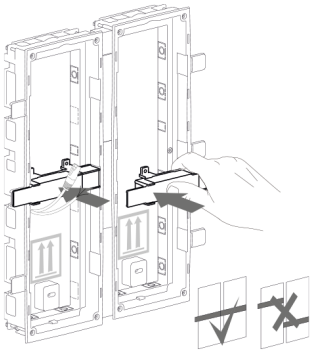

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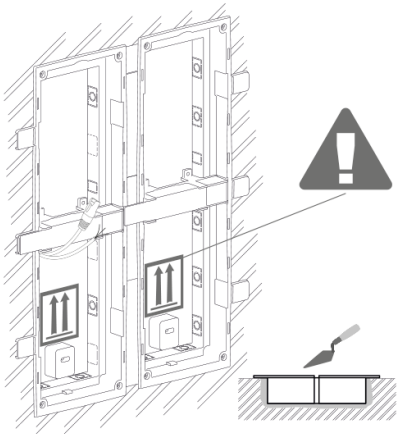

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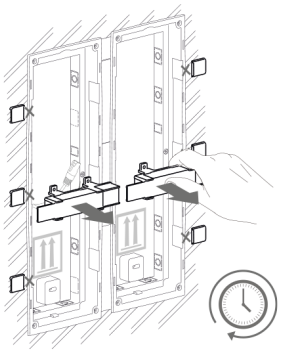

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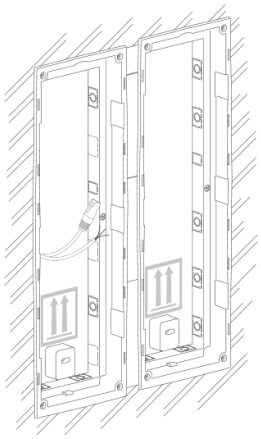

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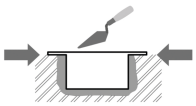
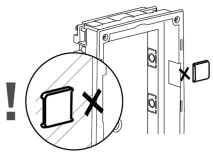


Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

CAUTION



When the walling material has hardened, break off the side stops.

3-Module Installation into Box

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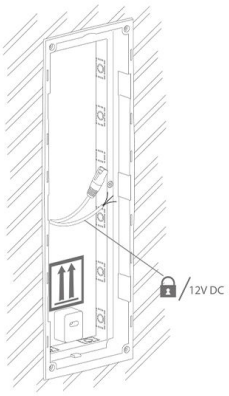

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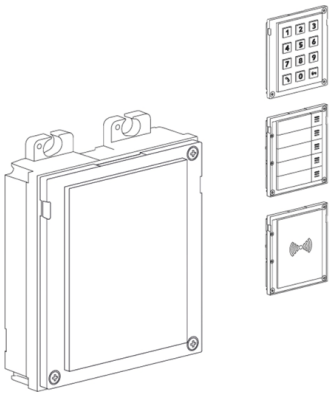

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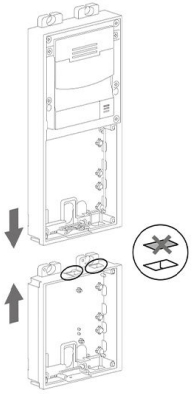

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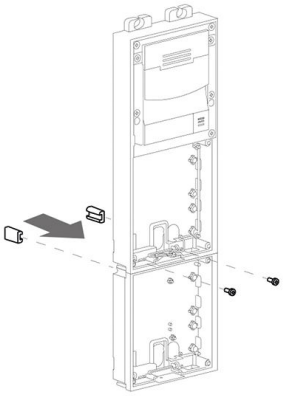

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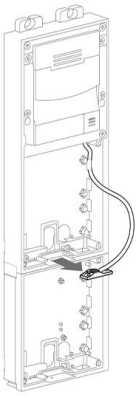

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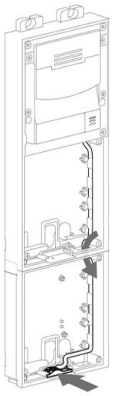

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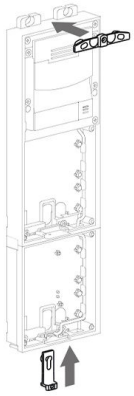

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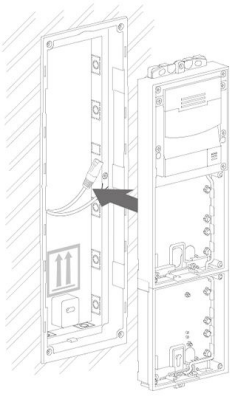

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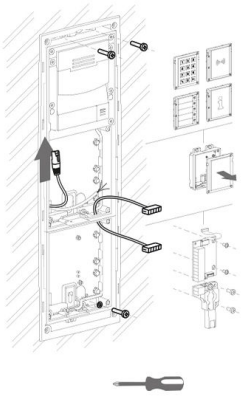

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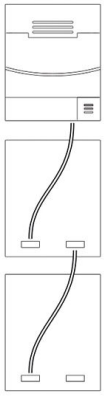

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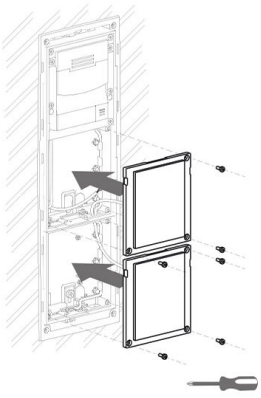


12.

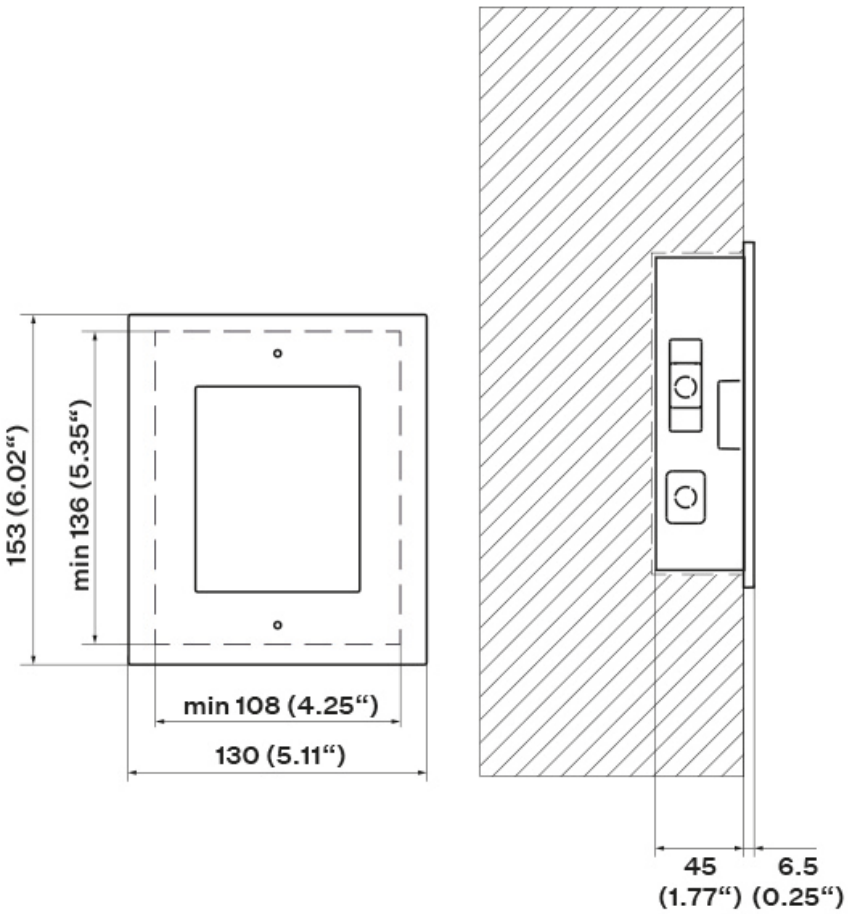
Frame Attachment

Check the frame sealing before fitting the frame.

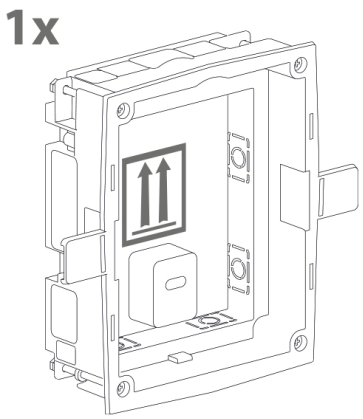
Screw the flush mounting frame in the upper and bottom parts.

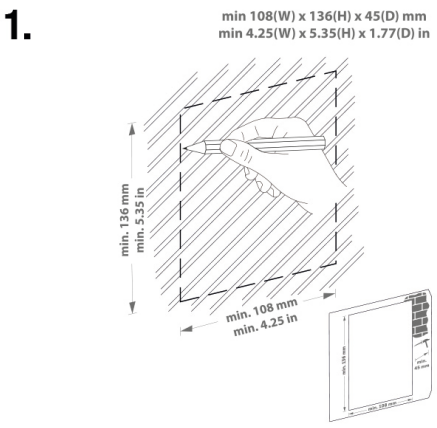
Hang the surface mounting frame on the hook in the upper part and then screw it tight in the bottom part.

1-Module Installation



Box Installation





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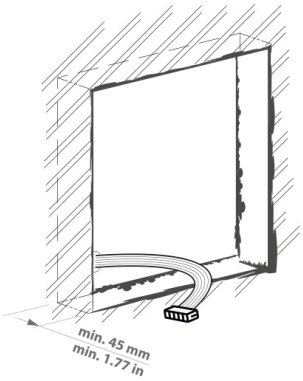

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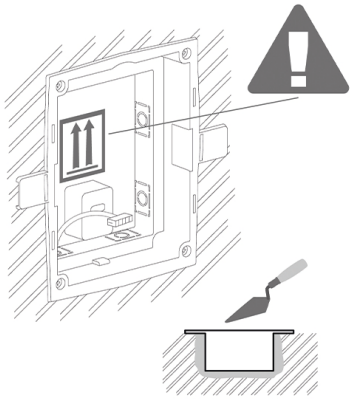

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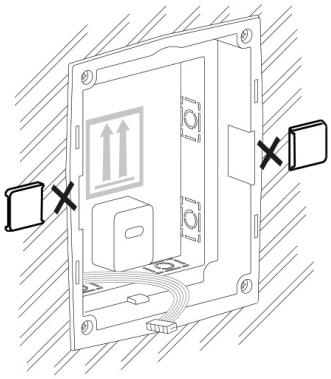

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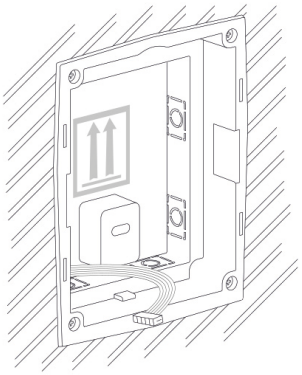

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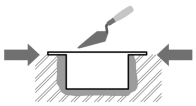
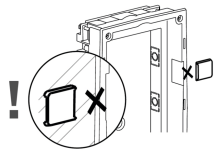


Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

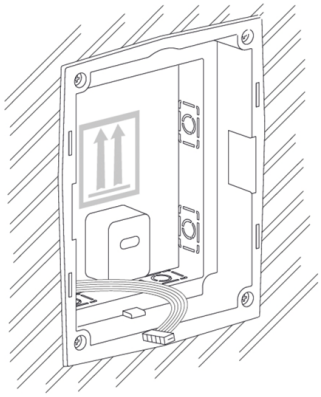
CAUTION



When the walling material has hardened, break off the side stops.

1-Module Installation into Box

1.



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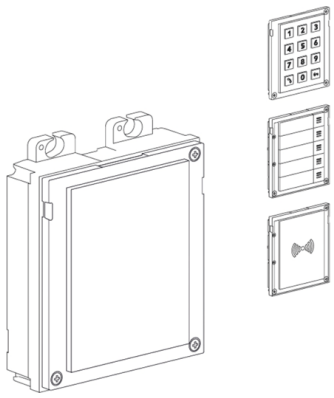

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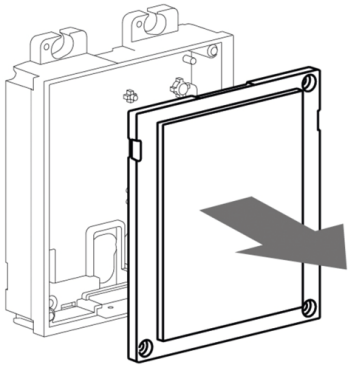

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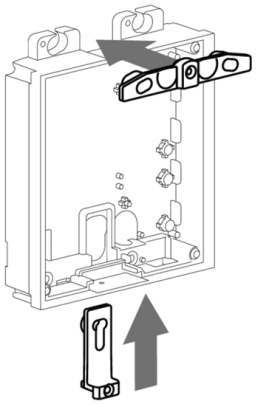

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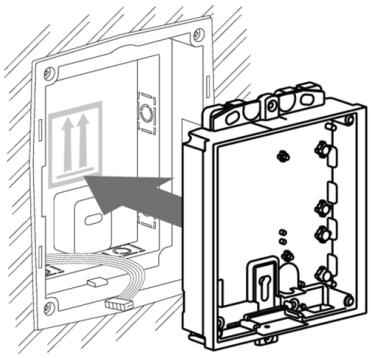

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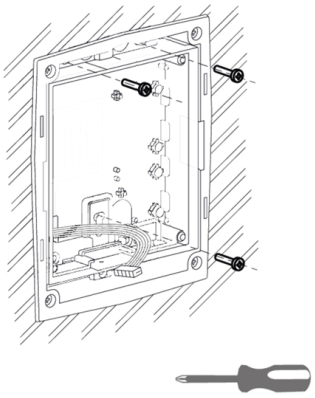

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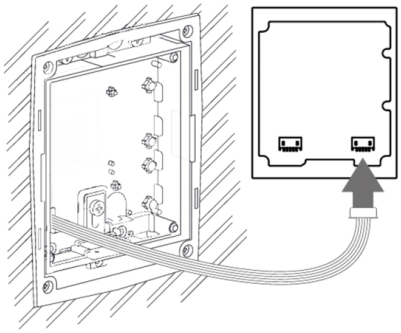

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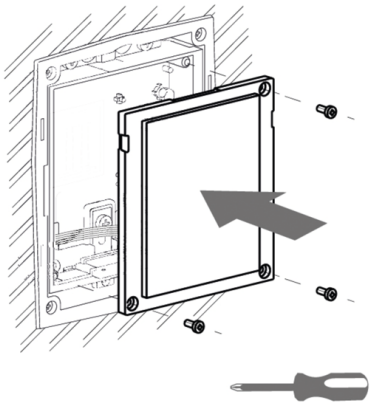

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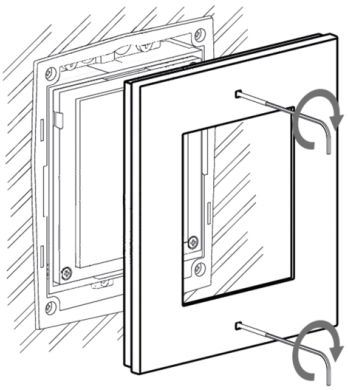

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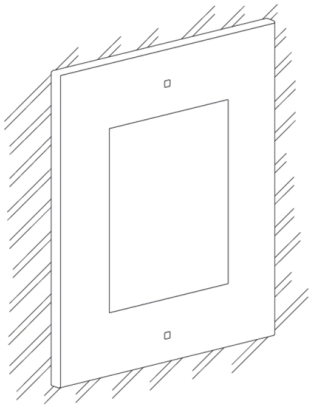
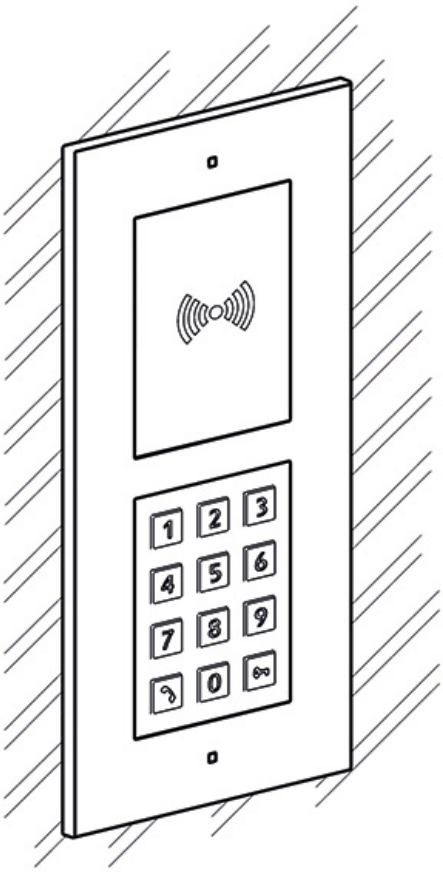


Flush mounting – into plasterboard



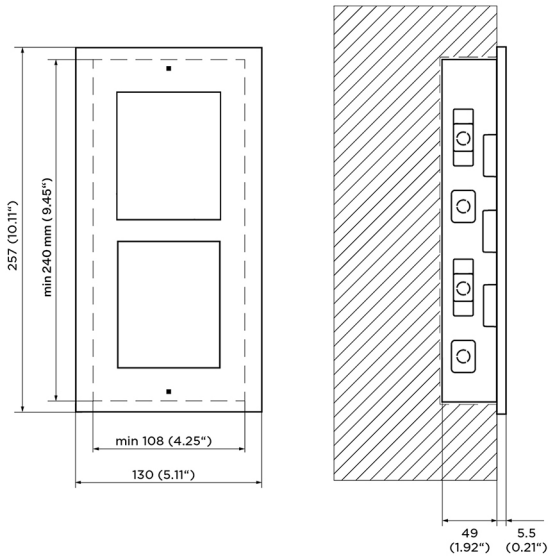
What you need for mounting:

- **2N Access Unit QR**
- a properly cut hole as instructed in the box package
- flush mounting box and frame
  - for 1-modules: box (9155014, 01284-001) frame (9155011/9155011B, 01278-001/01279-001)
  - for 2-modules: box (9155015, 01285-001), frame (9155012/9155012B, 01280-001/01281-001)
  - for 3-modules: box (9155016, 01286-001), frame(9155013/9155013B, 01282-001/01283-001)

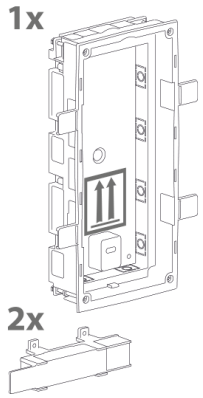
NOTE
The one-module frame is designed for stand-alone installations of extending modules such as OUT readers, etc. A 2-module frame is required for the main unit installation.

To install a device **2N Access Unit QR** into a wall, mount the flush mounting box first. Then install the device into it.

2-Module Installation



Box Installation



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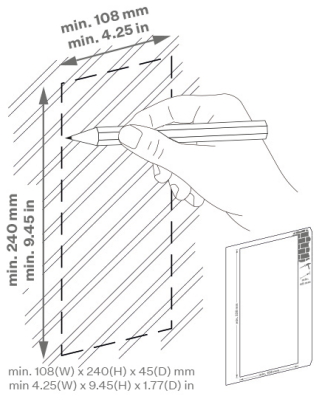

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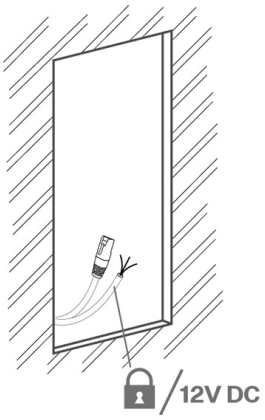

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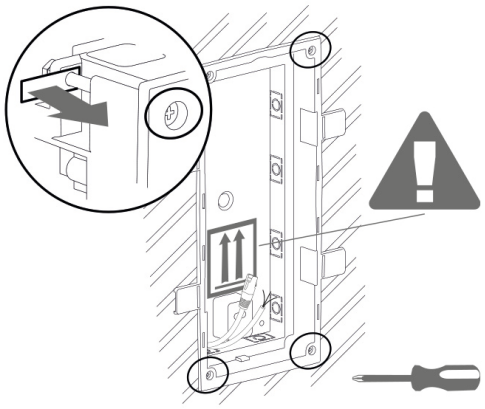

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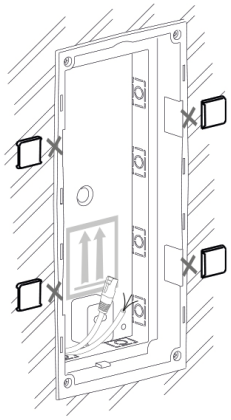

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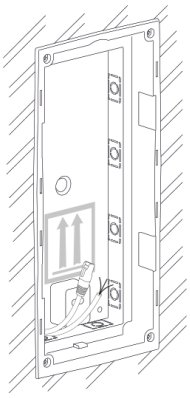

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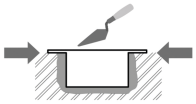
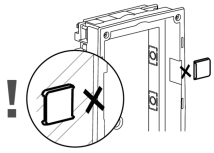


Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

CAUTION



When the walling material has hardened, break off the side stops.

2-Module Installation into Box

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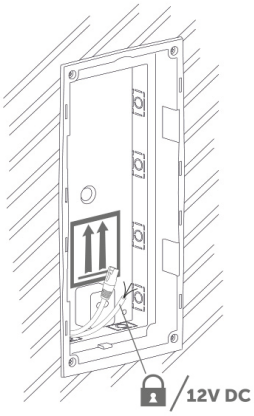

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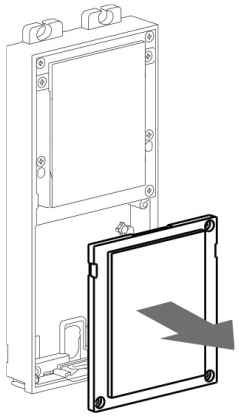

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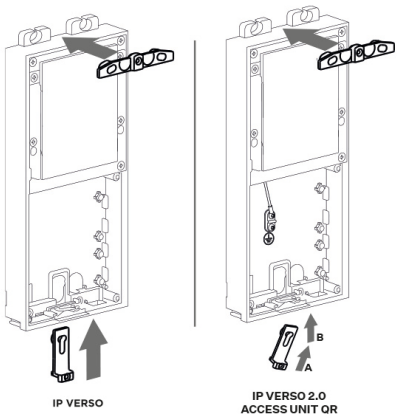

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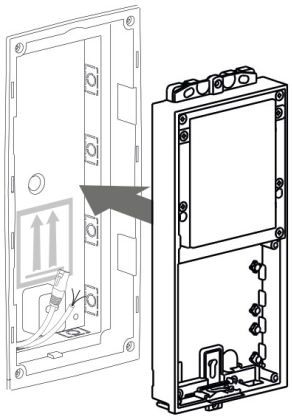

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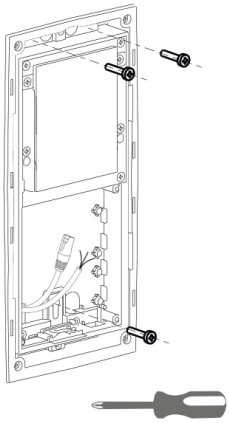

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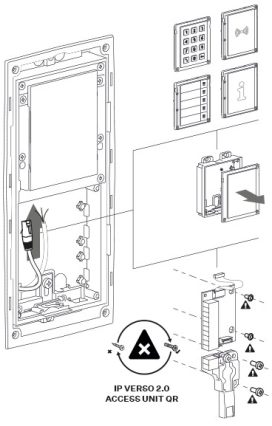

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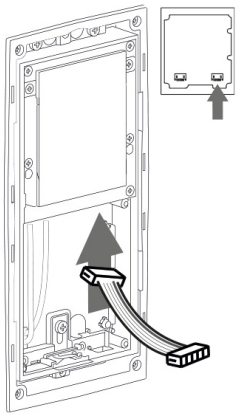

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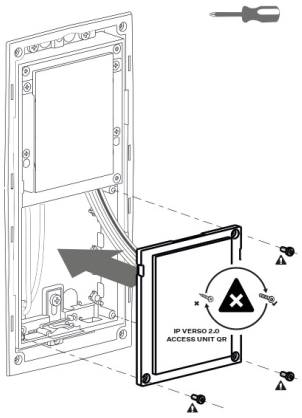

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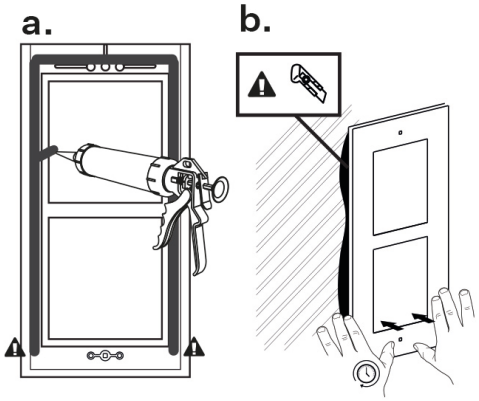

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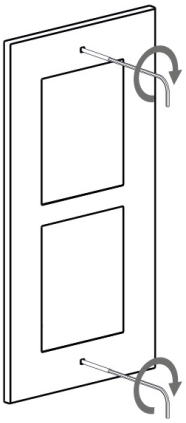


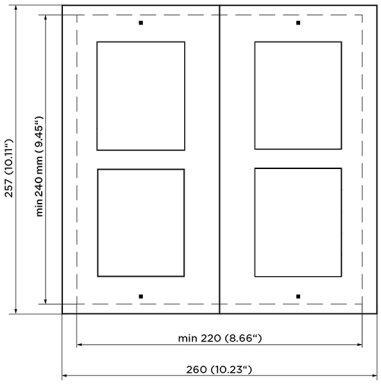
Frame Attachment

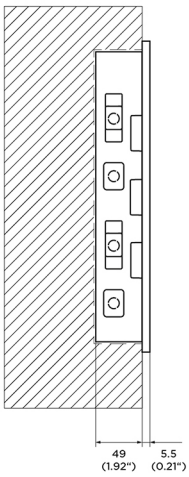
Check the frame sealing before fitting the frame.

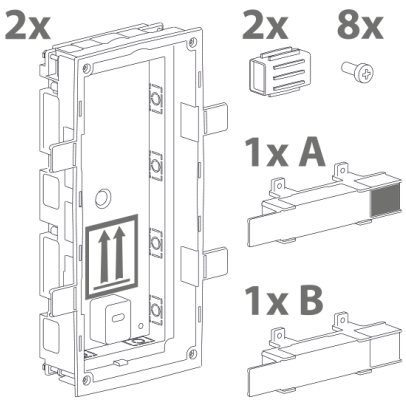
Screw the flush mounting frame in the upper and bottom parts.

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

Installation of Multiple 2-Module Boxes Next to Each Other







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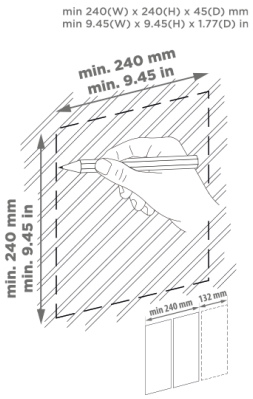

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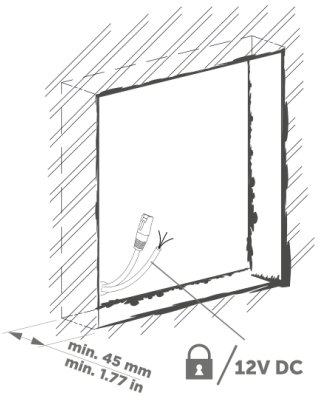

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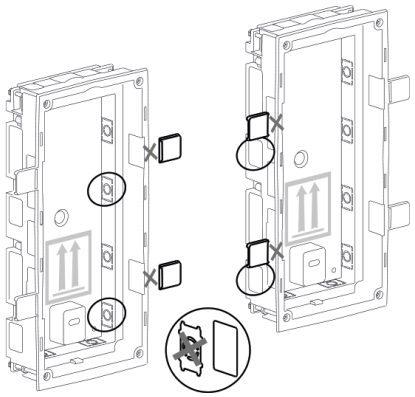

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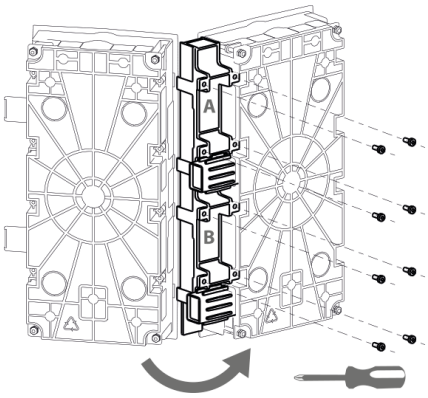

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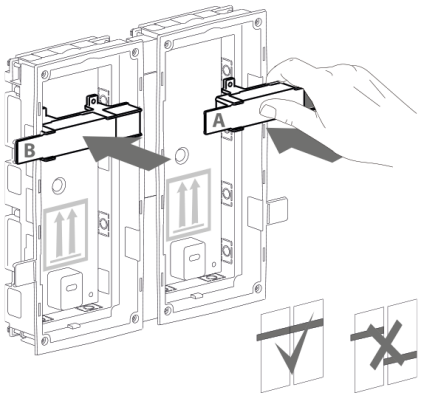

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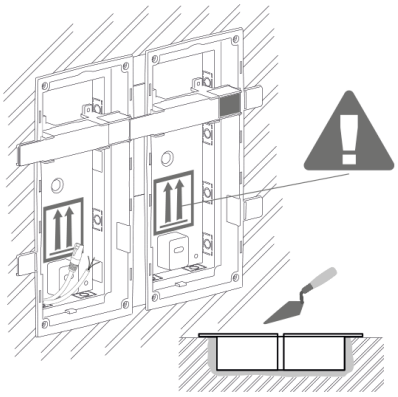

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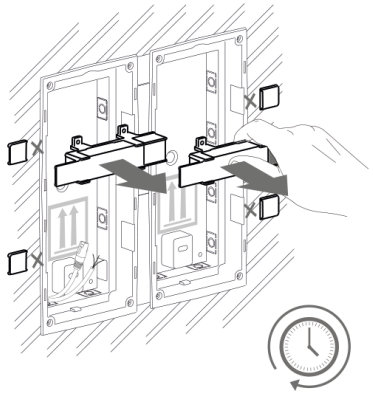

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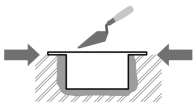
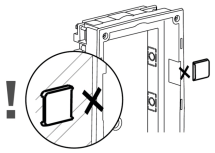


Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

CAUTION



When the walling material has hardened, break off the side stops.

Installation of Multiple 2-Modules into Box

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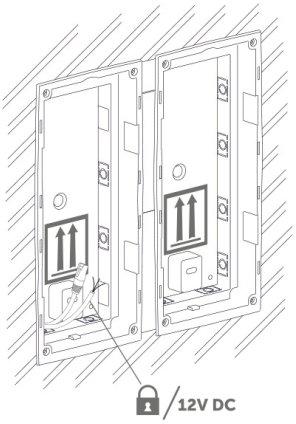

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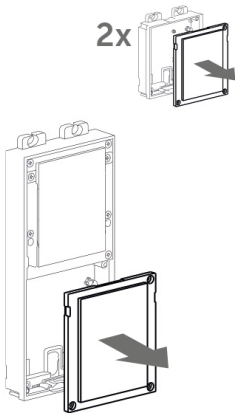

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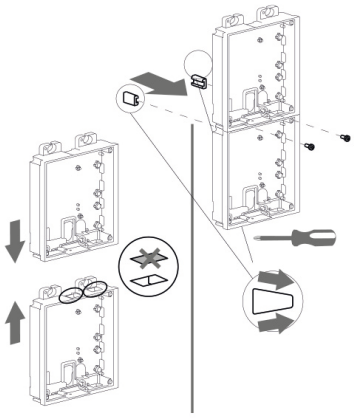

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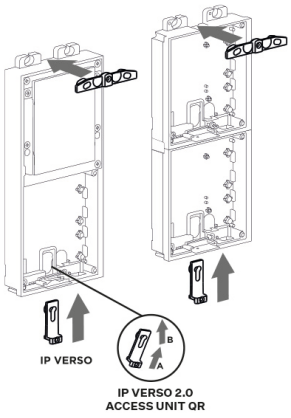

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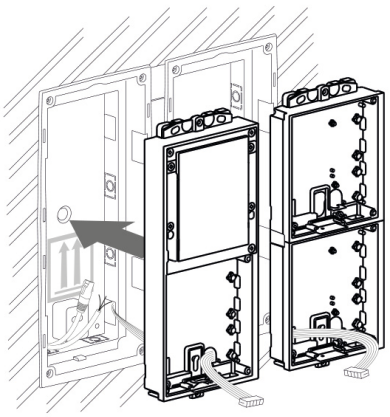

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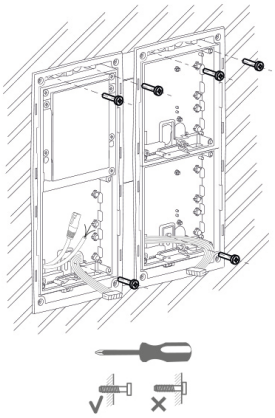

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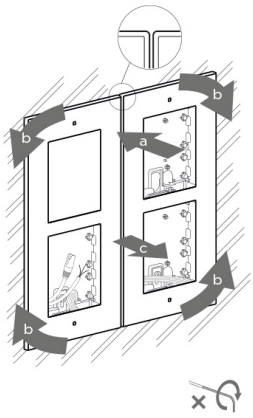

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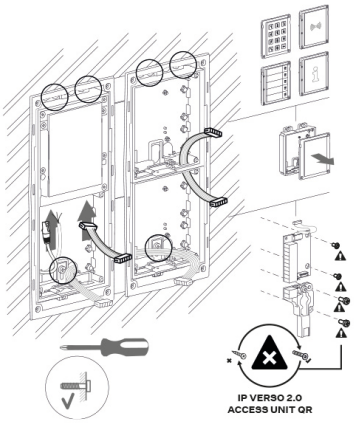

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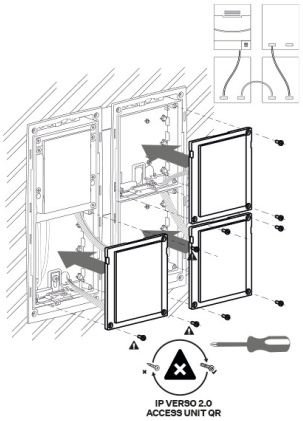

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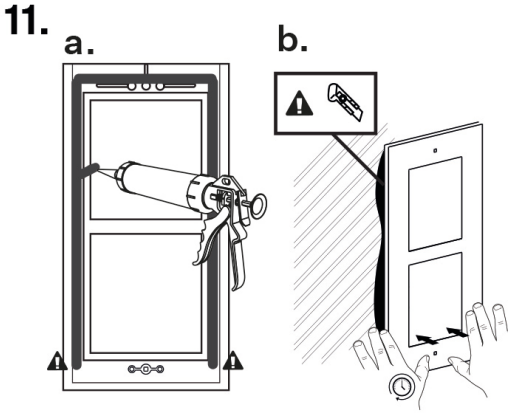

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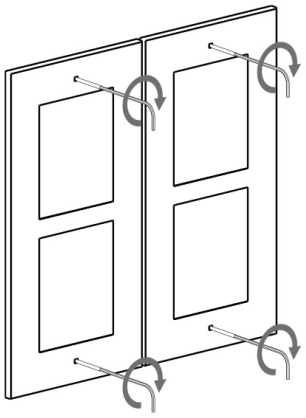
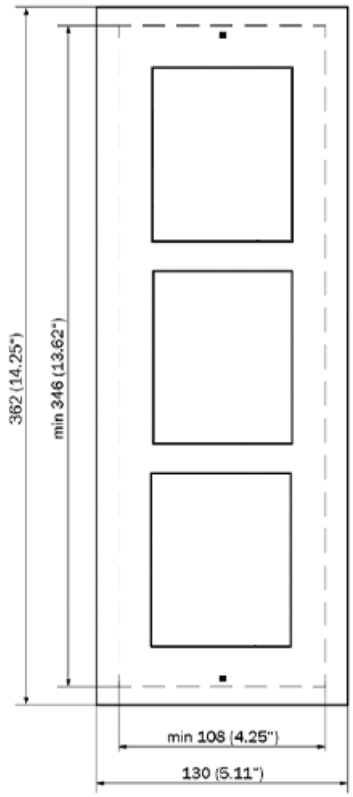
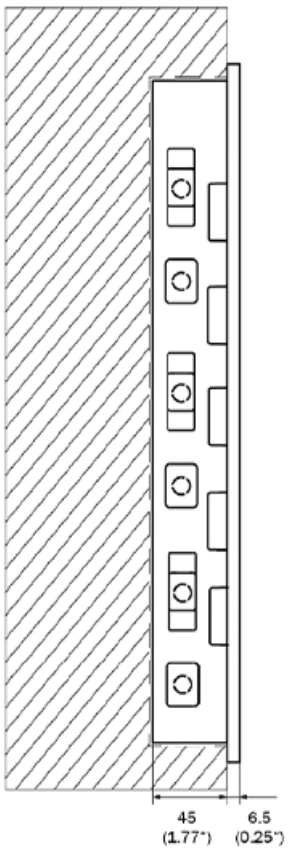


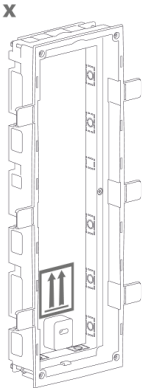
3-Module Installation





Box Installation

1x



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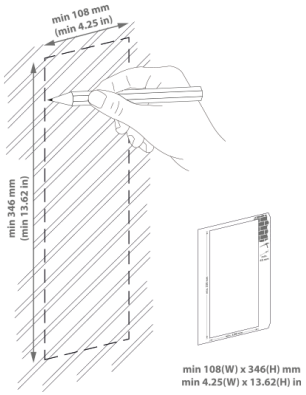

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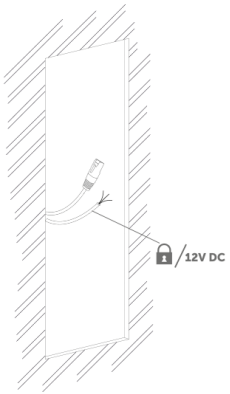

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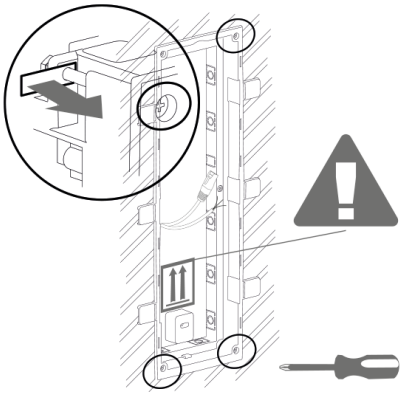

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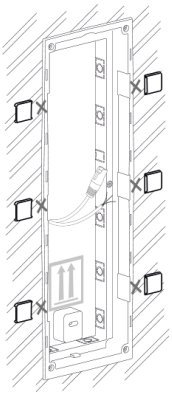

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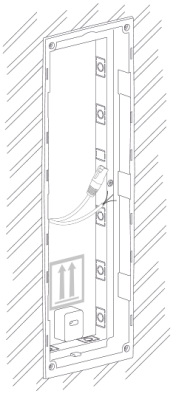

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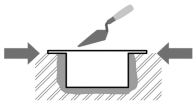
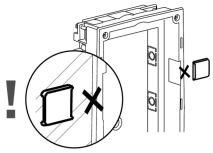


Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

CAUTION



When the walling material has hardened, break off the side stops.

3-Module Installation into Box

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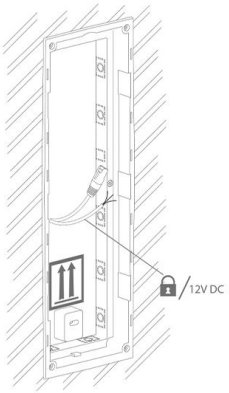

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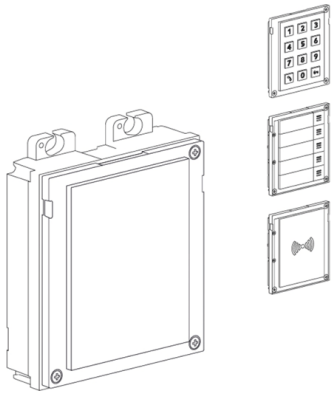

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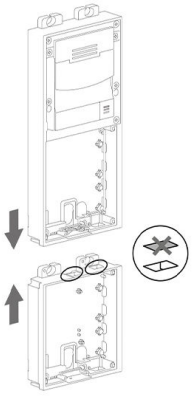

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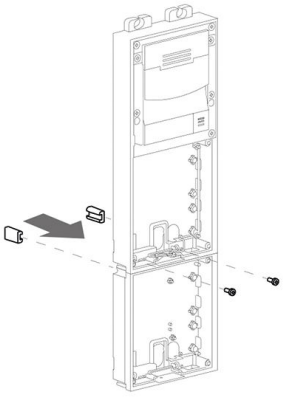

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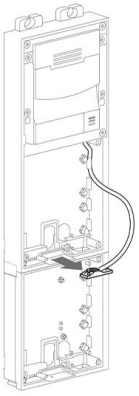

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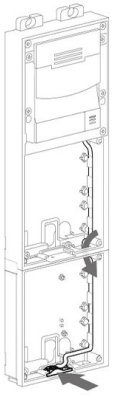

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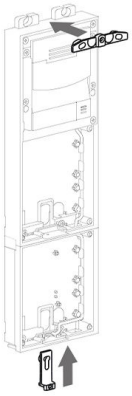

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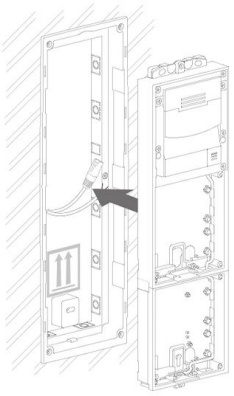

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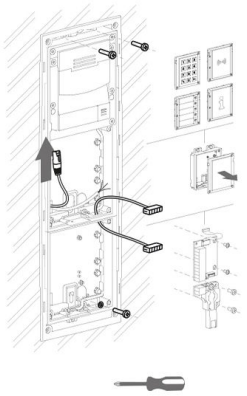

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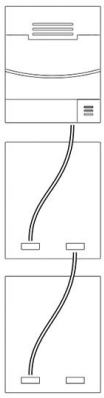

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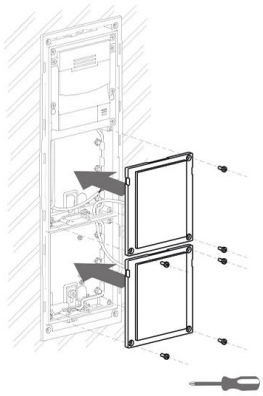


12.

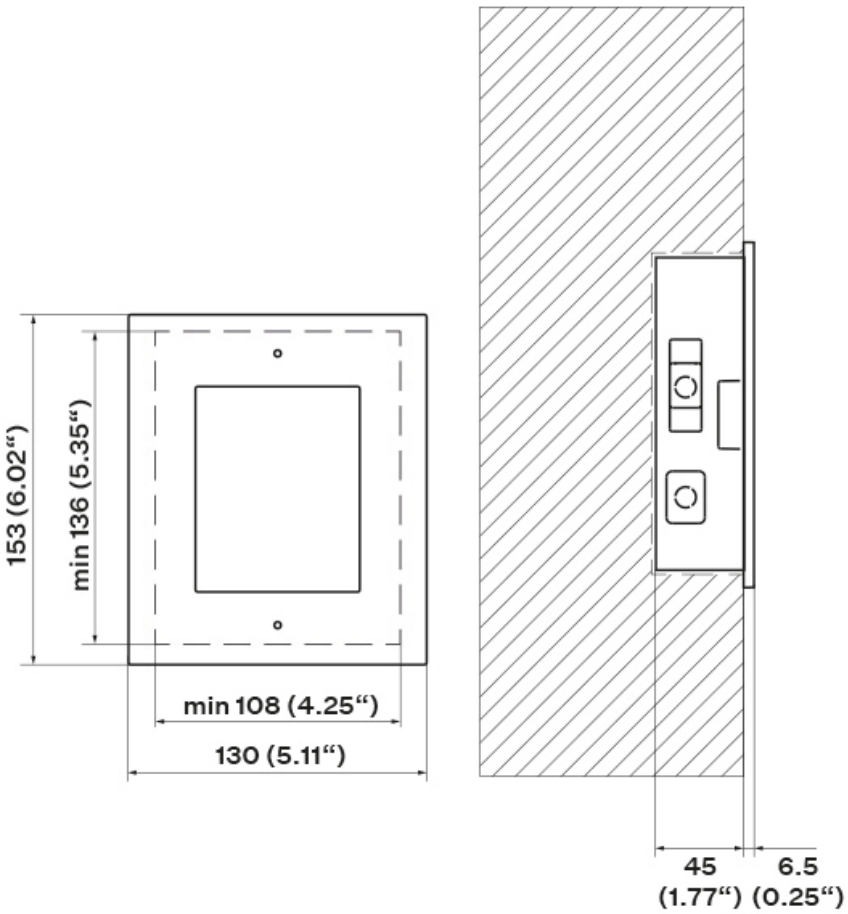
Frame Attachment

Check the frame sealing before fitting the frame.

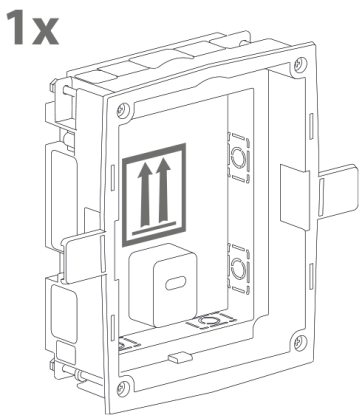
Screw the flush mounting frame in the upper and bottom parts.

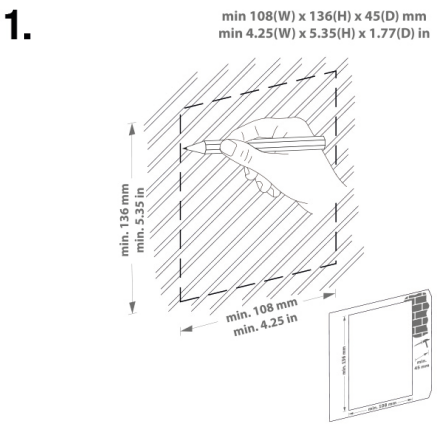
Hang the surface mounting frame on the hook in the upper part and then screw it tight in the bottom part.

1-Module Installation



Box Installation





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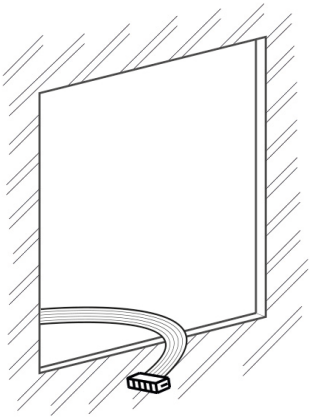

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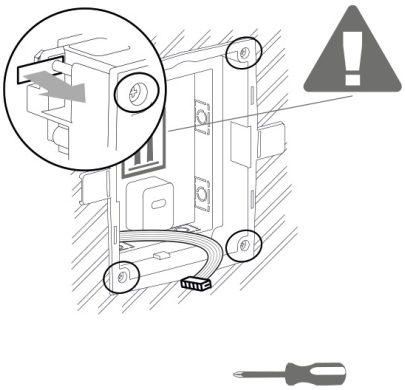

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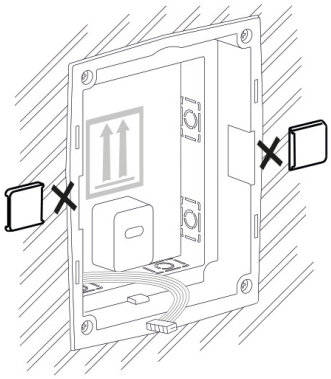

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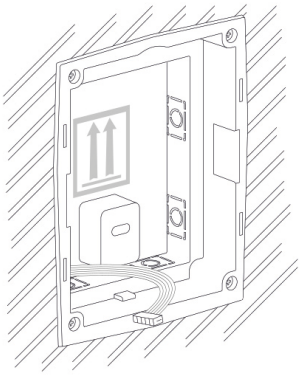

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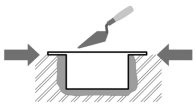
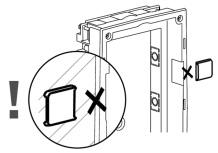


Make sure that the flush mounting box edges are not aligned with the wall but overlap the wall surface. When the proper box installation instructions are not met, water might get in and destroy the device installed. Side stops are used for a correct wall position.

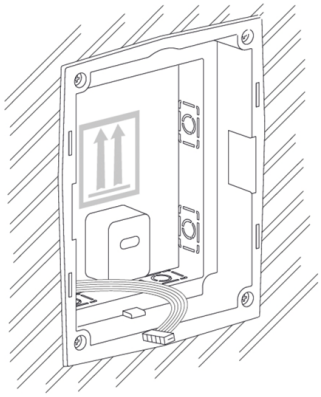
CAUTION



When the walling material has hardened, break off the side stops.

1-Module Installation into Box

1.



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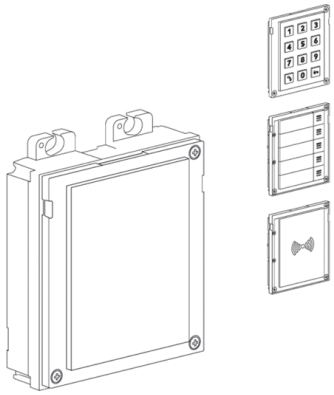

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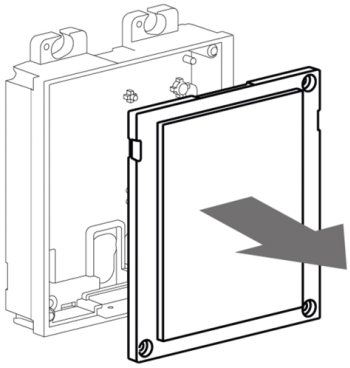

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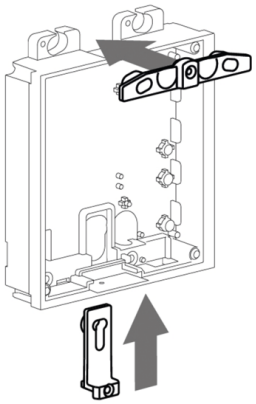

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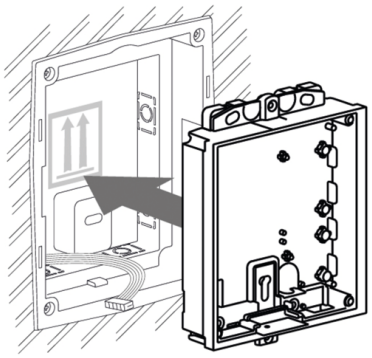

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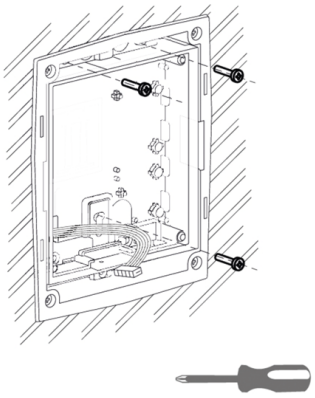

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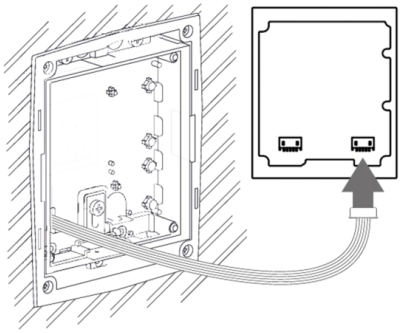

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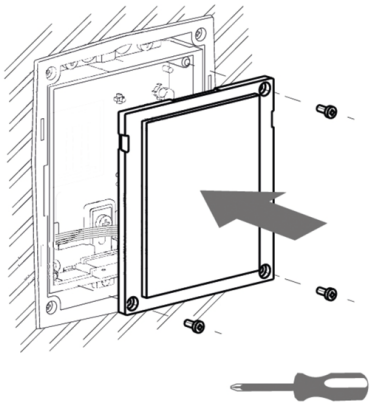

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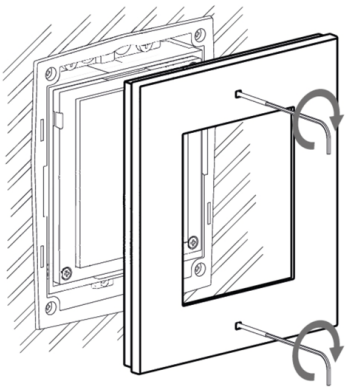

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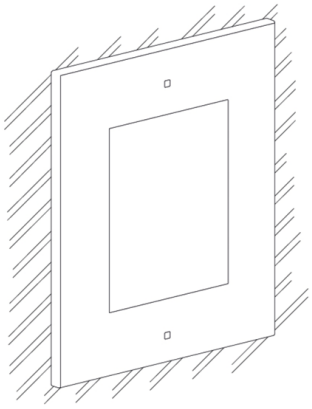


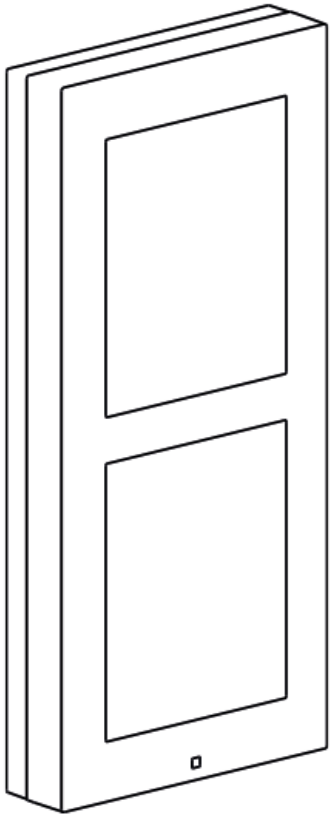
Frame Attachment

Check the frame sealing before fitting the frame.

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

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

Surface Installation



What you need for mounting:

- **2N Access Unit QR**
- drilling template
- a proper frame
  - for 1-modules: frame (9155021/9155021B, 01287-001/01288-001)
  - for 2-modules: frame (9155022/9155022B, 01289-001/01290-001)
  - for 3-modules: frame (9155023/9155023B, 01291-001/01292-001)

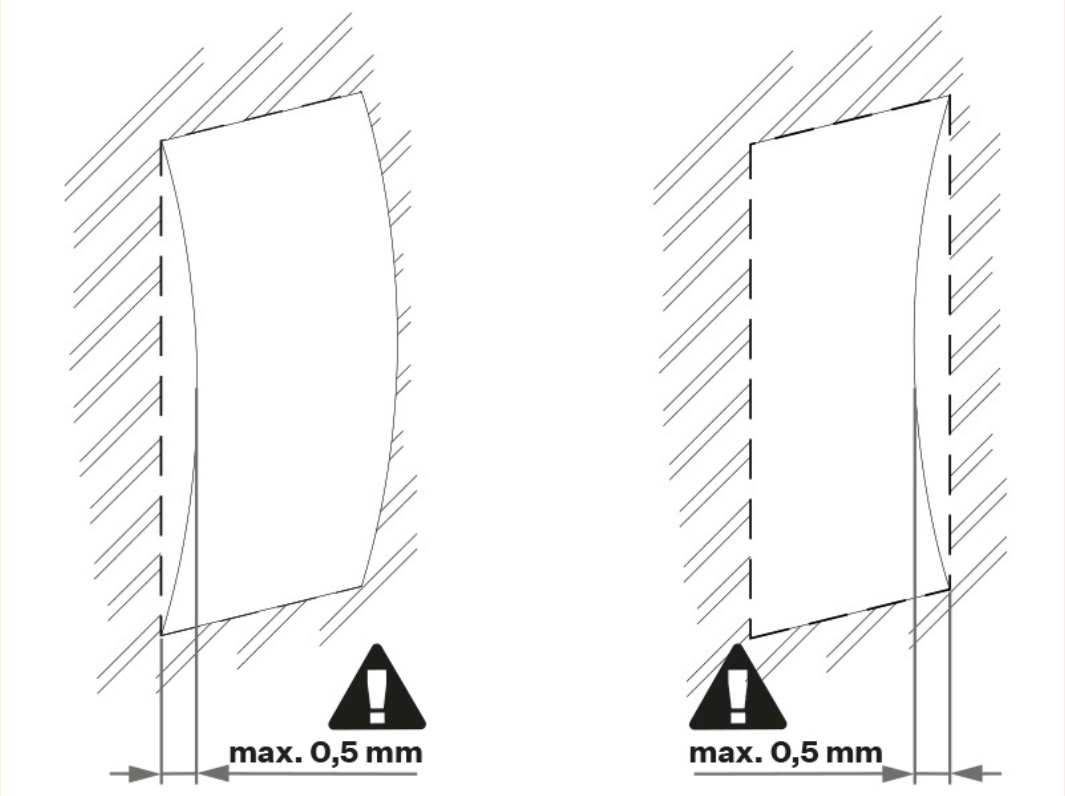
NOTE
The one-module frame is designed for stand-alone installations of extending modules such as OUT readers, etc. A 2-module frame is required for the main unit installation.

For uneven surfaces, use a backplate for the required count of modules (9155061/9155062, 01293-001/01294-001).

DANGER
Eliminate the risk of personal injury! Surface installation 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!

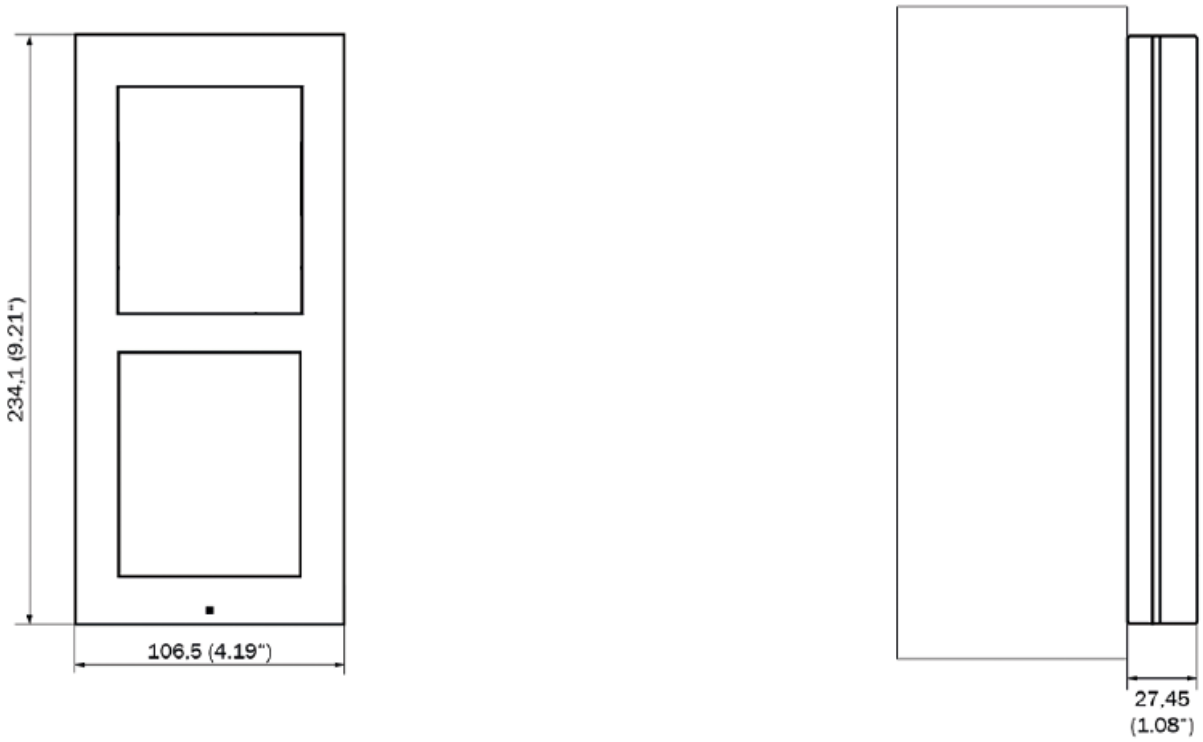
WARNING

- Make sure that the installation surface is flat with a maximum inequality of 0.5 mm. (e.g. prefabricated boards, glass, cut stone, etc.). If the installation surface is not even, use the flush mounting type or equalize the wall surface with a backplate (9155061/9155062/9155068, 01293-001/01294-001/01305-001) or make the wall surface perfectly flat.



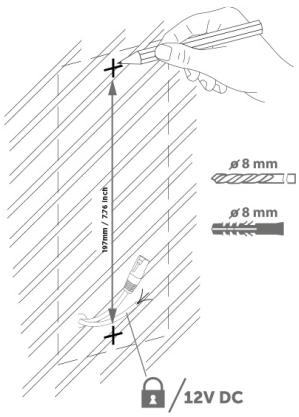
- Surface mounting always poses a problem where the installation is exposed to potential vandalism (such as public garages, etc.). In that case, use steel fixing elements instead of the dowels and screws included in the delivery.

2-Module Installation



TIP
Download the drilling template from 2N.com.

1.



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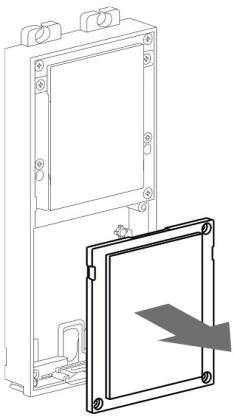

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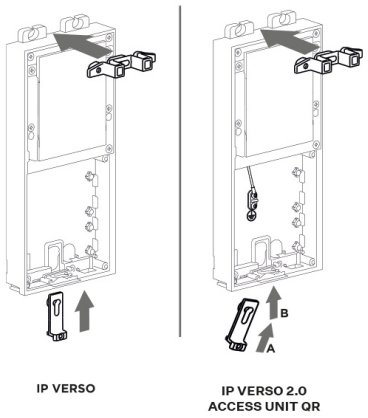
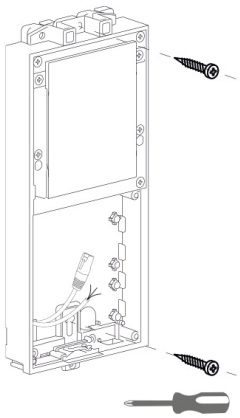

B
A
IP VERSO
IP VERSO 2.0
ACCESS UNIT QR

4.



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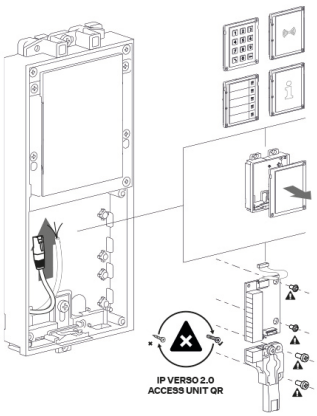
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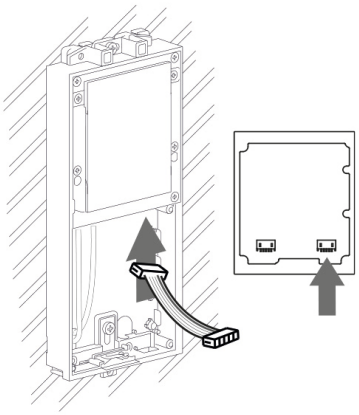

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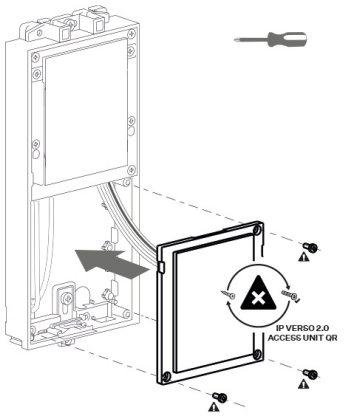
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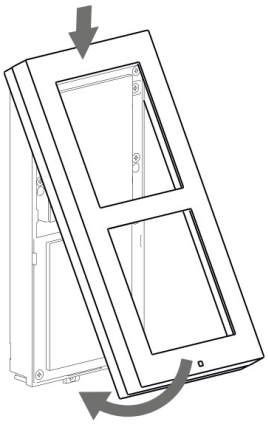

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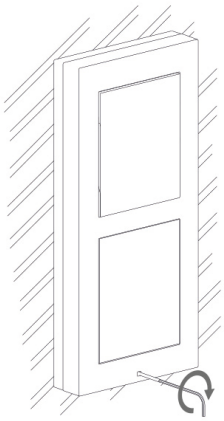

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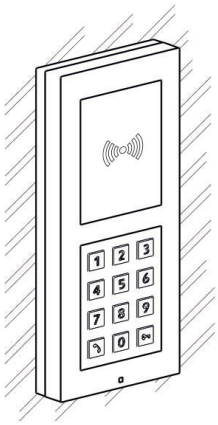


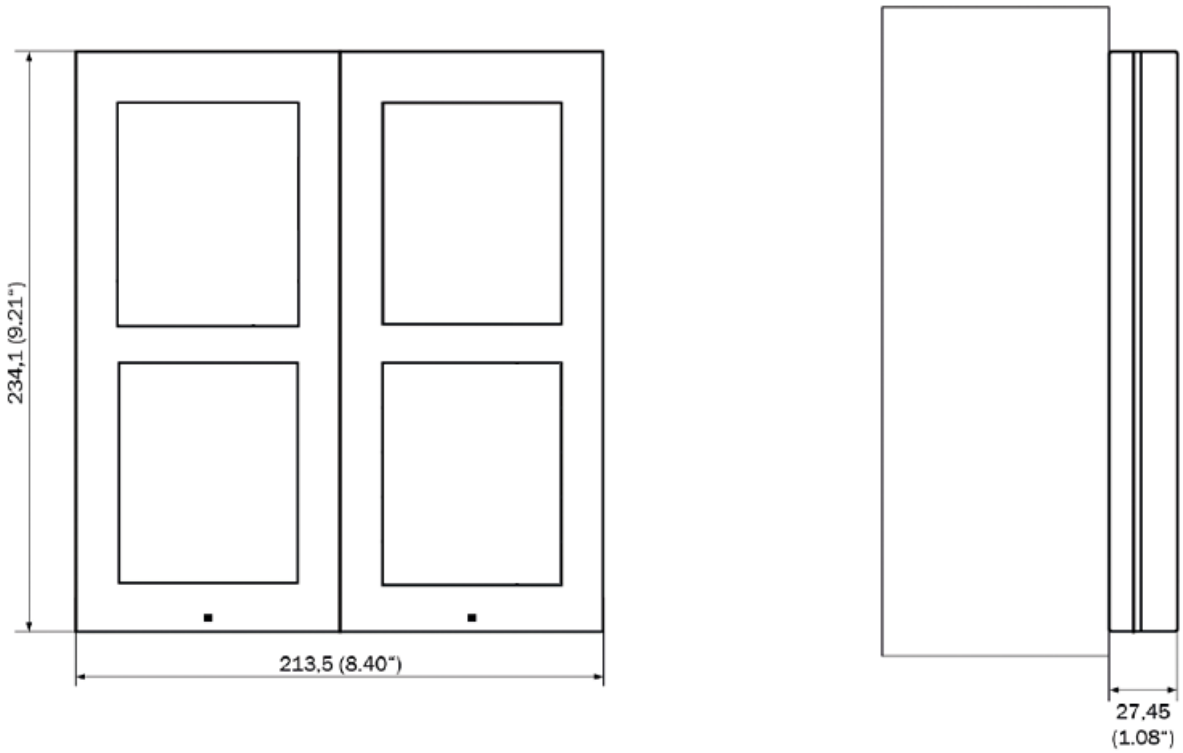
Frame Attachment

Check the frame sealing before fitting the frame.

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

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

Installation of Multiple 2-Modules Next to Each Other



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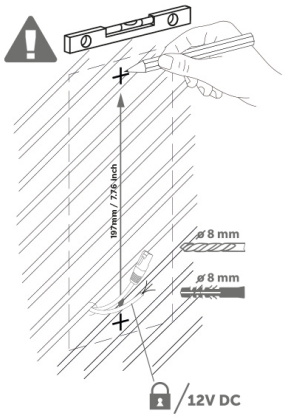

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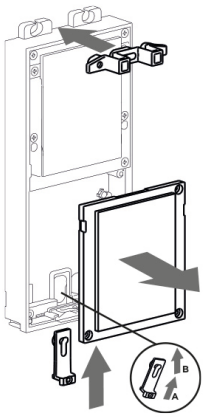

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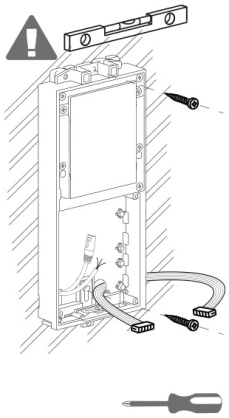

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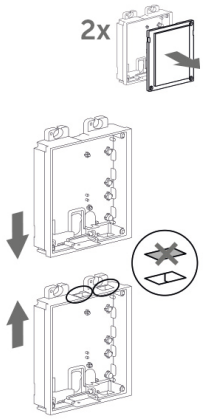

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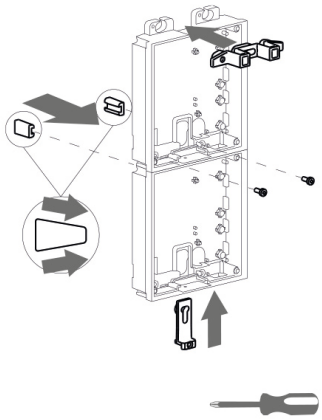

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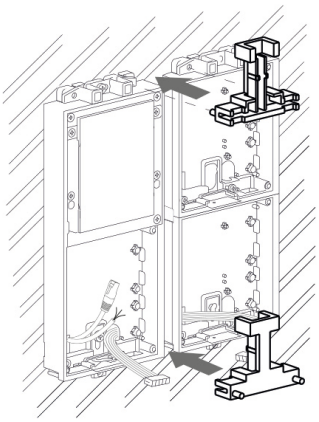

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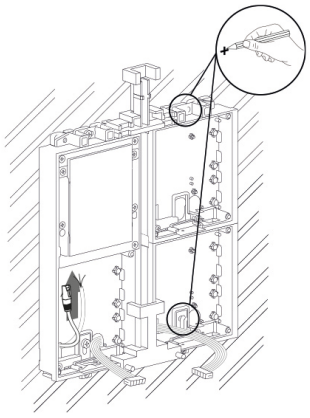

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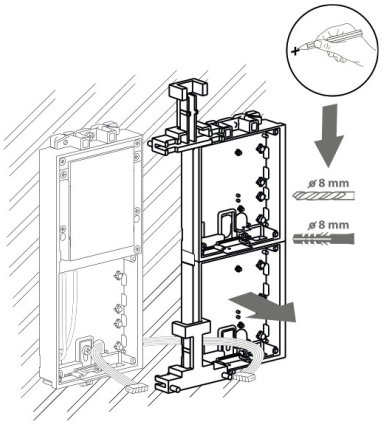

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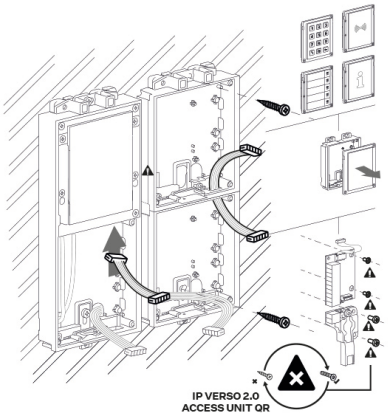

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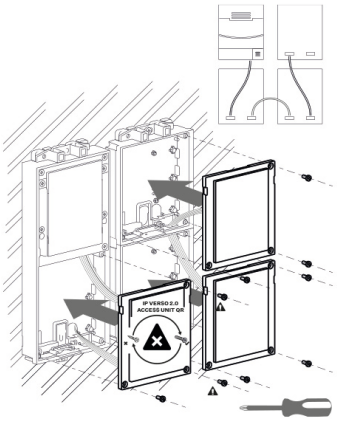

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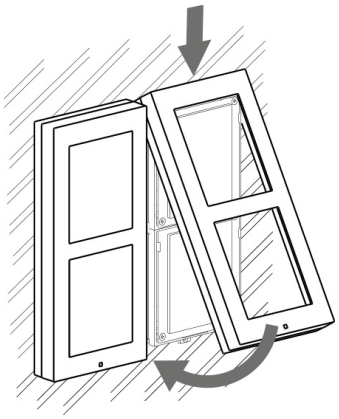

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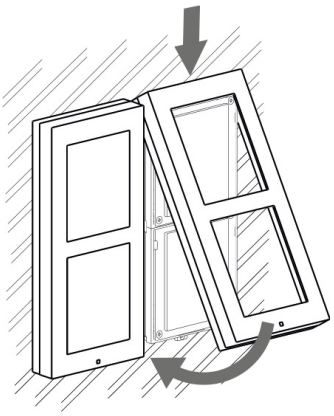


Frame Attachment

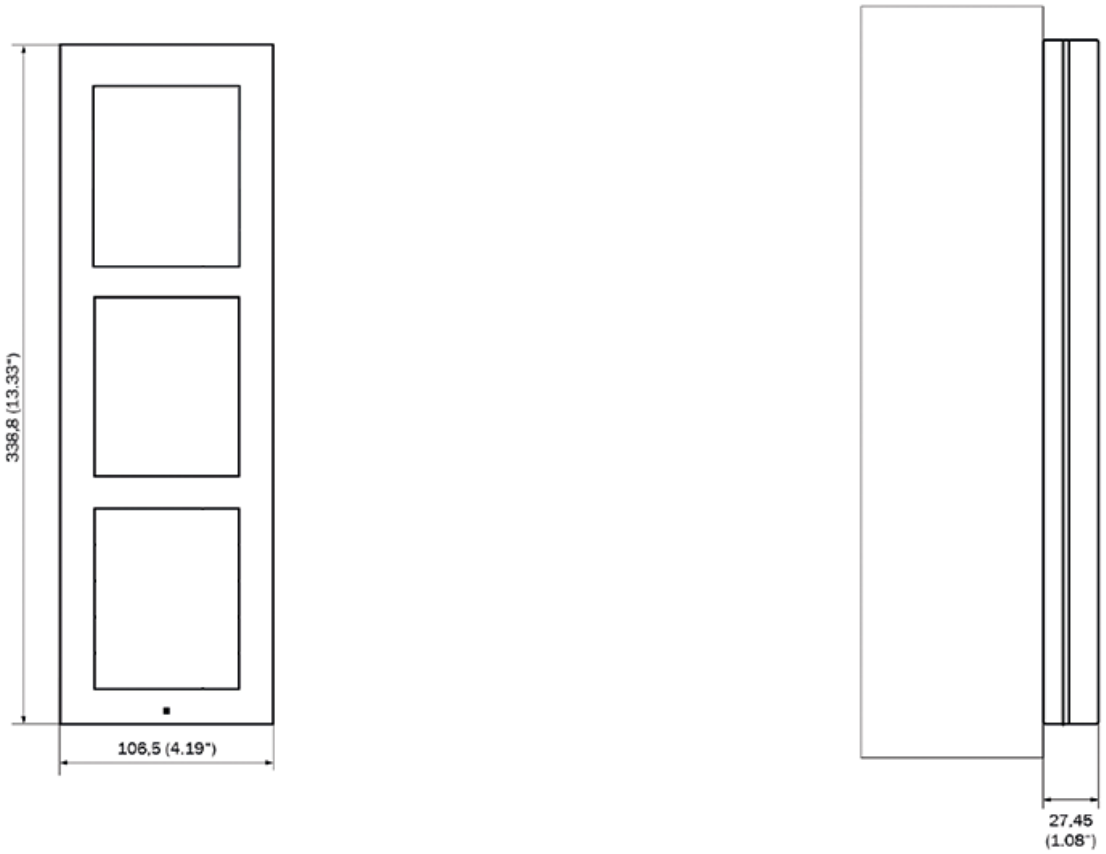
Check the frame sealing before fitting the frame.

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

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

3-Module Installation

To install a 3-module, put a 2-module with a 1-module together.



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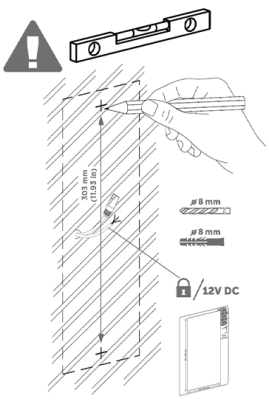

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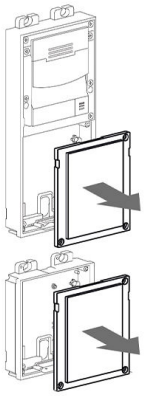

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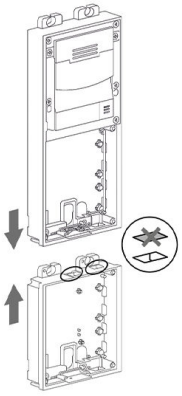

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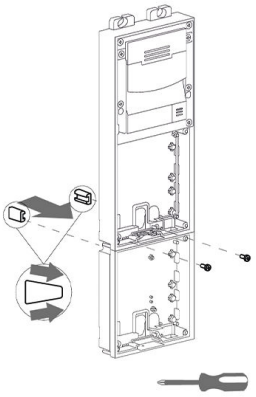

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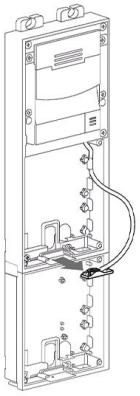

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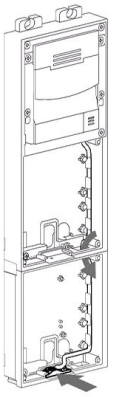

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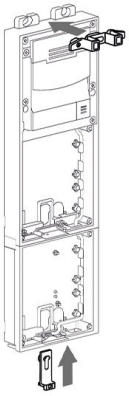

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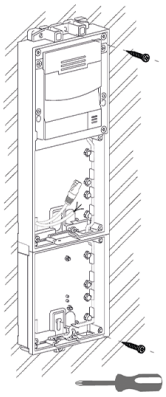

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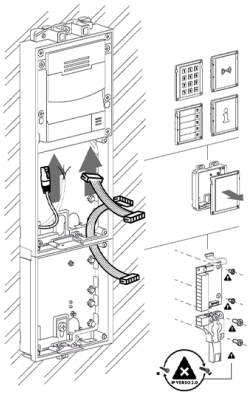

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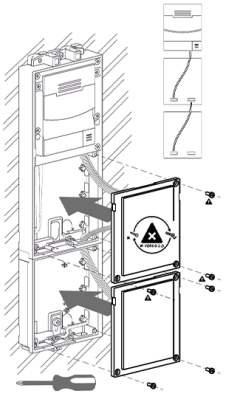

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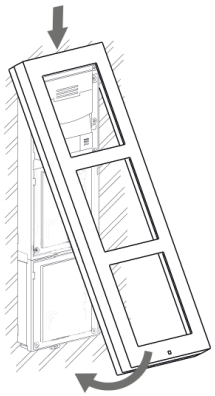

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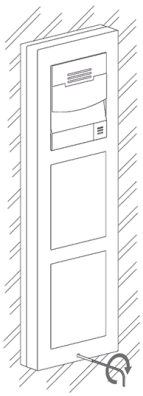

Frame Attachment

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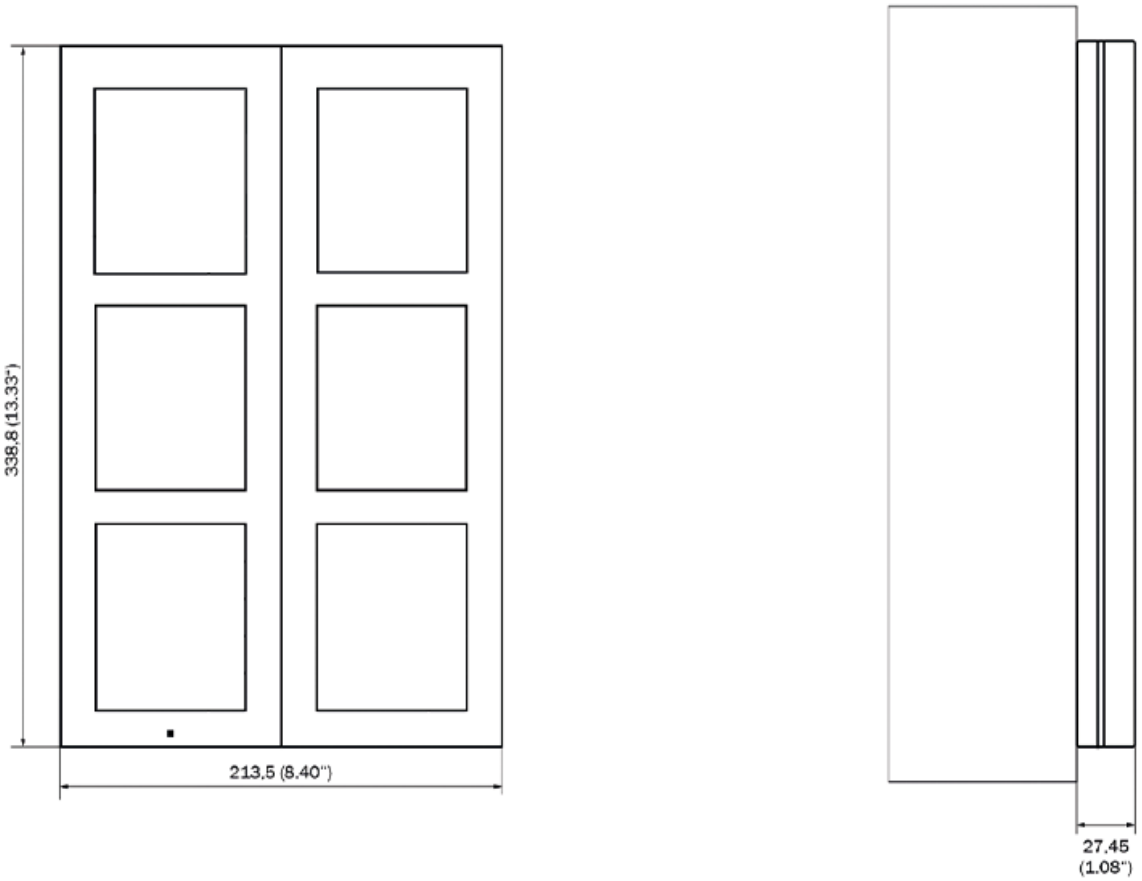
Installation of Multiple 3-Modules Next to Each Other



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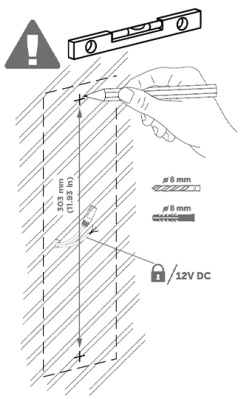

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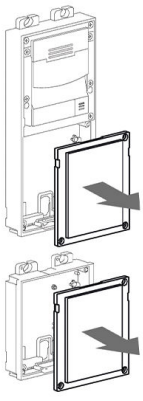

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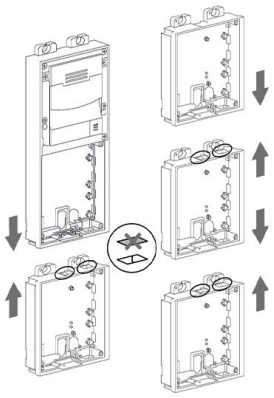

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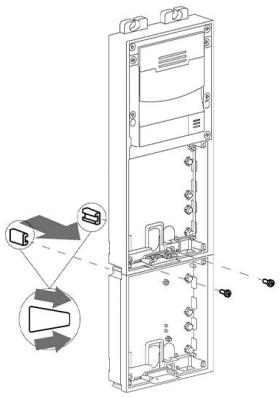

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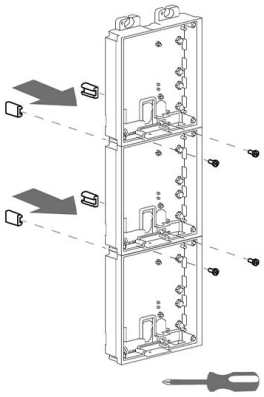

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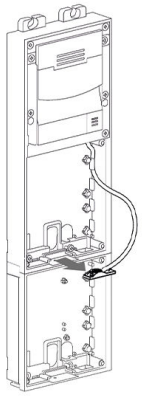

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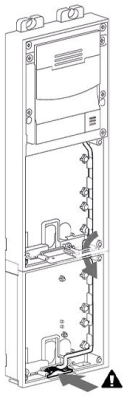

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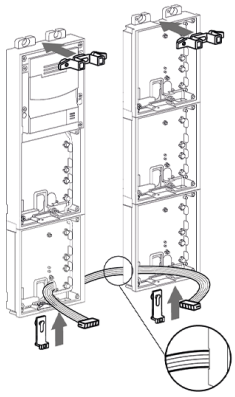

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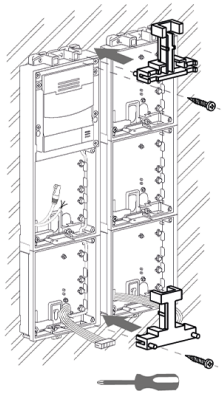

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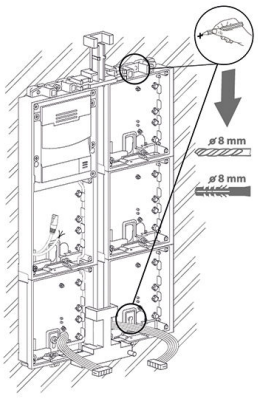

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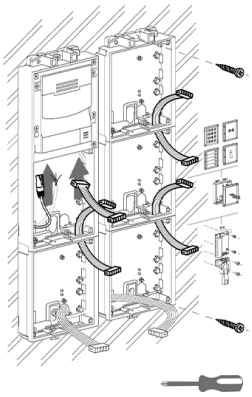

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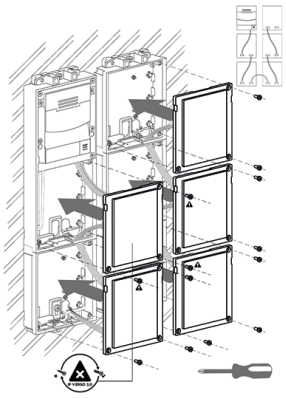

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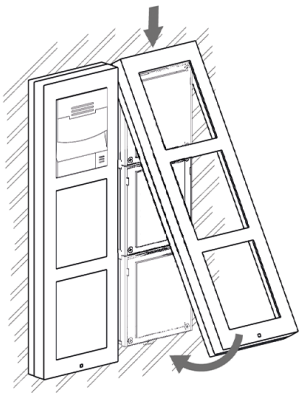

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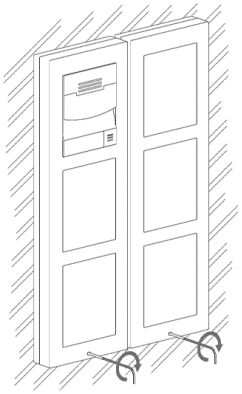

Frame Attachment

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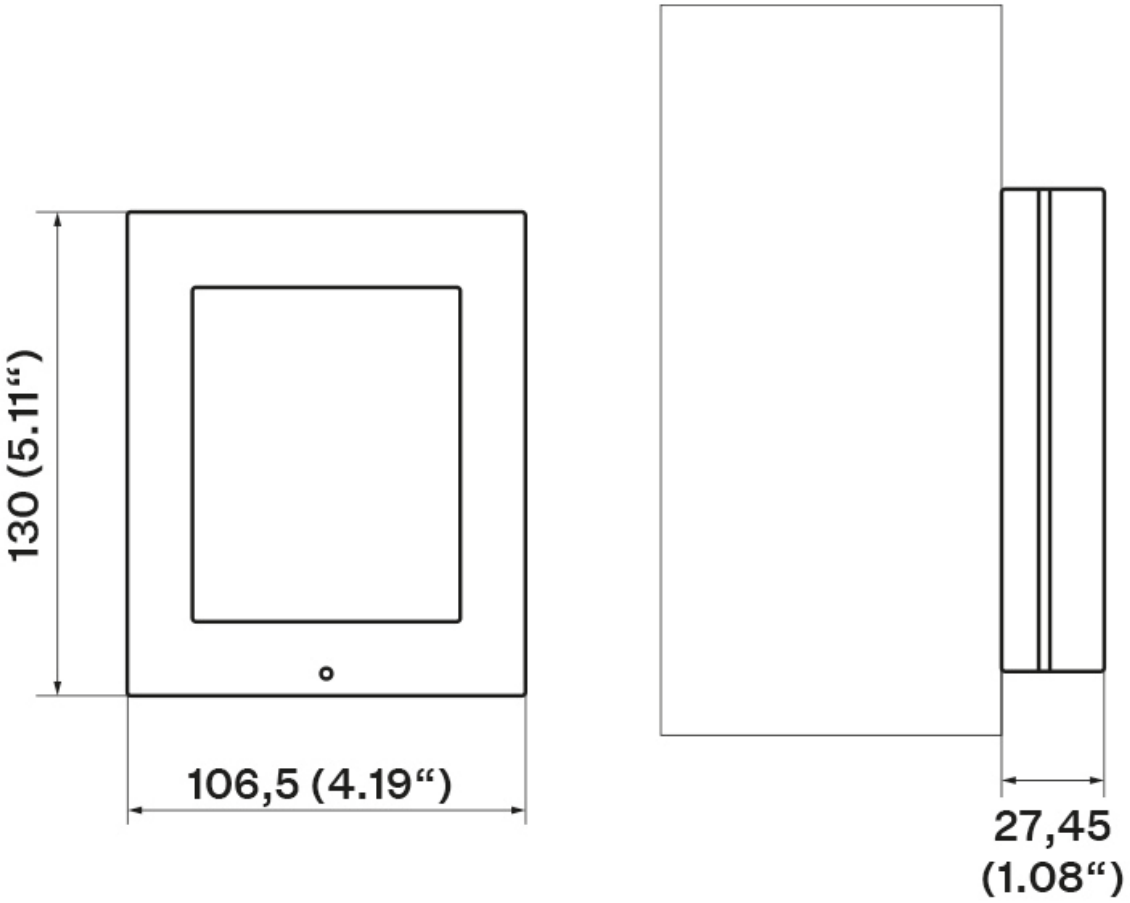
1-Module Installation



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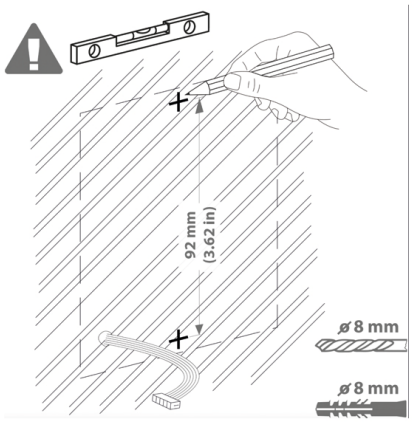

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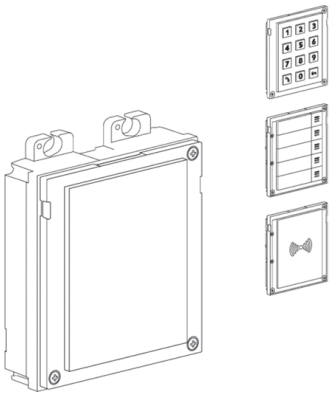

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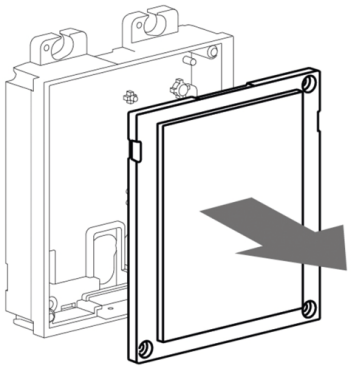

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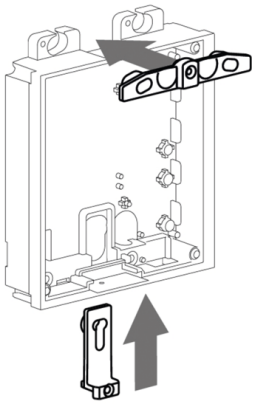

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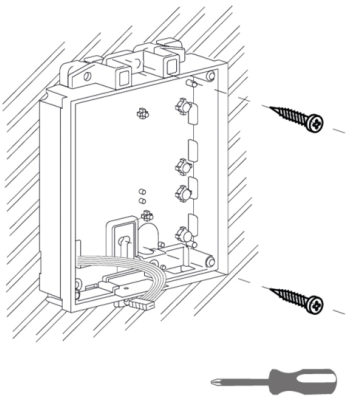

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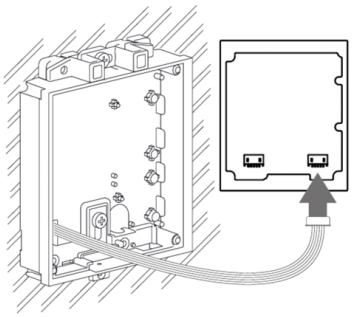

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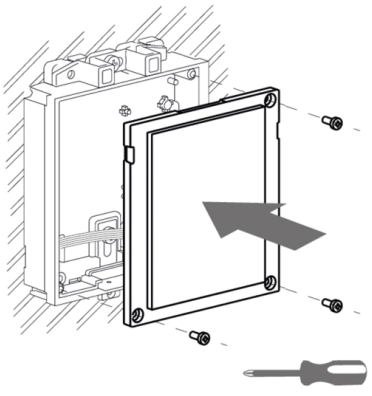

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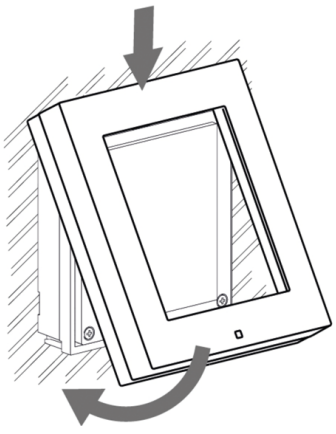

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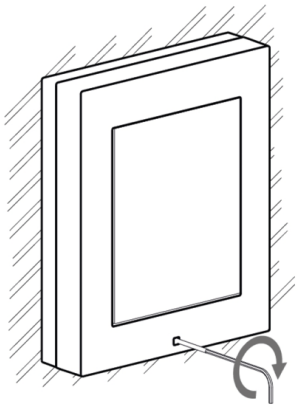

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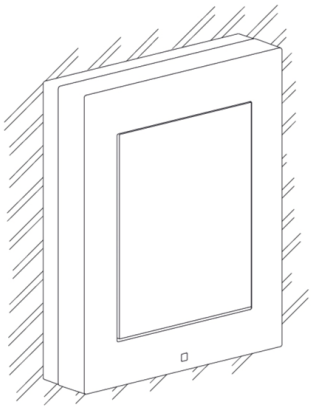


Frame Attachment

Check the frame sealing before fitting the frame.

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

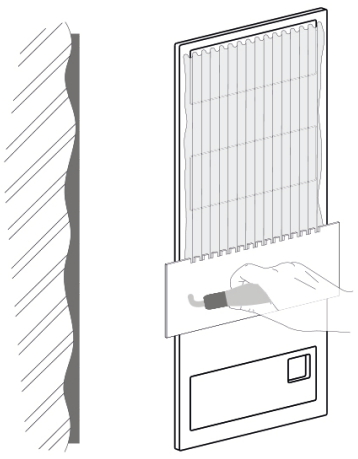
Hang the surface mounting frame on the hook in the upper part and then screw it tight in the bottom part.

Backplate Use

For uneven surfaces, use a backplate for the required count of modules (9155061/9155062, 01293-001/01294-001).

On uneven wall

1.



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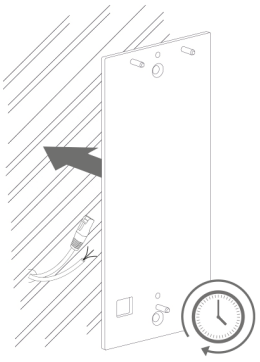

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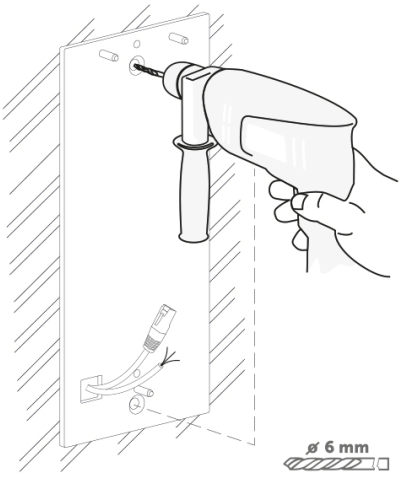

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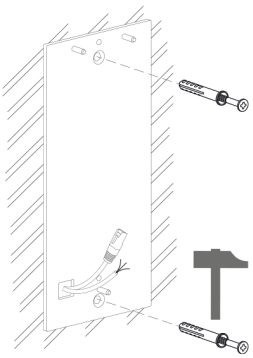

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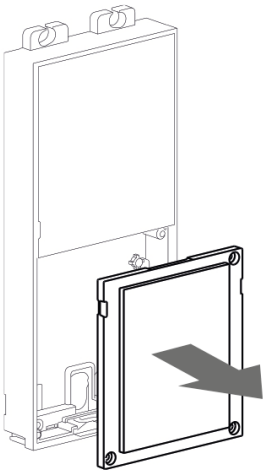

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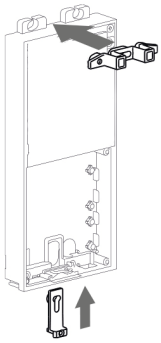
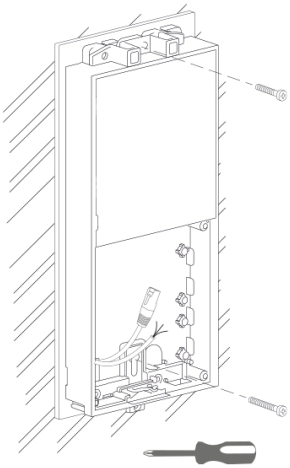


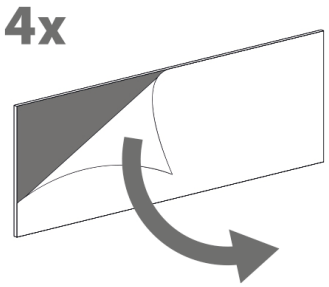
7.



On glass

The backplate for uneven surfaces can also be used for installation on glass.

1.



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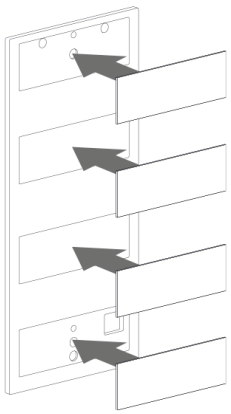

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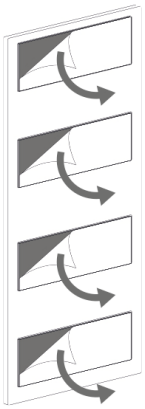
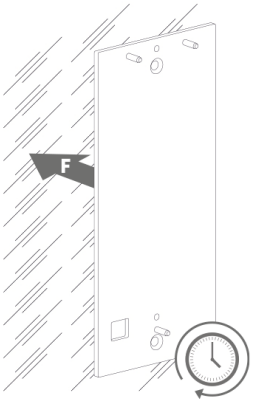
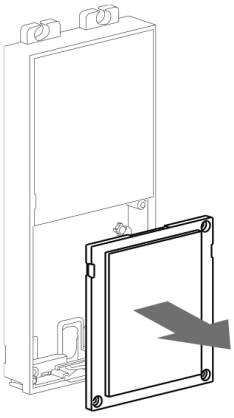


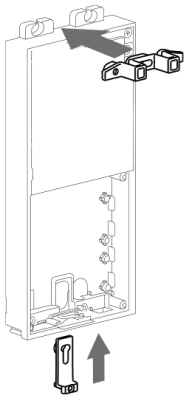
4.



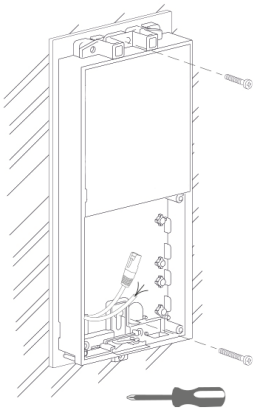
5.



6.



7.



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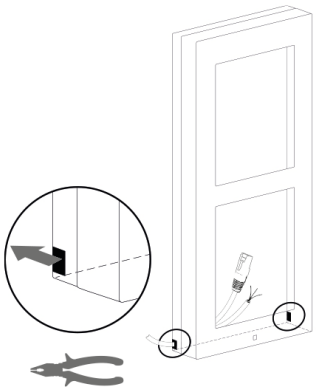
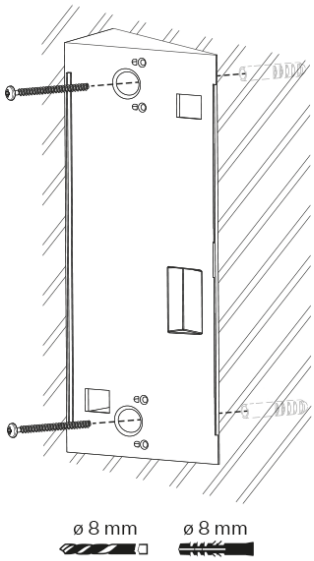


Surface installation on mounting backplate with tilt

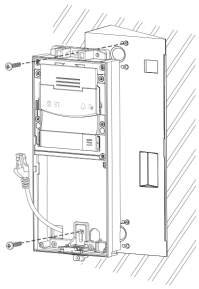
The 2-module slope board is used as a backplate for installations with a tilt of 25°.

TIP
Download the drilling template from 2N.com

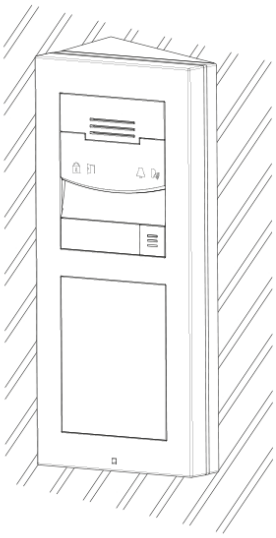
1.



2.



3.



Electric Installation

Power Supply

2N Access Unit QR can be fed either directly from the LAN if equipped with PoE 802.3af (Class 0, max. 12,95 W) supporting network elements or from an external 12 V ±15 % / 3 A DC power supply.

CAUTION

- The device must be part of the electrical system of the building.
- Make sure that the external power supply meets the power supply class 2 (PS2/LPS) .

PoE Supply

2N Access Unit QR is compatible with the PoE 802.3af (Class 0, max. 12,95 W) technology (Class 0, max. 12.95 W) and can be supplied directly from the LAN via compatible network elements. If your LAN does not support this technology, insert a PoE injector, between **2N Access Unit QR** and the nearest network element. This power supply provides **2N Access Unit QR** with 12 W for its own feeding and for connected modules.

External Power Supply

Use a 12 V ±15 % SELV supply dimensioned to the current consumptionaccording to the required power output for to make your device work reliably.

CAUTION

Make sure that the wires are firmly attached to the terminal to avoid any free contact.

Adapter Connection (1341481, 02520-001)

The white wire at the end of the adapter carries the positive charge (+), the black wire carries the negative charge (−).

Combined Power Supply

2N Access Unit QRcan 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.

Power Supply Installation

Electric Installation Preparation

1. Unscrew the second module bind on the device base.
2. Use a flat screwdriver to take out the second module blind.

2-Module Electric Installation

1. Place the 2-module base on the flush mounting box / predrilled holes with dowels and pull the power cables through the bottom holes.
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.

3-Module Electric Installation

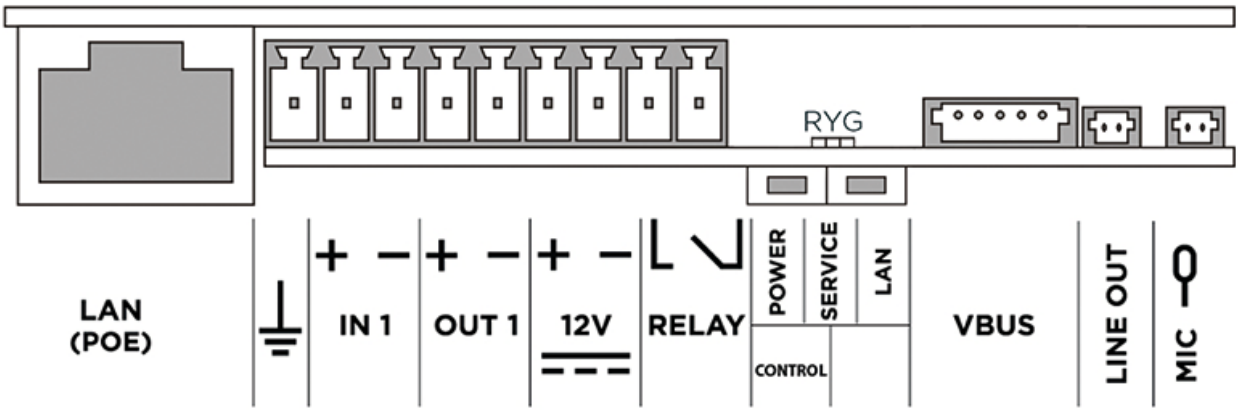
1. Unscrew the blind on the extending 1-module.
2. Use a flat screwdriver to take out the blind.
3. Slide the 1-module to the 2-module base and secure its position with small side wedges and screws.
4. Remove the microphone from the 2-module and loosen its cable.
5. Lead the microphone (as shown in the mechanical installation (p. 28) figures) into the 1-module base.
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 extending base to the 2-module base if necessary.

Electric Installation of Multiple Modules Next to Each Other

1. Unscrew the blinds of the extending bases and take them out using a flat screwdriver.
2. Slide the bases into each other as projected and secure their positions with 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.

Device Connectors

Main unit connector wiring



GROUND symbol	Grounding terminal

> **CAUTION**
> We recommend that a grounding cable of the cross-section of 1.5 mm^2 is used.

IN1	IN1 terminals for input in passive/ active mode (−30 V to +30 V DC) • OFF = open contact or U_{IN} > 1.5 V • ON = closed contact or U_{IN} < 1.5 V
OUT1	OUT1 terminals of active input for Security Relay (p. 116) or electric lock connection: 8 up to 12 V DC depending on power supply (PoE: 10 V; adapter: source voltage minus 2 V), up to 600 mA

12 V	External power supply terminals 12 V ±15 % / 3 A DC
RELAY	RELAY1 terminals with accessible 30 V / 1 A AC/DC NO contact.
POWER/ SERVICE/LAN	LED indicators (red/green/yellow).
CONTROL	Factory Reset button
BOOT	The buttons is used for advanced diagnostic operations but is irresponsive to common users.
LINE OUT	External induction loop output. LINE OUT (1 V_{RMS}) connector, type JST SHR-02V-S

CAUTION
2N Access Unit QR is not compatible with the 2N induction loop extending module, but an external induction loop can be connected to it.

MIC	Microphone (MIC) connector

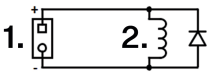
Available switches

Location	Name	Description
Main unit	RELAY	**Passive switch:** • switching contact • max. 30 V / 1 A AC/DC
	OUT	**Active switch output:** • 10 to 12 V DC, max. 600 mA

Location	Name	Description
I/O module* (9155034, 01257-001)	Extension relay1	**Passive switch:** • make and break contact • max. 30 V / 1 A AC/DC • only used to connect non-critical devices (e.g. lights)
	Extension relay2	**Passive switch:** • make and break contact • max. 30 V / 1 A AC/DC • only used to connect non-critical devices (e.g. lights)

Multiple modules marked with an asterisk (*) can be used.

DANGER
If a coil containing device is connected, e.g. relays/electromagnetic locks, it is necessary to protect the device output against voltage peak while switching off the induction load. For this way of protection we recommend a 1 A / 1000 V diode (e.g., 1N4007, 1N5407, 1N5408) connected antiparallel to the device.



1. Terminals
2. Coil. e.g. relay or electromagnetic lock

WARNING
The 12V output is used for lock connection. If the device is installed in a location where there is a danger of unauthorized access (building front, e.g.), we strongly recommend the use of the 2N Security Relay (9159010, 01386-001) to ensure the maximum installation security.

Relay Terminal Wiring Diagrams

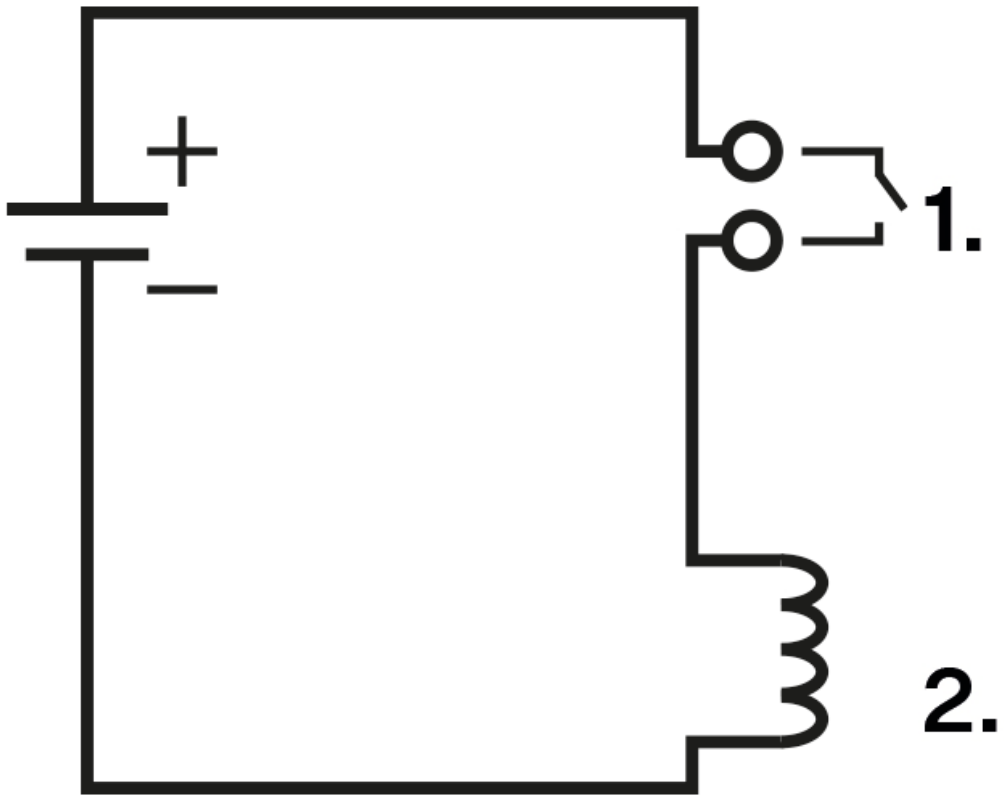
It is possible to connect a device to the **2N Access Unit QR** relay terminals to be controlled by this relay, e.g. an electric/electromechanical door lock.

The elements are designated as follows in the diagrams below:

1. Device relay

2. Controlled device

Wiring diagram for the relay terminal output for switching the electric circuit of the controlled device

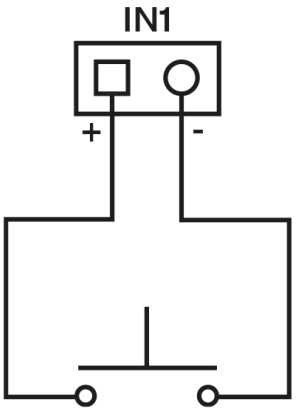


Connection of IN1 inputs (or IN2)

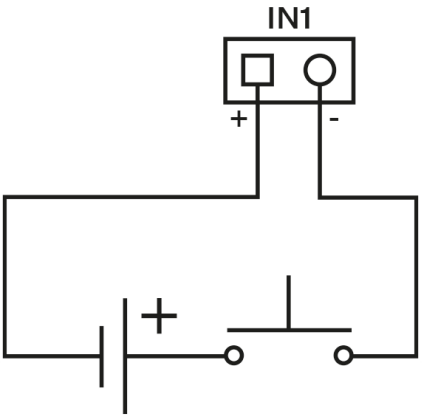
It is possible to connect an external button, e.g. a departure button or door open sensor, to the IN1 or IN2 terminals of device**2N Access Unit QR**.

The following wiring diagrams apply both to IN1 and IN2.

Wiring diagram of IN1 terminals in active mode



Wiring diagram of IN1 terminals in passive mode



LAN Connection

2N Access Unit QR is connected to the LAN by inserting a SSTP cable (category Cat-5e or higher) in the dedicated LAN connector on the device. As the device is equipped with the Auto-MDIX function, you can use either the straight or crossed cable version.

This device must be deployed within a network infrastructure that provides adequate protection against Denial-of-Service (DoS) attacks and similar network-based threats. The device does not include built-in protection against high-volume or malicious traffic and relies on the surrounding network environment—such as firewalls, intrusion prevention systems, or rate limiting—for defense. Failure to implement appropriate network security measures may lead to service degradation or unavailability. The equipment's user documentation shall contain a description of all exposed network interfaces and all services exposed via network interfaces, which are delivered as part of the factory default state.

CAUTION

- We recommend the use of a LAN surge protection (p. 93).
- We recommend the use of a shielded SSTP Ethernet cable.

Overvoltage Protection

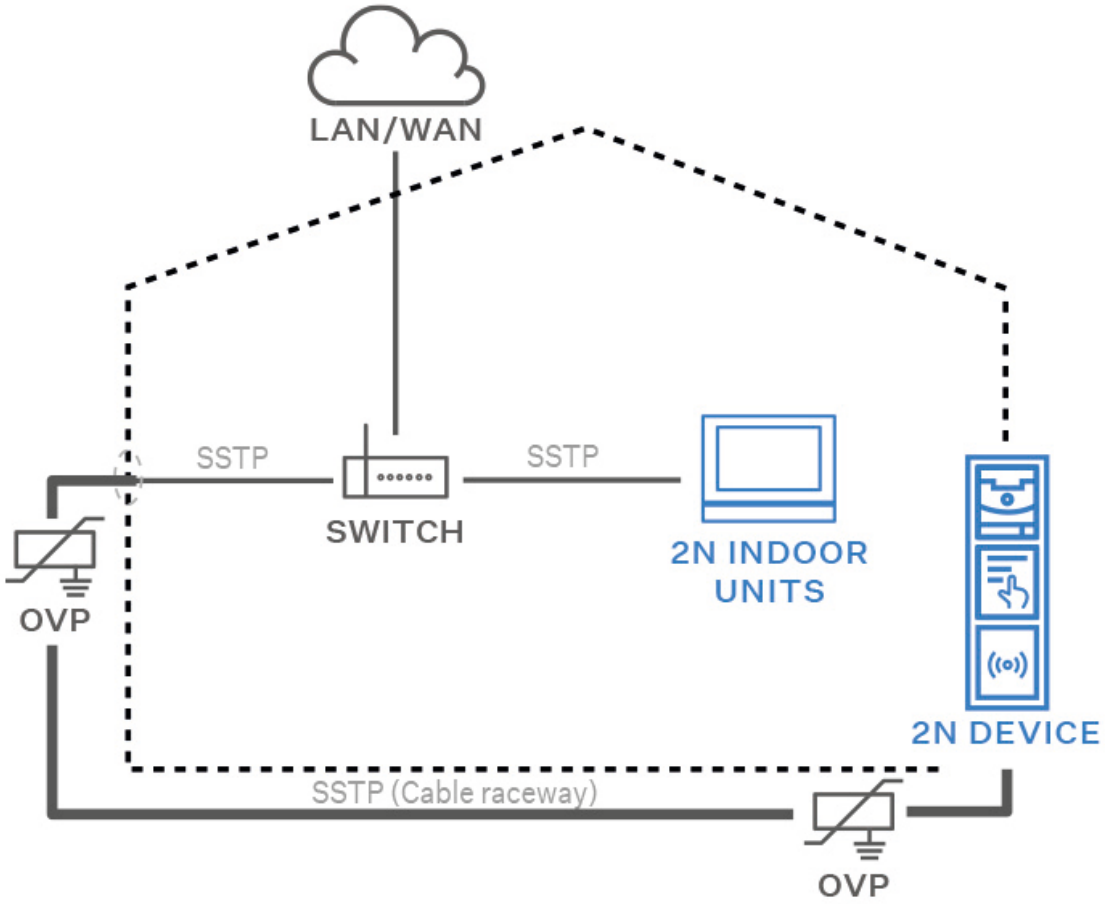
The 2N device cables have to be protected against atmospheric overvoltage caused by external causes (lightning, e.g.). A surge can damage a device installed outside/inside the building if the wires are unprotected.

Therefore, we recommend that additional overvoltage protectors (OVP) be installed on the outer walls or roof for all the wires leading outside the building. Keep the following instructions while installing overvoltage protectors:

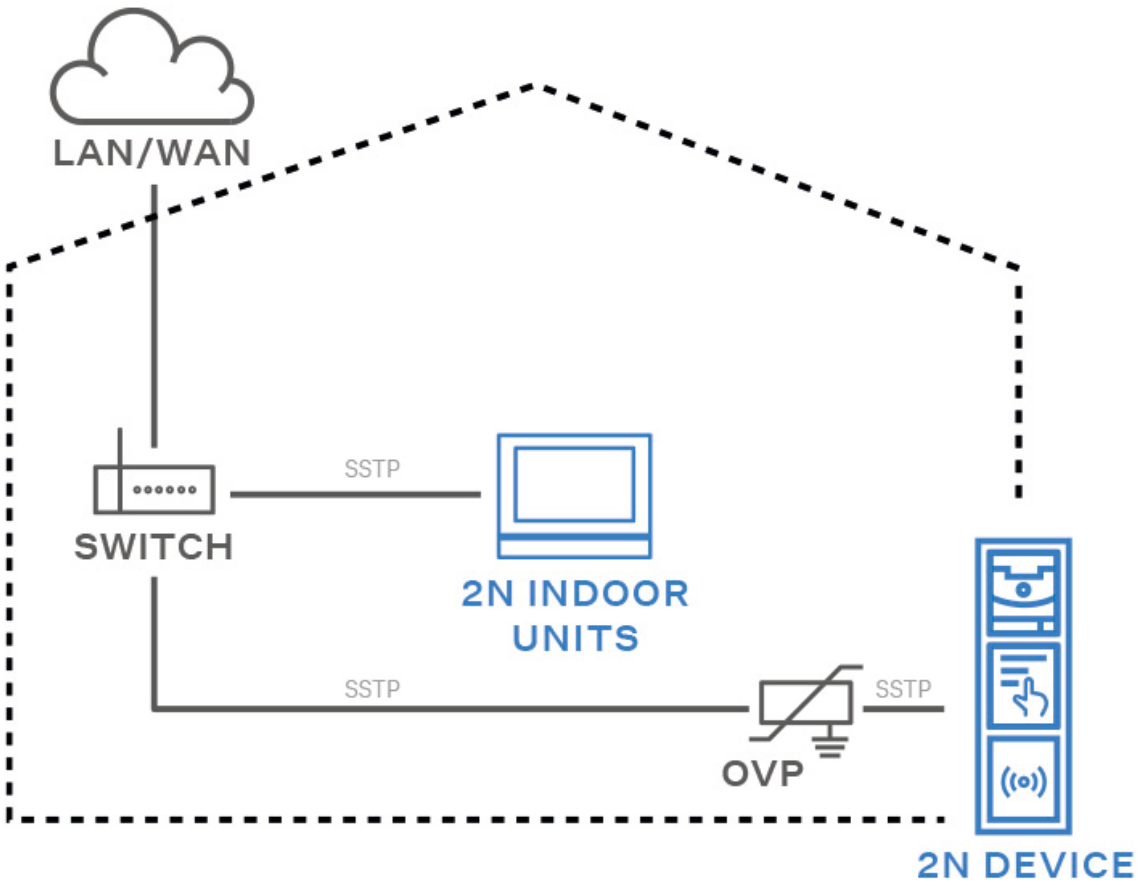
- Make sure that the overvoltage protector is installed as close as possible to the device installed outside the building.
- Make sure that the overvoltage protector is installed as close as possible to the device installed on an external part of the building.
- Make sure that the overvoltage protector is installed as close as possible to the point where the cabling leaves the building.

Examples of Overvoltage Protection Installation

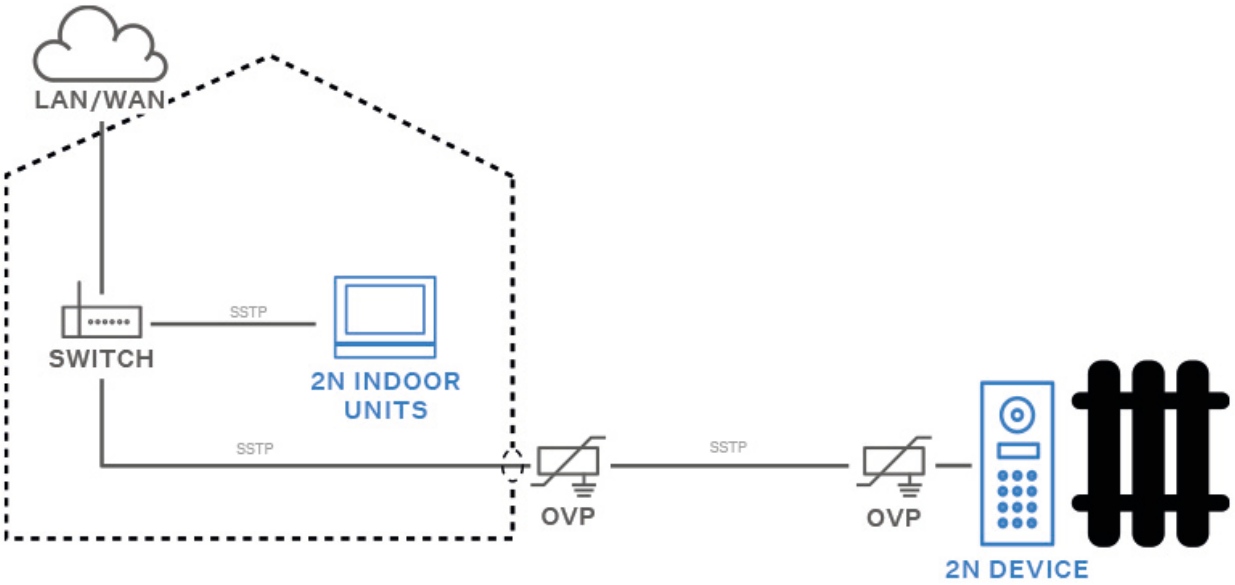
Overvoltage protection installation diagram for a device installed on the building facade and cables outside the building



Overvoltage protection installation diagram for a device installed on the building facade and cables inside the building



Overvoltage protection installation diagram for a device and cables installed outside the building



Installation Completion

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

WARNING

- Make sure that all the terminals of the unused connectors are properly tightened to avoid vibrations caused by sound.
- An incorrectly made installation may compromise the device waterproofness. Water infiltration may damage the electronic part.
- Make sure that all the 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 an uneven wall. Thus, you prevent water leakage and wall damping.

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

Frame Attachment

Check the frame sealing before fitting the frame.

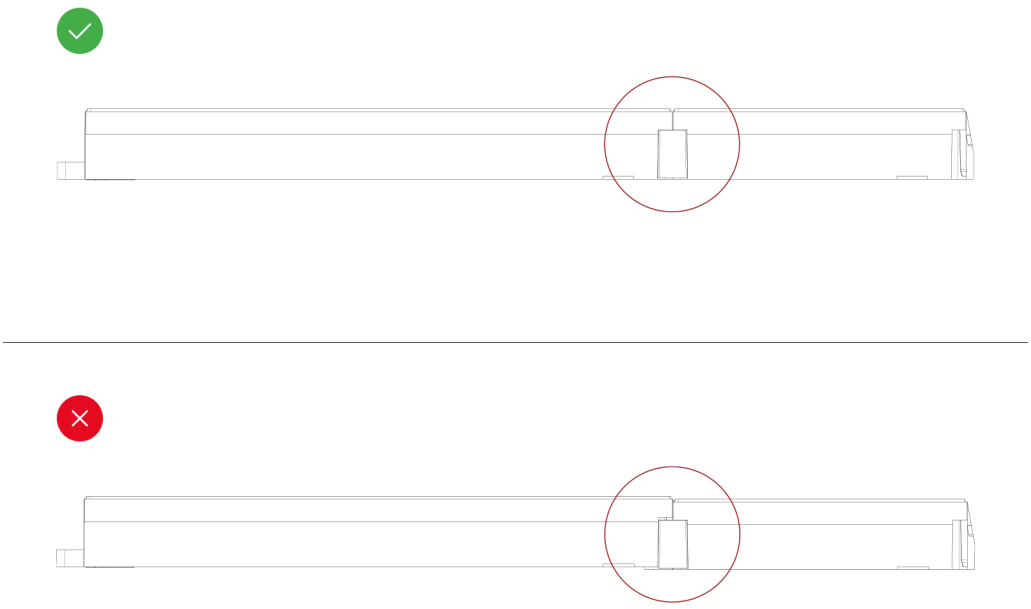
Screw the flush mounting frame in the upper and bottom parts.

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

Most Frequent Installation Errors

Always mount the metal bolts and level the bases on an even surface **before** tightening the screws.

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



See the side view in the drawing above for the right/wrong connection of the bases. Pay particular attention to the base connection detail. You may have a situation especially when the instructions are neglected and the screws are tightened first.

Main and Extending Modules

CAUTION
In case the firmware versions of the module to be connected and the main unit are incompatible, the module will not be detected. Therefore, update the device firmware after connecting the modules. Update firmware via the web configuration interface in System > Maintenance.

TIP
To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

NOTE
2N Access Unit QR also supports the **2N IP Verso** extending modules.

2N Access Unit QR can be interconnected with the following modules:

- 125 kHz RFID card reader (p. 103)
- 13.56 MHz NFC RFID card reader (p. 104)
- Secured 13.56 MHz, NFC RFID card reader (p. 104)
- 125 kHz, 13.56 MHz, NFC Bluetooth & RFID card reader (p. 105)
- 125 kHz, secured 13.56 MHz, NFC Bluetooth & RFID card reader (p. 105)
- 125kHz, 13.56MHz, NFC touch keypad & RFID card reader (p. 106)
- 125kHz, secured 13.56MHz, NFC touch keypad & RFID card reader (p. 107)
- 125 kHz, 13.56 MHz, NFC touch keypad & Bluetooth & RFID card reader (p. 107)
- 125 kHz, secured 13.56 MHz, NFC touch keypad & Bluetooth & RFID card reader (p. 108)
- Touch keypad (p. 109)
- Biometric fingerprint reader (p. 109)
- Touch display (p. 109)
- Keypad (p. 110)
- I/O module (p. 110)
- Wiegand module (p. 112)
- Security Relay (p. 116)
- Tamper Switch module (p. 118)
- Infopanel (p. 120)
- Blind panel module

Module Interconnection

All the modules that can be connected to the device are interconnected via a bus. The bus starts on the main unit and goes over all the modules. The order of the modules on the bus is irrelevant. And it is also irrelevant which bus connector is used as the input and which is used as the output on the module.

The modules include a 220 mm long bus interconnecting cable.

The Wiegand, OSDP and I/O modules include an 80 mm long bus cable. These modules can be hidden inside one of the modules described below (Infopanel, Keypad, RFID card reader, Bluetooth) or can be freely placed behind the device (in a mounting box, e.g.). The Tamper Switch, which is not on the bus, is interconnected with one of these modules.

It is possible to order separate bus cables of the length of 1 m, 3 m or 5 m (9155050/9155054/9155055, 01267-001/01268-001/01269-001 respectively), which are intended for remote module installations. Typically, they help install an RFID card reader on the opposite side of the wall on which the device communicator is installed. This cable may only be used once on the bus. The total length of all the bus cables used in these extended installations may not exceed 7 m.

The modules can be combined in each base as follows:

Module	External mounting into the device base (the module is visible):	Internal mounting into the device base (the module is not visible):	Internal mounting on the base bottom edge
Infopanel	✓	✗	✗
Keypad	✓	✗	✗
Touch keypad	✓	✗	✗
125 kHz RFID card reader	✓	✗	✗
13.56 MHz RFID card reader	✓	✗	✗
13.56 MHz, NFC RFID card reader	✓	✗	✗
Secured 13.56 MHz, NFC RFID card reader	✓	✗	✗
125 kHz, 13.56 MHz, NFC Bluetooth & RFID card reader	✓	✗	✗
125kHz, secured 13.56MHz, NFC Bluetooth & RFID card reader	✓	✗	✗

Module	External mounting into the device base (the module is visible):	Internal mounting into the device base (the module is not visible):	Internal mounting on the base bottom edge
125kHz, 13.56MHz, NFC touch keypad & RFID card reader	✓	✗	✗
125kHz, secured 13.56MHz, NFC touch keypad & RFID card reader	✓	✗	✗
Bluetooth reader	✓	✗	✗
Touch display	✓	✗	✗
Fingerprint reader	✓	✗	✗
I/O	✗	✓	✗
Wiegand	✗	✓	✗
Tamper Switch	✗	✗	✓
Blind panel	✓	✗	✗

Module Power Supply

All the modules connected to the device, except for the Tamper Switch, are powered from the bus. The available bus power output depends on the power supply type.

The main unit allows an external power supply to be used to increase the available power output for the modules connected.

Power Supply	Specification	Available power output
External supply	12 V ±15 % / 3 A DC	24 W (36 W)

Power Supply	Specification	Available power output
PoE	802.3af (Class 0 – 12.95 W)	12 W
Combined	External supply + PoE	30 W (42 W)

Sample Calculations

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)	Maximum consumption [W]
At relax	2.376
LED – lock	0.072
LED – secured	0.096
Unit backlight	0.072
Relay 1	0.132
OUT1	4.8
Total	**7,548**

Module	Maximum idle consumption [W]	Full load [W]
Main unit with camera	2.36	11.57
Infopanel	0.17	0.35

Module	Maximum idle consumption [W]	Full load [W]
Keypad	0.12	1.54
Touch keypad	0.12	1.54
Fingerprint reader	0.73	1.54
125 kHz RFID card reader	0.52	1.31
13.56 MHz RFID card reader	0.44	0.82
RFID card reader 13.56 MHz, NFC	0.44	0.82
Secured 13.56 MHz NFC RFID card reader	0.44	0.82
Touch display	1.16	2.02
Induction loop	0.18	2.99
Fingerprint scanner	0.73	1.54
I/O module	0.31 (+ 0.13 for relay activation)	0.65
Wiegand module	0.46	0.46
Tamper Switch	0.31	0.65
Blind panel	✕	✕

Specimen configuration consumption computation

Module	Maximum consumption [W]	Maximum consumption [W]
Main unit with camera	2.36	11.57

Module	Maximum consumption [W]	Maximum consumption [W]
13.56 MHz RFID card reader	0.44	0.82
I/O	0.31	0.65
Touch display	1.16	2.02
Tamper Switch	0.31	0.65
Wiegand	0.46	0.46
Bluetooth reader	0.2	0.67
Total		
	5.24	**16.84**

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 the backlight level, active output current supply, volume level 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 activation (not included in the minimum consumption).

Module Specifications

CAUTION
2N Access Unit QR supports connection of just one Bluetooth module. If connected, multiple Bluetooth modules may result in a undesired behavior.

TIP
To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

125 kHz RFID Card Reader Module

The 125 kHz RFID card reader module (91550941, 02140-001) is used for reading RFID card IDs in the 125 kHz bandwidth.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

CAUTION
We recommend that the M-Bus and LAN cable are not crossed but carried separately through separate bushings to increase the reading distance of this reader & touch display installation.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

13.56 MHz, NFC RFID Card Reader Module

The 13.56 MHz RFID card reader (91550942, 02139-001) is used for reading RFID card IDs in the 13.56 kHz bandwidth.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Secured 13.56 MHz NFC RFID Card Reader Module

The 13.56 MHz RFID card reader (91550942-S/9155086, 02141-001/01712-001) is used for reading secured RFID card IDs in the 13.56 MHz bandwidth.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

Bluetooth & 125 kHz, 13.56 MHz, NFC RFID Card Reader Module

The Bluetooth & 125 kHz and 13.56 MHz card reader module (91550945, 02778-001) is used for access control using a smartphone/tablet with **My2N** or an access card, for making user calls and/or controlling other functions.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- NFC – for **2N My2N** for Android only, a licensed function.
- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Bluetooth & 125 kHz, secured 13.56 MHz, NFC RFID Card Reader Module

The Bluetooth & 125 kHz and secured 13.56 MHz card reader module (91550945-S, 02444-001) is used for access control using a smartphone/tablet with **2N My2N** or an access card, for making user calls and/or controlling other functions.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- NFC – for **2N My2N** for Android only, a licensed function.
- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

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

The touch keypad & 125 kHz and 13.56 MHz card reader module (91550946, 02779-001) is used for code/card access control, making user calls and/or controlling other functions. The touch keypad surface is very sensitive yet weatherproof at the same time.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- NFC – for **2N My2N** for Android only, a licensed function.
- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)

- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Touch Keypad & 125 kHz, secured 13.56 MHz, NFC RFID Card Reader Module

The touch keypad with a combined 125 kHz and secured 13.56 MHz card reader (91550946-S, 02443-001) is used for code/card access control, making user calls and/or controlling other functions. The touch keypad surface is very sensitive yet weatherproof at the same time.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- NFC – for **2N My2N** for Android only, a licensed function.
- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

Touch Keypad & Bluetooth & 125 kHz, 13.56 MHz, NFC RFID Card Reader Module

The touch keypad with Bluetooth and a combined 125 kHz and 13.56 MHz card reader (91550947, 02781-001) is used for access control using a smartphone/tablet with **2N My2N** or code/access card, for making user calls and/or controlling other functions. The touch keypad surface is very sensitive yet weather-proof at the same time.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- NFC – for **2N My2N** for Android only, a licensed function.
- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **My2N**
- **2N PICard**

Touch Keypad & Bluetooth & 125 kHz, secured 13.56 MHz, NFC RFID Card Reader Module

The touch 02781-001keypad & Bluetooth & 125 kHz and secured 13.56 MHz card reader module (91550947-S, 02782-001) is used for access control using a smartphone/tablet with **2N My2N** or code/access card, for making user calls and/or controlling other functions. The touch keypad surface is very sensitive yet weatherproof at the same time.

To accelerate access card reading, we recommend that the used card types are only selected in the module settings.

Features

- NFC – for **2N My2N** for Android only, a licensed function.
- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Supported RFID cards 125 kHz:

- EM4x02
- NXP HiTag2

Supported RFID cards 13.56 MHz:

- **ISO14443A** (MIFARE Classic, MIFARE Plus, MIFARE Mini, MIFARE Ultralight, MIFARE DESFire CSN only)
- **PicoPass** (HID iClass CSN, Picopass)
- **FeliCa** (Standard, Lite)
- **ST SR** (SR, SRI, SRIX)
- **HID PAC** (HID SEOS, HID iClass SE, iClass SR, HID MIFARE DESFire with SIO, HID MIFARE Classic with SIO)
- **My2N**
- **2N PICard**

CAUTION
Press the “key” button on the card reader (without having entered any numbers) on the touch keypad & Bluetooth & RFID card reader module to start Bluetooth authentication.

Touch Keypad Module

The Touch Keypad module (9155047, 01277-001) is used for numeric access to the system. Also, it helps you control the lock and other functions via a numeric code. The keypad digits and symbols are backlit.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Biometric Fingerprint Reader Module

The Biometric fingerprint reader module (9155045, 01276-001) is used for verification of human fingers for access control and 2N/third party equipment control.

WARNING

The fingerprint reader may not be installed on places exposed to direct sunlight. If exposed to direct sunlight, the device may report errors.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Important module properties:

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

CAUTION

- A higher moisture may deteriorate the finger papillary line scanning. You are advised to dry your finger and the reader scanning surface for successful authentication.
- Fingerprint scanning may be more difficult for seniors whose finger papillary lines are not so distinctive (skin elasticity drops with age and a higher scanning pressure may lead to fingerprint blurring).

Touch Display Module

The Touch display (9155036, 01275-001) can be used as:

- Infopanel Module – displays the user defined image sequence
- Keypad module – virtual touch keypad

Specification

Resolution	320 px x 214 px H x V
Slideshow resolution	214 px x 214 px
Contrast ratio	400
Brightness	350 cd/m^2
Viewing angle	80 ° from any direction
Weight	280 g
Operating temperature	–20 to +60°C
Resistance level	IK07

Connectors and Installation

Connection Options:

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Keypad Module

The Keypad module (Part No. 9155031/9155031B, 01253-001/01254-001) is used for numeric access to the system.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

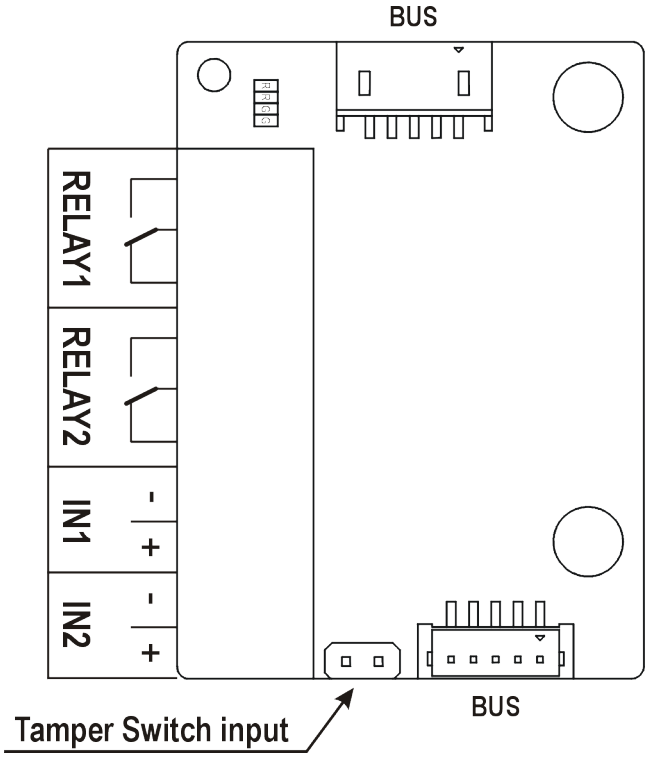
I/O Module

The I/O module (9155034, 01257-001) is used for extending the inputs and outputs. The module is designed for integration of sensors or other devices. The module is installed below another module, i.e. .

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 80 mm long interconnecting cable.
- The inputs / outputs are addressed as follows: <module_name>.<input/output_name>, e.g. “module5.relay1”. Configure the module name in the Module Name parameter in **Hardware > Extending modules**.

Connectors and Installation

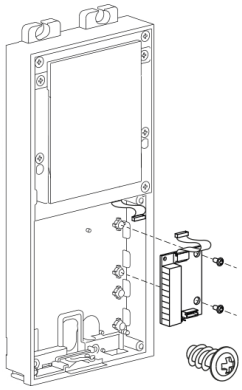


RELAY1/2	RELAY1/2 terminals with accessible 30 V / 1 A AC/DC NO/NC contact
IN1/2	IN1/2 terminals for input in passive / active mode (−30 V to +30 V DC) • OFF = open or U_{IN} > 1.5 V • ON = short-circuited or U_{IN} < 1.5 V
TAMPER	Tamper Switch (9155038, 01260-001) input

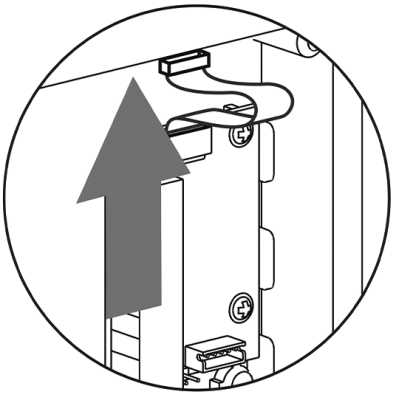
NOTE
2N Acess Unit 2.0 has an integrated tamper switch.

The module is installed under another module, i.e. needs no separate position.

1.



2.



Wiegand Module

The Wiegand module (9155037, 01259-001) is used for connecting an external Wiegand device (RFID card reader, fingerprint/biometric data scanner) and/or connecting **2N Access Unit QR** to an external security exchange.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 80 mm long interconnecting cable.
- Configure the module name in the Module Name parameter in **Hardware > Extending modules**.
  - LED IN is addressed as follows: <module_name>.<input1>, e.g. “module2.input1”.
  - The Tamper input is addressed as follows: <module_name>.<tamper>, e.g. “module2.tamper”.
  - LED OUT (negated) is addressed as follows: <module_name>.<output1>, e.g. “module2.output1”.

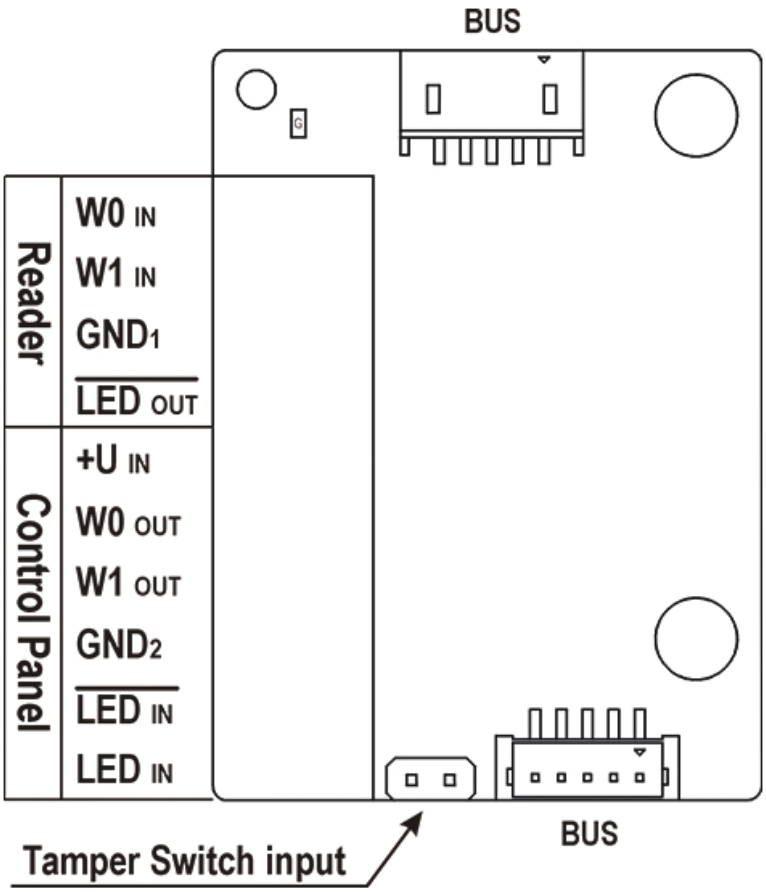
Specification

Technical Parameters of Wiegand Input

Current	5 mA
Input resistance	680 Ω
Pulse length	50 µs
Inter-pulse interval	approx. 2 ms

Connectors and Installation

All the inputs and outputs are galvanically isolated from the device with the insulation strength of 500 V DC. It is necessary to feed $+U_{IN}$ on Wiegand $W0_{OUT}$ from the Control Panel.



Reader helps connect an external Wiegand-supporting reader. The reader sends the device card ID.

The Control Panel is used for connection to the security PBX / access system to which the device sends the card ID information.

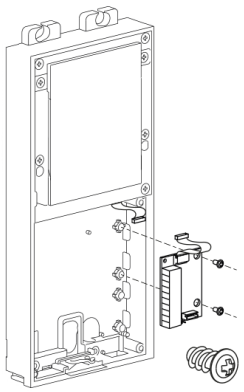
The module contains two BUS connectors for device bus connection. These two connectors are fully interchangeable and can be used either as inputs from the main unit or outputs to other modules.

Reader	$W0_{IN}$, $W1_{IN}$, GND_1	Isolated 2-wire WIEGAND IN
	LED_{OUT}	Isolated open LED OUT switched against GND_1 (up to 24 V / 50 mA)

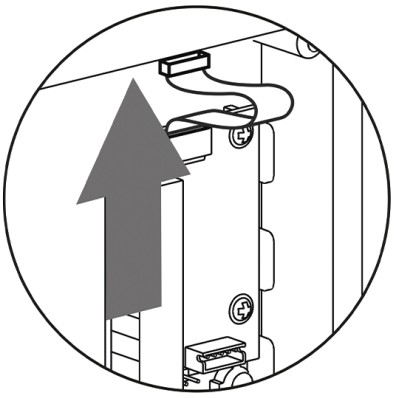
Control Panel	$+U_{IN}$	$+U_{IN}$ (5 to 15 V DC) for WIEGAND OUT power supply
	$W0_{OUT}$, $W1_{OUT}$, GND_2	Isolated 2-wire WIEGAND OUT
	LED_{IN} (negated)	Isolated input for open LED IN, input activated by GND_2 connection
	LED_{IN}	Isolated input for open LED IN, input activated after +U connection
	G	$+U_{IN}$ WIEGAND OUT active supply LED indicator
	TAMPER	Tamper Switch (9155038, 01260-001) input

The module is installed under another module, i.e. needs no separate position.

1.

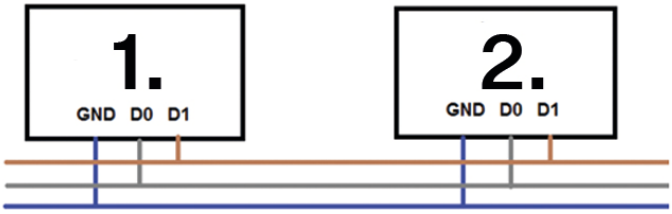


2.



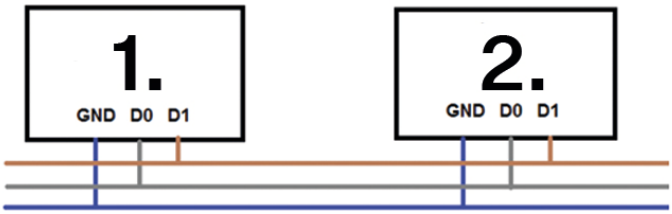
Recommended Wiegand bus wiring diagram, 2N device as a receiver.

1. **2N Access Unit QR**
2. External RFID Card Reader



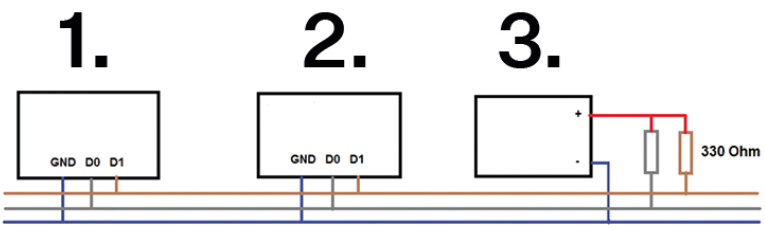
Recommended Wiegand bus wiring diagram, 2N device as a transmitter.

1. External RFID Card Reader
2. **2N Access Unit QR**



Recommended reader & OC output wiring diagram

1. **2N Access Unit QR**
2. External RFID Card Reader
3. 5 V power supply



Security Relay

The Security Relay (9159010, 01386-001) is used for enhancing security between **2N Access Unit QR** and the connected electric lock. The Security Relay significantly enhances security of the connected electric lock by preventing unlocking due to device tampering.

TIP
FAQ: 2N Security Relay – description of the device and use with the 2N intercoms

Specification

Passive switch	NO/NC contact, up to 30 V / 1 A AC/DC

Switched output	• Where the Security Relay is fed from the device, 8 to 12 V DC is available on the output depending on the power supply, 400 mA DC.
	  • PoE: 10 V
	  • adapter: source voltage of minus 2 V
	• Where the Security Relay is fed from an external power supply, 12 V / 700 mA DC is available on the output.

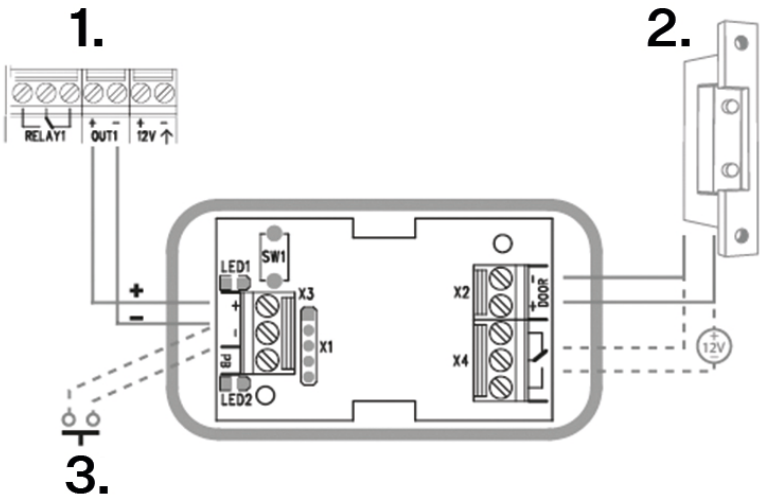
Dimensions	66.5 × 32.5 × 20.5 mm
Weight	24 g

Connectors and Installation

The Security Relay is installed between the device (outside the secured area) and the electric lock (inside the secured area). The Security Relay includes a relay that can only be activated if a valid access card/code is detected on the unit.

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

The Security Relay is designed with holes for surface anchoring. It is recommended that a screw of the diameter of 3 mm with a lens head of the diameter of 6 mm is used. Using a countersunk head may cause irreversible damage to the plastic cover!



1. **2N Access Unit QR**
2. Door lock
3. Departure button

Connect the Security Relay to the access unit as follows:

- To the Active output

Connect the electric lock to the Security Relay as follows:

- to the switched output
- to the passive output in series with the external power supply

The Security Relay also supports the Departure button connected to the ‘PB’ and ‘– 2N IP intercom’ terminals. Once the Departure button is pressed, the output is activated for 5 seconds.

https://www.youtube.com/embed/ardukvQzw5A

Status Signaling

Green LED	Red LED	State
flashing	off	Operational mode
on	off	Activated output
flashing	flashing	Programming mode – waiting for initialization
on	flashing	Error – wrong code

Configuration

1. Connect the Security Relay to the properly set Security output of the device. Refer to the Configuration Manual for details. Make sure that one LED at least is on or flashing.
2. Press and hold the Relay RESET button for 5 seconds to switch the device in the programming mode (red and green LEDs flashing).
3. Activate the output switch using the keypad, telephone, etc. The first code sent from the device will be stored in the memory and considered valid. After code initialization, the Security Relay will pass into the operational mode (green LED flashing).

CAUTION
Having reset the factory defaults on a device with firmware 2.18 or higher, remember to reprogram Security Relay using the instructions above.

Tamper Switch Module

The Tamper Switch module (9155038, 01260-001) of **2N Access Unit QR** is used for securing the system against unauthorized tampering.

CAUTION
Remember to purchase I/O Module (p. 110), ??? or Wiegand Module (p. 112) along with the Tamper Switch.

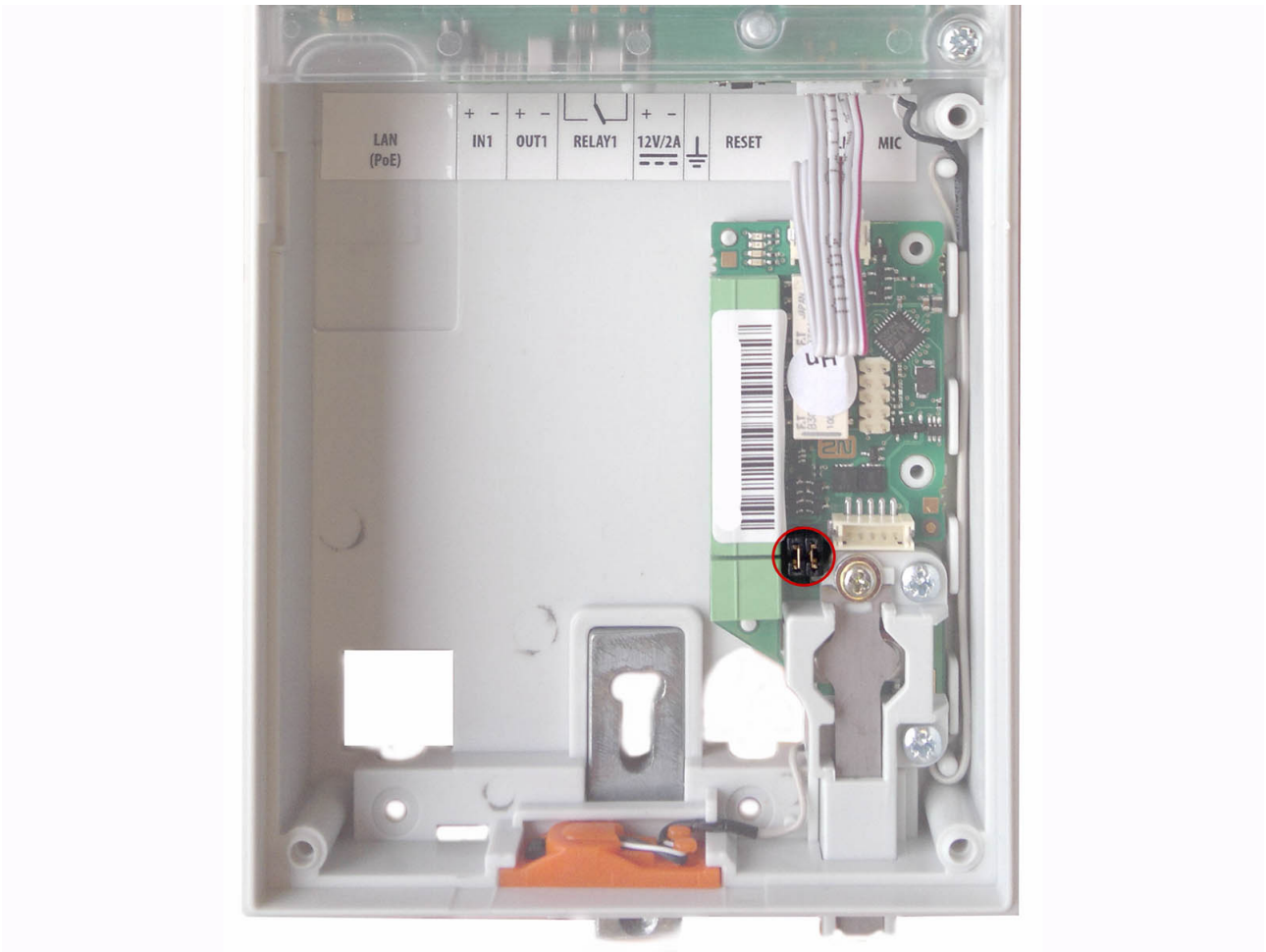
Features

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, in combination with the I/O module (p. 110), OSDP module or Wiegand module (p. 112), can be used for alarm triggering via the Automation interface in the **2N Access Unit QR** configuration.

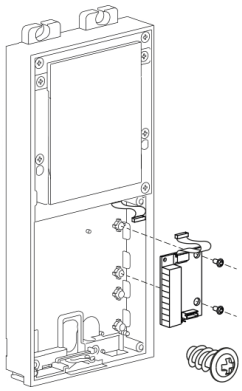
Connectors and Installation

This module is not connected to the bus.

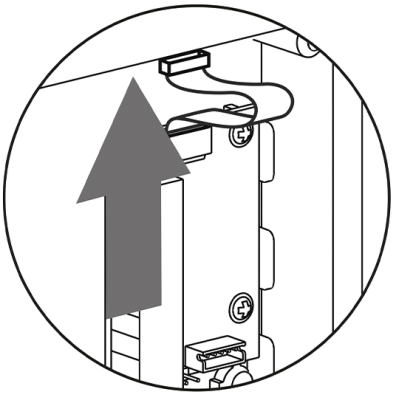


Jumpers are used for interconnecting the Tamper Switch pins with the I/O / OSDP / Wiegand module.

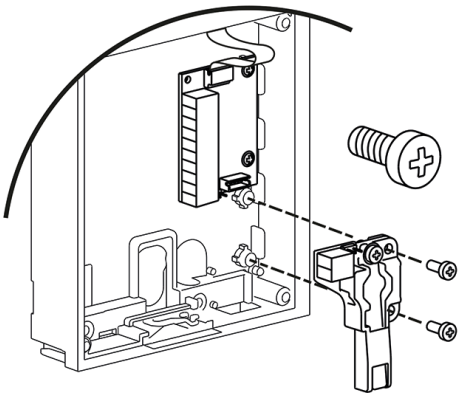
1.



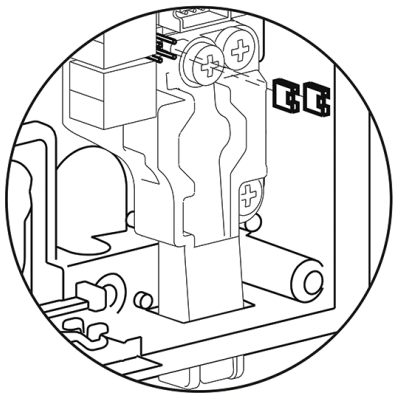
2.



3.



4.



Infopanel Module

The Infopanel module (9155030, 0159-7891) is used for inserting and backlighting printed information. It helps place a company logo or opening hours, e.g., to the device. The Infopanel is backlit, the backlight is software controlled. Refer to 2N.com for the printing template.

Features

- The module contains two bus connectors for the **2N Access Unit QR** bus.
- These two connectors are fully interchangeable and can be used either 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 module package includes a 220 mm long interconnecting cable.

Specification

Nametag dimensions (W x H)	69.2 x 86.7 mm (tolerance: +0; −0.5 mm)

Brief Guidelines

- Device Configuration Interface Access (p. 121)
- Configuration via Hardware (p. 122)
- IP Address Retrieval (p. 122)
- Firmware Update (p. 124)
- Device Restart (p. 124)
- Factory Default Reset (p. 125)

Device Configuration Interface Access

2N Access Unit QR is configured via the web configuration interface. You have to know the device IP address or the device domain name. Make sure that the device is connected to the local IP network and powered.

Domain Name

Enter the device domain name as “hostname.local” to connect to the device. The hostname of a new device consists of the device name and serial number. Enter the serial number into the domain name without dashes. Change the hostname anytime in **System > Network**.

Default domain name 2N Access Unit QR: 2NAccessUnitQR-{serial number without dashes}.local (e.g.: “2NAccessUnitQR-0000000001.local”)

Login based on a domain name is advantageous if the dynamic IP address is used. While the dynamic IP address changes, the domain name remains the same. It is possible to generate certificates signed by a trusted certification authority for the domain name.

IP address

To retrieve the device IP address, take the following steps, see :

- Use the freely accessible **2N Network Scanner**.

Web Configuration Interface Login

1. Fill in the **2N Access Unit QR** address or domain name into the internet browser.
   The login screen is now displayed.
   If the login screen is not displayed, check the IP address, port or domain name for validity. The login screen is not displayed if the web interface server is off. If no certificate has been generated for the IP address or domain name, a security certificate invalidity notification may appear. In that case, confirm that you want to go to the web configuration interface.
2. Enter the login data.
   The default login data are:
   Username: **Admin**
   Password: **2n**
   It is necessary to change the password immediately upon the first login.
   After login using the default password, the access to the web configuration interface functions is limited.

TIP
It is recommended that a password is used that is difficult to break. It is not recommended that names, places or things, especially those closely related to the user, are used in the password.

For increased password security, it is recommended that:

- the random password generator is used,
- the password length is 12 characters at least,
- various characters from different character sets are combined (small/capital letters, digits, special characters, etc.).

Configuration via Hardware

If software configuration is unavailable, the basic setting can be made using the the CONTROL button (for location see Subs. Device Connectors (p. 89)).

Device Restart

To restart the device, disconnect the device from the power supply or use the device web configuration interface in the System > Maintenance section. No configuration change appears after the restart.

NOTE
The device restart does not result in any change in the configuration settings.

Factory Default Reset

Located among the main unit connectors, the CONTROL (p. 89) button helps you reset the factory default values.

1. Disconnect the device from the power supply.
2. Press and hold the CONTROL button.
   a. Reconnect the device to the power supply while holding the button.
3. Release the button in 5 seconds.

CAUTION
If powered from an external power supply using terminals, the device will be reset to the factory settings only if it is also disconnected from the LAN.

IP Address Retrieval

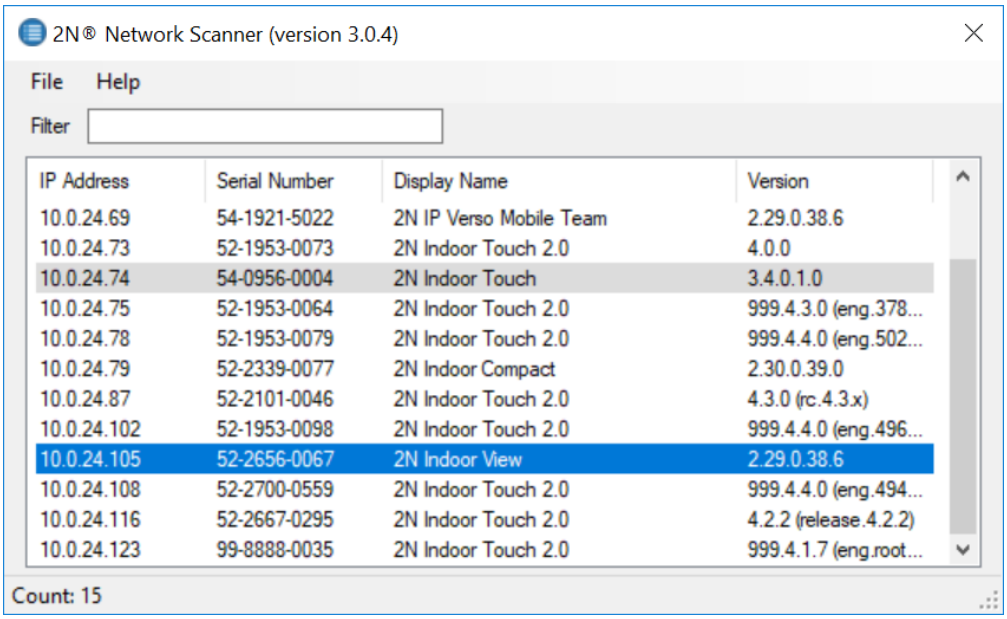
To retrieve the device IP address, take the following steps:

- Use the freely accessible **2N Network Scanner**.

IP Address Retrieval Using 2N Network Scanner

The application helps you find the IP addresses of all the 2N devices in the LAN. Download **2N Network Scanner** from the 2N.com website. Make sure that Microsoft .NET Framework 2.0 is installed for successful app installation.

1. Run the **2N Network Scanner** installer.
2. The Installation Wizard will help you with the installation.
3. Having installed **2N Network Scanner**, start the application using the Microsoft Windows Start menu.
   Once started, the application begins to automatically search the LAN for all the 2N devices which have been DHCP/statically assigned IP addresses. These devices are then shown in a table.



4. Select the device to be configured and right-click it. Select*Browse...* to open the device administration web interface login box for configuration.

CAUTION
If the found device is grey highlighted, its IP address cannot be configured using this application. In that case, click Refresh to find the device again and check whether multicast is enabled in your network.

TIP
- Double click the selected row in the **2N Network Scanner** list to access the device web interface easily.
- To change the device IP address, select *Config* and enter the required static IP address or activate DHCP.

The default login data are:
Username: **Admin**
Password: **2n**
It is necessary to change the password immediately upon the first login.

TIP
It is recommended that a password is used that is difficult to break. It is not recommended that names, places or things, especially those closely related to the user, are used in the password.

For increased password security, it is recommended that:

- the random password generator is used,
- the password length is 12 characters at least,
- various characters from different character sets are combined (small/capital letters, digits, special characters, etc.).

Firmware Update

We recommend that the firmware is also updated during the **2N Access Unit QR** installation. Refer to 2N.com for the latest FW version.

Update firmware via the web configuration interface in System > Maintenance, refer to the device Configuration Manual.

Once the firmware is uploaded successfully, the device is restarted automatically.

WARNING
Firmware downgrade in ARTPEC equipped devices results in factory reset and loss of the whole configuration including the license keys. Therefore, we recommend that you back up the configuration and save the valid license key before such downgrade.

TIP
You can make bulk updates for multiple devices via **2N Access Commander**.

Device Restart

To restart the device choose one of the following options:

- using disconnection from the power supply,
- via the web configuration interface.

NOTE
The device restart does not result in any change in the configuration settings.

Restart Using Web Configuration Interface,

You can restart the device via the web configuration interface. Refer to Web Configuration Interface Login (p. 121) for login details. Restart the device in System > > System using Restart.

Factory Default Reset

Reset the device factory default values via software in System > Maintenance Default reset.

Follow the instructions below **2N Access Unit QR** to reset the factory default values via hardware:

Factory Default Reset

Located among the main unit connectors, the CONTROL (p. 89) button helps you reset the factory default values.

1. Disconnect the device from the power supply.
2. Press and hold the CONTROL button.
   a. Reconnect the device to the power supply while holding the button.
3. Release the button in 5 seconds.

CAUTION
If powered from an external power supply using terminals, the device will be reset to the factory settings only if it is also disconnected from the LAN.

CAUTION
In case the factory default values are reset on the device with a firmware version 2.18 or higher, it is necessary to reprogram the 2N Security Relay using the instructions given in Security Relay (p. 116).

Factory Default Reset

Located among the main unit connectors, the CONTROL (p. 89) button helps you reset the factory default values.

1. Disconnect the device from the power supply.
2. Press and hold the CONTROL button.
   a. Reconnect the device to the power supply while holding the button.
3. Release the button in 5 seconds.

CAUTION
If powered from an external power supply using terminals, the device will be reset to the factory settings only if it is also disconnected from the LAN.

Device Control

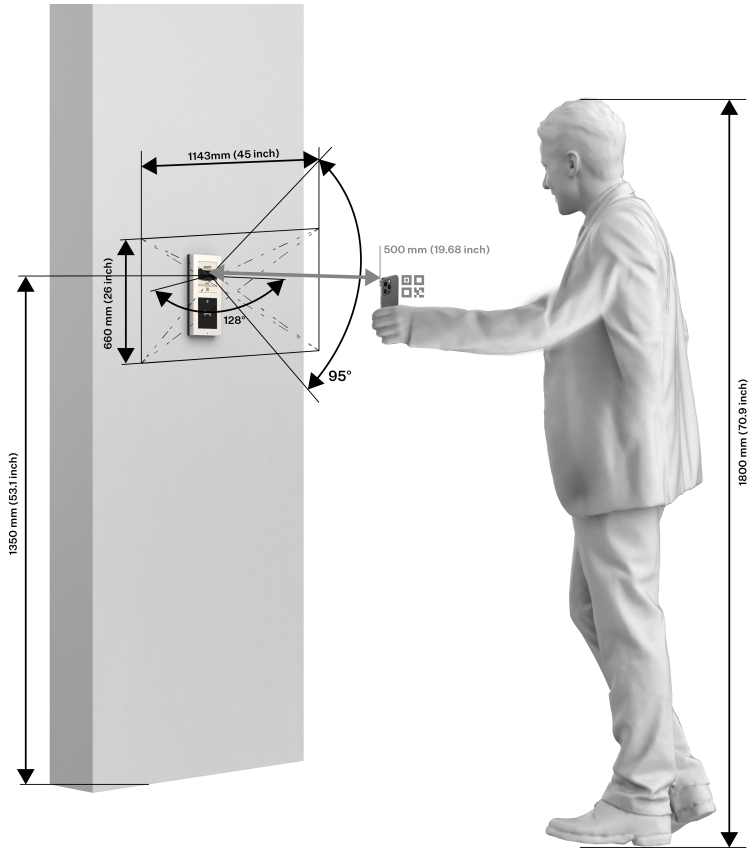
2N Access Unit QR is a modular access system that meets all individual user configuration needs. Unlike other access systems available on the market, **2N Access Unit QR** is not a single-module system with a fixed functionality, but represents a user friendly modular system, allowing the user to assemble required modules and accessories on a plug&play basis. This approach allows for individual system configurations and also leaves space for additional functionality if necessary.

The device works as an authorization intermediary, which authenticates the user access rights and, if the user access is valid, activates the switch. The door lock, lifts etc. can be controlled by the switch.

The device control depends on the product version:

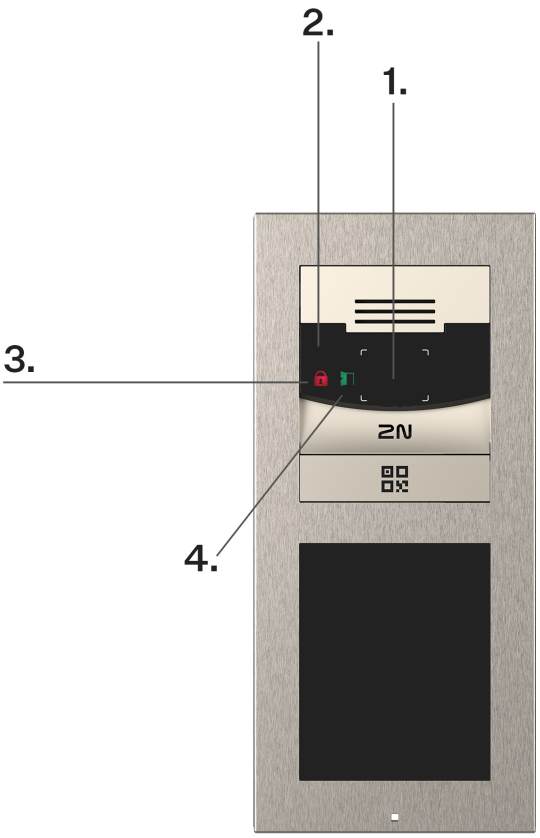
- using RFID cards and chips – by tapping a card/chip on the device,
- using the **2N My2N** application – by pressing the device touchscreen in the vicinity of a mobile device with **2N My2N** logged in,
- using NFC,
- using a QR code,
- using biometric data (fingerprint),
- by entering a numeric access code via a keypad application

The visualization below shows the (range of the) field of view and optimum installation height for the device camera. It is recommended that the QR code is placed 50 cm in front of the camera for optimum reading.



LED pictograms

The following photo shows the location of the elements on the front of the device.



1. Camera
2. Light sensor
3. Secured
4. Enabled entry

Colour Signalling

Devices with a display or LED pictograms display different statuses in color.

Status Signaling

Color	State	Description
Red	Active Access Blocking	Occurs if access is not allowed (it is not possible to activate the door switch) or occurs again after a specified period of time after the door switch is deactivated.
	Switch Locking	Applies to a switch that is configured as a door switch.
	Secured Status	Display of this status is only allowed on the device main unit if signaling is available.

Color	State	Description
Blue	Entering Access Code	Occurs when the user is entering the code and signals the possibility to confirm the code.
Green	Access Enable	Occurs when the access lock is deactivated and signals door opening or switch activation.

Maintenance - Cleaning

2N Access Unit QR contains no environmentally harmful components. Dispose of the device in accordance with the applicable legal regulations.

If used frequently, the device surface gets dirty. Use a piece of soft cloth moistened with clean water to clean the device. Use appropriate cleaning agents suitable for glasses, optical devices, screens, etc. We recommend that IT cleaning wipes are used.

CAUTION
Use the product for the purposes it was designed and manufactured for, in compliance herewith. The manufacturer reserves the right to modify the product in order to improve its qualities.

If used frequently, the device surface gets dirty. Use a piece of soft cloth moistened with clean water to clean the device. Use appropriate cleaning agents suitable for glasses, optical devices, screens, etc. We recommend that IT cleaning wipes are used.

- Alcohol-based cleaners may not be applied.
- Clean the device in dry weather in order to make waste water evaporate quickly.
- Do not use aggressive detergents (such as abrasives or strong disinfectants).
- Prevent water from getting inside the device.

TIP
To disinfect the surface of the device against bacteria and viruses (Anti-Covid) and maintain the hygienic conditions of critical surfaces and touch points, we recommend that you use the Zoono – Microbe Shield Surface Sanitiser spray.

Troubleshooting

Refer to https://www.2n.com/faqs for the most frequently solved problems.

Technical Parameters

Power Supply Types	
PoE	IEEE PoE 802.3af (Class 0, max. 12,95 W) (Class 0, max. 12.95 W)
External supply	12 V ±15 % / 3 A DC

Audio	
Microphone	Integrated
Amplifier	5 W (class D)
Speaker	4 W / 8 Ω
Sound pressure level (SPL max)	214 × 320
LINE OUT	1 VRMS / 600 Ω
Volume Control	Adjustable with automatic adaptive mode
Audio power output	1.9 W

Audio stream	
Protocols	• RTP
Codecs and Used Bandwidth	• G.711 (PCMA, PCMU) – 64 kbps (with 85.6 kbps headers) • G.729 – 16 kbps (with 29.6 kbps headers) • G.722 – 64 (with 85.6 kbps headers) • L16/16kHz – 256 kbps (with 277.6 kbps headers)

Camera	
Sensor	1/2.7" color CMOS
JPEG resolution	Up to 1920 x 1440
Video resolution	1920 x 1440
Frame rate	30 fps
Sensor sensitivity	14000e-/lux-sec
Viewing angle	125° (H), 105° (V)
Infrared illumination	Su
Sensor sensitivity without IR light	0.1 Lux ± 20 %
Focal length	1.9 mm

Video stream	
Protocols	• RTP • RTSP • RTCP • HTTP
ONVIF/RTSP streaming codecs	• H.264 • H.265 • MJPEG
IP Camera Function	Yes – compatible profiles: • ONVIF v2.4 profile S • ONVIF Profile T

Bandwidth used	
Audio codecs	• PCMA, PCMU – 64 kbps (with 85.6 kbps headers) • G.729 kbps – 16 bps (with 29.6 kbps headers) • G.722 – 64 kbps (with 85.6 kbps headers) • L16 / 16 kHz – 256 kbps (with 277.6 kbps headers)
Video Codecs	Set streaming in **Services > Streaming > RTSP**. The set bit rate represents the value that the codec has to approach on a long-time average. The data flow can vary depending on the scene to be scanned.

Interface	
LAN	10/100BASE-TX with Auto-MDIX, RJ-45
Recommended cabling	Cat-5e or higher
Supported protocols	DHCP opt. 66, SMTP, 802.1x, RTSP, RTP, TFTP, HTTP, HTTPS, Syslog, ONVIF
Passive switch (relay)	Switching (NO), max. 30 V / 1 A AC/DC
Active switch output	8 to 12 V DC according to power supply, up to 600 mA • PoE: 10 V • adapter: source voltage –2 V

Bluetooth	
Bluetooth	in compliance with BLE (Bluetooth Low Energy)
Security	Encoding: • asymmetric RSA-1024 • symmetric AES-128

Bluetooth	
Range	Adjustable: • short ~ 0.5 m • medium ~ 2 m • long ~ up to 10 m
RX sensitivity	up to –93 dBm
Consumption	20 mA at 12 V DC
Operating temperature	–40 °C ~ +60 °C
Storing temperature	–40 °C ~ +70 °C
Dimensions	97 x 105 x 30 mm
Support of mobile applications	Android 6.0 Marshmallow and higher, iOS 12.0 and higher

Touch Display Module	
Resolution	214 × 320
Slideshow mode resolution	214 × 320 px, 214 x 214 px
Contrast ratio	400 : 1
Brightness	214 × 320
Viewing angle	80° from all directions
Weight	280 g
Minimum consumption	1.36 W
Maximum consumption	2.40 W

Touch Display Module		
Operating temperature		–20°C to 60°C
Resistance level		IK07
Directory		residential / business (for 10 000 users)

I/O module, Wiegand module		
Dimensions		43 x 31.5 x 1.5 mm

Mechanical Parameters		
Cover		Robust zinc casting with surface finish (minor surface shade nuances are acceptable).

Body material		Versions:
		• Black version:
		  • Material - Zamak 410 - Zn95Al4Cu1
		  • Surface treatment – PUR Wet coating 15–25 µm, RAL 25 Jet black, inner side - passivated zinc

Surface installation dimensions	One-module	107 x 130 x 28 mm
	Two-module	107 x 234 x 28 mm
Frame – one-module	130 x 153 x 5 mm	
Frame – two-module	130 x 257 x 5 mm	
Box (minimum wall hole) – one-module	108 x 131 x 45 mm	

Mechanical Parameters		
Box (minimum wall hole) – two-module	108 x 238 x 45 mm	
Weight (depending on configuration)	Max. net	2 kg
	Max. gross	2.5 kg
Operating temperature		−40 °C to 60 °C
Relative humidity		10 to 95 % (non-condensing)
Storing temperature		−40 °C to 70 °C
Protection class		IP54
Resistance level		IK08

General Instructions and Cautions

Please read this User Manual carefully before using the product and follow the instructions and recommendations included therein.

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.

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 unfavorable 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, procure software protection of the product. The manufacturer shall not be held liable for any damage incurred as a result of the use of deficient 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 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 to increased tariff lines.

Directives, Laws and Regulations

2N Access Unit QR conforms to the following directives and regulations:

EU

- 2012/19/EU on waste electrical and electronic equipment

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

Industry Canada

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

Legislation of Thailand

เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.

กสทช.

เครื่องวิทยุคมนาคมนี้ ได้รับยกเว้น ไม่ต้องได้รับใบอนุญาตให้มี ใช้ซึ่งเครื่องวิทยุคมนาคมหรือตั้งสถานีวิทยุคมนาคมตามประกาศ กสทช. เรื่อง เครื่องวิทยุคมนาคม และสถานีวิทยุคมนาคมที่ได้รับยกเว้นไม่ต้องได้รับใบอนุญาต วิทยุคมนาคมตามพระราชบัญญัติวิทยุคมนาคม พ.ศ. 2498

กสทช. | โทรคมนาคม
กำกับดูแลเพื่อประชาชน
Call Center 1200 (โทรฟรี)

Legislation of Japan

本製品は、シールドネットワークケーブル(STP)を使用して接続してください。また適切に接地してください。

本製品は電気通信事業者（移動通信会社、固定通信会社、インターネットプロバイダ等）の通信回線（公衆無線 LAN を含む）に直接接続することができません。本製品をインターネットに接続する場合は、必ずルータ等を経由し接続してください。

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 household 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.

2N Access Unit QR – Installation Manual

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