

Technical Manual

ABB-Welcome

8317x-xxx-500

8317x-xxx-515

Keypad Module

Transponder Module

Fingerprint Module



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1 Safety



Warning

Electric voltage!

Risk of death and fire due to electric voltage of 230 V.

- » Work on the 230V 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 Welcome door communication system and operates exclusively with components from this system. The device must only be used with suitable ABB flush-mounted and surface-mounted installation sockets.

The outdoor station serves as end device for communication with the Welcome indoor stations.

The keypad module can be used as:

- Base key module of outdoor station,
- Stand-alone access control module.

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 Disposal

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

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

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006).

4 User Manual

Detailed information for planning Welcome systems is contained in the user manual. Download at www.Busch-Jaeger.com.

5 Operation

5.1 Standard operation

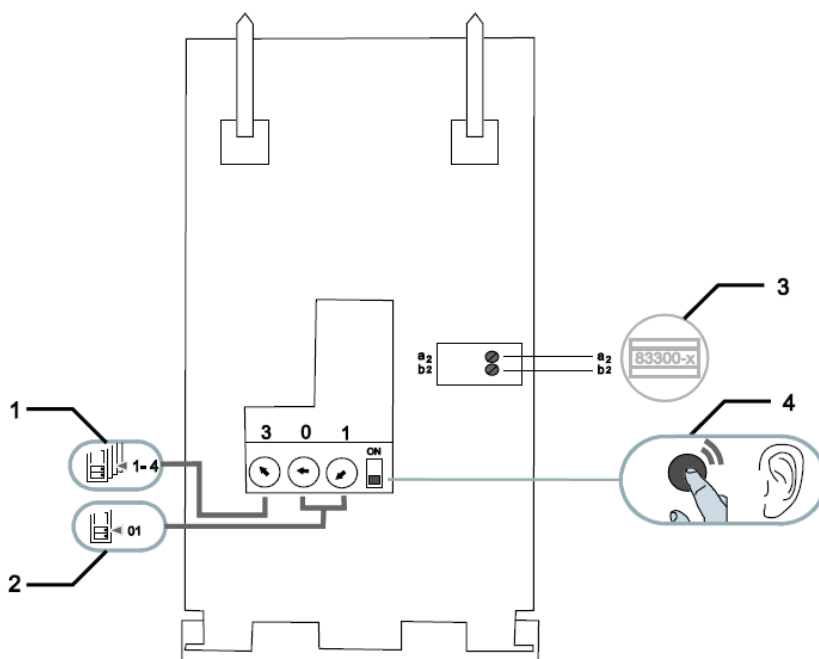


Fig. 1: Standard operation

No.	Function
1	The left potentiometer at an outdoor station indicates the address of this station. - See also chapter Addressing.
2	The next two potentiometers indicate the address of the topmost doorbell push-button of this station. The doorbell push-buttons below that are automatically numbered (consecutive). - See also chapter Addressing.
3	- Connection for the system controller - When using several outdoor stations: connection for the external bus
4	The sliding switch activates or deactivates the return sound when the doorbell push-button is pressed. <input type="checkbox"/> The return sound is switched on. <input checked="" type="checkbox"/> The return sound is switched off.

5.2 Keypad module operation

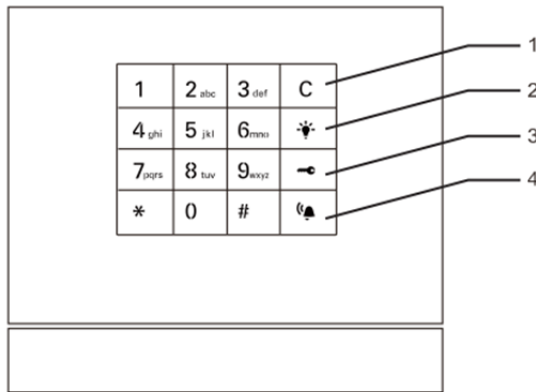


Fig. 2: Keypad module operation

No.	Function
1	Delete button
2	Light button
3	Door button
4	Call button

5.2.1 Initiate a call

If used in a building with one indoor station:	Press the Call button.
If used in a building with multi-indoor stations:	Input the room/office number. Press the Call button (only press the Call button can call the default).

5.2.2 Switch a light on

Switch default light:	Press the Light button. If successful, the green LED will on for 2 seconds, and tone will “di” for 1 second.
Switch one dedicated light:	Input * and the light address. Press the Light button. If successful, the green LED will on for 2 seconds, and tone will “di” for 1 second.

5.2.3 Open a door

Open a door:	Input the PIN code. Press the Unlock button. If successful, the green LED will on for 2 seconds, and tone will “di” for 1 second.
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Note...

Button "C" deletes an incorrect entry. The complete button combination must then be reentered.

5.3 Fingerprint module operation

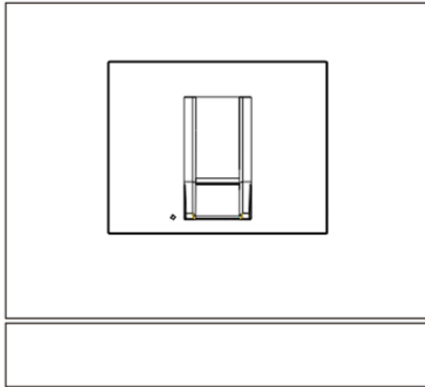


Fig. 3: Fingerprint module operation

5.3.1 Open a door

Open a door:	Swipe the enrolled fingerprint.
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5.3.2 Switch a light on

Switch default light:	Swipe the enrolled fingerprint.
Switch the light connected to the STPS:	Swipe the enrolled fingerprint within 5s after unlock.

* This operation is a by-product of open a door.

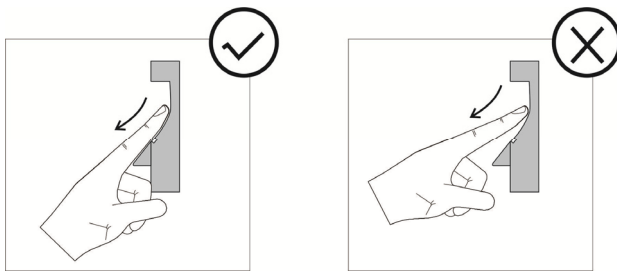


Note...

Above operation only can open a door or switch the light whose address is 1,2,3,4..

Special reminder for fingerprint module:**Swipe finger instruction**

1. Ensure you are standing in the most comfortable position before the fingerprint module.
2. Stretch out your target finger.
3. Press the upper section of the finger lightly on the sensor.
4. Swipe the finger flat over the sensor.
5. Please swipe your finger as following left picture shows.
6. Ensure the finger moves in a straight line without snaking and hesitation.
7. Do not move the finger too fast or too slowly

**Finger characteristics**

Following points should be noted before you decide to use one or more fingers:

1. If the finger with injuries, scars or unclear structure, please do not use this finger.
2. If the finger is too thick, please use the smaller one, such as small finger.
3. If the finger is too small, such as the user is a child, please use the thumb finger.
4. It's strongly suggested that at least 2 fingers in different hands should be enrolled for one user, just in case one finger(hand) is injured.

Causes of failure

1. The finger is too dry or dirty or injured or wet or moist or swollen.
2. The finger belongs to a child.
3. Swipe the finger with a steep angle, or too fast, or too slowly.
4. Press the finger on the sensor too lightly

5.4 Transponder module operation

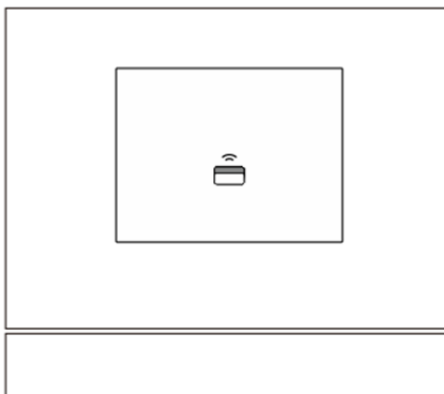


Fig. 4: Transponder module operation

5.4.1 Open a door

Open a door:	Swipe the enrolled card or mobile phone.
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5.4.2 Switch a light on

Switch default light:	Swipe the enrolled card or mobile phone.
Switch the light connected to the STPS:	Swipe the enrolled card or mobile phone within 5s after unlock.

* This operation is a by-product of open a door.



Note...

- » Above operation only can open a door or switch the light whose address is 1,2,3,4..
- » For some mobile phones, if it's failed to open a door, please turn off the screen of your mobile phone firstly, then swipe your mobile phone again.

5.5 Cleaning



Caution

Risk of damaging the surface of the device!

The surface of the device can be damaged by cleaning fluids or abrasive agents!

- » Clean the surfaces using a soft cloth and commercially available glass cleaner.

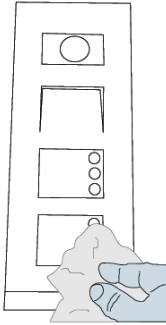


Fig. 5: Cleaning

6 Technical data

Designation	Value
Operating temperature	-25°C to +55°C
Protection	IP 44
Single-wire clamps	2 x 0.6 mm ² – 2 x 1 mm ²
Fine-wire clamps	2 x 0.6 mm ² – 2 x 0.75 mm ²
Bus voltage	28 V- ±2 V

7 Mounting / Installation



Warning

Electric voltage!

Risk of death and fire due to electric voltage of 230 V.

- » Low-voltage and 230 V cables must not be installed together in a flush-mounted socket!



Warning

Electric voltage!

- » The upstream fuse must be disconnected when working on the lighting system

7.1 Requirements for the electrician



Warning

Electric voltage!

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.

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

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 the power;
 2. Secure against being reconnected;
 3. Ensure there is no voltage;
 4. Connect to earth;
 5. Cover or barricade adjacent live parts.
- » Use suitable personal protective clothing.
- » Use only suitable tools and measuring devices.
- » Check the type of 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.).

7.2 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 230 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.

7.3 Mounting

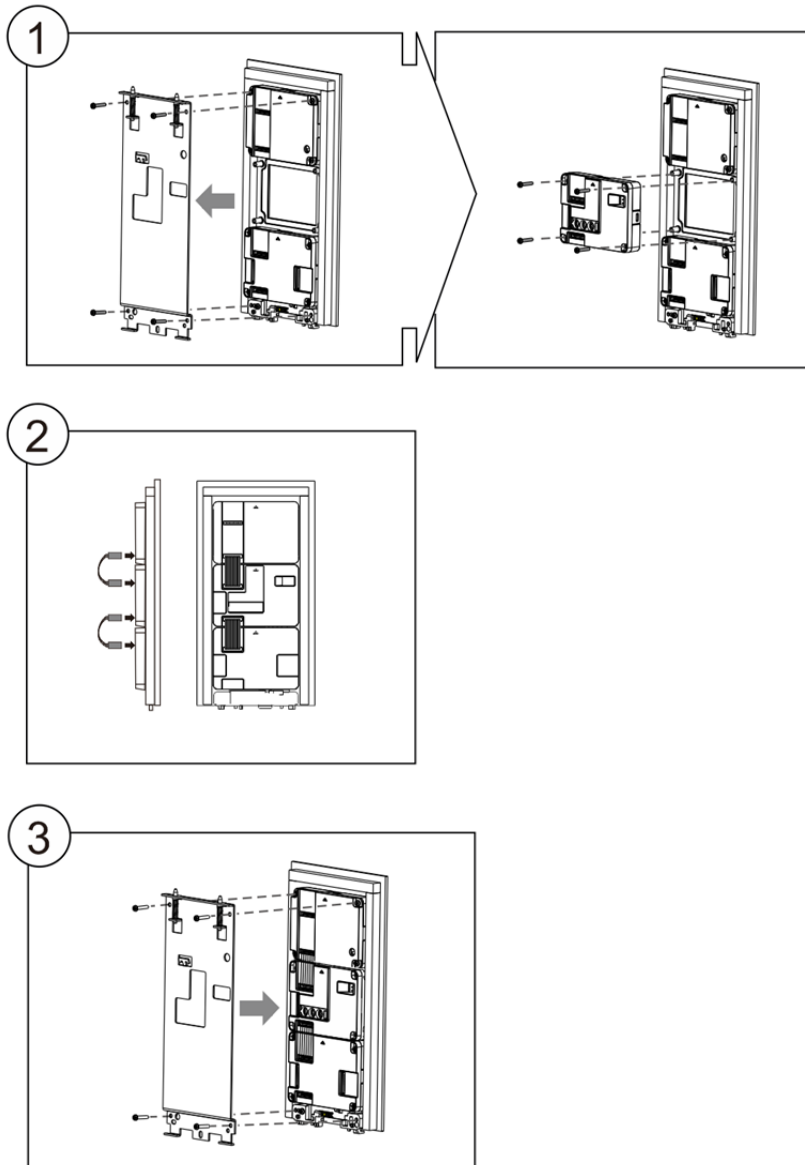


Fig. 6: Mounting

1. Unscrew the mounting plate and remove it.
Screw on the module.
2. Connect all modules using the 12-pin cable.
3. Install the mounting plate.

7.4 Connection

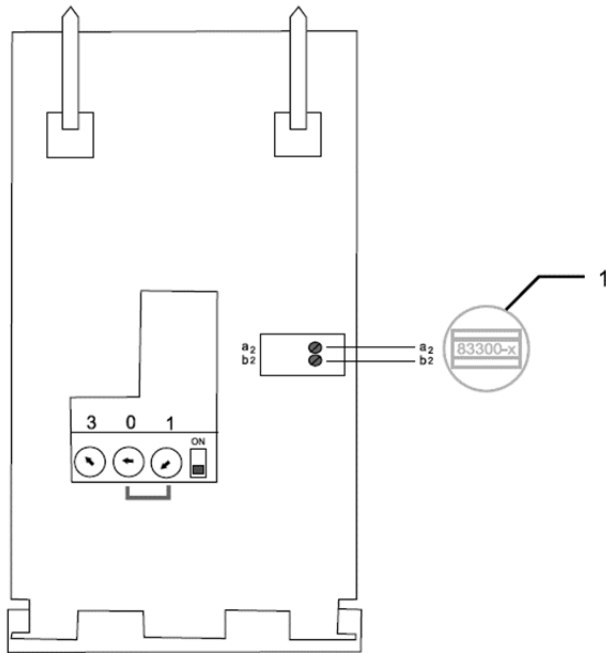


Fig. 7: Connection

No.	Function
1	<ul style="list-style-type: none"> - Connection for the system controller - When using several outdoor stations: connection for the external bus

8 Addressing

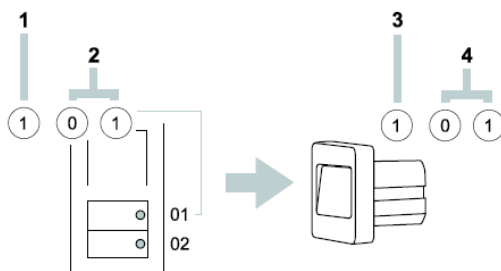
8.1 Addressing the stations

8.1.1 Potentiometer

Before installing as system, it must must be addressed.



- » For this "Addressing", three potentiometers have been fitted to the rear of the device.
- » The digits 0 to 9 can be set on each potentiometer.



Outdoor station:

- » The left potentiometer (1) at an outdoor station indicates the address of this station.
- » The next two potentiometers (2) indicate the address of the topmost doorbell push-button of this station.
- » The doorbell push-switches below that are automatically numbered (consecutive).

Indoor station:

- » The left potentiometer (3) of the indoor station indicates the address of the preferred outdoor station.
- » The next two potentiometers (4) indicate the address of this indoor station.

8.1.2 Setting the address of the outdoor station:

The allocation to one of the four inputs of the system is made on the outdoor stations and the associated switch actuators for door and light via the setting of the address.

For this the potentiometer house/outdoors is set on an address between 1 and 4. The potentiometer is located on the rear of the outdoor station or the front of the MDRC switch actuator.

8.1.3 Assigning the doorbell push-button of an outdoor station to an apartment

The doorbell push-buttons of an outdoor station are assigned to the apartments consecutively from top to bottom and left to right with the addresses 01, 02, etc.

This assignment applies equally to several outdoor stations in a system. This means that in Fig. 10 on page 18, in each outdoor station push-button A is assigned to apartment 01, etc.

This factory setting is fixed via two potentiometers on the rear of the outdoor station. The middle potentiometer must be on "0" and the right one on "1"

8.1.4 Setting the address of the indoor station

The apartment is assigned on the indoor station via the setting of the address. Up to 99 apartments can be addressed within one system. In each of these up to four indoor stations with the same rights can be located with the same address.

When pressing the assigned doorbell push-button, all four indoor stations are called. The address of an indoor station (e.g. "15") is set with the aid of the potentiometers on the indoor station, the middle one indicating the tens digit (here "1") and the right one the singles digit (here "5"). The potentiometer is located on the back or outside of the indoor stations.

8.1.5 Setting of the "standard outdoor station"

For several outdoor stations in a system the "standard outdoor station" must be set on the indoor stations.

For this the potentiometer STATION is set on the address of the standard outdoor station - between 1 and 4.

The potentiometer is located on the rear of the indoor stations.

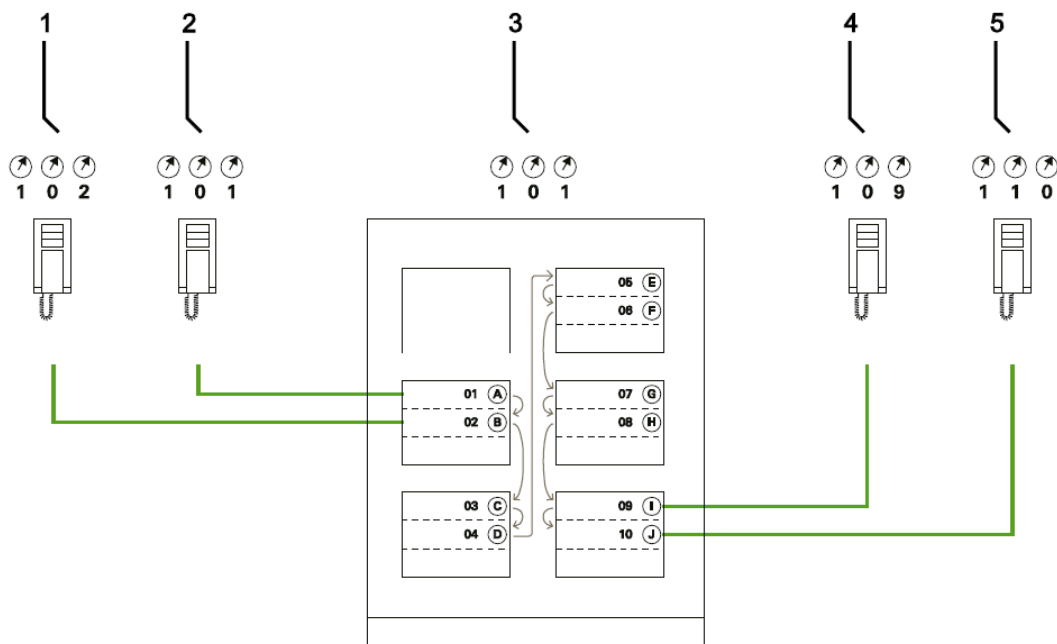


Fig. 8: Factory assignment of doorbell push-buttons

No.	Function
1	Apartment 01
2	Apartment 01
3	Outdoor station
4	Apartment 09
5	Apartment 10

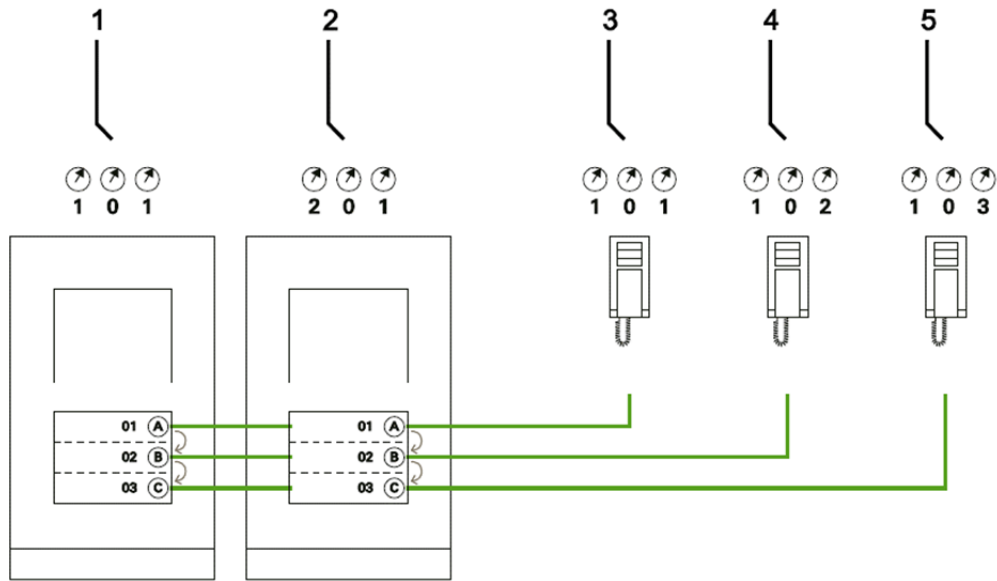


Fig. 9: Several outdoor stations with identical assignment

No.	Function
1	Main entrance outdoor station
2	Side entrance outdoor station
3	Apartment 01
4	Apartment 02
5	Apartment 03

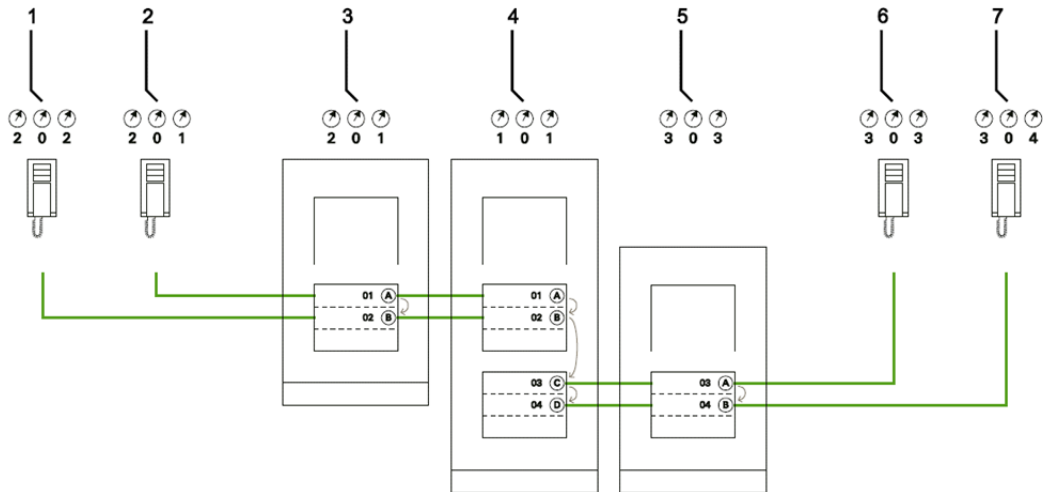



Fig. 10: Several outdoor stations with identical assignment

No.	Function
1	Apartment 01
2	Apartment 02
3	Outdoor station of the left building
4	Outdoor station of the entrance gate
5	Outdoor station of the right building
6	Apartment 03
7	Apartment 04

8.2 Video for addressing the device

	<u>Video for addressing the device</u>	
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9 Commissioning

9.1 Keypad module


First, you need to create the first admin:

No.	Function	Command	LED and tone
1	Create the first Admin0	[*] [#] + Admin0(3~8bit) + [*] + Admin0 + [#]	Green LED on (2s) Tone "di" (1s)

Then enter the setting by Admin0:

No.	Function	Command	LED and tone
1	Enter setting	[*] + Admin0 + [#]	Orange LED on

In setting mode, following functions can be implemented:

No.	Function	Command	LED and tone
1	Enroll AdminX	[1] [0] [*] + AdminX(3~8bit) + [*] + AdminX + [#]	Green LED on (2s) Tone "di" (1s)
2	Enroll Password only for Unlock	[2] [0] [*] + password + [*] + password + [#]	Green LED on (2s) Tone "di" (1s)
3	Assign press "Ring" button to call one indoor station (for example: Indoor Station address is 2)	[] button + Indoor Station address[0] [2] + [#] Note: the Indoor Station address can be 01~99.	Green LED on (2s) Tone "di" (1s)
4	Enable/Disable open door and turn on the lights connected to STPS at the same time	Enable(Default): [6] [0] [*] + [#] Disable: [6] [9] [*] + [#]	Green LED on (2s) Tone "di" (1s)
5	Delete one password (AdminX, Unlock password, Unlock+Disarmed password, Armed password, Disarmed password)	[1] [9] [*] + password + [*] + repeat password + [#]	Green LED on (2s) Tone "di" (1s)
6	Delete all user passwords (Unlock password, Unlock+Disarmed password, Armed password, Disarmed password)	[9] [9] [*] + Admin + [#]	Green LED on (2s) Tone "di" (1s)



Note...

- » If there is no operation in 15 seconds, system will return to idle without saving setting.
- » After creating other admins, you can enter setting by any admin.
- » Armed password is not permitted to be same as Disarmed password.
- » Armed password is not permitted to same as Unlock password.
- » Disarmed password is not permitted to be same as Unlock password.

9.2 Fingerprint module module

First, you need to create the first admin:

No.	Function	Command	LED and tone
1	Create the first Admin0 by swipe the fingerprint 3~5 times	Admin0 + Admin0 + Admin0 (+ Admin0 + Admin0)	Green LED on (2s) Tone "di" (1s)

Then enter the setting by Admin0:

No.	Function	Command	LED and tone
1	Enter setting	Admin0	Orange LED on

In setting mode, following functions can be implemented:

No.	Function	Command	LED and tone
1	Enroll AdminX	Admin0 + Admin0 + Admin0 + AdminX + AdminX + AdminX (+ AdminX + AdminX)	Green LED on (2s) Tone "di" (1s)
2	Enroll UserX	Admin0 + UserX + UserX + UserX (+ UserX + UserX)	Green LED on (2s) Tone "di" (1s)
3	Delete AdminX	Admin0 + Admin0 + Admin0 + Admin0 + AdminX + AdminX	Green LED on (2s) Tone "di" (1s)
4	Delete UserX	Admin0 + Admin0 + UserX + UserX	Green LED on (2s) Tone "di" (1s)
5	Delete all Users	Admin0 + Admin0 + Admin0 + Admin0 + Admin0 + Admin0	Green LED on (2s) Tone "di" (1s)



Note...

- » If there is no operation in 15 seconds, system will return to idle without saving setting.
- » During setting, wrong operation will make the system return to idle.
- » After creating other admins, you can enter setting by any admin.
- » In setting mode, Admin0 can be replaced by any enrolled admin. During the setting, it should be the one same Admin.
- » Any Admin can't delete itself.

9.3 Transponder module module

First, you need to create the first admin:

No.	Function	Command	LED and tone
1	Create the first Admin0 by swipe the card	Admin0	Green LED on (2s) Tone "di" (1s)

Then enter the setting by Admin0:

No.	Function	Command	LED and tone
1	Enter setting	Admin0	Orange LED on

In setting mode, following functions can be implemented:

No.	Function	Command	LED and tone
1	Enroll AdminX	Admin0 + Admin0 + Admin0 + AdminX	Green LED on (2s) Tone "di" (1s)
2	Enroll UserX	Admin0 + UserX	Green LED on (2s) Tone "di" (1s)
3	Delete AdminX	Admin0 + Admin0 + Admin0 + Admin0 + AdminX	Green LED on (2s) Tone "di" (1s)
4	Delete UserX	Admin0 + Admin0 + UserX	Green LED on (2s) Tone "di" (1s)
5	Delete all Users	Admin0 + Admin0 + Admin0 + Admin0 + Admin0 + Admin0 + Admin0	Green LED on (2s) Tone "di" (1s)



Note...

- » If there is no operation in 15 seconds, system will return to idle without saving setting.
- » During setting, wrong operation will make the system return to idle.
- » After creating other admins, you can enter setting by any admin.
- » In setting mode, Admin0 can be replaced by any enrolled admin. During the setting, it should be the one same Admin.
- » Any Admin can't delete itself.

9.4 Door opener app

With the Transponder module and the ABB door opener app it is possible to open the door directly with an NFC-enabled smartphone or tablet with android operating system (4.x or higher).

1. Download and install the ABB door opener app from Google Play Store.
2. Turn on the NFC function of your device.
3. Enter setting mode of your transponder module.
4. Start the app at your device.
5. Teach in your device as new user.
6. Configure your personal settings.

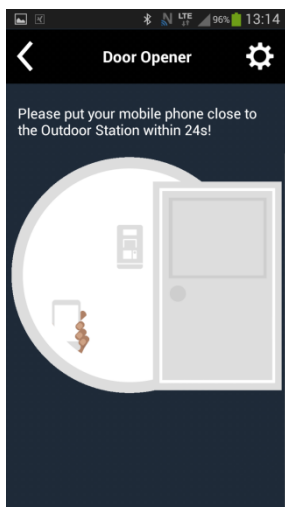


ABB door opener app, Mainpage

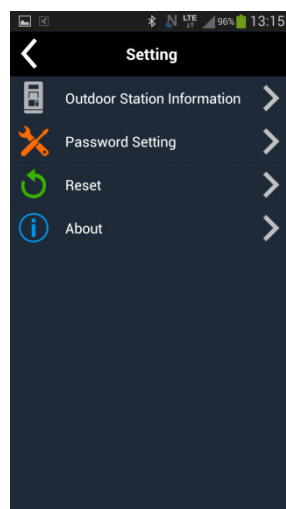


ABB door opener app, Settings

9.5 Restore default settings



If this AC module is integrated in the Outdoor Station, you need to delete all users+Admins, and all parameters of Outdoor Station.

1. Rotary switches to "000".
2. Then power on, the orange LED will flash, the tone will sound "di di di ...", until Rotary switch=999 within 60s.
3. Finish reset.



Project name: _____

Mounting position for the outdoor station: _____

 Floor 02	 01		
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