SAPPHIRE
LIKE BEING THERE...

**Inceiling Electric Screen
Installation Manual**

SAPPHIRE
LIKE BEING THERE...

Model: SESCxxx-A3

Thank you for purchasing a Sapphire product. Before use, please read this manual carefully and keep it for future reference.

Important Safety Instructions

【The following are critical safety precautions. Please read before installation and use.】

⚠️ Warning / ❗ Mandatory — 1. The product must be installed by qualified professionals. Installation by unqualified personnel may result in product damage, property damage, or personal injury.

⚠️ Warning / ❗ Mandatory — 2. Before installation, ensure that the mounting location (ceiling or wall) and the suspension device can bear a load of at least 50 kg. Otherwise, accidental falling may occur, leading to product damage, property loss, or personal injury.

⚠️ Warning — 3. Never perform electrical work while the power is on or before the screen is fully installed, as this may cause product damage or personal injury.

⚠️ Warning — 4. During electrical installation, incorrect wiring or poor connections may result in product damage, fire, or electric shock. All electrical work must be performed by a qualified electrician.

⚡ — 5. This product uses single-phase AC power and must be connected to a grounded outlet with proper grounding.

❗ Notice — 6. The screen must be used in a horizontal state. During installation, ensure the screen is adjusted to a level position to avoid product damage.

❗ Notice — 7. For products with infrared remote control, avoid using them in environments with strong light or lasers. For products with wireless remote control (including infrared), keep them away from fluorescent lamps, energy-saving lamps, or other devices with strong electromagnetic radiation to prevent interference that may disrupt the remote control circuit.

⚡ — 8. To reduce the risk of fire or electric shock, do not expose the product to dripping water, rain, or humid environments.

9. Keep the product away from heat sources such as radiators, heaters, stoves, and other heat-emitting devices (including amplifiers).

❗ Notice / ⚠️ — 10. During thunderstorms, heavy rain, or prolonged non-use, unplug the power cord. The product remains connected to AC power as long as the plug is inserted.

❗ Notice — 11. After use, fully retract the screen into the housing to prevent dust and dirt from contaminating the screen and degrading projection quality.

❗ Notice — 12. Stains or scratches on the screen surface may affect projection quality. Please note the following:
A. Do not touch the screen surface with your hands.
B. Do not write or draw on the screen.
C. Avoid poking the screen with fingers or sharp objects to prevent cracks or scratches.
D. Do not use organic solvents like thinners or corrosive cleaners. Use a non-corrosive dry soft cloth and mild soapy water to clean the screen and housing.

❗ Notice — 13. To prevent unnecessary harm, the operation and management of the device must be handled by adults.

❗ Notice — 14. Use only original accessories provided by the manufacturer.

⊗ No Hanging Items / ❗ Notice — 15. Do not hang or place any items on the product housing or lower tube, as this may cause product damage.
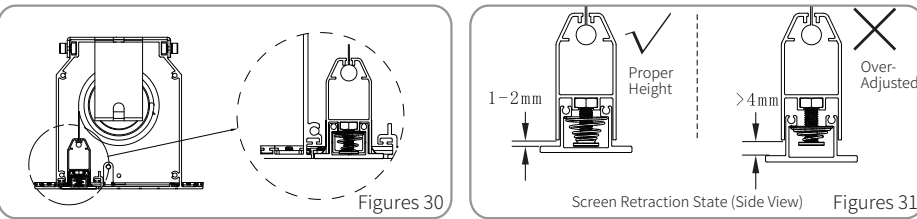
🚫 Prohibition of Disassembly — 16. There are no user-serviceable parts inside the product. Do not disassemble the product or replace components. For malfunctions, contact the after-sales service department and have the product repaired by qualified technicians.

⚠️ Warning	Ignoring the contents of the warning section may result in personal injury or property damage.	❗ Mandatory	The screen must be installed in a location with sufficient load-bearing capacity. Otherwise, accidents or screen detachment may occur.	🚫 Prohibition of Disassembly	Do not disassemble the screen or loosen screws without authorization. For repairs or adjustments, contact the manufacturer or authorized dealers.
⚡	Ignoring this may result in electric shock. Never connect switches or remote controls while the power is on.	❗ Notice	Ignoring this may cause product damage.	⊗ No Hanging Items	Do not hang any items on the screen housing or pull tube, as this may cause the entire product or screen to detach.

Maintenance and Adjustment

To set the upper limit, press the up button on your remote to raise the screen fully into its housing. Once the bottom bar assembly is all the way in, insert the supplied adjustment key (at a slight angle) into the motor's green knob locator. Rotate the key clockwise to lower the screen or counterclockwise to raise it further.

Note when adjusting the upper limit: because the decorative bottom bar fully seals the screen opening, its assembly differs from other models and contains an internal spring mechanism. When setting the upper limit, allow the bottom bar to just close while still leaving ample free travel. If the upper limit is set too high, you risk damaging the screen or the motor (see Figures 30–31).

Figures 30

Proper Height 1–2 mm / Over-Adjusted >4 mm — Screen Retraction State (Side View) — Figures 31

Operation Guide

6. External Infrared Receiver or Wireless-to-Infrared Control

The external infrared control port (EXTIR) allows users to connect an infrared receiver with an extension cable for special installation or usage scenarios (Figure 26).
This port can also connect to a wireless-to-infrared receiver (optional accessory). When paired with a wireless transmitter, it enables RF wireless control. With a wireless sync power controller, the screen can automatically deploy when the projector turns on and retract when it turns off (compatible with all projectors) (Figure 27).

Maintenance and Adjustment

■ After each use, fully retract the screen into the housing to prevent dust and dirt from contaminating the screen and degrading projection quality.
■ Before retracting the screen, inspect the surface to ensure it is free of insects, dust, or foreign objects.
■ Clean the screen surface with a non-corrosive dry soft cloth and mild soapy water. Do not use organic solvents or corrosive cleaners, as they may damage the product.
■ The motor does not require lubrication.
■ The screen's retraction and deployment heights have been preset to optimal positions at the factory. We do not recommend customers adjust these settings themselves to avoid product damage due to improper adjustments. (For deployment height/lower limit adjustments, consult your contractor or authorized dealer.)
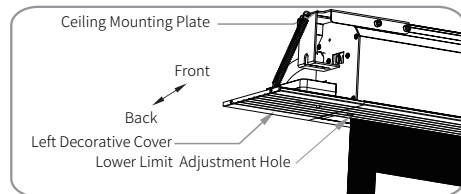
※ Adjustment method for screen retraction height (upper limit) and deployment height (lower limit).

If adjustments are necessary due to installation environment or space constraints, the lower limit (deployment height) can be adjusted using the motor adjuster inside the lower left of the screen (Figures 28-29).
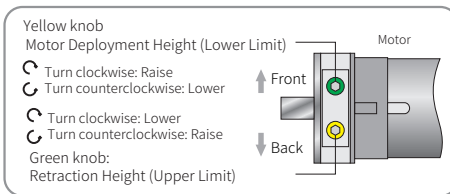
Warning
Operate with caution. When adjusting the retraction height, avoid over-retracting the screen to prevent motor and screen damage.
When adjusting the deployment height, ensure at least one and a half turns of the screen remain wound around the roller to prevent detachment.
After adjusting the limit positions, the screen may not respond immediately. Run the screen once or twice to observe the changes.

To adjust the deployment height (lower limit), set the control switch to the "Down" position. The screen will lower. Insert the included adjustment key into the motor's adjuster hole (yellow knob, facing the adjuster hole). Rotate clockwise to raise the screen or counterclockwise to lower it.

Ceiling Mounting Plate
Front
Back
Left Decorative Cover
Lower Limit Adjustment Hole

Yellow knob
Motor Deployment Height (Lower Limit)
⟳ Turn clockwise: Raise
⟲ Turn counterclockwise: Lower
⟳ Turn clockwise: Lower
⟲ Turn counterclockwise: Raise
Green knob:
Retraction Height (Upper Limit)
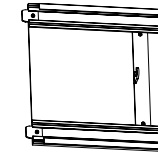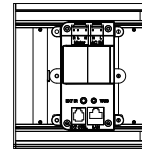Motor
Front
Back

Figures 28   Figures 29

Prohibited
The product has a unique structure. The "retraction height" is preset at the factory. Do not adjust it yourself to avoid damage. The manufacturer will not warranty damage caused by improper adjustment of the retraction height (upper limit).
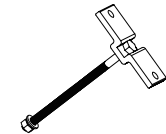
Included Accessories

■ Left Decorative Cover Assembly (includes control board, 1 piece)

■ Right Decorative Cover (1 piece)

■ Limit Adjustment Key (1piece)

■ Infrared Remote Transmitter (1 piece)

■ Power Cord with Plug (1 piece)

■ Hanging code kit (2 sets)

■ External Infrared Receiver (1 piece)

■ MM6x20mm self-tapping screws (4 pieces)

■ Installation and User Manual (1 piece)

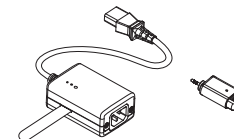## Optional Accessories

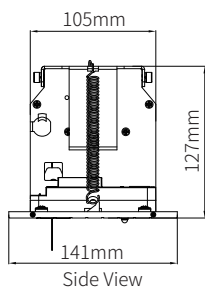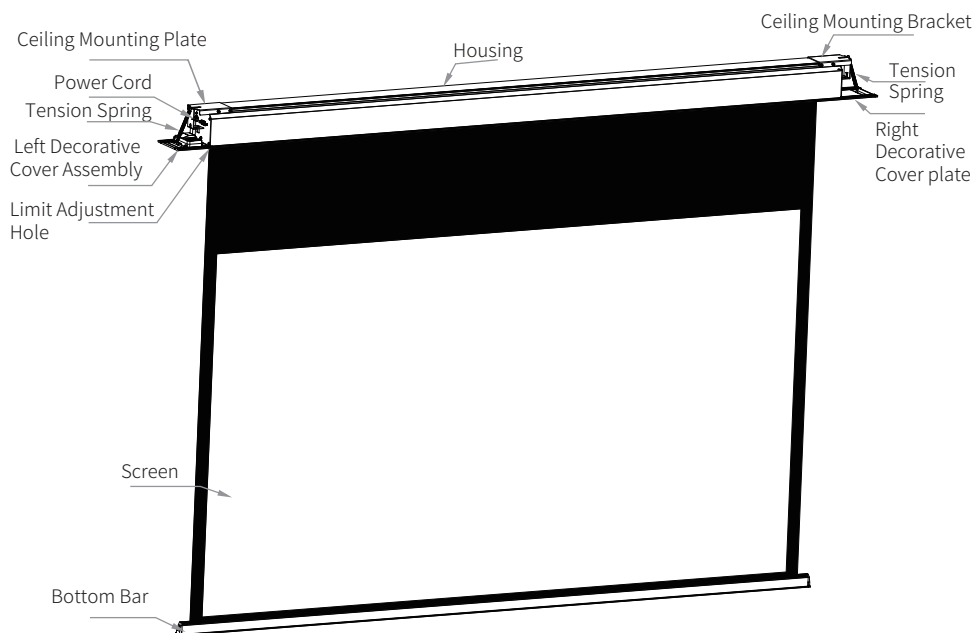■ M8 x 500mm Threaded Rod (2 pcs)

■ 12V Trigger Cable (1 pc)

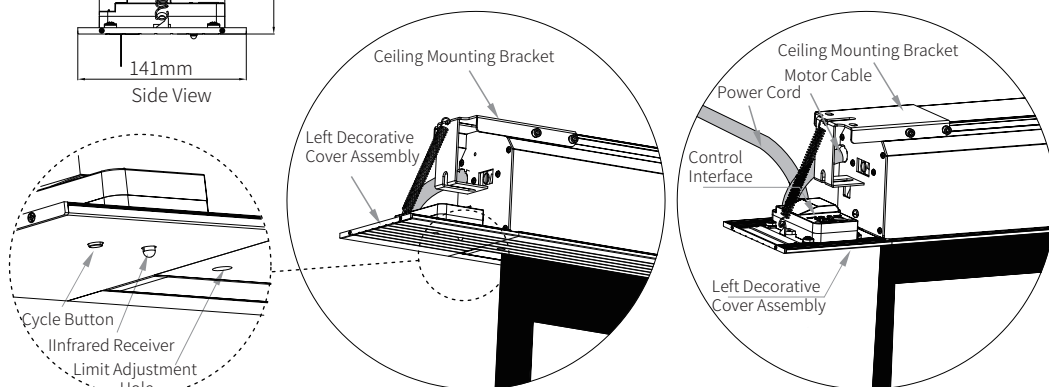■ Wall Control Switch (Low-Voltage Dry Contact Control)

■ Wireless Smart Sync Power Transmitter and Wireless-to-Infrared Receiver

Ceiling Mounting Plate

Housing

Ceiling Mounting Bracket

Power Cord

Tension Spring

Tension Spring

Left Decorative
Cover Assembly

Right
Decorative
Cover plate

Limit Adjustment
Hole

Screen

Bottom Bar

105mm

127mm

141mm

Side View

Ceiling Opening Dimensions:

Opening Length (Lt) = Total Screen Length (L) - 25 mm,
Opening Width: 115 mm, Height: ≥127 mm.

Ceiling Mounting Bracket

Left Decorative
Cover Assembly

Ceiling Mounting Bracket

Motor Cable

Power Cord

Control
Interface

Left Decorative
Cover Assembly

Cycle Button

Iinfrared Receiver

Limit Adjustment
Hole

2.Manual Switch Control

A cycle button is located on the lower left end cover (Figure 19). Each press cycles the screen through descent, stop, and ascent.

External Control (Dry Contact or RS-232, Wall Switch):

Connect the signal cable's RJ45 end to the "EXT CTRL" port on the left end cover (Figures 20–26). Use a wall switch, control system, or computer to control the screen's ascent, stop, and descent. The control interface layout is shown in Figure 20, and the cable wiring is in Figure 21.

3.Low-Voltage Dry Contact Wall Switch (Optional) (Figure 22)

4.RS-232/485 Interface Control

Connect the "EXT CTRL" port to a computer or control system's RS-232/485 port (Figure 21). Send commands to control the screen (Figure 24).
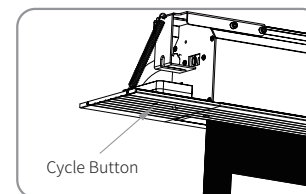
Cycle Button
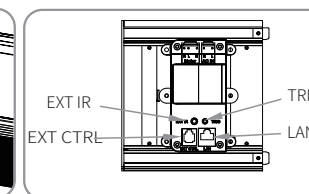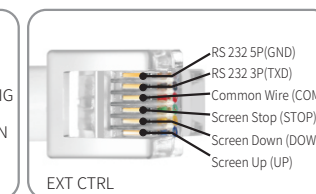
Figure 19

EXT IR

EXT CTRL

TRIG

LAN

Figure 20

RS 232 5P(GND)
RS 232 3P(TXD)
Common Wire (COM)
Screen Stop (STOP)
Screen Down (DOWN)
Screen Up (UP)

EXT CTRL

Figure 21

EXT CTRL

Figure 22

RS232
RS485

EXT CTRL

Figure 23

RS-232/485 Port Settings:

Baud Rate: 2400   Data Bits: 8
Parity: None   Stop Bits: 1

Control Codes:
Up：0xff,0xee,0xee,0xee,0xdd
Stop：0xff,0xee,0xee,0xee,0xcc
Down：0xff,0xee,0xee,0xee,0xee
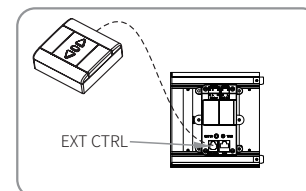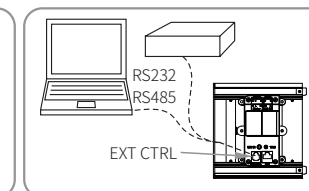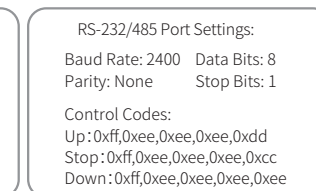
Figure 24

5.12V Trigger Control

Connect the trigger cable (optional) to the "TRIG" port on the left end cover and the projector's 12V output (Figure 25). The screen will deploy when the projector turns on and retract when it turns off.
Note: Verify that your projector has a 12V trigger output (consult the projector manual).
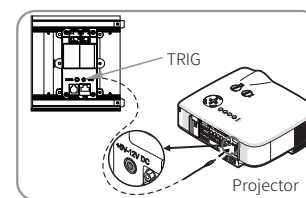
TRIG

Projector

Figure 25

Wireless-to-Infrared Receiver

EXT IR

External Infrared Receiver

Figure 26

Wireless-to-
Infrared
Receiver

EXT
IR

Projector

Wireless Smart
Sync Power
Transmitter
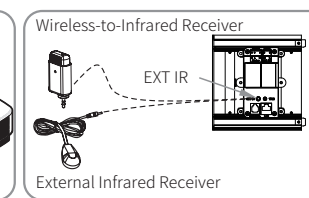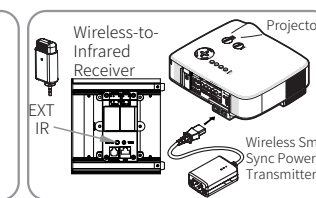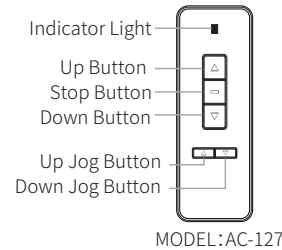
Figure 27

This electric projection screen supports multiple control methods. Choose the one that suits your needs:

- Infrared remote control
- Manual switch control
- Dry-contact wall switch control
- RS-232/485 interface control
- 12V trigger control
- External infrared or wireless-to-infrared receiver control

1.Infrared Remote Control

AC-127 Infrared Remote Transmitter Button Functions:

1. "Up" button: Screen ascends.

2."Stop" button: Screen stops.

3."Down" button: Screen descends.

4. "Up Jog" button: Fine-tune screen ascent.

5. "Down Jog" button: Fine-tune screen descent.

Indicator Light
Up Button
Stop Button
Down Button
Up Jog Button
Down Jog Button

MODEL：AC-127

Remote Usage Notes:

1.Point the remote at the screen's left end cover infrared receiver
(effective range: ~8 meters).

2.Remote effective angle: $\pm30°$ from the transmitter axis (Figure 16).

3.Receiver effective angle: $\pm30°$ from the receiver axis (Figures 17–18).

4.Do not block the remote's transmitter or screen's receiver.

5.Infrared signals travel in straight lines; ensure no obstructions.

6.Avoid humid or high-temperature environments.

7.Replace batteries if the remote range decreases or the indicator dims.

Battery Installation:

When the remote signal weakens, replace the batteries (2x CR2032 button cells). Do not mix old and new batteries.

1.Turn the remote over and slide the battery cover open.

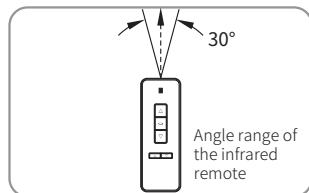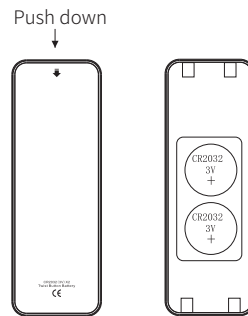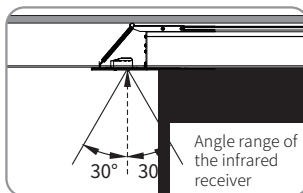2.Insert batteries according to the polarity markings.

3.Close the battery cover.

Push down

CR2032 3V +
CR2032 3V +

30°

Angle range of the infrared remote

Figure 16

Angle range of the infrared receiver

30° 30°

Figure 17
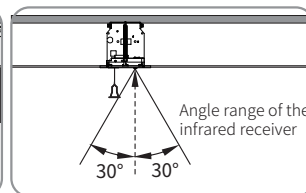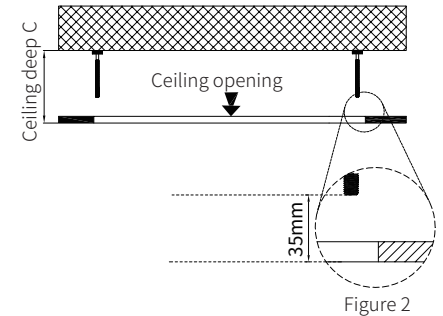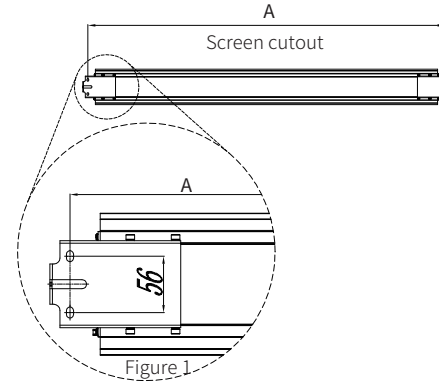
Angle range of the infrared receiver

30° 30°

Figure 18

Before installation, please use a tape measure to measure the following installation parameters to determine the installation tools and positions.
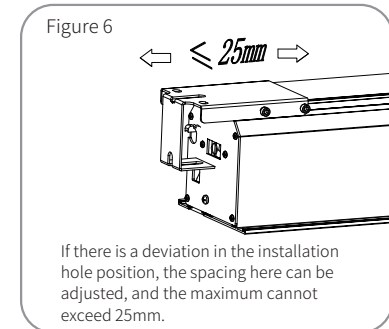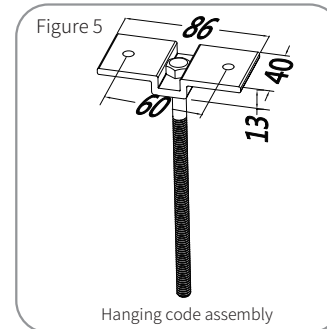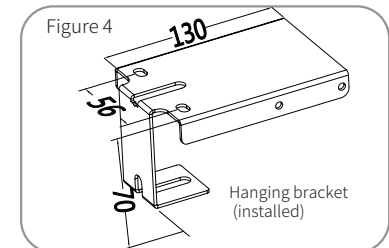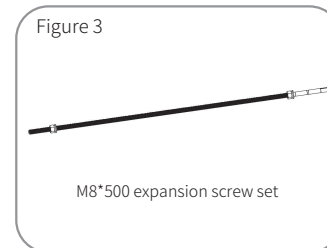
1. Installation spacing A in the length direction of the screen, as shown in Figure 1;
2. Ceiling internal space depth C, as shown in Figure 2.
Note: Screw cutting length is shown in the figure on the right

A
Screen cutout
A
56

Figure 1

Ceiling deep C
Ceiling opening
35mm

Figure 2

This product is equipped with three types of special mounting parts for different ceiling heights

Ⅰ. When C≥190mm, use the M8*500 expansion screw set, as shown in Figure 3;
Ⅱ. When 121mm＜C＜190mm, use the hanging code assembly, as shown in Figure 5;
Ⅲ. When C=121mm, use the pre-installed hanging bracket of the screen, as shown in Figure 4.

Figure 3

M8*500 expansion screw set

Figure 4
130
56
70
Hanging bracket (installed)

Figure 5
86
60
40
13
Hanging code assembly

Figure 6
⇐ ≤ 25mm ⇒

If there is a deviation in the installation hole position, the spacing here can be adjusted, and the maximum cannot exceed 25mm.

Ⅰ. Installation method for deeper concrete ceiling (C≥190mm)

Draw the center line with the ceiling slot, mark two points with a spacing of A symmetrically, and drill M8 expansion screw holes. Cut the screw rod length (about 35mm from the ceiling surface), and screw the screw rod. Fine-tune the screen bracket (left-right symmetry) to make the hole spacing and screw rod spacing consistent. Two people hold the screen at the same time, pass the M8 screw rod through the bracket hole, and screw on the nut set. The screen can be moved left and right to the center, and the nuts are tightened until the screen is flush with the ceiling to complete the outer shell fixation, as shown in Figure 7.
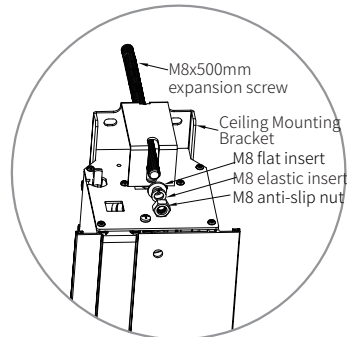
M8x500mm expansion screw
Ceiling Mounting Bracket
M8 flat insert
M8 elastic insert
M8 anti-slip nut

Figure 7

Ⅱ. Installation method for shallow wooden ceiling (121mm＜C＜190mm)

Draw the center line with the ceiling slot, mark two points with a spacing of A symmetrically, place the hanging brackets on the marked points, mark four self-tapping screw points, and drill the screw holes. Cut the screw length (about 35mm from the ceiling surface), insert the aluminum profile hanging brackets, and tighten the self-tapping screws. Fine-tune the screen bracket (left-right symmetry) to make the hole spacing and screw spacing consistent. Two people hold the screen at the same time, pass the M8 screw rod through the bracket hole, and screw on the nut set. The screen can be moved left and right to the center, and the nuts are tightened until the screen is flush with the ceiling to complete the outer shell fixation, as shown in Figure 8.
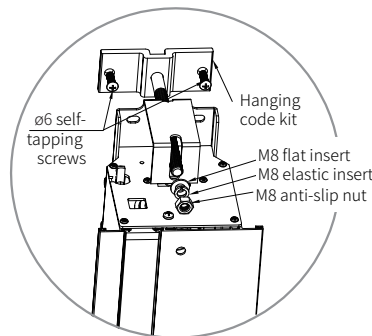
ø6 self-tapping screws
Hanging code kit
M8 flat insert
M8 elastic insert
M8 anti-slip nut

Figure 8

III. Customized deep ceiling (C=121mm)

Draw the center line with the ceiling slot, symmetrically mark four points with horizontal spacing of A and vertical spacing of 56mm; drill screw holes. Fine-tune the screen bracket (left-right symmetry) to make the hole spacing and screw spacing consistent, two people hold the screen at the same time, align the four screw holes, screw in the ø6 self-tapping screws, and complete the outer shell fixation, as shown in Figure 9.
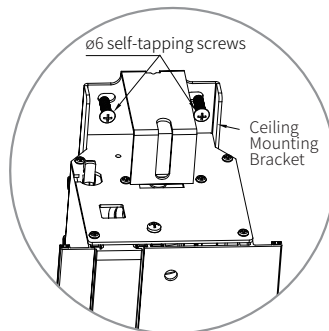
ø6 self-tapping screws
Ceiling Mounting Bracket

Figure 9

⚠ ⚡ Warning The power cord connection and AC power installation must be performed by a qualified electrician. Otherwise, product damage, property loss, or personal injury may occur!

[Note]: Before powering on, confirm that the product's operating voltage matches the local supply voltage. The recommended power supply capacity should be at least twice the product's power rating. Using an incompatible power supply may cause malfunctions or damage!

● Based on your preferred control method, connect the corresponding control plugs on the left end cover assembly (external infrared receiver, 12V trigger cable, RS-232/485 control cable for computer control, or RJ45 network cable for IP control).

● Connect the screen's power. Plug the motor cable from the left side into the "Motor" port on the left end cover assembly. Connect the included power cord to the "ACIN" port. Ensure secure connections, then plug the power cord into an AC outlet (Figures 10–12).
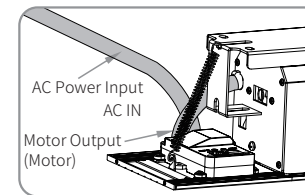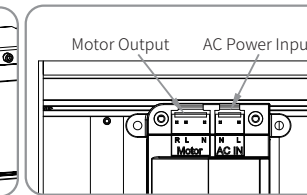
AC Power Input AC IN
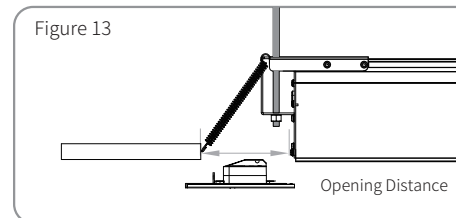Motor Output (Motor)

Motor Output   AC Power Input

Figure 10

Figure 11

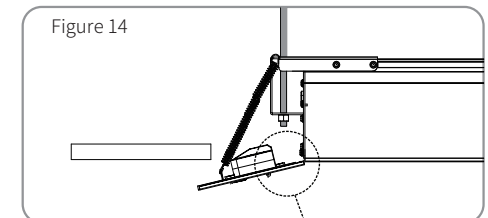| Corresponding Socket	Terminal Block	Wiring Definitions	Motor Wire Colors	
			230V	120V
AC IN	L	Power Phase		
	N	Power Neutral		
Motor	N	Motor Neutral	Blue	White
	L	Motor Down	Brown	Red
	R	Motor Up	Black	Black

Figure 12

● Power on the screen. Avoid touching high-voltage parts (ACIN and Motor ports) during operation. Press the cycle button on the left end cover to test the screen's ascent and descent. If functioning correctly, power off the screen and proceed with installation.
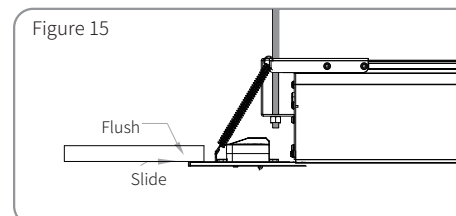
Decorative Cover Installation

● Install the left decorative cover (with control board) on the power cord side (Figures 13–15). The right decorative cover installation is similar.

Figure 13

Opening Distance

①Ensure sufficient opening distance. Gently pull the tension spring and hook it onto the decorative cover.

Figure 14

②Insert the left decorative cover's tabs into the housing slots.

Insert into the slot

Figure 15

Flush
Slide

③Align the cover with the ceiling and housing, then slide it flush against the housing end.