ABB-Welcome

Lift control module
M2306
M2307

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1   Safety

> ### Warning
> **Electric voltage!**
> Dangerous currents flow through the body when coming into direct or indirect contact with live components.
> This can result in electric shock, burns or even death.
> ■ Disconnect the mains power supply prior to installation and/or disassembly!
> ■ Permit work on the 110-240 V supply system to be performed only by specialist staff!

2   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. Therefore, dispose of the device at the appropriate recycling facility.

2.1   ABB devices

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

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3   Technical data

General	
Single-wire clamps	2 x 0.28 mm - 2 x 0.75 mm;
Fine-wire clamps	2 x 0.28 mm - 2 x 0.75 mm;
Bus voltage	20-30 V DC
Size	4 TE
Protection	IP 20
Operating temperature	-25 °C - +55 °C
Size	M2306: 90 mm x 72 mm x 65 mm M2307: 216 mm x 110 mm x 45 mm

4   Function

The lift control modules include the M adaptor (M2306) and lift control relay module (M2307). These two devices together ensure that lift (elevator) only goes to authorized floor(s).

If a resident presses the "unlock" button when receiving a guest's call from the outdoor station, or the authorized user swipes the registered card or enters correct password, the lift (elevator) will automatically go down to the floor where the outdoor station is installed. The lift (elevator) will then go to the dedicated floor where that resident lives. It cannot go to unauthorized floors, even when other buttons are pressed.

The configuration should be done through the dedicated configuration software by connecting the M adaptor to a computer.

5 Connection

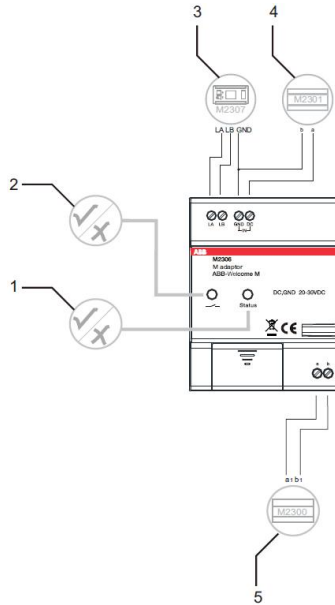### 5.1 M2306

Fig. 1

No.	Function
1	Status - ON = Connected with the system controller/internal bus - OFF = Not connected with the system controller/internal bus - Blinking = Working with the system controller/internal bus
2	- ON = Power on - OFF = Power off - Blinking = Working
3	Connect with M2307
4	Power supply
5	Connect with the system controller/internal bus

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5.2 M2307

Fig. 2

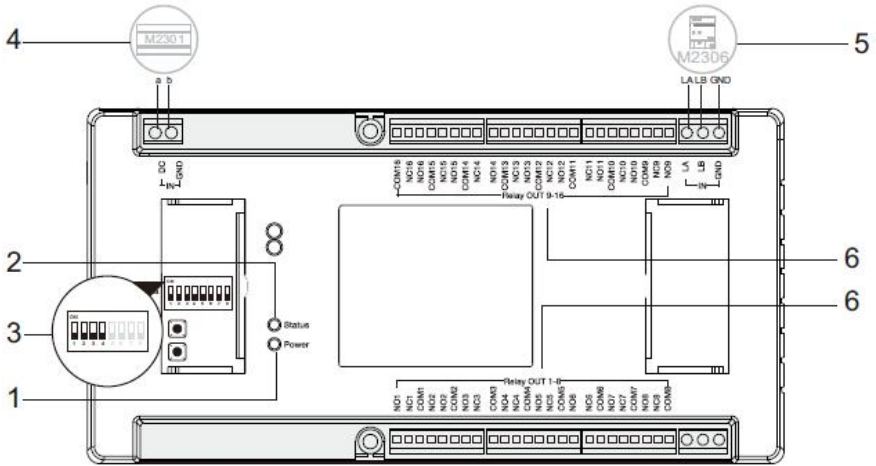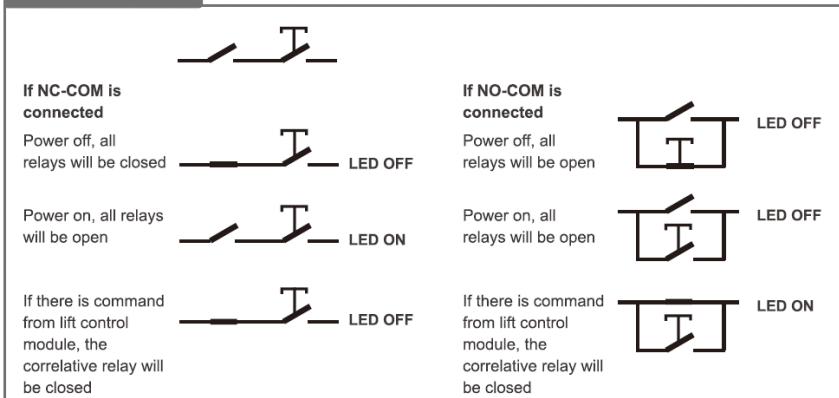| No.	Function
1	Power LED - ON = Power on - OFF = Power off
2	Setting LED - Blinks when working normally
3	Address Set the module address The address range is 1-16.Only the left 4 bits are used.
4	Power supply
5	Connect with M2306
6	Connect with the lift controller

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Different working mode according to the PC software setting

If NC-COM is connected

Power off, all relays will be closed ——— LED OFF

Power on, all relays will be open ——— LED ON

If there is command from lift control module, the correlative relay will be closed ——— LED OFF

If NO-COM is connected

LED OFF

Power off, all relays will be open ——— LED OFF

Power on, all relays will be open ——— LED OFF

If there is command from lift control module, the correlative relay will be closed ——— LED ON

5.3   Lift control relay module address by binary setting
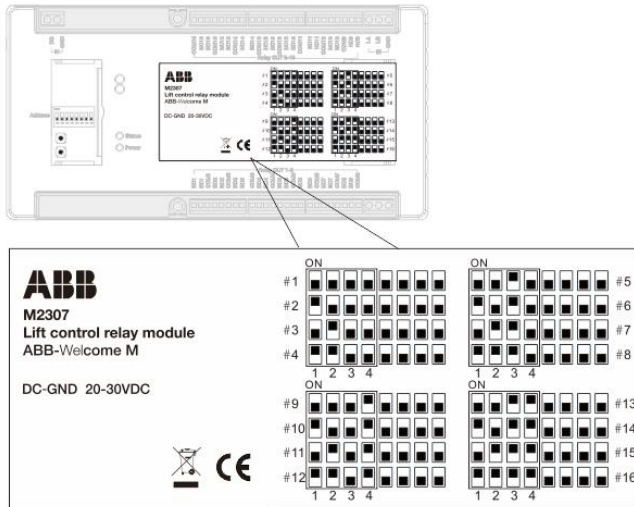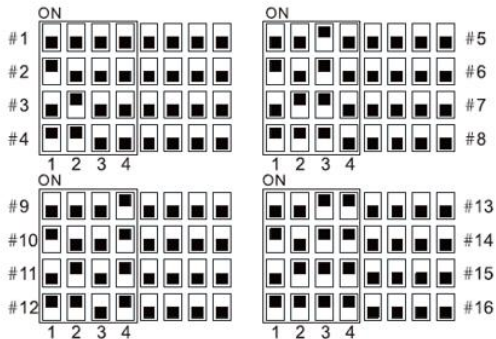

Fig. 3

· Installer needs only read the labeling on the lift control module
and adjust according to the given position.
· Only digits 1-2-3-4 are used.

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6   Mounting/Installation

Warning

Electric voltage!

Dangerous currents flow through the body when coming into direct or indirect contact with live components.

This can result in electric shock, burns or even death.

■ Disconnect the mains power supply prior to installation and/or disassembly!

■ Permit work on the 110-240 V supply system to be performed only by specialist staff!

Warning

Electric voltage!

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

6.1   Requirements for the electrician

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, such as a 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 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.).

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6.2   Mounting

The device must only be installed on mounting rails according to DIN EN 50022.
It is highly recommended that M2306 be installed in the lift motor room on the top floor or the electrical riser, while M2307 should be installed in the lift cabin.
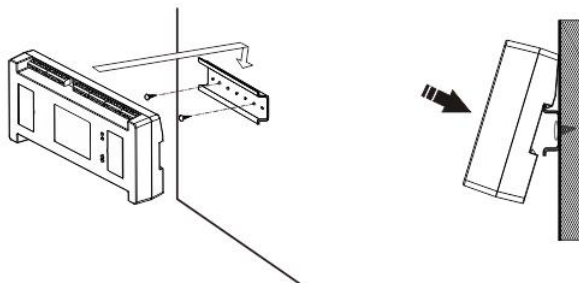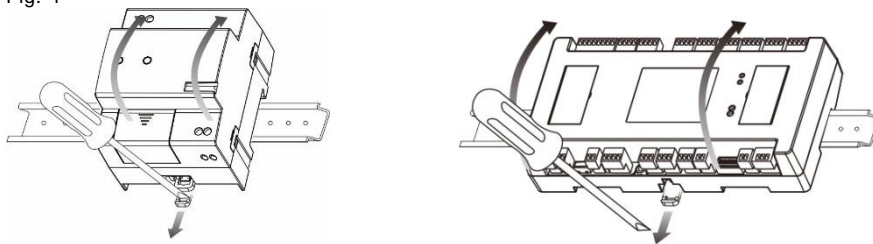
Fig. 4

Fig. 5: Dismantle

7 User case

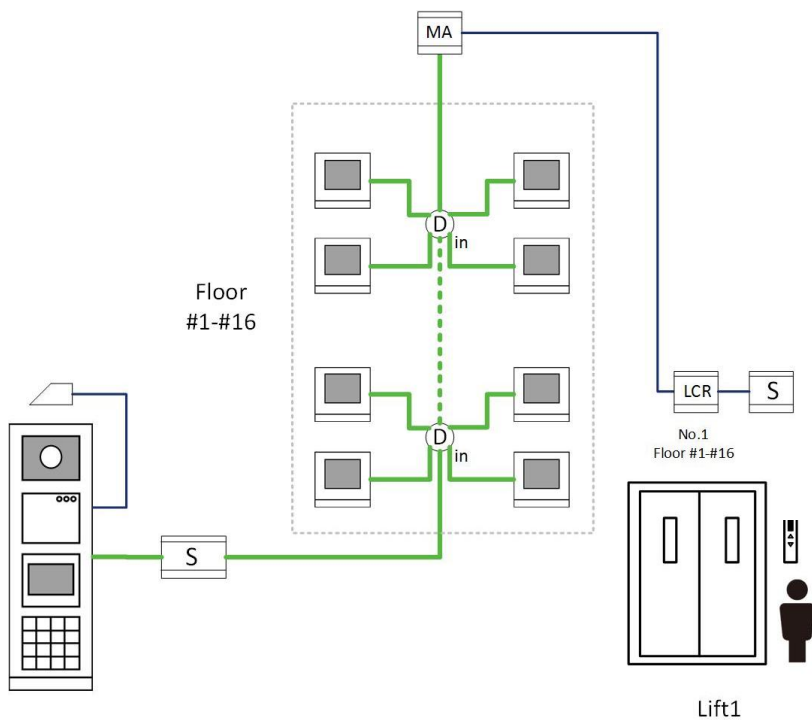### 7.1 High building (no more than 16 floors) with one lift

One M2306 and one M2307

Fig. 6: Topology

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Wiring with one M2306 and one M2307
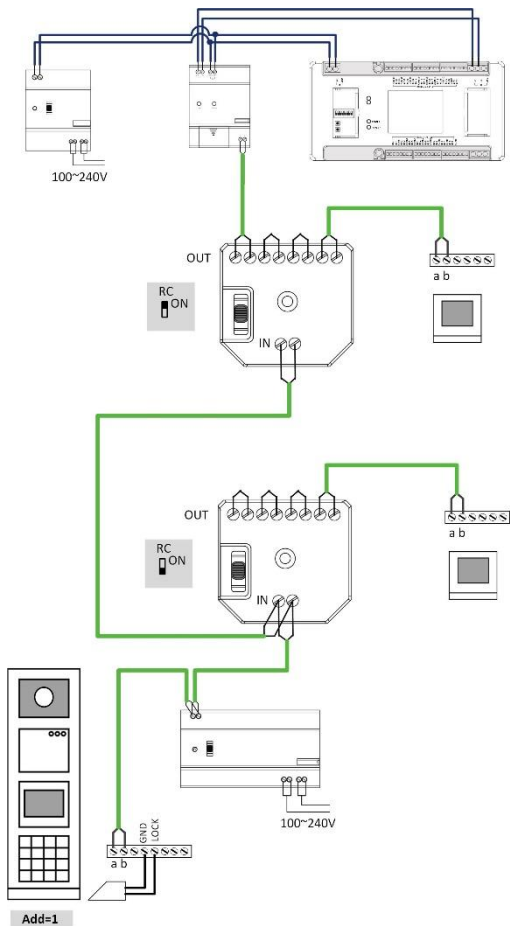

Fig. 7

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7.2 High building (more than 16 floors) with one lift

one M2306 and multi (up to 16) M2307

Fig. 8: Topology

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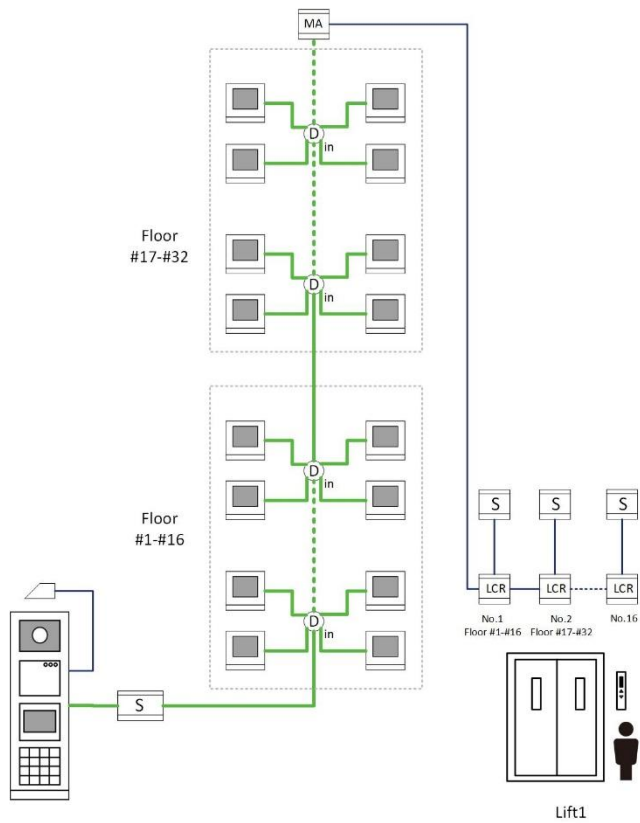
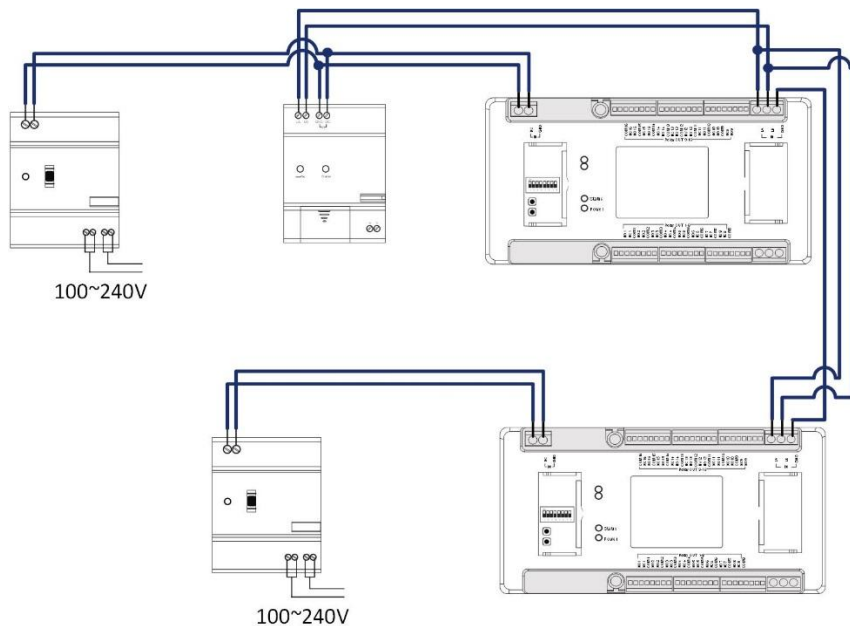Wiring with one M2306 and multi M2307

Fig. 9

Notes:

1.The first mini system controller (M2301) feeds one M2306 and one M2307.

2. An additional M2307 should be locally powered by one mini system controller. Eg. with (4) M2307 and (1) M2306, 4 mini system controllers are needed.

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7.3 High building (more than 16 floors) with two lifts
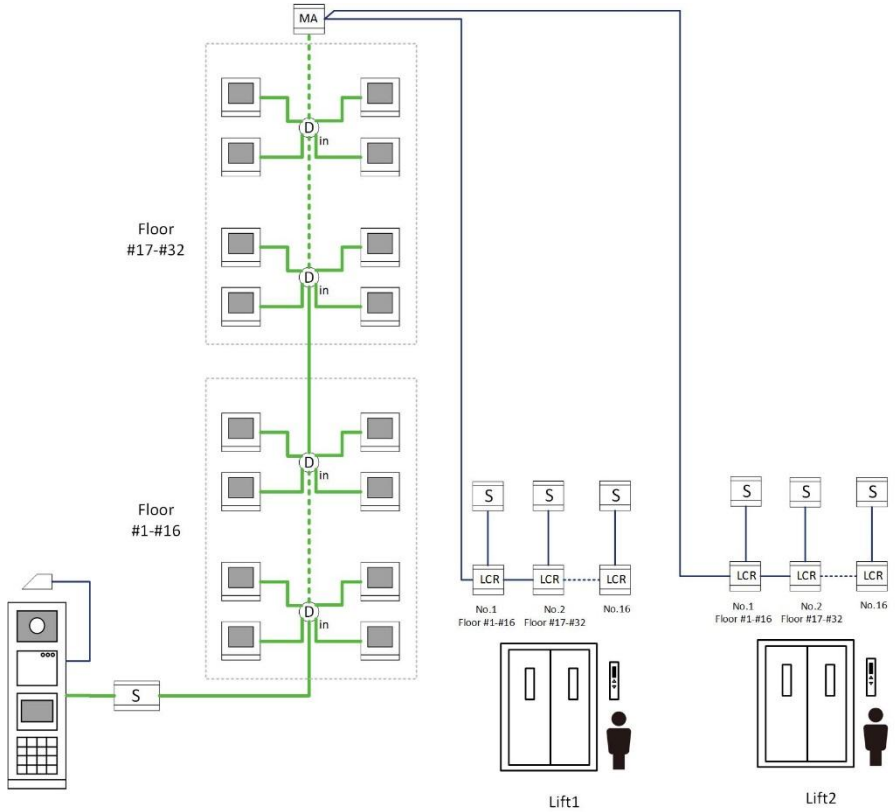
one M2306 and multi M2307 support 2 lifts

Fig. 10: Topology

Note: The address code can not be repeated.

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7.4   High building (more than 16 floors) with four lifts
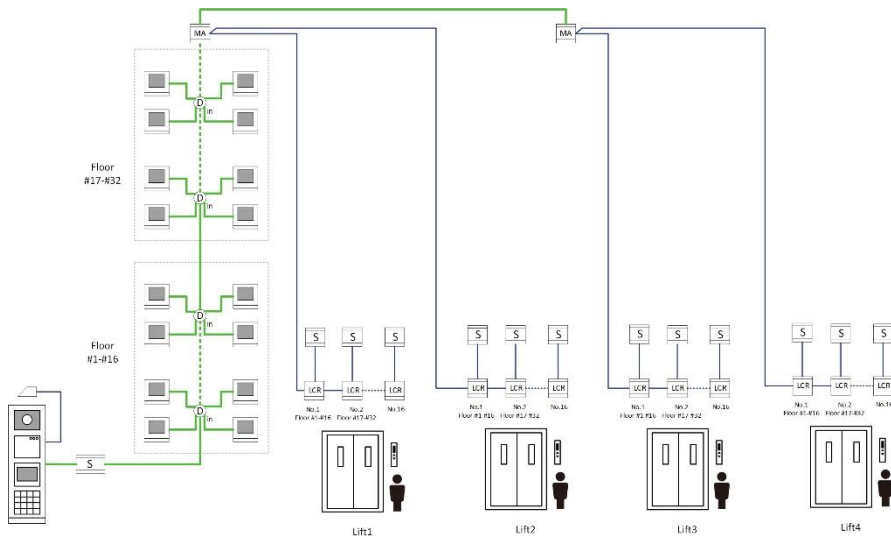
Two M2306 and multi M2307 support 4 lifts

Fig. 11: Topology

Note: The address code can not be repeated.

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8 Operation

8.1 User scenario illustration of visitor target floor

2. The resident presses the "unlock" button at any ABB-Welcome indoor station.

5. The visitor reaches the 12th floor.

4. Within a set of time (default of 10 minutes), the visitor can only activate the 12th floor. Other floors will not be activated at the same time.

After 10 minutes, the visitor must go to the outdoor station to call the resident again.

3. The lift will go down to the outdoor station automatically when visitor enters the lift.

1.Visitor inputs calling code for the 12th floor.

Fig. 12

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8.2   User Scenario Illustration of resident target floor

3. Within a set time (default of 10 minutes), the resident can only activate the 12th floor. Other floors will not be activated at the same time.

After 10 minutes, the resident must go to the outdoor station to input password or swipe card again.

4. The resident reaches the 12th floor.

1. The resident (living on the 12th floor) enters by inputting a password or swiping with authorized card.

2. The lift will automatically go down to the outdoor station floor when the resident enters the lift.

Fig. 13

Note: The lift control module will not function if the unlock button is pressed without a call from building outdoor station. E.g., unlock when there is a villa/floor outdoor station or gate station.

9 Configuration through PC software

9.1 Connected to PC

During configuration, the lift control adaptor can be connected directly to the PC so that the installed software (ABB-Welcome PC Configuration Tool) can be used. Essentially, there is no need for local power supply during configuration.

Upon completing configuration, click "Send the Configuration" to upload the configured file to the system. Refer to instructions below.

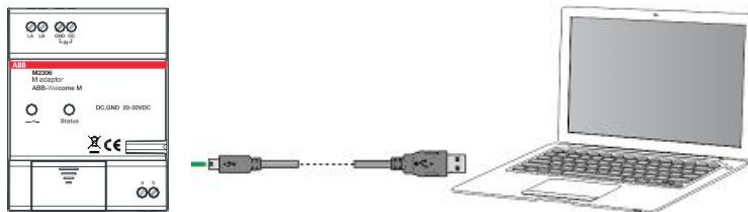Note: Only supports Microsoft Windows

Fig. 14

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9.2 Configuration

Basic Steps

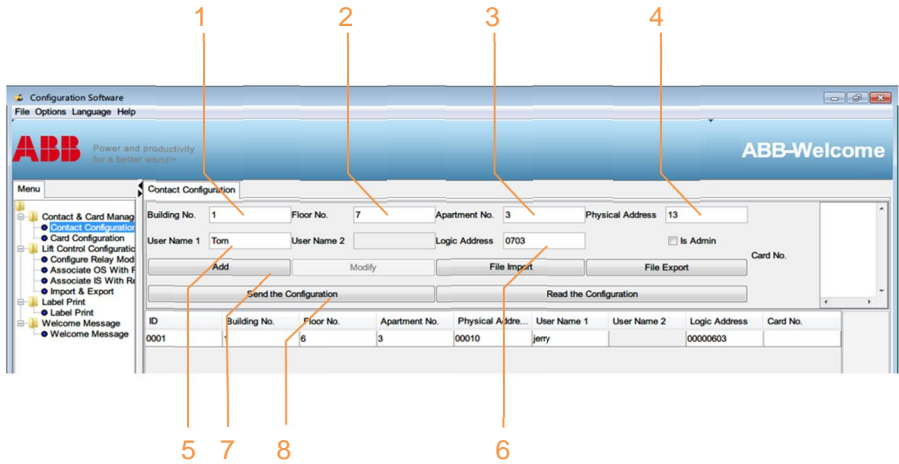Step 1: Set basic parameters of the apartment using the ABB-Welcome configuration tool.

Fig. 15

No.	Function
1	Select building number.
2	Select floor number.
3	Select apartment number.
4	Set physical address (e.g., 13 means the IS address set by IS switches)
5	Set user name
6	Set logic address (e.g., 0703 means 7th floor, apartment number 3).
7	Add data from one apartment to project.
8	Upload configuration to system

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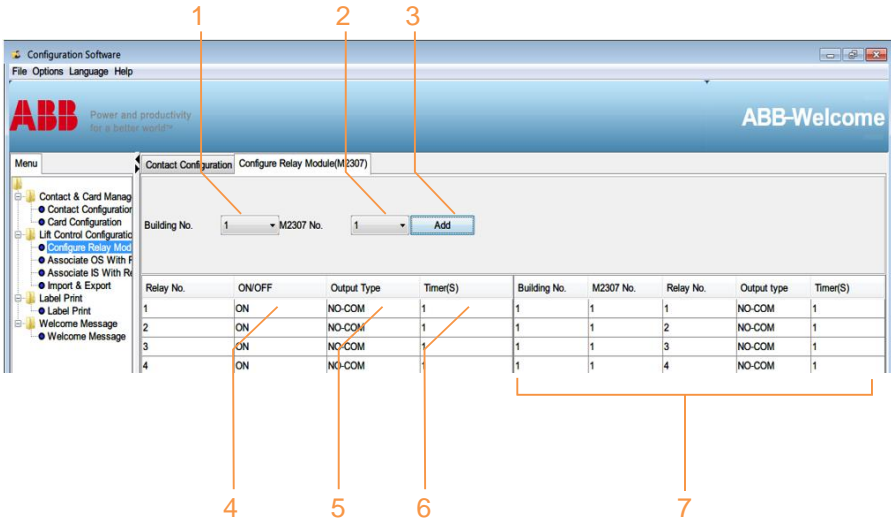Step 2: Select building, M2307 and configure parameters of each relay

Fig. 16

No.	Function
1	Select building number
2	Select M2307 number
3	Click "Add" to add a new M2307
4	Select ON or OFF for connecting the relay
5	Select NO or NC for output type
6	Set relay operation time (1-3,600 seconds)
7	Show all M2307 parameters

Note: In order to ensure building is configured properly, please finish each step before starting installation in a new building.

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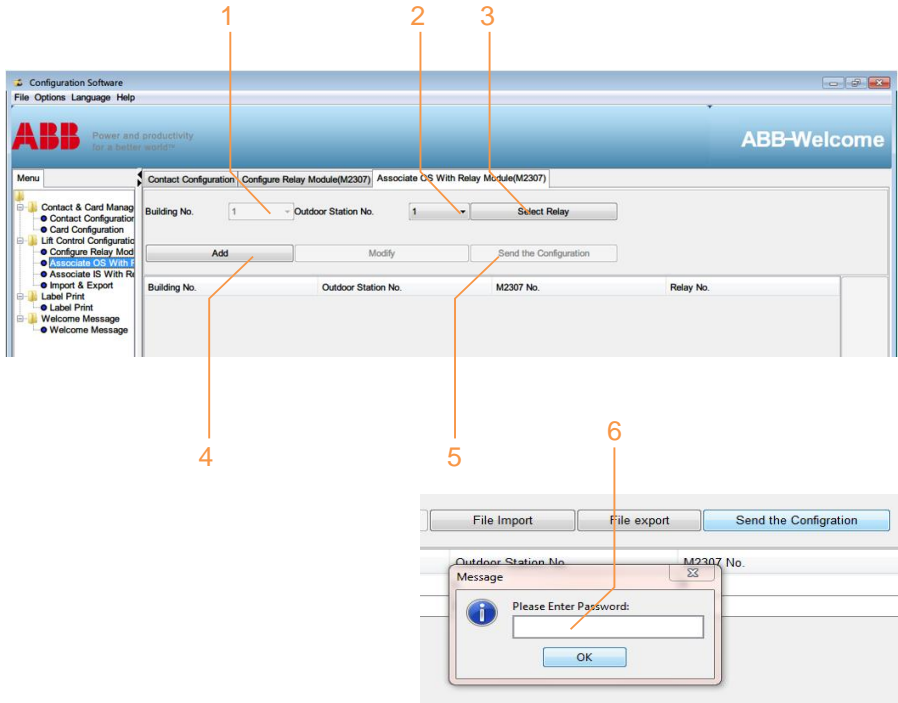Step 3: Associate outdoor station with M2307

Fig. 17

No.	Function
1	Building number (same as step2)
2	Select outdoor station number
3	Select Relay No. of M2307
4	Click "Add" to associate outdoor station with relay
5	Send all parameters to M2306
6	Input password*. Default password is 123456. *Please write down this password. If password is forgotten, software must be reloaded.

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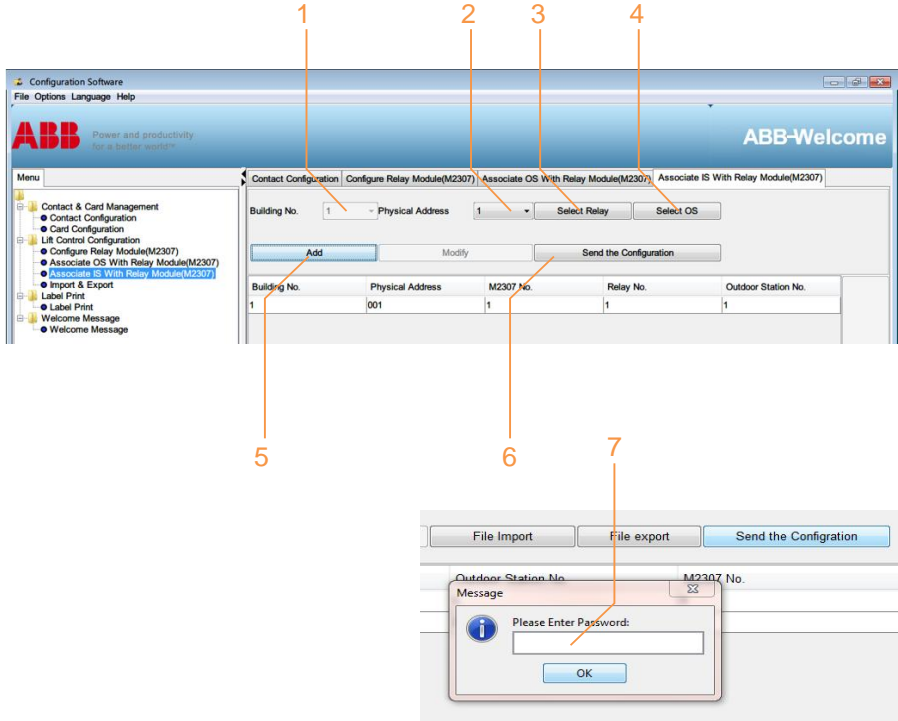
Step 4: Associate indoor station with M2307

Fig. 18

No.	Function
1	Building number (same as step2)
2	Select indoor station physical address
3	Select relay number of M2307
4	Select outdoor station number (floor number of outdoor station installed)
5	Click "Add" to associate indoor station with relay
6	Send all parameters to M2306
7	Input password. Default password is 123456.

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Optional steps:
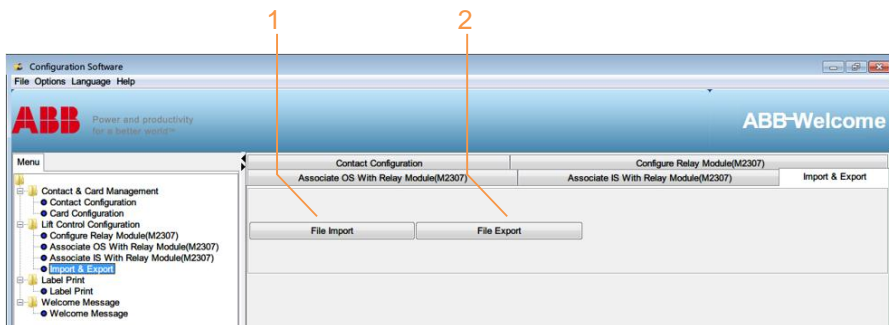Step 5: Export all data from this project or import data for new project

Fig. 19

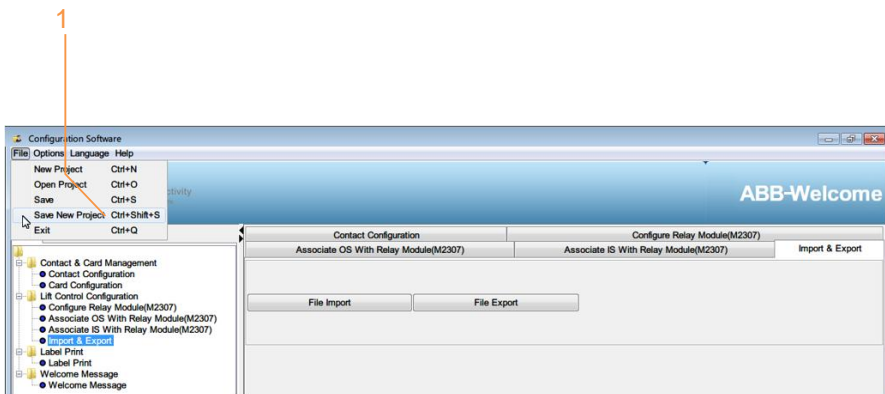| No.	Function
1	Export all lift control configuration data to one read-only Excel file. (Export the lift control configuration of each building for future reference.)
2	Import data for a new project from Excel file

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Step 6: Save as one new project

Fig. 20

No.	Function
1	Save as one new project: *.xml

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Step 7: Import existing project data to new outdoor station, guard unit and lift control

1
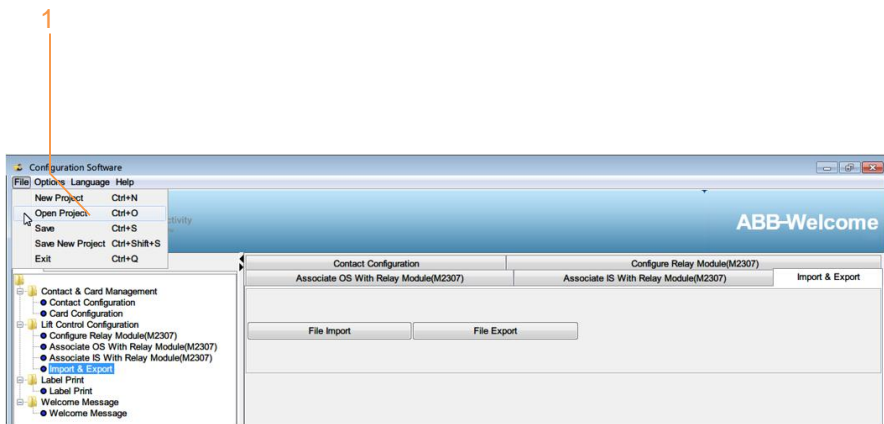

Fig. 21

No.	Function
1	Open one existing project: *.xml

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