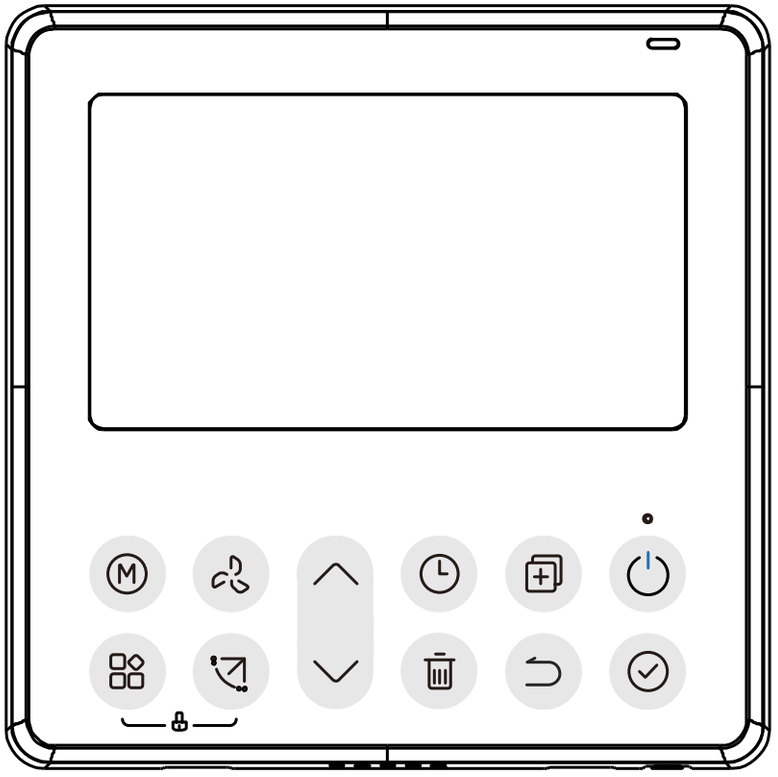
Wired Remote Controller
Ductless Systems
KSACN1401AAA

Installation Manual

NOTE: In order to properly service the wired controller, read this manual carefully prior to operating the unit. Keep this manual after reading for future reference.



NOTE: Images are for illustration purposes only. Actual models may differ slightly.

TABLE OF CONTENTS

PAGE

COMPATIBILITY 3
SAFETY CONSIDERATIONS.....4
BATTERY INSTALLATION.....6
PREPARATION BEFORE INSTALLATION 9
CONTROLLER INSTALLATION.....11
SPECIFICATIONS.....20

COMPATIBILITY

This wired controller is compatible with the following R454B Ductless Systems:

Table 1 —Compatibility

Indoor	Tier
High Wall	High
High Wall	Mid
1- Way Cassette	Mid
4 – Way Cassette	Mid
Floor Console	Mid
High Wall	Entry
High Wall - Cooling Only	Entry
Low Static Ducted	Mid
High Static Ducted	Mid
Celling and Floor Console	Mid
Air Handler	All Tiers

SAFETY CONSIDERATIONS

Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs, elevated structures, etc.). Only trained, qualified installers and service mechanics should install, start-up, and service this equipment. Untrained personnel can perform basic maintenance functions such as cleaning coils.

When working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.

Follow all safety codes. Wear safety glasses and work gloves. Keep a quenching cloth and fire extinguisher nearby when brazing. Use care in handling, rigging, and setting bulky equipment.

Read these instructions thoroughly and follow all warnings or cautions included in the literature and attached to the unit. Consult the local building codes and National Electrical Code (NEC) for special requirements. Recognize safety information.

This is the safety-alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: **DANGER**, **WARNING**, and **CAUTION**. These words are used with the safety-alert symbol.

DANGER identifies the most serious hazards which will result in severe personal injury or death.

WARNING signifies hazards which could result in personal injury or death. **CAUTION** is used to identify unsafe practices which may result in minor personal injury or product and property damage.

NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before beginning any modification or installation of this kit, ensure the main electrical disconnect is in the **OFF** position. Ensure power is disconnected to the fan coil unit.

CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

Do not install the wired controller in an area subjected to excessive steam, oil or sulfide gas. Doing so may damage the controller and/or cause it to fail.

BATTERY INSTALLATION

BATTERY WARNING

KEEP OUT OF REACH OF CHILDREN. Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.



WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours.**
- **KEEP** new and used batteries **OUT OF REACH of CHILDREN**.
- **Seek immediate medical attention if a battery** is suspected to be swallowed or inserted inside any part of the body.





BATTERY WARNING



WARNING: Contains coin battery.

WARNING

INGESTION HAZARD: This product contains a button cell or coin battery.

- **BATTERY WARNING: KEEP OUT OF REACH OF CHILDREN;**
- If the battery compartment (if applicable) does not close securely, stop using the product and keep it away from children;
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

Battery Installation Method

⚠ WARNING

Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. **DO NOT** dispose of batteries in the household trash or incinerate. Even used batteries may cause severe injury or death. Call a local poison control center for treatment information. Non-rechargeable batteries are not to be recharged. **DO NOT** force discharge, recharge, disassemble, heat above 125°F (52 °C) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns. Ensure the batteries are installed correctly according to polarity (+ and -). **DO NOT** mix old and new batteries, different brands or types of batteries such as alkaline, carbon-zinc, or rechargeable batteries. Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.

- Completely secure the battery compartment. If the compartment does not close securely, stop using the product, remove the batteries and keep them away from children.

  Battery type: CR2032
  Battery Power Supply: 3.0V

  a. Put the battery in the installation site. Ensure the positive side of the battery is in accordance with the positive side of installation site (see Fig. 1).

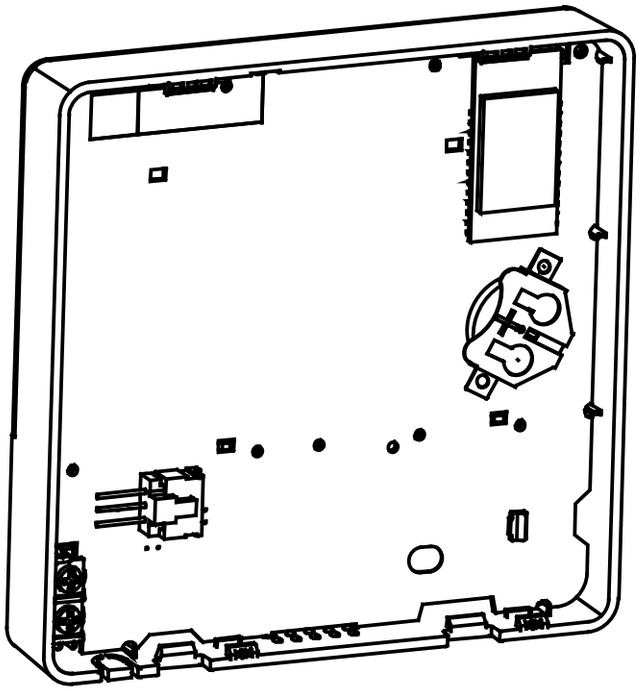


Fig. 1 —Battery Location

  b. Set the time corrected on the first time operation. Batteries in the wired controller can timeout during a power failure which ensures the time is accurate. When the power restores, if the time displayed is not accurate, the battery is dead and must be replaced.

PREPARATION BEFORE INSTALLATION

Select Installation Location

Do not install in a location covered with heavy oil, vapor or sulfate gas, otherwise, this product could be deformed, resulting in system malfunction. CN4- Connection Harness" QTY 1, Remarks Part Number **17401204000184**.

1. Confirm that all the following parts have been supplied:

Table 2 — Parts

No.	Name	Qty.	Remarks
1	Wire Controller	1	N/A
2	Installation and Owner's Manual	1	N/A
3	Screws	3	M3.9*25 (for mounting on wall)
4	Wall Anchors	3	For mounting on wall
5	Screws	2	M4X25 (for mounting on wall)
6	Plastic screw bars	2	For fixing on switch box
7	Battery	1	
8	Connective wire group	1	Optional
9	Screw	1	M4X8 (for mounting the connective wire group
10	Extension Cable (19 ft.)	1	
11	Ferrite Core	1	

2. Field supplied:

Table 3 — Field Supplied

No.	Name	Qty (embedded into wall)
1	Gang Box	1
2	Conduit, where required (follow local codes)	1

NOTE: Extension wire available through RCD (Replacement Components Part Number: 17401204000769.

Precautions When installing the wire controller

1. This manual provides the installation method of wired controller. Please refer to the wiring diagram in this installation manual to connect the wire controller with indoor unit.
2. The wired controller works in low voltage loop circuit. Do not run control wiring in the same conduit with power wiring or other low voltage wiring.
3. The Shielded wire of the wired controller must be grounded firmly.
4. Do not megger the control wiring.

CONTROLLER INSTALLATION

1. Wired remote controller structural dimensions

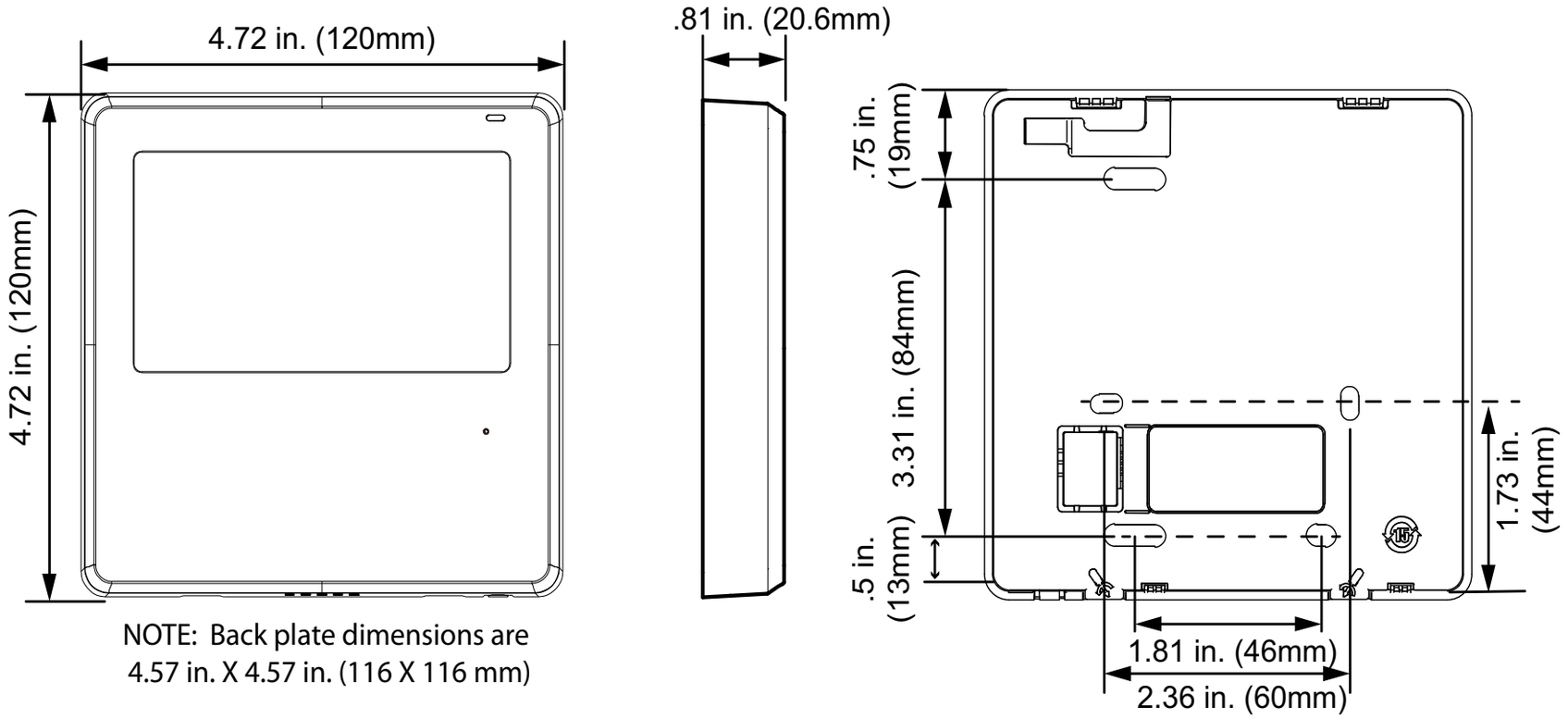


Fig. 2 – Structural Dimensions

2. **Remove the upper part of wired controller**
   – Insert a slot screwdriver into the slots in the lower part of the wired controller (2 places), and remove the upper part of the wire controller (see Fig. 3).

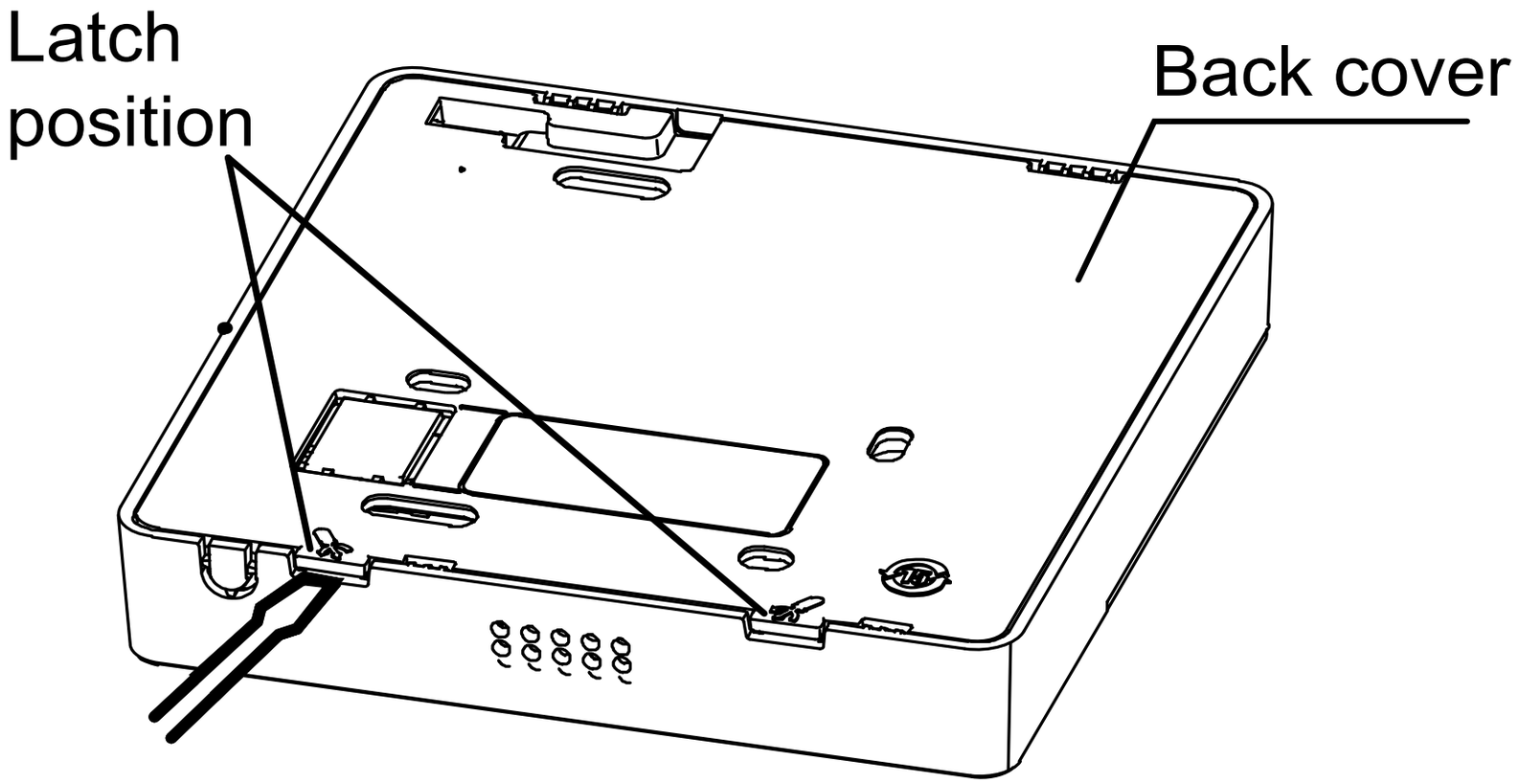
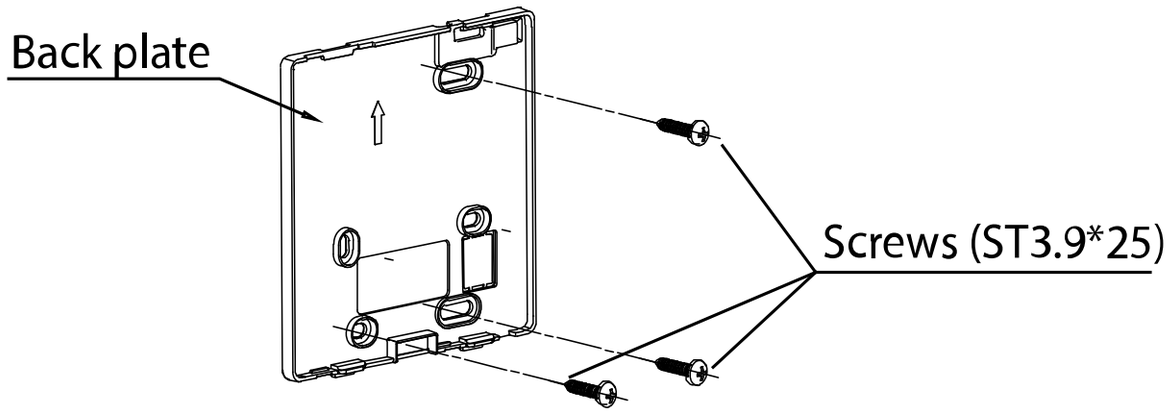


Fig. 3 – Slot Locations on Wired Controller

NOTE: Do not pry up and down, only slightly rotate the screwdriver.

NOTE: The PCB is mounted in the upper part of the wired controller. Be careful not to damage the board with the slot screwdriver.

3. **Fasten the back plate of the wired controller**
   – For exposed mounting, fasten the back plate on the wall with the 3 screws (ST3.9*25) and plugs (see Fig. 4).



Use two M4X25 screws to install the back cover on the 86 switch box, and use one ST3.9*25 screw to fix to the wall.

Fig. 4 – Fasten Back Plate on Wall

   – Use Use two M4X25 screws to install the back cover on the 86 switch box and use one ST3.9*25 screw to fix to the wall (see Fig. 5).

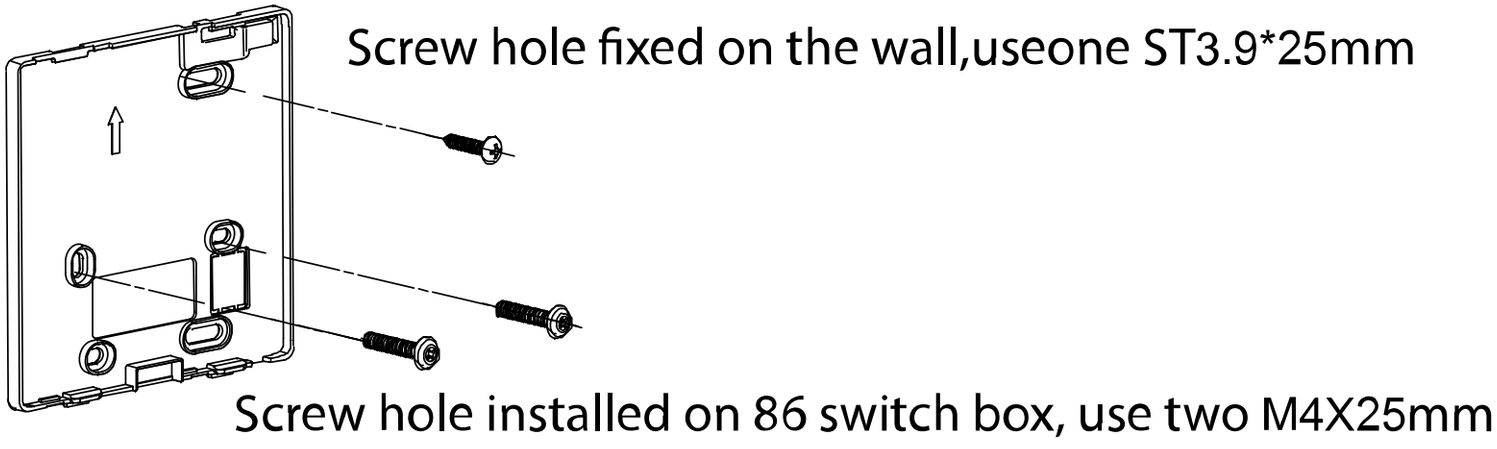


Fig. 5 – Install Back Cover

4. Wire with the Indoor Unit

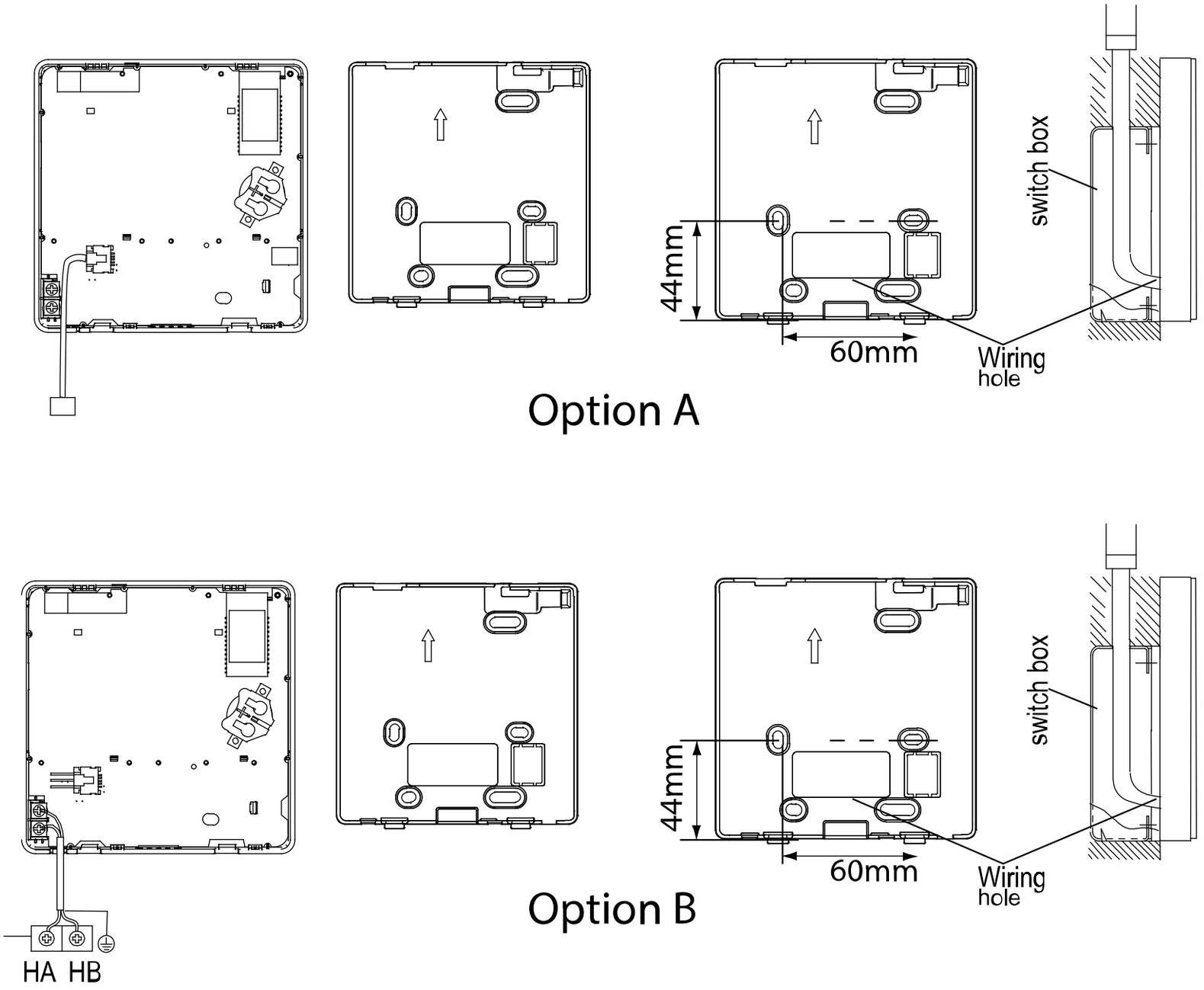


Fig. 6 – Wire with Indoor Unit

Option A

Connect the wire from the display panel of the indoor unit to a connecting cable. Then connect the other side of the connecting cable to the controller.

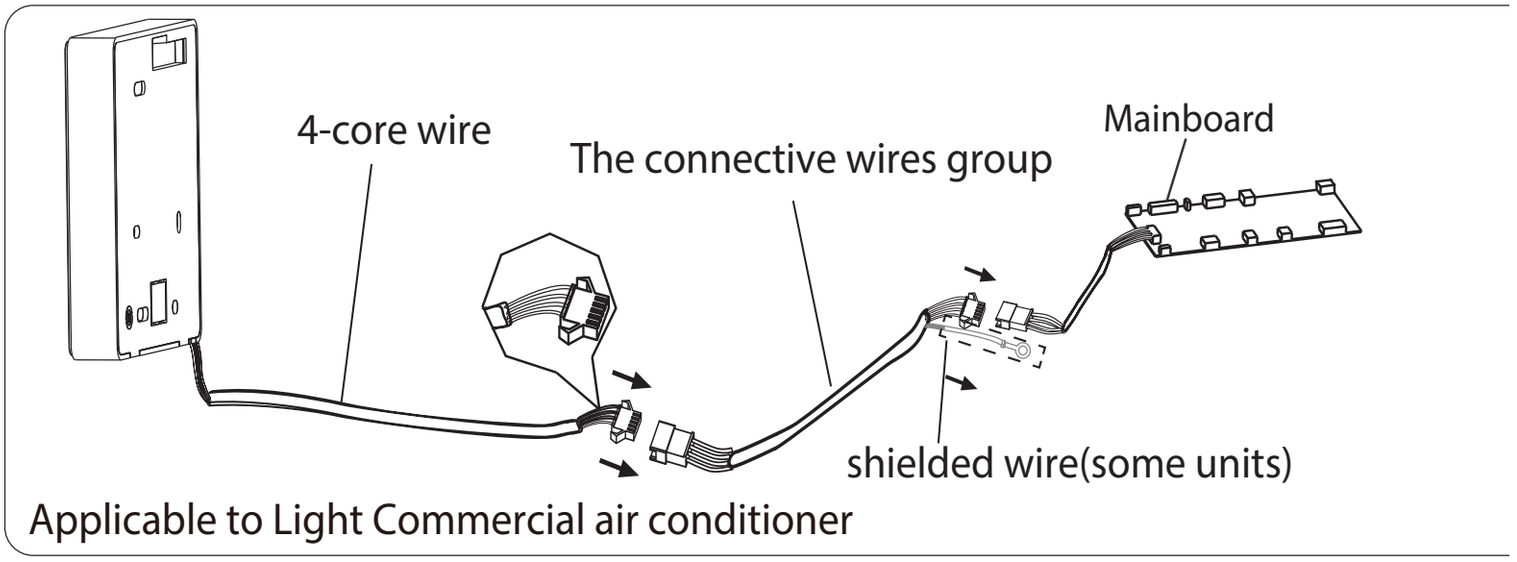


Fig. 7 – Connection to units with a CN40 connection on the main control board

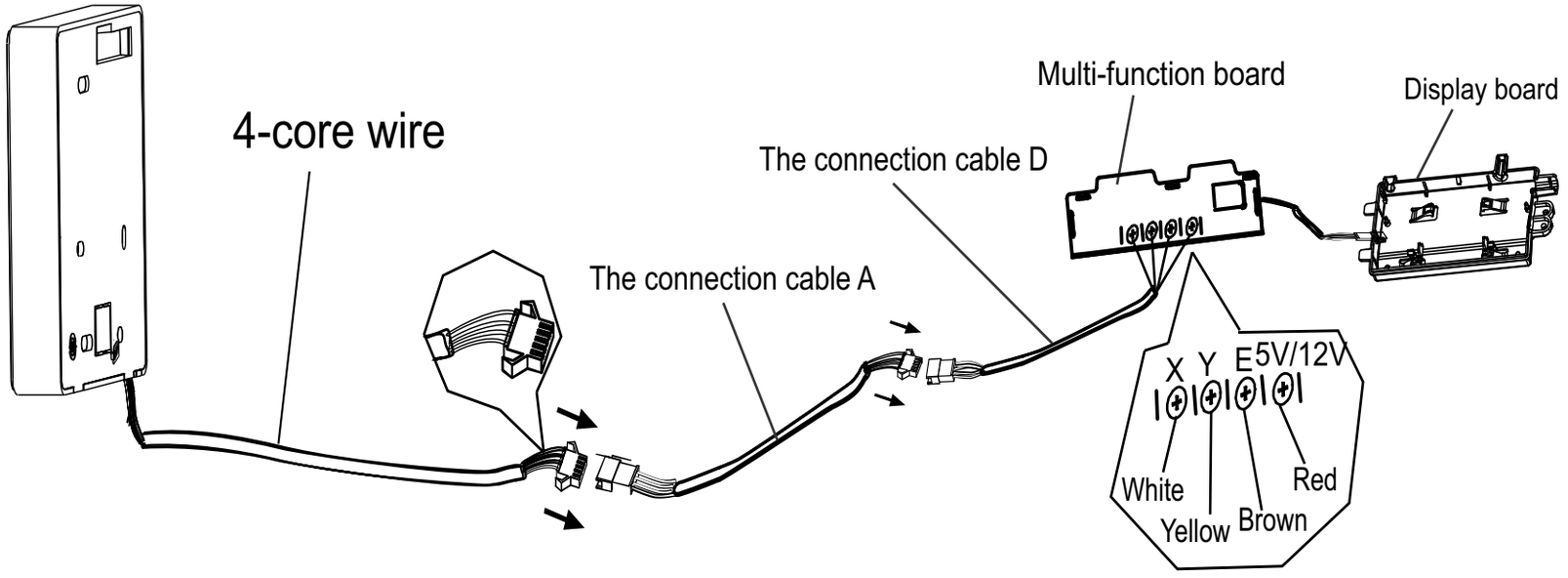


Fig. 8 – Connection to units with XYE terminals on the multi function board

NOTE: Connect Connection A first with 4-core wire then connect to Connection D with multi-function board.

Option B

1. Indoor Unit

Notch the part for the wiring to pass through with nippers, etc.

Connect the terminals on the wired controller (HA ,HB), and the terminals of the indoor unit (HA ,HB). (HA and HB do not have polarity.)

NOTE: DO NOT allow water to enter the wired control. Use the trap and putty to seal the wires.

Connecting wires must be fixed reliably and cannot be pulled.

For some units, the wired controller connects to the unit HA and HB ports through the HA and HB ports. There is no polarity between HA and HB (see Fig. 9).

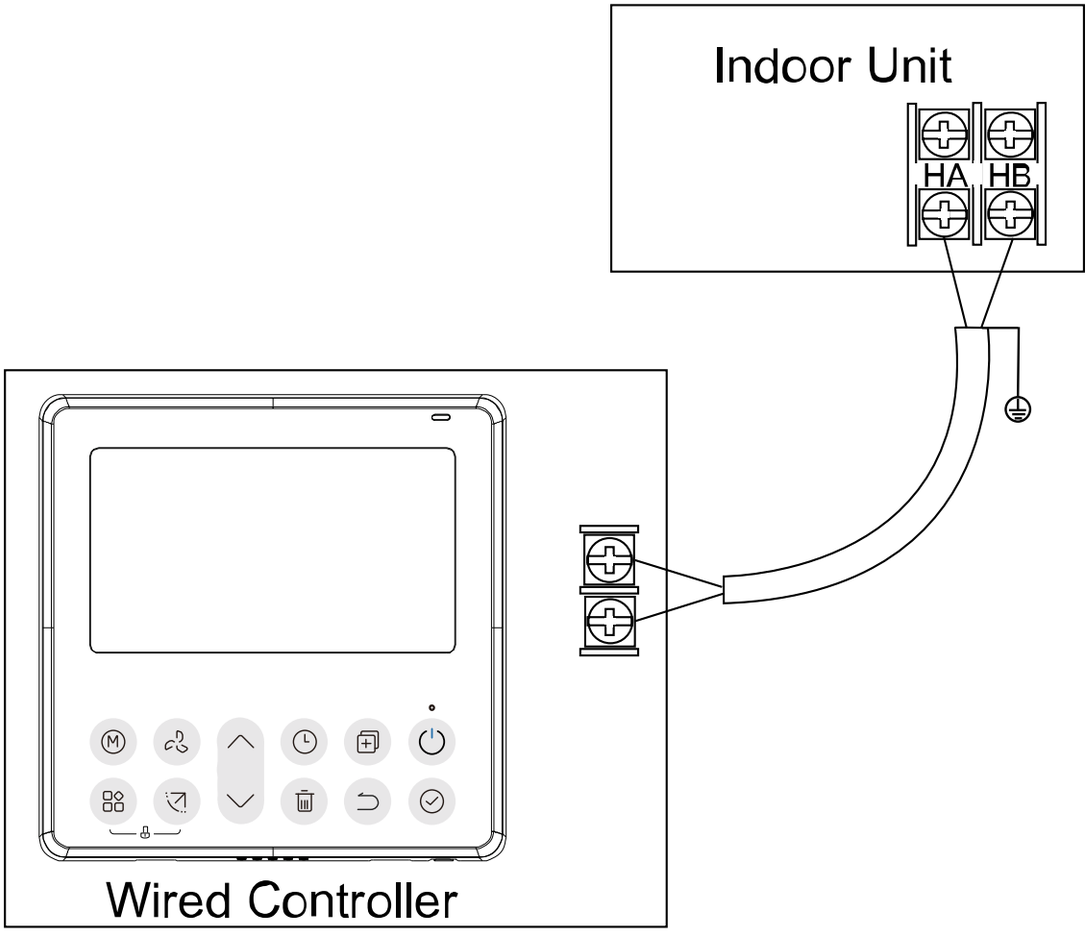


Fig. 9 – Wired Controller Connection to Indoor Unit

The main/secondary wired controller can be used to enable two wired controllers to control one unit, and the wired controllers connect to the unit HA and HB ports through the HA and HB port on the controller. There is no polarity between HA and HB (see Fig. 10).

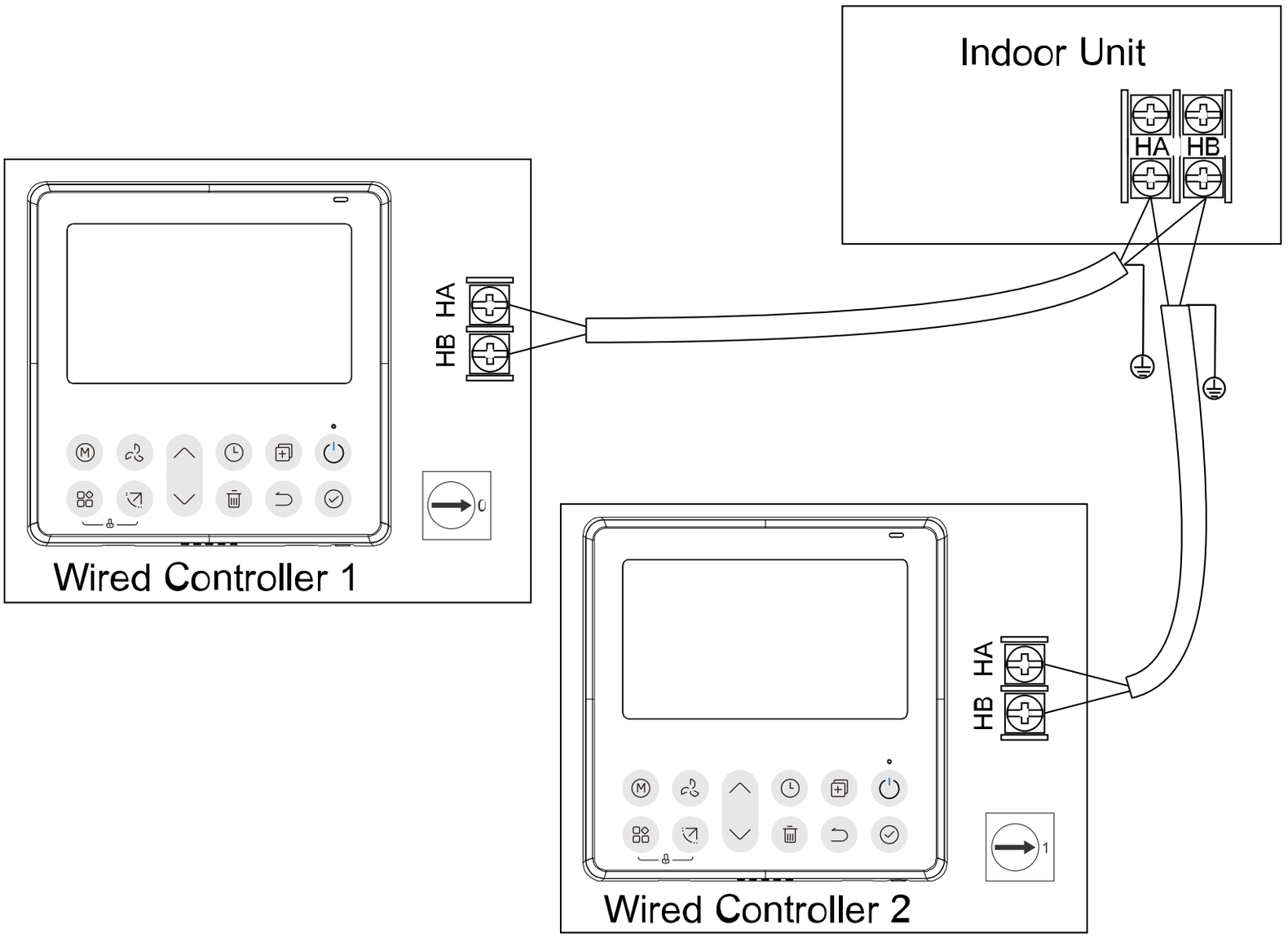


Fig. 10 – Two Wired Controllers Wired to One Unit

NOTE: Wired controller with Wireless function does not have this function.

NOTE: Only applicable to light commercial units and units that have HA/HB connection.

For some units, one wired controller can support multiple units (a maximum of 16 units). In this case, the wired controller and unit need to be connected to the HA and HB ports at the same time. In group control, there will be no error displayed on the wired controller (see Fig. 11).

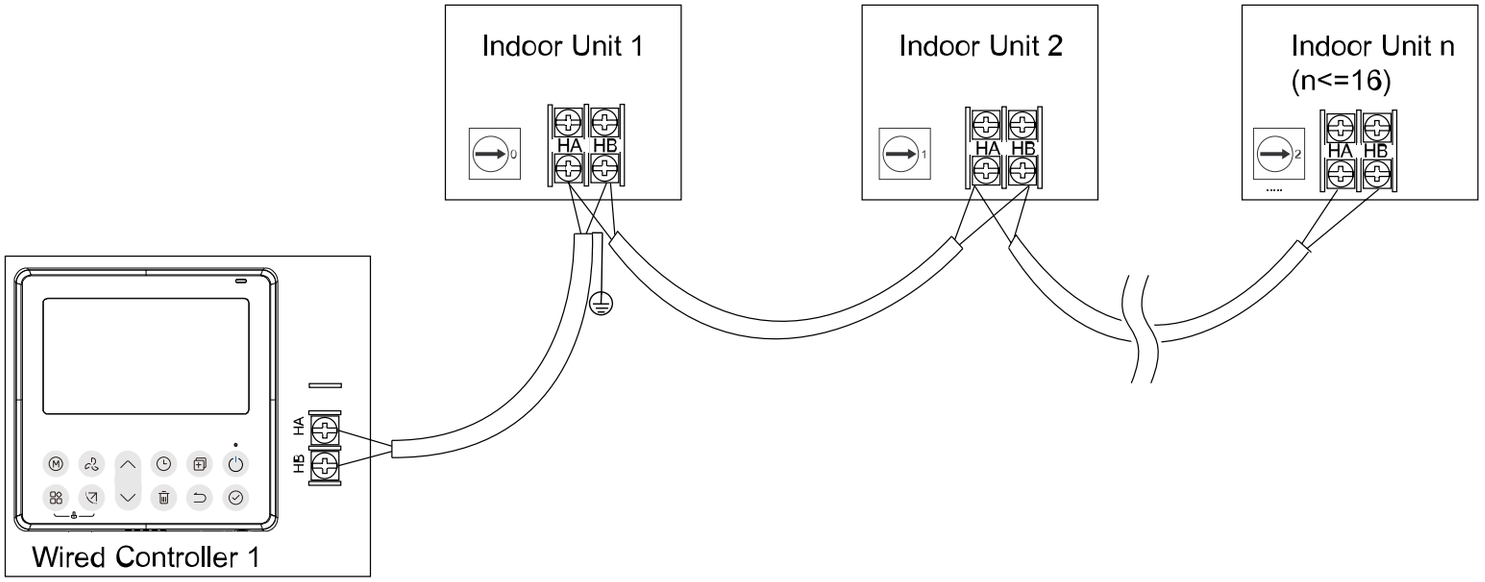


Fig. 11 – One Wired Controller Wired to Multiple Units

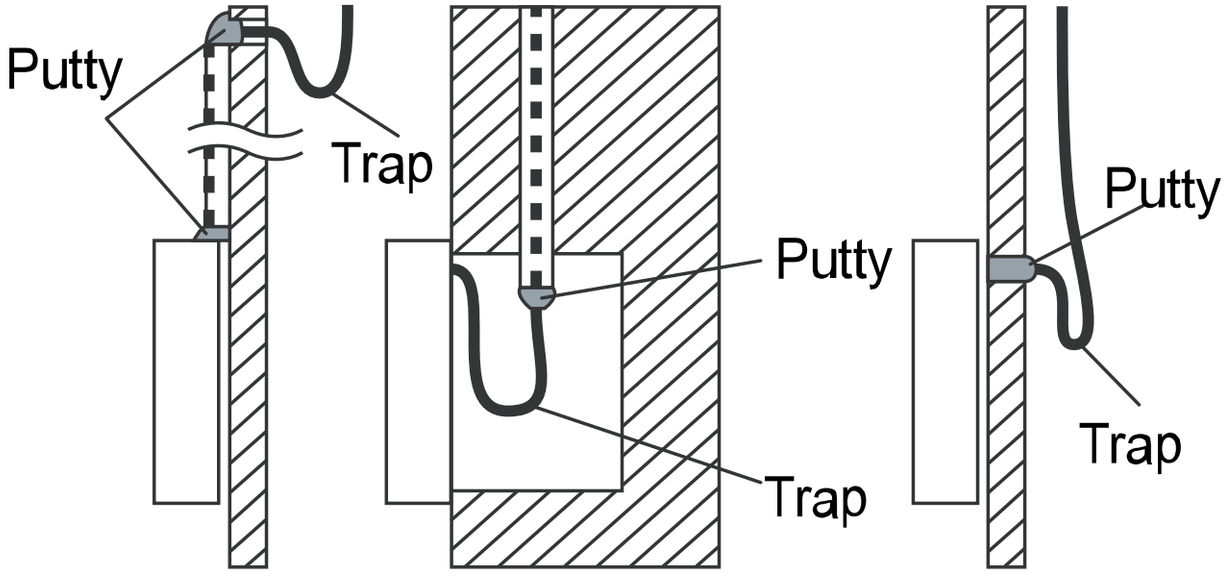


Fig. 12 – Putty and Trap Locations

5. Reattach the top panel of the wired controller

IMPORTANT: Avoid clamping wiring when reattaching the top panel.

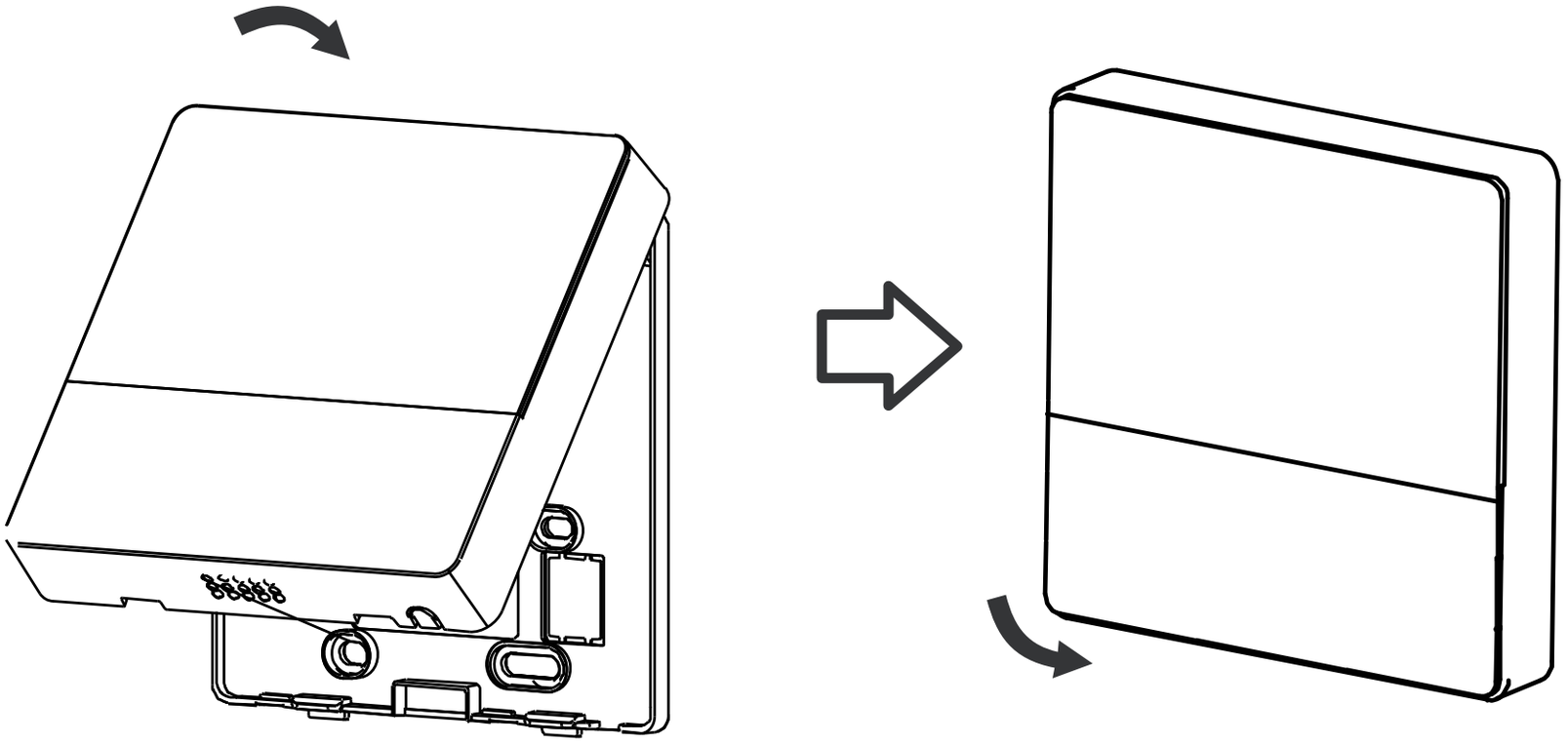


Fig. 13 – Reattach Upper Part of Wired Controller

NOTE: All the pictures in this manual are for explanation purpose only. Your wired controller may be slightly different.

SPECIFICATIONS

Input Voltage	12V
Ambient Temperature	0~43°C(32~110°F)
Ambient Humidity	RH40%~RH90%

Wiring Specifications

NOTE: Use connective extension wire of 20 ft. (6 m) length.

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