



How to use relay module

Title:	How to use the relay	Version:	v1.0	Date:	09/14/2016
Product:	DS-KA-RL1E2			Page:	1 of 18

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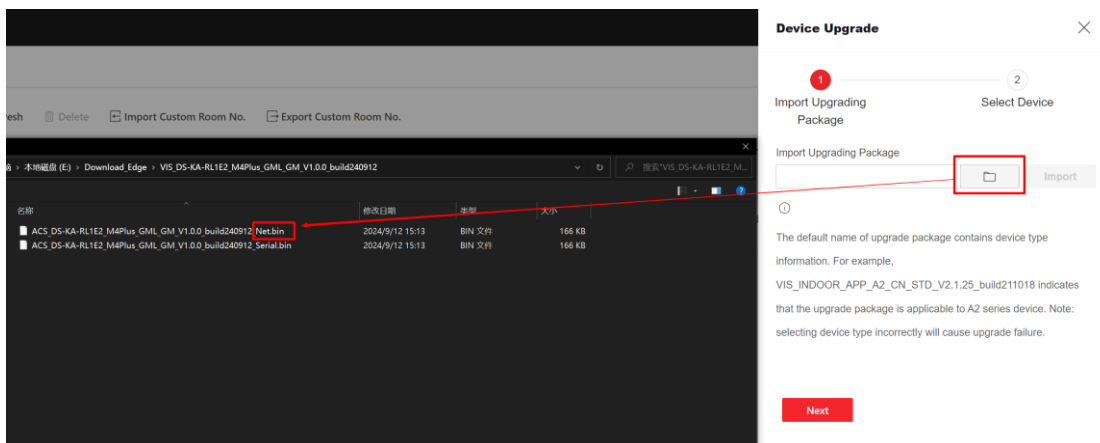
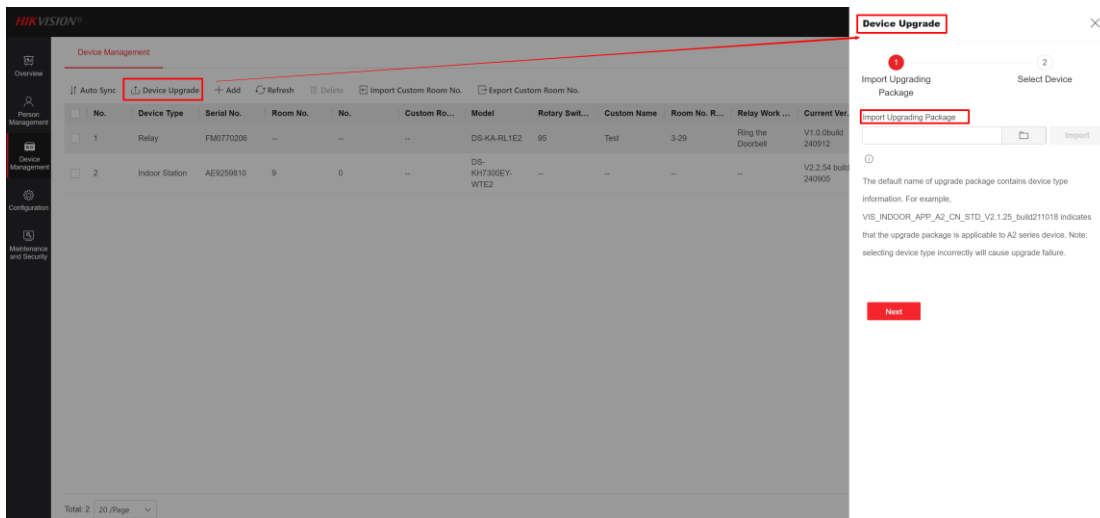
How to use relay module

Update

Web upgrade

Login the door station's remote configuration

Device manmagment > Device Upgrade > Import firmware file (NET.bin)



Device Upgrade



1

Import Upgrading
Package

2

Select Device

Import Upgrading Package

ACS_DS-KA-RL1E2_M4Plus_GML_GM_



Import

①

The default name of upgrade package contains device type information. For example,

VIS_INDOOR_APP_A2_CN_STD_V2.1.25_build211018 indicates that the upgrade package is applicable to A2 series device. Note: selecting device type incorrectly will cause upgrade failure.

Next

The screenshot shows the VIS/DOV interface with the 'Device Upgrade' dialog open. The dialog has two steps: 'Import Upgrading Package' (Step 1) and 'Select Device' (Step 2). In Step 1, the 'Import Upgrading Package' field contains 'ACS_DS-KA-RL1E2_M4Plus_GML_GM_' and the 'Import' button is highlighted. In Step 2, the 'Select Device' dropdown is set to 'relay'. The background shows the 'Device Management' table with the following data:

No.	Device Type	Serial No.	Room No.	No.	Custom Ro...	Model	Rotary Switc...	Custom Name	Room No. R...	Relay Work ...	Current Ver...
1	Relay	FM0770206	--	--	--	DS-KA-RL1E2	95	Test	3-20	Ring the Doorbell	V1.0.0build 240912
2	Indoor Station	AE9209810	9	0	--	DS-KH7300EY-WTE2	--	--	--	--	V2.2.54 build 240905

Device Upgrade



①

Import Upgrading
Package

②

Select Device

1 is selected.

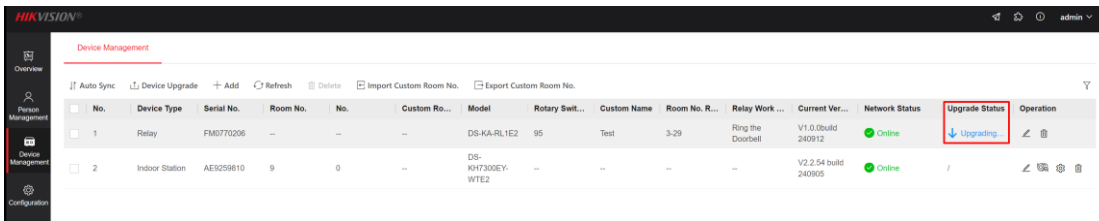
relay

Serial No.	Current Versi...	Rotary Switc...
<input checked="" type="checkbox"/> FM0770206	V1.0.0build 240912	95

< 1 >

Previous

Upgrade

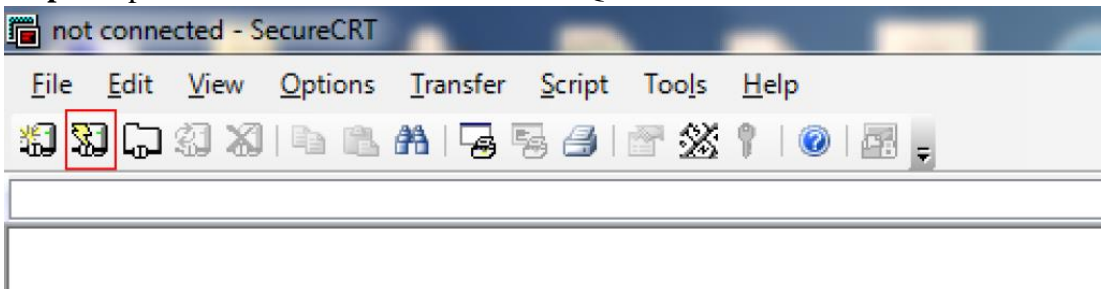


After press the Upgrade button, the device's Upgrade Status will show **Upgrading**

Serial upgrade

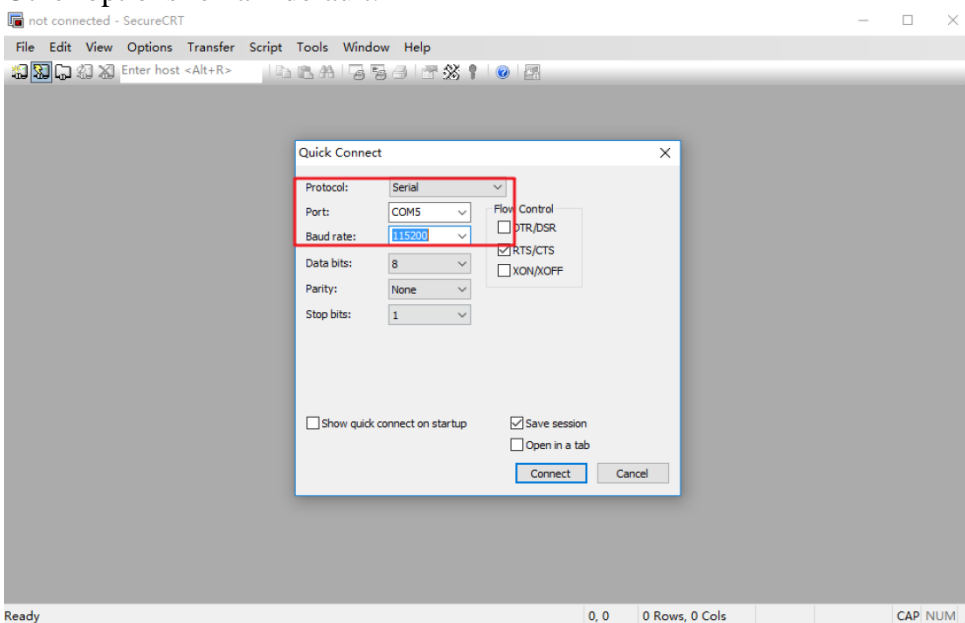
Use the serial line to connect relay and computer together, then one side connect to relay, another side connect to computer USB port.

Step 1. Open SecureCRT software and click Quick Connect

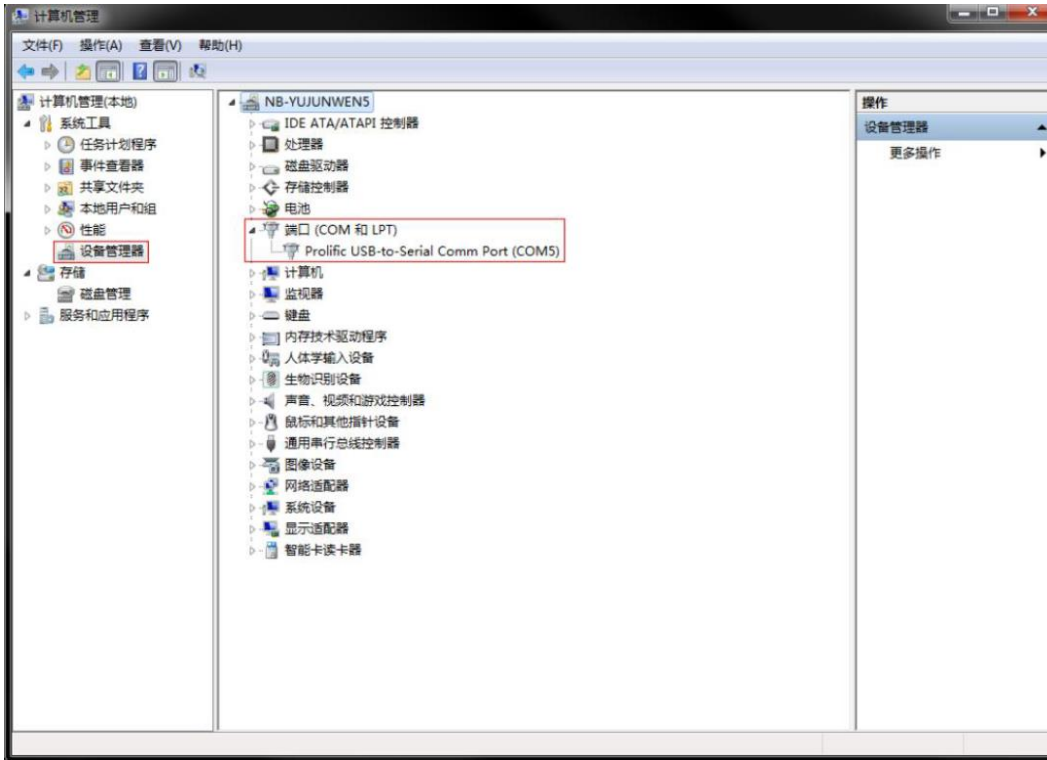


Step 2. Configure Quick Connect and click connect.

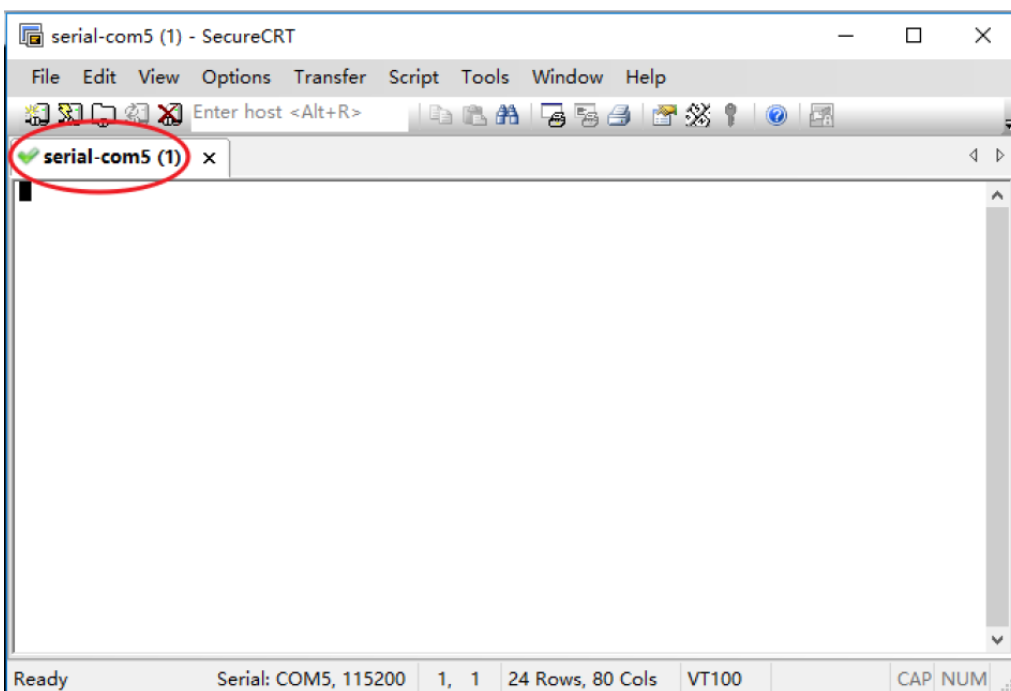
- Select Serial in Protocol
 - Select the port used by the serial port
(How to check your computer's port please refer to 6th step)
 - Select 115200 in Baud rate
- Other options remain default.



Step 3. This section guide you how to check the serial port which is used to connect card reader. Click the computer icon on the desktop, right-click and select Manage, enter the following interface. Click, Device Manager, and then click the port to view. Here shows COM5, so we have to select com5 in front step.



Step 4. After step 2, click Connect to enter the following interface, if you see a green icon, it means connect successfully



Step 5. Continuously press U on your PC keyboard, then switch on the relay. Then you will find

printed message in the box. After main menu is displayed, it means entered upgrade mode successfully, if not, please power off relay then repeat this step again.

```

=====
= (C) COPYRIGHT 2015 Hangzhou Hikvision Digital Technology Co.,Ltd =
=                                                                    =
=          GD32F427_boot_V1.0 Update Application                    =
=                                                                    =
=          Version 1.0.0 build20231213                             =
=====

Please Input 'u' in 1 SEC For Update The Soft
Or It Will Jump To User Application 5 SEC Later

===== Main Menu =====

Download Image To the STM32F4xx SPI Flash And Update ---- 1
Execute The New Program ----- 2
Disable the write protection ----- 3

```

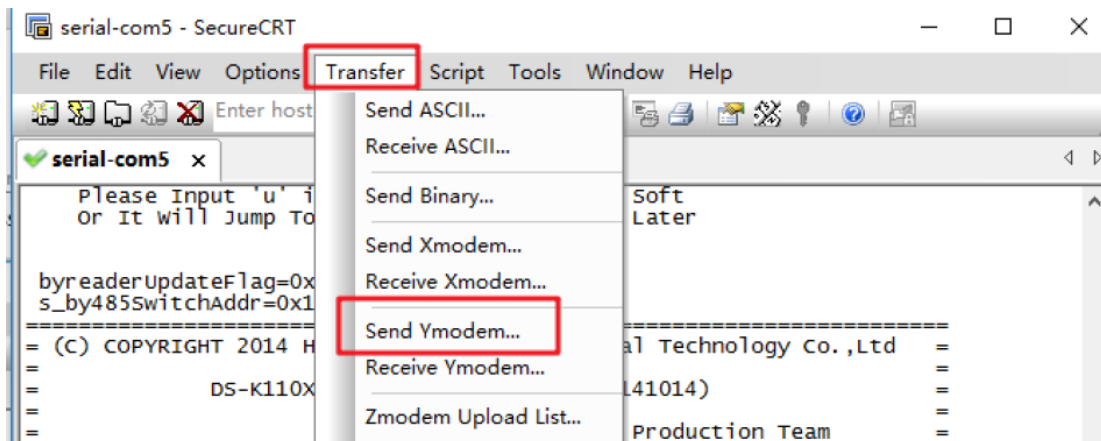
Step 6. Input 1 and Enter key from keyboard, you will find below message

```

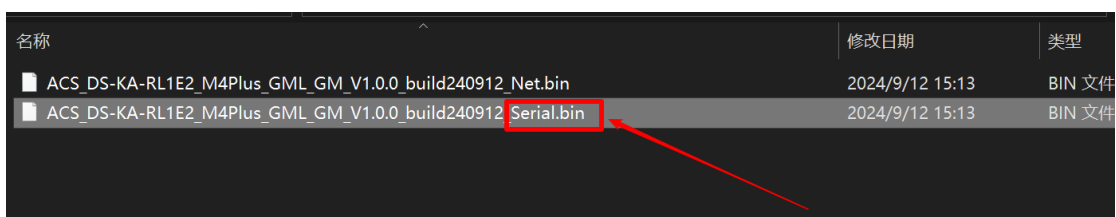
Waiting for the file to be sent ... (press 'a' to abort)
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

```

Step 7. Select Transfer > Send Ymodem from menu



Step 8. Select upgrade file, the file name should end with Serial.bin (for example ACS_DS-KA-RL1E2_M4Plus_GML_GM_V1.0.0_build240912_Serial.bin), then click Add and OK



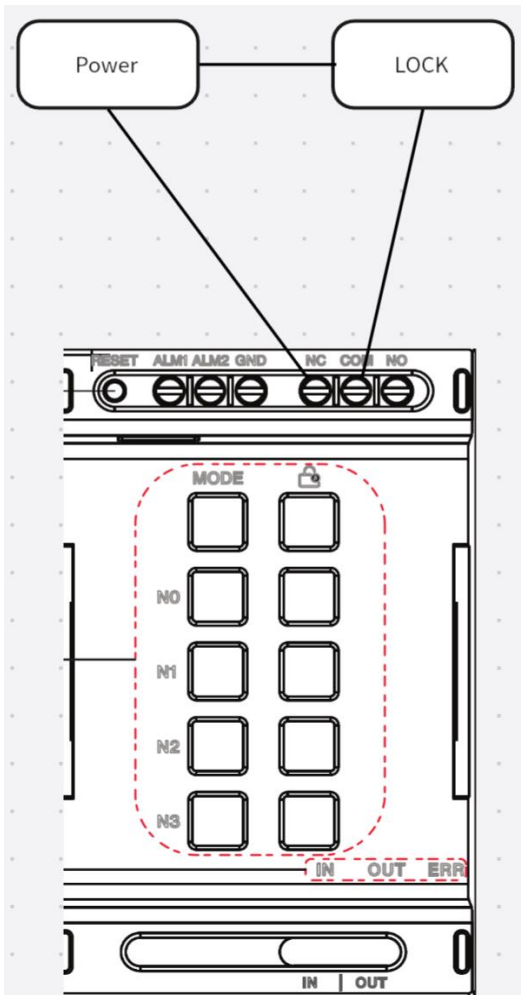
Step 9. Then you will see below picture, the upgrade file will be send to relay.

```
Waiting for the file to be sent ... (press 'a' to abort)
CCCCCCCCCCCCCCCCCCCC

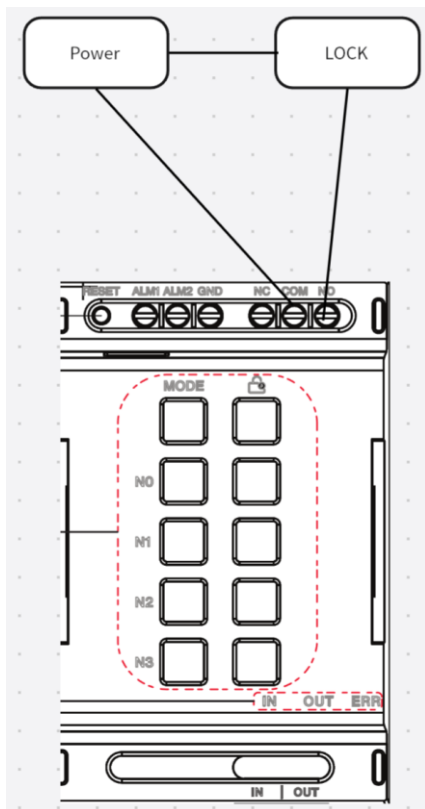
Programming Completed Successfully!
-----
Name: acs_ds-ka-rl1e2_m4plus_gml_gm_v1.0.0_build240912_serial.bin
Size: 169140      Bytes
-----
```

Wiring

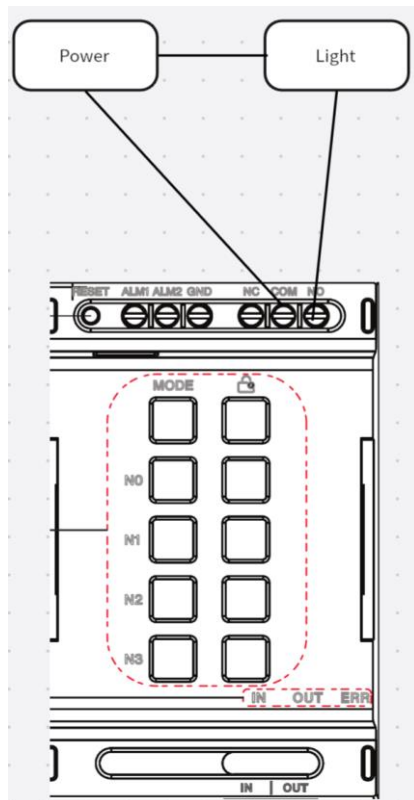
Connect the lock (NC) to relay



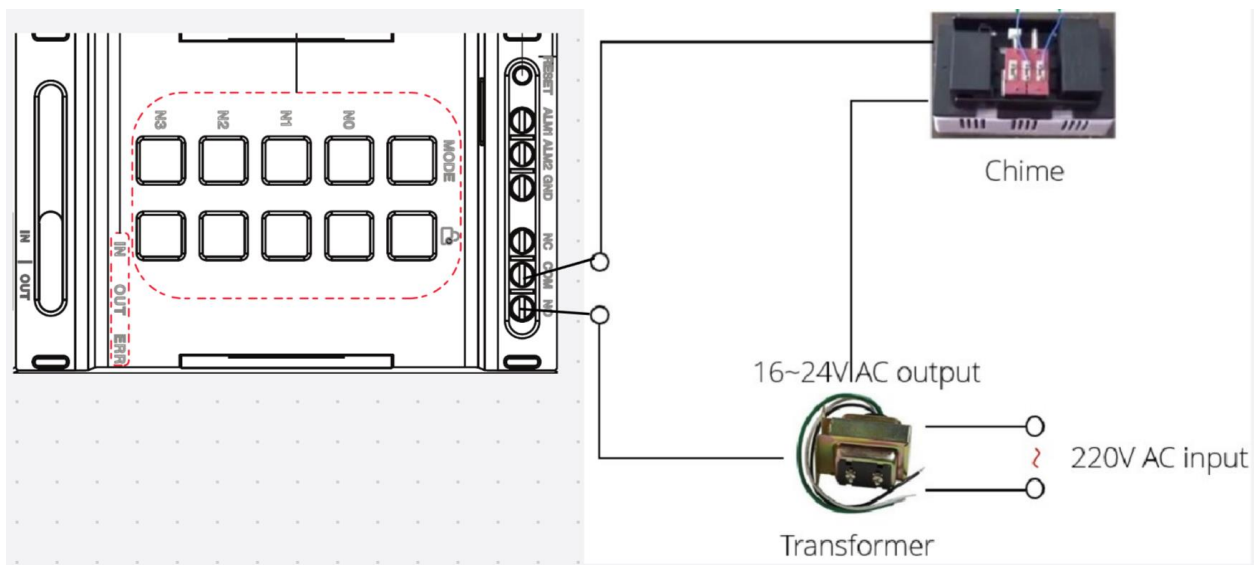
Connect the lock (NO) to relay



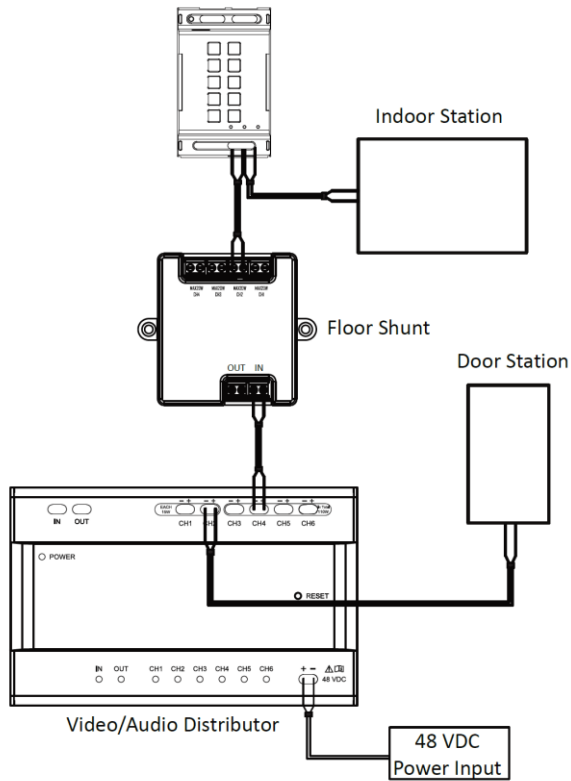
Connect the light (NO) to relay



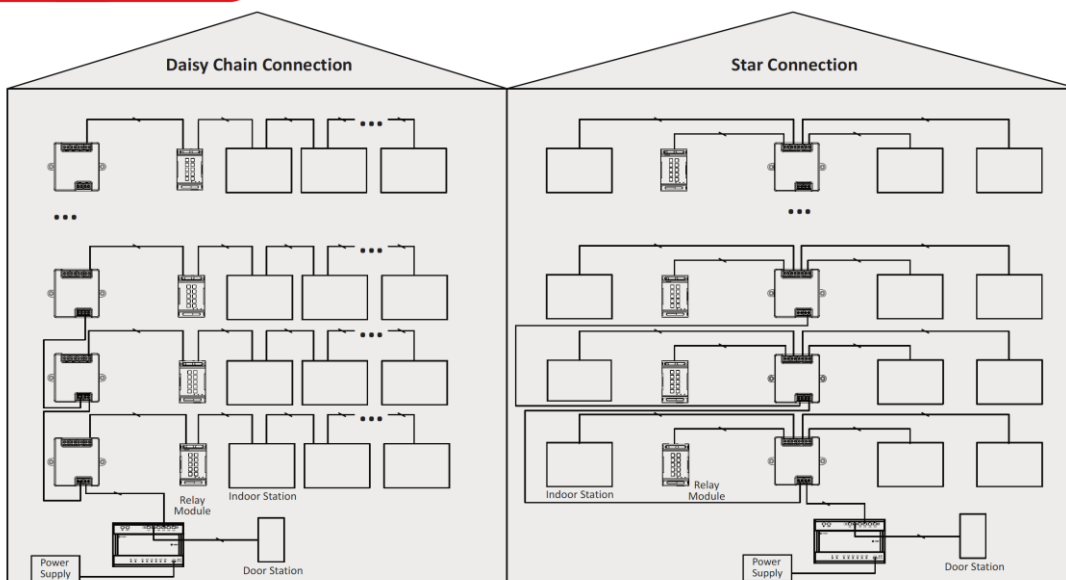
Connect the mechanical doorbell (NO) to relay



Connect the relay to indoor station



System Wiring



Light Indicators

The ERR light will flash when encounter invalid mode, relay No., building No., room No. range and IP address conflict.

DIP code description

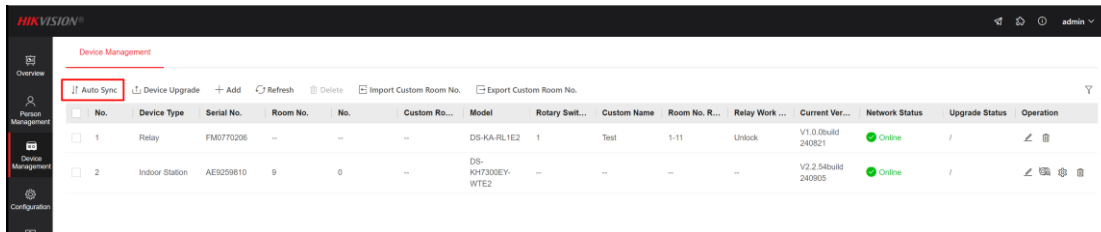
Door Open Duration

Rotary Switch	Door Open Duration(s)	Light Control(s)	Mechanical Doorbell Ring Times
0	2	30	3
1	1	10	6
2	3	20	9
3	4	60	15
4	5	120	30
5	8	/	/
6	10	/	/
7/8/9	2	/	/

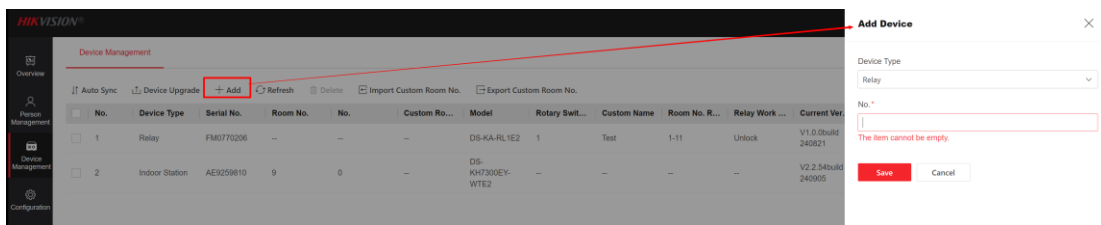
	Tens	Units	
MODE	<input type="text"/>	<input type="text"/>	
N0	<input type="text"/>	<input type="text"/>	Relay No.
N1	<input type="text"/>	<input type="text"/>	Building No.
N2	<input type="text"/>	<input type="text"/>	Room No. (Minimum)
N3	<input type="text"/>	<input type="text"/>	Room No. (Maximum)

Add relay to device

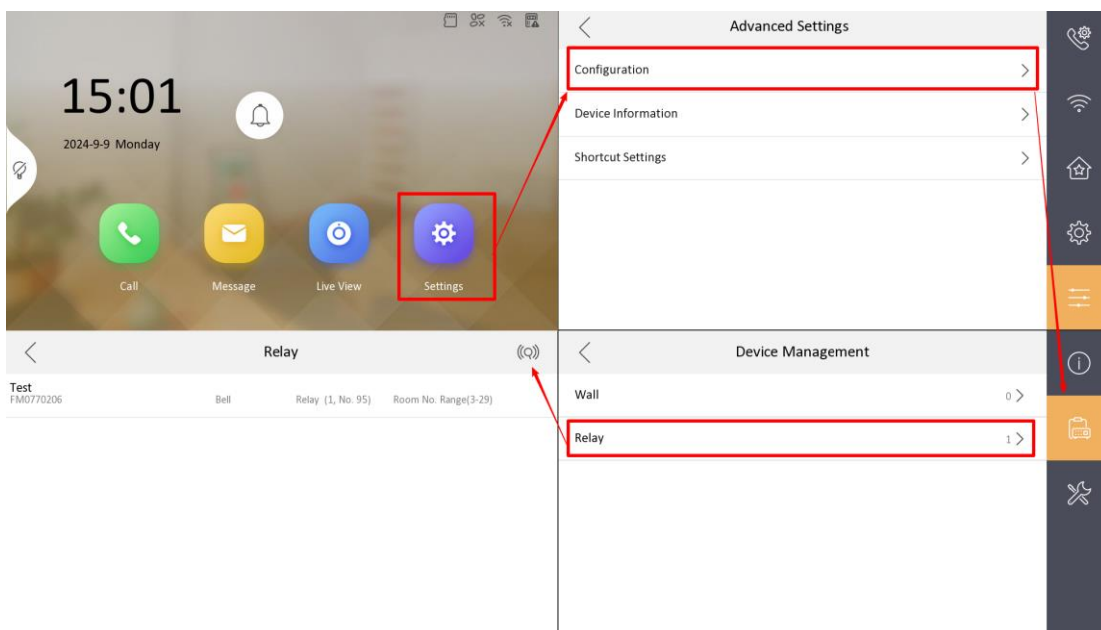
Method 1: Auto Sync by Door station



Method 2: Manual add by Door station



Method 3: Search by Indoor station

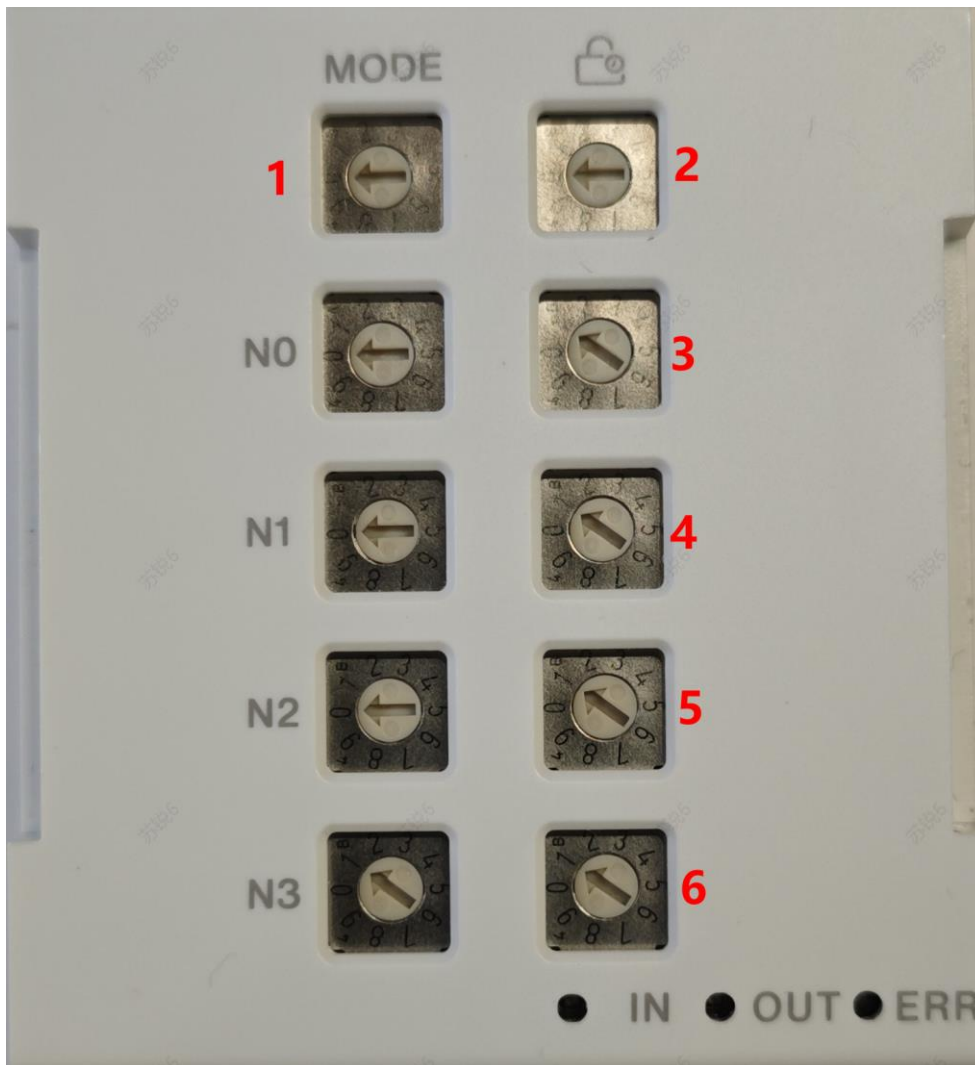


Working mode

Mode 0

Usually closed. Can be triggered manually. Being set to unlock the door. (The relay is bound to specified indoor station in Building N1, N2, N3 automatically.)

Example



1: mode is 0, the lock is normally closed

2: door open duration is 2s

3: relay no. 1

4: Building no. 1

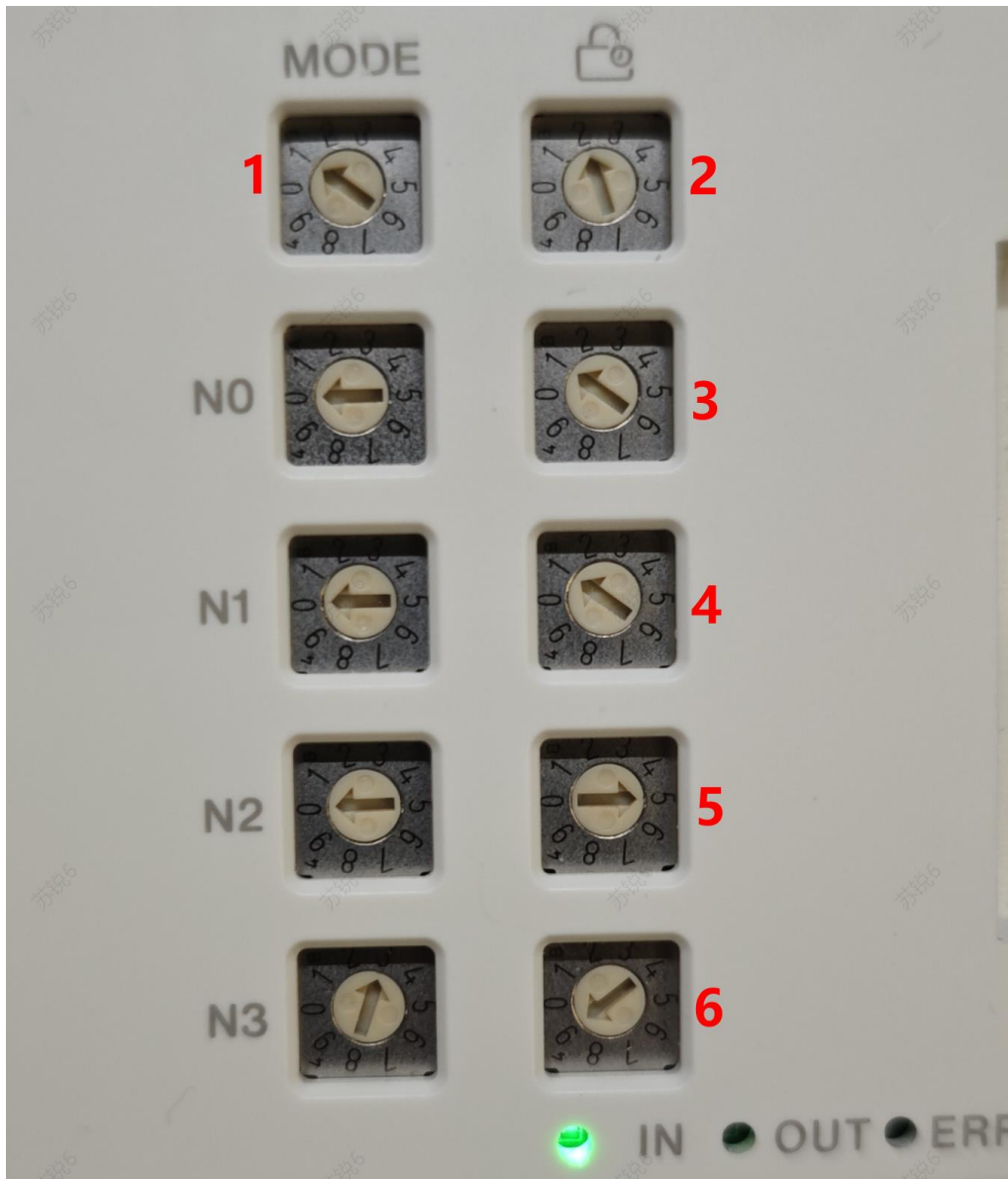
5: Minimum Room no. 1

6: Maximum Room no. 11 ($1 \times 10 + 1$)

The indoor station from 1 to 11 in Building 1 can control the lock of relay No. 1

Mode 1:

Usually open. Can be triggered manually. Being set to unlock the door.(The relay is bound to specified indoor station in Building N1, N2, N3 automatically.)

Example

1: mode is 1, the lock is normally opened

2: door open duration is 3s

3: relay no. 1

4: Building no. 1

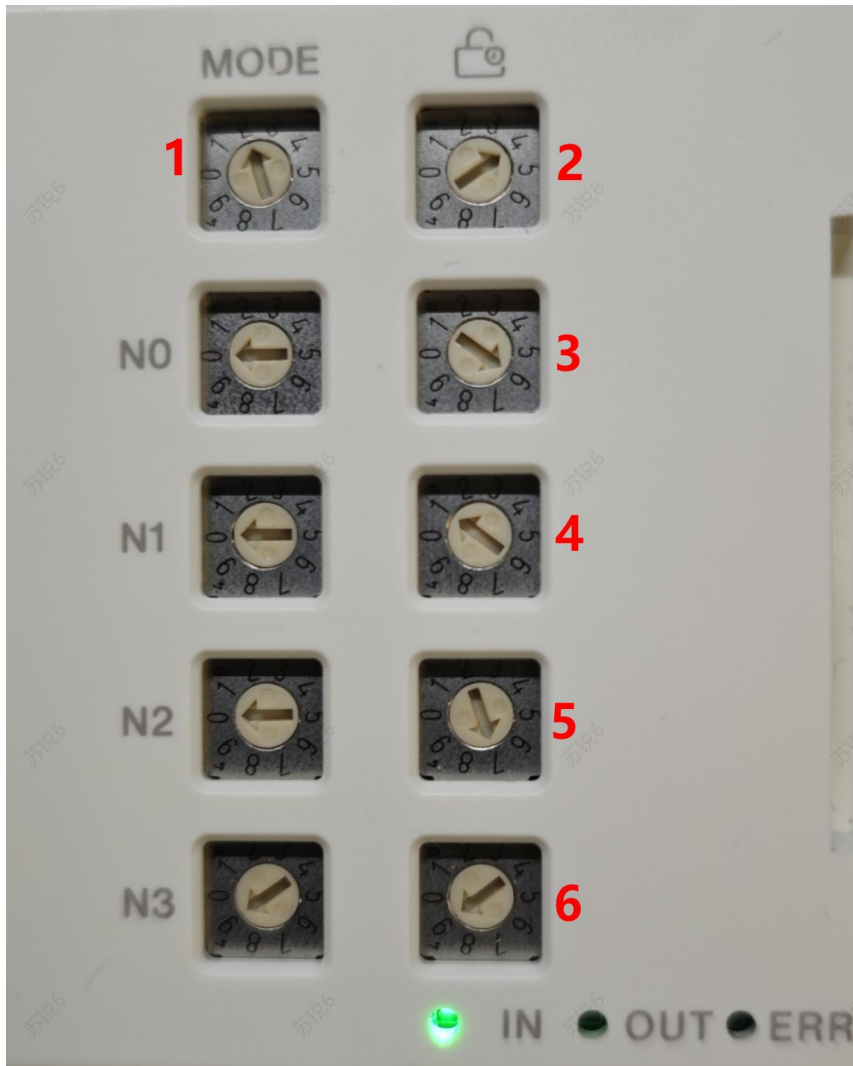
5: Minimum Room no. 5

6: Maximum Room no. 39 ($3 \times 10 + 9$)

The indoor station from 5 to 39 in Building 1 can control the lock of relay No. 1

Mode 2:

Usually open. Can be triggered manually. Being set to control the light. (For this mode, when the dial code of N1, N2 or N3 is not 0, the relay is bound to a indoor station in Building N1. The room number range from N1 to N3.)

Example

1: mode is 2, relay connect the light

2: Light controls 120s

3: relay no. 6

4: Building no. 1

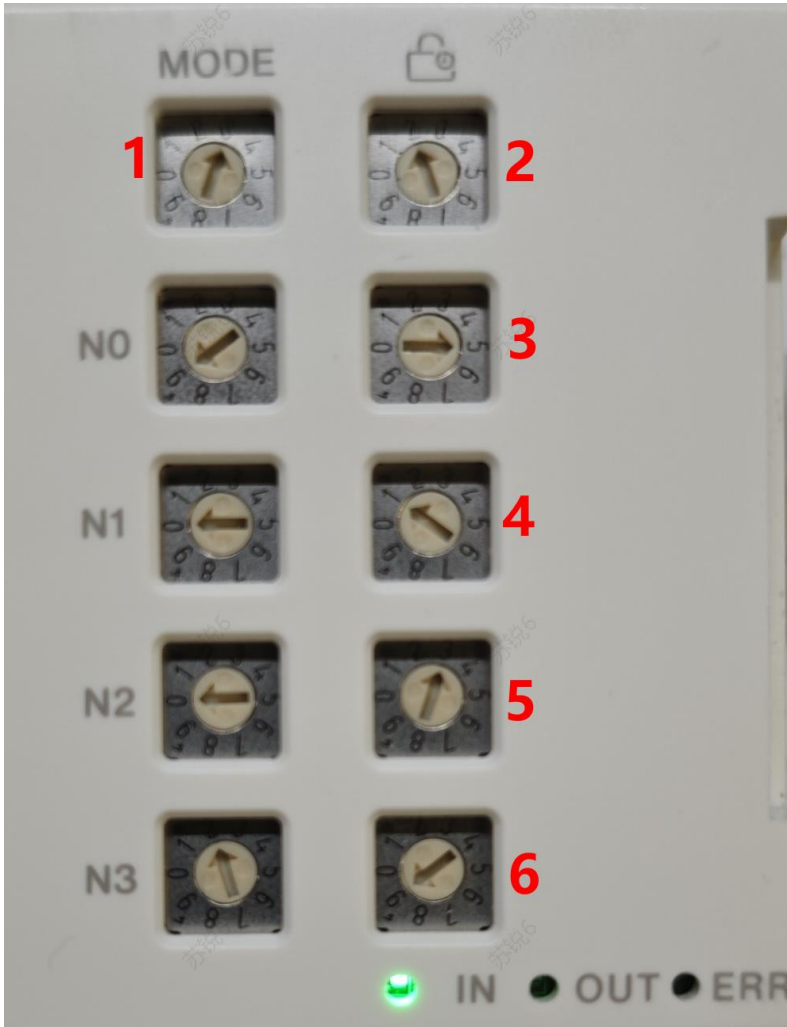
5: Minimum Room no. 7

6: Maximum Room no. 99 ($9 \times 10 + 9$)

The indoor station from 7 to 99 in Building 1 can control the light of relay No. 6

Mode 3:

Usually open. Would be triggered automatically after call. Being set to control the mechanical doorbell. (For this mode, when the dial code of N1, N2 or N3 is not 0, the relay is bound to a indoor station in Building N1~N3. The door open duration of the relay decides the number of times the mechanical door bell would ring.)

Example

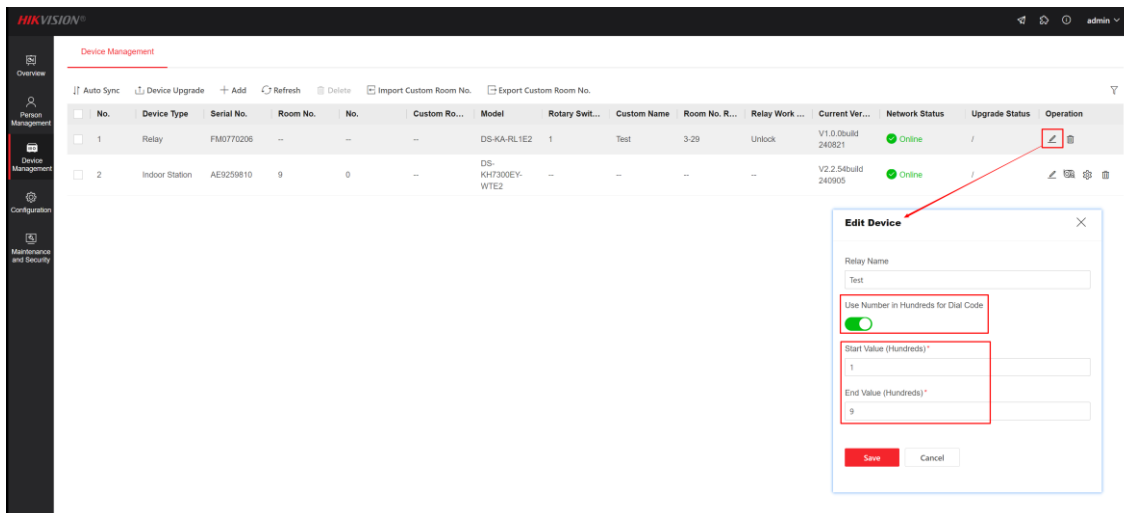
- 1: mode is 3, relay can control the mechanical doorbell
 - 2: Mechanical door bell ring 9 times would be triggered automatically after call
 - 3: relay no. 5
 - 4: Building no. 1
 - 5: Minimum Room no. 3
 - 6: Maximum Room no. 29 ($2 \times 10 + 9$)
- The indoor station from 3 to 29 in Building 1 can control the mechanical doorbell of relay No. 6

Notes:

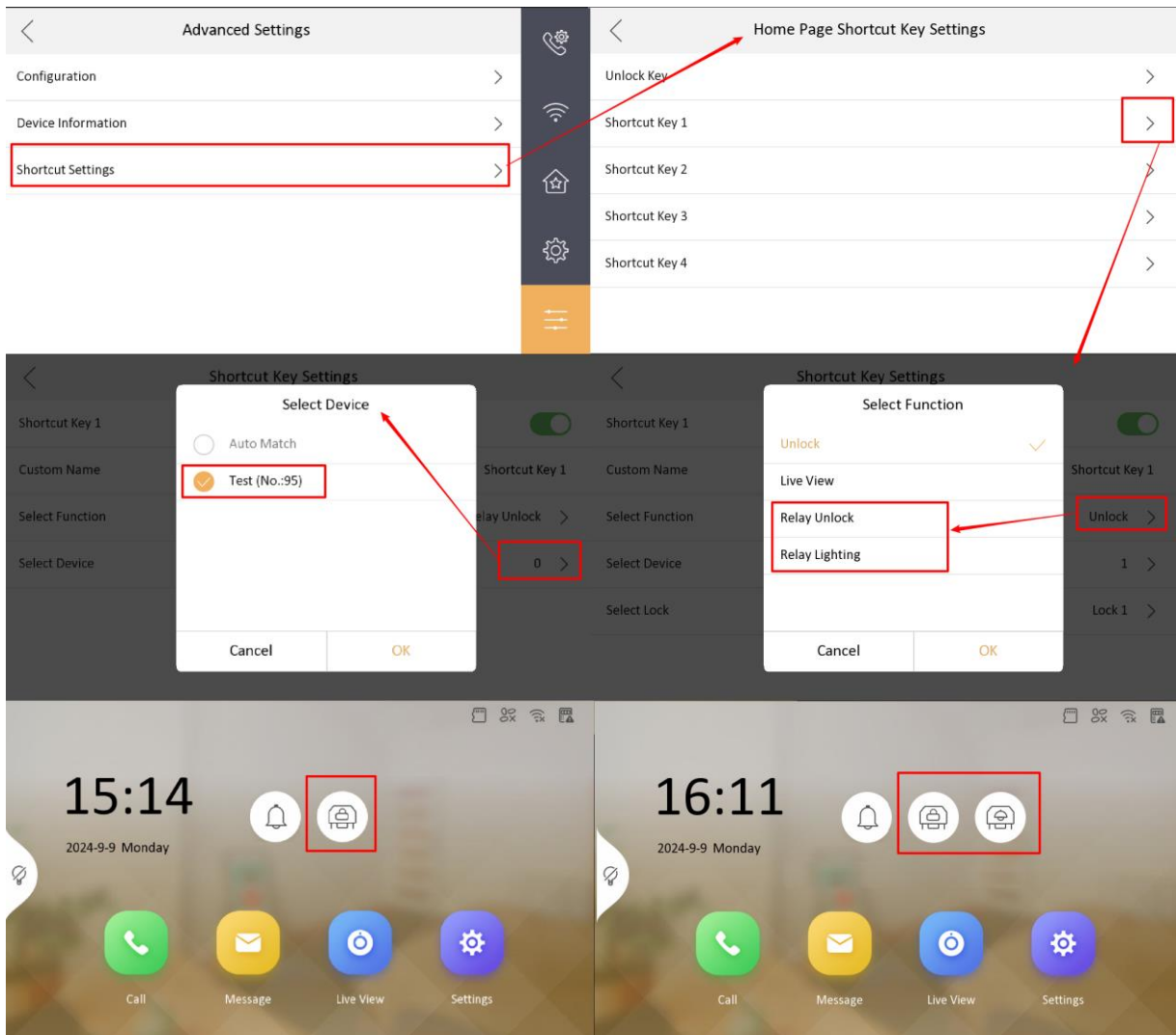
- Each indoor station supports maximum 99 relay modules. The ceiling depends on the power dissipation of the relay module(s).
- The indoor station building number needs to be the same as the relay module, and the indoor station room number needs to be within the range of the room number of the relay module.

	Tens	Units	
MODE	<input type="text"/>	<input type="text"/>	
N0	<input type="text"/>	<input type="text"/>	Relay No.
N1	<input type="text"/>	<input type="text"/>	Building No.
N2	<input type="text"/>	<input type="text"/>	Room No. (Minimum)
N3	<input type="text"/>	<input type="text"/>	Room No. (Maximum)

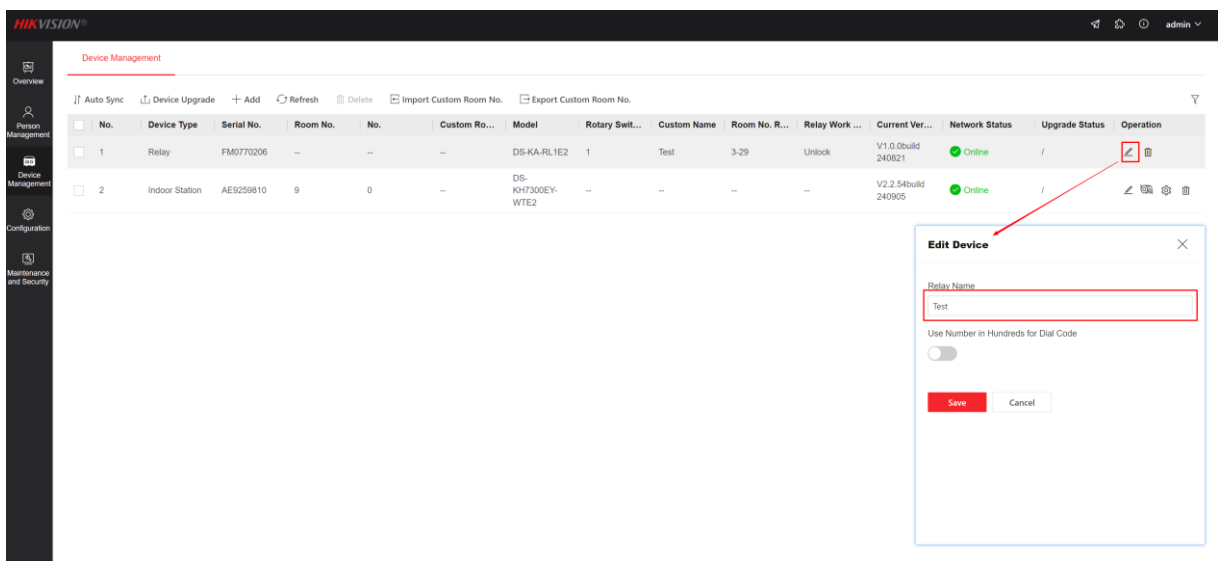
- In total, you can use 1 to 99 to number the building and the relay, and 1 to 400 to number the room (To configure room number in hundreds, you need to visit the web interface of the door station).



- Each indoor station has 2 to 5 customizable buttons. The unlock button can be configured to unlock door station's relay, or trigger specified relay module's relay (address is needed). The other 4 buttons also supports triggering specified relay module's relay (address is needed).

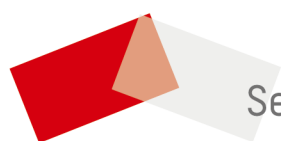


5. Relay's name can be edited in the door station's device management



6. When building No. is dialed to 0, pressing reset button would restore the device to unactivated state.

	Tens	Units	
MODE	<input type="text"/>	<input type="text"/>	
N0	<input type="text"/>	<input type="text"/>	Relay No.
N1	<input type="text"/>	<input type="text"/>	Building No.
N2	<input type="text"/>	<input type="text"/>	Room No. (Minimum)
N3	<input type="text"/>	<input type="text"/>	Room No. (Maximum)



See Far, Go Further