

# SUPPORT INFORMATION

Door Entry Phones

25/11/2019



## Akuvox R27A Quick Start Guide

BASIC

Rev 01 /2019 EN

Skills: ✕ ✕ ✕ ✕ ✕

### Table of Contents

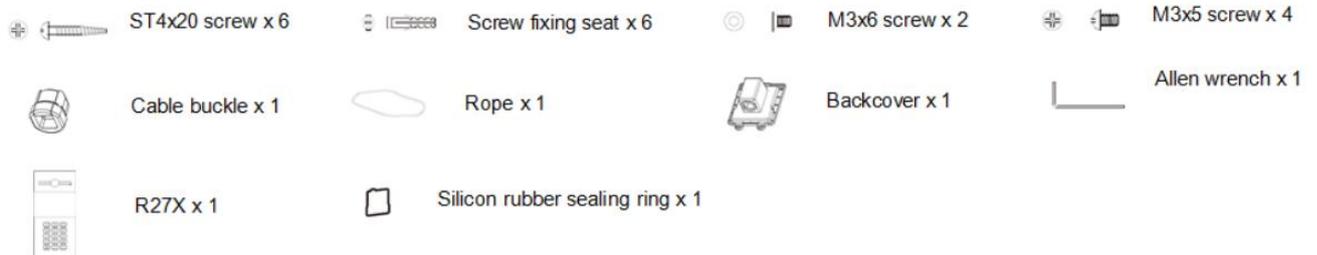
1.	PHYSICAL INSTALLATION .....	2
2.	THE R27A CONNECTOR TERMINALS ON THE BACK SIDE:.....	6
3.	WIRING POWER SUPPLY.....	7
4.	THE IP ADDRESS .....	8
5.	WIRING DOOR STRIKE, LOCK OR MAGNETIC LOCK.....	8
6.	CONFIGURATION FOR RELAYA.....	9
7.	EXTRA RELAY SETTINGS .....	10
8.	WIRING REQUEST TO EXIT PUSH BUTTON.....	10
9.	CONFIGURATION FOR INPUT "DOORA" .....	11
10.	CALL CONFIGURATION EXAMPLE 1   LOCAL RELAY ON R27A.....	11
11.	CALL CONFIGURATION EXAMPLE 2   LOCAL RELAY C315 .....	15
12.	LOCAL ACCESS CONTROL.....	16
13.	ACT ENTERPRISE INTEGRATION ON WIEGAND 32 BIT.....	19
14.	SPC INTEGRATION ON WIEGAND 32 BIT AND WIEGAND 56 BIT .....	20
15.	TROUBLESHOOTING .....	21
16.	NOTES.....	22

# SUPPORT INFORMATION

## 1. Physical Installation

**Things you need:** (excluding Back Box and Flush Mount all comes with the product)

■ Universal accessories :



■ Surface accessories :



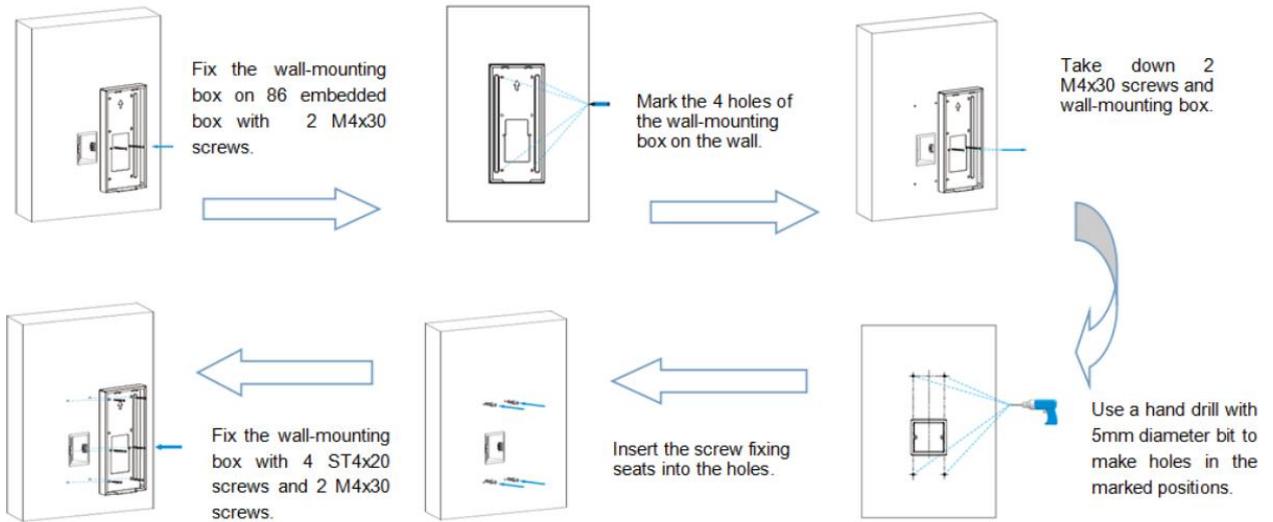
■ Flush accessories:



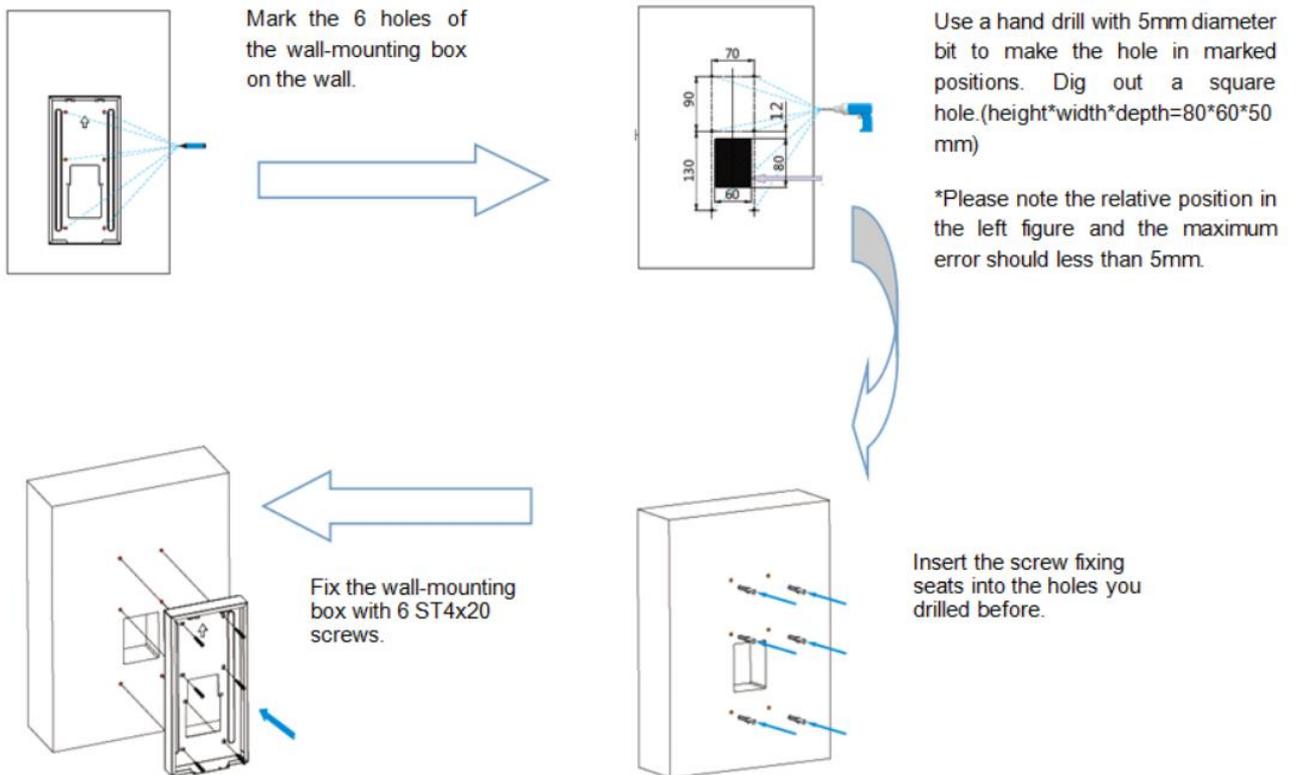
### Installation with 86mm Backbox:

[Example Back Box](#) (external Link)

# SUPPORT INFORMATION

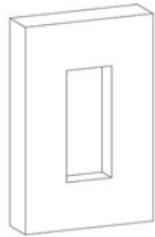


## Installation without Backbox:



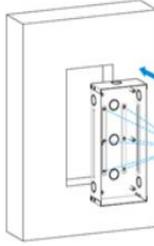
**Flush Mounted:** [\(using the Flush Mounting Bracket\)](#)

# SUPPORT INFORMATION

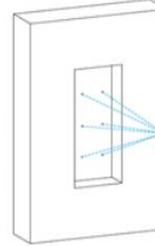


Dig out a square hole (height\*width\*depth=269.5\*122.4\*60.5mm)

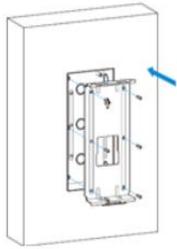
Note: The size of the hole should be a little larger than recommended value that can accommodate all cables.



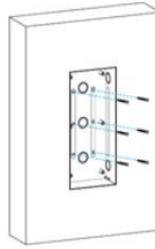
Insert the embedded box into the hole and make sure the cables of the device can route through the cable hole. Then mark the 6 holes of the wall embedded box on the wall.



Take down the embedded box, then use a hand drill with 5mm diameter bit to make holes in the marked positions.

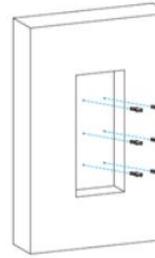


Use six M4x10 screws to fix the flush-mounting bracket on the embedded box.



Place the embedded box into the square hole until the edges of which align to the wall and make all cables go through the cable hole. Fix the embedded box with 6 ST4x20 screws.

Note: The embedded box can not over the edge of the square hole.



Insert the screw fixing seats in the hole you drilled before.

# SUPPORT INFORMATION

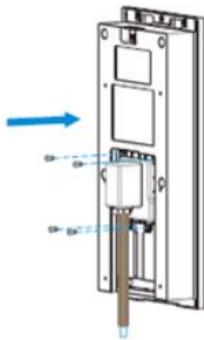
## Back Cover Installation:



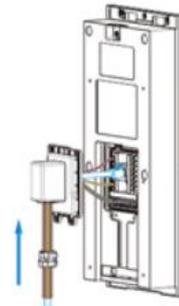
For convenient wiring, hang R27X on the wall-mounting box/flush-mounting bracket with rope. Then insert the silicon rubber sealing ring into the groove.



Take down the back cover and cable buckle.

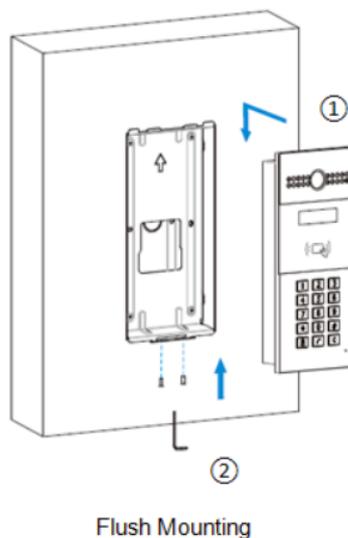
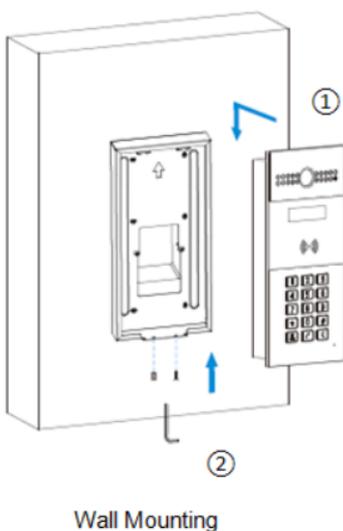


Use four M3x5 screws to fix the back cover.



Route the cables of the device through the cable hole, connect to the corresponding interfaces of the main board. Then insert the cable buckle into the back cover.

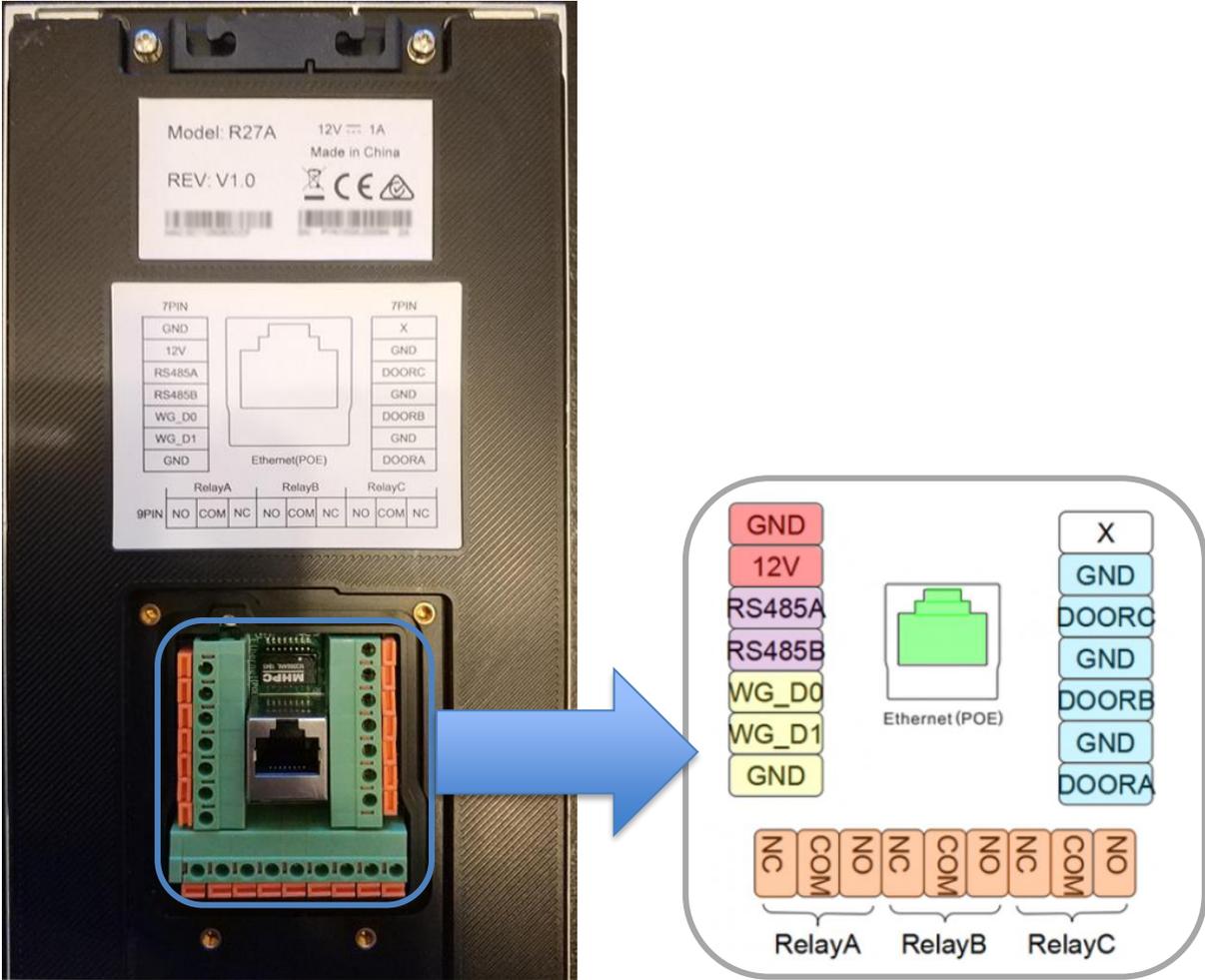
## Final Installation:



1. Place the device into the wall-mounting box / flush-mounting bracket until the edges of which align to the wall. Then pull the device downward and ensure the groove of it hooks to the lock catches of the back box.
2. Use the Allen wrench to tighten the device with 2 M3x6 screws.

# SUPPORT INFORMATION

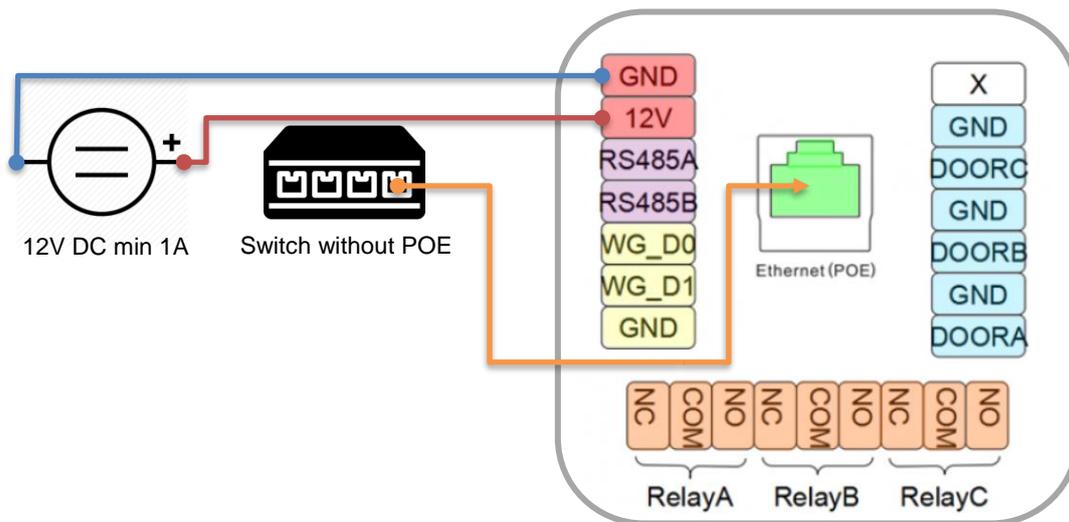
## 2. The R27A Connector Terminals on the back side:



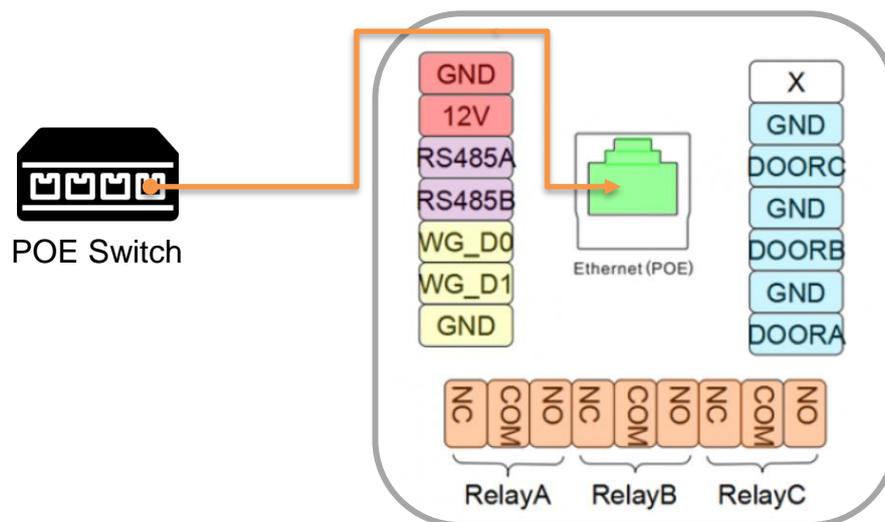
## 3. Wiring Power Supply

To power the R27A device 2 options are available

- A local 12 Volt Power supply connected to GND and +12V here shown in red  
The power Supply should have min rating of 1A at 12 Volts DC.  
*Recommended cable min 0,6 mm<sup>2</sup> stranded or single core.*



- By using a POE enabled Switch (The POE will power for the R27A Unit)  
Connect the ethernet cable having POE into the green highlighted RJ45 port.  
*Using POE, the red terminal will not provide any power to source the attached locks.  
In this case an external Power Supply will be required!*



## 4. The IP Address

By default, the R2/A is configured for using DHCP (automatically assigned IP Addresses). The automatic assignment of your devices IP will happen automatically after it has started. The R27 A will get an IP from your Router or DHCP server in your network.

To Access the Devices Web Server for the configuration you can discover the IP address by 2 different steps.

- 1) Press “\*2396#” to enter administrator interface. Press “3” to enter system setting interface, and press “1” to enter network setting interface. Here you can check or modify the IP address of the device.
- 2) You can download the IP Scanner tool from Akuvox and search in your local network for new units. [Link for the IP Scanner and Description.](#)

### **Manual IP configuration:**

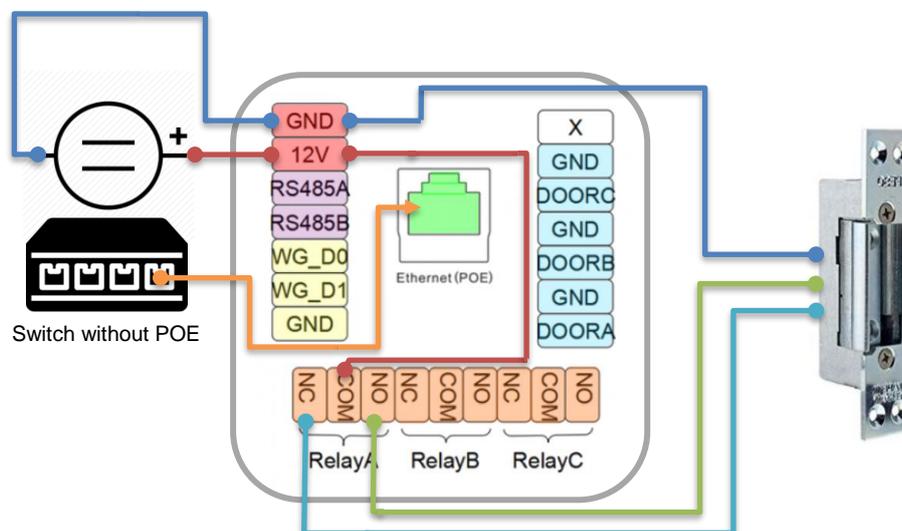
To setup a manual IP address you need to enter the Web Client by using a temporary assigned IP address. Login with default credentials Username = admin, Password = admin. **Navigate to Network > Basic** and change the IP address from DHCP to manual and set the desired address.

More options can be found [here](#) at the corresponding Akuvox Wiki Record.

## 5. Wiring Door Strike, Lock or Magnetic Lock

### **R27A and Lock is powered by a single PSU**

- **Normal Operation wiring**
- **Fail-Safe Operation wiring**

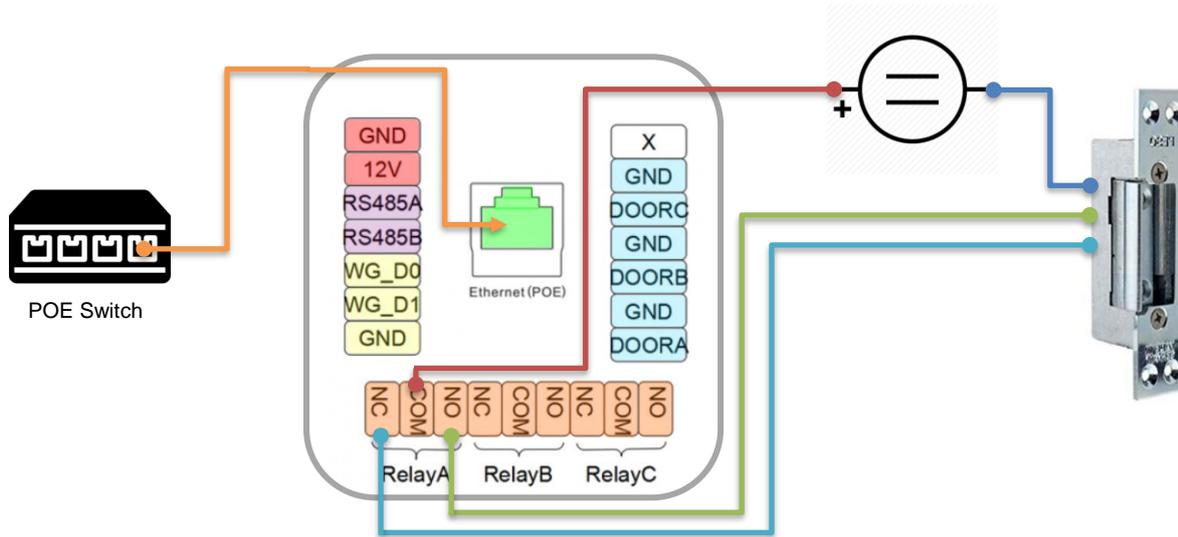


Remember to select the right Power Supply in relation to your Locks Power consumption.

# SUPPORT INFORMATION

## **R27A is powered via POE, Lock is powered by an external PSU**

- Normal Operation wiring
- Fail-Safe Operation wiring



### **Legend:**

- Ethernet / POE ■
- Lock Cabling ■ ■
- Power Supply ■ ■
- Wires ■

## 6. Configuration for RelayA

As per chapter 3 discover and use the IP address and login to connect to its Web Server. **Navigate to Intercom > Relay** to configure the parameters for the different relays. Most cases the default values are just perfect.

Relay			
Relay			
Relay ID	RelayA	RelayB	RelayC
Relay Type	Default state	Default state	Default state
Relay Mode	Monostable	Monostable	Monostable
Relay Delay(sec)	3	3	3
DTMF Option	1 Digit DTMF		
DTMF	6	0	0
Multiple DTMF			
Relay Status	RelayA: Low	RelayB: Low	RelayC: Low

**Relay Delay** set the door open time. Default is 3 Sec we would recommend using 5 Sec.

**DTMF** define the unlock Code. Default is "5" but it can be changed to another value. Remember your DTMF code for further intercom settings.

Press 6 on your phone's keypad during an active call, to send the corresponding DTMF tone to release the door on RelayA. Indoor monitors or App's have soft keys simulating the configured DTMF tone. [DTMF Wiki Link](#)

## 7. Extra Relay settings

Several extra Settings can be applied to each relay.

Relay			
Relay ID	RelayA	RelayB	RelayC
Relay Type	Default state	Default state	Default state
Relay Mode	Monostable	Monostable	Monostable
Relay Delay(sec)	3	3	3
DTMF Option	1 Digit DTMF		
DTMF	6	0	0
Multiple DTMF			
Relay Status	RelayA: Low	RelayB: Low	RelayC: Low

### Relay Type

By this setting you can inverse the relay if needed. Example use case can be a fail-safe operation for the door lock.

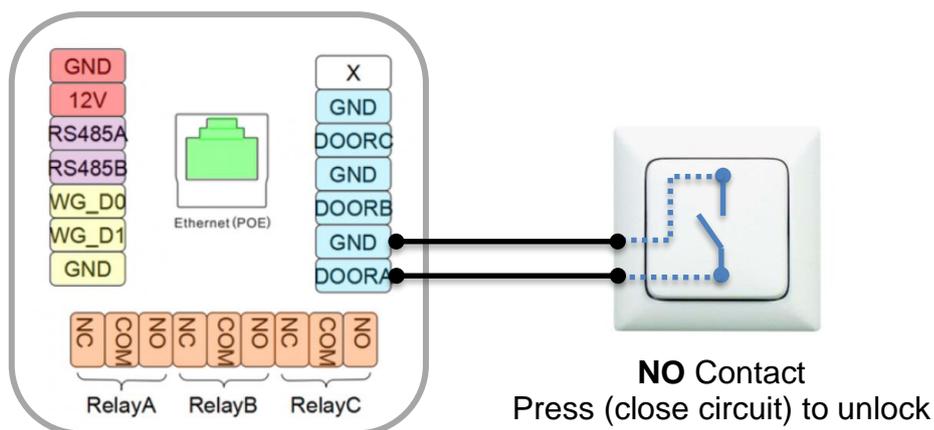
### Relay Mode

**Monostable** = momentary switching for the Delay time.

**Bistable** = Keep the state of the relay until triggered next time ( Toggle mode )

## 8. Wiring Request to Exit Push Button

This configuration will allow to use a standard switch to release the door by remote. Normally this is used if the door has a card reader from the Entrance direction, and a release button from the inside.



## 9. Configuration for Input “DoorA”

Open the Web Server and [navigate to Intercom > Input](#). In this section you can configure the behaviour of individual inputs. To enable the “DoorA” Input as Request to Exit Button apply the illustrated changes.> The door will open for the configured delay time on the selected relay once the contact has been closed.

**Input A**

Input Service: Enabled

Trigger Option: Low

Action to execute:  FTP  Email  Sip Call  HTTP

Http URL:

Open Relay: RelayA

Door Status: DoorA: High

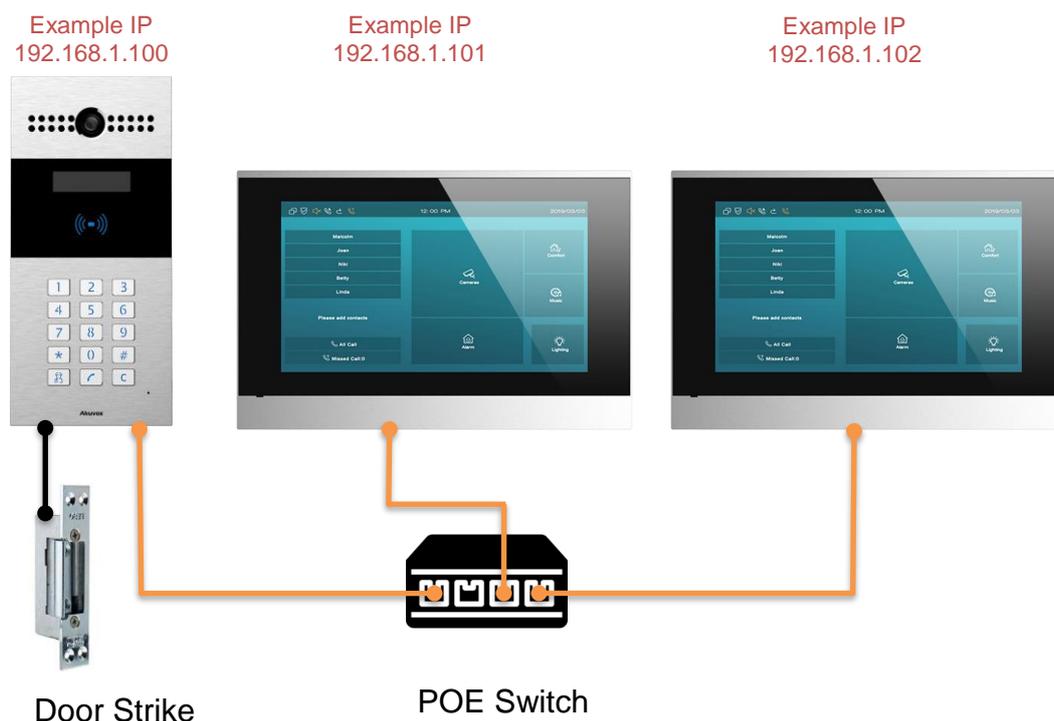
**Trigger Option** set the input trigger mode.  
**Low** means contact closing  
**High** means contact opening

**Open Relay** define the relay you like to control by this input.

**Door Status** show the current input state (in real time)

## 10. Call Configuration Example 1 | Local Relay on R27A

The R27A is combined with 2x C315 Indoor monitors to pick up a call from the door. Out of the box the C315 Monitors will have the most necessary settings configured already. In each C315 Monitor only the unlock features for the doors must be configured to get a working system in place.



# SUPPORT INFORMATION

## The Setup:

**Step1:** Get the C315 Monitors connected via DHCP to your network.

**Step2:** Write down the give IP address of each C315S unit to be configured in the R27A later.

 **Tip:** Most networks support a DHCP reservation for devices, so they will always have the same IP Address assigned. **Please use this feature for optimal system performance.**

**Step3:** Configure each C315S with the remote relay Unlock DTMF command “6”

On the C315 units [Navigate to Phone > Relay](#) and set the remote relay settings for your R27A.

- Configure the common DTMF Command  
On the relay settings page set the remote Relay DTMF to your selected character

**Relay Setting**

Local Relay

Relay Delay (Sec)  Relay Type

Remote Relay

DTMF code1  

DTMF code2

DTMF code3

- Configure the Soft Key(s) for the Talking Screen (incoming calls).  
This example will just show one “Open Door” Soft Key in the Talking Screen here configured as “**Soft Key 0**”

## **Softkey In Talking Page**

	Status	Display Name	Relay
Key 0	<input type="text" value="Enabled"/>	<input type="text" value="Open Door"/>	<input type="text" value="Remote Relay DTMF1"/>
Key 1	<input type="text" value="Disabled"/>	<input type="text" value="Open Barrier"/>	<input type="text" value="Local Relay"/>
Key 2	<input type="text" value="Disabled"/>	<input type="text" value="Unlock3"/>	<input type="text" value="Local Relay"/>

# SUPPORT INFORMATION

**Step4:** Configure the local contacts in your R27A to be able to call the different receivers from your R27A calling screen

**Navigate to Phone Book > Phone Book** and configure the IP Addresses of each C315 Monitor as a call receiver. The illustration will show a new contact created with the following settings:

## Name

Set the name of the resident also shown in the contact list on the R27A screen

## Phone

Phone Number, Sip Account or IP address of the Resident

## Priority of Call

The priority of this resident, call as first, 2nd or 3rd choice

**Phone Book**

Show Cloud Contact: Disabled

Contact: All Contacts

Search: [ ] Search Reset

Index	Name	Phone	Group	Lift Floor Number	Priority of Call	<input type="checkbox"/>
1	Andy	<a href="#">10.61.224.38</a>	Default	0	Firstly Called	<input type="checkbox"/>
2						<input type="checkbox"/>
3						<input type="checkbox"/>
4						<input type="checkbox"/>
5						<input type="checkbox"/>
6						<input type="checkbox"/>
7						<input type="checkbox"/>
8						<input type="checkbox"/>
9						<input type="checkbox"/>
10						<input type="checkbox"/>

Page 1 Prev Next Delete Delete All

**Contact Setting**

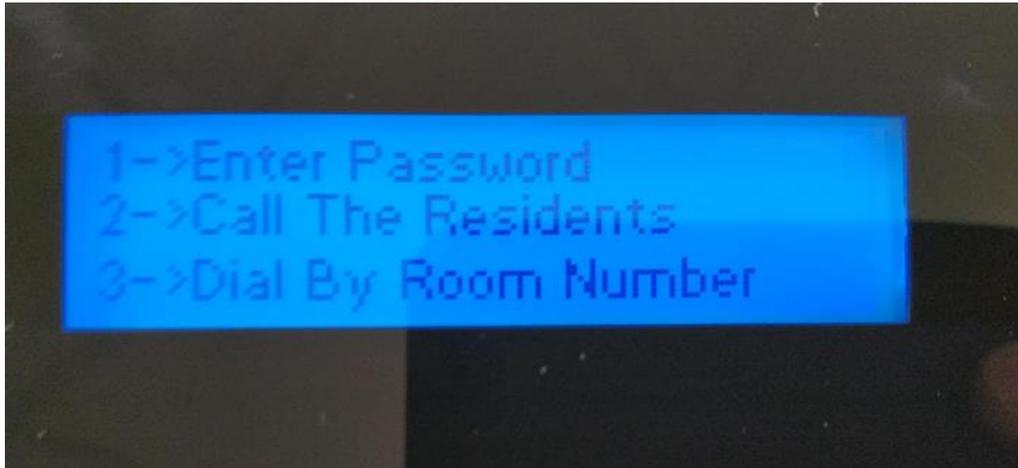
Name	Andy
Phone	10.61.224.38
Group	Default
Priority of Call	Firstly Called
Account	Auto
Lift Floor Number	0

Add Edit Cancel

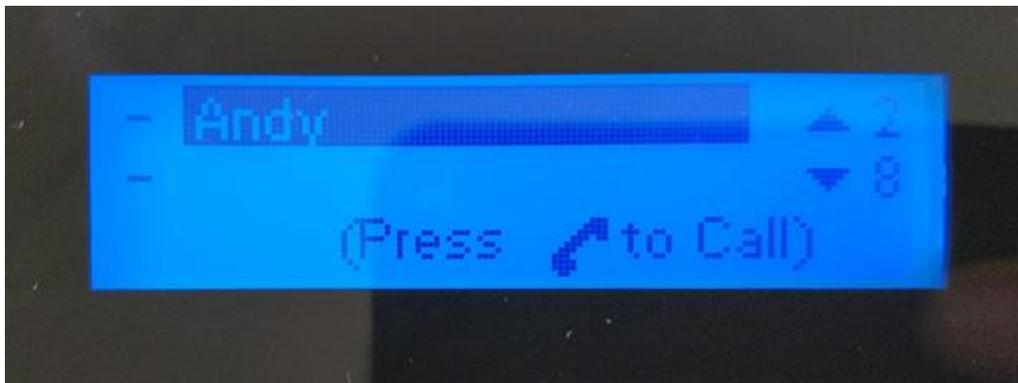
# SUPPORT INFORMATION

**Step5:** Test call by using the screen menu on the R27A  
**By default, you have 3 options to select on the home screen**

- 1-> Enter a password for Temporary Access
- 2-> Call the Residents
- 3-> Dial By Room Number (Cloud Feature)



Select "2" and it will show the local configured residents on the R27A.  
By using the buttons **2** and **8** you can navigate up and down in the list to select the resident you like to call.



Finally, after the right party has been selected like here "**Andy**", press the Phone  Key to dial.

If all settings are done to correct way, the other party, in this case Andy's Indoor Screen will start to ring and show the Incoming call screen with the video preview of the R27A's camera.

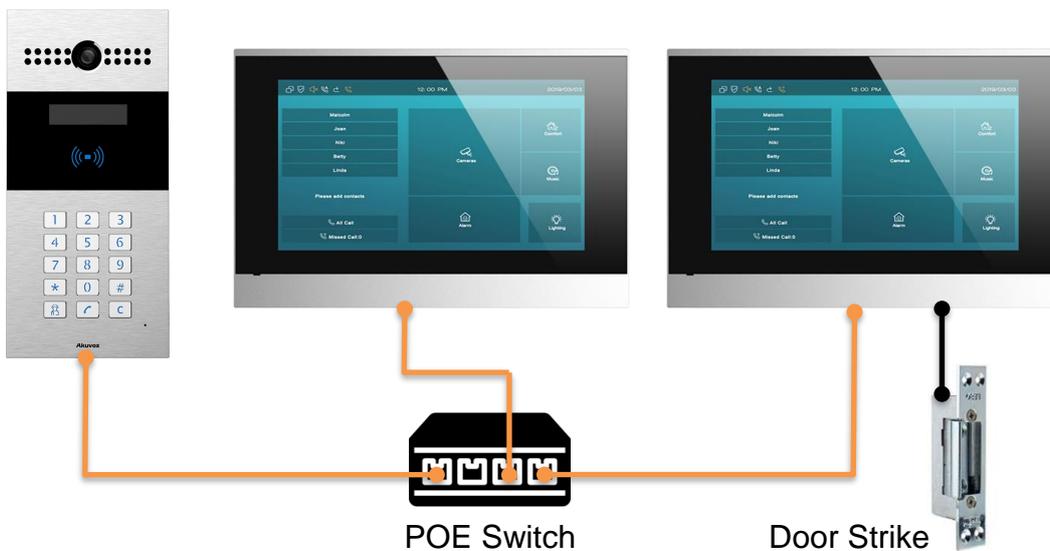
## 11. Call configuration Example 2 | Local Relay C315

This example will be based on the previous example 1, but as big difference we are going to link the door lock to the **Local Relay of one of the C315S** Indoor monitors. This is a more secure solution, as the relay is installed inside of the secure area.

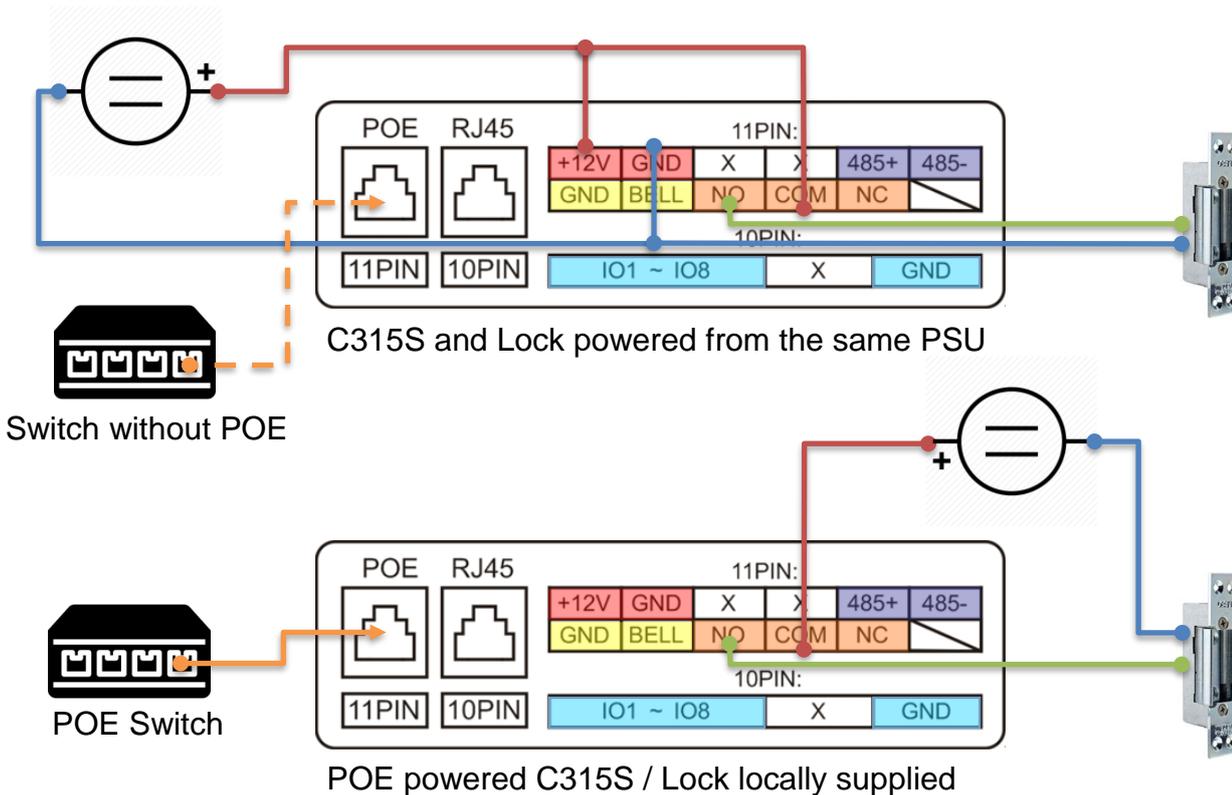
Example IP  
192.168.1.100

Example IP  
192.168.1.101

Example IP  
192.168.1.102



### C315S Connection Schema for the door Lock locally connected:



# SUPPORT INFORMATION

## The Setup:

**Step1-2** are the same as the previous Example1

**Step3:** Configure the first C315S DTMF code and Relay settings as below

On the C315 units having the relay connected, [Navigate to Phone > Relay](#) and set the relay settings for Local Relay1

- Configure the Relay Type at Local Relay to **Open Door** with the desired Delay timer
- Set the Remote Relay DTMF Code1 to “**6**” (Your common DTMF code)

### Relay Setting

Local Relay

Relay Delay (Sec)	5	Relay Type	Open Door
-------------------	---	------------	-----------

Remote Relay

DTMF code1	6
------------	---

- Configure the Soft Keys for the Talking screen.  
This sample will just show one “Open Door” Soft Key in the Talking Screen what is Key 0  
Here the difference to example 1 is the relay set for **Local Relay1**

### Softkey In Talking Page

	Status	Display Name	Relay
Key 0	Enabled	Open Door	Local Relay1

## 12. Local Access control

This R27A Door Entry phone comes with an onboard Access control system, able to hold up to 500 cards for local Access control. The reader embedded can read Mifare Classic, Mifare Desfire as well as EM4102 EM cards based on 125kHz.

How to configure cards into the R27A

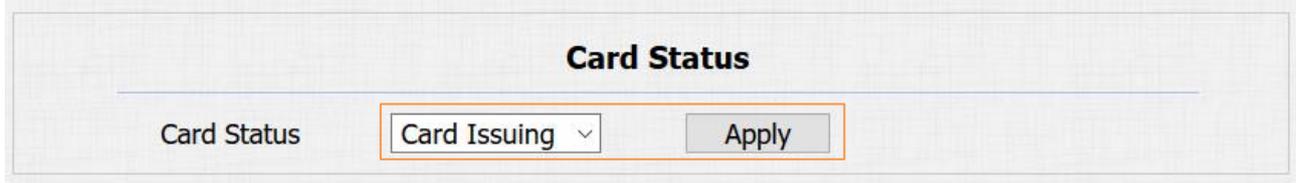
### Step1:

Open the R27A Web Client and navigate [Navigate to Phone > Card Settings](#)

# SUPPORT INFORMATION

## Step2:

To learn new card's, you first select as Card Status "**Card Issuing**" and Apply.

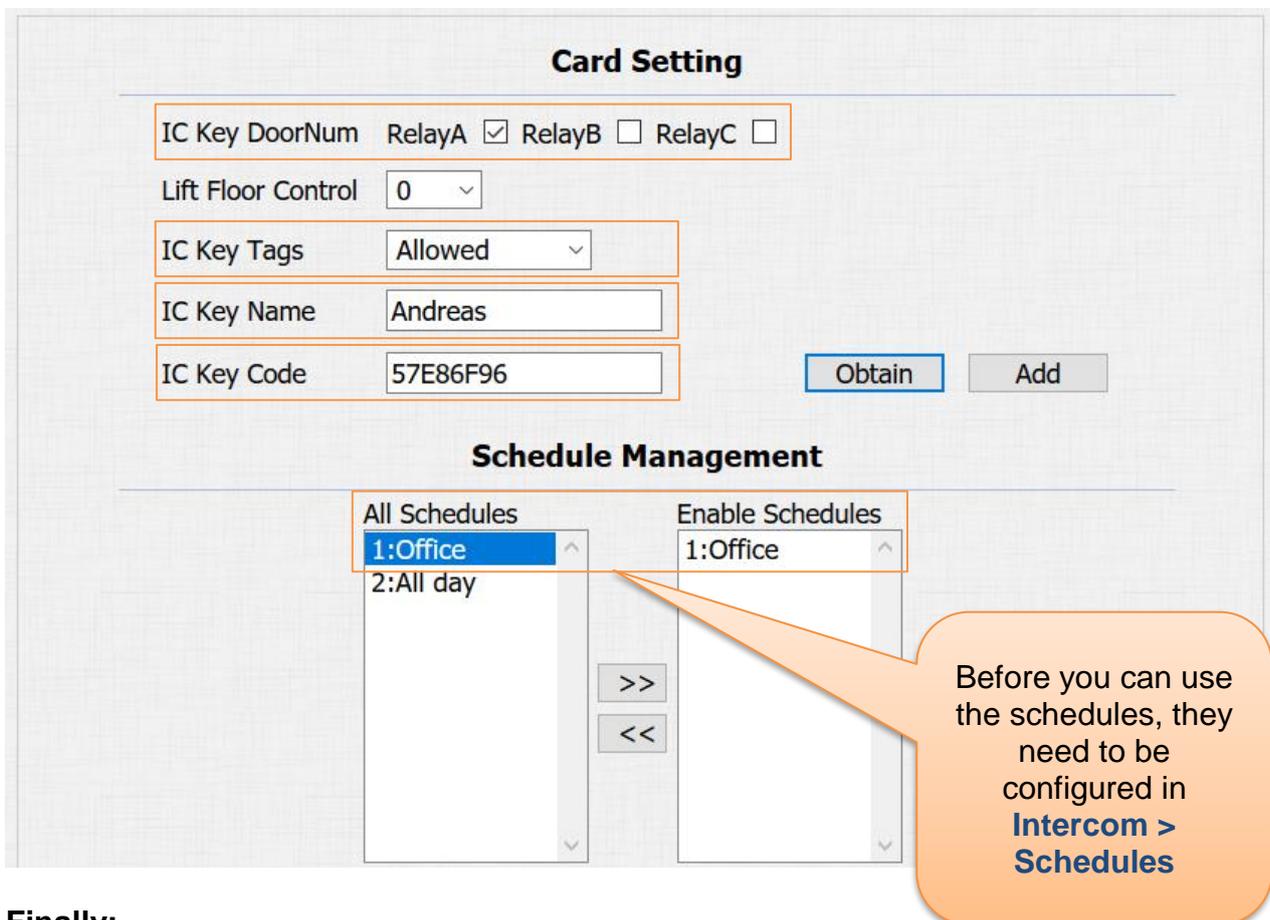


**Card Status**

Card Status Card Issuing Apply

## Step3:

Fill out the highlighted fields in card Settings and finally click "**Obtain**" to enrol the card presented at the reader.



**Card Setting**

IC Key DoorNum RelayA  RelayB  RelayC

Lift Floor Control 0

IC Key Tags Allowed

IC Key Name Andreas

IC Key Code 57E86F96 Obtain Add

**Schedule Management**

All Schedules 1:Office 2:All day

Enable Schedules 1:Office

>> <<

Before you can use the schedules, they need to be configured in [Intercom > Schedules](#)

## Finally:

Press **Add** to store the card.

## Test:

Show the configured card on the R27A's card reader and if the settings are correct and the allowed time is valid, you will see an **UNLOCK** message on the LCD screen together with a voice message saying "**The Door has been open**".

# SUPPORT INFORMATION

The configuration for local Access Control cards can be seen on the Door Card Management list in [Intercom > Card Settings](#).

Door Card Management								
Index	Name	Code	Relay	Lift Floor Number	Tags	ScheduleID	Frequency	<input type="checkbox"/>
1	Andreas	57E86F96	1	0	Allowed	1/	-	<input type="checkbox"/>
2								<input type="checkbox"/>
3								<input type="checkbox"/>
4								<input type="checkbox"/>

To check the Access control logs, please navigate to the [Phone > Door Log](#)

Door Log							
Door Log							
Index	Name	Code	Type	Date	Time	Status	<input type="checkbox"/>
1	Andreas	57E86F96	Card	2019-12-11	15:40:11	Success	<input type="checkbox"/>
2	unKnown	57E86F96	Card	2019-12-11	15:28:12	Failed	<input type="checkbox"/>
3							<input type="checkbox"/>
4							<input type="checkbox"/>

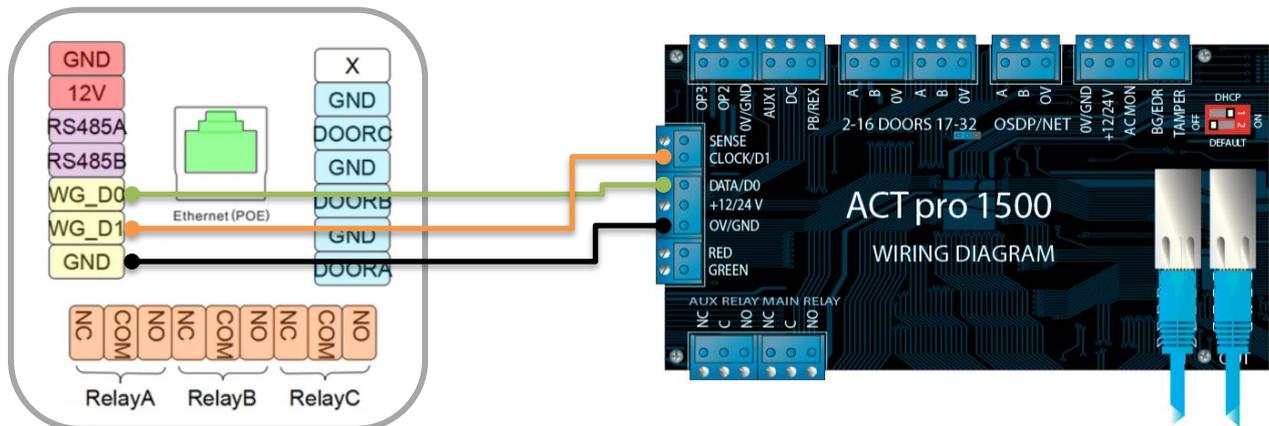
## 13. ACT Enterprise integration on Wiegand 32 Bit

The Wiegand 32 Bit will be supported by the default activated Wiegand Card formats in the ACT Enterprise 2.9.xx and later systems. On the ACT Enterprise side, no extra settings will be required.

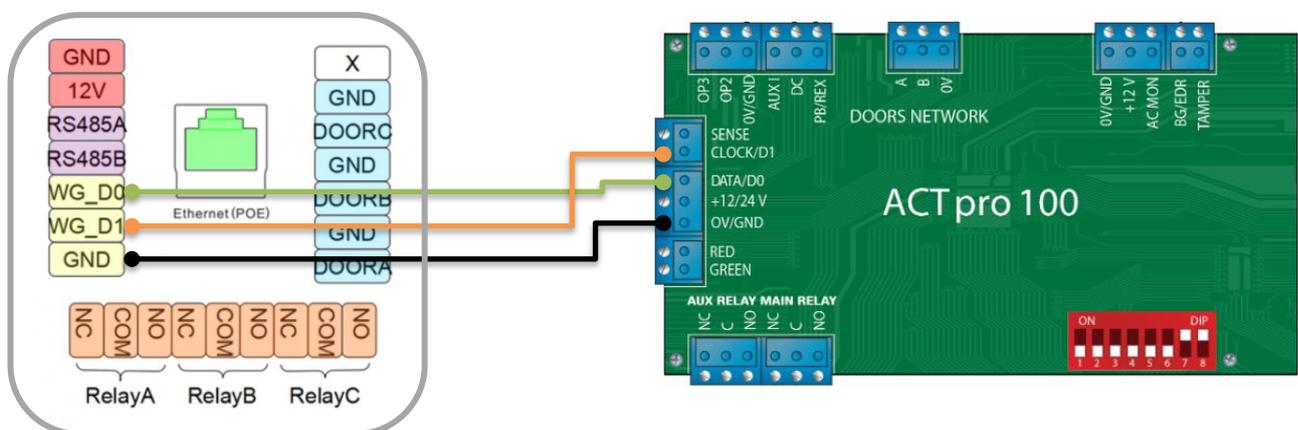
The Wiegand 32 Bit can ready the full 4Byte UID from a Mifare / Desfire card. If a 7Byte card will be used, ACT will just receive the first 4 Byte from the provided 7Byte as card number.

 R27A has not the capability to reduce the provided 7Byte to 4Byte same as the ACT / Vanderbilt readers will do. This is only possible on R29S by today but planned as improvement for R27A in the future! Today the R27 Will just send the first 4 Byte, as the readers will ignore the first Byte, send the coming 4Byte and ignore the rest of the following bytes as ACT standard.

The Wiring between R27A and the ACT Enterprise 1500e Controller



The Wiring between R27A and the ACT Enterprise 100e Controller



 Make sure the R27A and the ACT controller have the ground signal connected to have a common Ground for both devices, otherwise the Wiegand Signal will float.

# SUPPORT INFORMATION

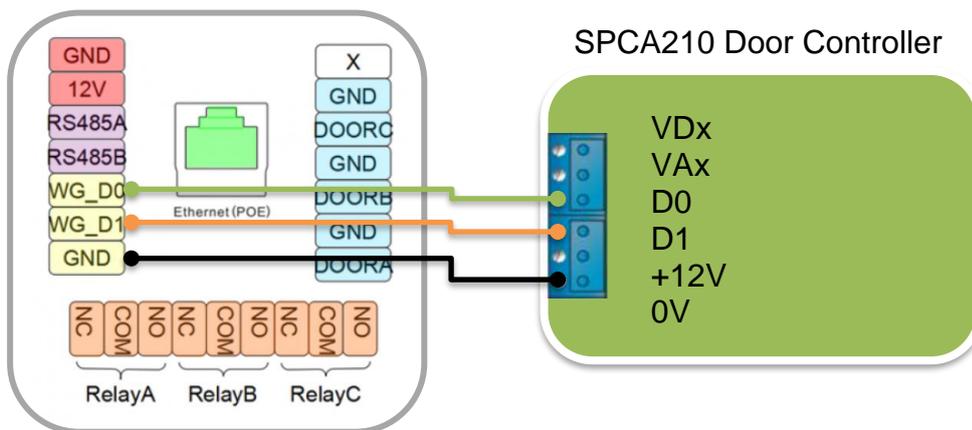
## Settings on the R27A for Wiegand 32 Output

Navigate to **Intercom > Advance** and select the displayed configuration

Wiegand	
WiegandType	wiegand-34
Wiegand Mode	Output
Wiegand Output CRC	OFF

 The CRC turned off will turn down the selected 34 Bit to 32 Bit card data send to the Access control System.

## 14. SPC integration on Wiegand 32 Bit and Wiegand 56 Bit



Wiegand 34 Bit will be read in SPC with card format **HID ICLASS MIFARE (32 Bit Card Data)**  
This can be used for 4 Byte Mifare Cards (UID)

Wiegand 58 Bit will be read in SPC with card format **HID ICLASS DESFIRE (56 Bit Card Data)**  
This can be used for 4 or 7 Byte Desfire or Mifare cards (UID)

Wiegand	
WiegandType	wiegand-34
Wiegand Mode	Output
Wiegand Output CRC	OFF

Wiegand	
WiegandType	wiegand-58
Wiegand Mode	Output
Wiegand Output CRC	OFF

## 15. Troubleshooting

**The device will not start up at all, no LED indication or Display.**

- Check the 12volt Power supply and polarity, also check the POE switch if this has been used.

**If the relay will not open by using the soft key on the indoor Monitor.**

- Check the DTMF code to match on Entry phone relay and Soft Key settings.

**The request to Exit Button will work inverted.**

- The Trigger Option for the Input might be set to High instead of Low.

**The Request to Exit Button will not open the door.**

- Check if the correct relay is assigned to the used input.

**Voice is too low on the indoor monitor.**

- Check the MIC Value on the R27A and increase or tune the speaker up on the Indoor Monitor.

**The Indoor monitor will not ring after the call button was pressed.**

- The Indoor Monitor might have a changed IP address, or the DNS feature has been turned on. DND stands for Do not Disturb and the monitor will not ring or indicate a call.

More product related articles and helpful information can be found at the [Akuvox WIKI](#) Page

