# ABB-Welcome M

M25102xC M25102xA-x-M25102xPx. M25102xK-x. M25102xCR. 5102xDN Outdoor station



# ABB-Welcome

1	Safety.		3
2	Intende	d use	3
3	Environ	ment	3
	3.1	ABB devices	3
4	Termina	al description	5
	4.1	Audio module	5
	4.1.1	Lock connected with terminals 3&4	8
	4.2	Camera module	g
	4.2.1	Analog camera connected with terminal 1	10
	4.2.2	Detached camera connection	
	4.3	Push button module	12
	4.4	Keypad module	13
	4.5	Display and card reader module	
	4.6	Nameplate module	17
5	Operati	on	18
	5.1	Pushbutton outdoor station	18
	5.1.1	Addressing	18
	5.1.2	Setting the language for the voice messages	
	5.2	Pushbutton Outdoor Station with display module	
	5.3	Pushbutton Outdoor Station with keypad module	25
	5.4	Keypad outdoor station	27
	5.4.1	Call a resident (3 types)	27
	5.4.2	Call the guard unit	28
	5.4.3	If an indoor station is in "leave home mode"	29
	5.4.4	If a guard unit is in "intercept mode"	29
	5.4.5	System settings	30
	5.5	Keypad outdoor station without display	
	5.5.1	Calling a resident, just input physical address	
	5.5.2	Call guard unit	
	5.5.3	System settings	39
6	Advanc	ed configuration	41
7	Technic	cal data	42
8	Mountir	ng / Installation	43
	8.1	Requirements for the electrician	
	8.2	General installation instructions	
	8.3	Mounting	45

# 1 Safety



## Warning

#### Electric voltage!

Risk of death and fire due to electrical voltage of 100-240 V.

- Work on the 100-240V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

#### 2 Intended use

The outdoor station is an integral part of the ABB Welcome door communication system and operates exclusively with components from this system. The device must only be used with suitable ABB flush-mounted installation sockets and rain hood.

# 3 Environment



#### Consider the protection of the environment!

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

The device contains valuable raw materials which can be recycled.
 Therefore, dispose of the device at the appropriate collecting depot.

#### 3.1 ABB devices

All packaging materials and devices from ABB bear the markings and test seals for proper disposal. Always dispose of the packing materials and electric devices and their components via the authorized collection depots and disposal companies.

ABB products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU-Directive 2002/96/EG WEEE and 2002/95/EG RoHS)

(EU-REACH ordinance and law for the implementation of the ordinance (EG)  $\,$ 

No.1907/2006)

# 4 Terminal description

# 4.1 Audio module

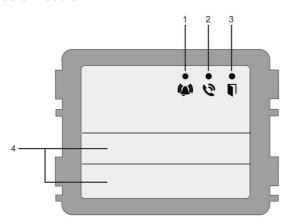


Fig. 1 Terminal description

No.	Function
1	LED flashes slowly, indicating a call established
	LED flashes fast, indicating that the system is busy
2	LED illuminates, indicating possible communication.
3	LED illuminates, indicating the door is unlocked
4	Call pushbuttons

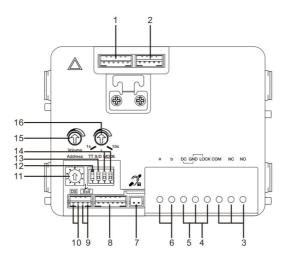


Fig. 2 Terminal description

No.	Functions
1	Connector for camera module
2	Connector for device software update
3	Plug-in clamps (COM-NC-NO) for floating output, door opener (30VAC/DC 1A)
4	Plug-in clamps (Lock-GND) for door opener (18V 4A impulsive, 250 mA holding)
5	Plug-in clamps (DC-GND) for additional power supply
6	Plug-in clamps (a-b) for Bus connection
7	Connector for induction loop module
8	Connector for next module
9	Connector for exit push button
10	Connector for sensor for checking the door status
11	Rotary switch for setting the address of OS (1-9)
12	Set feedback tones for push buttons: ON/OFF
13	Configure push buttons in a single column or double column mode (ON= double column; OFF= single column)
14	Configure functions of the 1st / 2nd push button.
	3->OFF, 4->OFF=call indoor station/call indoor station;
	3->ON, 4->OFF=switch on lighting / call indoor station;

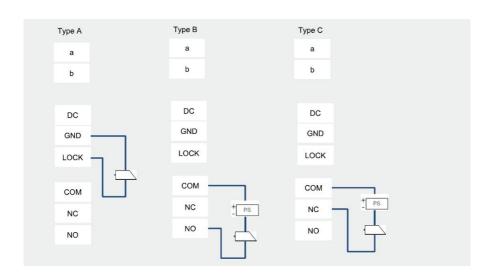
# ABB-Welcome M

# **Terminal description**

	3->OFF, 4->ON=call guard unit / call indoor station;
	3->ON, 4->ON=switch on lighting / call guard unit.
15	Adjust the loudspeaker volume.
16	Adjust the door lock release time, 1-10s (available for the
	lock connected with the Lock-GND)

# 4.1.1 Lock connected with terminals 3&4

Lock type	Pic	Operation type	Voltage	Wiring
Electric Strike Lock, 12V	0 0	Power supply to open.	12V DC/AC	Type A Type B
Electric Strike Lock, 24V	0 0	Power supply to open.	24V DC/AC	Туре В
Electric Rim Lock, 12V		Power supply to open.	12VDC	Type A Type B
Electric mortise lock	11	Power on to close.	12VDC	Type C
Magnetic lock		Power on to close.	12/24VDC	Type C



# 4.2 Camera module

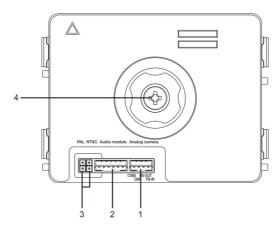


Fig. 3 Terminal description

No.	Functions
1	Connector for additional analog camera
2	Connector for audio module
3	Jumper for setting the video format: PAL /NTSC
4	Adjust the camera view area

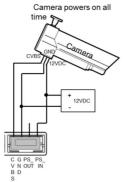
### 4.2.1 Analog camera connected with terminal 1

All the cameras with the video output of 1Vp-p  $75\Omega$  ,CVBS (composite video broadcast signal) can be connected with the camera module.

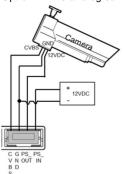
Generally, the transmission distance from analog camera to the outdoor station can reach up to 50 meters by Coax cables or about 10 meters by other types of cables.

#### Two types of connections:

Option 1: The analog camera is powered on all the time

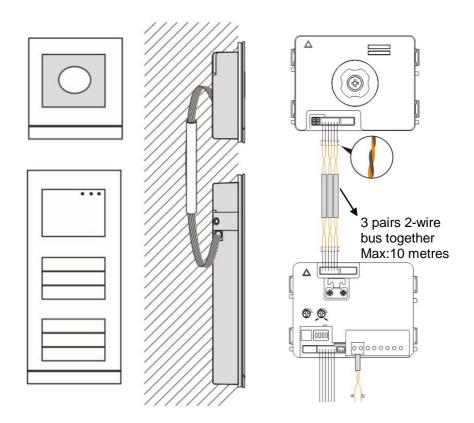


Option 2: The analog camera is powered on only during working hours



#### 4.2.2 Detached camera connection

Camera module can be used as a detached camera, and the wiring is shown in below.



# 4.3 Push button module

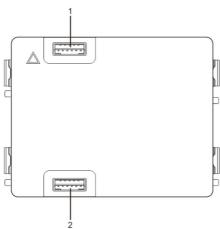


Fig. 4 Terminal description

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

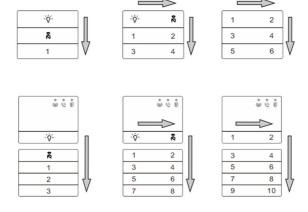


Fig. 5 Terminal description

No.	Functions
1	Regardless of the structure of the push button module, the button numbers are listed from the top to bottom and from left to right (in the double column mode)
2	Lighting switch / call guard unit function is always assigned to the 1st/2nd button.
3	User names can be printed by the labelling tool of the Welcome M configuration software.



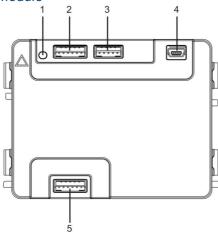
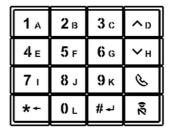


Fig. 6 Terminal description

No.	Functions
1	Program button
2	Connector for previous module
3	Connector for device software update
4	USB connector for the connection to the PC : download/upload the configuration
5	Connector for next module





Pic 1 Pic 2

Fig. 7 Terminal description

I

No.	Functions
1	Call resident
	A visitor inputs an indoor station number (001) or apartment number (e.g.
	0101, programmed in advance) to call a resident.
	*Also, the visitor can select a resident name with the button $ riangle$ or the
	button of the accompanying display module to make a call.
	Meanwhile, pressing the button 🗺 can cancel the call.
	*This function is only available in Pic1.
2	Calling the guard unit
	A visitor can call a guard unit by pressing the button if the guard unit is
	available in the system.
3	Unlocking by password
	Press" + password+ to release the lock connected with terminals
	"LOCK-GND" of the audio module.
	Press " +2 + + + password + + " to release the 2nd-lock connected
	with terminals "COM-NC-NO" of the audio module.
	The initial password is 123456 and residents can set their own customized
	password with indoor stations.
4	System engineering configuration
	Press " #+ + system password + #+ " to enter the system
	engineering configuration menu.
	The initial system password is 345678 and it can be modified by the
	administrator.

# 4.5 Display and card reader module

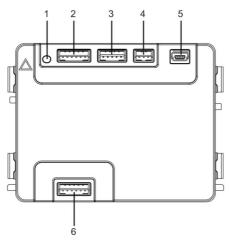


Fig. 8 Terminal description

No.	Functions
1	Program button
2	Connector for previous module
3	Connector for device software update
4	Connector for Wiegand output
5	USB connector for connecting to the PC: download/upload the configuration
6	Connector for the next module



Fig. 9 Terminal description

No.	Functions
1	LCD display
2	Support ID or IC card.
	Swipe the registered card to release the door lock. The card can be
	programmed through the module itself, or using a PC to download the
	program file. (M251021CR is accompanied with an ID card reader, while
	the M251022CR is accompanied with an IC card reader.)
3	Support Wiegand output.
	The default Wiegand format is 26 bits but it can also be extended to 34
	bits.

<sup>\*</sup>The display module must be connected after audio module.

### Technical Specification:

M251021CR: Display module with ID card reader

Work	125KHz
Frequency	
Standard	ISO18000-2
Support	EM4100, EM4205, EM4305, EM4450, TK4100, T5567 / T5577 Compatible
card	HID 2
Output	Wiegand 26, 34bit
format	

#### M251022CR: Display module with IC card reader

Work	13.56MHz
Frequency	
Standard	ISO 14443A
Support	Mifare One S50/S70,etc.
card	
Output	Wiegand 26, 34bit
format	

# 4.6 Nameplate module

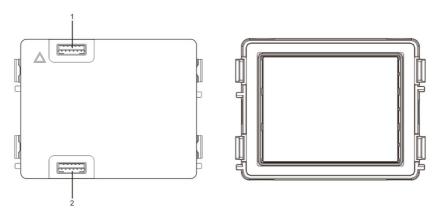


Fig. 10 Terminal description

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

Labeling of the nameplate module can be printed by the labelling tool of the Welcome M configuration software.

# 5 Operation

# 5.1 Pushbutton outdoor station



Fig. 11 Pushbutton outdoor station

# 5.1.1 Addressing

# 1. Configure functions of the 1st / 2nd push button

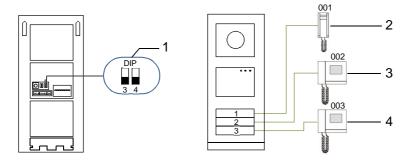


Fig. 12 Addressing

No.	Functions
1	3->OFF, 4->OFF
2	Call apartment 01
3	Call apartment 02
4	Call apartment 03

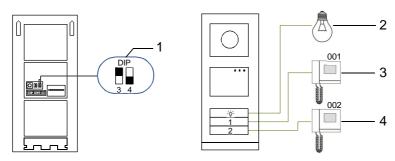


Fig. 13 Addressing

No.	Functions
1	3-> ON, 4->OFF
2	Switch on light. The light is connected with a switch actuator, and the address of the switch actuator must be same as the address of this outdoor station.
3	Call apartment 01
4	Call apartment 02

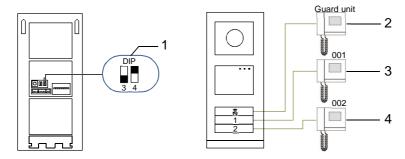


Fig. 14 Addressing

No.	Functions
1	3-> OFF, 4-> ON
2	Call the guard unit. If there are multiple guard units in the same section, all guard units will ring at the same time when a visitor presses the button "call guard unit".
3	Call apartment 01
4	Call apartment 02

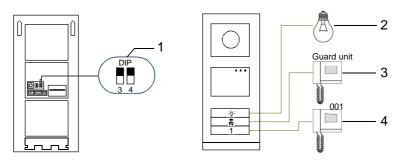


Fig. 15 Addressing

No.	Functions
1	3-> ON, 4-> ON
2	Switch on lights
3	Call guard unit
4	Call apartment 01

# 2. Configure push button in a single column or double column modes

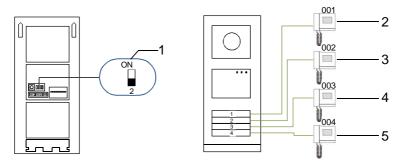


Fig. 16 Addressing

No.	Functions
1	2-> OFF
2	Call apartment 01
3	Call apartment 02
4	Call apartment 03
5	Call apartment 04

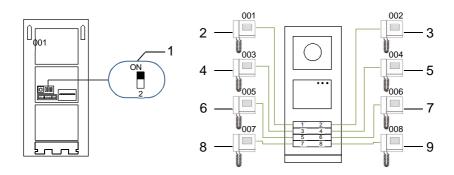


Fig. 17 Addressing

No.	Functions
1	2-> ON
2	Call apartment 01
3	Call apartment 02
4	Call apartment 03
5	Call apartment 04
6	Call apartment 05
7	Call apartment 06
8	Call apartment 07
9	Call apartment 08

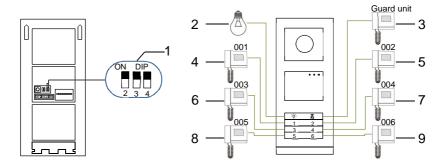


Fig. 18 Addressing

I

No.	Functions
1	2-> ON,3-> ON, 4-> ON
2	Switch on lights
3	Call the guard unit
4	Call apartment 01
5	Call apartment 02
6	Call apartment 03
7	Call apartment 04
8	Call apartment 05
9	Call apartment 06

# 5.1.2 Setting the language for the voice messages (if the audio module has a speech synthesis function)

If the audio module with a speech synthesis function (M251024A-.) is assembled, the local language can be set.

Set OS address as "0", hold the 1st button for 3s to play the voice message.

Click on this button to select the language one by one.

After choosing the right language, hold this button to save and exit the setting.

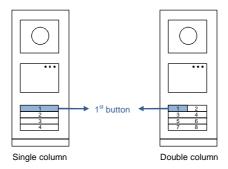


Fig. 19 Addressing

#### Pushbutton outdoor station used as gate station

If pushbutton outdoor station is set as a gate station, gateway as an important system device must be used and it must be set as floor gateway mode.

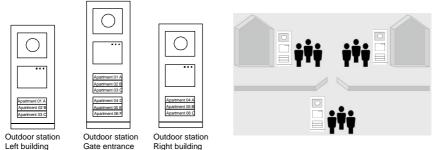


Fig. 20

Detailed information please refer to "Gateway "user manual, floor gateway chapter.

# 5.2 Pushbutton Outdoor Station with display module

The Display and card reader module can be assembled with a push button outdoor station and the user can swipe cards to open the door. For such combination, a master card is needed for an electrician to manage this outdoor station.

Register a master card/deactivate master card (we recommend that this work is carried out by specialized personnel):

- 1. Disconnect the power supply.
- 2. Reconnect the power
- Hold the "program button" for 5s to enter "program master card" interface within 30s.
- 4. Any card swiped by the reader during this time will be taken to be the new MASTER card. A prompt "Register master card successfully" will appear on the screen.
- If the card exists, when you swipe it again, the information will be deleted, and a prompt "Delete master card successfully" will appear on the screen.

Only 1 master card can be registered.



Fig. 21

Enter system setting using master card:

- 1. Swipe the MASTER card to enter the setting menu. Three LEDs will turn on.
- 2. 6 options:

Program Card;

Language;

Wiegand Output;

Choose Door

Date & Time:

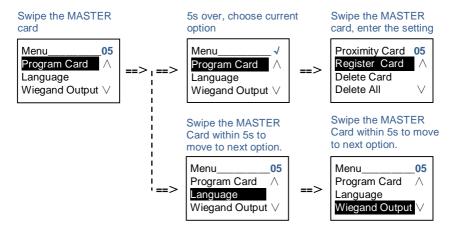
Back

There is a 5s countdown for each option.

3. Swipe the MASTER card again within 5s to change to the next option.

Or, 5s over, the current option will be chosen.

4. 30s Over, to exit the settings menu.



## 5.3 Pushbutton Outdoor Station with keypad module

The keypad module can be assembled with a push button outdoor station, and users can enter the password to open the door.

Users can enter the system settings menu by the following steps (during setting, press "#" to confirm, press "\*" to cancel, the default system password is 345678):

Set the device as an Outdoor Station or a Gate Station



Fig. 22

#### **Outdoor Station:**

#\* system password # =>
1 # => 1 #
Gate Station:
#\* system password # =>
1 # => 2 #

2. Modify "system password"

#\* system password # =>

2 # => Enter new password (6-8 bits) # => Enter the password again #

3. Modify "door open code"

```
#* system password # =>
3# => Enter new door open code (6-8 bits) # => Enter the code again #
```

4. Set the voice message

If the audio module with the speech synthesis function (M251024A-.) is assembled, the local language can be set.

```
#* system password # =>
4# => Press 	☐ or 	☐ to choose the language => #
```

5. Enable/disable access control function

**Enable access control function:** 

```
#* system password # =>
5# => 1 #
Disable access control function:
#* system password # =>
5# => 2 #
```

#### \*Reset the system password of keypad module:

It is possible to reset the system password to factory-setting if you have forgotten it. The restoration of default factory settings does not delete the rest of the information programmed on the system, such as user names and other settings.

- Disconnect the power supply.
- 2. Reconnect the power
- 3. Hold the "program button" for 5s within 30s.
- 4. A "di" will be sounded and the system password will be reset to the default (345678).

## 5.4 Keypad outdoor station

# 5.4.1 Call a resident (3 types)

#### 1. By physical address

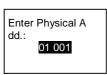
Physical address is the internal code which the outdoor station will send through the bus connection to indoor stations or other devices in the system. For each apartment, physical address means the address of an indoor station which is installed in the apartment. For each building, physical address means the address of a gateway which is installed for each building, and it is also called the building number.



Fig. 23

In standby mode, a visitor can press the physical address corresponding to the residence that you want to call directly, from 001 to 250.

For a complex building, a visitor needs to press the building number (01~60) + physical address (001~250) or make a call in the gate station.



#### 2. By logic address

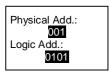
Logic address is a code that a visitor can press to make a call. The code must be assigned first and then associated with the physical address.

The apartment No. or some special codes can be used to set the logic address, which is easy for the users to remember.

Set the logic address by taking the following steps:

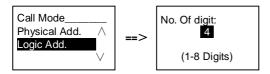
Assign the logic address:

#\* system password # => system setting => Address Book => Add => Logic Add



Turn on the "logic address" call mode

#\* system password # => system setting =>
Configuration => Call mode



#### 3. By resident name

(Remarks: this function is only available for the outdoor station with a keypad module (M251021K-.).)

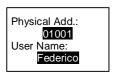
In the standby mode, press the button  $\triangle$  or the button  $\checkmark$  to display resident names. Use the buttons  $\triangle$  and  $\checkmark$  to search for the desired residential station and press the button  $\checkmark$  to make a call.

Also, a visitor can enter the resident name with a keypad directly to make a call.

Resident names must be assigned first and then associated with the physical address.

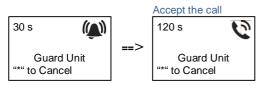
#\* system password # => system setting

=> Address Book => Add => Contact List



## 5.4.2 Call the guard unit

Press the button 🐧 to make a call to a guard unit.



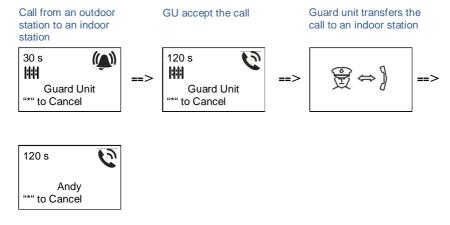
#### 5.4.3 If an indoor station is in "leave home mode"

If an indoor station works in the "leave home mode", a visitor can record a message for the resident after entering the following interface.



#### 5.4.4 If a guard unit is in "intercept mode"

If a guard unit works in the "intercept mode", the call from an outdoor station to an indoor station will be intercepted by the guard unit and after the identity is confirmed, the guard unit will forward the call to the indoor station.

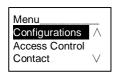


## 5.4.5 System settings

(During setting, press "#" to confirm, press "\*" to cancel, default system password is 345678):

1. Enter the system setting menu

#\* system password #

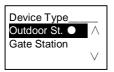


- 2. Configurations
  - (1) Set the device as an Outdoor Station or a Gate Station.

**Outdoor Station:** 

#\* system password # =>

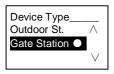
Configurations # => Device Type # => Outdoor St. # (Default)



#### **Gate Station:**

#\* system password # =>

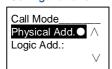
Configurations # => Device Type # => Gate Station #



(2) Set the call mode: make a call by a Physical Address or a Logic Code Set the call mode by Physical Address:

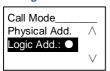
#\* system password # =>

Configurations # => Call mode # => Physical Address #



Set the call mode by a Logic Code , No. of digits (1-8 digits):

#\* system password # =>
Configurations # => Call mode # => Logic Code #



#### (3) System password setting

Modify the system password

#\* system password # =>

Configurations # => System code # => Modify #



#### Reset the system password

#\* system password # =>

Configurations # => System code # => Reset #



#### 3. Access control

(1) Door open code

The password can be set as 6-8 digits. The default door open password is  $\frac{1}{2}$ 

"123456", and it can be changed with an outdoor station.

Meanwhile, users can set their own passwords with indoor stations, totally, 6000 passwords can be stored.

# Set the door open password ON/OFF (default: 123456) #\* system password # => Access Control # => Door open code # => Enable / Disable # Door Open Code Disable Modify Done!

#### Modify the door open password

#\* system password # =>

Reset

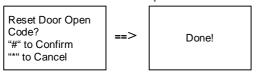
Access control # => Door open code # => Modify #



#### Reset the door open password

#\* system password # =>

Access control # => Door open code # => Reset #



(2) Proximity card (3000 cards can be registered for outdoor station.)

#### Register cards:

#\* system password # =>

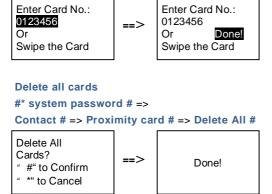
Access control # => Proximity card # => Register card #



#### Delete cards:

#\* system password # =>

Access control # => Proximity card # => Delete card #



- 4. Contact(3,000 names of the combination of 24 alphanumeric characters)
  - (1) Add

Add the contact by user names

#\* system password # =>
Contact # => Add # => User Names #

Physical Add.:
001
User Name:
Alexander.G

Resident names must be associated with physical address.

```
Add the contact by logic address

#* system password # =>
Contact # => Add # => Logic add. #

Physical Add.:
001
Logic Add.:
0101
```

Logic address must be associated with physical address.

(2) Modify
Modify contact by user names
#\* system password # =>

#### Contact # => Modify # => User Names #



Modify the resident names and its corresponding physical address.

# Modify contact by logic address #\* system password # => Contact # => Modify # => Logic add. # Enter Logic Add.: 0101

Modify the logic address and its corresponding physical address using the alphanumeric keypad.

### (3) Delete

0101

Delete the contact by user names

#\* system password # =>

Contact # => Delete # => User Names #



Delete the contact by logic address

#\* system password # =>
Contact # => Delete # => Logic add. #

Enter Logic
Add.:

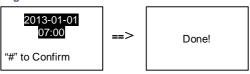
# (4) Clear all #\* system password # => Contact # => Clear all # Delete All Names? # #" to Confirm " \*" to Cancel

Clear all lists including resident names and logic address entries from this menu.

- 5. System setting
  - (1) Date and time

#\* system password # =>

Settings # => Date & time # => Enter time and date => #

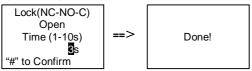


(2) Door Open Time

#\* system password # =>

Settings # => Door Open Time # => Time 1-10s (default: 3s) => #

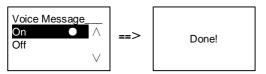
Lock(NC-NO-C) means the lock connected with COM-NC-NO terminals.



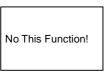
(3) Setting the voice message on/off

If the audio module with the speech synthesis function (M251024A-.) is assembled, the speech synthesis function can be enabled or disabled. Meanwhile, the local language can be chosen, too.

```
#* system password # =>
Settings # => Voice message #
```



If the audio module is without the speech synthesis function, there will be an indication for users if entering this menu.

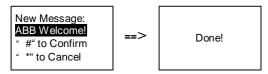


(4) Select language
#\* system password # =>
Settings # => Language #



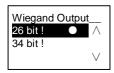
(5) Welcome msg.
#\* system password # =>

Settings # => Welcome Msg. #

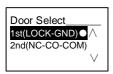


Max 64 characters can be entered.

(6) Setting the Wiegand output digits
#\* system password # =>
Settings # => Wiegand Output #



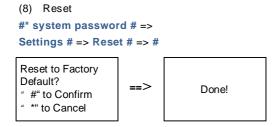
(7) Set the related door lock when swiping the card #\* system password # => Settings # =>Choose Door #



Setting the lock which will be released when swiping the registered card:

1st (LOCK-GND): the lock connected with the LOCK-GND terminals will be released when swiping the card.

2ND (NC-NO-COM): the lock connected with the NC-NO-COM terminals will be released when swiping the card.



Reset all settings to factory settings, but other information, e.g. user names, logic addresses and cards information cannot be reset.

(9) Information
#\* system password # =>
Settings # => Information #

View the software information of each modules of the outdoor station.

#### \*Reset the system password of keypad module:

It is possible to reset the system password to factory-setting if you have forgotten it. The restoration of default factory settings does not delete the rest of the information programmed on the system, such as user names and other settings.

- 1. Disconnect the power supply.
- 2. Reconnect the power
- 3. Hold the "program button" for 5s within 30s.
- 4. A "di" will be sounded and the system password will be reset to the default (345678).

# 5.5 Keypad outdoor station without display (Camera + audio+ keypad)

# 5.5.1 Calling a resident, just input physical address

In standby mode, a visitor can press the physical address corresponding to the residence that you want to call directly, from 001 to 250.

For a complex building, the visitor needs to press the building number (01~60) + physical address (001~250) to make a call from a gate station.

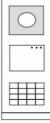
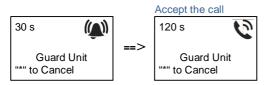


Fig. 24

# 5.5.2 Call guard unit

Press the button to make a call to a guard unit.



# 5.5.3 System settings

Users can enter the system settings by the following steps (during settings, press "#" to confirm, press "\*" to cancel. The default system password is 345678.):

1. Set the device as an Outdoor Station or a Gate Station.

**Outdoor Station:** 

#\* system password # =>

1 # => 1 #

**Gate Station:** 

#\* system password # =>

1 # => 2 #

2. Modify the "system password"

#\* system password # =>

2 # => Enter new password (6-8 bits) # => Enter the password again #

3. Modify the "door open code"

```
#* system password # =>
3# => Enter new door open code (6-8 bits) # => Enter the code again #
```

4. Setting the voice message

If the audio module with the speech synthesis function (M251024A-.) is assembled, the local language can be set.

```
#* system password # =>
4# => Press 	O or 	☐ to choose the language => #
```

5. Enable/disable the access control function

```
Enable access control function:
```

```
#* system password # => 5# => 1 #
```

Disable access control function:

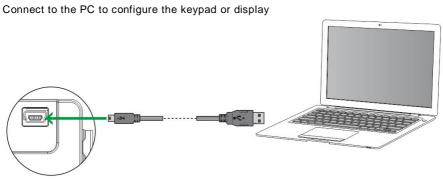
```
#* system password # => 5# => 2 #
```

#### \*Reset the system password of keypad module:

It is possible to reset the system password to factory-setting if you have forgotten it. The restoration of default factory settings does not delete the rest of the information programmed on the system, such as user names and other settings.

- 1. Disconnect the power supply.
- 2. Reconnect the power
- 3. Hold the "program button" for 5s within 30s.
- 4. A "di" will be sounded and the system password will be reset to the default (345678).

# 6 Advanced configuration



# 7 Technical data

1

Designation	Value
Operating temperature	-40 °C- +70 °C
Protection (cover frame	IP 54
assembled)	
Power supply, door opener	18V 4A impulsive, 250 mA holding
(Lock-GND)	
Floating output, door opener	30 V AC / DC 1A
(COM-NC-NO)	
Single-wire clamps	2 x 0,28 mm <sup>2</sup> – 2 x 1 mm <sup>2</sup>
Fine-wire clamps	2 x 0,28 mm <sup>2</sup> – 2 x 1 mm <sup>2</sup>
Bus voltage	20-30 V

# 8 Mounting / Installation



# Warning

#### Electric voltage!

Risk of death and fire due to electrical voltage of 100-240 V.

 Low-voltage and 100-240 V cables must not be installed together in a flush-mounted socket!
 In case of a short-circuit there is the danger of a 100-240 V load on

## 8.1 Requirements for the electrician

the low-voltage line.



# Warning

#### Electric voltage!

Install the device only if you have the necessary electrical engineering knowledge and experience.

- 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 is as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  - 1. Disconnect from power source;
  - 2. Secure against being re-connected;
  - 3. Ensure that there is no voltage;
  - 4. Connect to the earth:
  - 5. Cover or barricade adjacent live parts.
- Use 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 the ground, protective grounding, necessary additional
  measures, etc.).

#### 8.2 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 and other power supplies (to avoid interference).
- Do not install the wires of the system bus together with 100-240 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.

# 8.3 Mounting

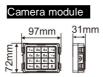


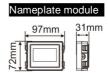


Prepare a pair of gloves to protect yourself from cutting.

#### Dimension

# Audio module 97mm 25mm





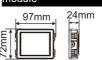
# Pushbutton module







# Display and card reader module



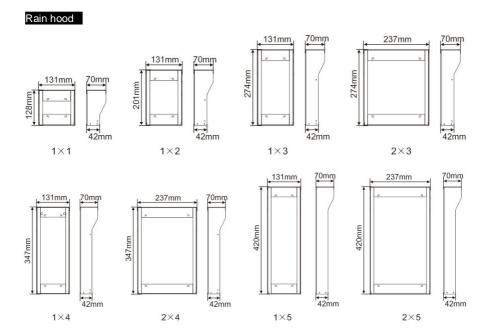
1×4

 $2\times4$ 

1×5

# Cover frame 19mm 19mm 19mm 125mm 201mm <sup>#</sup>3mm 3mm 3mm 1×1 $1 \times 3$ $2 \times 3$ $1 \times 2$ 19mm 420mm 347mm 347mm 3mm 1×4 $2\times4$ 1×5 2×5 Flush-mounted 115mm 264mm 3mm $1 \times 2$ 1×3 $2 \times 3$ 1×1 218mm 414mm 414mm 341mm 3mm

 $2 \times 5$ 



## **Components of the Outdoor Station**

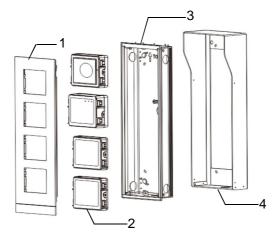


Fig. 26 Mounting

No.	Functions
1	Cover frame
2	Modules
3	Flash-mounted box
4	Rain hood

#### Mount each module at the cover frame

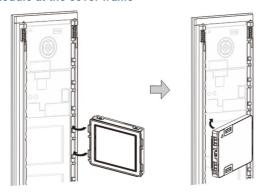


Fig. 27 Mounting

- Insert each module into the cover frame from behind until they click in place. All
  modules can be inserted, e.g. the camera module, audio module, push button
  module, keypad module, display and card reader module, nameplate module.
- 2. Pay special attention to the top to bottom orientation of each module.

#### **Modules wiring**

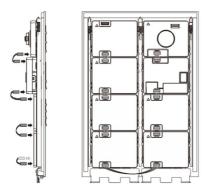
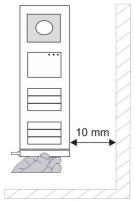


Fig. 28 Modules wiring

- 1. Use cables to connect the modules together one by one.
- 2. Ensure that the audio module is connected next to the camera module.

#### The distance zones for the installation of the outdoor station



When selecting the installation site ensure that the minimum distance to the right side is adhered to for the removal of the end strip.

#### Wires

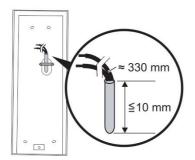


Fig. 29 Mounting

- 1. Prepare the installation box.
- 2. Strip the wires.
  - The insulated section of the cable end must not be longer than 10 mm.

#### Assemble the frame into the flush-mounted box

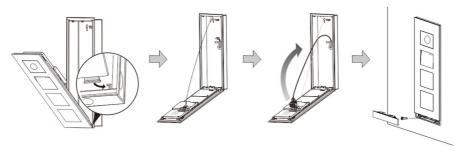


Fig. 30 Mounting

- 1. Hang the device in the installation box.
- 2. Fasten the safety loop.
- 3. Connect the wires into the enclosed clamp and plug the clamp onto the contact pins; Fold the device and shut it until it audibly snaps in.
- 4. Screw on the front of the device.

#### Three types of installation

Option 1: Flush-mounted only with a flush-mounted box

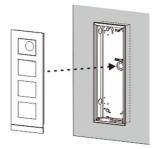


Fig. 31 Flush-mounted only with a flush-mounted box

#### Option 2: Flush-mounted with a rain hood

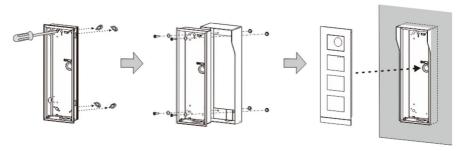


Fig. 32 Flush-mounted with a rain hood

Option 3: Surface-mounted with a rain hood

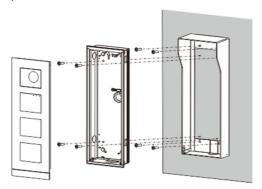


Fig. 33 Surface-mounted with a rain hood

## Dismounting outdoor station

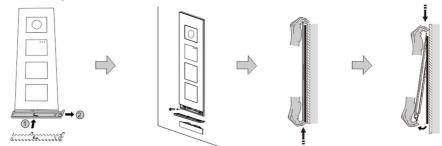


Fig. 34 Mounting

- 1. Use the enclosed mounting tool to remove the end strip.
- 2. Remove the screw that are used to fix the cover frame.
- 3. Push up and pull out the outdoor station on the bottom of the cover frame.

#### Dismount the modules

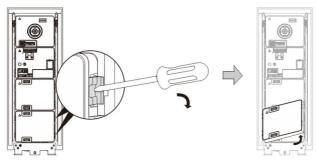


Fig. 35 Dismounting the modules

- 1. Dismount the module from one side of the module.
- 2. Take out the modules.

# Replace the name plates

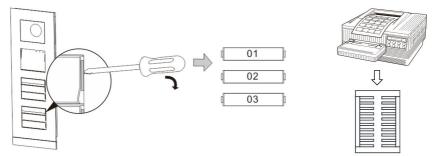


Fig. 36 Mounting

- 1. Remove the pushbutton cover and write the user names on the label.
- 2. \*Use a piece of labelling A4 sheet with software necessary for the correct format and print the labels.

## Adjust the angle of the camera

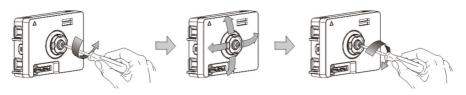
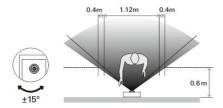
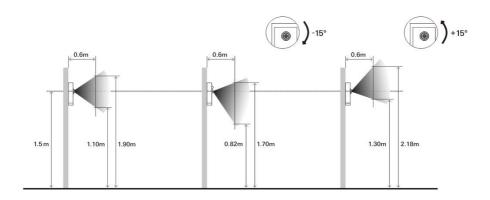


Fig. 37 Adjust the angle of the camera

- 1. Unscrew the camera;
- 2. Adjust the angle of the camera in 4 directions(up, down, right and left)
- 3. Screw on the camera.





#### Extension of the outdoor station

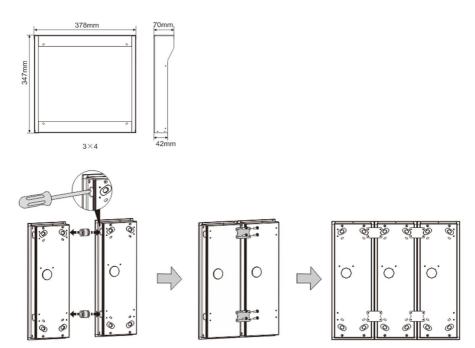


Fig. 38 Mounting

- 1. Make a hole for the cable.
- 2. Use the joining fixtures to assemble the flush-mounted boxes horizontally.
- 3. Run the connection wires between the boxes for modules connection.

<sup>\*</sup>The extension is useful for multi-outdoor stations connection.

#### **Notice**

We reserve the right to at all times make technical changes as well as changes to the contents of this document without prior notice.

The detailed specifications agreed to at the time of ordering apply to all orders. ABB accepts no responsibility for possible errors or incompleteness in this document.

We reserve all rights to this document and the topics and illustrations contained therein. The document and its contents, or extracts thereof, must not be reproduced, transmitted or reused by third parties without prior written consent by ABB.