TIS
Automation Made Easy

ℹ️ PRODUCT INFORMATION

With its elegant shape and design, the IO AC 4G is available in black or white and includes a stylish rotating knob for air condition control and 4 push buttons for lights and shutter control.

PRODUCT SPECIFICATIONS

📥	**Input**	Temp / Humidity Sensor	0-100C / 0-99% RH
		Using Panel Addition	2-3 Digital Input
📤	**Output**	Using Panel Addition 3R	3 Relay Output 3A/5A
		Using Panel Addition 3DL-12V	12V DC 50mA Output
		Using Panel Addition 2DL-IRE	IR Emitter
TISBUS	**TIS Bus**	Number of devices on 1 line	Max. 64
		Bus voltage	12-32 V DC
		Current consumption	<50 mA / 24 V DC
🎛️	**Operating and display elements**	Display	2.3-inch OLED Screen
		Rotating Knob	1× Rotating and pushing knob
		push buttons	4 push buttons with White/Orange LED
		TIS bus	TIS Protocol messages and commands
⚙️	**Functions**	Rotating / Press (knob)	Change Temperature / AC ON-OFF
		1 Press (push button)	ON/OFF/Scene
		Long Press (push button)	Dim or ramp the lights
		Double click (push button)	Extra Scene
⊞	**Dimensions**	Width × Length × Height	90mm × 23mm(including knob) × 129mm
⛶	**Housing**	Materials	PC fire proof / acrylic in front
		Casing color	Silver plating frame, acrylic white or black
		Internal Parts color	Black & White
		IP rating	IP 50

CE ⬥ RoHS COMPLIANT ⬥ PG- ⬥ C ⬥ FC

Read Instructions

We recommend that you read this Instruction Manual before installation.

Safety instructions

Electrical equipment should only be installed and fitted by electrically skilled persons.

Failure to follow the instructions may cause damage to the device and other hazards.

These instructions are an integral part of the product and must remain with the end customer.

Programming

This device can be tested and programmed manually. Advanced programming requires knowledge of the TIS Device Search software and instruction in the TIS advanced training courses.

Simple Installation

You can use 2 screws to install this panel on wall; it fits on most junction box sizes.

Mounting Location

Install in a dry, indoor area with a suitable temperature and humidity range.

Data Cable

Use screened stranded RS485 data cable with four twisted pairs. Configure devices in a "Daisy Chain."
Do not cut or terminate live data cables.

Electrical Wires

The recommended wire size for light channels is 1.5mm - 2.5mm for loads, if you are using the Panel Addition 3R type. The installer should consider the total current consumption when selecting the wires.

Warranty

There is a two-year warranty provided by law. The hologram warranty seal and product serial number are available on each device.

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INSTALLATION STEPS

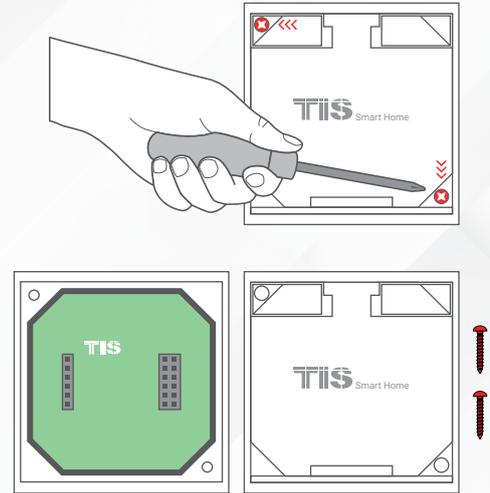**1 »**   Insert a large flathead screwdriver in the hole of the Panel Cover. Rotate the screwdriver 90 degrees.
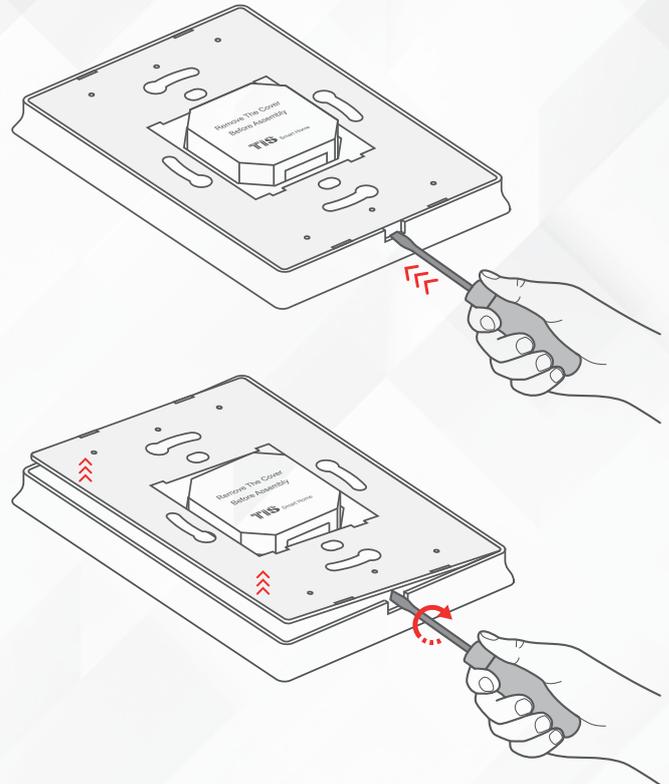
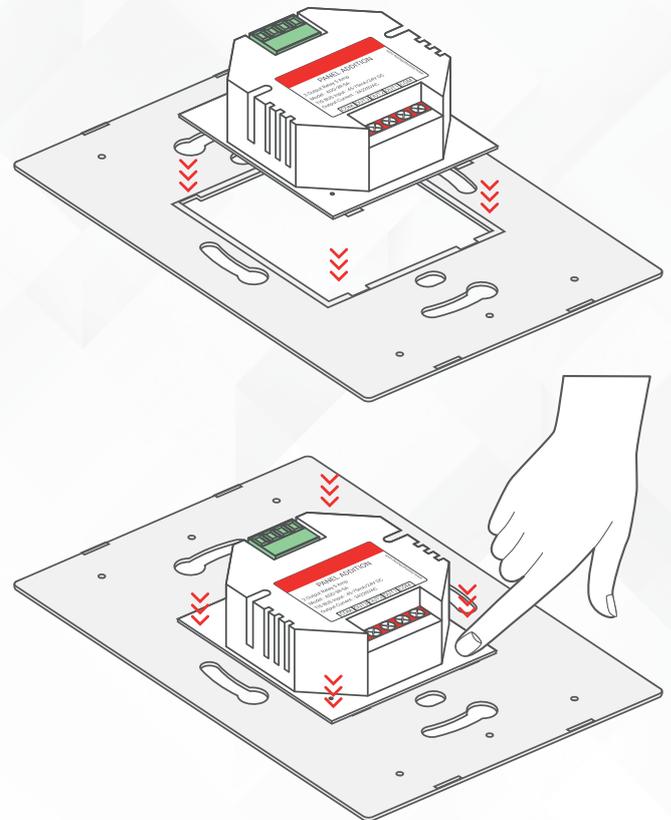**2 »**   Separate the Cover, Main Panel, and Wall Base from each other.

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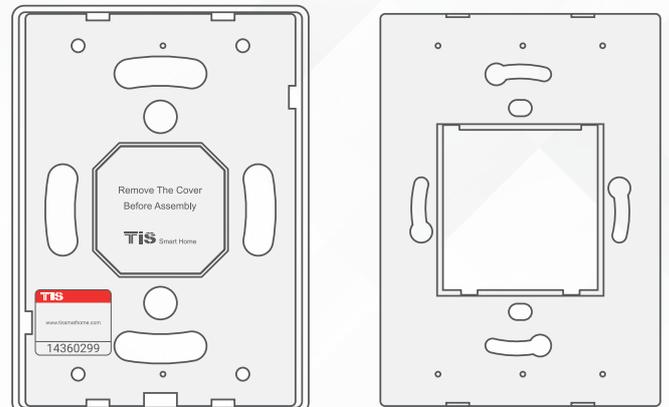
⚙ INSTALLATION STEPS

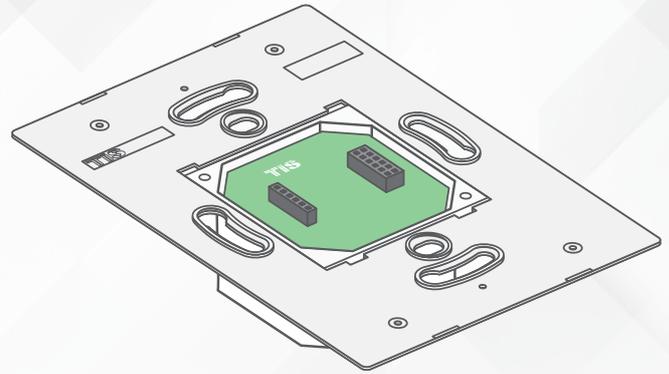**3 »** Remove the 2 screws on the Panel Addition cover.

4 » Connect the Wall Base and Panel Addition in this position. Place the upper pins as shown, and then push the down pins down with your fingers to assemble.

4

INSTALLATION STEPS
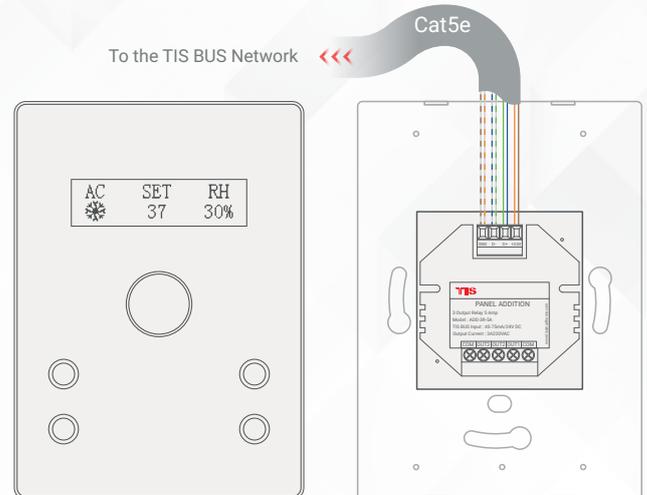
It should look like this following the correct assembly.

5 Turn off the main electrical source before installation.

WARNING! HIGH VOLTAGE

6 Connect the Cat5e TIS BUS wire to the Panel Addition.

Cat5e

To the TIS BUS Network


```
AC    SET    RH
 ❄    37    30%
```

PANEL ADDITION

TEXAS INTELLIGENT SYSTEM LLC
SUITE# 610. 860 NORTH DOROTHY DR
RICHARDSON
TX 75081.USA

TIS CONTROL LIMITED
RM 1502-p9 Easey CommBldg
253-261 Hennessy Rd Wanchai
Hong Kong
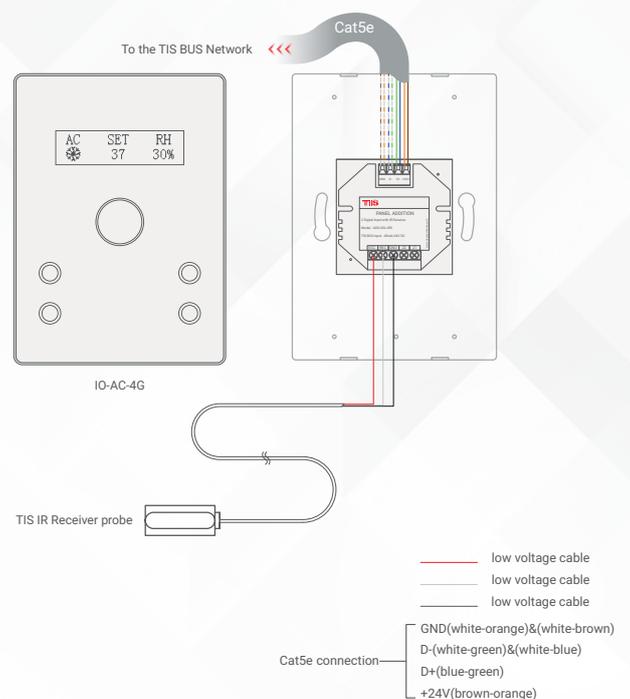
www.tiscontrol.com
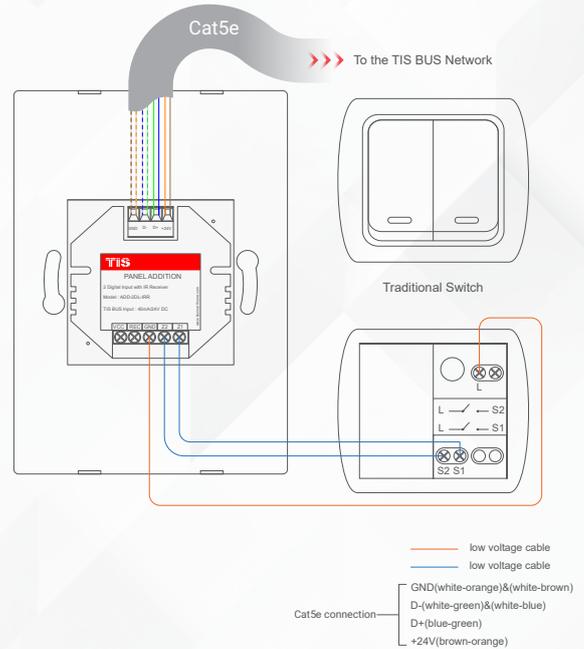
INSTALLATION STEPS

7 ⟫ Connect the other connection if needed as per the panel addition type.

⟫ FOR PANEL ADDITION 2DL-IRR

You can connect 2 digital inputs to any switch or window magnet.

Cat5e

››› To the TIS BUS Network

PANEL ADDITION
2 Digital Input with IR Receiver
Model : ADD-2DL-IRR
TIS BUS Input : 40mA/4V DC

Traditional Switch

L
L — S2
L — S1
S2 S1

— low voltage cable
— low voltage cable

Cat5e connection
- GND(white-orange)&(white-brown)
- D-(white-green)&(white-blue)
- D+(blue-green)
- +24V(brown-orange)

⟫ You can add an External Infrared Receiver to the IRR Port, connect as follows:

▶ the IR Receiver black wire to GND
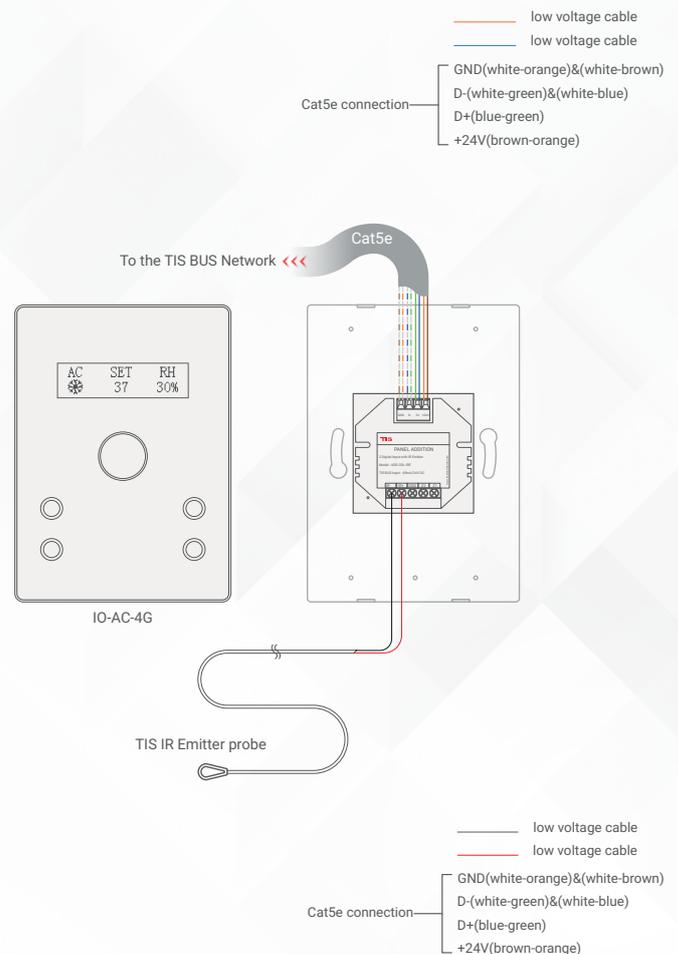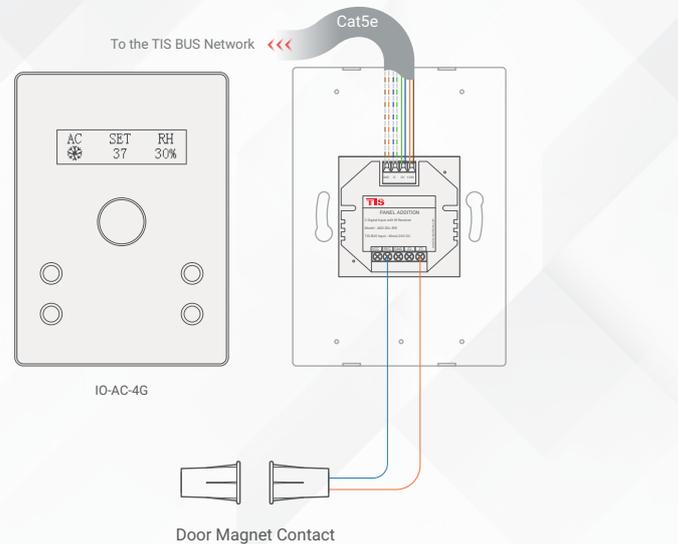
▶ Gray wire to REC

▶ Red wire to VCC Terminal.

To the TIS BUS Network ‹‹‹ Cat5e

AC   SET   RH
❅   37   30%

IO-AC-4G

PANEL ADDITION

TIS IR Receiver probe

— low voltage cable
— low voltage cable
— low voltage cable

Cat5e connection
- GND(white-orange)&(white-brown)
- D-(white-green)&(white-blue)
- D+(blue-green)
- +24V(brown-orange)

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INSTALLATION STEPS

FOR PANEL ADDITION 2DL-IRE

You can connect 2 digital inputs to any switch or window magnet.

To the TIS BUS Network

Cat5e

IO-AC-4G

Door Magnet Contact

low voltage cable
low voltage cable

Cat5e connection
- GND(white-orange)&(white-brown)
- D-(white-green)&(white-blue)
- D+(blue-green)
- +24V(brown-orange)

▶ Connect the IR Emitter Probe's positive wire to IR+ terminal.
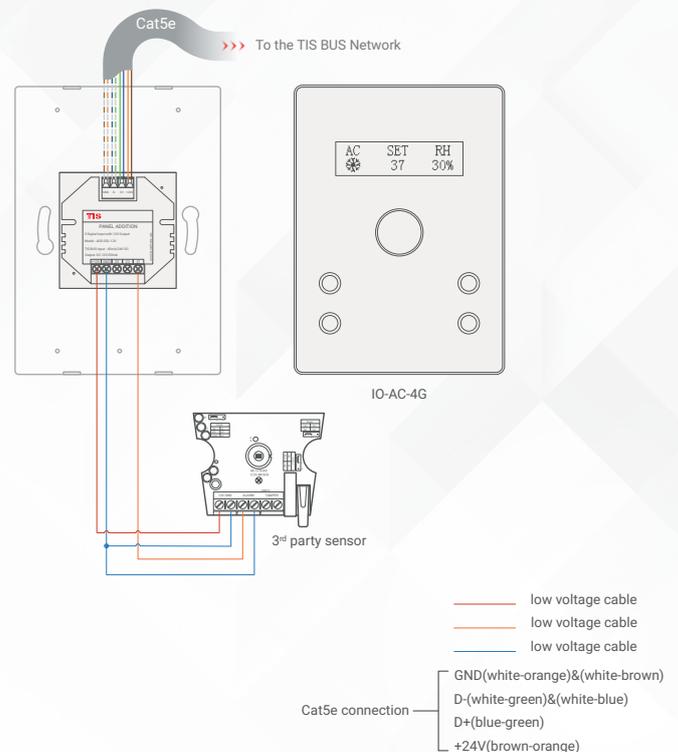
▶ Connect the negative wire to IR-terminal.

To the TIS BUS Network

Cat5e

IO-AC-4G

TIS IR Emitter probe

low voltage cable
low voltage cable

Cat5e connection
- GND(white-orange)&(white-brown)
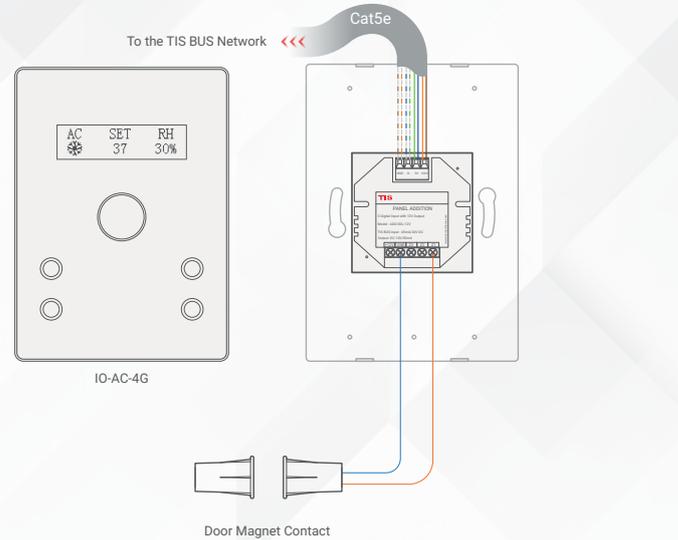- D-(white-green)&(white-blue)
- D+(blue-green)
- +24V(brown-orange)

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⚙ INSTALLATION STEPS

» FOR PANEL ADDITION 3DL-12V

You can connect 3 digital inputs to any switch or window magnet.

To the TIS BUS Network «« Cat5e

AC SET RH
❄ 37 30%

IO-AC-4G

Door Magnet Contact

———— low voltage cable
———— low voltage cable

Cat5e connection —
┌ GND(white-orange)&(white-brown)
│ D-(white-green)&(white-blue)
│ D+(blue-green)
└ +24V(brown-orange)

» Also, you can connect any 12V operated smoke detector or any 3rd party sensor with NC/NO connection to the 12V GND and Z1-Z3 terminals as per the diagram.

Cat5e »» To the TIS BUS Network

AC SET RH
❄ 37 30%

IO-AC-4G

3rd party sensor

———— low voltage cable
———— low voltage cable
———— low voltage cable

Cat5e connection —
┌ GND(white-orange)&(white-brown)
│ D-(white-green)&(white-blue)
│ D+(blue-green)
└ +24V(brown-orange)

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INSTALLATION STEPS

FOR PANEL ADDITION 3R-5A

LIGHTING CONNECTION
- ▶ Connect the live wire to COM
- ▶ Connect the loads wire to Out1-Out3 to terminals
- ▶ Connect load neutral wire to main neutral in the distributor box.

To the TIS BUS Network
Cat5e
Connect To L
AC   SET   RH
37   30%
MCB
O-OFF
I-ON
IO-AC-4G
Connect To N

2.5 mm Electric Cable
1.5 mm Electric Cable
1.5 mm Electric Cable
GND(white-orange)&(white-brown)
D-(white-green)&(white-blue)
D+(blue-green)
+24V(brown-orange)
Cat5e connection
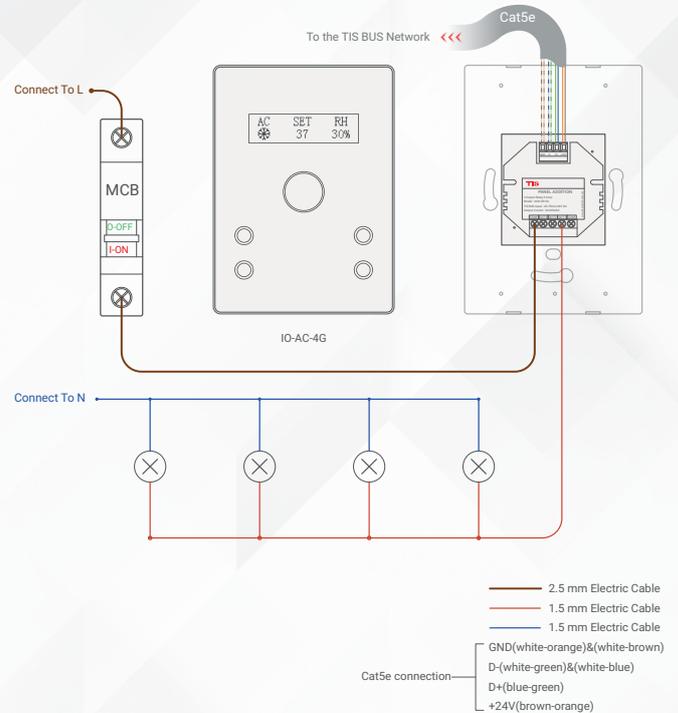
SHUTTER / CURTAIN CONNECTION
- ▶ Connect the Supply wire to COM
- ▶ Connect the Open wire to OUT1
- ▶ Connect the Close wire to OUT2
- ▶ Shutter neutral connection, if it exists, can be looped to main neutral in the distributor box.
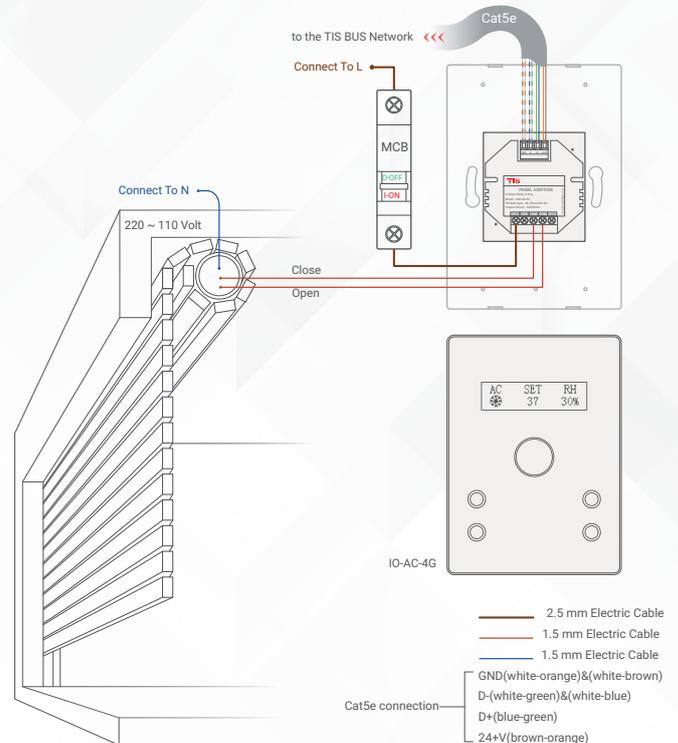
WARNING: Set the curtain function in the software before connecting the wires.

to the TIS BUS Network
Cat5e
Connect To L
MCB
O-OFF
I-ON
Connect To N
220 ~ 110 Volt
Close
Open
AC   SET   RH
37   30%
IO-AC-4G

2.5 mm Electric Cable
1.5 mm Electric Cable
1.5 mm Electric Cable
GND(white-orange)&(white-brown)
D-(white-green)&(white-blue)
D+(blue-green)
24+V(brown-orange)
Cat5e connection

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INSTALLATION STEPS

FOR PANEL ADDITION 3R-5A

FCU CONNECTION
- Connect the supply wire to com
- Connect the FAN Low, Medium, and High wires to Out1, Out2, and Out3 in the same order.

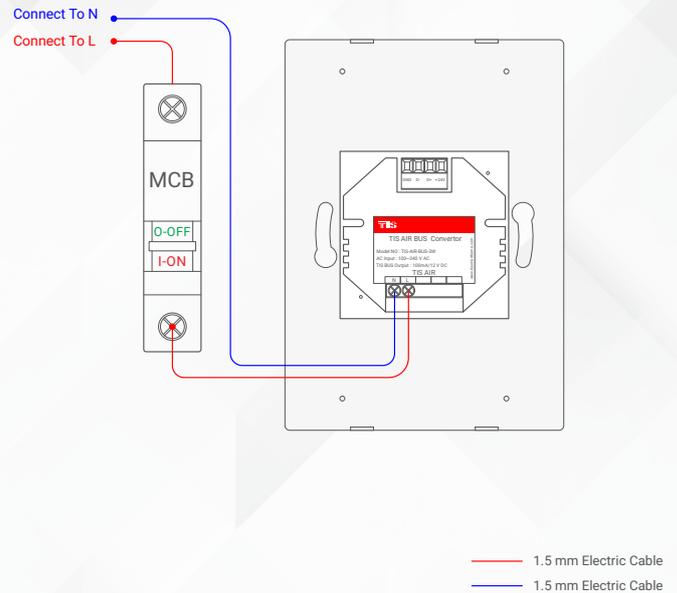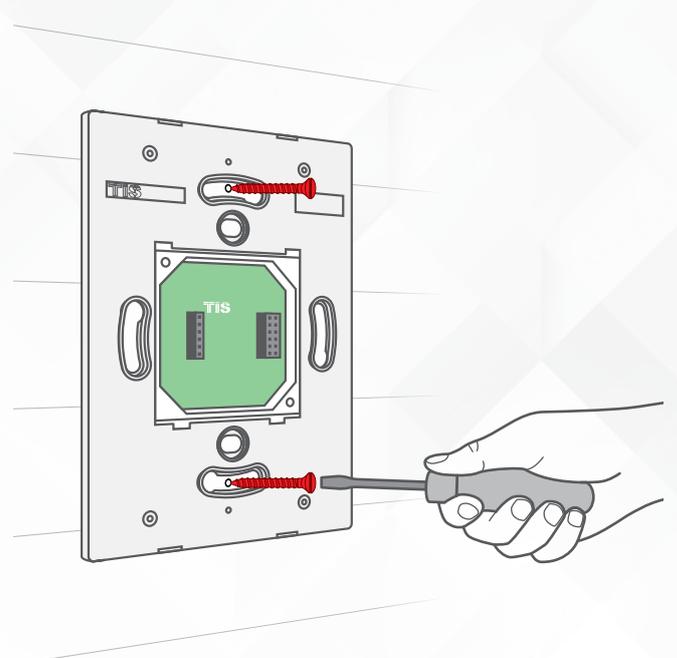**WARNING:** Set the FCU function in the software before connecting the wires.

- 2.5 mm Electric Cable
- 1.5 mm Electric Cable
- 1.5 mm Electric Cable

Cat5e connection
- GND(white-orange)&(white-brown)
- D-(white-green)&(white-blue)
- D+(blue-green)
- 24+V(brown-orange)
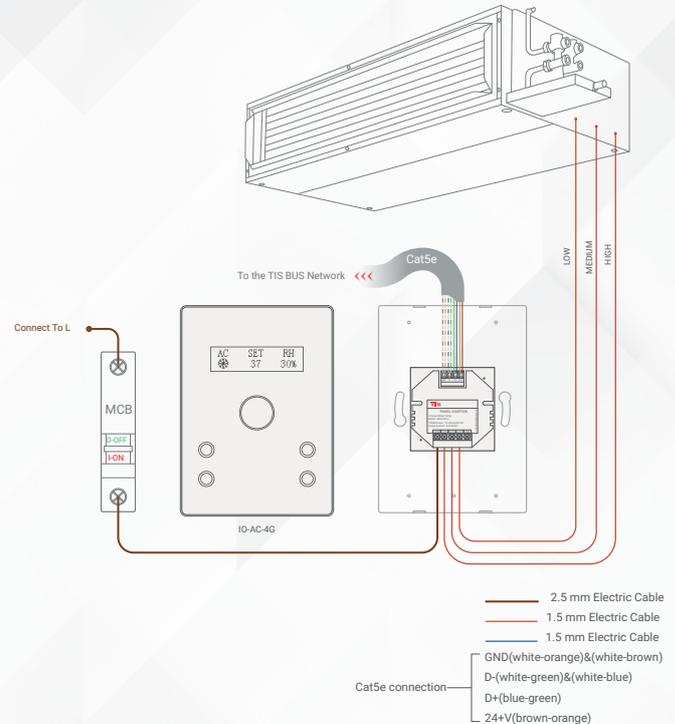
HVAC CONNECTION
- Connect the HVAC COM (supply) wire to COM
- Connect the Cool, Heat, and FAN wires to Out1, Out2, and Out3 in the same order.

WARNING: Set the HVAC function in the software before connecting the wires.

- 2.5 mm Electric Cable
- 1.5 mm Electric Cable

Cat5e connection
- GND(white-orange)&(white-brown)
- D-(white-green)&(white-blue)
- D+(blue-green)
- +24V(brown-orange)

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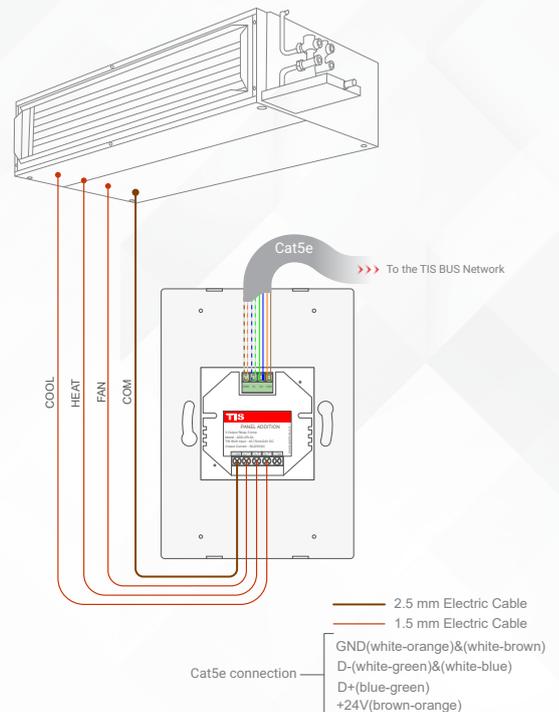
INSTALLATION STEPS

FOR PANEL ADDITION AIR-BUS-3W

▶ Connect the live wire to the L terminal,

▶ Connect the neutral wire to N terminal.

Connect To N
Connect To L

MCB

O-OFF
I-ON

TIS AIR BUS Convertor

1.5 mm Electric Cable
1.5 mm Electric Cable

8 ▶ Mount the device on the wall using 2 screws on the junction box.

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⚙ INSTALLATION STEPS

9 › Using your fingers, pull the protective plastic cover vertically, remove it, and throw it away.
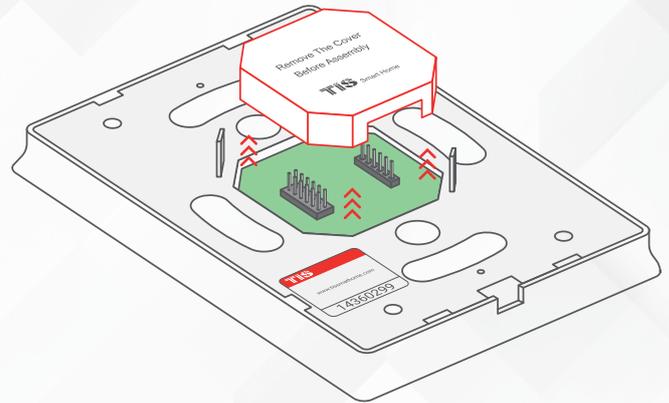
10 › Connect the main Luna panel vertically to the part installed on the wall; install the upper part by making sure the buckles are completely inside.

12
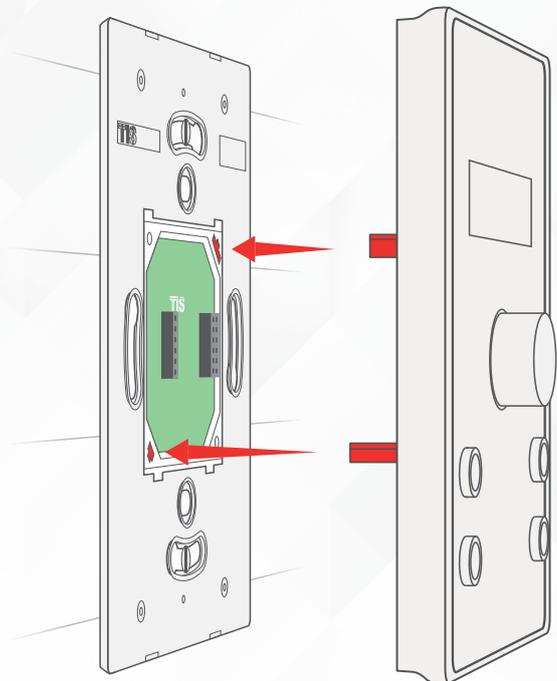
⚙ INSTALLATION STEPS

11 ≫ Push on the bottom part of the main panel to fix it to the wall and complete the assembly.

12 ≫ Turn on the power source. The panel should turn ON.

13
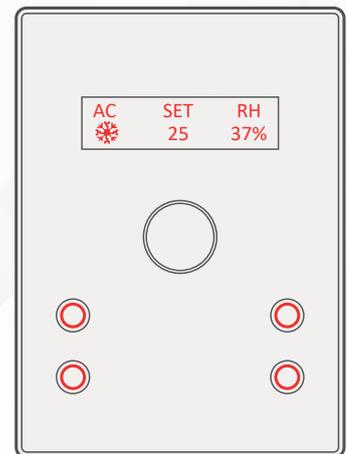
PAIRING (MANUAL PROGRAMMING)

LIGHTS / SHUTTERS PROGRAMMING

You can pair the light channels with any wall panel. To do so, follow these steps:

1 Press any button on any relay or dimmer module channel for 6 seconds so that the LED indicator light of that button starts blinking.
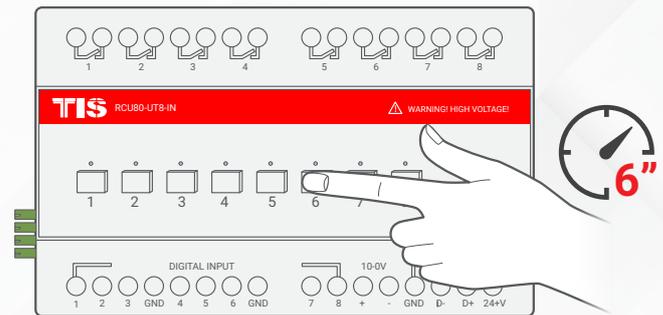
2 On the IO Push buttons, shortly press on any push button or press the wall switch that is connected to the dry inputs of the panel addition zones.
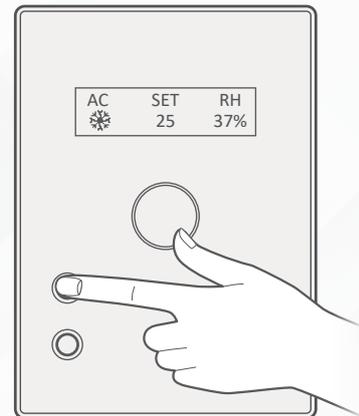
3 Test the button on the panel by short pressing it for ON/OFF and long pressing it to dim (if channel is dimmable).

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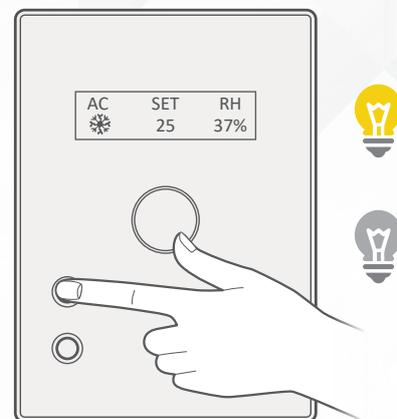
PAIRING (MANUAL PROGRAMMING)

FCU PROGRAMMING

1 To program the FCU to any wall thermostat panel, press and hold the first Channel L (LOW) button for 6 seconds. The LED indicator of the pressed button will start blinking.
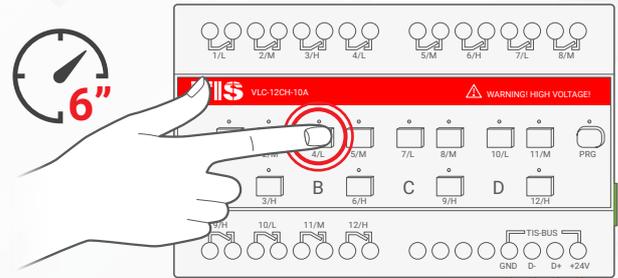
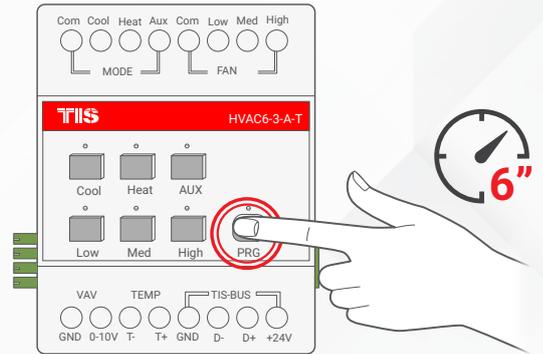**2** On the IO AC page, push the IO knob to turn the AC ON.
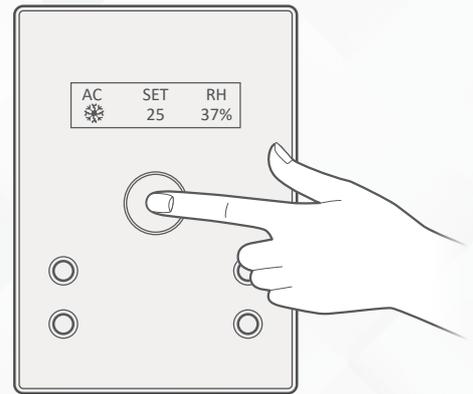
3 Test your air conditioning by changing the fan speed from low to medium to high. Your relay should respond accordingly.
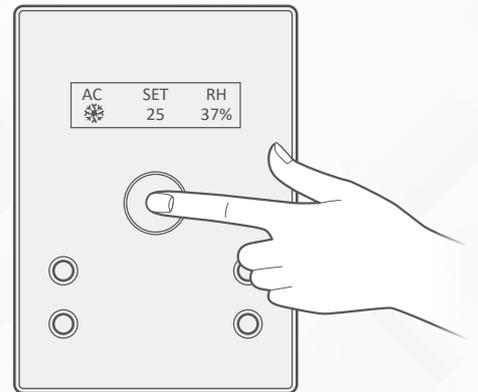
15

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Hong Kong
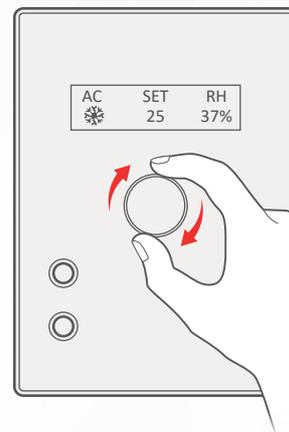
PAIRING (MANUAL PROGRAMMING)

HVAC PROGRAMMING

1 Press the PRG button on the HVAC module for 6 seconds until the green LED turns on and is steady.

2 On the IO AC page, push the IO knob to turn the AC ON.
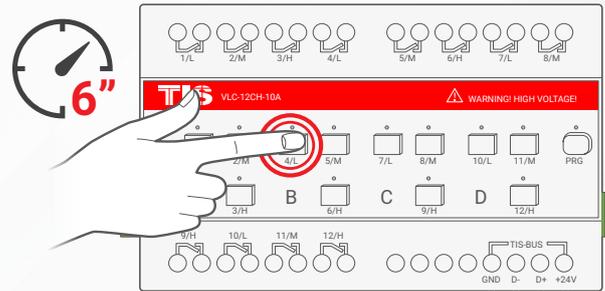

3 Test your air conditioning by changing the mood, heat/cool, and fan speed from low to medium to high. The HVAC module should respond accordingly.
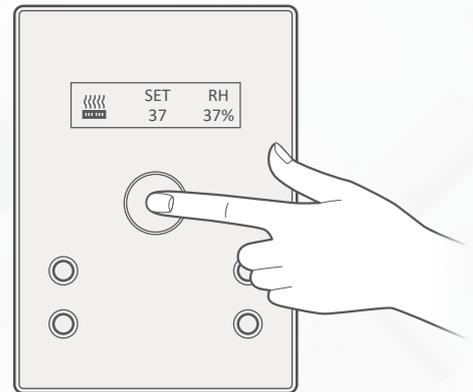

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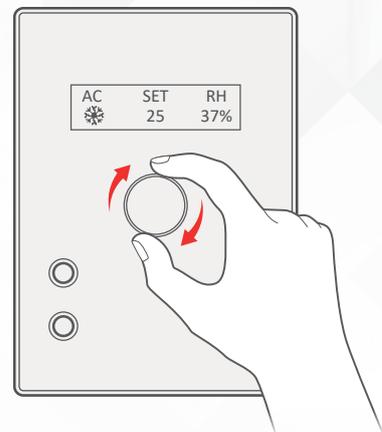
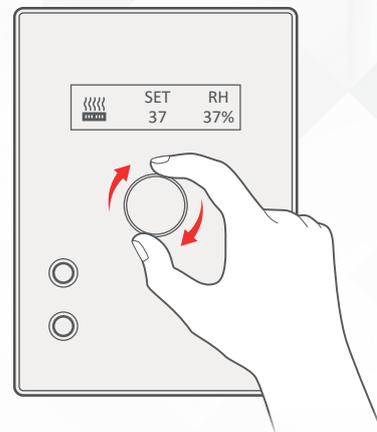## PAIRING (MANUAL PROGRAMMING)

♨ FLOOR HEATING PROGRAMMING

1 » Press any button on any relay or dimmer module channel for 6 seconds so that the LED indicator light of that button starts blinking.

2 » On the IO floor heater page, turn the floor heating ON.

3 » Test your floor heating by changing the temperature; the relay should respond accordingly.

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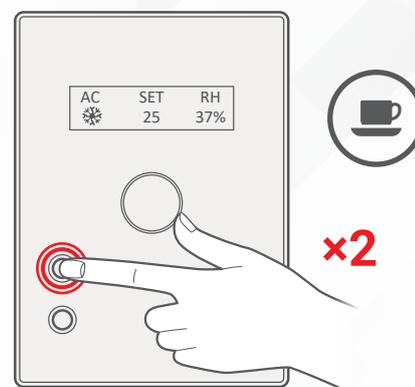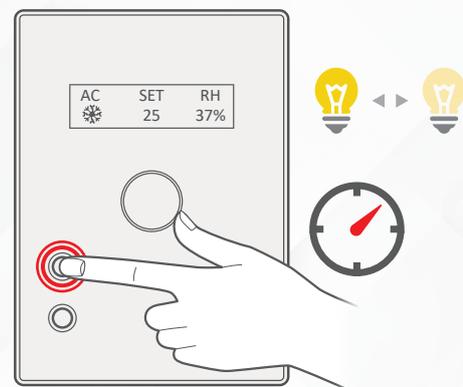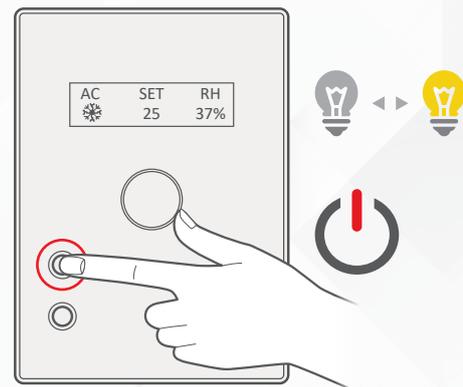Hong Kong

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USER OPERATION

LIGHTS / SHUTTERS / SCENE CONTROL

You can use the 4 push buttons to control lights and other devices. Press on the push buttons as follows:

Short press for ON/OFF or to run a scene.

Long press to dim or ramp up the lights

Double click to trigger a special programmed scene.

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USER OPERATION

CLIMATE CONTROL

The following functions are used to control your climate:

Changing AC pages

Press and rotate the knob at the same time

▶ You can navigate between the AC control page (AC1-AC2), floor heater, and ceiling fan speeds.
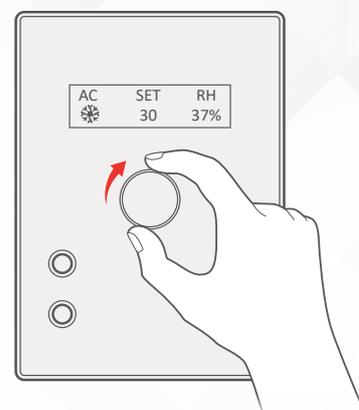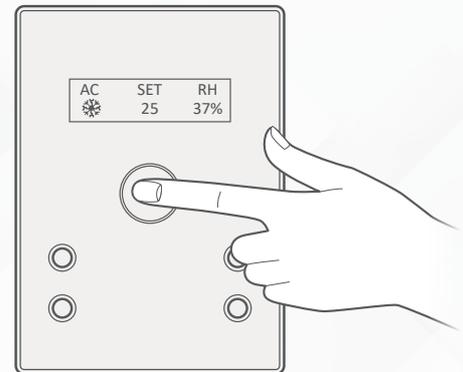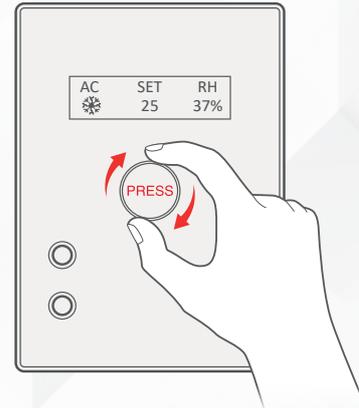
Turning Climate Control ON/OFF

Short press on the rotating knob

▶ Turn your AC, floor heater, or ceiling fan on/off.

Increasing the temperature in AC & floor heating pages

Rotate the knob to the right

▶ Increase the set AC or floor heater temperature.

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USER OPERATION

CLIMATE CONTROL

The following functions are used to control your climate:

Decreasing the temperature in AC & floor heating page

Rotate the knob to the left.

▶ Decrease the set AC or floor heater temperature.

Change fan speed on AC page
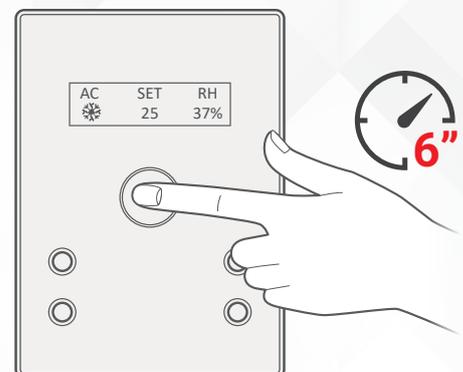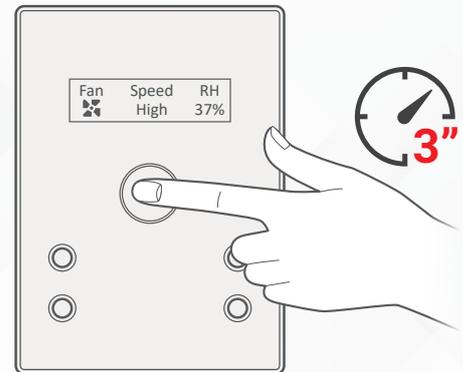
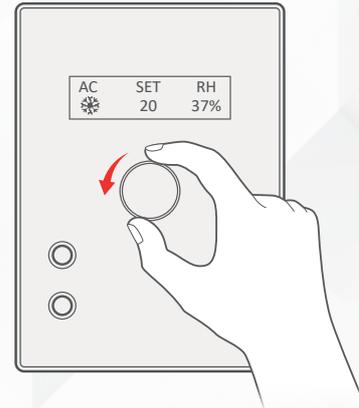**Long press on knob for 3 seconds**

▶ Change AC fan speed to low, med, high, or auto.

Changing AC mode

Long press on knob for 6 seconds

▶ Change AC mode to cool, heat, fan, or auto.

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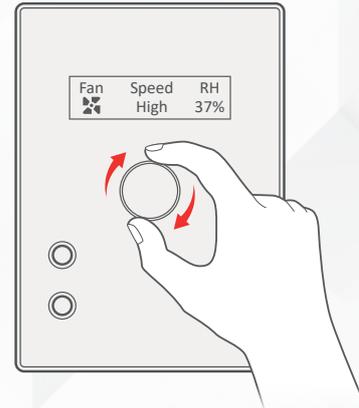
USER OPERATION

CLIMATE CONTROL

The following functions are used to control your climate:

### Changing ceiling fan speed

Rotate the knob to the left or right

▶ Decrease the set AC or floor heater temperature.

Fan	Speed	RH
	High	37%

MESSAGES DISPLAY

The panel can display urgent messages with a buzzer sounding on its OLED Screen.

WARNING!
FIRE DETECTED

For normal messages, a message icon will appear in the top left corner of the OLED, and you will need to press on the knob to show the message on the screen.

✉	SET	RH
	26	37%

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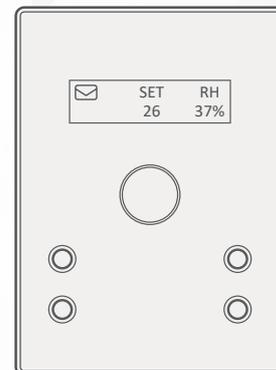
🧰 TROUBLESHOOTING

❓	**The panel's LCD blinks rapidly**	**Reason:** The panel address conflicts with another device in the TIS network. You need to press and hold the IR button (IR middle button) for 6 seconds so that the panel can get a new address.
❓	**The panel buttons' LEDs do not turn ON, and the device is not powered.**	**Reason 1:** There is no TIS-BUS power or no connection to the L/N input (if used AIR bus-3W converter). **Reason 2:** The TIS 24V power supply is not connected to the TIS-BUS.
❓	**The wall panels fail to pair with other devices.**	**Reason 1:** The TIS-BUS connection has a problem, or the wire has a short. **Reason 2:** The manual programming function is disabled on the device (it is enabled by default).
❓	**The wall panels fail to control the device channels.**	**Reason 1:** The TIS-BUS connection has a problem, or the wire has a short. **Reason 2:** The programming address is faulty.
❓	**The page is asking for a password.**	**Reason:** The page's password lock is enabled. The default password is 1234. You can disable this locking page function in the software. If you've forgotten the password, you can email your Luna MAC number to the tech support team and they will generate an unlock password for your panel.
❓	**Music stops and will not play the next track once the current track finishes.**	**Reason:** In the Luna Music Page, the Play Mode setting is set to Play Once. You should change it to Play All.

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