Installation Manual

V1.0

Xiamen Leelen Technology Co., Ltd.

Contents

Foreword

Xiamen Leelen Technology Co., Ltd. is the biggest domestic supplier of building intercom and digital /system devices. In this industry, only Leelen won the honor of "China Top Brand" and "Famous Trademark of China." Leelen ranks third by virtue of its comprehensive strength in China's building intercom industry.

Leelen has nearly a dozen subordinate enterprises such as Leelen Investment Company, Leelen Technology Co., Ltd., Leelen Electric Control Technology Co., Ltd, Leelen High Voltage Electric Co., Ltd, SafeHouse Electronic Science and Technology Co., Ltd, and Zhonglin Machine Co., Ltd. It has 37 subsidiary companies, offices and after-sales service sites which are spread all over China. Leelen has an industrial park which covers an area of nearly 110,000m^2, owns international first-class production and detection equipment and realizes self-production of products through a full set of procedures.

As for research and development, Leelen has established research and development centers in Ximen and Beijing, and has a deep cooperation with famous institutes and enterprises such as Peking University, Xiamen University, Huaqiao University, ABB (Xiamen), Haier, Tsinghua Tongfang, Honeywell and Johnson Controls in various aspects such as technologies, products, etc. Leelen is a compiling and drafting member of national standards and industrial standards and is the leader of the drafting team responsible for international building intercom standards.

Leelen is the first one to launch the national service hotline and to implement the 95105895 and the "full-course 315" service mode" in the industry. It is the first one to apply for and pass the ISO9001 quality system certification, ISO14001 environment system certification and OHSAS18001 occupational health management system certification. We have been confirmed by the standardization of the enterprise system evaluation (AAAA level) and obtained the Certificate for Use of Product Marks of International Standards. We won the "Xiamen Quality Award" in the third year. Meanwhile, Leelen is the vice-president of China Security Association and China Real Estate Procurement Alliance, the First Choice Brand for Qualified Affordable Housing Project and China Top-500 Real Estate Enterprises' Procurement, the "5E" supplier of China Real Estate procurement. Besides, Leelen has been receiving the "China Top-10 Security Brands" awards since 2004.

This Installation and Commissioning Manual was compiled in the principle "being practical, convenient," simply and clearly divided into several elements including Foreword, Construction Manual, Installation Manual, Commissioning Manual, etc. Limited by experience and knowledge level, there are some inevitable shortcomings. Project contractors and technicians using this Manual are welcome to put forward suggestions which will be used as a reference for our subsequent revisions. Thank You!

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Leelen Technical Support Center

2017.8

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Notices for use

Correct transportation, installation, operation, service and maintenance ensure normal work of the intercom equipment. However, you must be aware of the notices for product use before doing those works.

➢ **Attention** Incorrect operations may cause danger and may result in system abnormalities or equipment damage, which will lead to unnecessary losses.

➢ **Transport** During transport, keep the product well packaged, do not unpack the product and guard the product against water, dust, collision, etc.

➢ **Storage** The packaged product should be stored in a well-ventilated room or warehouse at an ambient temperature within a range of 10℃-40℃, with a relative humidity not greater than 80% and without corrosive gases.

➢ **Installation** Before installation, please cut off all power supplies. The installation should proceed in accordance with the installation manual. After installation, the equipment is powered on only after it is checked that the wiring is correct.

➢ **Maintenance** The project contractor or relevant technicians should maintain, test and update the system regularly.

Description of version

● This manual is an engineering installation and commissioning manual, used as a reference by engineering technicians for installation and commissioning. If it is found that a certain product is inconsistent with the real object or the product manual in a certain aspect, the real object shall prevail.

● This manual is customized for the company's current product. Our company will launch new products and revised versions will be made as soon as possible. However, if new products are not recorded in time, please refer to the product manual or contact our company's technicians.

● All registered trademarks and product and company names in this manual belong to our company, and may not be duplicated or used without consent or written authorization of the our company.

● Some information about the products in this manual is confidential, and its copyright belongs to Leelen.

● Leelen reserves the right of final interpretation on all contents of this manual.

1.Construction manual

1.1 System overview

1.1.1 Description of digital building intercom system

A digital building intercom system is a building intercom and access control system based on computer network transmission.

In this system, enclosure station, a center guard unit, a central management computer, outdoor stations, digital access control units, indoor stations, etc. are uniformly accessed to a computer network. The network computer transmits signals to realize video intercom and access control functions, etc.

The digital building intercom system provides functions of allowing people to go in and out by sweeping access cards, to call a home at the door to perform video intercom and ask for opening the door, and to call the management center to perform video intercom and ask for opening the door, and allowing residents to use indoor stations to monitor the camera of the outdoor station at the door, call the management guard unit to perform video intercom and call other homes to perform intercom.

It also provides functions of allowing people in the management center to use the management guard unit to call residents' indoor stations to perform video intercom, allowing people in the management center to use the computer to perform access card management send messages to residents and send messages to enclosure stations and building outdoor stations.

1.1.2 Main functions and features

Digital network-based data transmission makes the system more stable.
Video intercom function, door-to-door intercom function.
Support recording of incoming calls. The incoming call record includes information automatically captured by the system.
Support visitors to leave messages.
The number of residents is not limited.
RJ45 connection for the equipment.
Support IC card-based access control and management.
The computer of the management center supports management on the access records, intercom records, etc.
Support a messaging function. The computer of the management center can send messages to the building outdoor stations and indoor stations.

1.1.3 Topological graph and description of overall system architecture

Topological graph of overall system architecture
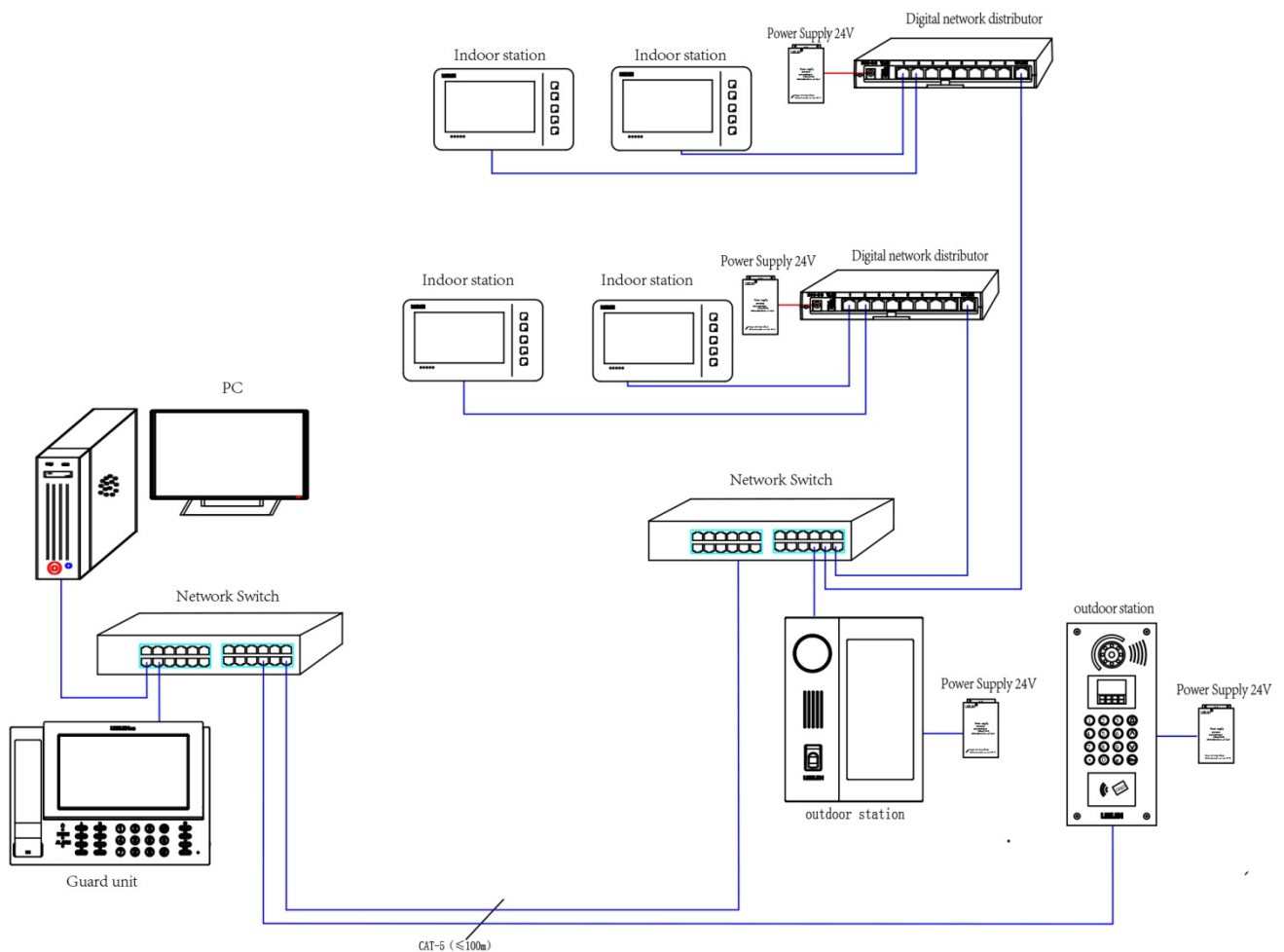
A project usually includes an enclosure access section, a management center section, a building unit access section and an indoor section. The four sections are described in detail below.

1.1.3.1 Enclosure access section

For access control of the enclosure, an enclosure outdoor station can be installed. Visitors can call indoor stations or the management center using the enclosure outdoor station to perform the video intercom operation. Residents can go in and out by sweeping cards at the outdoor station.

A project can include a plurality of enclosure entrances. Some enclosure entrances are equipped with a digital access controller instead of digital outdoor station. The digital access controller is externally connected with a card reader and residents can go in and out by sweeping cards on the card reader.

1.1.3.2 Management center section

The management center is usually equipped with a center management computer and a management guard unit. Management persons can use the management computer to perform management operations on access cards and use the management guard unit to call residents at home and perform video intercom operations or answer calls from indoor stations of residents and perform video intercom operations.

A large project can be equipped with an auxiliary management center. The auxiliary management center can also be equipped with the center management computer and the management guard unit.

1.1.3.3 Building unit access section

A unit of a building is usually equipped with a building outdoor station. Visitors use the outdoor station to call building outdoor station of residents in the unit to perform video intercom. Residents can go in and out of the unit by sweeping cards on the outdoor station.

If a unit has several entrances, some entrances can be equipped with the digital access controller. The digital access controller is connected with the card reader. Residents can go in and out by sweeping cards on the card reader.

1.1.3.4 Indoor section

Indoor stations are installed at residents' homes. Residents can use the indoor station to answer calls from the enclosure outdoor station and the building outdoor station to perform video intercom and open the door.

Residents can use the indoor station to answer calls from the management guard unit and indoor stations of other residents, or call the management guard unit or other homes, to perform video intercom.

Residents can also use the indoor station to check call records and visitor's messages, and check notifications from the management center.

1.2 Description of cables

1.2.1 Line configuration

Devices connected	Distance L (m)	Line type	Remarks
1.Incoming line			
From the Indoor station to the network distributor or network switch	L≤90	UTP5E	
	90≤L≤2K	Multi-mode fiber (number of cores, self-defined)	
	L≤20K	Single-mode fiber (number of cores, self-defined)	
From the flat outdoor station to network distributor or network switch	L≤90	UTP5E	Flat outdoor station: refers to the unit serving as the secondary video doorbell.
2. Main lines in a building			
From the building outdoor station to the switch	L≤90	UTP5E	
	90≤L≤2K	Multi-mode fiber (number of cores, self-defined)	
	L≤20K	Single-mode fiber (number of cores, self-defined)	
From the building outdoor station to the electric control lock	L≤10	RVV2*1.0	
From the building outdoor	L≤10	RVV2*1.0	

station to the magnetic lock			
From the building outdoor station to the power supply	L≤10	RVV2*1.0	12V~24V
3.Main network cable			
From guard unit to the central core switch	L≤90	UTP5E	
	90≤L≤2K	Multi-mode fiber (number of cores, self-defined)	
	L≤20K	Single-mode fiber (number of cores, self-defined)	
From the lower-level network switch to central network switch	L≤90	UTP5E	
From the enclosure outdoor station to the network switch	90≤L≤2K	Multi-mode fiber (number of cores, self-defined)	
	L≤20K	Single-mode fiber (number of cores, self-defined)	
	L≤90	UTP5E	
4. Indoor wiring			
Power wire of the indoor station	L≤30	RVV2*1.0	
Zone wire of the indoor station	L≤30	RVV3*0.5	
Note: The building intercom device does not support direct fiber, but needs to connect via fiber optical converters.			

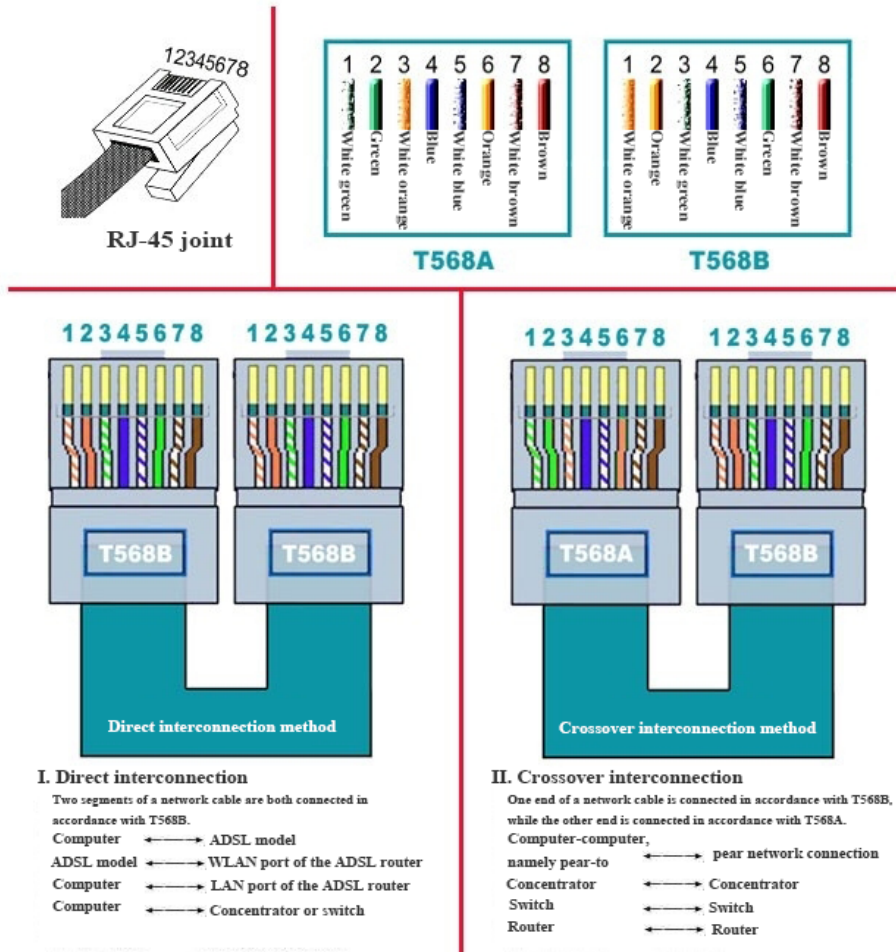## 1.2.2 Requirements for network cables

1.2.2.1 Requirements for wire diameter and wire resistance
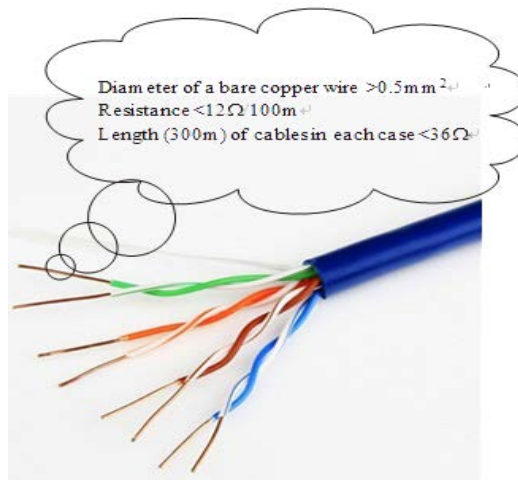
- Wire diameter: The diameter of a single UTP5E bare copper wire should be greater than 0.51m ㎡.
- Wire resistance: The wire resistance of a single UTP5E wire should be less than 12Ω per 100m; the wires resistance of a case (305m) of UTP5E wires should be controlled to be less than 36Ω.

1.2.2.2 Definition of line sequence of crystal heads

Wiring diagram of RJ-45 joints (crystal heads) of the network wires

I. Direct interconnection

Two segments of a network cable are both connected in accordance with T568B.

Computer ←——→ ADSL model

ADSL model ←——→ WLAN port of the ADSL router

Computer ←——→ LAN port of the ADSL router

Computer ←——→ Concentrator or switch

II. Crossover interconnection

One end of a network cable is connected in accordance with T568B, while the other end is connected in accordance with T568A.

Computer-computer, namely pear-to ←——→ pear network connection

Concentrator ←——→ Concentrator

Switch ←——→ Switch

Router ←——→ Router

Note: The line sequence of the RJ45 joints follows the standard 568b, and all manufactured UTP5E wires must pass the UTP5E wire on-off test (a cable wire tester can be used).

1.3 Requirements for pipeline construction

For installation and commissioning of the building intercom system, the pre-stage wiring is an important link of the system installation and commissioning. Wiring builds an "information express way" in a residential community. The intercom system of the whole residential community can run steadily and reliably only when signal transmission is smooth. It is undoubted that high-quality wiring ensures stable and reliable system operations. Unreasonable wiring makes the whole system unstable and causes system crash and abnormalities. Therefore, a rational construction of the pipelines is very important.

1.3.1 Requirements for pipeline solution

● Pipeline architecture: Recommended architecture is a linear architecture. Tree-type, star-type and bus-type pipeline architectures should be used as little as possible (or not used).

- Requirements for pipe quality: The networked lines among buildings must be independently laid with steel pipes or racks.
- Requirements for pipe diameter: The inner diameter of the pipes is usually 1.7-2 times the outer diameter of the engineering cable; and the pipes should have as few elbows as possible, better not more than 2.

1.3.2 Requirements for pipe material solution

- Performance: Selected devices such as wires, interfaces and plug-ins should have high physical and electrical performance and high anti-interference.
- Practicability: Convenient installation, high cost performance, configuration of structure and plug-in interfaces easy to be extended.
- Flexibility: Rational information interface devices, random pull and plug.
- Easy management: Convenient maintenance, uniform marks, convenient wiring and wire jumping.

1.3.3 Requirements for system environment

- All signal lines are wired through the weak electrical well, avoid interference sources as many as possible, and completely follow the national standard GB-50348-2004. The signal lines cannot be configured in parallel to strong-current wires (AC 220V), radio frequency lines, CATV cables, large-signal audio lines, etc. If parallel wiring is inevitable, the intervals between parallel lines must be greater than 35cm.
- Environmental elements such as damp-proofing and dust-proofing must be taken into consideration of installation sites of system devices, and the installation sites must be away from acoustic, thermal, optical and vibrating factors other than environmental factors to avoid affecting the system usage performance.

Device type	Device position	Device requirements
Access layer	Applicable to network distributor/switch which is directly connected or accessed by an Indoor station	Digital intercom network distributor or common switch
Aggregation layer	Applicable to the network distributor/switch that aggregates the access-layer switches	Has the capability of processing data of all devices accessed to this device
Core layer	Communication with all network devices, positioned in the central computer room	Switch with high stability and high performance is selected.

1.3.4 Network configuration environment

In order to ensure good network environment and network construction quality for the TCP/IP communication of the company's digital intercom system devices and the communication quality among the devices, and to help technicians, salesmen and project construction persons give instructions to clients to standardize the network application environment, network design requirements are hereby specified:
- RJ45 manufacturing standard: international standard T568B (see "Definitions of line sequence of crystal heads" for details);
- Network address configuration: ensure that the network IP addresses are not conflicting;
- Communication transmission distance: maximum transmission distance of UTP5E ≤90m; if the wire length exceeds 90m, optical fiber transmission or switch cascading are required;

- Wire selection: famous brands are recommended and the channel DC Loop resistance of all selected wires should be less than or equal to 25Ω, which means that the closed loop resistance of any twisted pair is less than or equal to 25Ω. For specific parameters, see electric standards in the "Code for design of comprehensive wiring system project (GB50311-2007)."
- Requirements for pipeline laying: wires and cables should be kept a necessary distance from surrounding electric appliances such as electric motor, power transformer and radio frequency application devices that may generate high level and strong-current cables; the wired cables cannot be electrified by AC 220V/380V strong-current power supply, or laid in parallel with radio frequency signal lines (CATV cables, large-signal audio lines); and if parallel wiring is inevitable, the distance between parallel wires should be greater than 30cm. For specific parameters, see "Code for design of comprehensive wiring system project (GB50311-2007)."
- Model selection of network switches of all layers

2. Installation manual

2.1 Installation attentions

- **Preparation before installation**
  - ✧ Check if the installation site is firm and flat;
  - ✧ Ensure all wires and cables are smoothly connected and are free of damage, defects, etc.
  - ✧ To install the pre-embedded box or bottom case, ensure that the installation site meets requirements, the pre-embedded box is free of deformation and its edge is not higher than the wall;
- **Attentions for installation process**
  - ✧ The installation height must be controlled. The camera center of the intercom outdoor station is recommended to be 145cm above the ground.
  - ✧ During installation, the environment of the installation site of the device should be taken into consideration. The device should not be installed at the following sites:
    - ■ wet site or water dropping position;
    - ■ hot or cold place;
    - ■ place with strong magnesium presence;
    - ■ place with much dust;
    - ■ corrosive place, etc.
    - ■ The face recognizing device may not be installed at a position with direct exposure to sunlight.
  - ✧ Never beat or collide the device with a hard substance, or the device will malfunction.

  - ✧ Do not operate the device when it is electrified or accidents such as an electric shock or device damage may be caused.

✧ To install screws, directly screw in the screws without inclination or locking may be not tight or the device may be damaged.

| Correct | Incorrect |
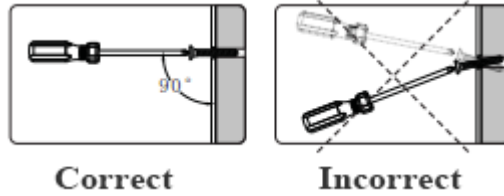
● **Installation completed**

✧ Clean the site and devices. Never clean the intercom devices with flammable cleaners such as alcohol or benzene.

✧ During cleaning, never pour liquid into the product or accidents such as electric conduction may be caused.
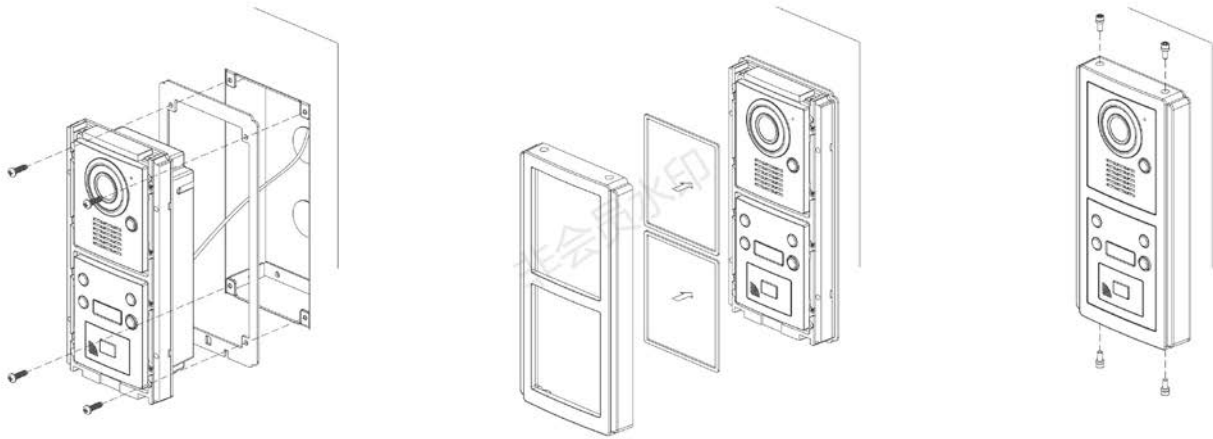

2.2 Outdoor station

2.2.1 Appearances and main parameters of outdoor stations

Outdoor station	Appearance	Main parameters
Model No.8 series		Working Voltage: DC12-24V±10% Max Power Consumption: ≤4W Standby Power Consumption: ≤2.5W IP Grade: IP54 Capacity of Cards: ≤30,000 pcs Panel Material: Alum Casting Working Temp: -40℃ to 70℃ Operation: Mechanical Pushbutton Installation on Gate or Wall Dimension(mm): 120×240×60.5 Embedded Box

		Dim(mm):104×214×50 Color: Iron Grey
Model No.15 series		Working Voltage: DC12-24V±10% Max Power Consumption: ≤6W Standby Power Consumption: ≤3W IP Grade: IP54 Capacity of Cards: ≤30,000 pcs Panel Material:Alum Casting Working Temp: -40℃ to 70℃ Operation: Mechanical Pushbutton Installation: Surface-mounting/emb edded-mounting Dimension(mm):79×148×45
Model No.10 series		Working Voltage: DC12-24V Max Power Consumption: ≤8W Standby Power Consumption: ≤4W IP Grade: IP54 Capacity of Cards: ≤30,000 pcs Panel Material: Alum +Tempered Glass Working Temp: -40℃ to 70℃ Operation: Touch Screen Installation: Embedded/ Iron Gate Dimension(mm): 170×386×54 Embedded Box Dim(mm):142×358×64 Color: Aluminum Color
Model No.16 series		Working Voltage: DC18-24V Max Power Consumption: ≤8W Standby Power Consumption: ≤4W IP Grade: IP54 Capacity of Cards: ≤30,000 pcs Panel Material: Alum +Tempered Glass Working Temp: -40℃ to 55℃ Operation: Touch Pushbutton Installation: Embedded/ Iron Gate Dimension(mm):166×386×52 Embedded Box Dim(mm): 145×358×60 Color:Black + Aluminum Color

2.2.2 Installation of outdoor station

2.2.2.1 Model NO.8 outdoor station:

Instructions on the installation

- Embed pipelines and a pre-embedded box.
- Connect wires, fix the outdoor station and the sealing ring on the pre-embedded box using screws.
- Place the front panel on the outdoor station.
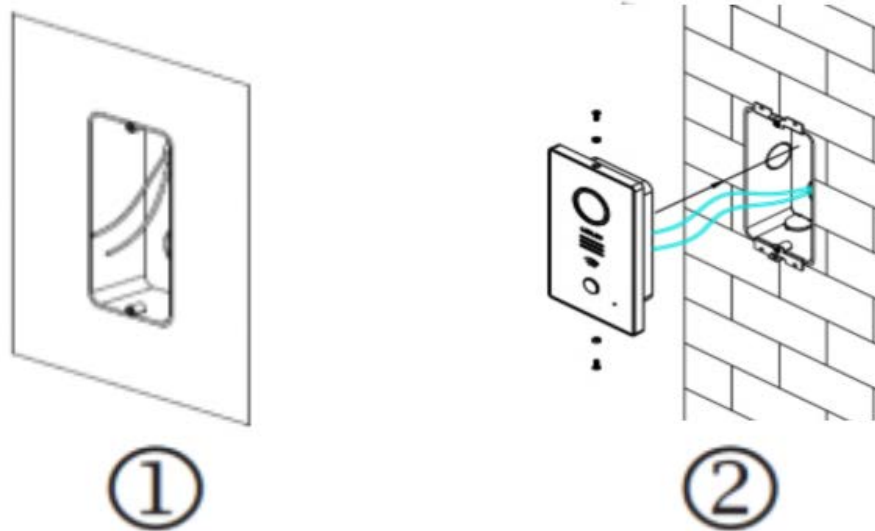- Fasten the front panel and the outdoor station with screws. Then, the installation is completed.

2.2.2.2 Instructions on the installation of the Model No.15 outdoor station:

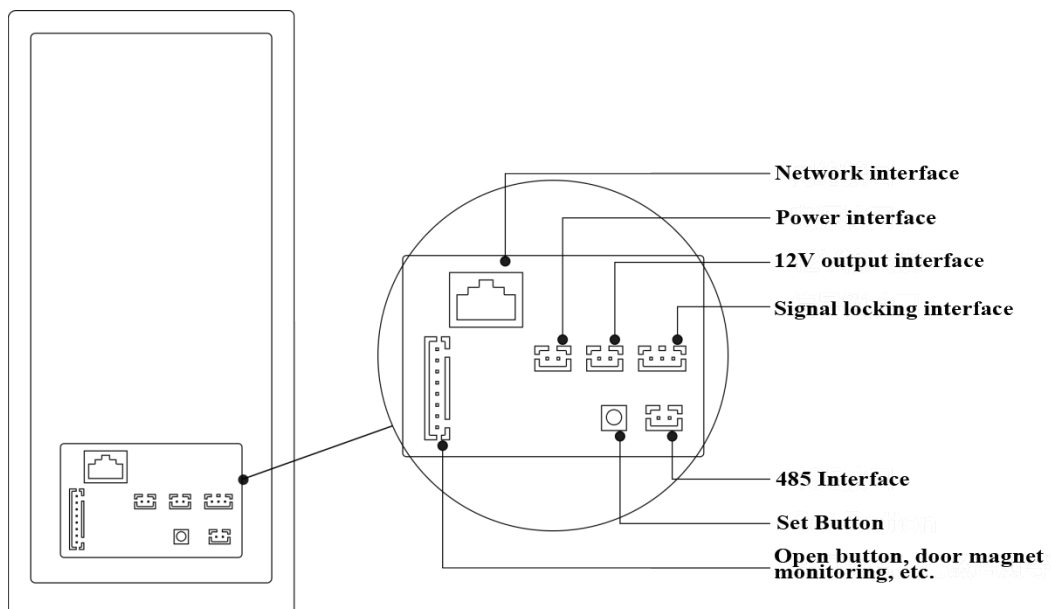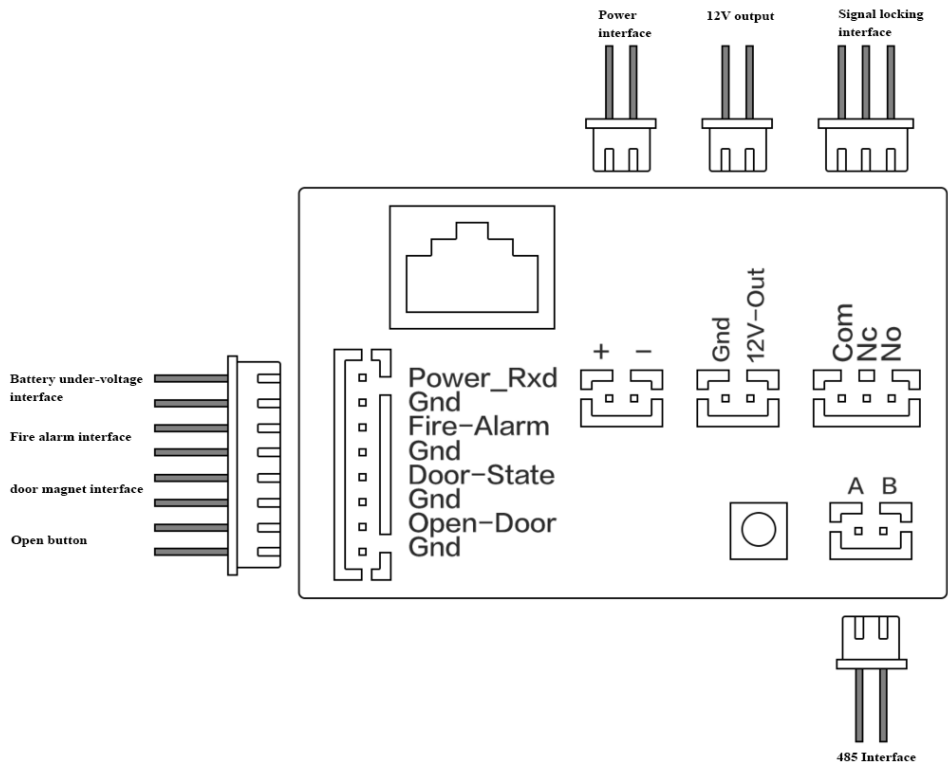● **Surface installation on the wall**
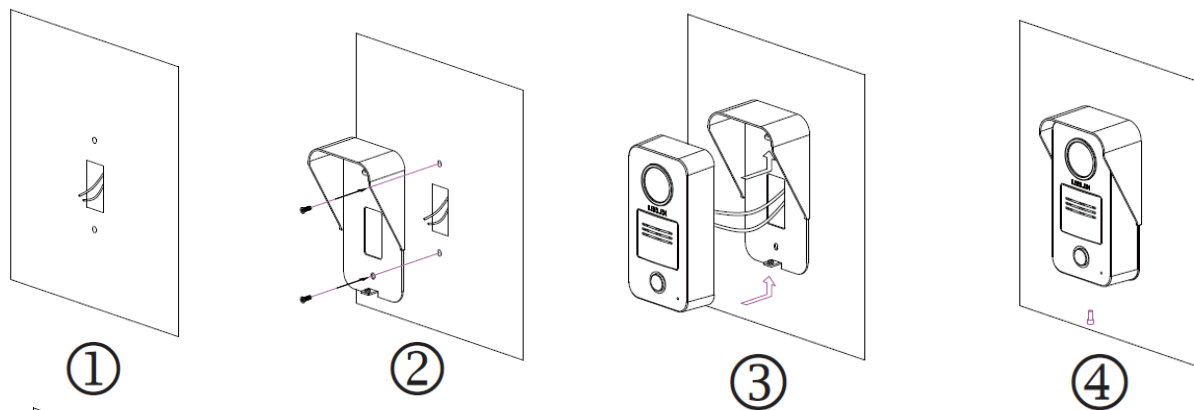
Instructions

- Embed pipelines.
- Fix a sunshade on an iron door using screws.
- Connect wires, place the outdoor station on the sunshade in the direction of the arrow.
- Fasten the outdoor station and the sunshade using screws. Then, then installation is completed.

● **Insertion installation**

Instructions on the insertion installation of the 15-type entrance machine:

- Embed pipelines and the pre-embedded box.
- Connect wires, fix the outdoor station on the pre-embedded box with screws. The, then installation is completed.

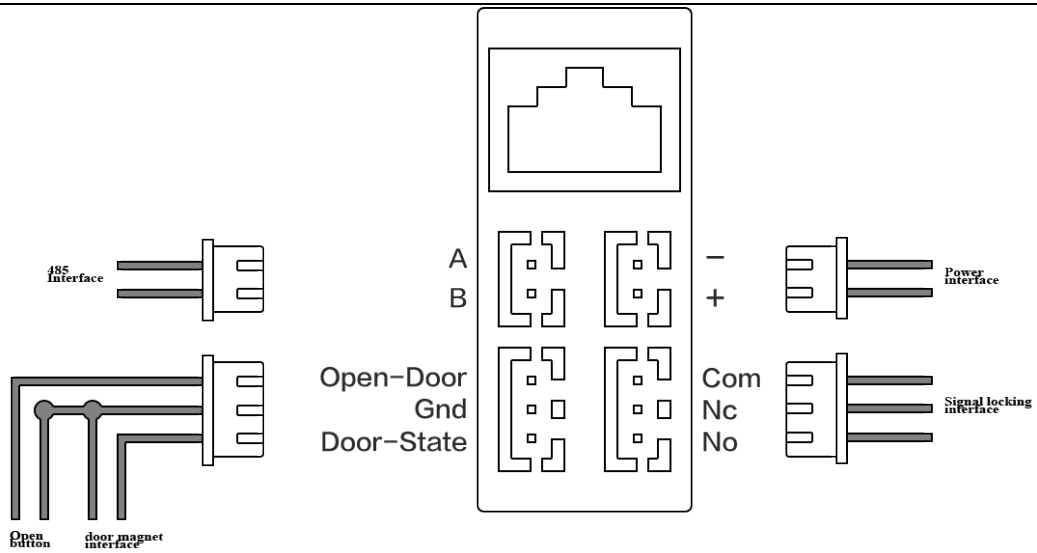## 2.2.2.3 Instructions on the installation of the Model No.10:
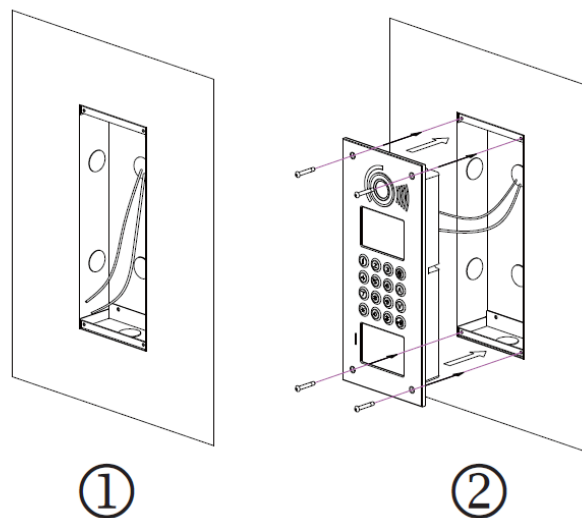
Instructions of the embedded installation:

- Embed pipelines and the pre-embedded box.
- Connect wires, fix the outdoor station on the pre-embedded box with screws. Then, the installation is completed.

2.2.2.4 Instructions on the installation of the Model No.16 outdoor station:
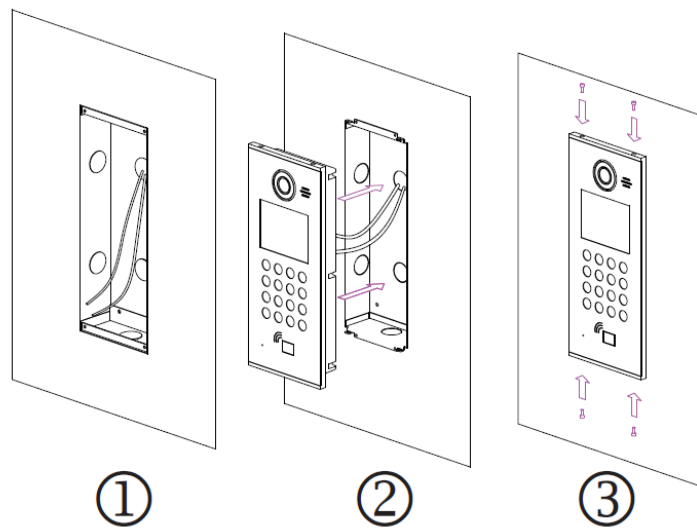
Instructions of the embedded:

- ■ Embed pipelines and the pre-embedded box.
- ■ Connect wires, place the outdoor station on the pre-embedded box.
- ■ Fasten the outdoor station and the pre-embedded box with screws. Then, the installation is completed.

2.2.3 Instruction on device wiring interface
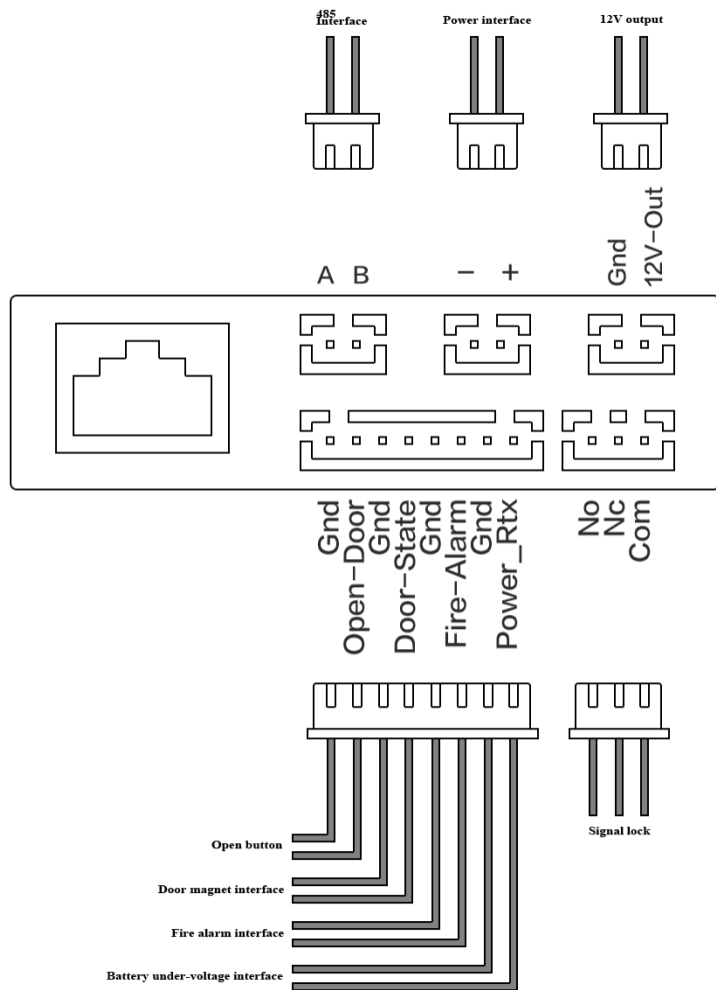
2.2.3.1 Wiring interfaces of model No.8 Outdoor Station :

Network interface
Power interface
12V output interface
Signal locking interface
485 Interface
Set Button
Open button, door magnet monitoring, etc.

Power
interface

12V output

Signal locking
interface

Battery under-voltage
interface

Fire alarm interface

door magnet interface

Open button

Power_Rxd
Gnd
Fire-Alarm
Gnd
Door-State
Gnd
Open-Door
Gnd

+   −

Gnd
12V-Out

Com
Nc
No

A B

485 Interface

2.2.3.2 Wiring interfaces of model No.15 Outdoor Station:

Network interface

485 Interface

Electric connection

Signal locking interface

Engineering update
interface

Set button

Anti-movement
monitoring

Open button and open
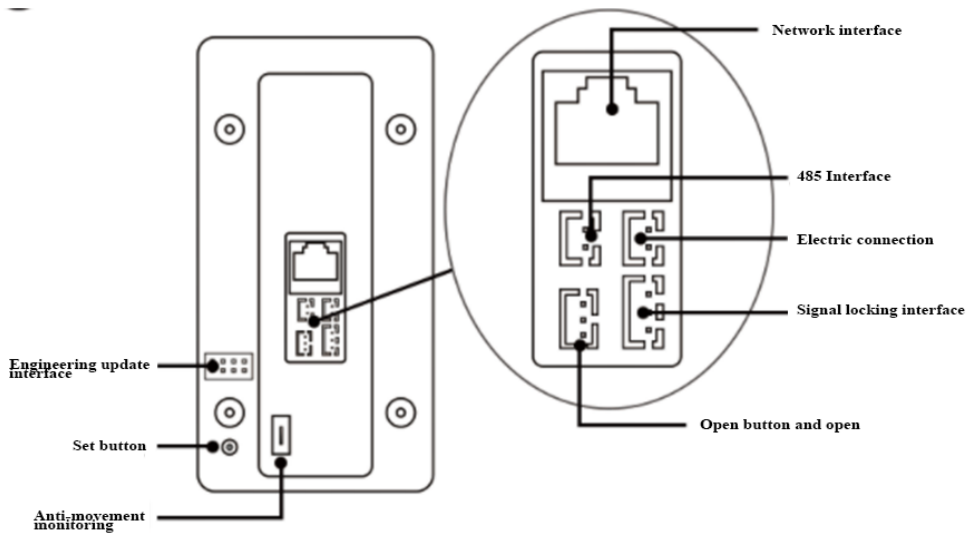
2.2.3.3 Wiring interfaces of model No.10/16 Outdoor Stations:
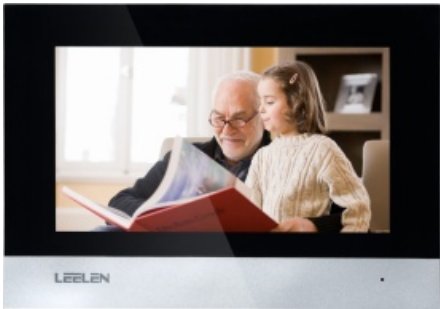
Interface description:

➢ Power interface: Power input, connected to red/black wires, supporting DC12-24V, supporting SPoE power supply.

➢ 12V output: Connected to red/black wires, corresponding implication: 12 V + / GND, output ≤750mA.

- RS485 interface: Connected to red/black wires, corresponding implication: A /B, externally connected to the access card reader.
- Signal locking interface: This interface uses a relay to output a switching value, and is connected to orange/yellow/green wires with a corresponding implication of COM / NC / NO; it uses an auxiliary power supply to supply power to the magnetic lock, the negative pole of the auxiliary power supply is connected to the COM terminal of the interface, the NC terminal of the interface is connected to the negative pole of the magnetic lock and the positive pole of the auxiliary power supply is connected to the positive pole of the magnetic lock.
- Network interface: Network connecting interface, 10/100m self-adaption.
- Exit button: The Exit button is connected to black/blue wires, with a corresponding implication of G N D / OPEN_DOOR.
- Door state: The door state interface is connected with black/gray wires, and is externally connected to a door magnet device.
- Fire alarm interface: The fire alarm interface is connected with black/purple wires, and is externally connected to a switching-value fire alarm signal line.
- Under-voltage alarm interface: The under-voltage alarm interface is connected with brown/white wires and is connected with a power supply under-voltage alarm signal line.
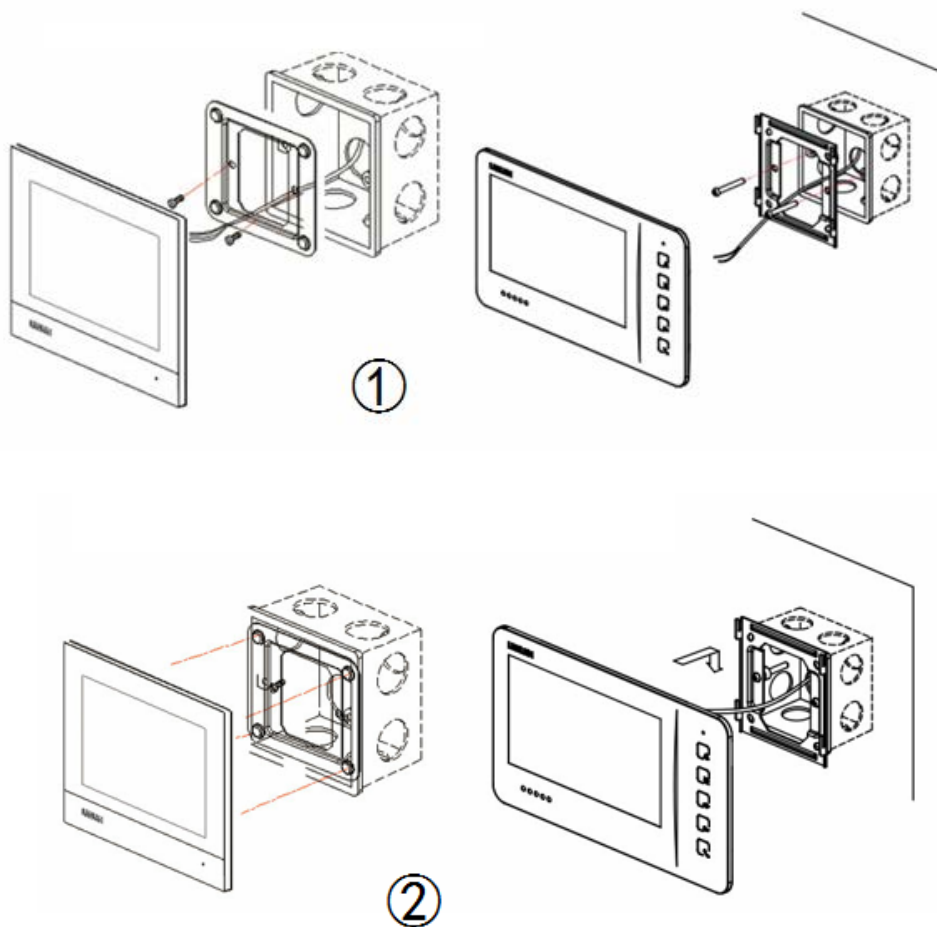
2.3 Indoor stations

### 2.3.1 Appearances and main parameters of indoor stations

Model No.	Appearance	Main parameters
V31		Working Voltage: DC12-24V±10% (SPOE support) Max Power Consumption: ≤5.5W Standby Power Consumption: 1.7W Display: 7-inch TFT LCD Operation: Capacitive Touch/Capacitive Pushbutton Installation: Surface Mounting Panel Material: PMMA Dimension(mm): 200×140×15.9
V32		Working Voltage: DC12-24V±10% (SPOE support) Max Power Consumption: ≤5.5W Standby Power Consumption: 1.7W Display: 7-inch TFT LCD Operation: Capacitive Touch/Capacitive Pushbutton Installation: Surface Mounting Panel Material: PMMA Dimension(mm): 220×140×15.9

V33		Working Voltage: DC12-24V±10% (SPOE support) Max Power Consumption: ≤5.5W Standby Power Consumption: 1.7W Display: 4.3-inch TFT LCD Operation: Capacitive Touch Installation: Surface Mounting Panel Material: PMMA Dimension(mm): 175×114×15.9
E60		Working Voltage: DC12-24V Max Power Consumption: ≤9 W Standby Power Consumption: 3W Display: 7-inch TFT LCD Operation: Capacitive Touch Installation: Surface Mounting Panel Material: Tempered Glass Dimension(mm): 239×139×20

2.3.2 Installation of Indoor stations

Installation instructions (applicable to V31, V32, V33 and E60)

①

②
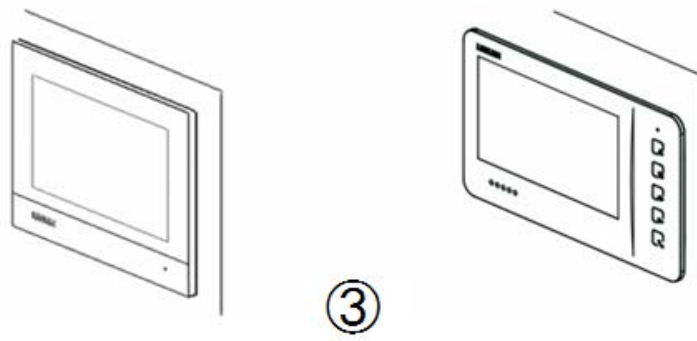
Instructions on installation steps:

- Embed pipelines and a pre-embedded box and fix the hanging board with screws.
- After the lines and the indoor station are connected, the magnet steel on the back of the indoor station is aligned with the convex point on the hanging board, and then the indoor station is hung on the hanging board.
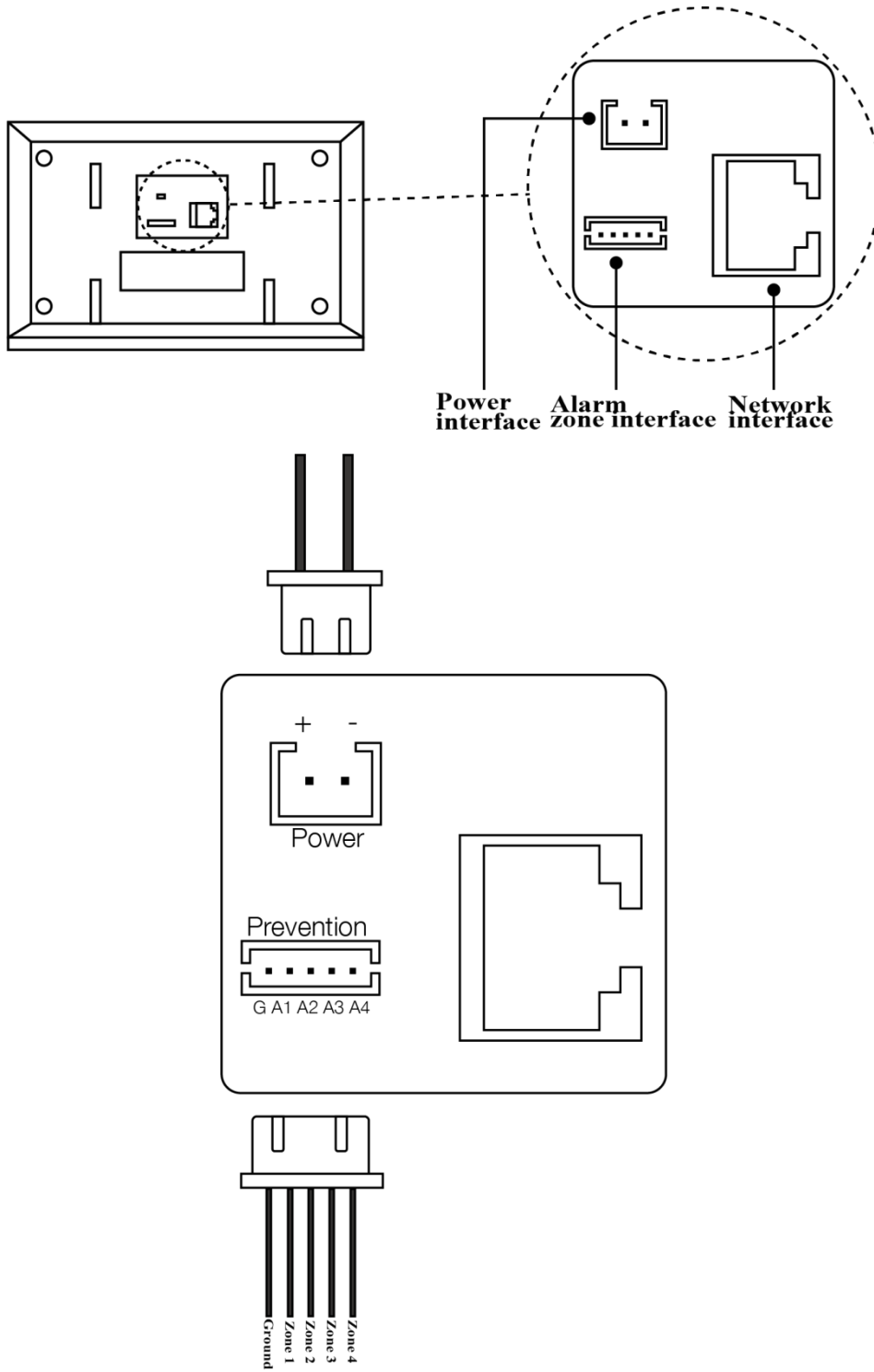- Please confirm that the device has been stably hung and orderly placed.

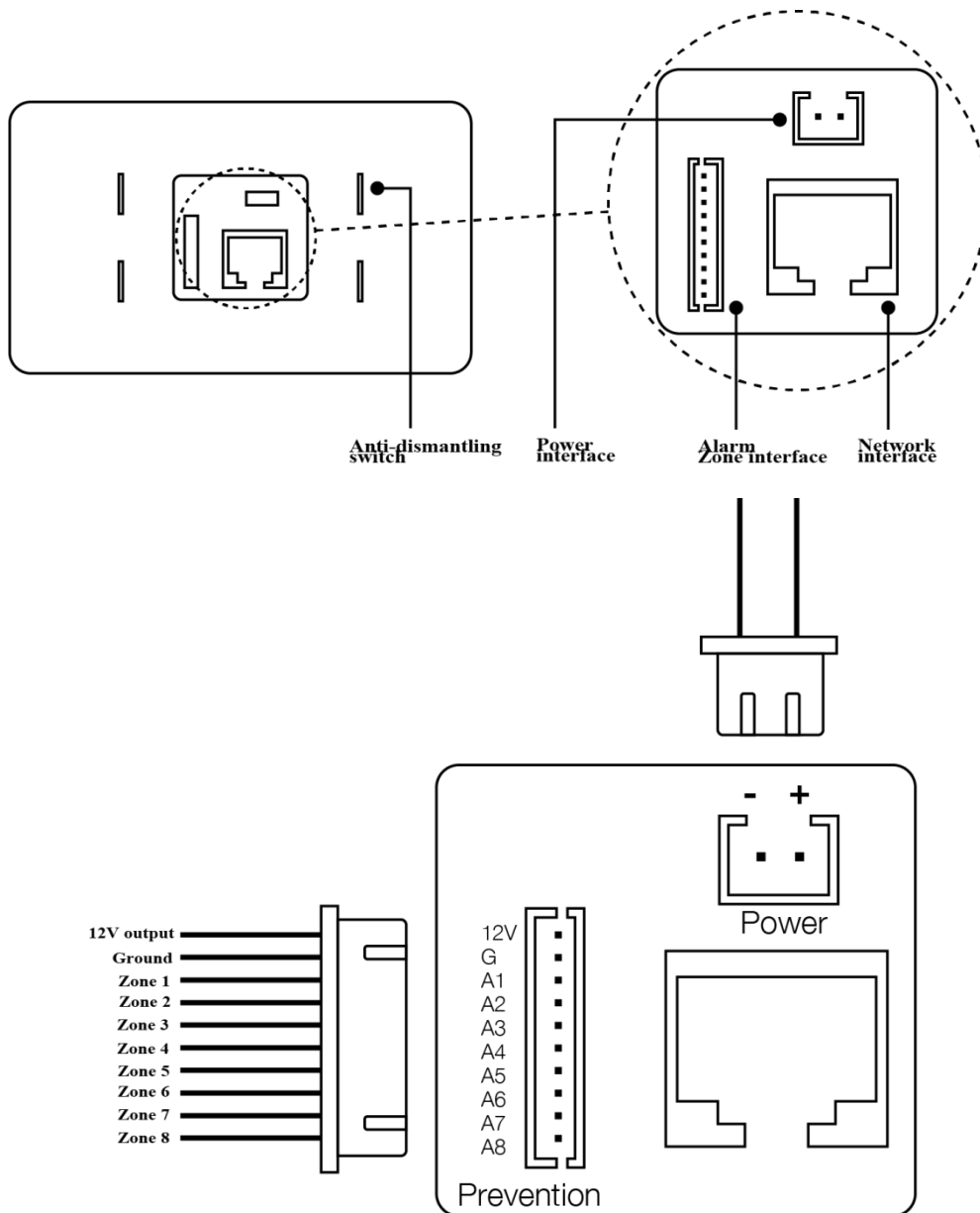## 2.3.3 Instructions on device wiring interfaces

2.3.2.1 Wiring diagram of V31 and V32 device terminals:

Power

+ -

A8
A7
A6
A5
A4
A3
A2
A1
G
12V

Prevention

Zone 8
Zone 7
Zone 6
Zone 5
Zone 4
Zone 3
Zone 2
Zone 1
Ground
12V output
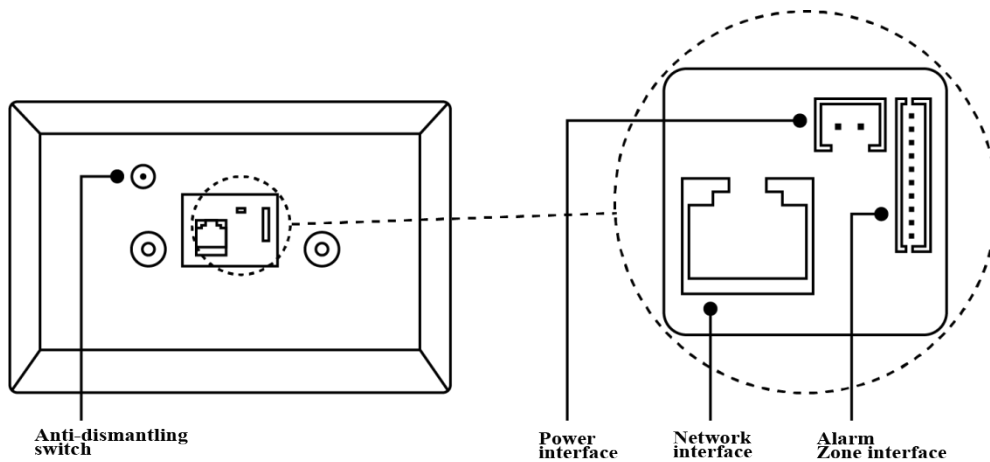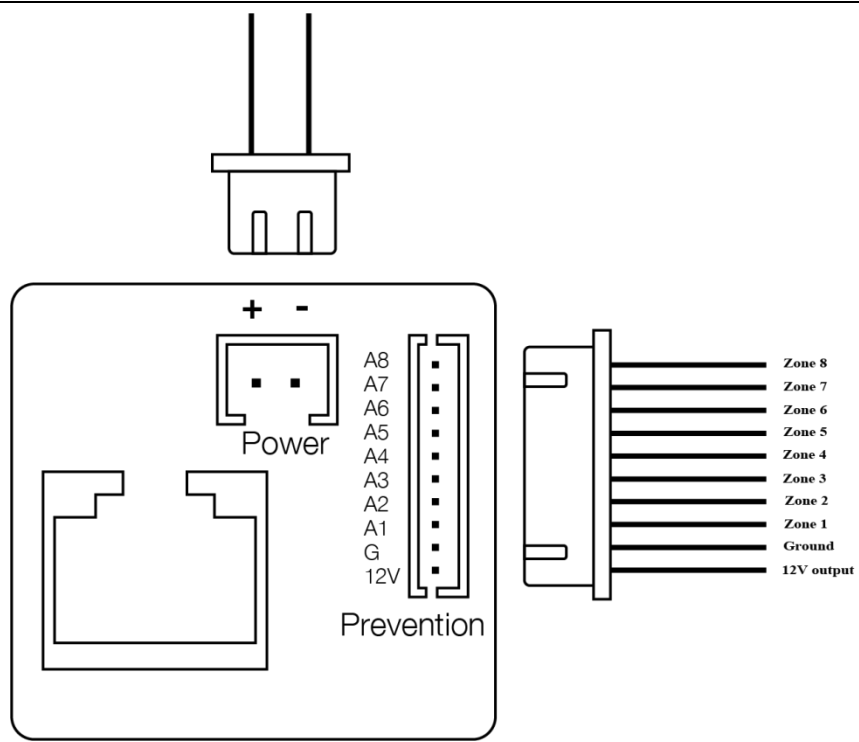
2.3.2.2 Wiring interface of V33:

Power interface   Alarm zone interface   Network interface

+ -
Power

Prevention
G A1 A2 A3 A4

Ground Zone 1 Zone 2 Zone 3 Zone 4

2.3.2.3 Wiring interface of E60:

Description of relevant interfaces of indoor stations

Interface	Wiring	Wiring definition and color
Network interface	This interface is connected to the network distributor/switch using a straight-through line.	Connection method of the crystal heads of the power cable 586B—586B
Power interface	Red and black wires are connected with a 18V power supply.	Red Black 18V GND
Alarm Zone interface	Interface connected to 8 paths of wired zones	Red Black Yellow Yellow Yellow Yellow Yellow Yellow Yellow Yellow 12V GND A1 A2 A3 A4 A5 A6 A7 A8

Interface description:

➢ Anti-removal interface: An interface for monitoring the removal state of the device. (Note: 4.3-Inch indoor station has no such interface.)

- ➢ Power interface: Power input, supports DC12-24V, supports SPOE power supply.
- ➢ Network interface: Network connecting interface, 10/100m self-adaption.
- ➢ Alarm Zone interface: An interface connected to the alarm device.
  - ◼ The 7-inch indoor station has 8 zones, and supports the 8th zone as the doorbell.
  - ◼ The 4.3-inch indoor station has 4 zones, and supports the 4th zone as the doorbell.
  - ◼ Wiring diagram of the zone infrared sensor:
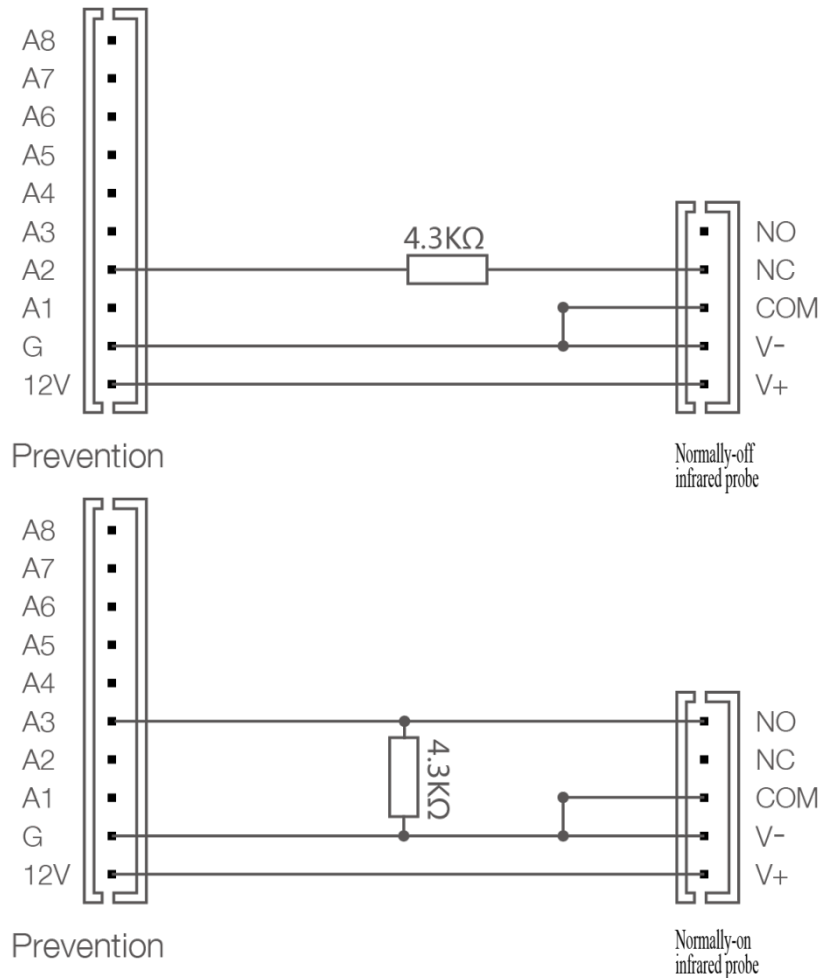
2.4 Networking and intermediate devices

2.4.1 Appearances and main parameters

Networking and intermediate devices	Appearance	Main parameters

24V Switch power supply		Input voltage: AC90V-AC240V/50-60Hz Maximum input power supply: 0.36Amax Output voltage: 24VDC±4V (red + black-） Output current: 2.5A Static power consumption: 05W Working temperature: -40℃ ~55℃; Protective grade: IP30 Appearance size: 169×61×124 (mm) Installation mode: Wall-typed installation
Digital network distributor		Working voltage: 18~24V DC Static power consumption: 05W Working temperature: -25℃ ~70℃; Capacity: 8 pieces Interface: RJ-45 interface/RS485 interface Protective grade: IP30 Appearance color: iron gray Panel material: ABS plastic Appearance size: 200×95×30 (mm) Installation mode: Wall-typed installation
Digital access controller		Working voltage: 12~24V DC Static power consumption: 1 W Working temperature: -40℃ ~70℃; Capacity: 30,000 pieces Interface: RJ-45 interface/RS485 interface/fire alarm interface Protective grade: IP30 Appearance color: iron gray Panel material: ABS plastic Appearance size: 200×95×30 (mm) Installation mode: Wall-typed installation

		Working voltage: 12~24V DC
Access card reader		Static power consumption: 0.77W Working temperature: -40℃ ~70℃; Interface: RS485 interface Protective grade: IP54 Appearance color: iron gray Panel material: ABS plastic Appearance size: 120×86×19.5 (mm) Installation mode: Wall-typed installation
Digital IC Card sender		Working voltage: 5V DC Maximum power consumption: 0.82W Working frequency: 13.56MHz Distance to the card sender: ≥2CM (upon specific card) Card type: IC card or CPU card Working temperature: -25℃ ~55℃; Interface: USB interface Protective grade: IP30 Panel material: ABS plastic Appearance size: 148×97×35 (mm) Installation mode: desk top

2.4.2 Device installation

2.4.2.1 Installation manner of 24V power supply

Use two screws to fix the power supply in an intelligent box which is about 160cm above the ground, as shown in the figure (the schematic installation diagram can be seen in the figure below).

Precautions for installation:

- Before installation, please read the product manual first, confirm the wiring manner, and confirm that the input voltage is consistent with the product requirements.
- Please use the power supply within the range of the technical parameters, or the product may be damaged.
- Non-professionals may not open the outer casing or disassemble the product, or an electric shock or product damage may be result.
- Do not install the device outdoors or at a dusty place.
- High Voltage. Danger! Non-professionals may not open the outer casing.

2.4.2.2 Installation modes of the digital network distributor and digital access controlle

➢ **Installation of DIN rail**

Pull out the slide fastener on the back of the device and install the device on the guide rail rack of the case.
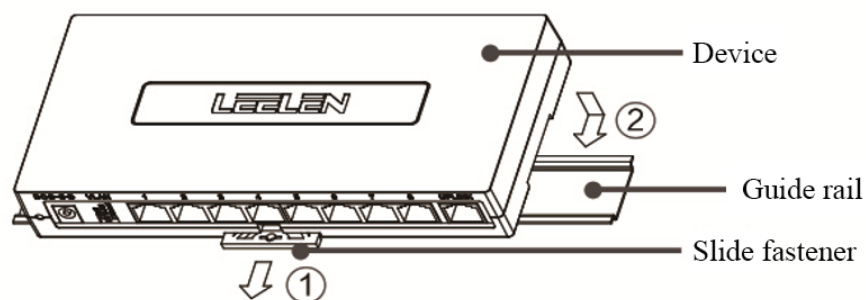
Fasten the slide fastener on the device to complete the installation.
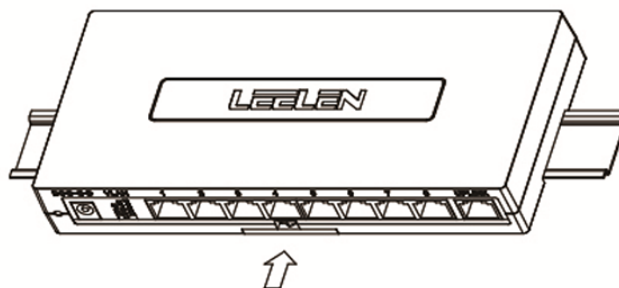
➢ **Installation on the wall**

Drill two screw holes at a distance of 10cm at proper positions, screw in plastic bases and lock screws.
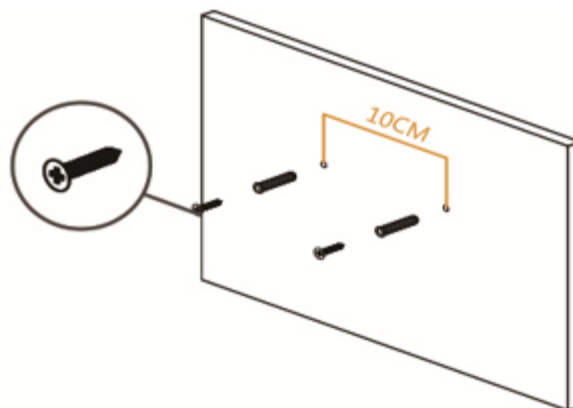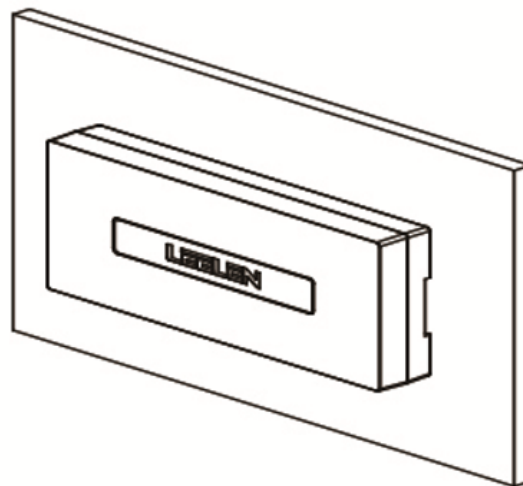

Align the hollow spaces on the back of the device with the screw heads, and then hang the device on
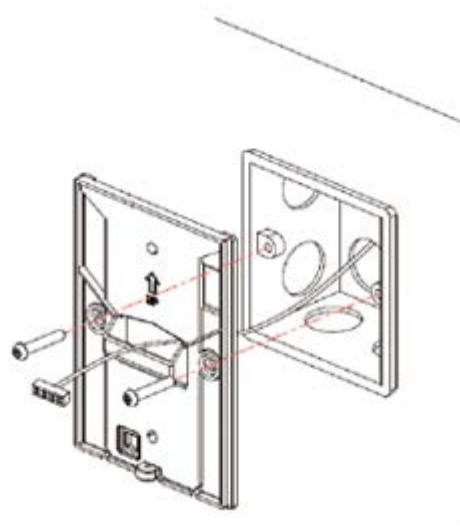
the screws.
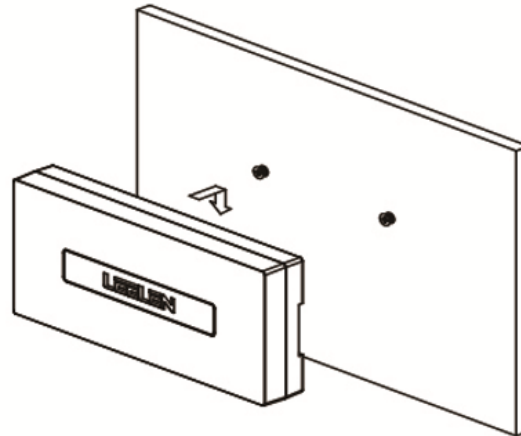
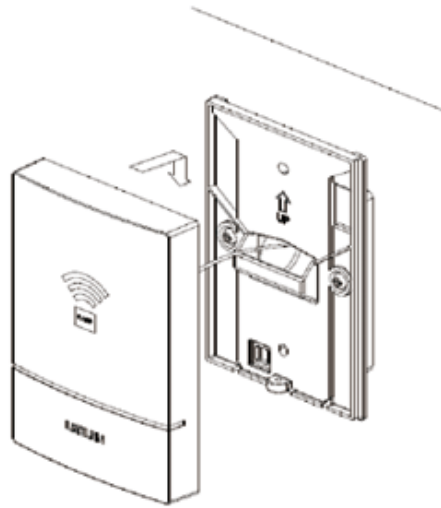**Installation completed**

➤ **Installation manner of access card reader**
  Use screws to fix the rear cover on the 86-type pre-embedded box.

Fasten the front cover on the back of the rear cover.

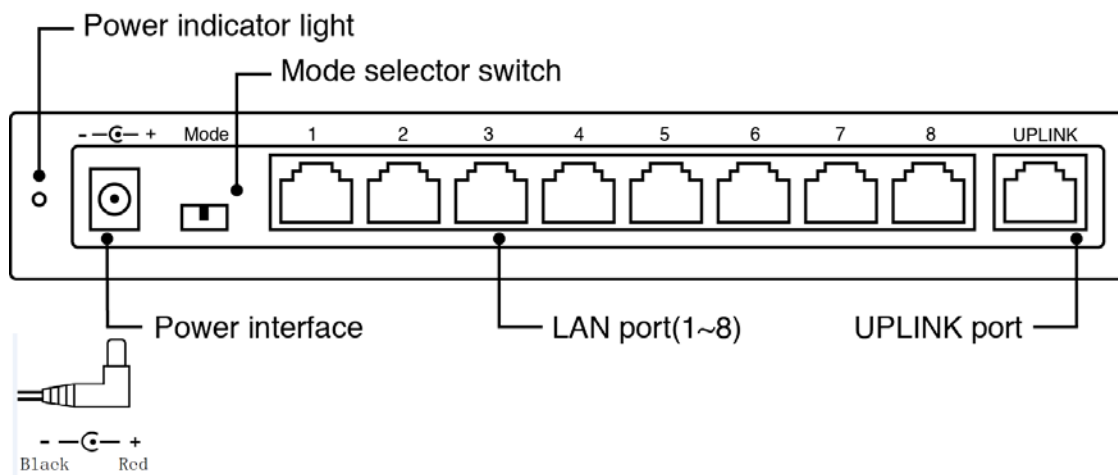**Lock the front and rear cover with screws to complete the installation.**

2.4.3 Instructions of device wiring

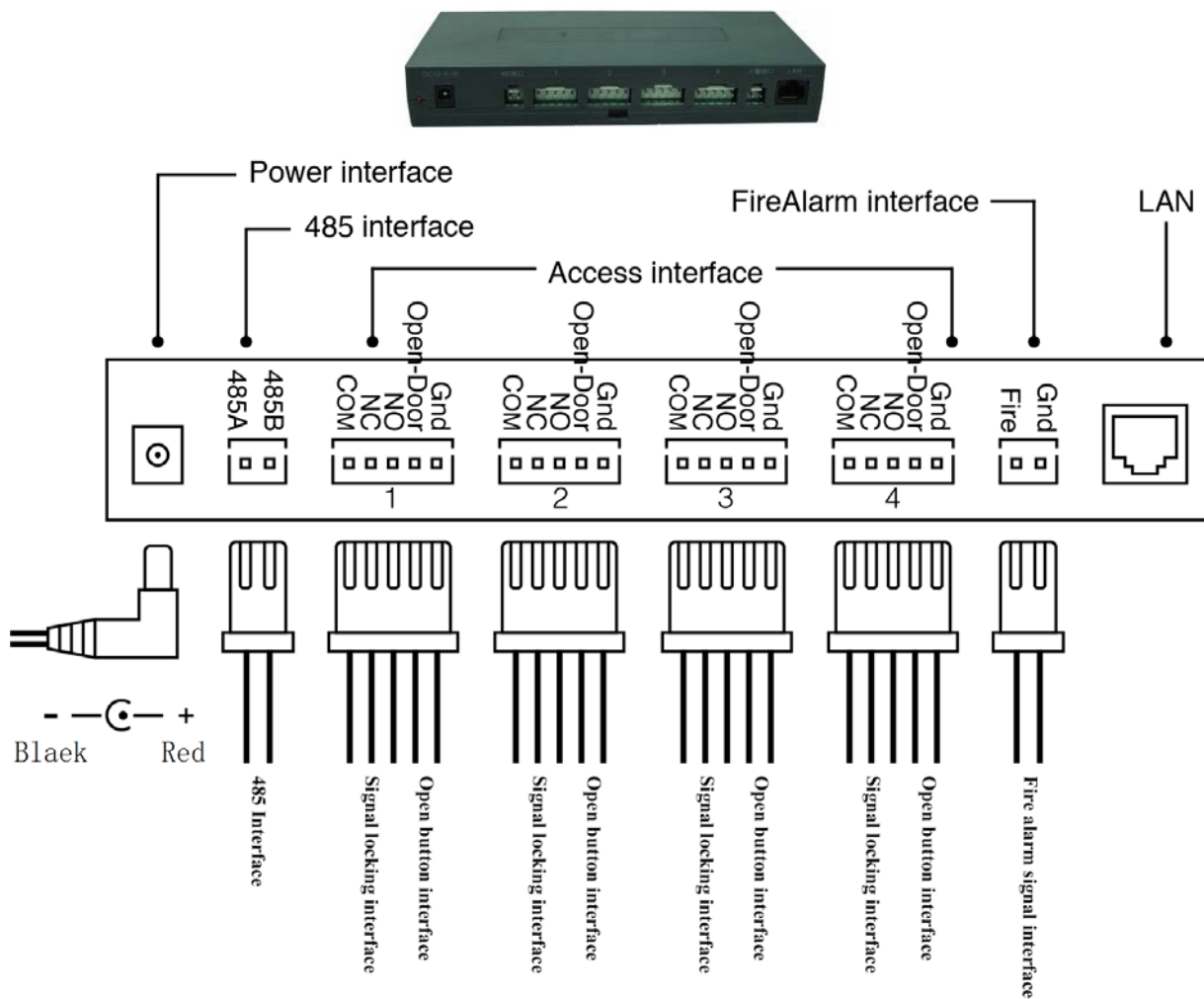### 2.4.3.1 Wiring diagram of 24V switch power supply:

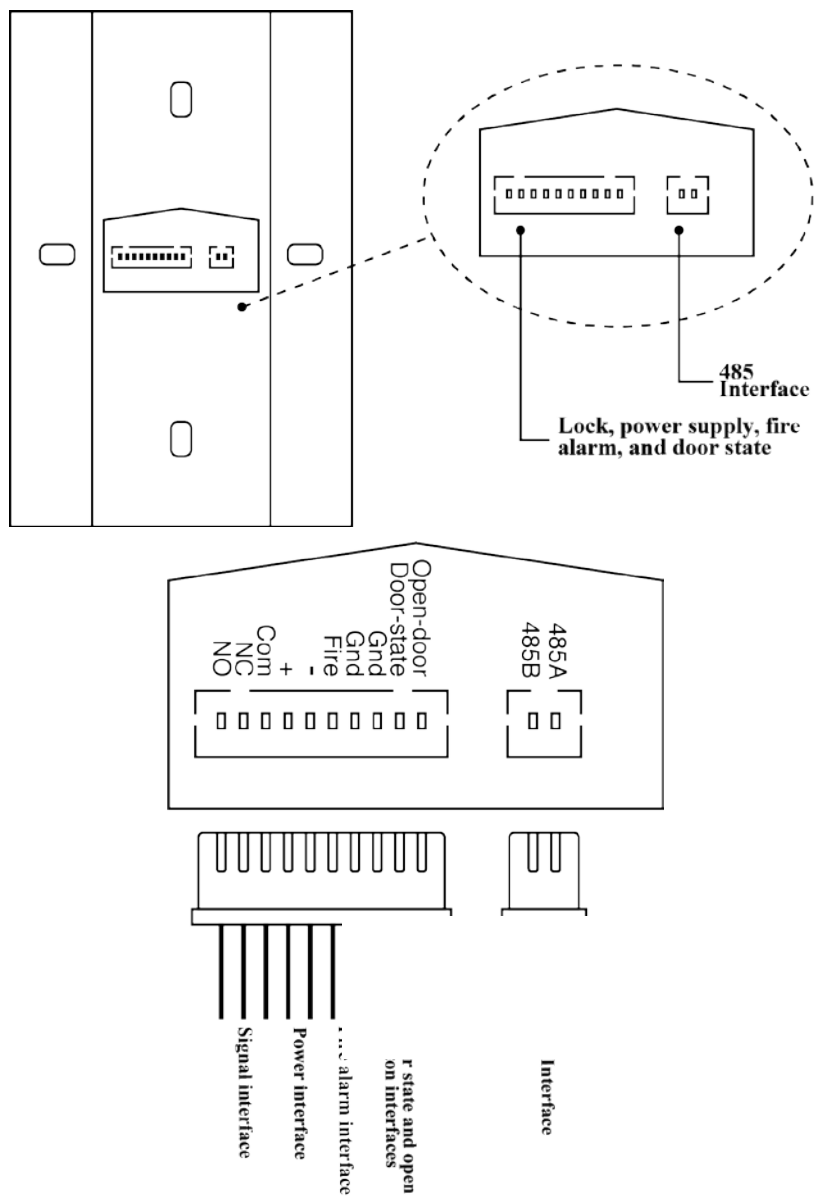### 2.4.3.2 Wiring diagram of digital network distributor:

Power indicator light
Mode selector switch
Power interface
LAN port(1~8)
UPLINK port
Black Red

2.4.3.3 Wiring diagram of access controller:

Power interface
485 interface
FireAlarm interface
LAN
Access interface
Black Red

485 Interface
Signal locking interface
Open button interface
Signal locking interface
Open button interface
Signal locking interface
Open button interface
Signal locking interface
Open button interface
Fire alarm signal interface

2.4.3.4 Wiring diagram of access card reader:

Wiring description

Card reader		Digital access control	Door state	Exit button	Power supply	Fire alarm	Lock
10-Core socket	NO						Black
	NC						White
	COM						Grey
	+				Violet		
	-				Blue		
	FIRE					Green	
	G					Yellow	
	G		Orange	Orange			
	STATE		Red				
	OPEN			Brown			
Access control	A	Red					
	B	Black					

2.5 Center Guard Unit (model No.5)

2.5.1 Appearances and main parameters

Technical parameters:

Working voltage: DC12-24V±10%

Maximum power consumption: 8W

Standby power consumption: <3W

Operating system: linux operating system

CPU：dual core A7

Main screen: dual core 1.2GHz
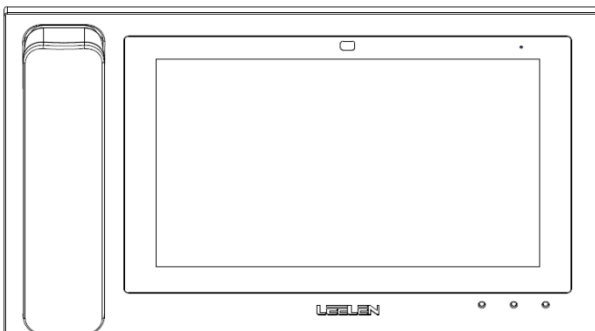
RAM: 8G

Flash：2G

Screen: 10.1-inch TFT LCD

Resolution: 1280*800

Video format: H.264

Transmission mode: TCP/IP network transmission

Operating manner: capacitive touch

2.5.2 Desk top installation of the device
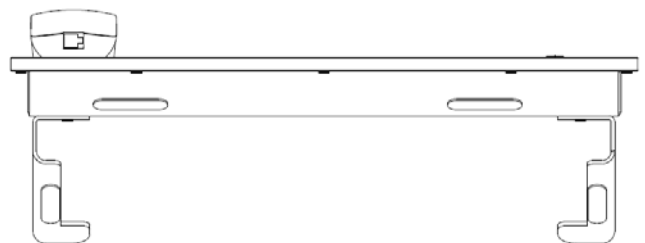
Precautions:

- Do not install the center guard unit in a damp environment.
- The desk where the center guide unit is placed should be kept clean and flat.
- The center guide unit should keep a sufficient distance from other devices to ensure airflow and sufficient heat dissipation.
- Do not place any articles on the center guide unit to avoid damage to the display screen and internal

elements of the center guide unit.
- High Voltage. Danger! Non-professionals may not open the outer casing.
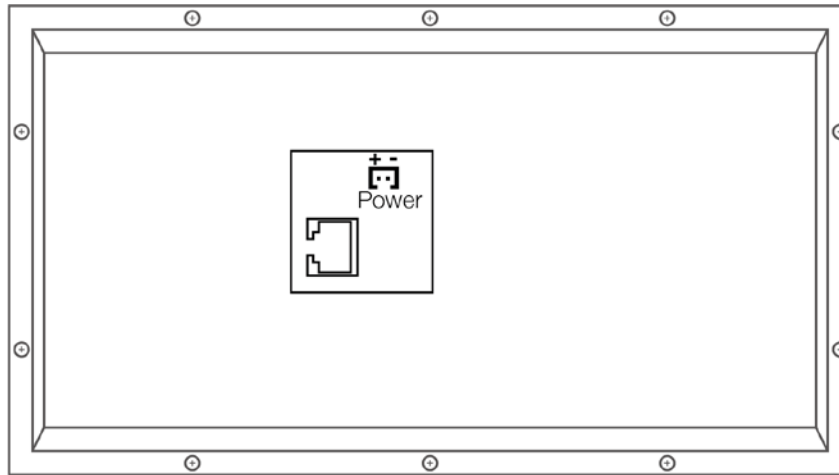
2.5.3 Instructions on device wiring

Diagram of backboard of guard unit

Interface of guard unit	Wiring	Wiring definition and color
Network interface	This interface is connected to the network switch using a straight-through line.	Connection method of the crystal heads of the power cable 586B—586B
Power interface		Red Black 18V+ GND

3. Commissioning manual

3.1 Precautions for commissioning

Preparations for commissioning
- Collect information of the residential community, formulate a call code table and an IP plan of the residential community.
- Test wires and ensure wires are smooth.
- Check if the device wiring is correct, in particular the wiring of the power supply and pay attention to the wiring of the positive and negative poles of the power supply.
  Precautions for commissioning
- Power on the system and if there are abnormalities, cut off the power supply immediately and eliminate abnormalities.
- During commissioning within a building, follow the principle of "checking, powering on and commissioning layers one by one."
- During the commissioning of the main platform, follow the principle of "checking, powering on and commissioning buildings one by one."
- When the system is powered on, it is forbidden to replace or wire the device.

3.2 Commissioning flow
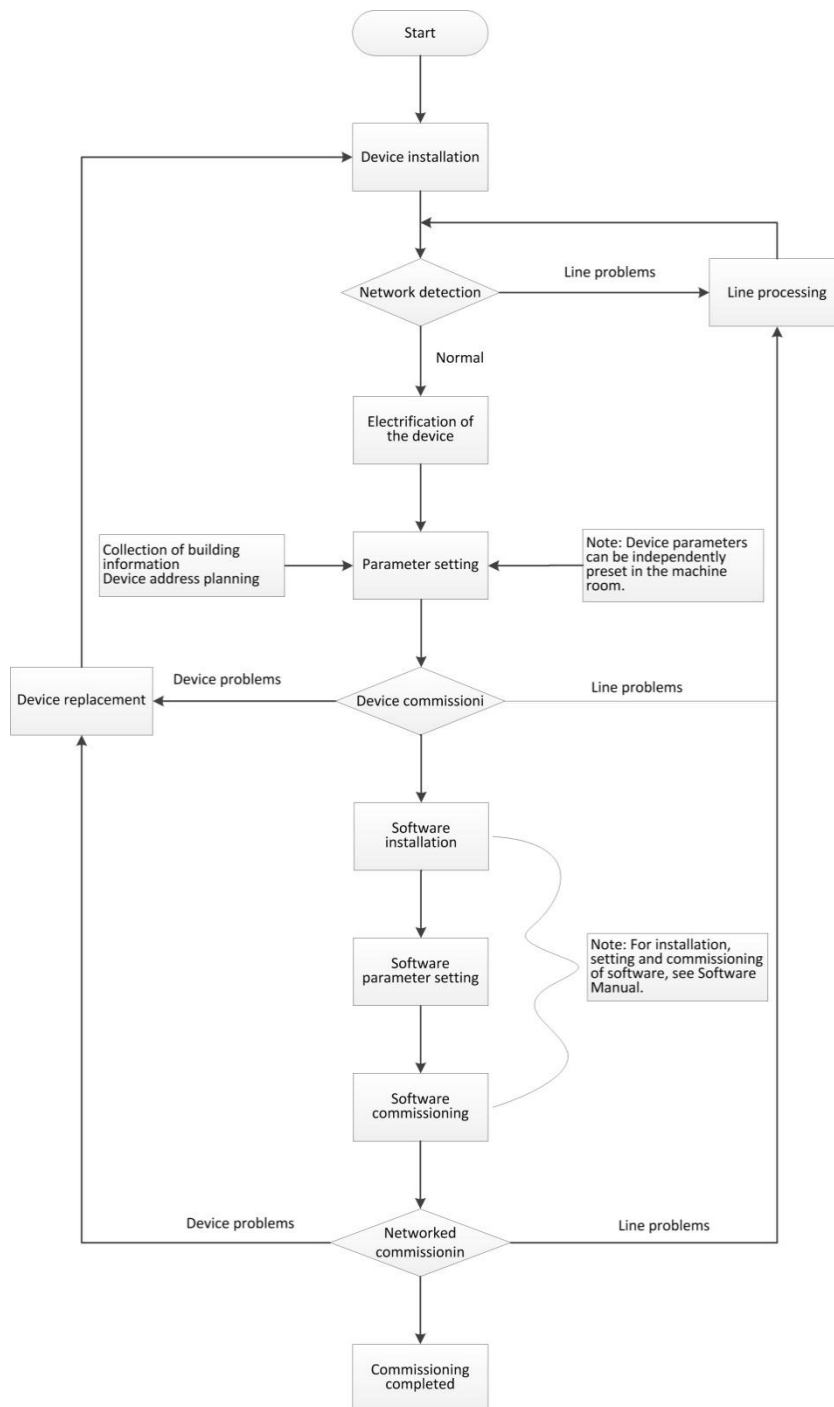
3.3 Parameter planning

3.3.1 Sub-network division

Description of sub-network division

Before IP planning, check the number of the intercom device that are needed according to actual situations. The IP address is required to be greater than the number of all devices of a residential community because every device

needs an IP address.

Simple classification (three types: sub-net masks of A, B and C types of networks can be used.)

- type IP address and sub-net mask
  - ✧ Take 1 9 2 . x xx . x xx . x xx as an example
  - ✧ Range of IP address: 1 9 2 .0 .0 . 1 ~ 1 9 2 . 2 5 5 . 2 5 5 . 2 5 4
  - ✧ Default sub-net mask of A-type network: 2 5 5 .0 .0 . 0
  - ✧ IP quantity: 2 5 6 x 2 5 6 x (2 5 6 - 2) = 1 6 6 4 , 6 1 4 4
- B-type IP address and sub-net mask
  - ✧ Take 1 9 2 . 1 6 8 . x xx . x xx as an example
  - ✧ Range of IP address: 1 9 2 . 1 6 8 .0 . 1 ~ 1 9 2 . 1 6 8 . 2 5 5 . 2 5 4
  - ✧ Default sub-net mask of B-type network: 2 5 5 . 2 5 5 .0 . 0
  - ✧ IP quantity: 2 5 6 x (2 5 6 - 2) = 6 , 5 0 2 4
- C-type IP address and sub-net mask
  - ✧ Take 1 9 2 . 1 6 8 .1 . x xx as an example
  - ✧ Range of IP address: 1 9 2 . 1 6 8 .1 . 1 ~ 1 9 2 . 1 6 8 .1 . 2 5 4
  - ✧ Default sub-net mask of C-type network: 2 5 5 . 2 5 5 . 2 5 5 . 0
  - ✧ IP quantity: 2 5 6 - 2 = 2 5 4

According to our project characteristics, our project is usually a local area network project of a residential community. Generally, a residential community includes thousands of apartments. We select the B-type IP address.

E.g.: With 1,500 homes, our IP range is:

- ■ 1 9 2 . 1 6 8 .1 . 1 ~ 1 9 2 . 1 6 8 .1 . 2 5 4
- ■ 1 9 2 . 1 6 8 .2 . 1 ~ 1 9 2 . 1 6 8 .2 . 2 5 4
- ■ 1 9 2 . 1 6 8 .3 . 1 ~ 1 9 2 . 1 6 8 .3 . 2 5 4
- ■ 1 9 2 . 1 6 8 .4 . 1 ~ 1 9 2 . 1 6 8 .4 . 2 5 4
- ■ 1 9 2 . 1 6 8 .5 . 1 ~ 1 9 2 . 1 6 8 .5 . 2 5 4
- ■ 1 9 2 . 1 6 8 .6 . 1 ~ 1 9 2 . 1 6 8 .6 . 2 5 4
- ■ sub-net mask can be set as 2 5 5 . 2 5 5 . 2 4 8 . 0.

IP division and sub-net mask of device

We employ B-type IP address. 1 9 2 . 1 6 8 .x . x as an example to divide subnets.

Quantity of segments	Quantity of IP in each segment	Sub-net mask	Range of IP in each segment
1	65024	255.255.0.0	192.168.0.1~192.168.255.254
2	32512	255.255.128.0	192.168.0.1~192.168.127.254
			192.168.128.0~192.168.255.254
4	16256	255.255.192.0	192.168.0.1~192.168.63.254
			192.168.64.1~192.168.127.254
			192.168.128.0~192.168.191.254
			192.168.192.1~192.168.255.254
8	8128	255.255.224.0	192.168.0.1~192.168.31.254
			192.168.32.0~192.168.63.254
			……
			192.168.192.1~192.168.223.254

			192.168.224.1~192.168.255.254	
16	4064	255.255.240.0	192.168.0.1~192.168.15.254	
			192.168.16.0~192.168.31.254	
			……	
			192.168.224.1~192.168.239.254	
			192.168.240.1~192.168.255.254	
32	2032	255.255.248.0	192.168.0.1~192.168.7.254	
			192.168.8.0~192.168.15.254	
			……	
			192.168.240.1~192.168.247.254	
			192.168.248.1~192.168.255.254	
64	1016	255.255.252.0	192.168.0.1~192.168.3.254	
			192.168.4.0~192.168.7.254	
			……	
			192.168.248.1~192.168.251.254	
			192.168.252.1~192.168.255.254	
128	Not recommended!			

3.3.2 Planning of the call number of a device

3.3.2.1 Collect information of a residential community

information of a residential community includes the quantity of enclosure outdoor stations, quantity of buildings, quantity of ladder ways, floors of each ladder way, number of houses on each floor and quantity of the entrance machines and indoor stations of each house.

3.3.2.2 Formulate rules for the call number of a device

The call number of a device has 8 digits, divided into a unit-number section and a home-number section.

The rules for unit numbers are formulated first: A unit number is four-digit, where the former two digits are the building number, while the latter two are the unit number, for example the unit number of unit 01 of building 01 is 0101.

Then, the rules for home numbers are formulated: A home number is also four-digit, where the former two digits are floor number and the latter two are house numbers, for example, the home number of house 03 on floor 8 should be 0803.

For example, a certain indoor station is installed in house 03 on floor 8 of unit 01 of building 01, then the call number of the indoor station should be 0101-0803.

If there are several indoor stations in a home, then 9-digit call numbers can be configured for the indoor stations, where the former 8 digits are the unit number and house number of the home and the 9th digit is the sequence number of the indoor station. For example, the home 03 on floor 8 of unit 01 of building 01 is equipped with three indoor phones, then the call numbers of the three indoor stations are 0101-0803-1,0101-0803-2 and 0101-0803-3,

respectively.

3.3.2.3 Formulate rules for the call number of an outdoor station

An outdoor station usually includes enclosure outdoor station and building outdoor station.

The call number of an enclosure outdoor station is 8-bit, where the former four bits are usually set to be 8888, and the latter four are usually the sequence number. For example, if a residential community has four enclosure outdoor station and then the number of the four enclosure outdoor stations are 8888-0001, 8888-0002, 8888-0003 and 8888-0004 in sequence.

The call number of a building outdoor station is 8-bit, where in the former four bits are unit number, and the latter four are sequence number which usually starts from 0001. For example, if the unit 01 of building 01 has two building outdoor stations, then the call numbers of the two building outdoor stations are 0101-0001 and 0101-0002 in sequence.

3.3.2.4 Formulate rules for the call number (*e.g.:* Model No.15) of a flat outdoor station (a secondary video doorbell installed at a higher home)

The call number of a flat outdoor station usually includes 8 bits, where the former four are consistent with the device number of the unit, while the latter four are the indoor station number + 8000.

For example, for the flat outdoor station of the home 03 on floor 8 of unit 01 of building 01, the call number should be 0101-8803.
(Note: 0803 + 8000 = 8803)

3.3.2.5 Rules for the call number of the digital access controller

The call number of the digital access controller is 8-digit. The number is set according to the position where the device is installed. If the digital access controller is installed at a position of the enclosure, then the call number is progressively increased according to the rules for the call number of the enclosure outdoor stations. If the digital access controller is installed at a ladder way, then the call number is progressively increased according to the rules for the call number of the building outdoor station.

For example, if a certain residential community has two enclosure outdoor station s and two digital access controllers installed at the enclosure, then the call numbers of the enclosure outdoor stations are 8888-0001 and 8888-0002 in sequence   and the call numbers of the digital access controllers are 8888-0003 and 8888-0004 in sequence.

For example, if the unit 01 of building 01 has two building outdoor station and two digital access controllers installed at the enclosure, then the call numbers of the elevator machines are 0101-0001 and 0101-0002 in sequence, and the call numbers of the digital access controllers are 0101-0003 and 0101-0004 in sequence.

3.3.2.6 Rules for the call numbers of Guard Unit and management software

The call number of a guard unit is 8-digit, where the former four digits are usually set to be 9999, and the latter four are usually the sequence number. For example, if a certain residential community has two guard units, then the call numbers of the two guard units are 9999-0001 and 9999-0002 in sequence.

The call number of a piece of management software is 8-digit, where the former four are usually set as 9999, while the latter four are progressively increased according to the call number of the guard unit, for example, the call number of the management software is 9999-0003 under the condition that there are two guard units.

3.3.2.7 Set call modes

The call number of a device is a number input by a user to call a certain device. For example, if a user using a certain outdoor station to call an indoor station in room 03 on floor 8 of unit 01 of building 01, it only needs to input the call number (0101-0803) of the outdoor station at the indoor station, and then the user can call the indoor station and perform intercom.

During actual applications, users do not need to input all the 8 digits to call an indoor station. Users can set the bit of digitals of a call number in the parameter setting menu of the outdoor station according to actual situations to reduce the digits of a call number input to call an indoor station.

After a user sets the calling digits in the outdoor station, the outdoor station will supplement the former digits automatically according to the call number of the outdoor station itself and the call number input by the user before making a call.

For example, if a user sets a 3-bit call number in the parameter setting interface of an outdoor station, the outdoor station automatically generates the final call number according to the former 5 digits of the call number of the outdoor station itself and the 3-bit call number input by the user to make a call after the user inputs the 3-bit call number.

For example, if the call number of an outdoor station itself is 0101-0001 and the set call number is a 3-bit outdoor station automatically generates the final call number according to the former five digits of the call number of the outdoor station itself and the 3-bit call number input by the user to make a call when the user inputs the 3-bit call number.

Note: The digits of a call number should be set according to actual situations. Generally, the call number of the Enclosure outdoor station is 8-bit, and the call number of the ladder way outdoor station is 4-bit. If the total floors of a certain ladder way are less than 10, the call number can be set to be 3-bit.

If a user wants to set a 2-bit call number, the user can define rules of the call numbers of the outdoor station and indoor station again according to actual situations, thus realizing 2-bit calling.

Rules for call number:
- XXXX (unit number) - XXXX (home number)
- For example, for unit 01 of building 01, the first outdoor station can be set as 0101-0001.
- For a home 0803, the indoor station can be set as 0101-0803.
- For a 3-digit contact number, it can be set as XXXX-0XXX.
- The outdoor station is usually set as XXXX-0001.
- The management guard unit is usually set as 9999-0001.
- The management software is 9999-0002 by default.
- The contact number should be set according to the above rules as possible as it can, and 0 is used to supplement lacking digits.

3.3.3 Application cases

➢ Information collection of a residential community: A residential community has six high buildings; each building has one unit; each unit has 30 floors; there are four houses on each floor; there is an access at the underground floor 1; the residential community has two access doors, and one management center. Besides, there are two villas, each with two access doors and four indoor stations. According to the above information, it is known that, the residential community has indoor stations:
  ✧ 6 (building) x 1 (unit) x 3 0 (floor) x 4 (house) x 1 (indoor station) = 7 2 0
  ✧ There are 8 indoor stations and 4 outdoor stations for the villas.
  ✧ Quantity of the outdoor stations: 6 (building) x 1 (unit) x 2 (pieces) = 12

- ✧ Quantity of the enclosure outdoor stations: 2
- ✧ Quantity of the center guide unit: 1
- ➢ Formulate IP rules:

    Select the B-type IP to divide network segments. The network is divided into 16 segments, one of which is selected to set IP.

- ➢ Formulate ID number rules:
    - ✧ Building No.: 2-bit
    - ✧ Unit No.: 2-bit
    - ✧ Floor No.: 2-bit
    - ✧ Home No.: 2-bit

Parameter planning list of indoor stations:

Parameters of unit 01 of building 01 are as follows:			
Floor	Home	SN	IP address
1	1	0101-0101	192.168.1.10
	2	0101-0102	192.168.1.11
	3	0101-0103	192.168.1.12
	4	0101-0104	192.168.1.13
2	1	0101-0201	192.168.1.14
	2	0101-0202	192.168.1.15
	3	0101-0203	192.168.1.16
	4	0101-0204	192.168.1.17
……			
8	1	0101-0801	192.168.1.38
	2	0101-0802	192.168.1.39
	3	0101-0803	192.168.1.40
	4	0101-0804	192.168.1.41
……			
30	1	0101-3001	192.168.1.126
	2	0101-3002	192.168.1.127
	3	0101-3003	192.168.1.128
	4	0101-3004	192.168.1.129

Outdoor station parameters of unit 01 of building 01 are as follows:		
Position	SN	IP address
1 layers	0101-0001	192.168.1.2
Underground floor 1	0101-0081	192.168.1.3

The IP parameter of the indoor station of the unit 01 of building 02 can be set in a range from 1 9 2 .1 6 8 .2 . 1 0 to 1 9 2 .1 6 8 .2 . 1 2 9.

For the serial number of a villa, usually, the unit is set as 1111. A villa can be regarded as one unit with a uniform unit number.

For the serial number of the outdoor station of the villa, the 5th digit can be declined from 9 or 8 in turn, and it is ensured that there is no conflict with the numbers of other devices.

The serial number of a villa is as follows:

Villa	Indoor station number	SN	IP address
01	1	1111-0001-1	192.168.7.10
	2	1111-0001-2	192.168.7.11
	3	1111-0001-3	192.168.7.12
	4	1111-0001-4	192.168.7.13
Outdoor station01 of villa 01		1111-9001	192.168.7.14
Outdoor station 02 of villa 01		1111-8001	192.168.7.15
02	1	1111-0002-1	192.168.7.16
	2	1111-0002-2	192.168.7.17
	3	1111-0002-3	192.168.7.18
	4	1111-0002-4	192.168.7.19
Outdoor station 01 of villa 02		1111-9002	192.168.7.20
Outdoor station 02 of villa 02		1111-8002	192.168.7.21
……			

Enclosure outdoor station No.

Position	SN	IP address
1	8888-0001	192.168.8.10
2	8888-0002	192.168.8.11

Center guard unit No. and center PC No.

Position	SN	IP address
Center guide unit	9999-0001	192.168.8.2
Center PC machine	9999-0002	192.168.8.5

Setting of public parameters of a residential community:

Subnet mask of all devices: 255.255.0.0
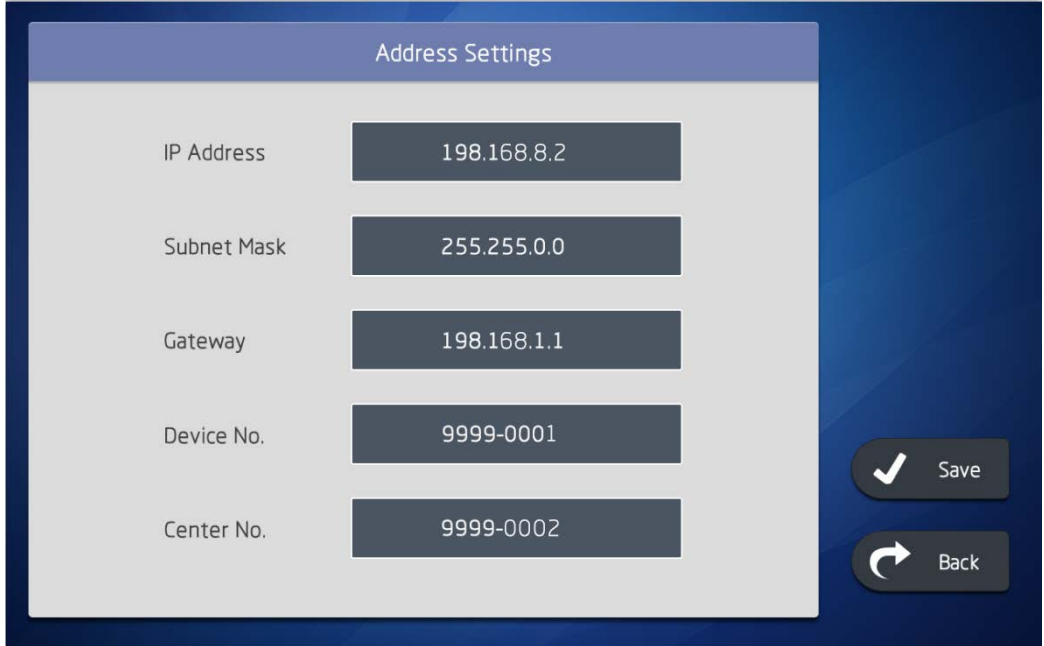
Gateway of all devices: 192.168.1.1
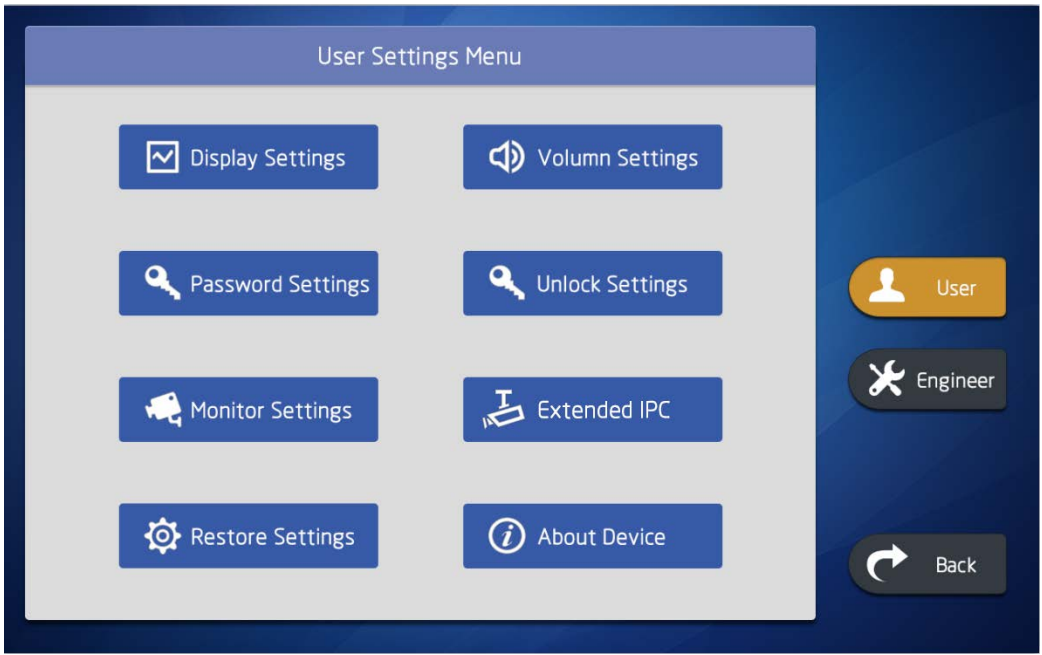
3.4 Description of commissioning of guard unit

3.4.1 Necessary parameters to be set

Device address Input "999999" in the engineering setting column to enter the setting interface. Set the device number and IP address of the guard unit. Select defaults for other items.

3.4.2 Parameter setting method

Item	Setting instructions
Address setting (required item)	Input "999999" in the engineering setting column to enter the setting interface. Set the device number and IP address of the guard unit. Select defaults for other items.
Supervision	Fill in the name and address of the outdoor station in the monitor setting column of the guard unit, and save the setting. Then, the outdoor station in the interface can be monitored.

Duty	The guard unit can be set on an on-duty state or off-duty state. In the off-duty state, an incoming call is transferred to a guard unit of the next level.
Intercom	On the intercom interface, you can input the device number using the guard unit to perform intercom.
SOS Records	Check the records on SOS signals initiated by the indoor station in the SOS Records.
Alarm Records	Check the records on zone alarms initiated by indoor stations in the Alarm Records.

3.5 Instructions on commissioning of outdoor stations

3.5.1 Instructions on parameters to be set on the outdoor stations

Network IP: Set the IP address, gateway and sub-net mask of the device according to the parameters planned in the project and check the MAC address.
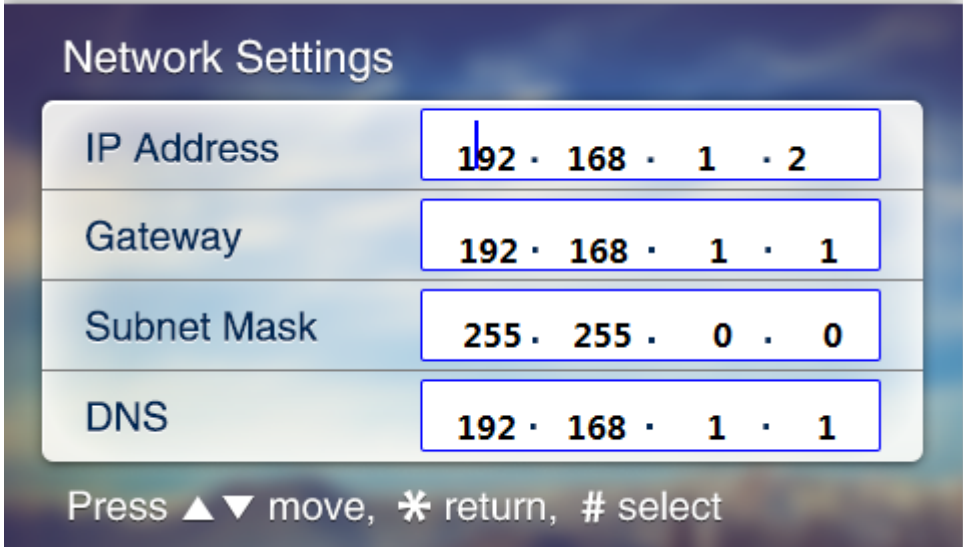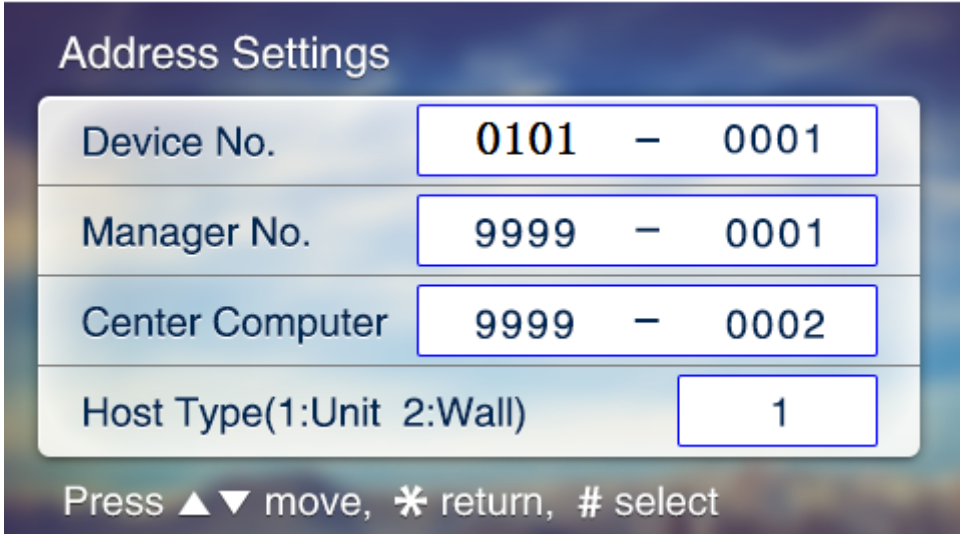
Address ID: Set the device number, management number, management center number and outdoor station type of the device according to the planned parameters.

3.5.2 Instructions of parameter settings

Instructions of the outdoor station setting menu: (for example, the outdoor station of unit 01 of building 01 can be set as 0101-0001).

outdoor station system access setting:"*90*+1234*", or press the "Set" key through the "Set" hole on the back to enter the outdoor station system setting interface. 1234 is the default engineering password of the outdoor station device. Users can modify the password in the outdoor station settings.

Item	Setting instructions
Access card management	Has functions of access control configuration, resident card management, property card, registered face recognition, blue-tooth, QR code, etc.
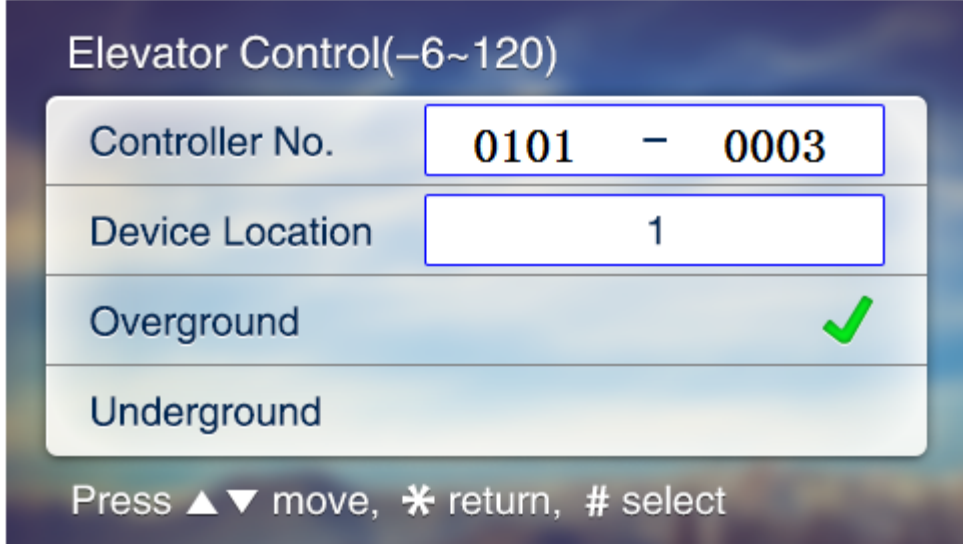
Network	Set the IP address, gateway and subnet mask of the device according to the parameters planned in the project. **Network Settings** IP Address: 192 · 168 · 1 · 2 Gateway: 192 · 168 · 1 · 1 Subnet Mask: 255 · 255 · 0 · 0 DNS: 192 · 168 · 1 · 1 Press ▲▼ move, ✳ return, # select
Address	Set the device number, management number, management center number, and outdoor station type of the device according to the planned parameters. **Address Settings** Device No.: 0101 — 0001 Manager No.: 9999 — 0001 Center Computer: 9999 — 0002 Host Type(1:Unit 2:Wall): 1 Press ▲▼ move, ✳ return, # select
Version	Check the software version, hardware version, core version, face version, blue-tooth version, fingerprint version, and SN information of the device, and check the MAC address.
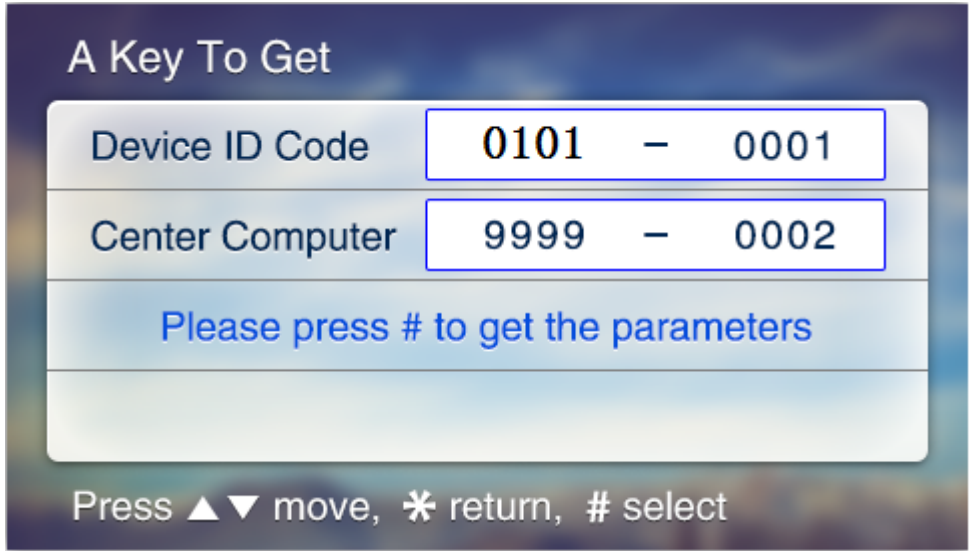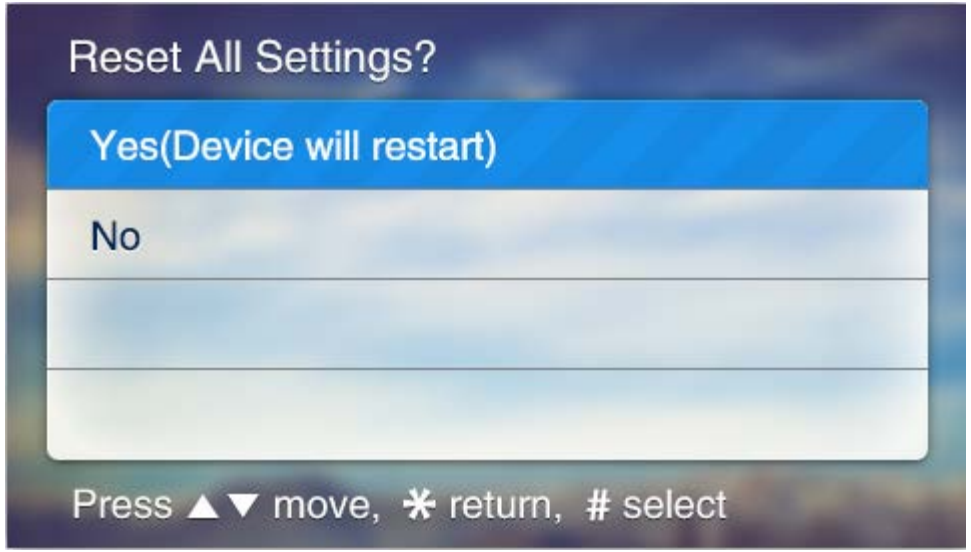
Time limit	Set unlocking duration, door state monitoring, opening time limit, and the starting and ending time of the time-limited services.
Dial	Set dialing digits.

	Dialing Digits(1~8) 4 Press ✱ return, # select
Volume	Set ringtone volume, intercom volume, prompt volume, capture volume, bell volume, etc. **Ring Volume(%)** 0 20 40 60 80 100 Press ▲▼ move, ✱ return, # select **Bell** 1/5 Ring1 ✓ Ring2 Ring3 Ring4 Press ▲▼ move, ✱ return, # select
Door access control	Set door access control mode: control by the machine itself or by the digital access controller.

	Entrance Guard Control 1/2 Local Control ✔ Digital Entrance Guard Controller Press ▲▼ move, ✳ return, # select
Elevator control	Set number of the elevator controller and floor of the machine itself. **Elevator Control(−6~120)** Controller No. 0101 − 0003 Device Location 1 Overground ✔ Underground Press ▲▼ move, ✳ return, # select
Date/time	Set time and date, and automatically synchronize the time. **Time And Date Settings** 1/3 Time Date Time Synchronization Press ▲▼ move, ✳ return, # select
Screen saver	Set time to enter screen saver mode and screen saver mode.

Password	Set engineering password. Default engineering password is 1234.
Language	Set language.
One-key-acquire	Press one key to acquire parameters of the device in the configuration software.

Reset to factory default	Select to re-set to factory default.

3.5.3 Device commissioning steps

➢ Confirm the number of the guard unit.
➢ Use the "Security" button of the outdoor station to call the guard unit.
➢ The guard uneit confirms if the number of the outdoor station is correct.
➢ The guard unit answers the call and confirms the audio and video quality.
➢ The guard unit unlocks the door and then confirms that the unit door has been unlocked.
➢ All the above items are confirmed, and then the commissioning is complete.
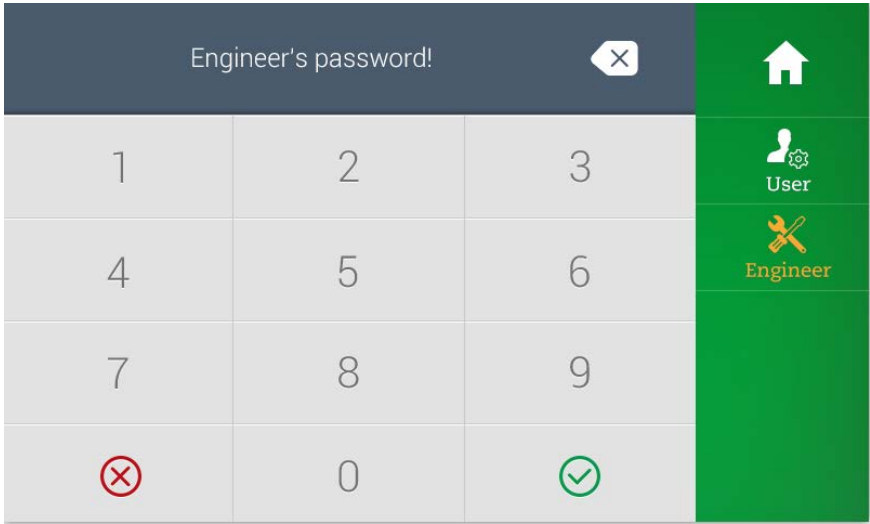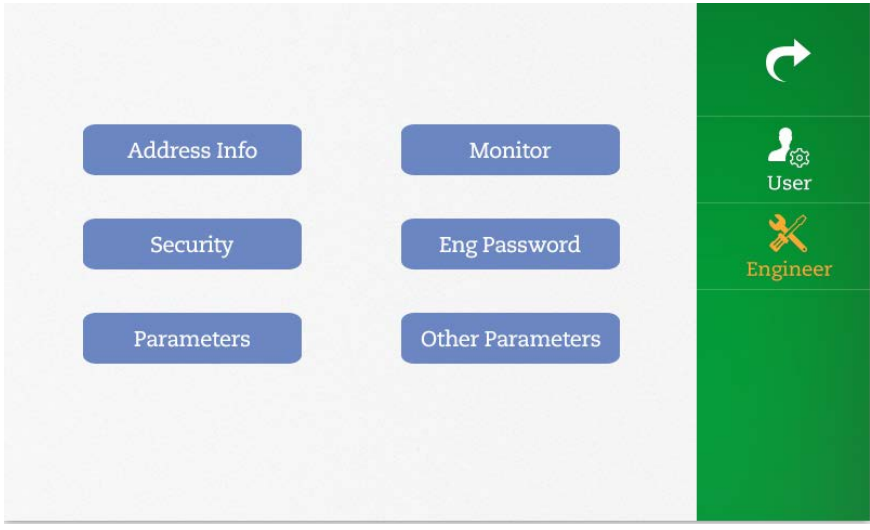
3.6 Instructions on indoor station commissioning
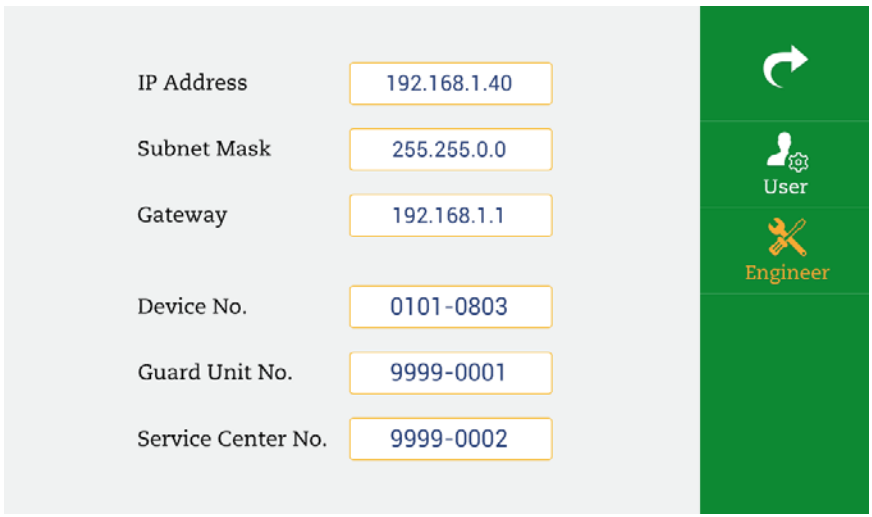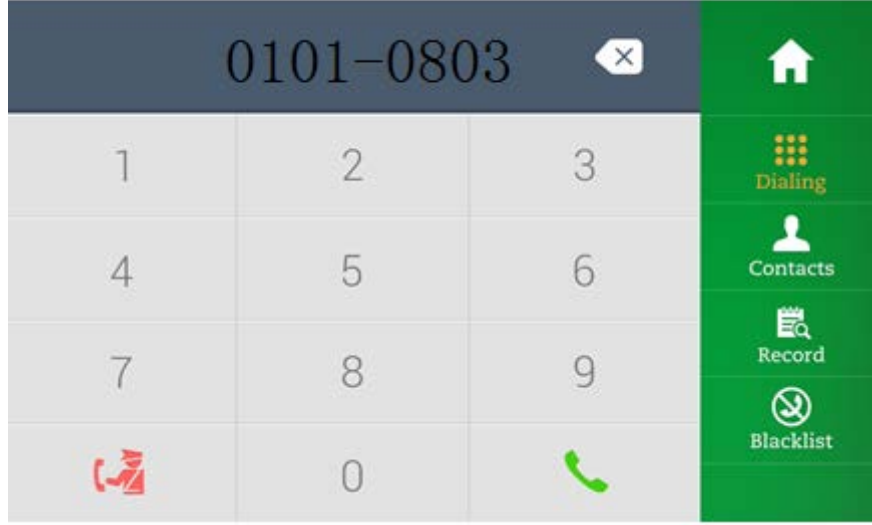
3.6.1 Necessary parameters to be set of the indoor station

Click on the setting key ⚙ at the right lower corner on the desk top of an extension, select "engineering setting"

and input the password "999999" to enter engineering setting: Modify the device number and IP in the address information column (for example, the indoor station of the resident with a home number 0803 can be set as 0101-0803).

3.6.2 Indoor station setting method

Item	Instructions	Remarks
Settings	Input the password "999999" to enter the engineering setting interface. Modify the device number and IP in the address information column	

Intercom	 On the intercom interface, input the 8-digit number of the called party, and then called party can be reached. *E.g.:* 0101-0803.	
Video Monitor	For monitoring of the outdoor station, set the number of the outdoor station through the video monitoring in the system setting interface, for example, XXXX-XXXX, save the setting and then you can check the outdoor station video through the monitoring list of the indoor station. 	

	1.Zone alarm setting	
	● Security Enter the engineering setting interface, click on "Security" to enter the zone setting interface with the following contents:	

<table>
<tr><th>No.</th><th>Location</th><th>Detector Type</th><th>Alarm Type</th><th></th></tr>
<tr><td>01</td><td>—</td><td>Permanent</td><td>SOS</td><td rowspan="9"></td></tr>
<tr><td>02</td><td>—</td><td>Permanent</td><td>Smoke</td></tr>
<tr><td>03</td><td>—</td><td>Permanent</td><td>IR</td></tr>
<tr><td>04</td><td>—</td><td>Delay</td><td>Door</td></tr>
<tr><td>05</td><td>—</td><td>Immediate</td><td>Gas</td></tr>
<tr><td>06</td><td>—</td><td>Permanent</td><td>IR</td></tr>
<tr><td>07</td><td>—</td><td>Prohibit</td><td>Prohibit</td></tr>
<tr><td>08</td><td>—</td><td>Delay</td><td>Other</td></tr>
<tr><td colspan="4">1/1</td></tr>
</table>

Zone sequence number: wired zones 1-8.

Alarm type: Prohibit, permanent, immediate, delay, etc.

Sensor types: SOS, smoke, gas, IR, door magnet, etc.

Click on "Return" to save settings.

Setting recommends: Smoke and SOS buttons are set as permanent zones; the sensors of the door magnet are set as external and delay zones; the infrared sensor of the living room are set as internal and delay zones.

● Alarm parameters

Enter the user setting interface, with a default password 123456. Click on "Alarm parameters" to enter the alarm parameter setting interface with the following contents:

Absent	Home
Arm delay time(s)	30
Alarm delay time(s)	30
Alarm repeat time(s)	30
Remove setting	off

Absent setting: check effective zones in the absent mode.

Security Management

Home setting: check effective zones in the home mode.

Arm delay time: length of time delay from the moment when zones are set to the moment when zones work, for the purpose of preventing arm-and-work situations. Generally, the arm delay time is 60 seconds, with a small allowance.

Alarm delay time: a time length for alarming after a zone is triggered. Generally, the arm delay time is 60 seconds, with a small allowance.

Alarm repeat time: if a zone is re-triggered within 60s after the zone has been triggered, the system does not handle the re-triggering and record alarm information. The default setting is 60 seconds, with a small allowance.

Remove setting: it is used to set whether or not an alarm sound is given when the device is dismantled. This item is switched to turn on or off.

Elevator control	Set the number of the elevator-control outdoor station as the address of the elevator controller in the "Other parameters" option in the engineering setting interface of the indoor station. Press the indoor station to call the elevator, the indoor station sends a control command to the elevator controller and the elevator controller receives the control command and executes the corresponding operations.	
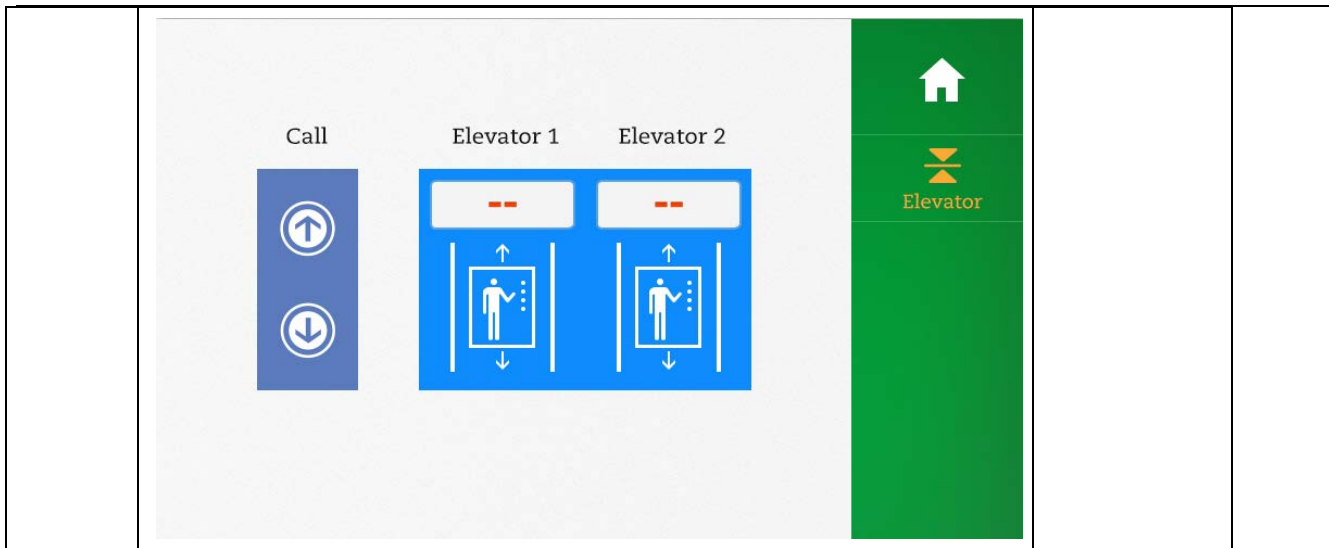
3.6.3 Test steps after device parameter setting

➢ Confirm the number of the guard unit.
➢ Use the "Security" button of the outdoor station to call the guard unit.
➢ The guard unit confirms if the number of the outdoor station is correct.
➢ The guard unit answers the call and confirms the audio and video quality.
➢ The guard unit unlocks the door and then confirms that the unit door has been unlocked.
➢ All the above items are confirmed, and then the commissioning is complete.

3.7 Web setting parameters (parameter setting of Model No.8 and Model No.15 Outdoor Station)

In addition to modifying parameters on the device, you can also modify parameters through web setting.
The operating steps are as follows:
✧ Open the browser (the latest 360 browser/QQ browser are recommended).
✧ Input the IP number of the device (see the default device IP in the table below).
✧ Input the user's name and password (the user's name is admin and the password is 123456/999999/111666).
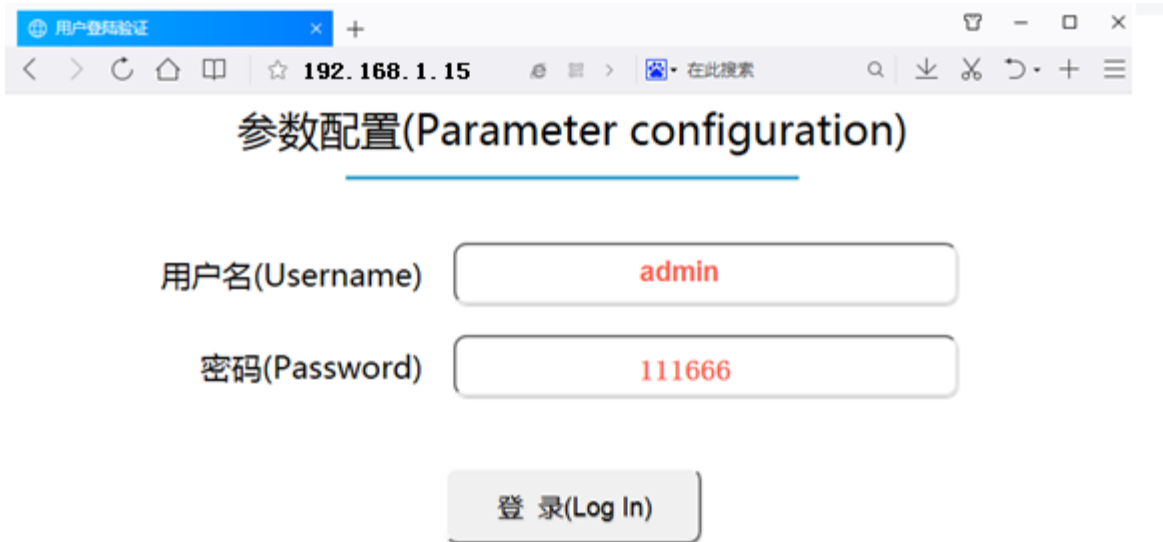
Default device IP:

Name	Default device IP
Model No.8 outdoor station	192.168.1.8
Model No.10 outdoor station	192.168.1.16
Model No.15 outdoor station	192.168.1.15

Model No.16 outdoor station	192.168.1.16	
Indoor station	192.168.1.100	

E.g.: (Model No.15 outdoor station) To avoid same with any indoor station, we suggest to set the device No. for No.15 outdoor station as 0101-8803,i.e. the indoor station device No. + 8000

(Note:0803+8000=8803)

8/15 Host Parameter Configuration   Software Version No. : 1.10_20180306   [Save]   [Exit]

Network/Address

IP Address	192.168.1.8
Subnet Mask	255.255.0.0
Gateway	192.168.1.1
DNS	192.168.1.1
Device No.	1111-0001
Guard Unit No.	9999-0001
Service center No.	9999-0002
OS Type	Block Unit ▼
MAC Address	
SN Information	

Entrance

Digital Access Controller Switch	Close ▼
Digital Access Controller Number	1111-0008
Access Control Lock Number	0 (1~4)
Swiping Card to Arm or Disarm	Close ▼
Management Card Function	Close ▼
The Property Card Patrol Function	Close ▼
Copy Card Prevention Function	Close ▼
Password To Unlock	Open ▼
Network Environment Settings	100M ▼

Limited Time Settings

Unlock Time	5 (0~253)s
Door Status Switch	Close ▼
Opening Time	3 (1~300)s
Time-limited Service	Close ▼

Display/Volume

Language Settings	English ▼
Ring Volume	60 ▼ %
Speech Volume	60 ▼ %
Ring	ring1 ▼
Camera Tone	Close ▼

Modify the parameters needing to be modified in the Web page, and click on "Save."

3.8 Installation and commissioning of management software

See the individual User Manual for installation of the management software.

3.9 Commissioning steps of the main platform

➢ Check if the home alarm, outdoor station and management software can receive messages from the main platform.
➢ Check if the outdoor station can call indoor station and if the outdoor station can call the management machine and unlock doors.
➢ Check if the management software download is jammed.
➢ Check if the outdoor station can sweep card and unlocks doors.