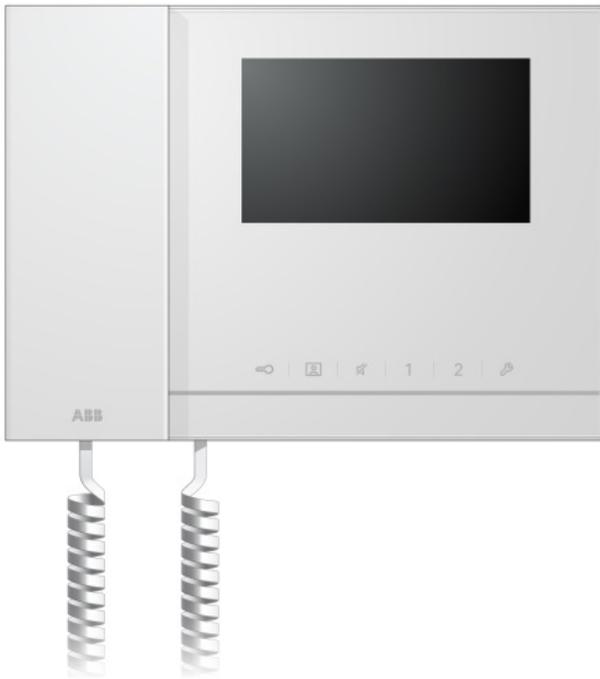


VER: 1.3 | 02.20.2017

**ABB Welcome<sup>®</sup>**  
M22302-  
M22303-  
4.3" Video handset  
indoor station



# ABB Welcome®

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## 1 Safety



### Warning

#### **Electric voltage!**

Direct or indirect contact with live components can cause dangerous currents to flow through the body, which may result in electric shock, burns or even death.

- Always disconnect the main power supply prior to installation and/or disassembly.
- Work on the 110 V - 240 V supply system must be performed only by qualified personnel.

## 2 Intended use

This device is an integral part of the ABB Welcome door communication system and operates exclusively with components from this system. The device must only be installed in dry indoor rooms.

## 3 Environment



### **Consider the protection of the environment!**

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



- The device contains valuable raw materials that can be recycled, and should be disposed of in an appropriate recycling facility.

### 3.1 ABB devices

All packaging materials and devices from ABB bear the markings and test seals for proper disposal. Always dispose of the packaging material, electronic devices and their components via an authorized recycling facility or disposal company.

## 4 Operations

### 4.1 Standard operations

#### 4.1.1 Control elements

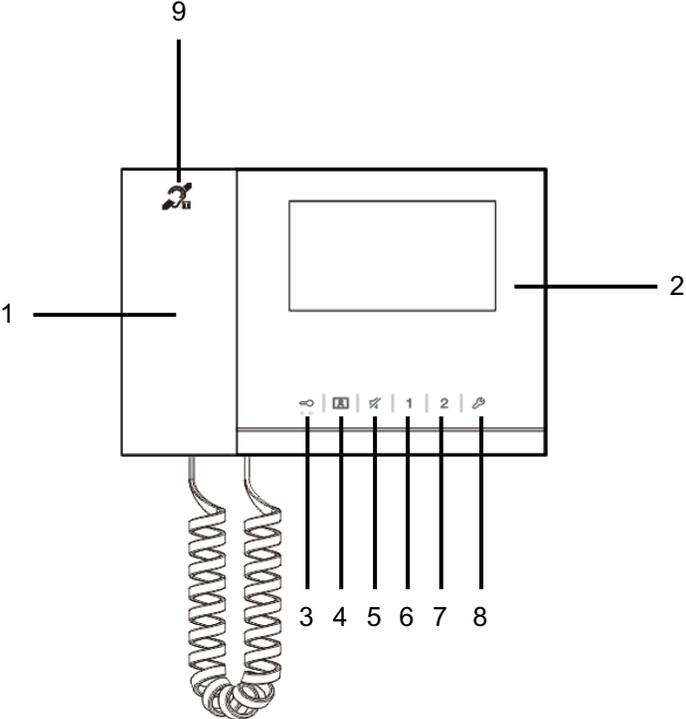


Fig. 1 Control elements

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No.	Functions
1	<p><b>Handset</b></p> <p>1A For an incoming call, pick up handset within 30 seconds to activate communication, and hang up to end the call.</p> <p>1B In standby mode, pick up handset to enter the communication menu.</p>
2	<p><b>4.3" display</b></p>
3	<p><b>Unlock button</b></p> <p>3A Open the door by pressing this button at any time.</p> <p>3B Auto-unlock: The door is automatically opened after incoming call. (For this function, hold this button for more than 10 seconds until the backlit LED is on. The same operation will switch off the function and LED will be off. )</p> <p>The LED flashes slowly to indicate an incoming call.</p> <p>The LED illuminates to indicate auto-unlock.</p> <p>If the LED flashes fast, this indicates system is busy or door is open longer than set time. (Sensor must be connected first.)</p>
4	<p><b>Surveillance button</b></p> <p>4A In standby mode, press this button to surveil the default outdoor station.</p> <p>4B While the display is on, press this button to switch to surveil next outdoor station. (Function is available depending on the type of installation.)</p> <p>4C While the display is on, hold this button to take a photo.</p> <p>4D In standby mode, if the LED flashes, press this button to display the "history" menu.</p> <p>**The LED flashes slowly to indicate a missed call.</p>
5	<p><b>Mute button</b></p> <p>5A In standby mode, press this button to mute ringtone of this indoor station.</p> <p>5B In standby mode, long-press the button to mute ringtone of all indoor stations in the apartment.</p> <p>5C Press this button to reject incoming call.</p> <p>5D During a conversation, press this button to mute microphone.</p> <p>The LED illuminates to indicate mute status.</p>
6	<p><b>Programmable button 1</b></p> <p>6A Release the lock connected with outdoor station (COM-NC-NO) (default function).</p> <p>6B In standby mode, long-press this button for 3 seconds to send SOS alarm to guard unit. If LED flashes slowly, SOS was successfully sent to guard unit. If LED flashes fast, SOS was not successful.</p> <p>6C *Programmable for additional function, e.g. call guard unit, intercom, etc.</p>
7	<p><b>Programmable button 2</b></p> <p>*Programmable for additional function, e.g. call guard unit, intercom, etc.</p>
8	<p><b>System setting button</b></p> <p>Enter the system setting menu for various functions of the device.</p> <p>If the LED flashes fast, it means setting is busy.</p>
9	<p><b>*Induction loop function</b></p>

\*For this function, please contact your electrical installer.

\*\*This function is only available in M22303-.

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## 4.2 Control actions

### 4.2.1 Incoming call and during a call

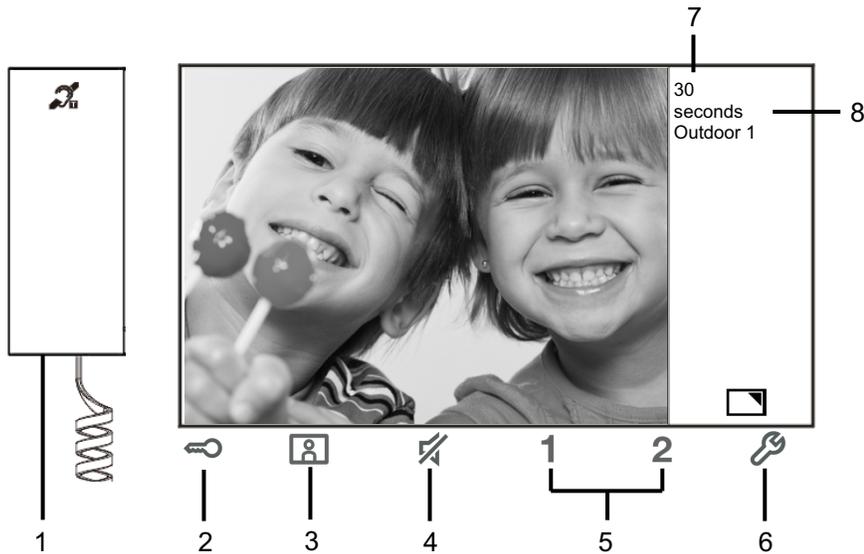


Fig. 2 Incoming call and during a call

During a call, the following functions are available:

No.	Functions
1	Pick up handset to accept the incoming call. During a call, hang up the handset to end the call.
2	Press to open the door from which the call originates.
3-A	Press to see the analog camera view of the outdoor station if applicable.
3-B	Hold to take a snapshot.
4	Press to mute the ringtone of an incoming call. During a call, press to mute the microphone.
5-A	Press to activate the function of the programmable button.
5-B	If the function "release second lock" or "control switch actuator" is assigned to the programmable button, press this button to activate the function.
6-A	Press to enable or disable the full-screen function.
6-B	Hold to enter the brightness settings.
7	Indicates time remaining for conversation.
8	Indicates the number of the outdoor station from which the call originates.

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## 4.2.2 Display and volume settings during a call

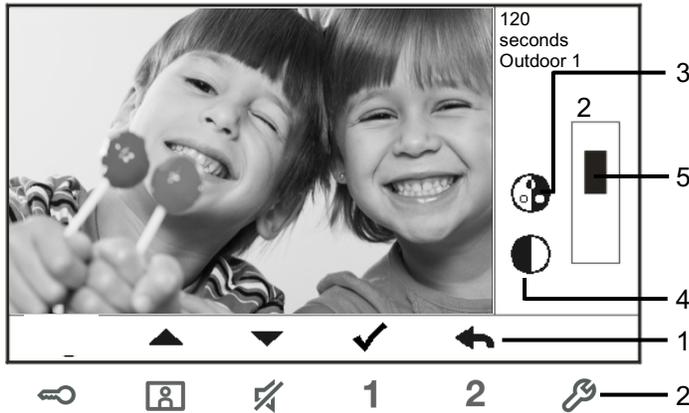


Fig. 3 Display and volume setting during a call

Hold button  for 3 seconds to enter the display and volume settings menu during a call. The following functions are available.

No.	Functions
1	Navigation buttons (up, down, confirm, cancel, etc.)
2	Press the navigation buttons as needed.
3	Saturation
4	Brightness
5	Value set

\*This function is available in M22302- and M22303-, color video handset indoor station.

## 4.2.3 Communication menu

### 4.2.3.1 Overview

Pick up handset to enter the communication menu. The following functions are available:

No.	Functions
1	Intercom call -Press the existing call list to make an intercom call.
2	Call to guard unit -Call guard unit directly.
3	Broadcast -Enable the broadcast function in this menu.
4	Switch actuator -Activate the existing actuator list.

## 4.2.3.2 Intercom call

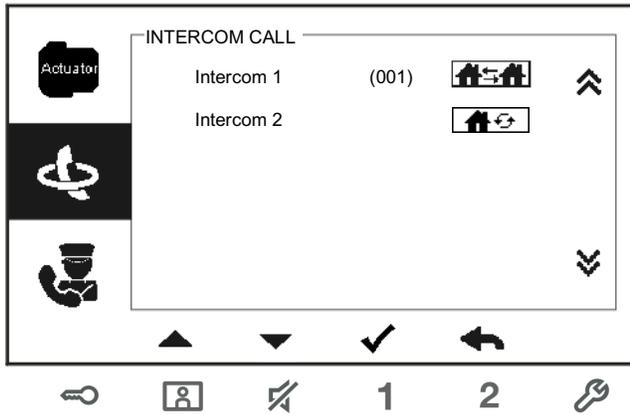


Fig. 4: Intercom call

First, set intercom call lists in the "system settings-intercom settings" menu. After choosing a list, press ✓ to make a call.

## 4.2.3.3 Call guard unit

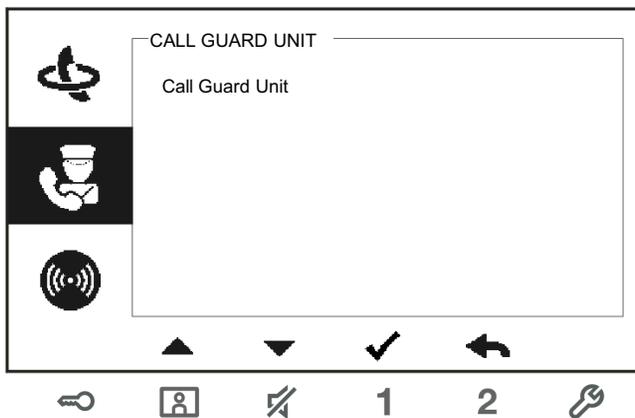


Fig. 5: Call guard unit

## 4.2.3.4 Broadcast

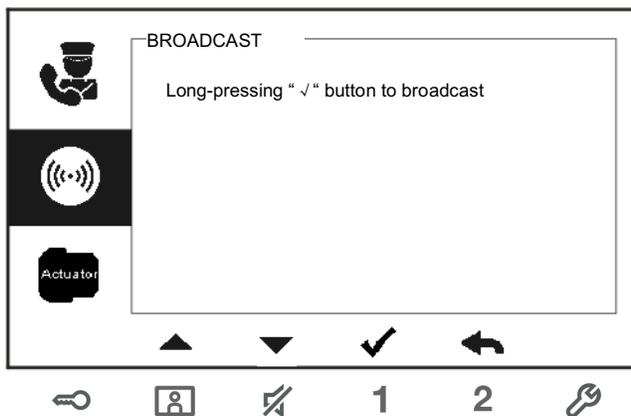


Fig. 6: Broadcast

This function is available in M22302- / M22303-, color video handset indoor station.

4.2.3.5 Switch actuator

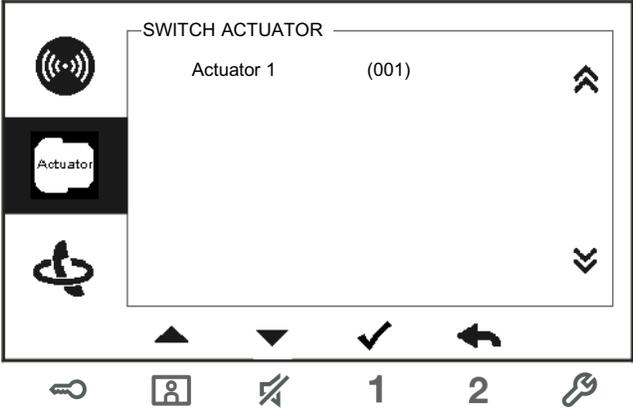


Fig. 7: Switch actuator

First, set the actuator list in the “system settings-switch actuator” menu.  
After choosing a list, press button ✓ to enable the lock or light that is connected to the switch actuator.

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## 4.3 Settings

### 4.3.1 Overview

Press button  to enter the system settings menu. The following functions are available:

No.	Functions
1	Intercom settings -Set intercom lists among different apartments or within the same apartment.
2	Switch actuator -Set the actuator list in this menu.
3	Program button -Set functions for programmable buttons.
4	Call forward -Set the target (e.g., other indoor stations or guard units) where you wish to forward calls from visitors when you are away from home.
5	Auto unlock -Set the automatic unlock time range.
6	Set outdoor station password -Set a customized door open password, which is available for an outdoor station with a keypad.
7	Ringtone -Set the ringtone for outdoor bells, indoor bell or others.
8	Volume -Set ringtone volumes.
9	Date and time -Set different times.
10	Other settings -Other settings, e.g., auto full screen.
11	Blacklist -Set a blacklist that is used to prevent unwanted calls from other apartment(s).
12	History -View all communication entries in the menu, e.g., received calls, missed calls, etc.
13	Language -Set the language.
14	Information
15	Reset factory default

4.3.2 Intercom call settings

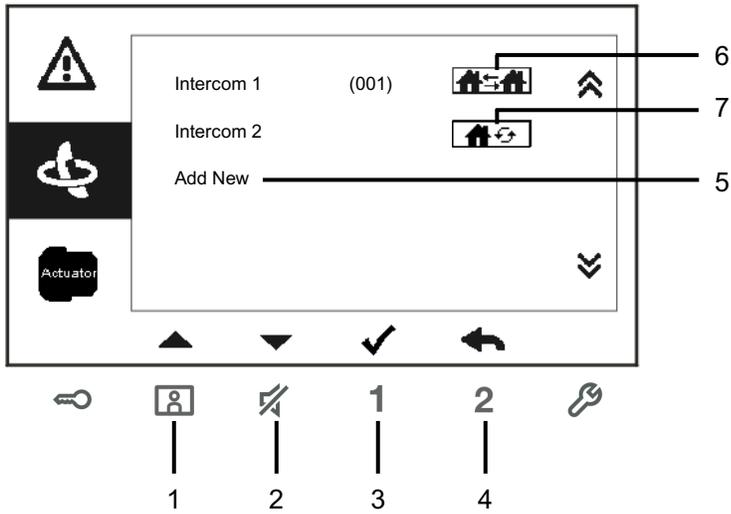


Fig. 8: Intercom setting menu

No.	Functions
1	Choose the previous selection or scroll up.
2	Choose the next selection or scroll down.
3	Confirm the selection or enter to edit.
4	Return to the previous screen.
5	Add a new intercom list. A total of 32 intercom lists can be added.
6	Existing intercom list: Press button ✓ to modify the settings.  indicates an external intercom from different apartments. *To establish an external intercom, each apartment must have a master indoor station.
7	Existing intercom list: Press button ✓ to modify the settings.  indicates an internal intercom in the same apartment.

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Add a new list

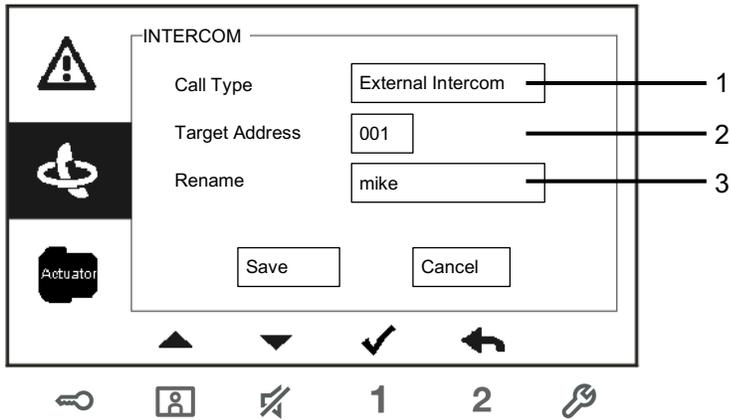
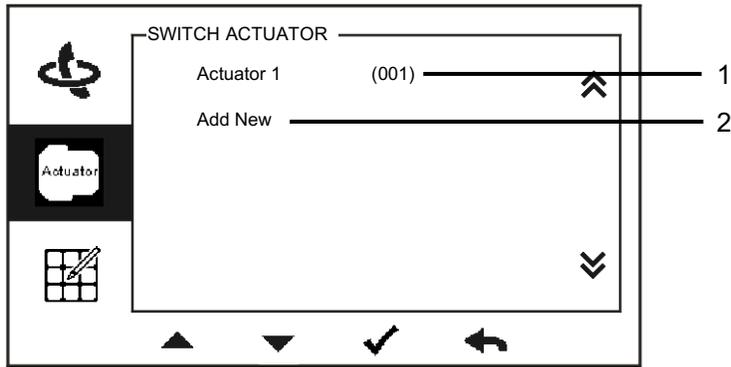


Fig. 9: Add new intercom

No.	Functions
1	Enter to choose the call type: -An external intercom indicates a call from a different apartment. -An internal intercom indicates a call from within the same apartment.
2	Enter to change the target address, from 001 to 250. *If the call type is an internal intercom, there is no need to set the target address.
3	Rename the intercom list: Scroll through letters of the alphabet or numbers with "+" or "-" button.

After setting, press "save" to confirm.

4.3.3 Switch actuator settings



Add a new list

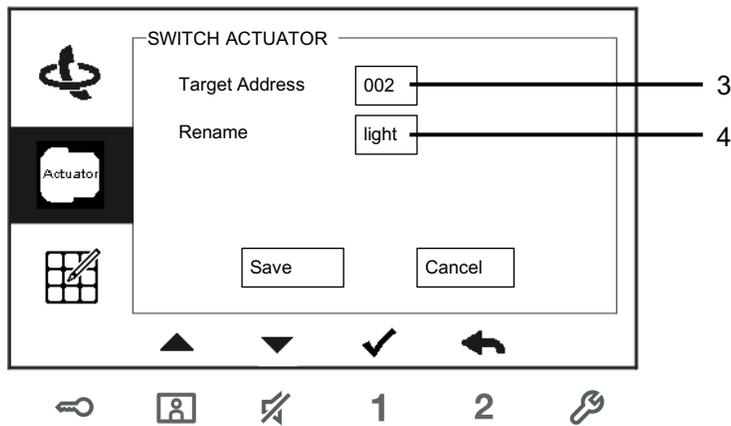


Fig. 10: Switch actuator settings

No.	Functions
1	Existing switch actuator list: Press button ✓ to modify the settings.
2	Add a new actuator list. A total of 10 switch actuators can be added.
3	Enter to change target address with "+" or "-" button from 001 to 199.
4	Rename the switch actuator list: Scroll through letters of the alphabet or numbers with "+" or "-" button.

4.3.4 Program button settings

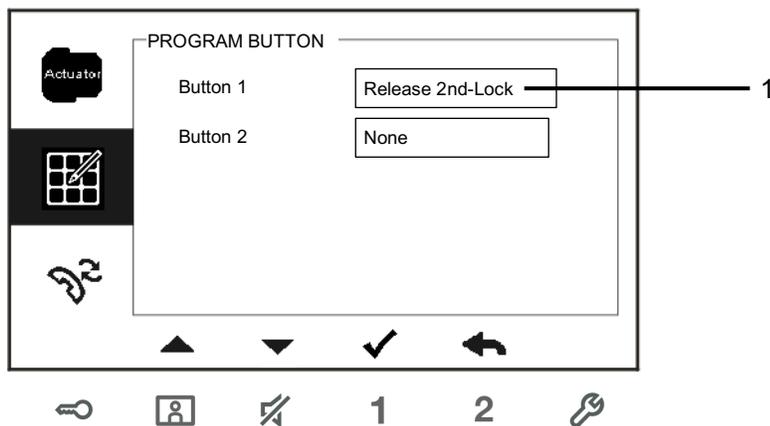


Fig. 11: Program button settings

No.	Functions
1	Set functions for the program button, e.g., releasing second lock, calling guard unit, intercom call, enabling the switch actuator. Second lock means the lock is connected with an outdoor station. (NC-NO-COM) *Only the existing intercom call list and switch actuator list can be assigned to the program button.

## 4.3.5 Call forward settings

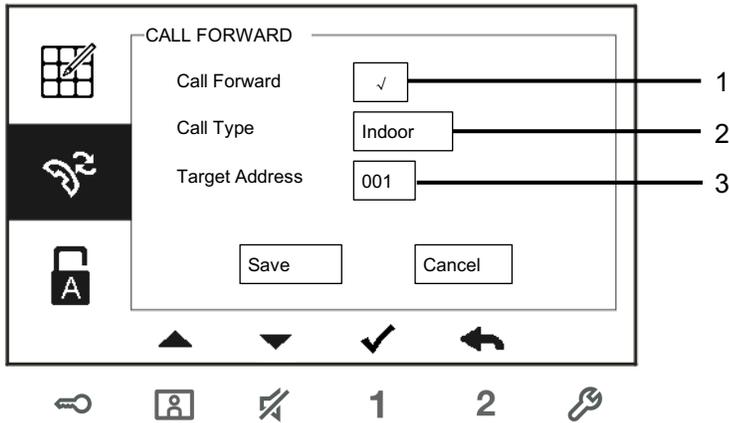


Fig. 12: Call forward settings

No.	Functions
1	Enable or disable the call forward function.
2	Enter to choose a call type, including indoor or guard unit.
3	Enter to change the target address if the call type is an indoor station.

\*If the call forward function is activated, the auto unlock function will be disabled.

\*This function can only be set in the master indoor station

\*This function is available in M22302- and M22303-, color video handset indoor station.

## 4.3.6 Auto unlock settings

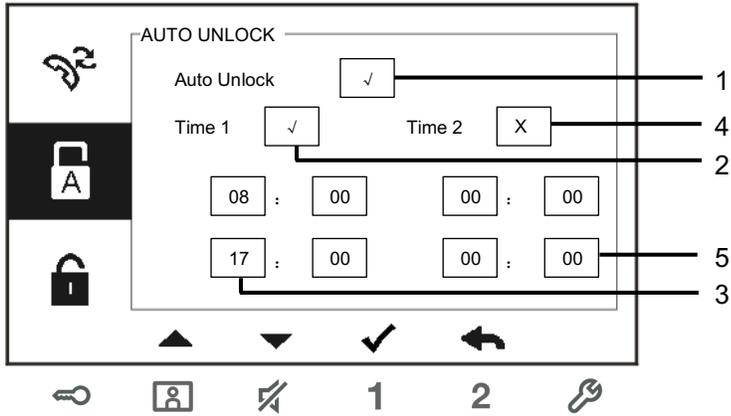


Fig. 13: Auto unlock settings

No.	Functions
1	Enable or disable the auto unlock function.
2	Enable or disable the auto unlock during Time 1.
3	Set start time and end time for Time 1.
4	Enable or disable auto unlock during Time 2.
5	Set start time and end time for Time 2.

\*If you activate the auto unlock function without setting exact working time, this function will be available for 10 hours.

\*If the auto unlock function is activated, the call forward function will be disabled.

\*This function can be set only at the master indoor station.

## 4.3.7 Outdoor station password settings

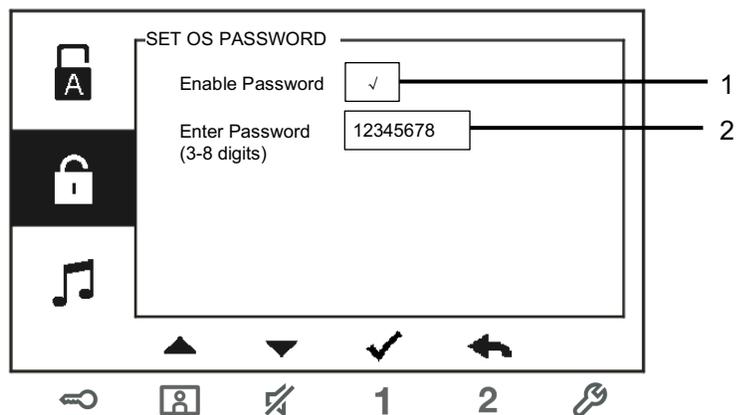


Fig. 14: Outdoor station password settings

No.	Functions
1	Enable or disable the password functions
2	Enter a 3-8 digit password.

\*Only available with the keypad.

\*This function only can be set at the master indoor station.

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## 4.3.8 Ringtone settings

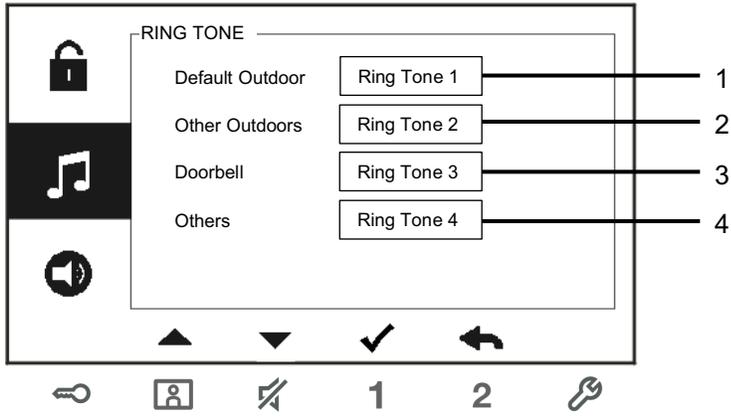


Fig. 15: Ringtone

No.	Functions
1	Select the bell sound for the default outdoor station.
2	Select the bell sound for other outdoor stations.
3	Select the bell sound for the apartment door.
4	Select the bell sound for other areas, e.g., guard unit or intercom call from other apartments.

## 4.3.9 Volume settings

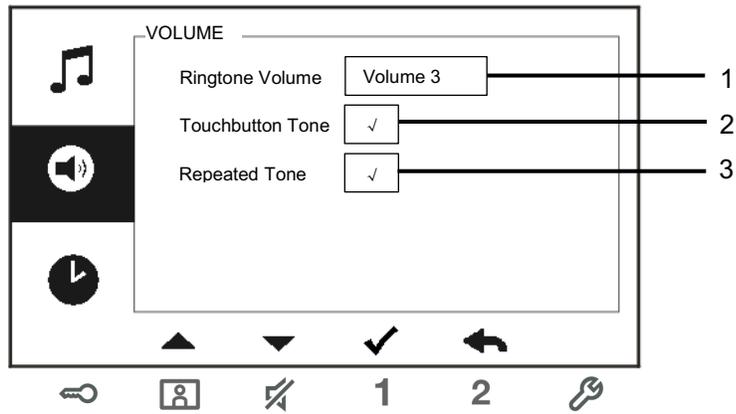


Fig. 16: Volume settings

No.	Functions
1	Set the volume of bell sound.
2	Enable or disable the feedback tone that sounds when the touch button is pressed.
3	Set the ringtone to ring once or continuously.

4.3.10 Date and time settings

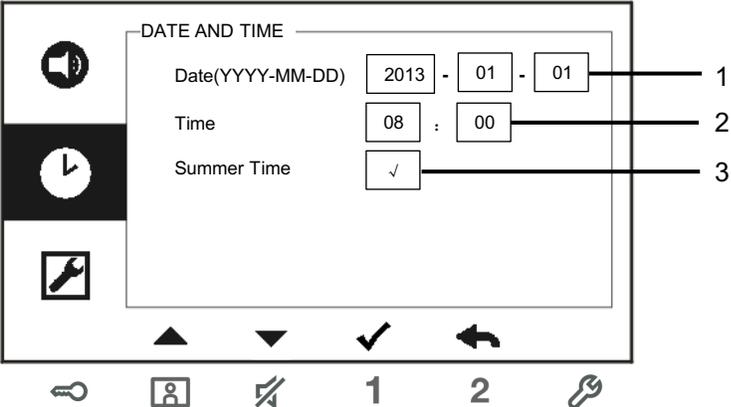


Fig. 17: Date and time settings

No.	Functions
1	Set the date.
2	Set the time.
3	Enable or disable the summertime function.

## 4.3.11 Other settings

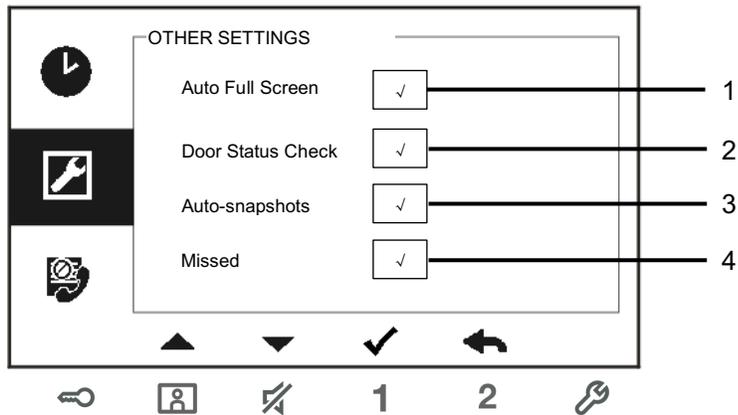


Fig. 18: Other settings

No.	Functions
1	Enable or disable the auto full screen function.
2	Enable or disable the door status check function. (Only available if the sensor is installed with an outdoor station;  flashes when the door is open.)
3	Enable or disable the auto-snapshot function.
4	Enable or disable the missed call function. (  flashes when there is a missed call.)

## 4.3.12 Blacklist settings

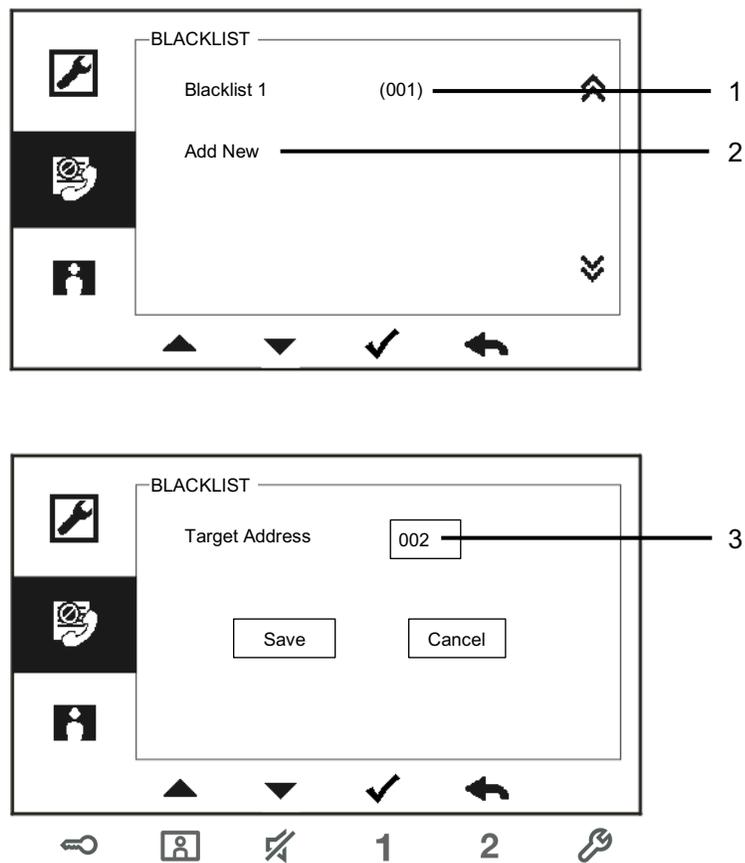


Fig. 19: Blacklist settings

No.	Functions
1	The existing blacklist. Press ✓ button to modify the setting.
2	Add a new blacklist. A total of 32 blacklists can be added.
3	Enter to change target address with "+" or "-" button from 001 to 250.

\*This function can only be set at the master indoor station.

## 4.3.13 History review

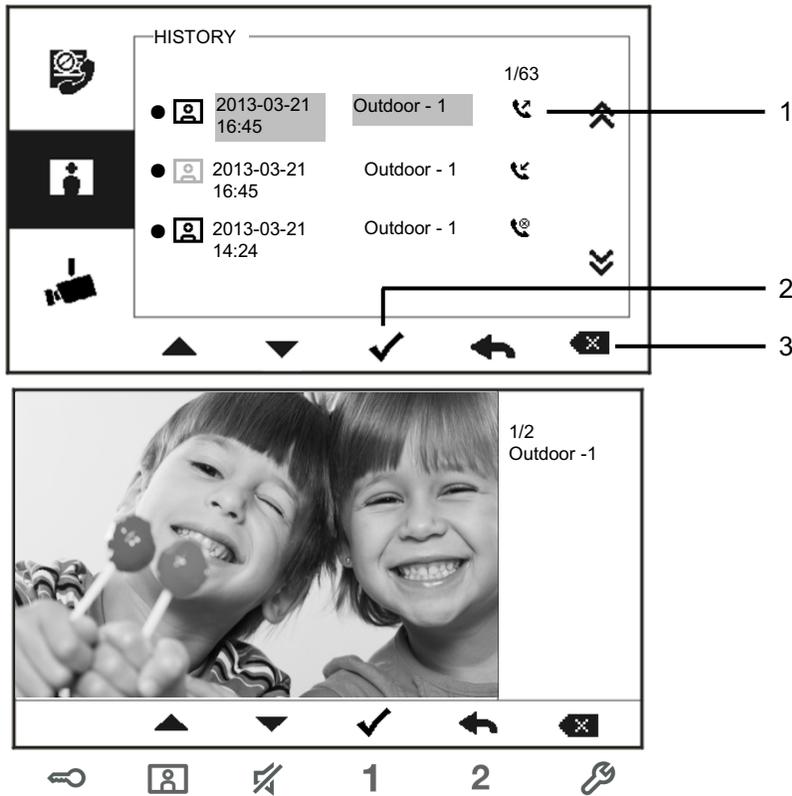
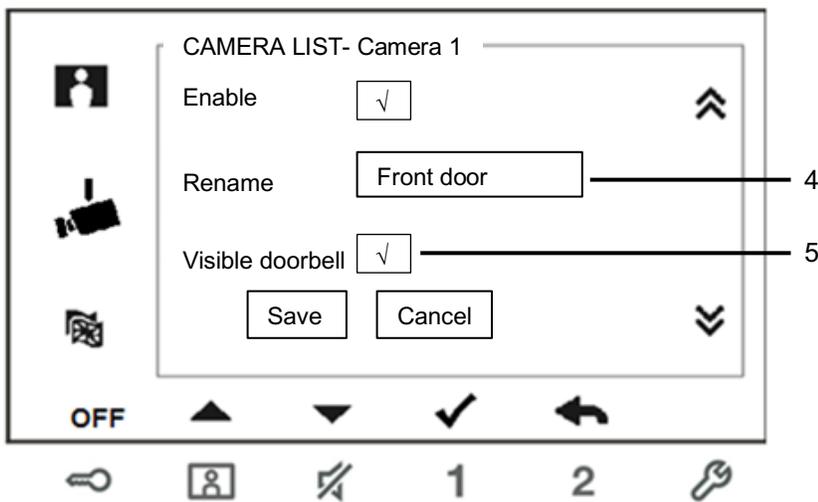
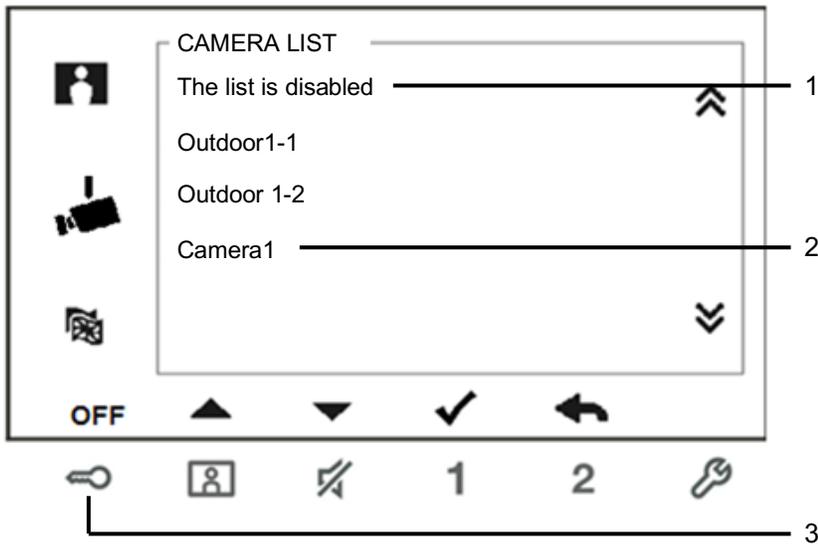


Fig. 20: History review

No.	Functions
1	<p>Up to 100 events can be recorded in the history menu.</p> <p>-If the snapshot function is enabled, an icon is displayed. If the snapshot function is not enabled, the icon is not displayed.</p> <p>-Date, time and type of event are recorded together with the snapshot.</p> <p>-Directions:  indicates dialed calls   indicates received calls   indicates missed calls</p>
2	<p>Press this button to view details of this event.</p> <p>Two photos are always taken when a visitor rings the bell.</p>
3	<p>Press this button to delete a recorded item.</p>

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## 4.3.14 Camera list



No.	Functions
1	Display the status of the camera list. When the camera is enabled, the user can make a surveillance according to this camera list, and the user can also modify this camera list.
2	Display the cameras from camera interface.
3	Press this button to enable or disable the camera list. Default is set as disable.
4	To set name of the camera. (1-14 characters) The characters can only be number or letters.
5	This option can only be set when camera interface (mode=4) is associated with this indoor station. Only one camera can be set as available. When the doorbell is pressed, the image from the camera connected to the camera interface will display on the indoor station.

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## 4.3.15 Language settings

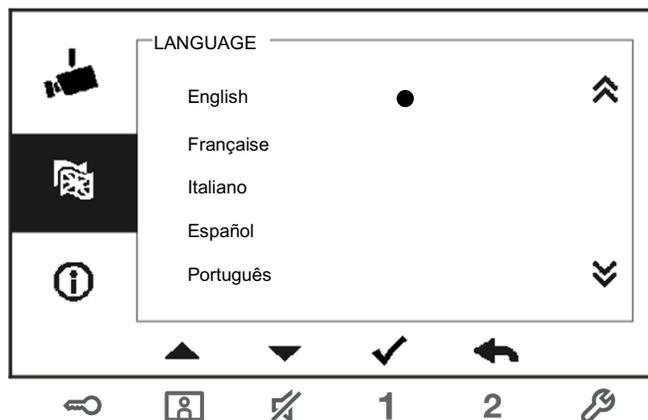


Fig. 21: Language settings

## 4.3.16 Information

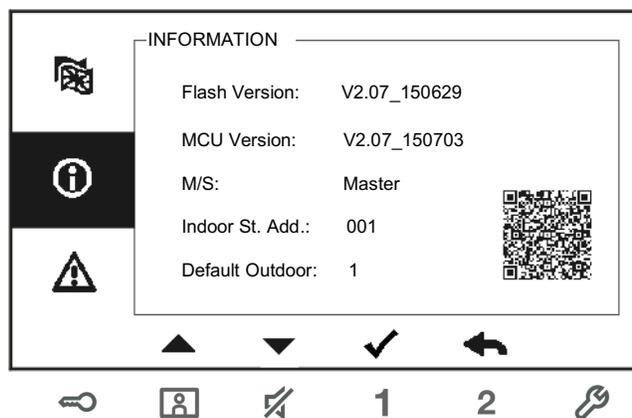


Fig. 22: Information

Information for outdoor station. (Scan QR code to access detailed instructions for the indoor station.)

4.3.17 Reset factory default

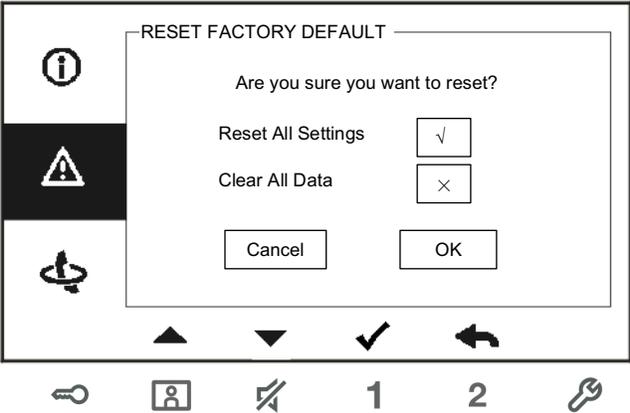


Fig. 23: Reset factory default

No.	Functions
1	Reset all settings: Reset the device and restore all default configurations. The operation does not delete the programmed data or history, such as intercom lists and switch actuator lists.
2	Clear all data: Delete all programmed data and history. Also, all configurations will be restored to factory default settings.

4.4 Cleaning



Caution

**Risk of damage to the screen surface.**

The screen surface can be damaged by hard or sharp objects!

Never use such objects for entries on the touch screen monitor.

- Use your finger or a plastic stylus.

The screen surface can be damaged by cleaning fluids or abrasive agents!

- Clean the surfaces using a soft cloth and commercially available glass cleaner.
- Never use abrasive cleaning agents.

4.5 Adjusting the device

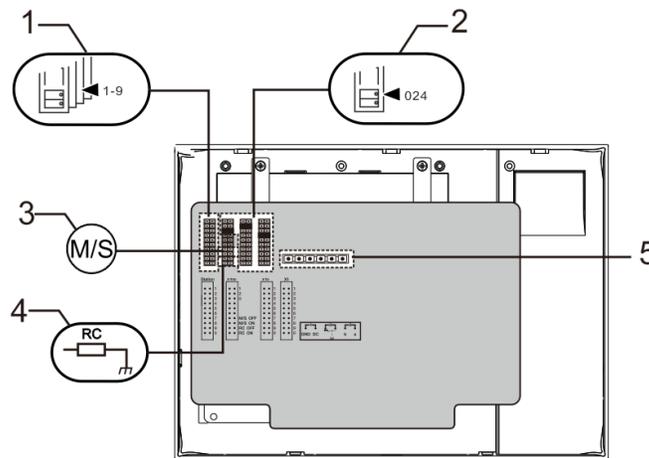


Fig. 24:

- 1. Station**  
Jumper to set the address of default outdoor station.
- 2. X100 X10 X1**  
Jumper to set the address of the indoor station.  
EXAMPLE: setting address 024.
- 3. Master or slave function**  
Only one indoor station in each apartment should be set as "master." (Jumper should be set as "M/S on.") All additional indoor stations in the same apartment must be set as "slave." (Jumper should be set as "M/S off.")
- 4. Terminal resistor**  
In video installations or mixed audio and video installations, the jumper must be set as "RC on" on the last device of the line.
- 5. a b = Bus connection**  
 = Doorbell connection  
**DC GND** = Additional power supply

## 5 Technical data

<b>Designation</b>	<b>Value</b>
Display resolution:	480 x 272
Display size:	4.3"
Operating temperature	+14 °F to +131 °F
Storage temperature	-40 °F to +158 °F
Protection	IP 30
Single-wire clamps	2 x 22 AWG - 2 x 18 AWG
Fine-wire clamps	2 x 22 AWG - 2 x 18 AWG
Bus voltage	20 V - 30 V
Size	5.67"x 7.80" x 1.77"

## 6 Mounting and installation



### Warning

#### **Electric voltage!**

Direct or indirect contact with live components can cause dangerous currents to flow through the body, which may result in electric shock, burns or even death.

- Always disconnect the main power supply prior to installation and/or disassembly.
- Work on the 110 V - 240 V supply system must be performed only by qualified personnel.

### 6.1 Requirements for the electrician



### Warning

#### **Electric voltage!**

Install the device only if you have the necessary qualifications.

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

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

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

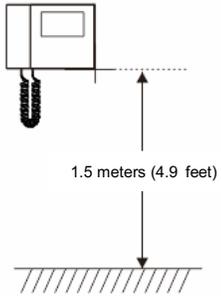
### 6.2 General installation instructions

- Terminate all branches of the wiring system via a connected bus device (e.g., indoor station, outdoor station, system device).
- Do not install the system controller directly next to the bell transformer or other power supplies (to avoid interference).
- Do not install the wires of the system bus together with 100 V - 240 V wires.
- Do not use common cables for the connecting wires of the door openers and wires of the system bus.
- Avoid bridges between different cable types.
- Use only two wires for the system bus in a four-core or multi-core cable.
- When looping, never install the incoming and outgoing bus inside the same cable.
- Never install the internal and external bus inside the same cable.

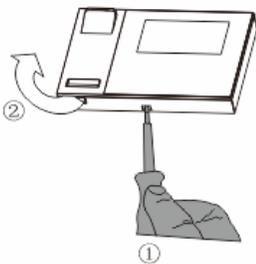
# ABB Welcome<sup>®</sup>

## 6.3 Mounting

### Recommended installation height

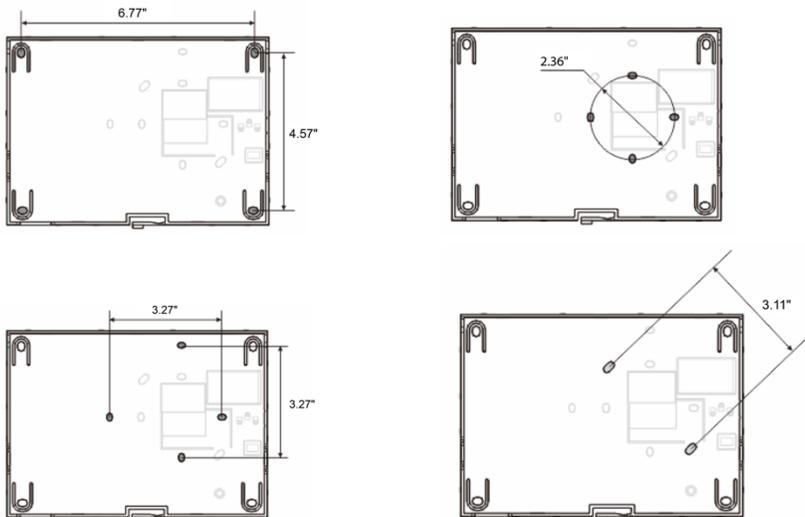


### Dismantling



Open the housing of the panel by pulling the clamp at the bottom of the device.

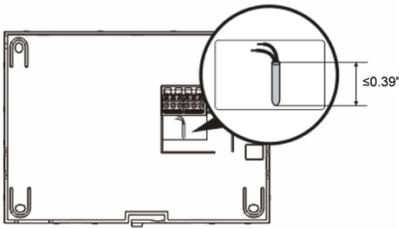
### Installation dimensions



1. The bottom of the device has screw holes for fastening on the wall according to the illustrations above.
2. In addition, the bottom of the device can be affixed to an existing flush-mounted box. The dimensions of a compatible flush-mounted box are shown in the illustrations above.

# ABB Welcome<sup>®</sup>

## Wiring

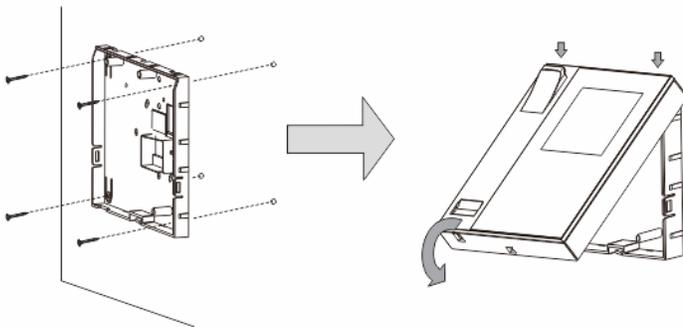


Affix the bottom of the device and connect it according to the illustration. The insulated section of the cable end must not be longer than 0.39".

## Settings

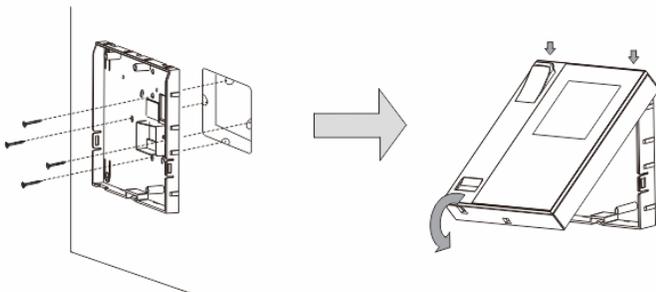
Set addresses of the preferred outdoor stations and the address of the indoor station on the jumper. (See Chapter 4.5, Adjusting the device.)

## Mounted on the wall



1. Affix the bottom of the device to the wall.
2. Latch the upper part of the device onto its bottom part. Place the upper side of the device on the lock-in lugs, and then press the bottom side onto the bottom part of the device until the clamp catches.

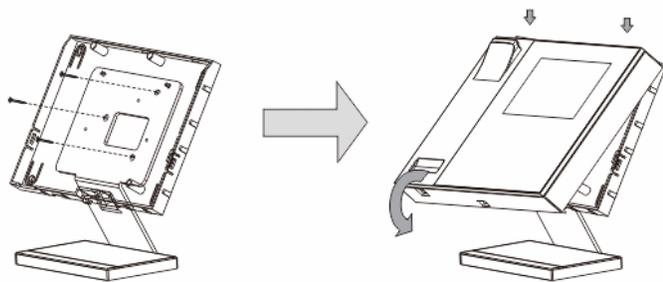
## Mounted with flush-mounted box



1. Affix the bottom of the device to an existing flush-mounted box.
2. Latch the upper part of the device onto its bottom part. Place the upper side of the device on the lock-in lugs, and then press the bottom side onto the bottom part of the device until the clamp catches.

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## Mounted with desktop bracket



1. Affix the bottom of the device to the desktop bracket.
2. Latch the upper part of the device onto its bottom part. Place the upper side of the device on the lock-in lugs, and then press the bottom side onto the bottom part of the device until the clamp catches.

The installation of the indoor station is now complete.

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**ABB Inc.**

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