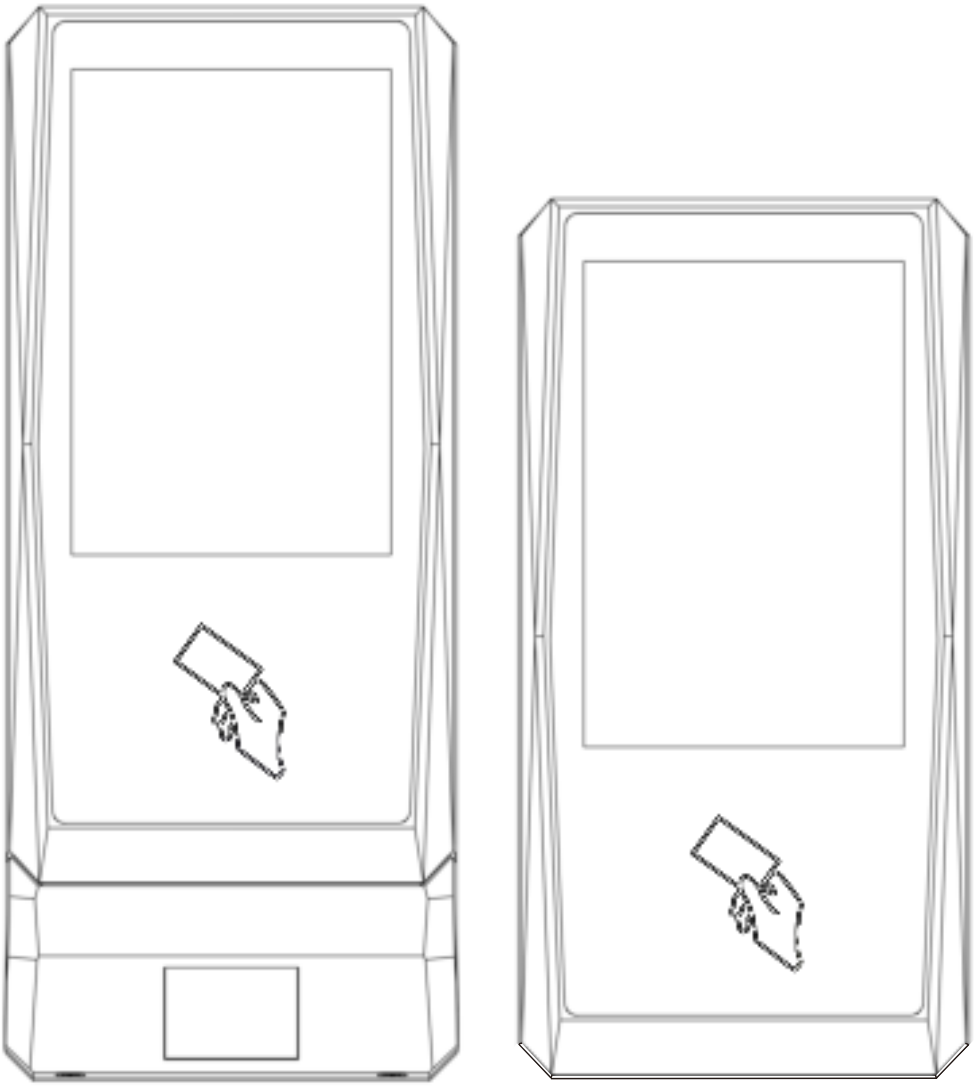
CIVINTEC®

CRYSTAL TOUCH TERMINAL

CT9 PRO INSTALLATION GUIDE

V2.0.1



Suitable models:

CT9-T-P, CT9-T-QP, CT9-T-P-M, CT9-T-QP-M,
CT9-T-P-UV, CT9-T-P-M-UV, CT9-T-QP-UV, CT9-T-QP-M-UV

The table below contains the history of changes made to the present document.

Version	Date	Document Version History
V1.0.0	2022-07-15	Original Version
V2.0.1	2022-09-07	Optimize 4G cable

Introduction

This document is about CT9 Pro terminal installation instructions; please strictly follow the instructions in the installation. In order to prevent screen bursting, do not to touch the TP screen hard during installation.

Technical Specification

CRYSTAL TOUCH	CT9 Pro
Display	3.5" touch screen
Operation System	LINUX
Memory	64MB LPDDR, 128MB Nand Flash
Keypad	Touch PIN Pad
ISO-protocol	125KHz, 13.56MHz ISO14443A/B, ISO18092 NFC * *Not all ISO14443 B cards have been implemented in the reader, please contact Civintec for more details on current status.*
Contactless cards	125KHz Prox, 125KHz EM, 13.56MHz Mifare® Classic, Ultralight®, Ultralight®C, Mifare® Plus, DESFire® EV1/EV2, NFC tags (T2T,T4T)
Secure Access Module	ISO7816 (T=0, T=1) 1 SAM module, more on request
Barcode/QR scanner	• Area image 640 x 480 pixels, Filed of View 68°(H) x 51(V) • Decode range: 20mm-150mm(QR 20MIL) • Roll/Pitch/Yaw: 360°, ±55°, ±55° • Multiple formats supported (1D & 2D Codes): QR Code, Micro QR code, PDF417, Code 128, Code 39 and most mainstream 1D and 2D barcodes.
Communication Interface	1x Wiegand Input (WG26, WG32, WG34, WG40, WG42, WG50, WG56, WG58, WG64, WG128, Wg256), RS485 , BLE 4.0, TCP/IP, 4G
Power Supply	9-30VDC, PoE(IEEE802.3af/at High Power interface, optional – over JACK（connector)
Current consumption	Average 800mA@ 12VDC
Indicator	Controllable buzzer, speaker with controllable volume
I/O Port	1*I/O Port, 2*Wiegand(in) 2 inputs – Door contact, door exit
Relay connections	1 relay output, Max switching voltage 30V, Max switching current 2A
Tamper switch	1* tamper alarm switch
Installation	Terminal block connector, wall mount
Protection Class	IP65 waterproof
Operation Temperature	-20 ~ +60°C
Operation Humidity	0-90% relative humidity non-condensing
Certification	CE approved

01

Terminal Introduction

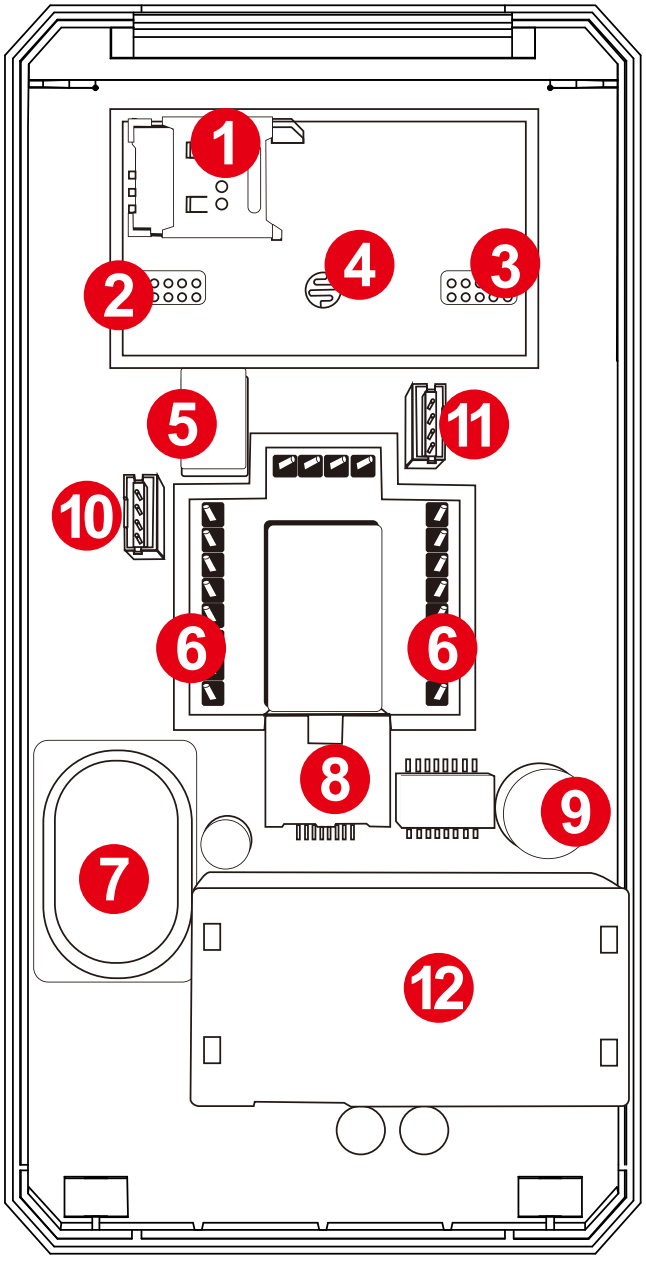
① 3.5” Touch Screen Display

② Card Reading Area

③ QR Code

02

Terminal introduction



① SAM Slot

② BLE & firmware upgrade interface

③ Software upgrade interface

④ Tamper alarm

⑤ Relay

⑥ PIN interfaces

⑦ Speaker

⑧ RJ45 TCP/IP port

⑨ Buzzer

⑩ Connector for 4G

⑪ Connector for QR Code

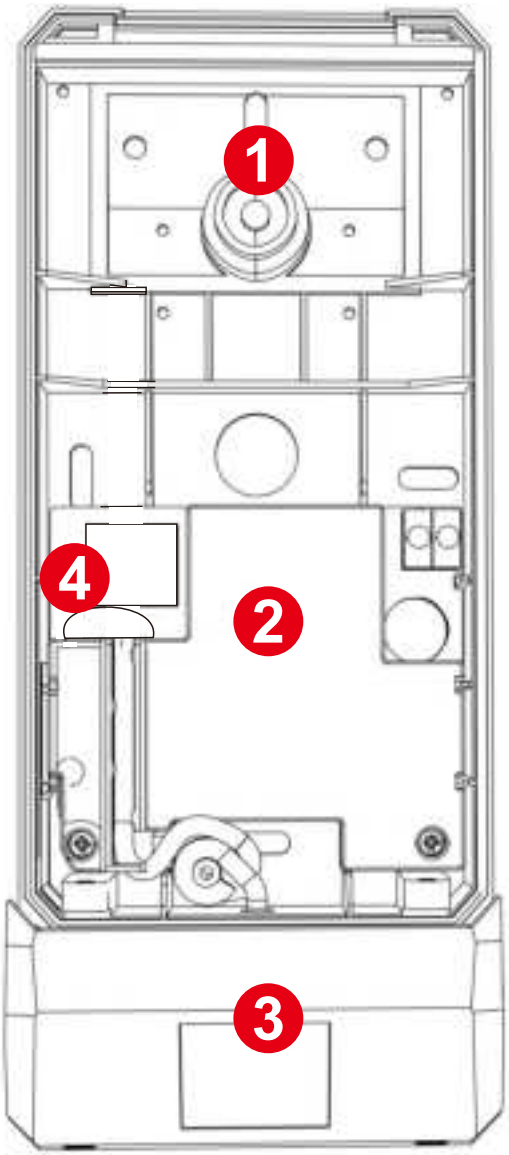
⑫ PoE (Optional)

RJ45 TCP/IP port

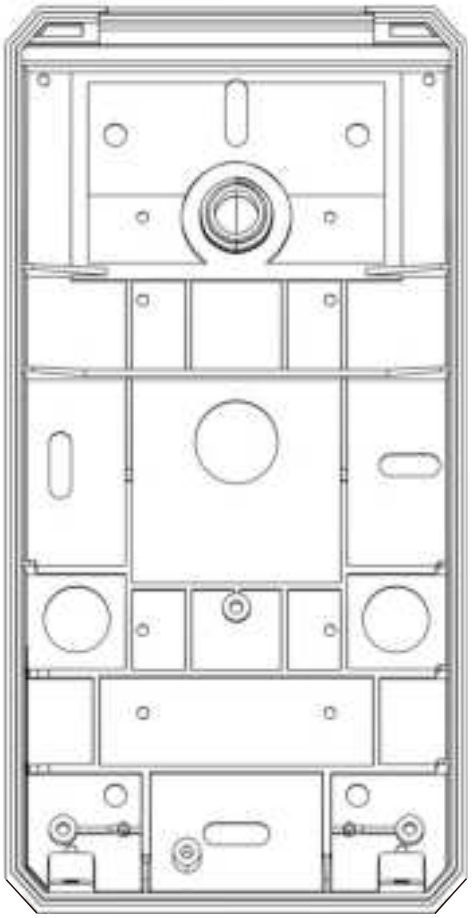
The default IP address is *"192.168.1.140"*.

03

Installation plate Modules Introduction



CT9-T/H-QP Installation Plate



CT9-M(E)-T Installation Plate

① Tamper Alarm

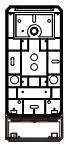
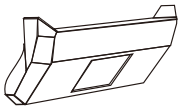
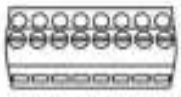
② 4G Module (Optional)

③ QR Code Scanner (Optional)

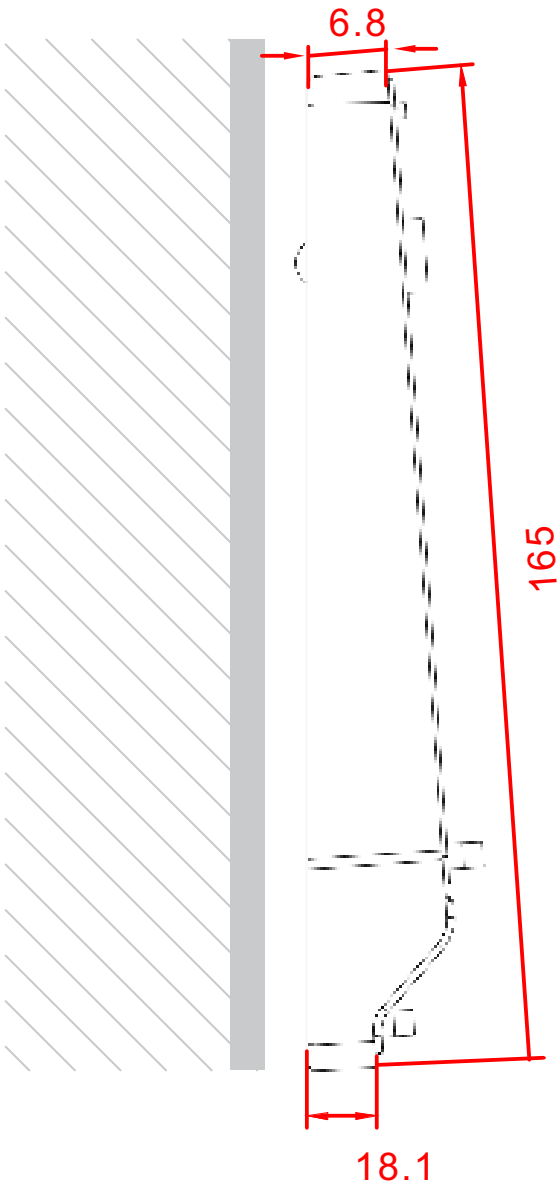
④ 4G SIM slot

04

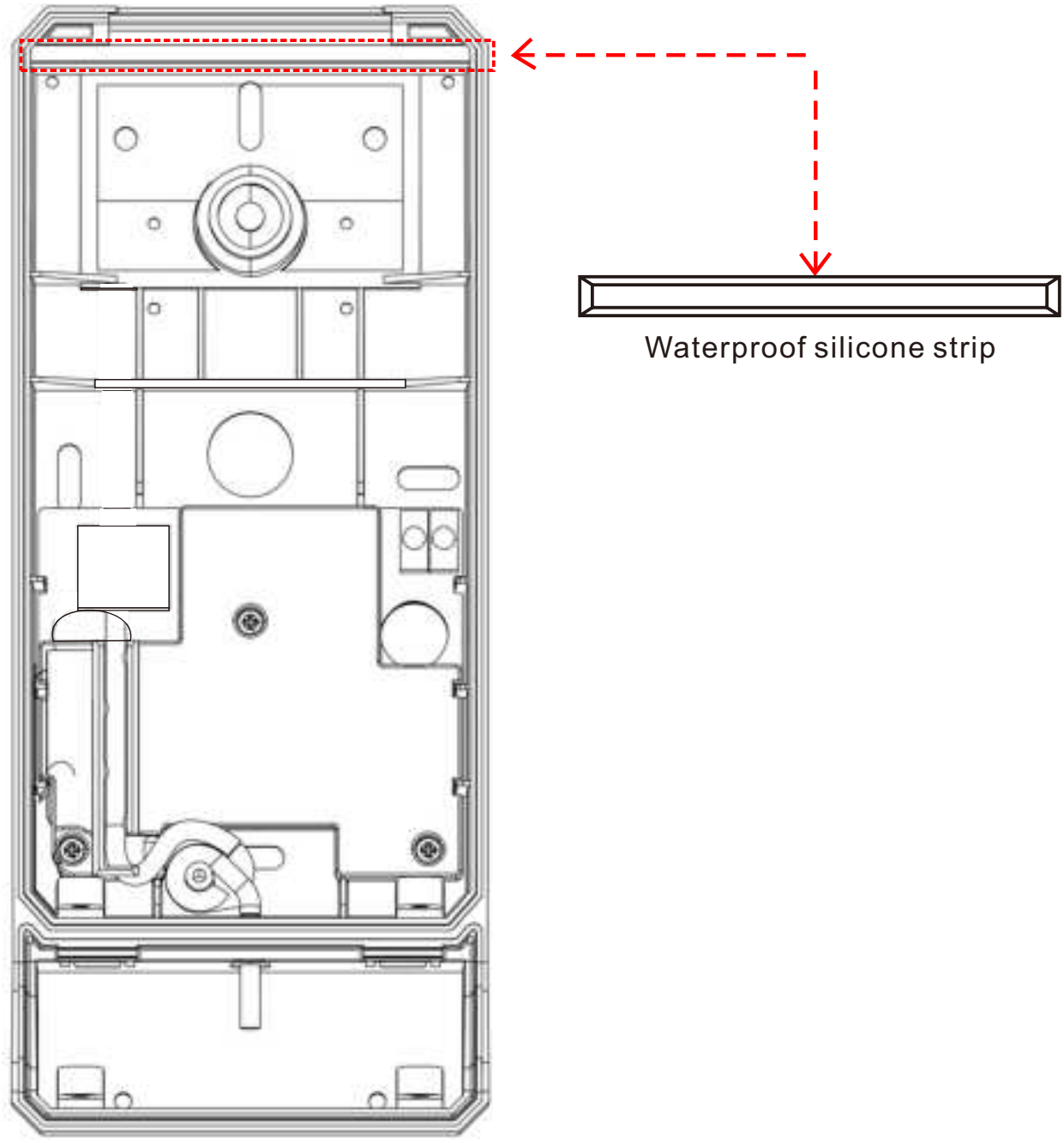
Package content

No.	Items	Picture	Volume
①	CT9 Pro terminal device		1
②	Installation plate		1
③	QR Code Scanner (Optional)		1
④	Waterproof silicone strip		1
⑤	Screw		4
⑥	Screw expand tube		4
⑦	8 PIN Connector		2
⑧	2 PIN Connector		1
⑨	Fixing screw		4
⑩	RJ45 connector		1

05

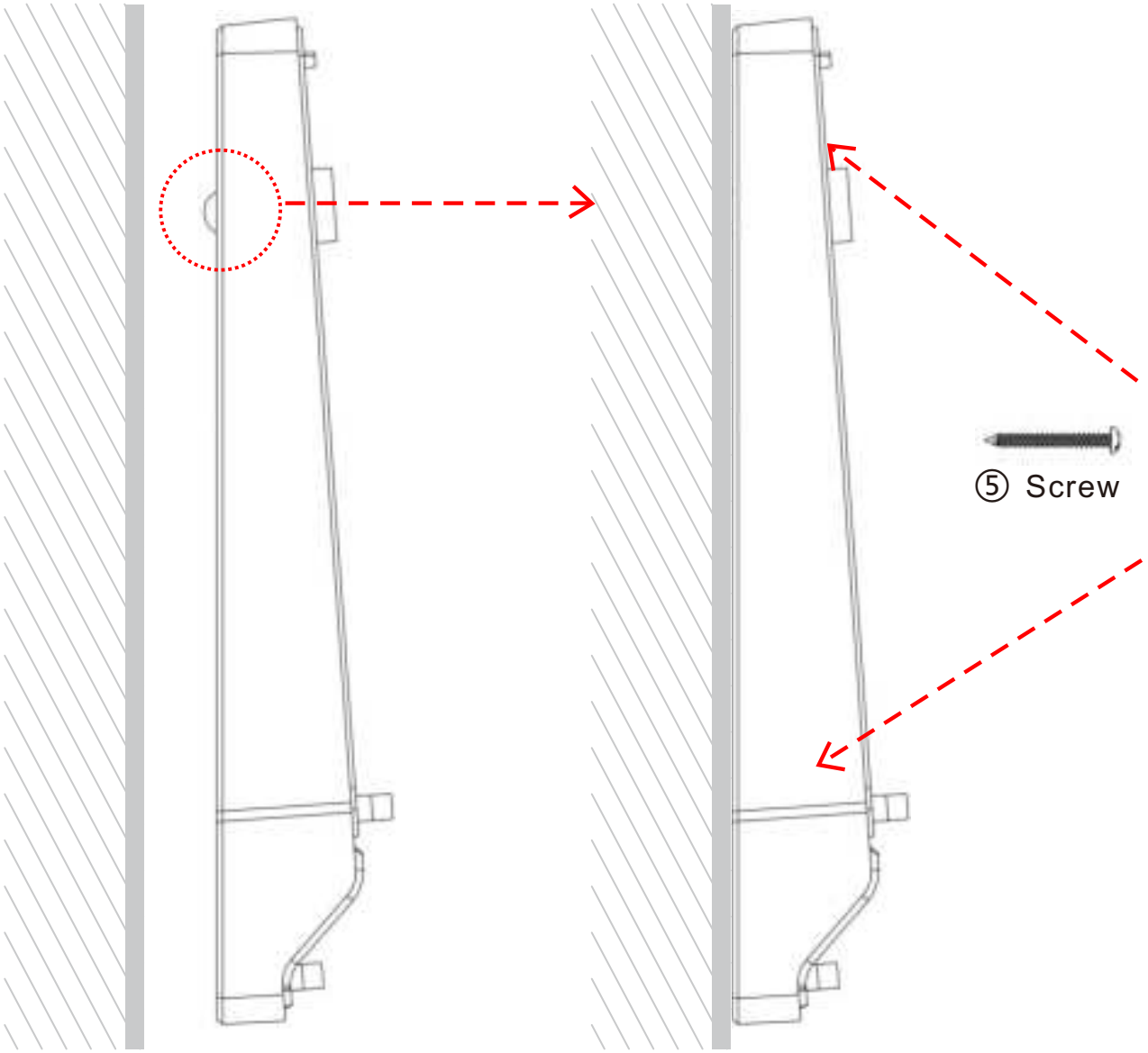


06



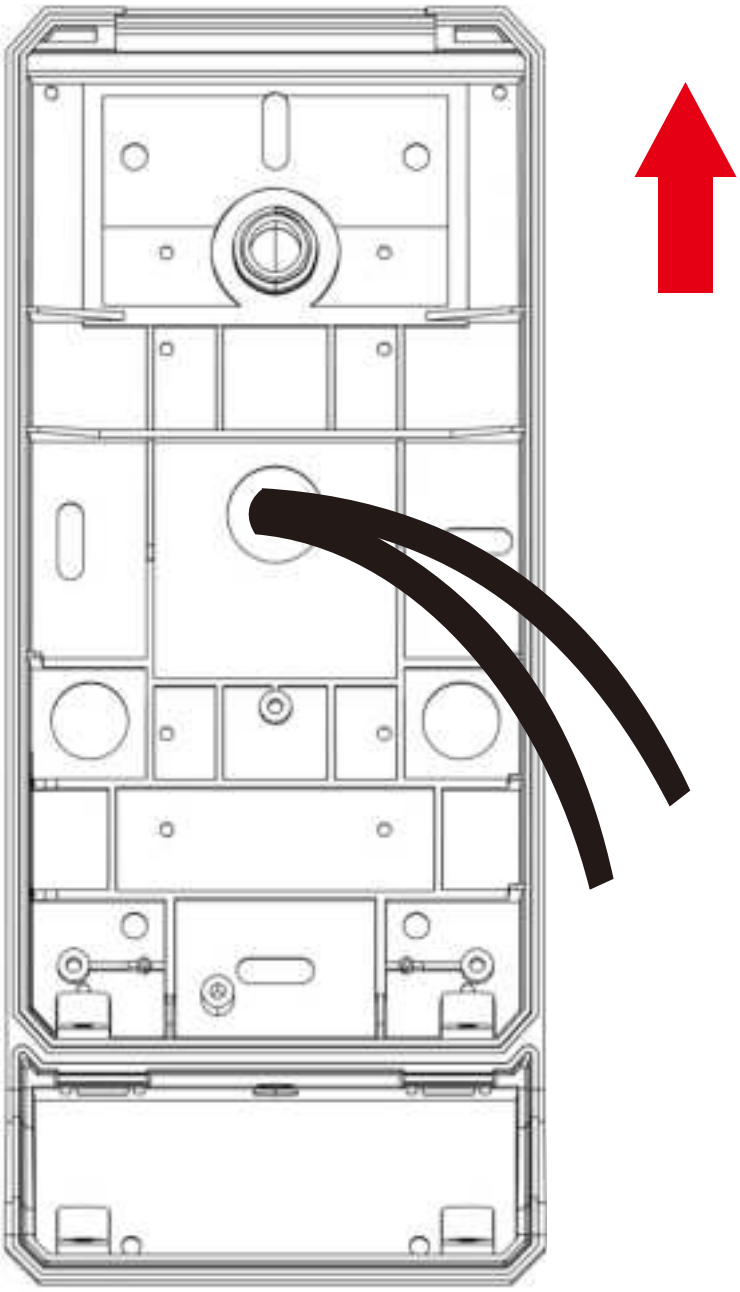
Plug waterproof silicone strip into the groove at the upper end of CT9 Pro installation plate.

07



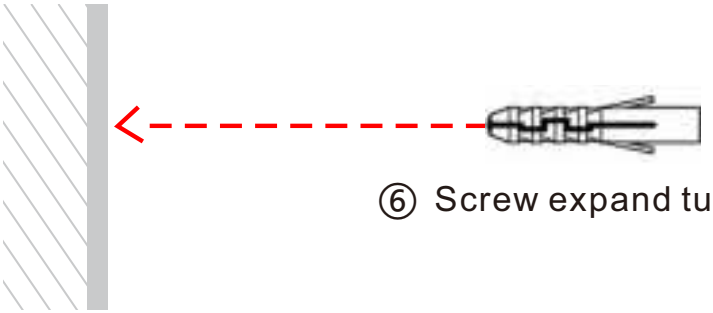
Ensure that the area behind the tamper switch bulb of the installation plate is flat. Make sure that the Tamper Alarm button is completely against the wall for correct tamper alarm functionality.

08

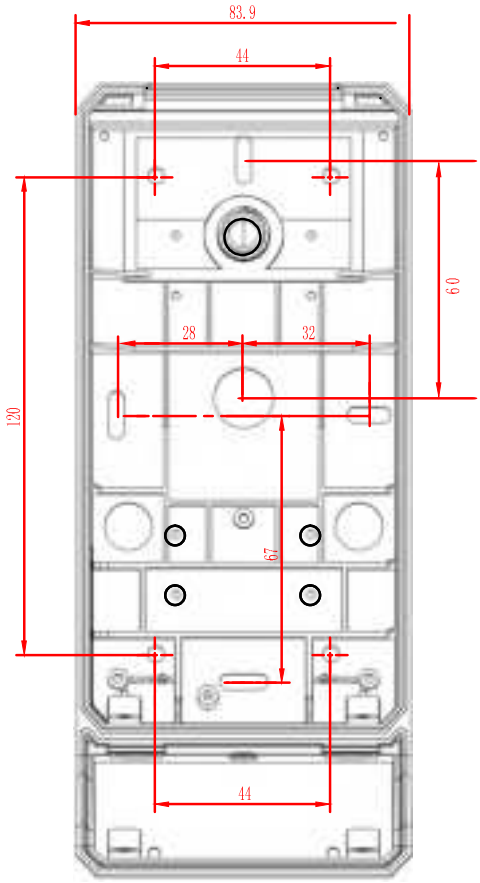


Unscrew the fixing screw from terminal and remove the installation plate from terminal. Ensure that the installation plate is fixed in the correct direction, the arrows pointing upwards.

09



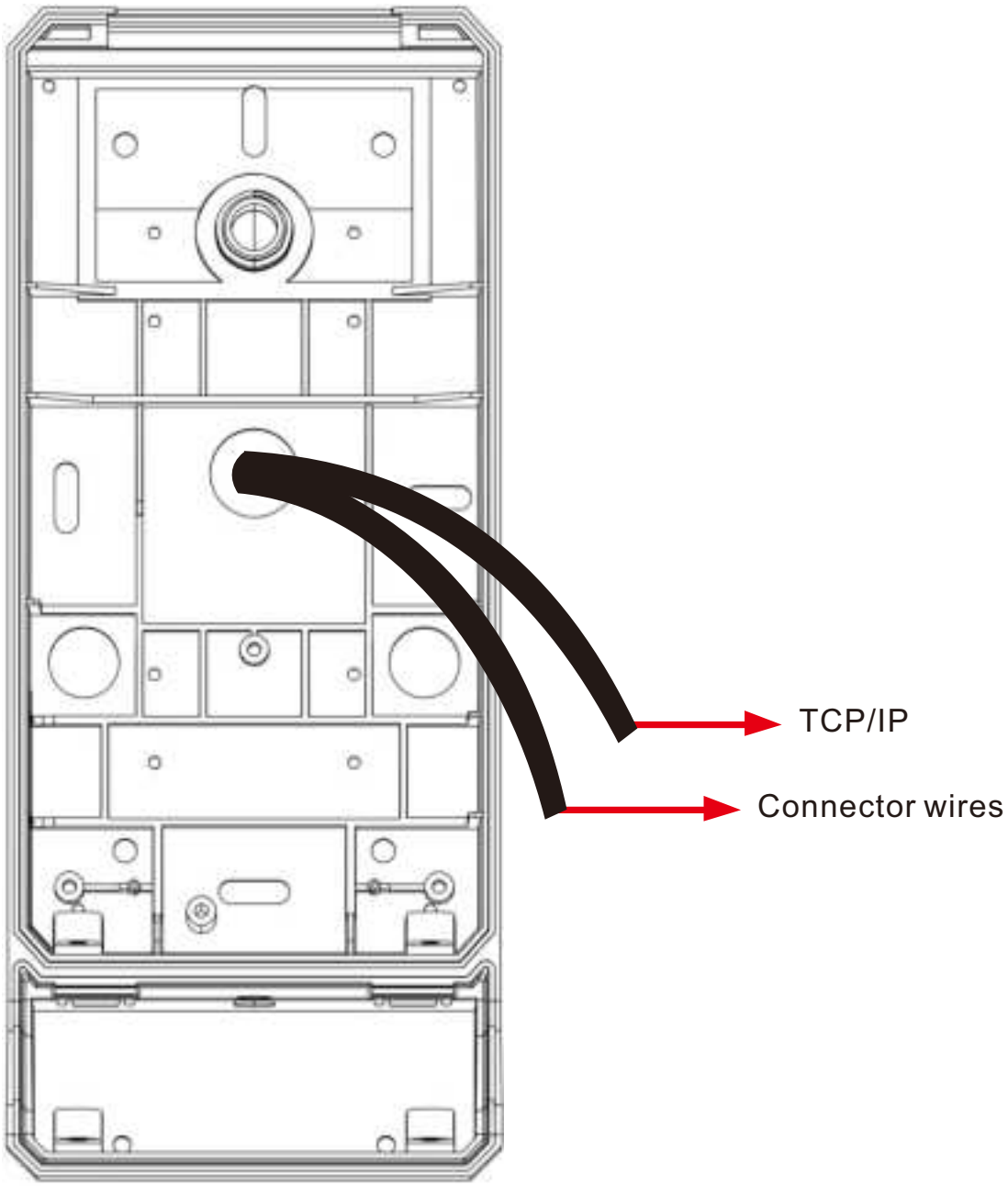
⑥ Screw expand tube X4



Wall Mount

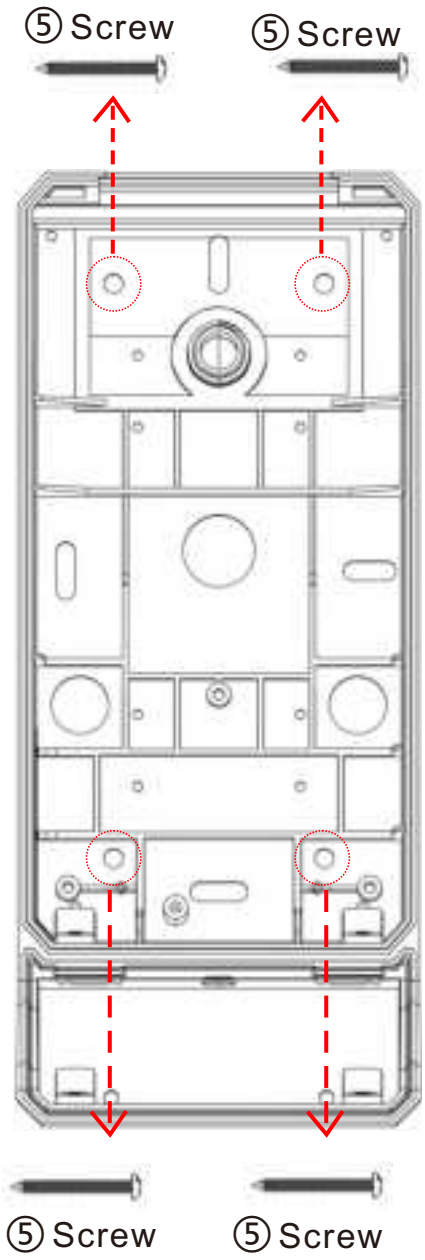
According to the holes parameter of installation plate, punch holes in the wall and install pipe expanding. Make sure to punch holes in strict accordance with the parameters to avoid of plate deformation and failure installation. There're two choices to punch holes.

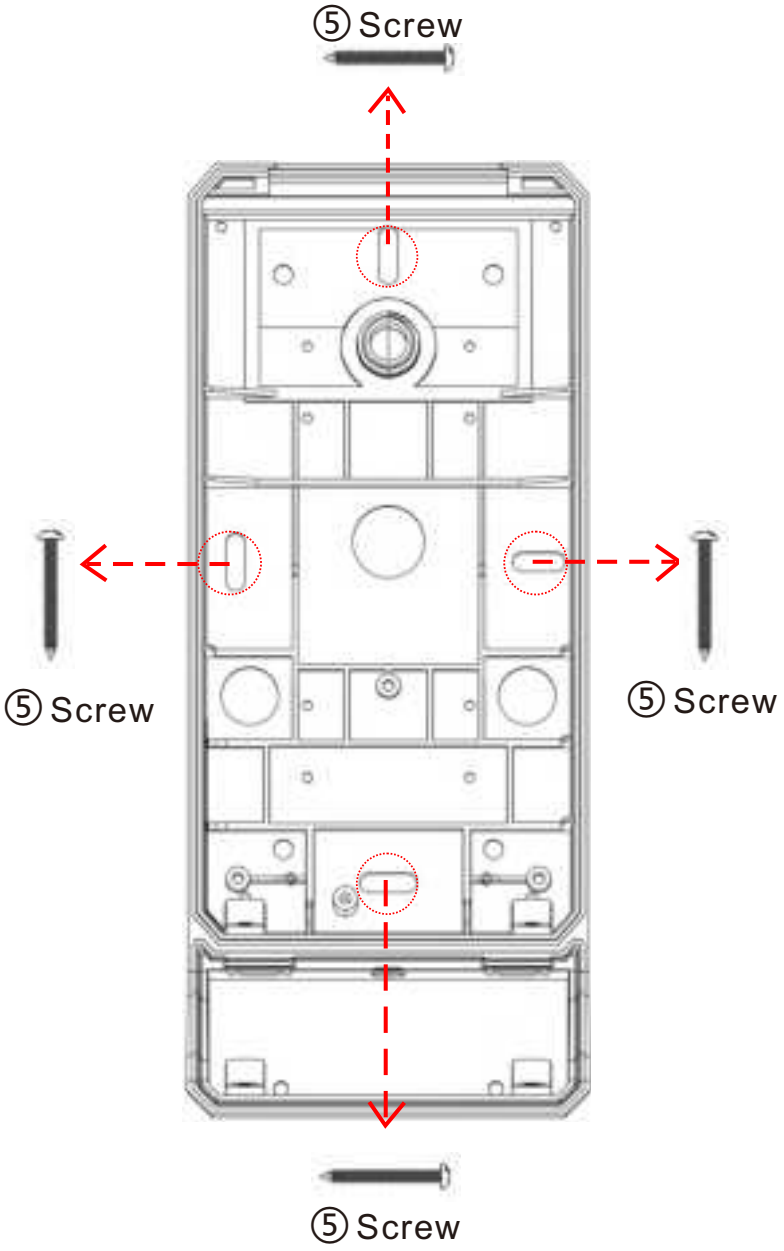
10



There’s hole on installation plate, the hole is used for TCP/IP cable and connector wires. Thread the cables through hole before fixing it on the wall.

11



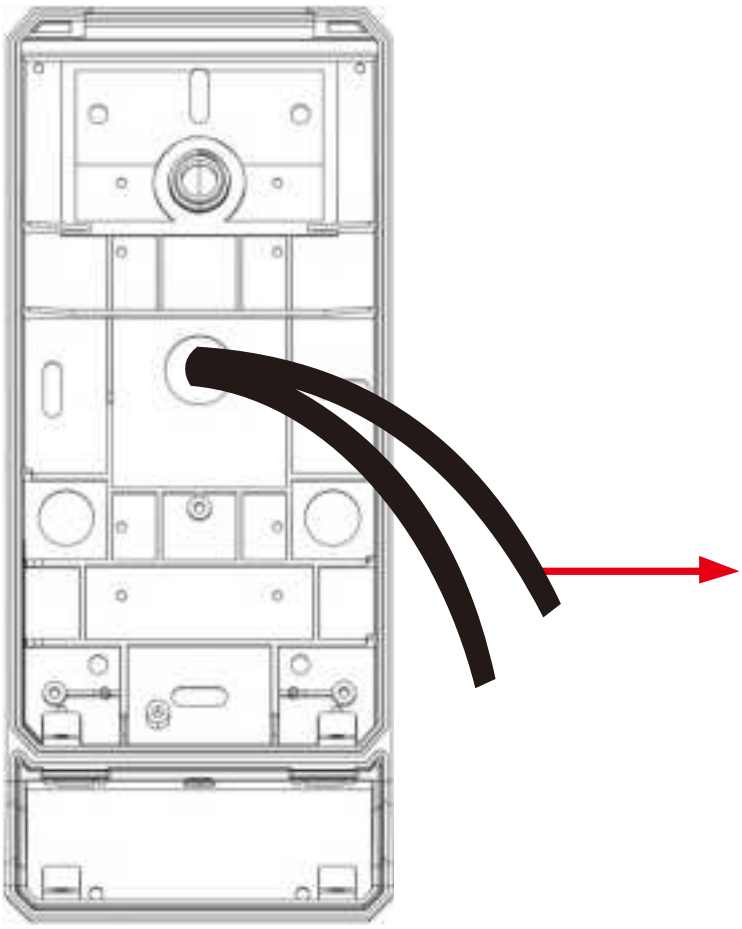


TYPE 1 of Installation Hole

TYPE 2 of Installation Hole

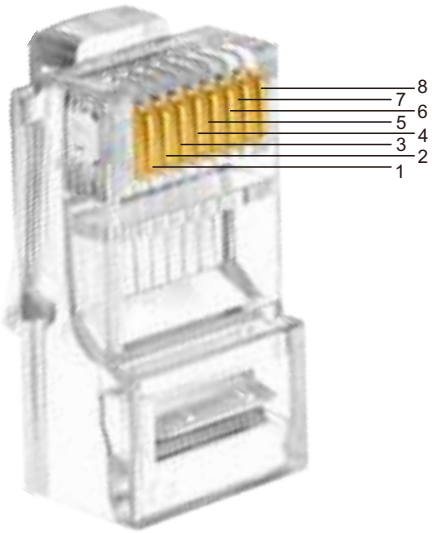
When installing directly to wall or door, use the installation holes as picture describes. Make sure not to tighten the screws too hard as doing so will deform and skew the installation plate. This may affect the tamper switch functionality of the terminal.

12



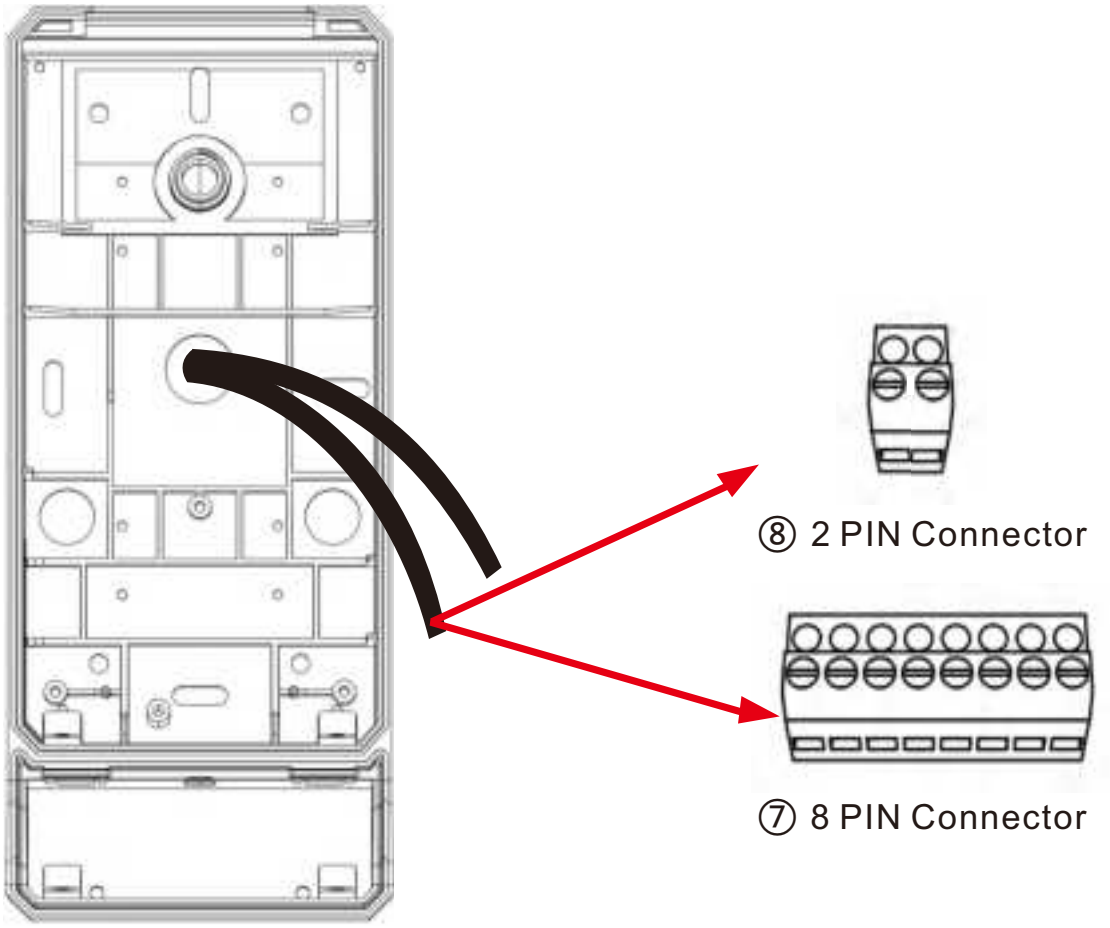
⑩ RJ45 Connector

PIN	
1	TX+
2	TX-
3	RX+
4	unused
5	unused
6	RX-
7	unused
8	unused



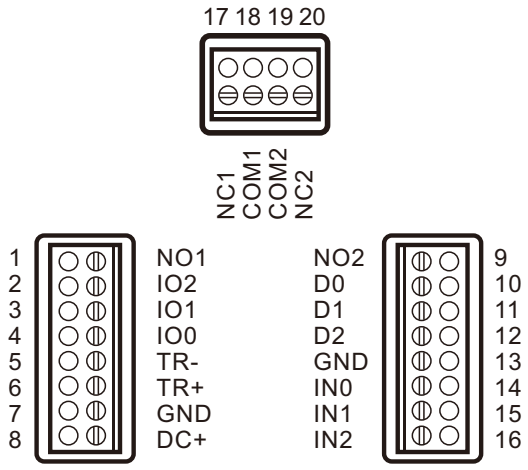
Refer to general standard for IP wire connection, connect and fix RJ45 connector to TCP/IP cable which thread through upper hole.

13



Refer to CT9 Pro terminal PIN definition, connect the cables with 8Pin or 2PIN connector and fasten screws. 2PIN connector is used for relay output.

14

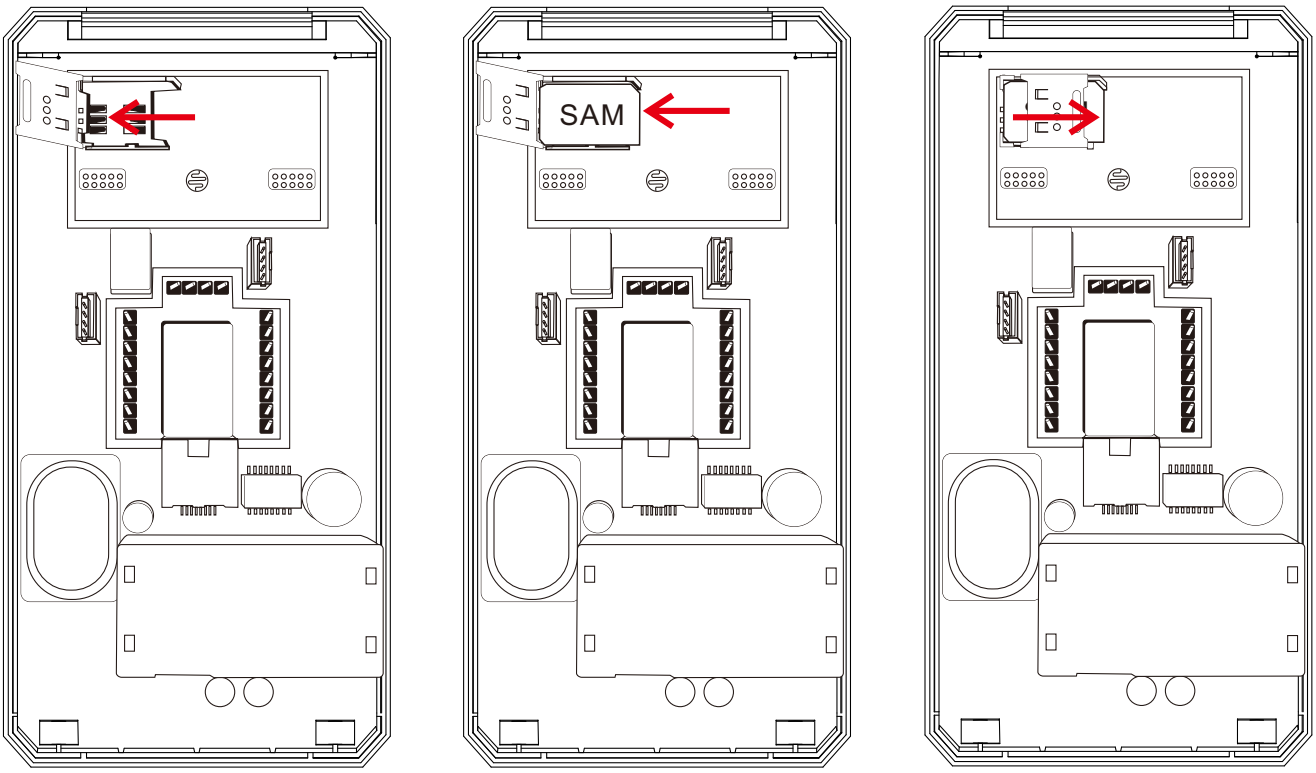


Pin No.	Pin Name	Description	Direction	Voltage	REMARK
1	NO1	Relay 1 NO Normally Open	----	Max.30V DC	
2	IO2	Tamper Alarm	IN/OUT	5V	
3	IO1	Access Denied	IN/OUT	5V	
4	IO0	Access Granted	IN/OUT	5V	
5	TR-	RS485 Send/Receive Data-	IN/OUT	5V	
6	TR+	RS485 Send/Receive Data+	IN/OUT	5V	
7	GND	Ground	Ground	0V	
8	DC+	9-30V DC Power	Power	9-30V	

Pin No.	Pin Name	Description	Direction	Voltage	REMARK
9	NO2	No Connected	----	----	*
10	D0	Wiegand D0/DAT	IN	5V	
11	D1	Wiegand D1/CLK	IN	5V	
12	D2	Output Buzzer Control	IN/OUT	5V	
13	GND	Ground	Ground	0V	
14	IN0	Input Buzzer control	IN	5V	
15	IN1	Input Entry Exit Button	IN	5V	
16	IN2	Input Door Contact	IN	5V	

Pin No.	Pin Name	Description	Direction	Voltage	REMARK
17	NC1	Relay 1 NC Normally Closed	----	Max.30V DC	
18	COM1	Relay 1 Common	----	Max.30V DC	
19	COM2	No Connected	----	----	*
20	NC2	No Connected	----	----	*

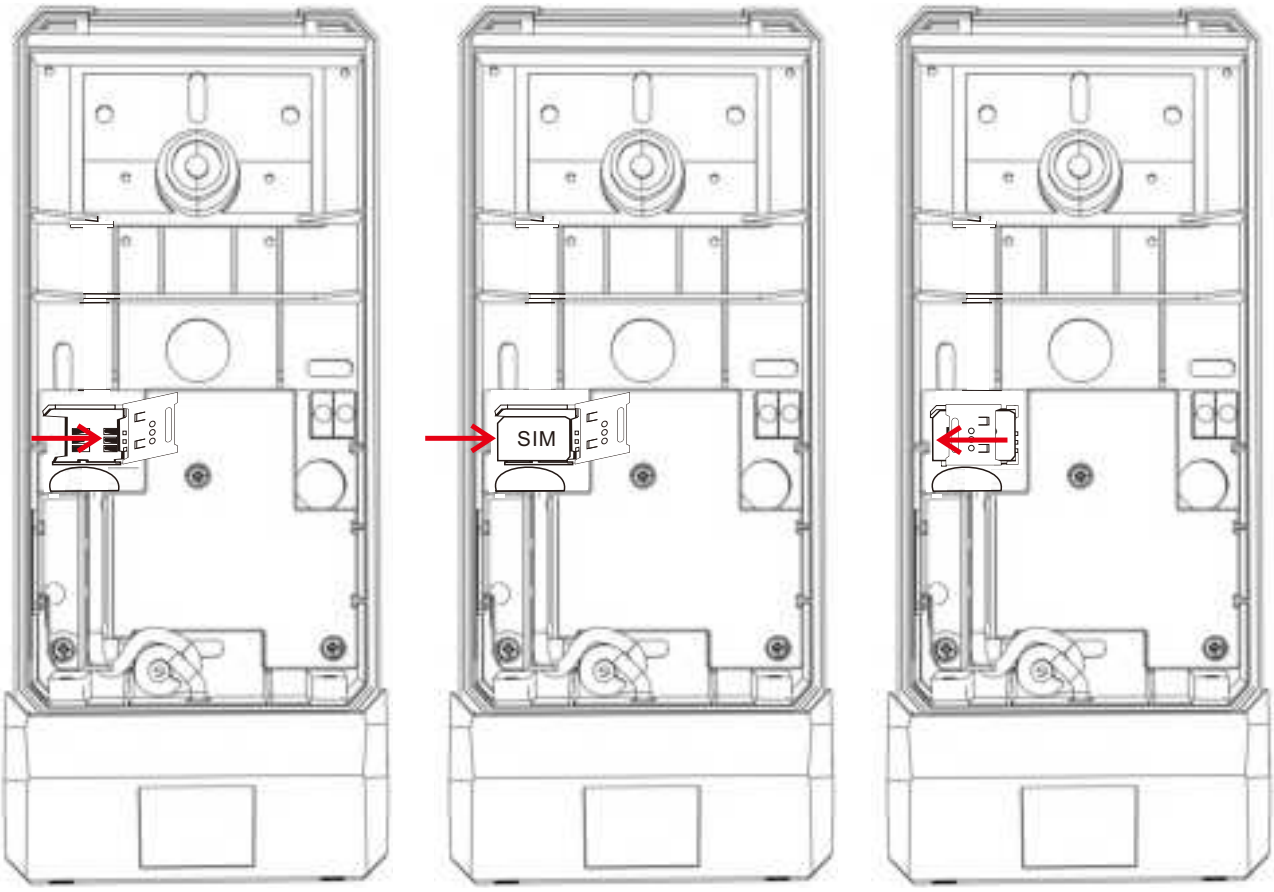
15



1 2 3

CT9 Pro is with SAM secure access module for data encryption. In order to install the SAM into the terminal open the SAM socket by unlocking and opening the lid. Then place the SAM into the socket lock it into place by closing the lid and sliding it into locked position.

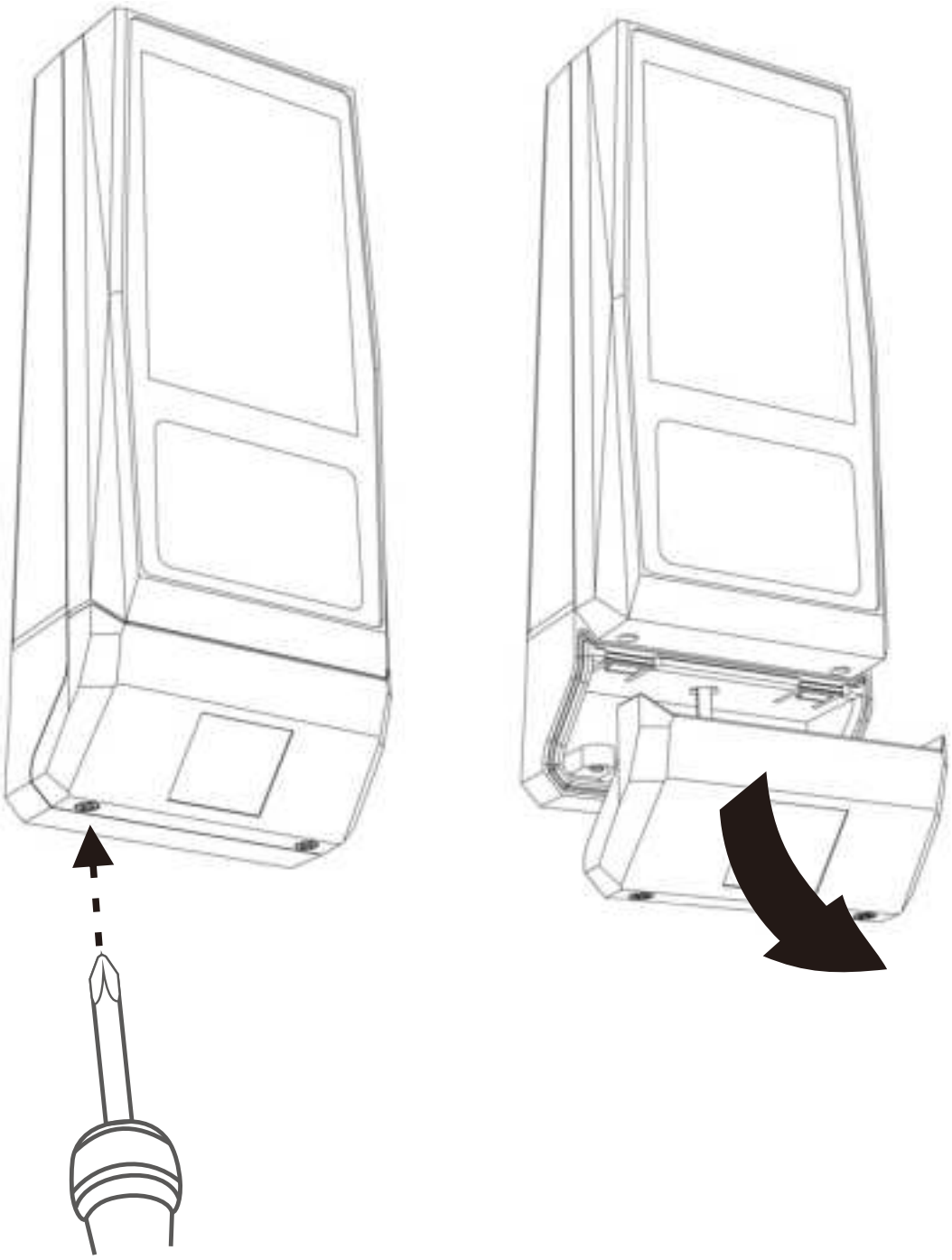
15



1 2 3

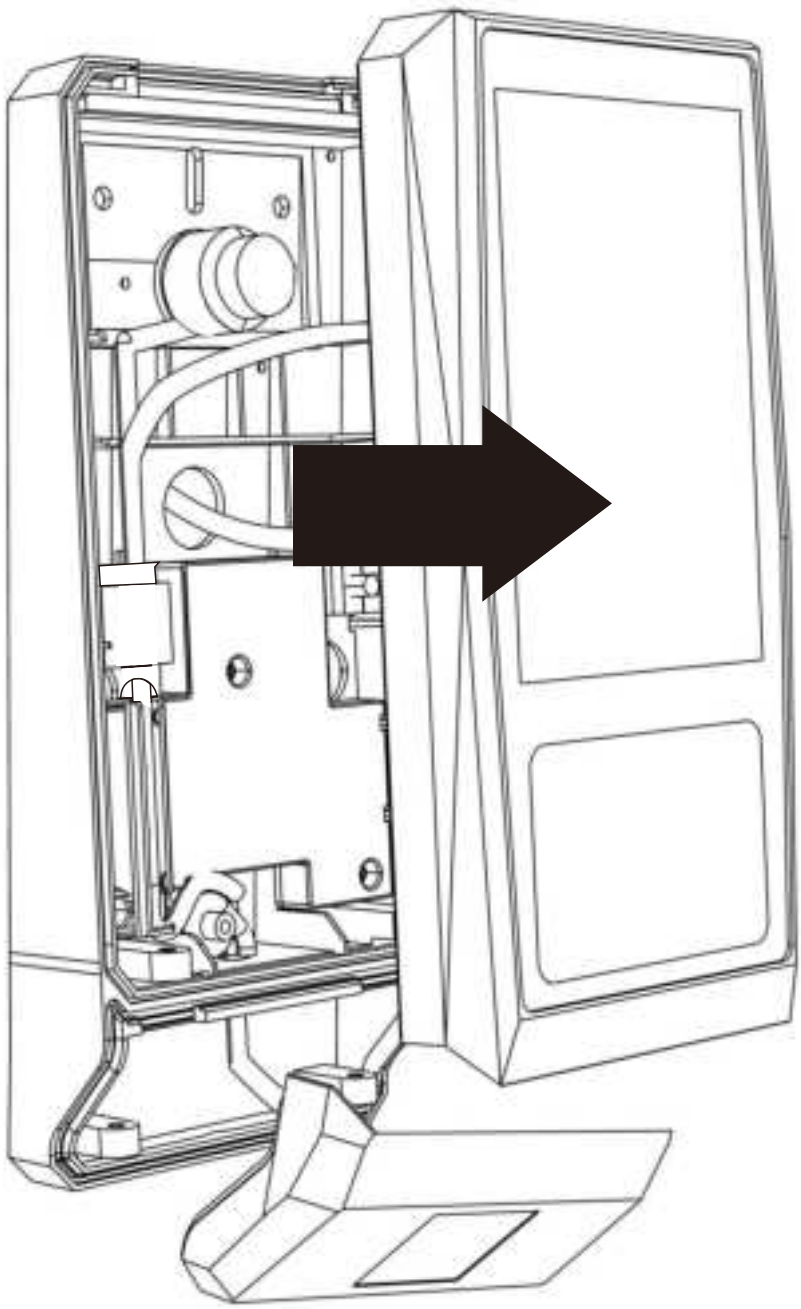
CT9 Pro is with the option of 4G wireless communication. There's SIM slot on installation plate to insert SIM card. In order to install the SIM card into terminal open the SIM socket by unlocking and opening the lid. Then place SIM card into socket lock it into place by closing the lid and sliding it into locked position.

16



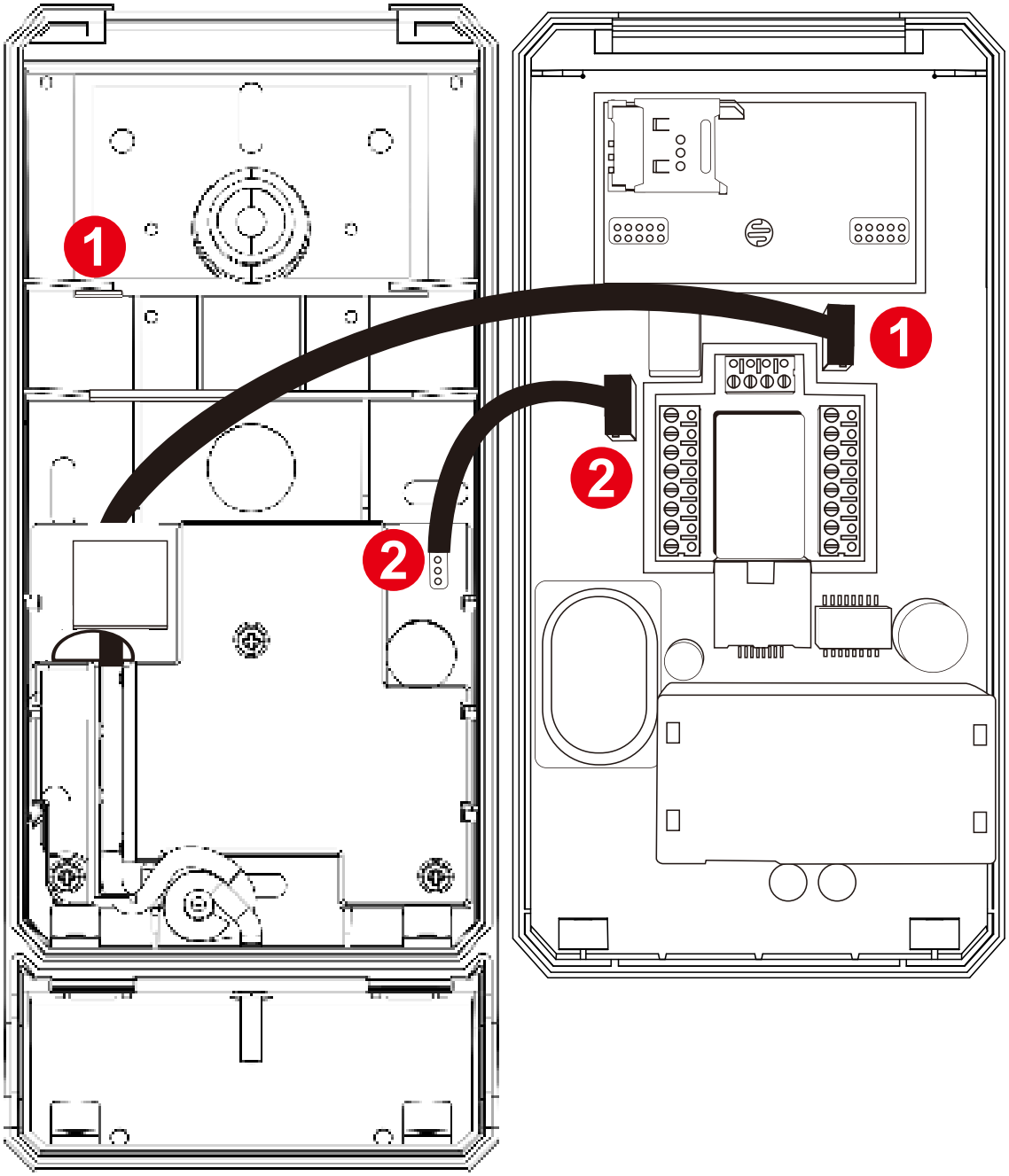
At the first time when you get the machine, you need to remove the QR code cover. Remove the two screws at the bottom of QR Code reader, and then hold the QRcode left and right and pull it out according to the direction of the picture. Be careful not to pull the QR code cover out too much, as its cable is connected to the CT9 Pro machine.

17



Remove the two screws on the bottom of the CT9 Pro body, then remove the CT9 Pro in the direction of the picture.

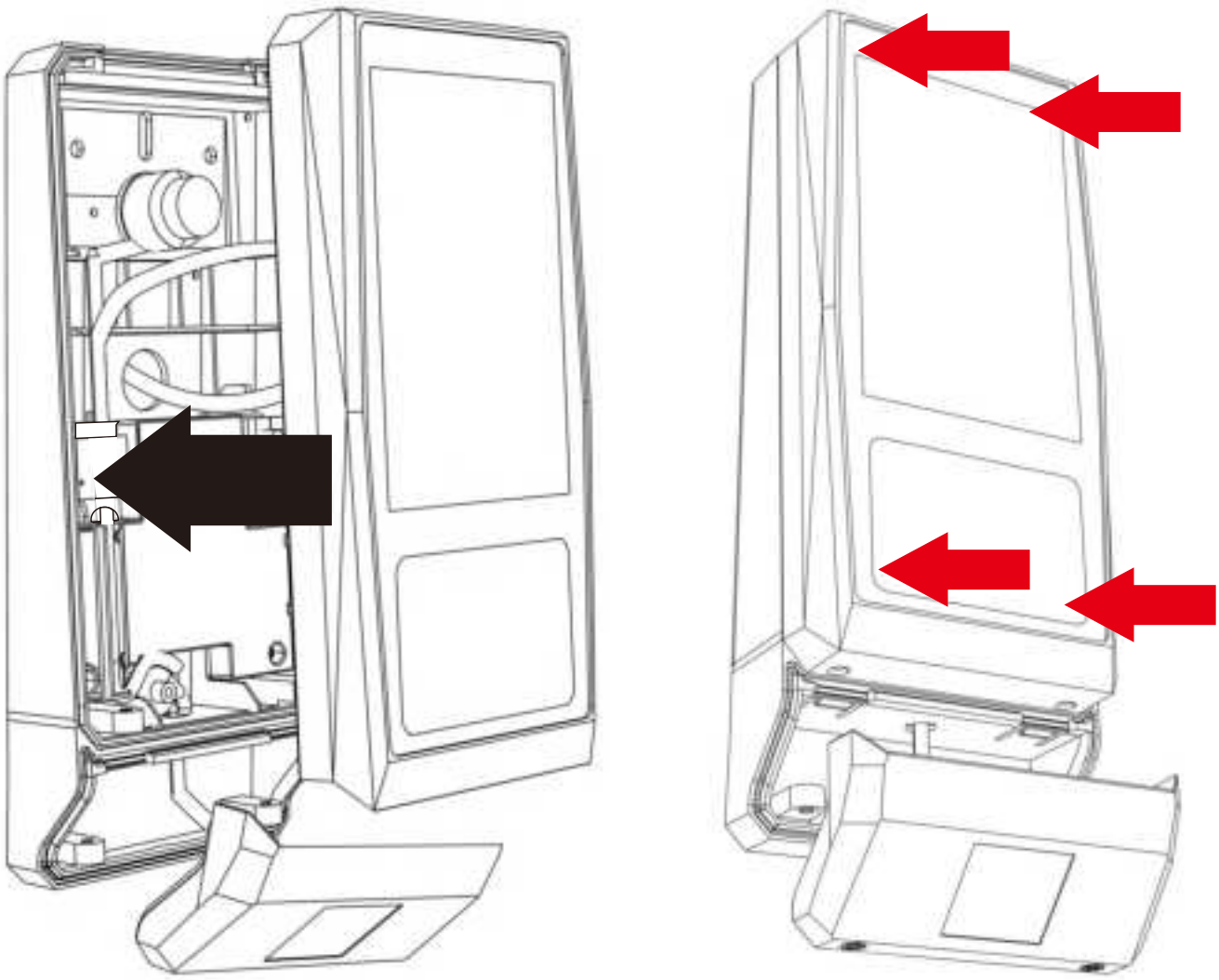
18



Connect the cable of the 4G module to the 4G socket ❷ according to the picture.

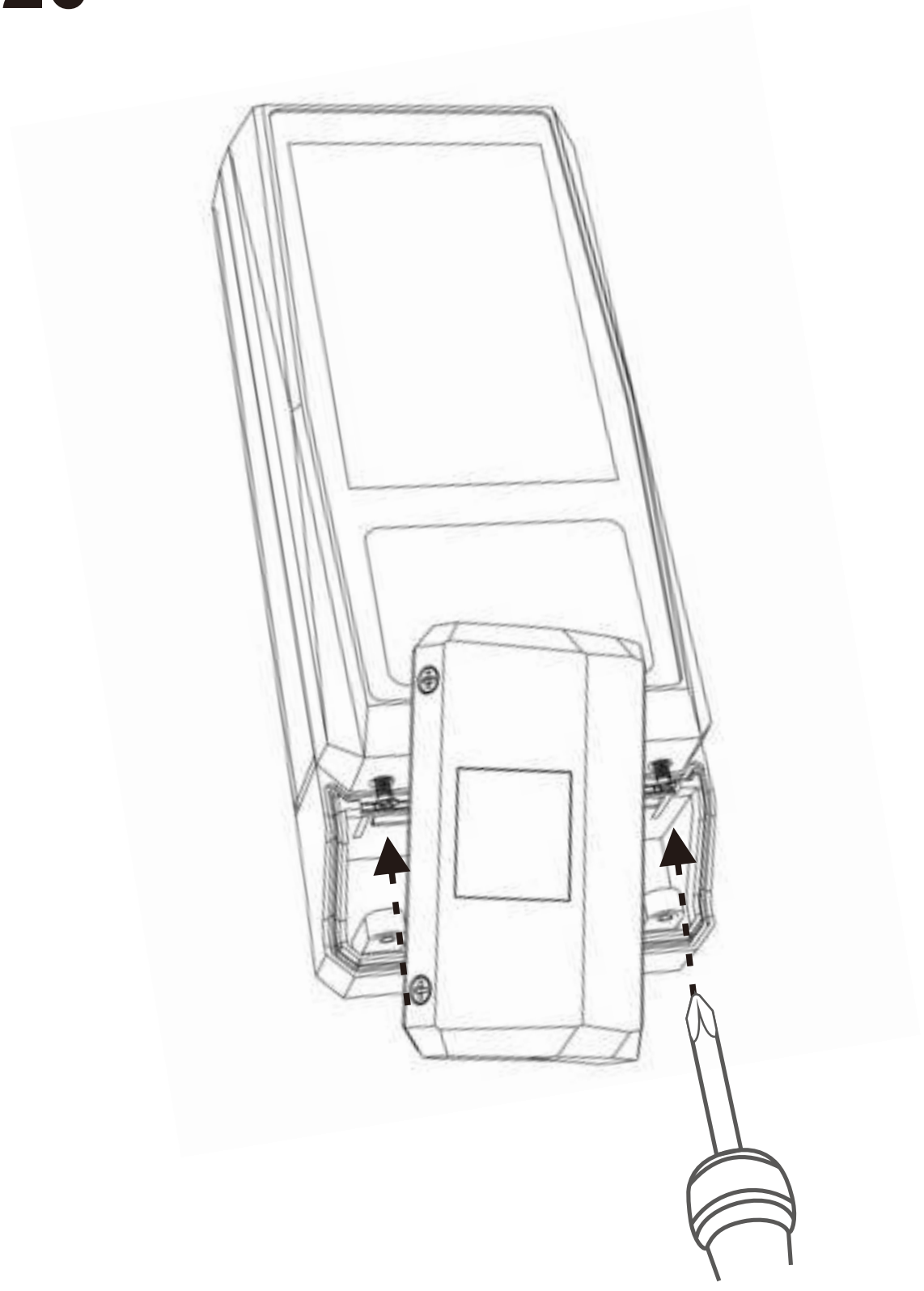
Connect the QR CODE module wire to the QR CODE socket ❶ as shown in the picture.

19



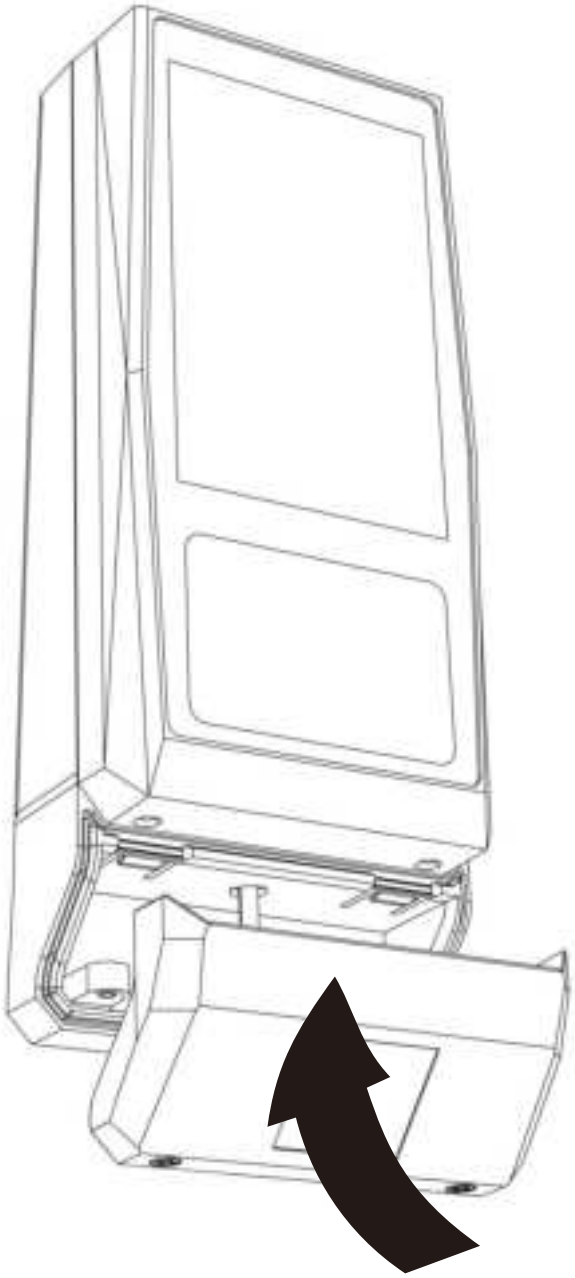
Install CT9 Pro on the wall according to the direction of the picture. Red arrow direction indicates the point of force. Press the point of force according to the direction of the red arrow, when you hear the sound clip, it means that the installation is correct.

20



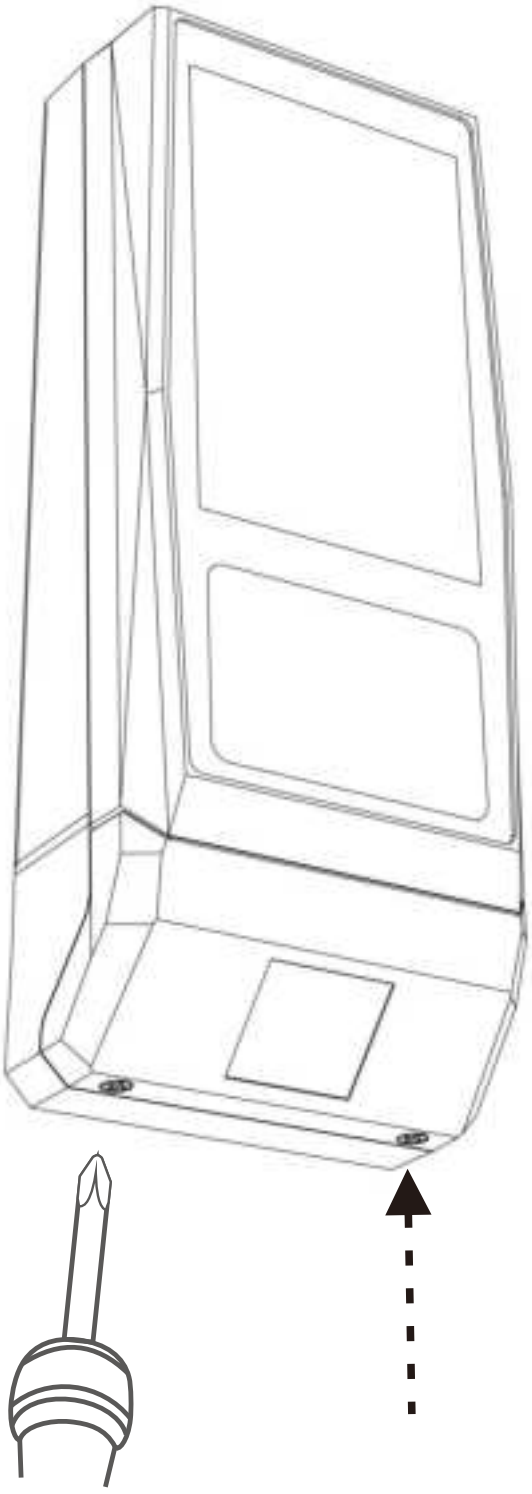
Rotate the QR CODE scanner according to the picture, and tighten two screws on CT9 Pro body.

21



Rotate the QR CODE scanner parallel to CT9 Pro terminal like the picture and install it in the direction of the arrow. when you hear the sound clip, it means that the installation is correct.

22



Install two screws on QR Code bottom to fix the QR code scanner.

FCC Caution:

Part 15.21

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Part 15.19

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3.This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

Part 15.105

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.