SAPPHIRE
LIKE BEING THERE...

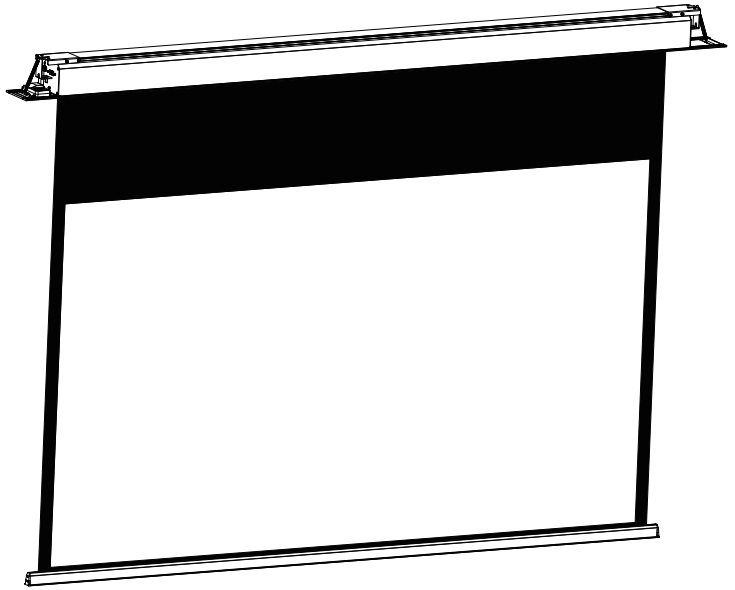
**Techical Assistance**

If you need help with installing this screen please visit
www.sapphireav.com

CE RoHS

SAPPHIRE
LIKE BEING THERE...

# Inceiling Electric Screen
# Installation Manual



## Model: SETC xxx A3 / SESC xxx 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. |

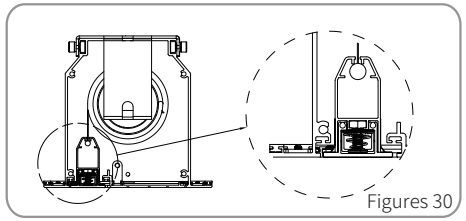


## Maintenance and Adjustment

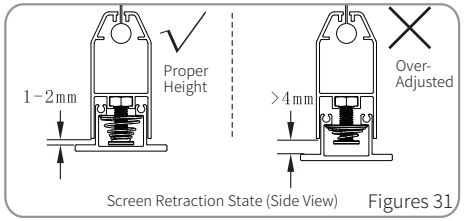
** If the bottom bar is hanging slightly below the casing, please adjust it using the top limit setting as described in this manual, or contact our technical support team for assistance. **

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




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.)

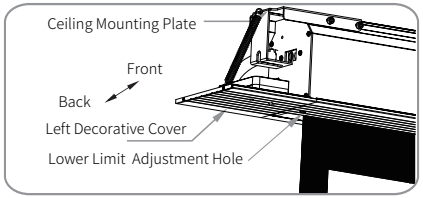
※ Adjustment method for screen retraction height (upper limit) and deployment height (lower limit).

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).

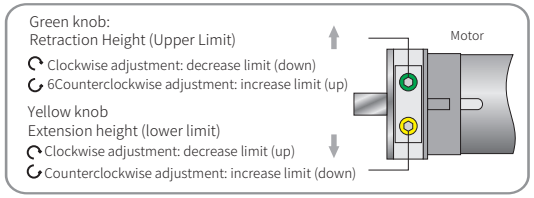
Warning

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.




Figures 28




Figures 29

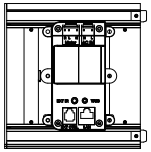
Prohibited

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).

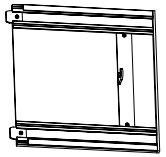


## Included Accessories

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



- Right Decorative Cover (1 piece)



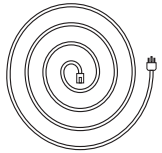
- Limit Adjustment Key (1piece)



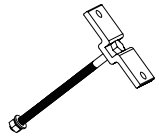
- Infrared Remote Transmitter (1 piece)



- 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)



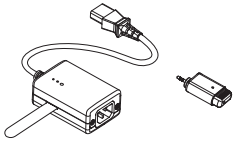
- 12V Trigger Cable (1 pc)



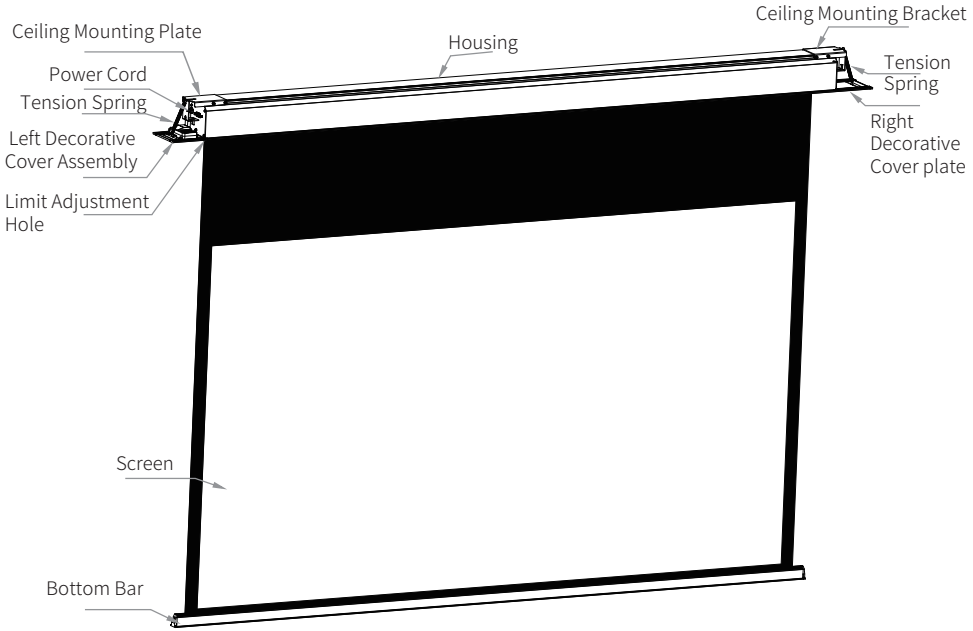
- Wall Control Switch (Low-Voltage Dry Contact Control)

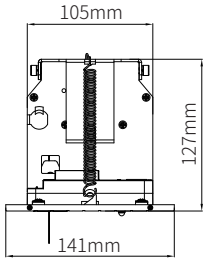


- Wireless Smart Sync Power Transmitter and Wireless-to-Infrared Receiver



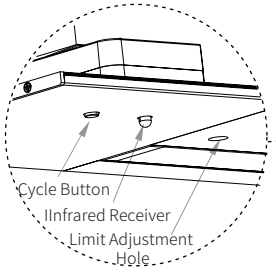
## Product Structure

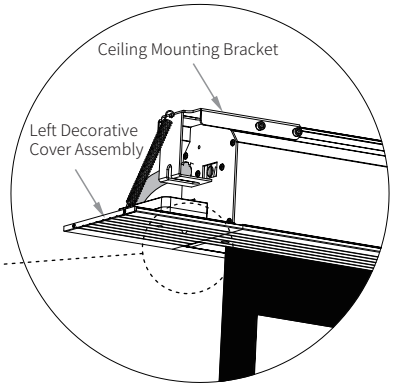


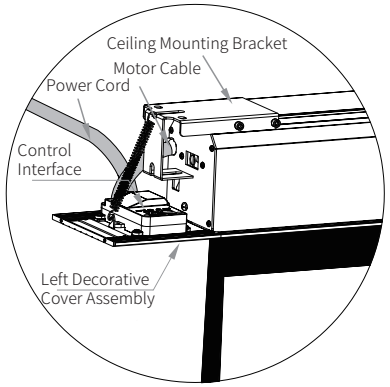




Ceiling Opening Dimensions:

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






## Operation Guide

### 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).

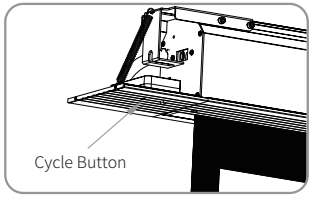



Figure 19

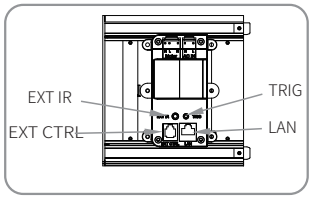



Figure 20

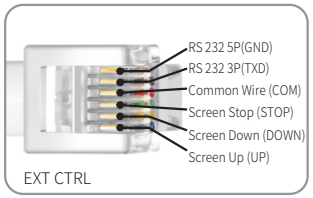



Figure 21

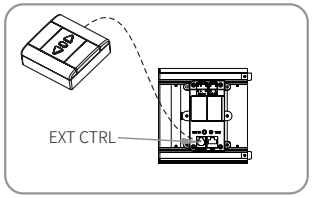



Figure 22

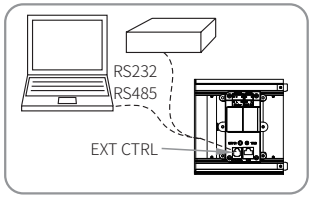



Figure 23

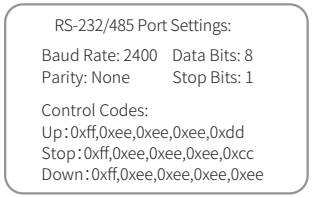



Figure 24

### 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).

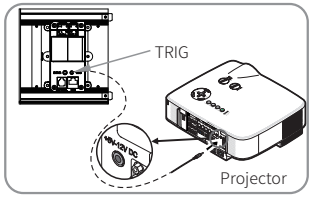



Figure 25

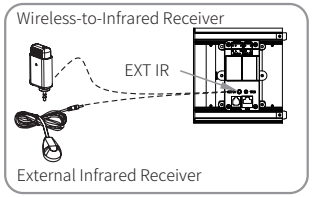



Figure 26

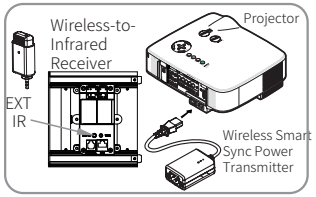



Figure 27

## Operation Guide

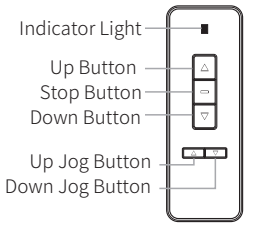
**This electric projection screen supports multiple control methods. Choose the one that suits your needs:**

- 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:

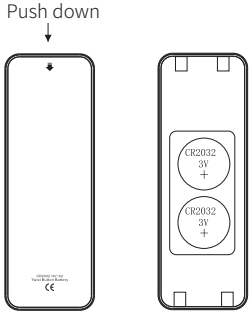
1. "Up" button: Screen ascends.
2."Stop" button: Screen stops.
3."Down" button: Screen descends.
4. "Up Jog" button: Fine-tune screen ascent.
5. "Down Jog" button: Fine-tune screen descent.



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: ±30° from the transmitter axis (Figure 16).
3.Receiver effective angle: ±30° 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.

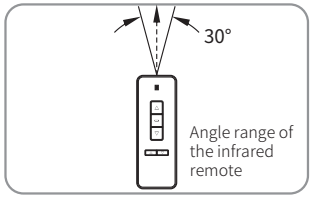


Figure 16

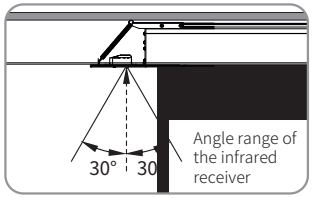


Figure 17

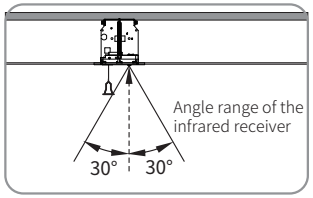


Figure 18



## Installation Methods

**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

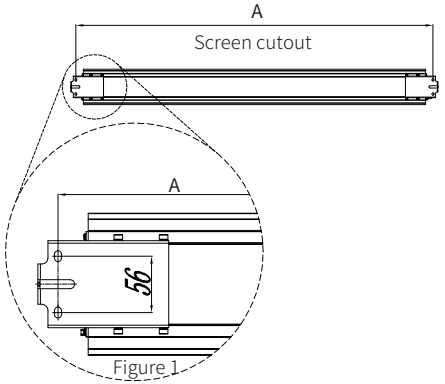


Figure 1

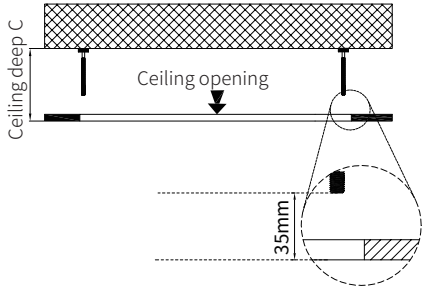


Figure 2

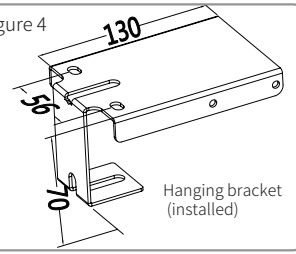
**This product is equipped with three types of special mounting parts for different ceiling heights**

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

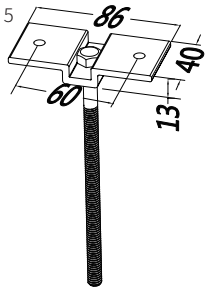

M8*500 expansion screw set

Figure 4



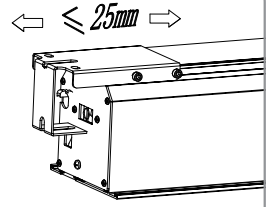
Hanging bracket (installed)

Figure 5



Hanging code assembly

Figure 6



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.

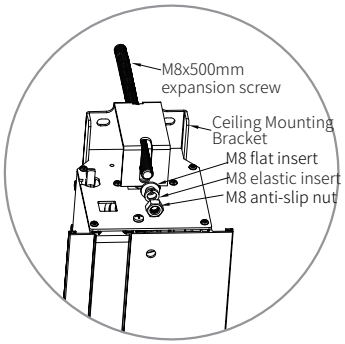



Figure 7

### 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.

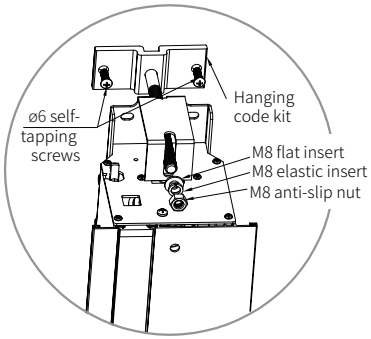



Figure 8

### 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.

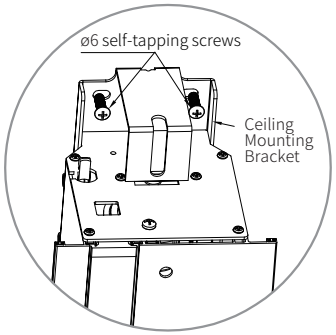



Figure 9





**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).

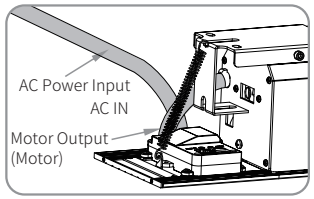



Figure 10

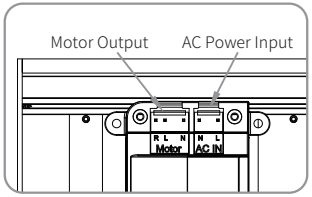



Figure 11

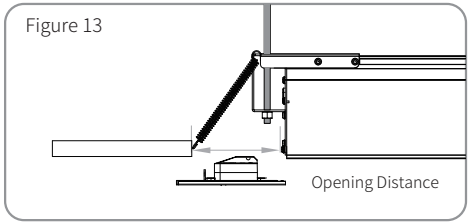
| Corresponding Socket | Terminal Block | Wiring Definitions | Motor Wire Colors | |
|---|---|---|---|---|
| | | | 230V | 120V |
| AC IN | L | Power Phase | | |
| | N | Power Neutral | | |
| Motor | N | Motor Neutral | Blue | White |
| | L | Motor Down | Brown | Red |
| | R | Motor Up | Black | Black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

Figure 12

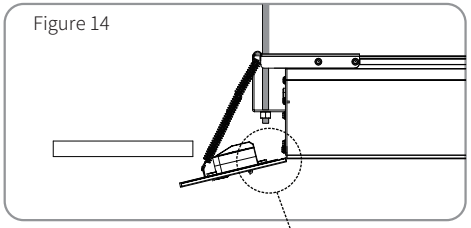
- Power on the screen. Avoid touching high-voltage parts (ACIN and Motor ports) during operation. Press the cycle button on the left end cover to test the screen's ascent and descent. If functioning correctly, power off the screen and proceed with installation.

### Decorative Cover Installation

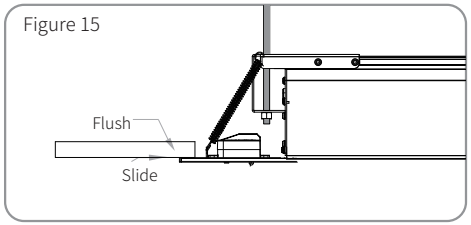
- Install the left decorative cover (with control board) on the power cord side (Figures 13–15). The right decorative cover installation is similar.




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




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




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

