Orbita

ORBITA Single Relay
for External Elevator Control

User Manual

Table of Contents

1:Products

MFR-05 Square Reader, MFR-04 Round Reader, MFC-03 Elevator Controller

MFR-05 Square Reader

MFR-04 Round Reader

SN	Description	Remarks
A	**8Pin Interface** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧	Definitions from left to right ① ---------Reserved ② ---------Power + 12V DC ③ ---------Ground ④ ---------Reserved ⑤ ---------Relay Output NC ⑥ ---------Relay Output COM ⑦ ---------Relay Output NO ⑧ ---------Reserved
B	**Reset Button** Reset hole. Press the Reset button to	Restore to factory defaults

2:Solution Overview

STC chip is used as the master control, and the NXP card reading chip supports M1 card swiping to control elevator operation.

M1 card swiping: :

Use the supporting software to encode cards that can be swiped to control elevator operations with guest cards and internal management cards for example. Only the elevator floor buttons can be managed, and the original elevator control function is not affected.

Swipe record monitoring :

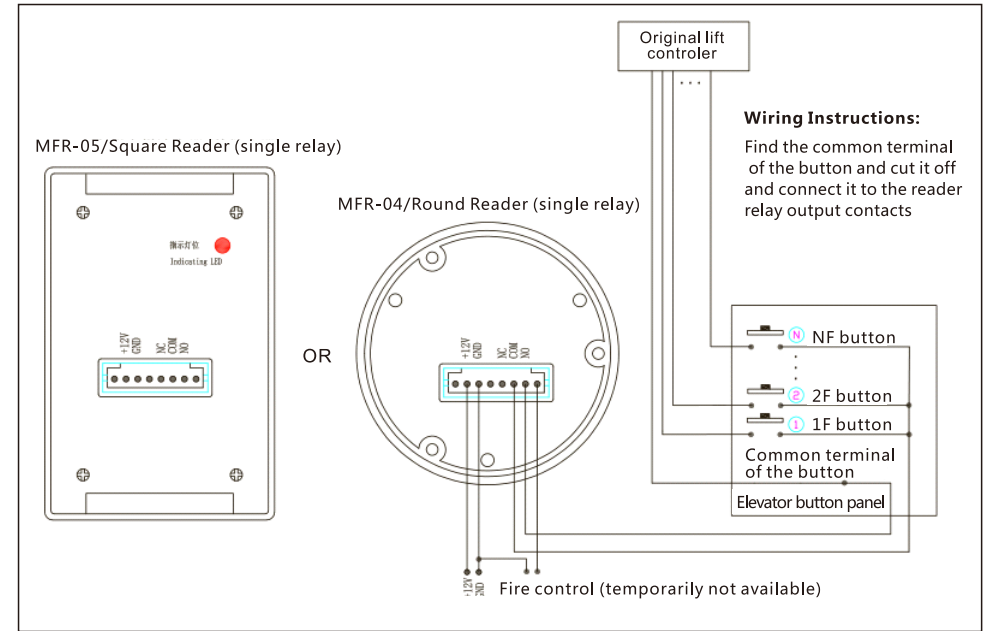A record of swipes is kept on all unlocking cards.

3:Performance Parameters

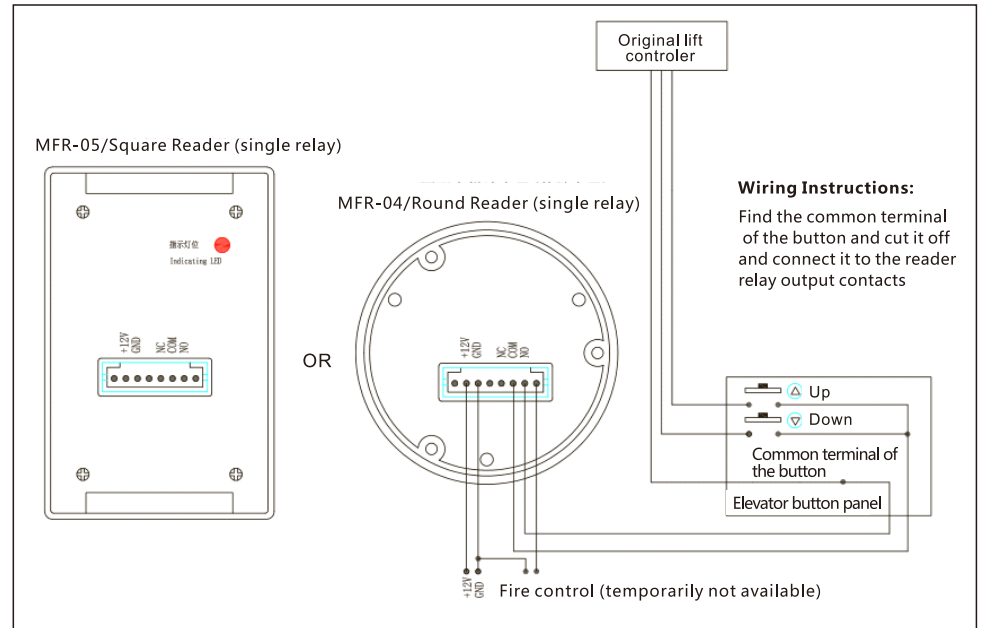MFR-05 Square Reader and MFR-04 Round Reader:

Model	MFR-05	MFR-04
Size	115mm (length), 74mm (width), 16 mm (height)	90 mm (diameter), 15 mm (height)
Material	ABS+PC	Anodized 6063 aluminum
Power supply mode	12V DC	12V DC
Maximum operating current	300mA	300mA
Supported card	MIFARE M1	MIFARE M1
Max reading distance	2 cm	2 cm
Output	Serial port	Serial port
Operating temperature	-20 - 70 ℃	-20 - 70 ℃
Operating humidity	30%~85%	30%~85%

4:Wiring Diagram

Reader wiring diagram (inside)

MFR-05/Square Reader (single relay)

MFR-04/Round Reader (single relay)

Original lift controler

Wiring Instructions:

Find the common terminal of the button and cut it off and connect it to the reader relay output contacts

指示灯位 Indicating LED

+12V GND NC COM NO

OR

NF button

2F button

1F button

Common terminal of the button

Elevator button panel

Fire control (temporarily not available)

Reader wiring diagram (outside)

MFR-05/Square Reader (single relay)

MFR-04/Round Reader (single relay)

Original lift controler

Wiring Instructions:

Find the common terminal of the button and cut it off and connect it to the reader relay output contacts

指示灯位 Indicating LED

+12V GND NC COM NO

OR

Up

Down

Common terminal of the button

Elevator button panel

Fire control (temporarily not available)

5:Reader Operation

5.1Main Functions

5.1.1 Guest Card:
To the occupancy floor.

5.1.2 Other Unlocking Cards:
To all floors

5.1.3 Setting Card:
Set up floors where the elevator stops

5.1.4 Buzzer Sound Alert :
Short tone: Setting succeeded

Long tone: Setting canceled

2 tones: Wrong area

3 tones: Time expired

4 tones: Unauthorized

5 tones: Card lost

7 tones: This room is blocked

8 tones: Wrong card

5.2 Function Details

5-2-1 Setting Card Function
When the reader touches the setting card, the reader will allow or frobid the elevator to stop at the floor specified with the card.

Short tone: Setting succeeded, stopping at that floor is allowed;

Long tone: Setting canceled, stopping at that floor is prohibited;

The card-making and swiping operations are shown below. :
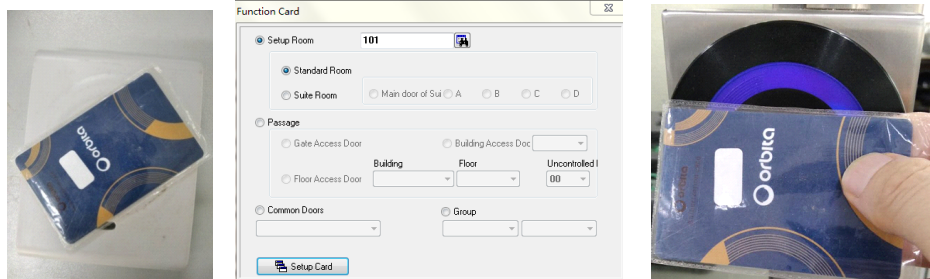
1 : Put the card on the encoder

2 : Configure the setting card point in the issuing software

3 : and swipe the card through the reader

5-2-2 Guest Card Function
When a guest swipes the guest card through the reader, the reader will allow the guest to use that elevator.When configuring the guest card, click the "Elevator Floor" button,
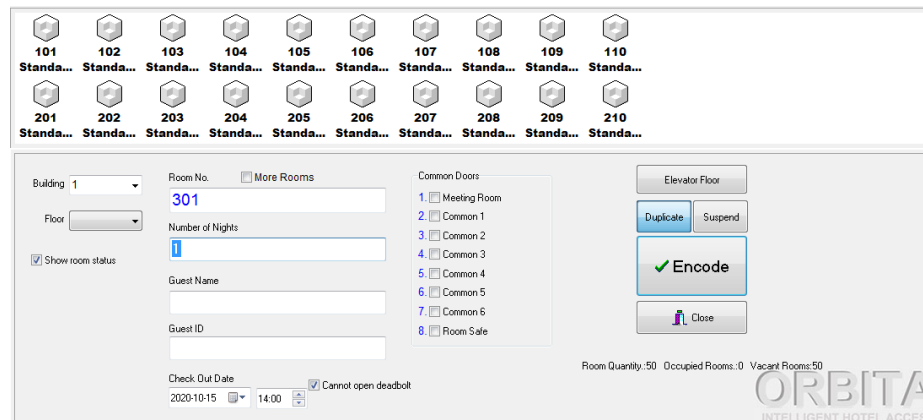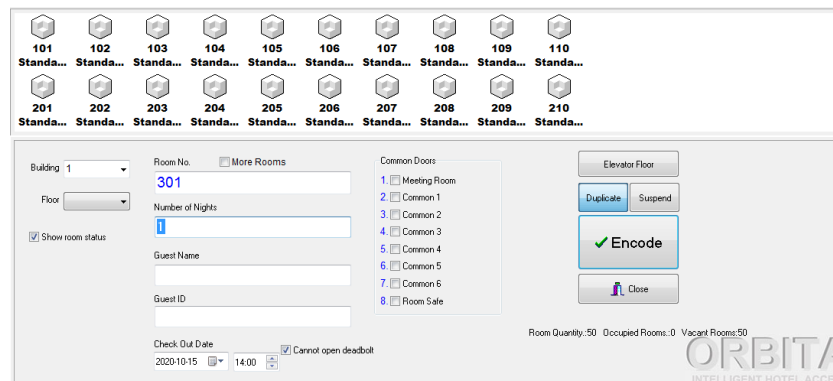

A dialog box appears as shown below, which contains 1F to 64F checkboxes.
You can select 0 to 8 floors in this box. By default, None (0 floor) is selected.
For example, the guest is in 3F (Room 301). You cannot select all floors except 3 in the dialog box. (The number of the guest floor cannot be selected)
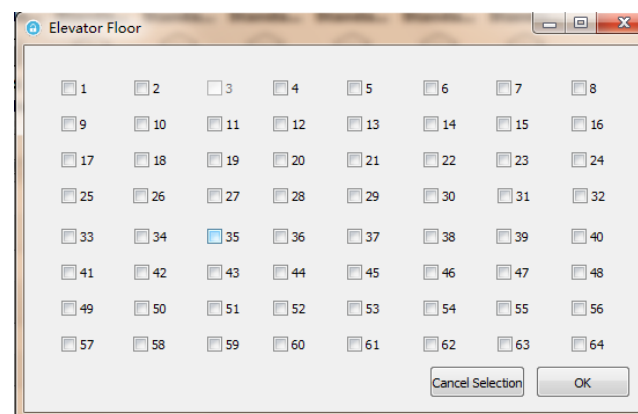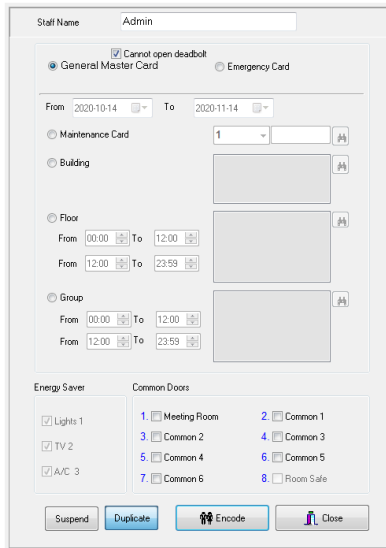

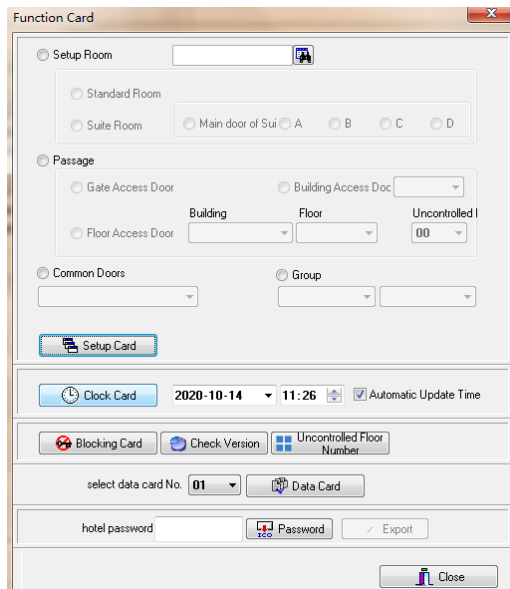Then click the "Encode" button as shown below to create a "Guest Card".

5-2-3 Other Unlocking Card

You can go to all permitted floors, click on the "Master Card" radio button and then click on the "Encode" button, as shown below.

A block card is required. Swipe the block card through the reader. If the buzzer gives out a short beep, and setting is now successful. Only the master card can unlock after blocking. Swipe the block card again if you want to cancel the block, and the function is canceled when the buzzer gives out a long beep. Click the "Block Card" button as shown below to encode a Block Card.
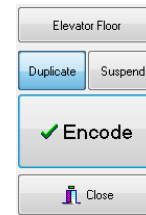

5-2-5 Loss Reporting

The master card loss only compares the loss value. Click the "Lost" button before clicking the "Encode" button, and then swipe the card through the reader to complete the loss reporting after issuing the card, as shown below.

To report a lost guest card or employee card, you need to write the number of the lost card in the newly encoded card, and click the "Lost" button. And the blacklist as shown below appears.
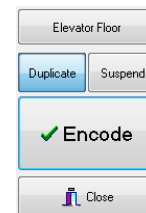

(Employee card Suspend)

(Gues card Suspend)

(Guest card blacklist)　　　　　　　　　(Employee card blacklist)

Double-click the card number to report the loss, and then click the "Encode" button to make the loss reporting card. After issuing, swipe the card through the reader to complete loss reporting.。

5-2-6 Elevator control channel numbers can be assigned to any floor number

Only card is supported. Setting through the handheld set is not supported. You can set in the following two ways:

Setting 1: Modify a single channel and add the elevator channel number to the original floor channel setting card. Encode an elevator control setting card to swipe the card on the reader to set, as shown below. When the channel number is 0, the previous setting mode is supported, and the room setting card also supports the previous setting mode. This setting mode is compatible with the legacy version of the issuing software and the elevator control. . The legacy software supports the new elevator control, and the new software supports the legacy elevator control.

Card Issuing Softwar	Reader	Result
New,the lift channel is not 0 in floor channel serring card	New	Reader channel numbers can be assigner to any floor
New,the lift channel is 0 in floor channel setting card	New	The result is the same as the legacy soft
New,room setting card	New	
New	Legacy	
Legacy	New	
Legacy	Legacy	

Setting 2: Modify all channels simultaneously. Use the S70 card to encode an elevator control setting card, and swipe the card on the reader to set, as shown below. You can set 64 floors in one go, greatly reducing the setting workload. With the legacy version, you need to swipe 64 times.

| Reader	Controller	Result
New	New	Controller channel numbers canbe assigned to any floor
New	Legacy	The result is the same as legacy control
Legacy	New	
Legacy	Legacy	
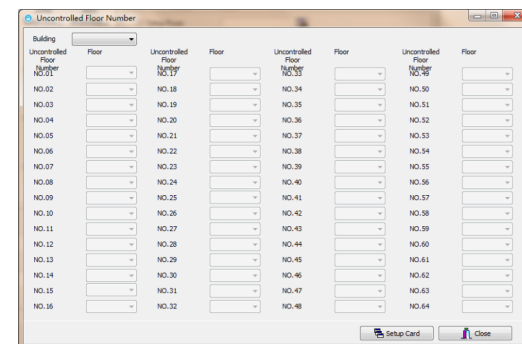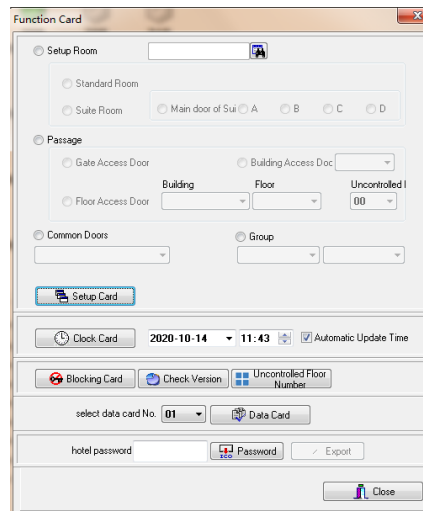
5-2-7 Restore Factory Settings

Press and hold the reset button on the back of the reader for 3s, and when you hear the buzzer go off, the settings are restored to the factory defaults.

Press and hold the reset button on the back of the reader for 10s, and when you hear the buzzer go off, not only the settings are restored to the factory defaults, you can also toggle whether or not to support additional floor modes:
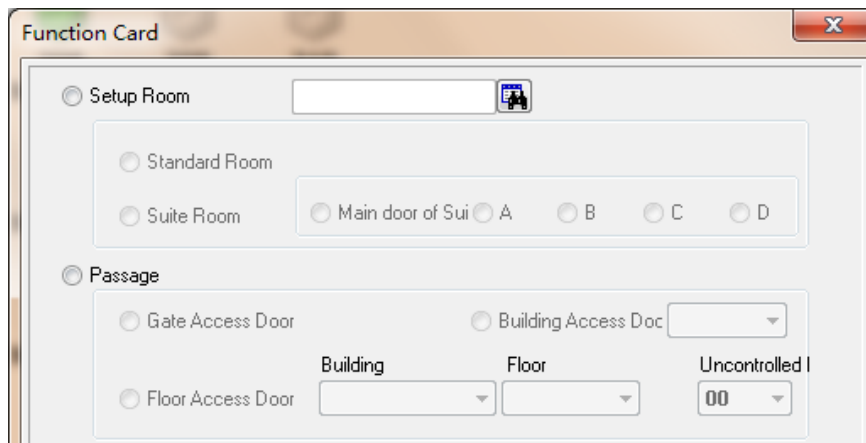
One continuous short beep: Single floor selection mode:

Two continuous short beeps: Multiple floor selection mode.
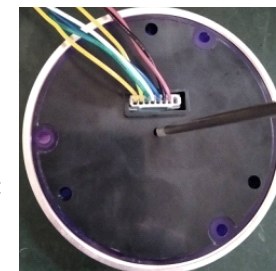
6: Supporting Software

We offer an Orbita hotel smart lock management system that accommodates all hotel management software and supports Fidelio/Opera.