KSACN1701BAA

WIRED SMART CONTROLLER

INSTALLATION MANUAL

Wired Smart Controller

Specifications subject to change without notice.

IM- KSACN1701B-01

TABLE OF CONTENTS

PAGE

A NOTE ABOUT SAFETY 2
GENERAL 4
INSTALLATION 5
Precautions 5
Tools Required 5
Compatibility 6
Select the Installation Location 6
Installation Steps 7
WIRED SMART THERMOSTAT - FCC COMPLIANCE 19

A NOTE ABOUT SAFETY

Safety Symbol

Any time you see this symbol ⚠ in manuals, instructions and on the unit, be aware of the potential for personal injury. There are 3 levels of precaution:

1. **DANGER** identifies the most serious hazards which will result in severe personal injury or death.
2. **WARNING** signifies hazards that could result in personal injury or death.
3. **CAUTION** is used to identify unsafe practices which could result in minor personal injury or product and property damage.
4. **NOTE** is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

⚠ WARNING

PERSONAL INJURY AND PROPERTY DAMAGE HAZARD

For continued performance, reliability, and safety, the only approved accessories and replacement parts are those specified by the equipment manufacturer. The use of non-manufacturer approved parts and accessories could invalidate the equipment limited warranty and result in a fire risk, equipment malfunction, and failure.

Please review the manufacturer's instructions and replacement parts catalogs available from your equipment supplier.

⚠ WARNING

PERSONAL INJURY, DEATH AND / OR PROPERTY DAMAGE HAZARD

Failure to follow this warning could result in personal injury, death or property damage.
Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or service agency must use factory-authorized kits or accessories when modifying this product.
Read and follow all instructions and warnings, including labels shipped with or attached to the unit before operating your new air conditioner.

GENERAL

NOTE: Please read this manual carefully before installing or operating your wired smart controller. Make sure to save this manual for future reference.

This manual gives detailed descriptions of the precautions that should be followed during operation.

INSTALLATION

Precautions

- **Do not install the device in a place vulnerable to leakage of flammable gases. Once flammable gases leak and are around the smart thermostat, fire may occur.**
- **Do not operate the device with wet hands. The presence of liquids may cause electric shock or damage the device.**
- **Always disconnect the device from the power source before installation or maintenance to avoid equipment damage or potential electrical shock.**
- **The wiring should be rated for the thermostat current and ensure that the power supply for the smart thermostat is securely isolated when connected to a non-communicating HVAC system.**
- **Ensure the connected cables meet CL2 requirements and meet National and local electrical standards. Otherwise, electric leakage or heating may occur.**
- **Do not alter the terminals of this device.**
- **Before drilling through the wall, ensure that there are no electrical wires, water pipes, or gas pipes inside the wall.**
- **Please install the power supply unit according to the instructions in this manual. Do not alter the power supply unit or usenon-specified power supply products.**
- **During installation and use of the thermostat, please prevent liquid (water, alcohol, etc.) from entering the device.**

Tools Required

- Drill and 3/16” bit
- Pencil
- Needle-nose pliers
- Wire stripper
- Flathead screwdriver
- Phillips-head screwdriver

Compatibility

HA and HB Connections

Compatible only with Ductless Multi-Family Air Handlers, Ductless Air Handlers, Ductless Crossover Air Handlers, and Crossover Coil applications for HA and HB connections. (See Fig. 6)

Not compatible with HA and HB connections on Ducted Units, Cassettes, or Floor/Ceiling Consoles.

24V Connections

Integrates exclusively through a 24V interface for use with Ductless Indoor Units. (See Fig. 8)

Check the 24V interface compatibility charts or 24V Interface submittal to ensure the correct indoor unit is paired with the 24V interface for Wired Smart Controller integration.

NOTE: Refer to the 24 Volt Interface Compatibility Charts to confirm interface compatibility with indoor units.

Select the Installation Location

- Do not install the device in a place vulnerable to leakage of flammable gases. Fire may occur once flammable gases are leaked and left around the thermostat.
- Do not install in a place where heavy oil, vapor, corrosive or sulfureted gasses are present. The device could be damaged leading to system malfunction.
- Do not install on an exterior wall.
- Install the thermostat on a flat wall. An uneven wall may lead to an unstable installation.
- Do not install near any heat-producing equipment. This may cause inaccurate temperature control.
- Ensure the device is not exposed to direct sunlight or facing a very dark corner. This may cause the automatic screen awake feature to not work properly.

- Do not place mirrors, ceramics, or other reflective objects within 1 meter at the 12 o'clock direction in front of the touch screen. This may cause the automatic screen awake feature to not work properly.

Installation Steps

Step 1 Power off the system

Power off your Air-Handler Unit (AHU), Ventilation, and Air Conditioning by using the breaker box or master switch.

Check that your system is off by turning on the heat during winter or the AC during summer. Wait a few minutes; you should not feel any air coming from your vents.

WARNING

The thermostat OFF switch will not turn off the power to the equipment.

Step 2 Label Wires

Take the labels, tools, AHU Manual, and smart phone to the AHU System. Open the AHU system's cover and locate the display board. (See Fig. 1)

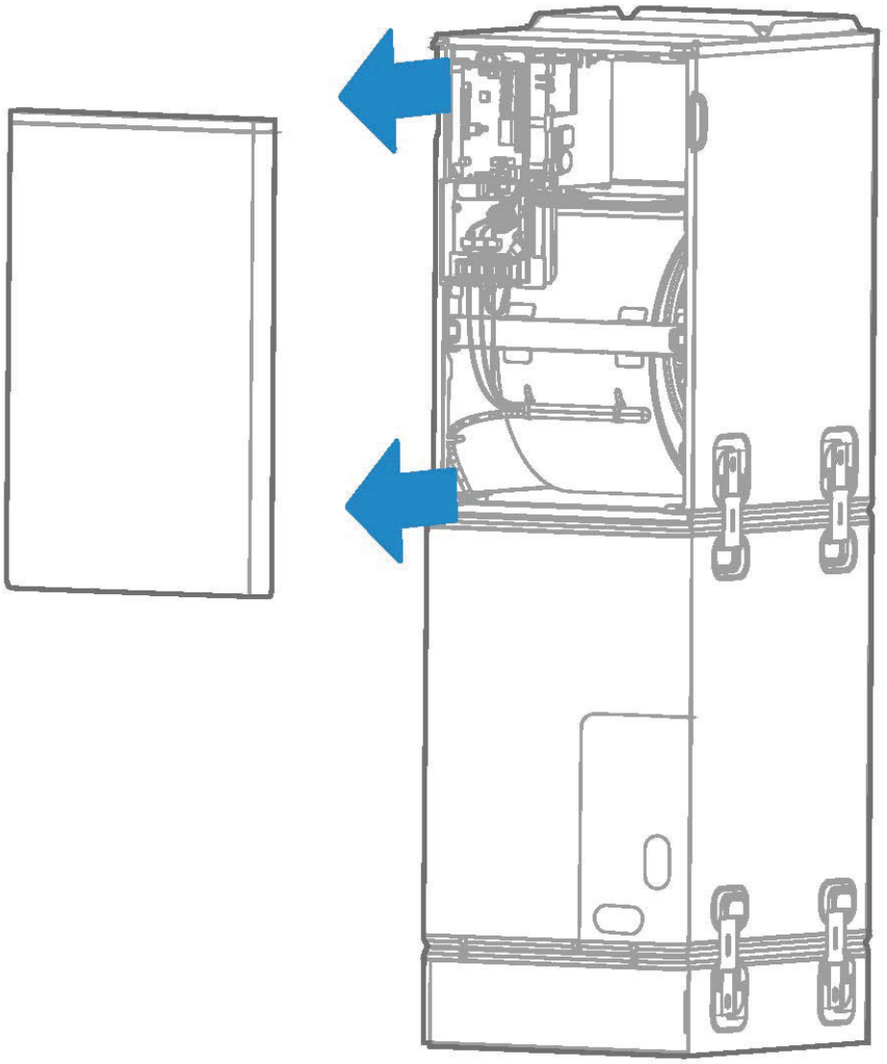


Fig. 1 Open AHU Cover

Determine which type of system you have by checking the terminals on the board (HA & HB or 24 V). (See Fig. 2) Label the wires if they are not already labeled. Take a picture of the labeled wires connected to the control board. You may refer to this picture during the installation.

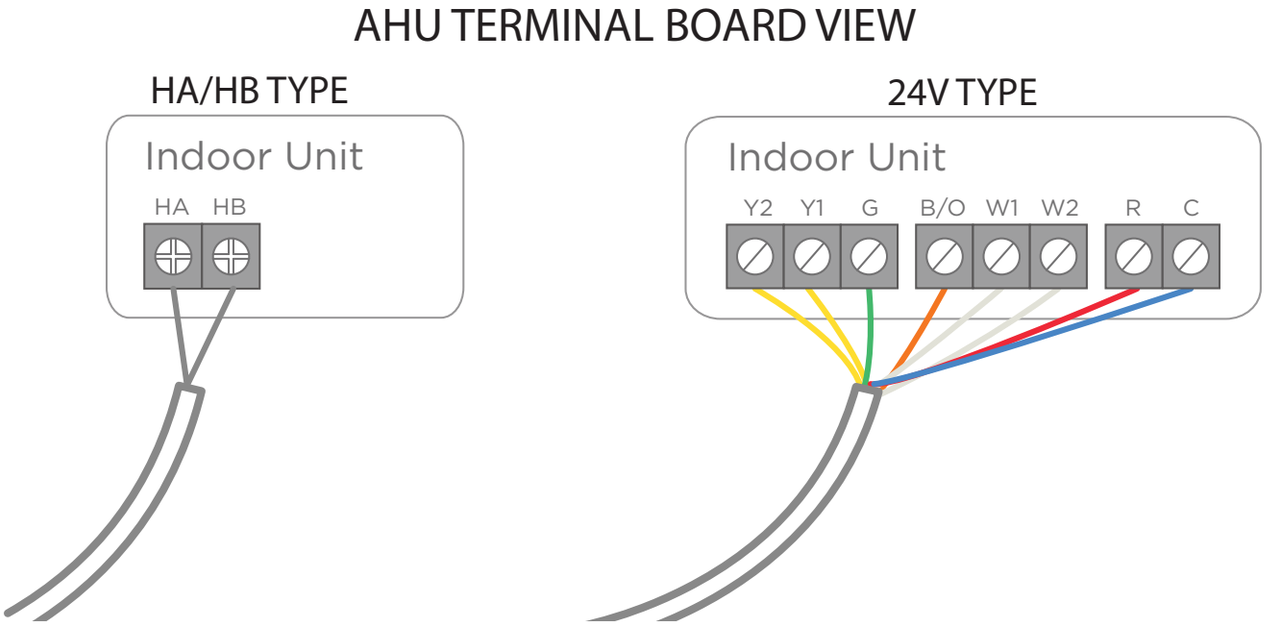


Fig. 2 System Types

Close the cover to the AHU system and return to your thermostat. If a thermostat is already installed, remove the cover, take a picture of the wiring, and label the wires based on their location on the thermostat. Remove the wires from the terminals and remove the old thermostat.

Step 3 Installation Location

- Use the M-base to locate the position where you want to place the thermostat.
- Place M-base on the wall and use the included level to correctly position the thermostat.
- Mark the screw hole position with a pencil, then remove the M-base.

Refer to the "Select the installation Location" section for the best location.

- It is recommended to use a 3/16 in. drill bit to drill the two holes.
- Insert the anchors (2).
- Re-position the M-base.
- Determine if you need to use the trim plate to cover marks or holes left by other systems.
- Install the screws (2). (If using optional trim plate do this after Step 4)

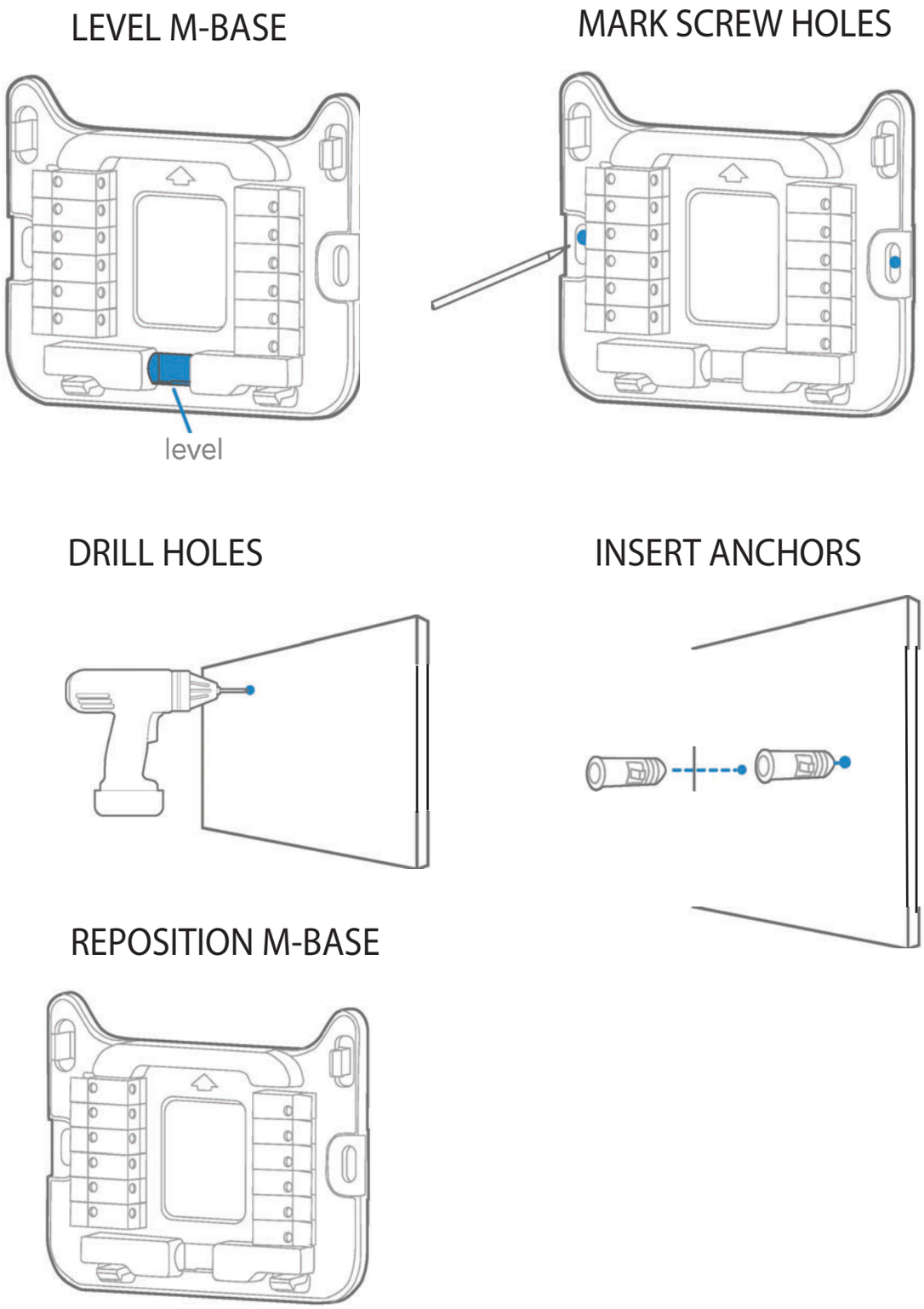


Fig. 3 Install the M-Base

Step 4 Trim Plate (Optional)

- If needed, use the trim plate with your thermostat. (See Fig. 4)
- If you use the trim plate, please align the mounting holes on the trim plate with the M-base.
- The trim plate is found in the bottom of the box.

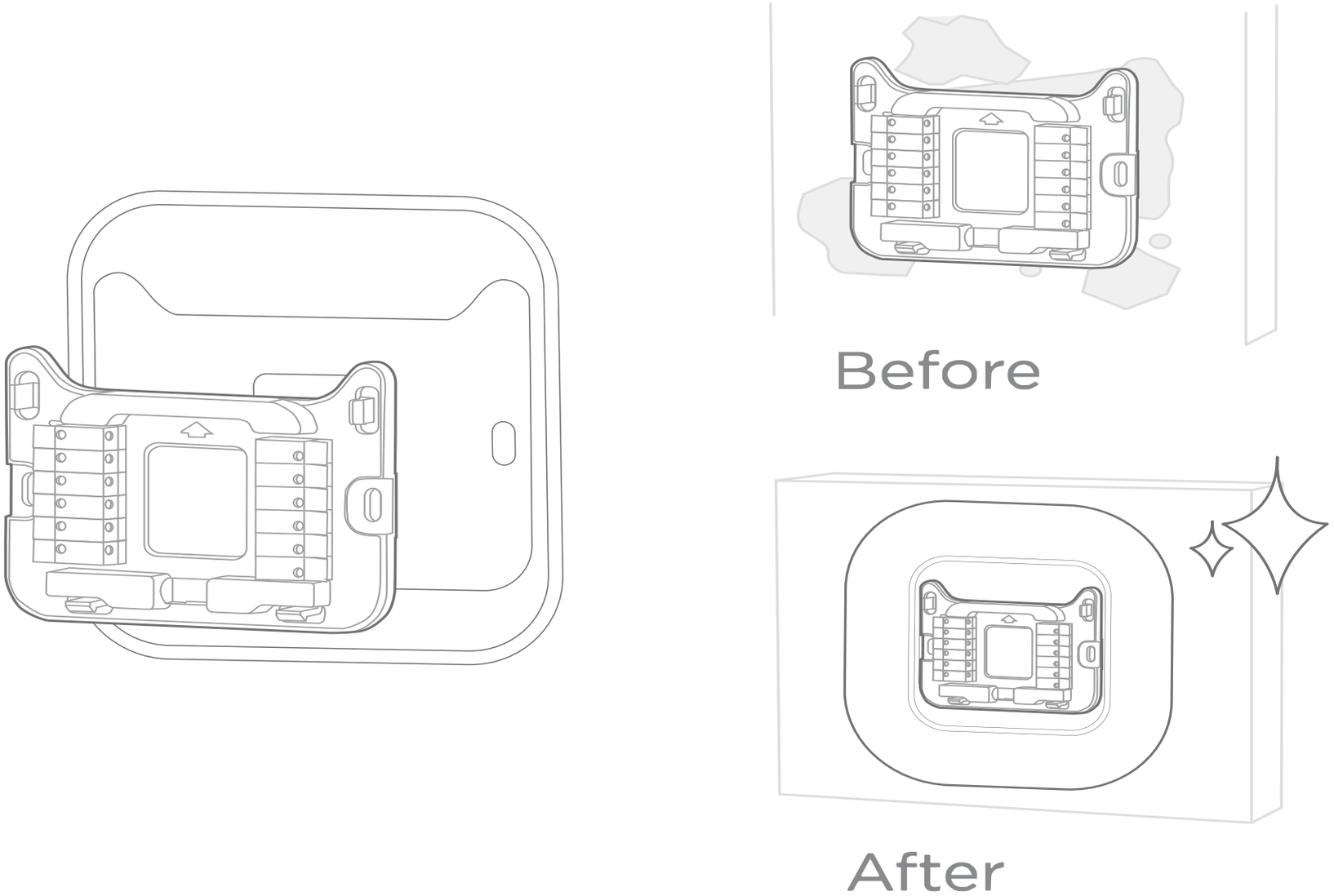


Fig. 4 Install Optional Trim Plate

Step 5 Connect Wires HA & HB

- Label the HA and HB wires. You can refer to the picture taken previously in the system.

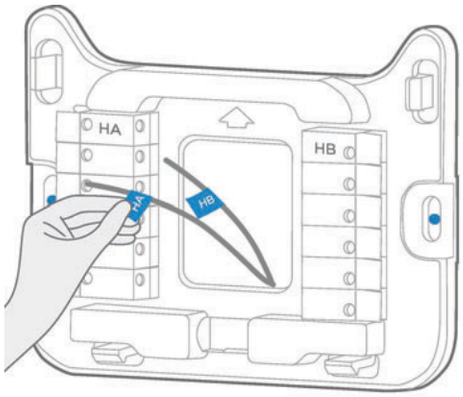
NOTE: To easily insert wires into the terminals, please ensure each wire is stripped to a length of 0.3-0.4 inches. The terminals allow for a wide range of wire sizes: AWG 18-24.

- Pull the HA and HB wires through the center hole of the M-base. (See Fig. 5)
- Push the terminal block levers with pencil or use needle nose pliers when inserting the wires.

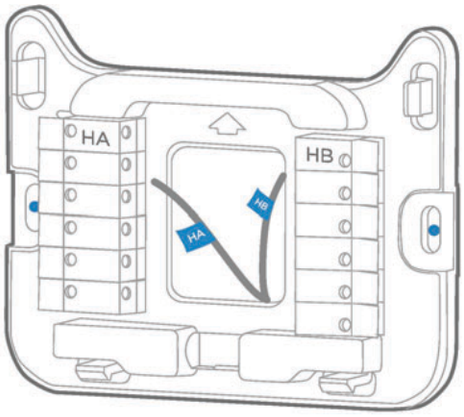
NOTE: The terminal block levers will be pushed downwards when the wire is connected.

- Gently tug on the wires to ensure they are securely connected.

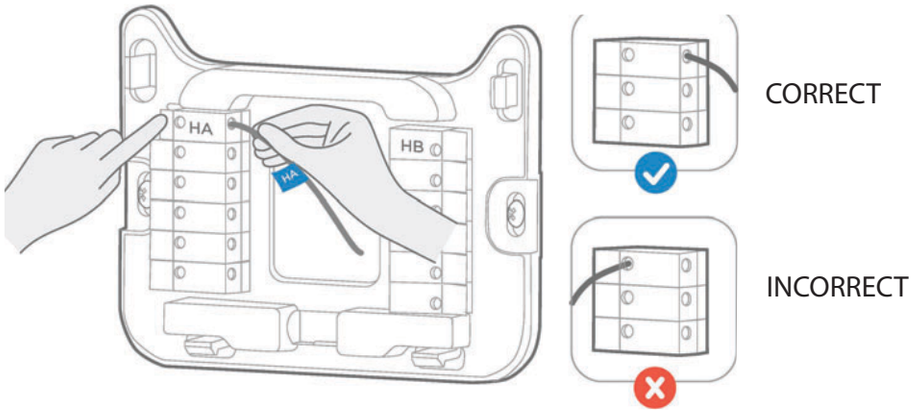
LABEL THE HA AND HB WIRES



PULL THE WIRES THROUGH THE HOLE



CONNECT THE WIRES TO THE TERMINAL BLOCKS



VERIFY CONNECTIONS ARE SECURE

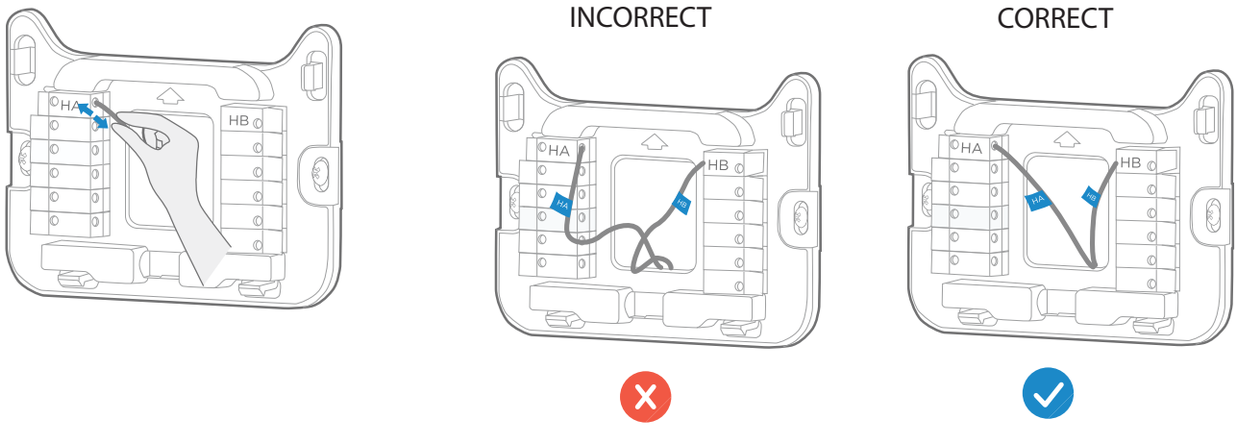


Fig. 5 Connect HA and HB Wires

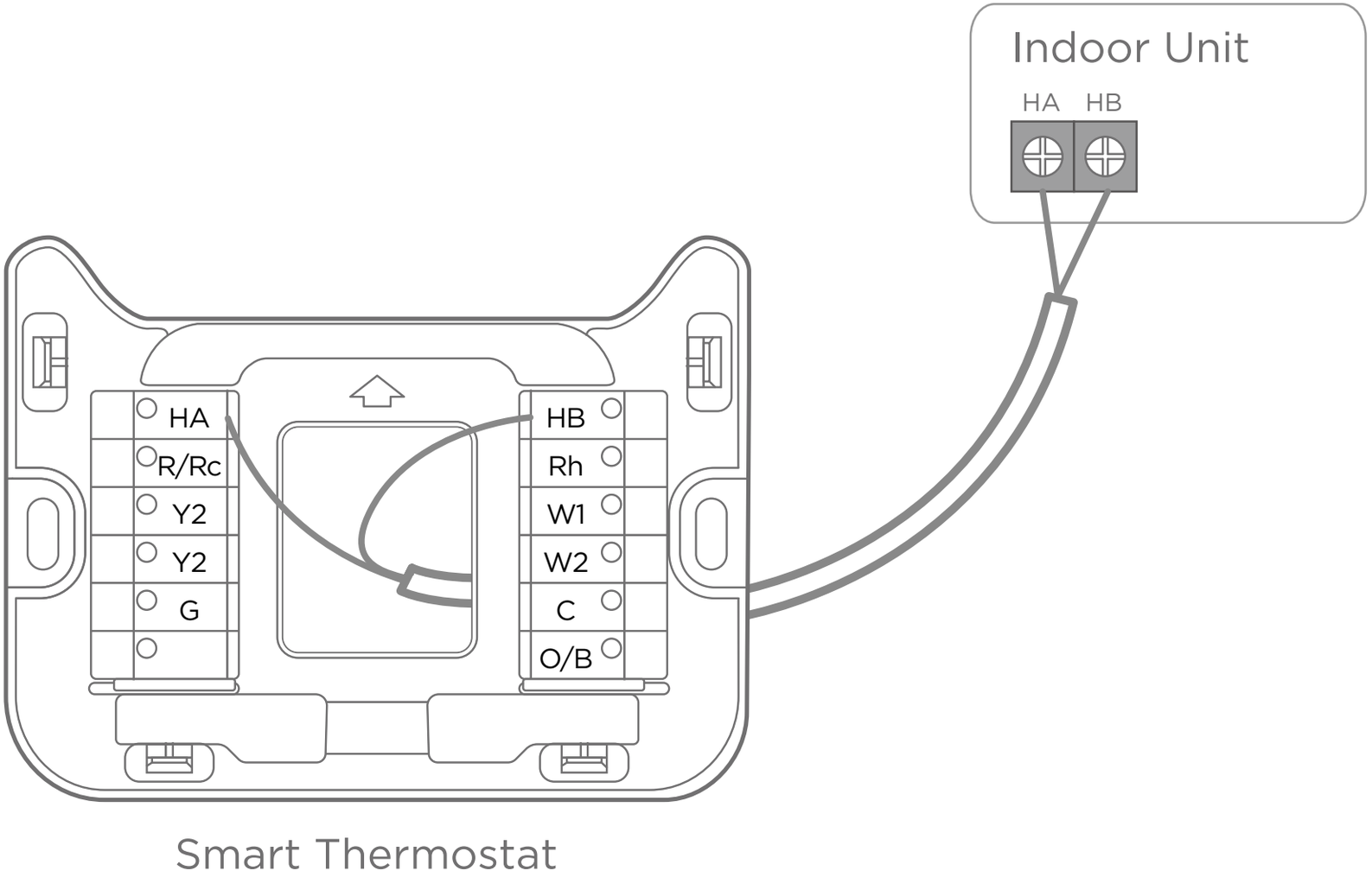


Fig. 6 - HA and HB Connections

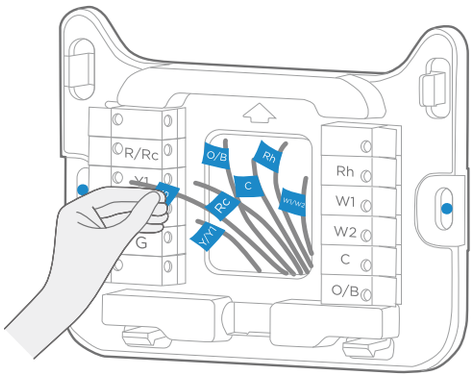
Step 6 Connect 24V Wires

- Label the 24V wires according to their color. You can refer to the picture taken previously. (See Fig. 7)
- Pull the wires through the center hole of the M-base.
- Push the terminal block levers with pencil or use needle nose pliers when inserting the wires.

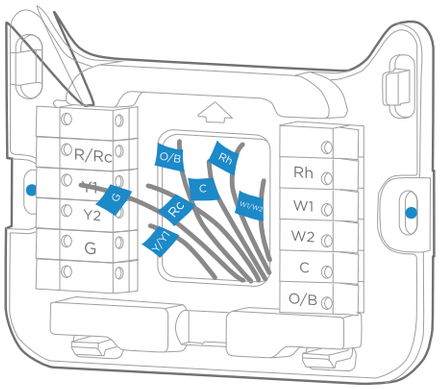
NOTE: The terminal block levers will be pushed downwards when the wire is connected.

- Gently tug on the wires to ensure they are securely connected.
- After all wires are securely connected, push any excess wires back into the hole and ensure there are no wires left outside.

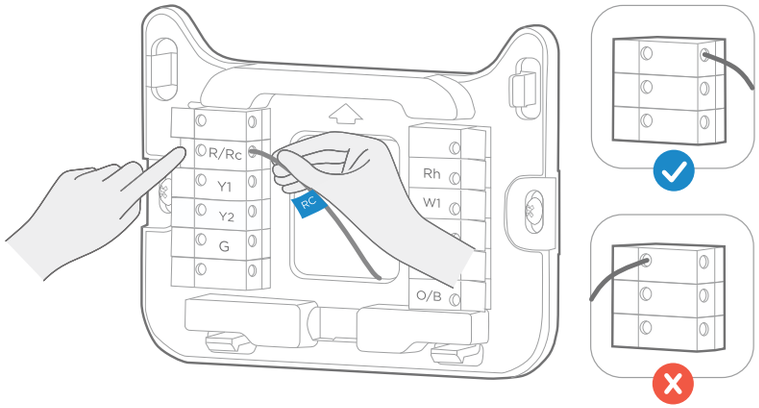
LABEL THE 24V WIRES



PULL THE WIRES THROUGH THE HOLE



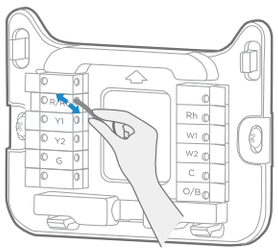
CONNECT THE WIRES TO THE TERMINAL BLOCKS



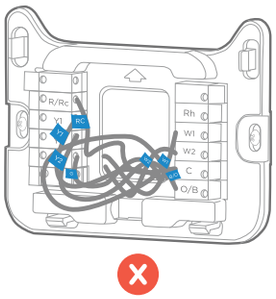
CORRECT

INCORRECT

VERIFY CONNECTIONS ARE SECURE



INCORRECT



CORRECT

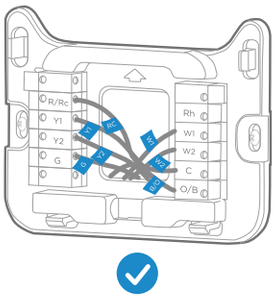
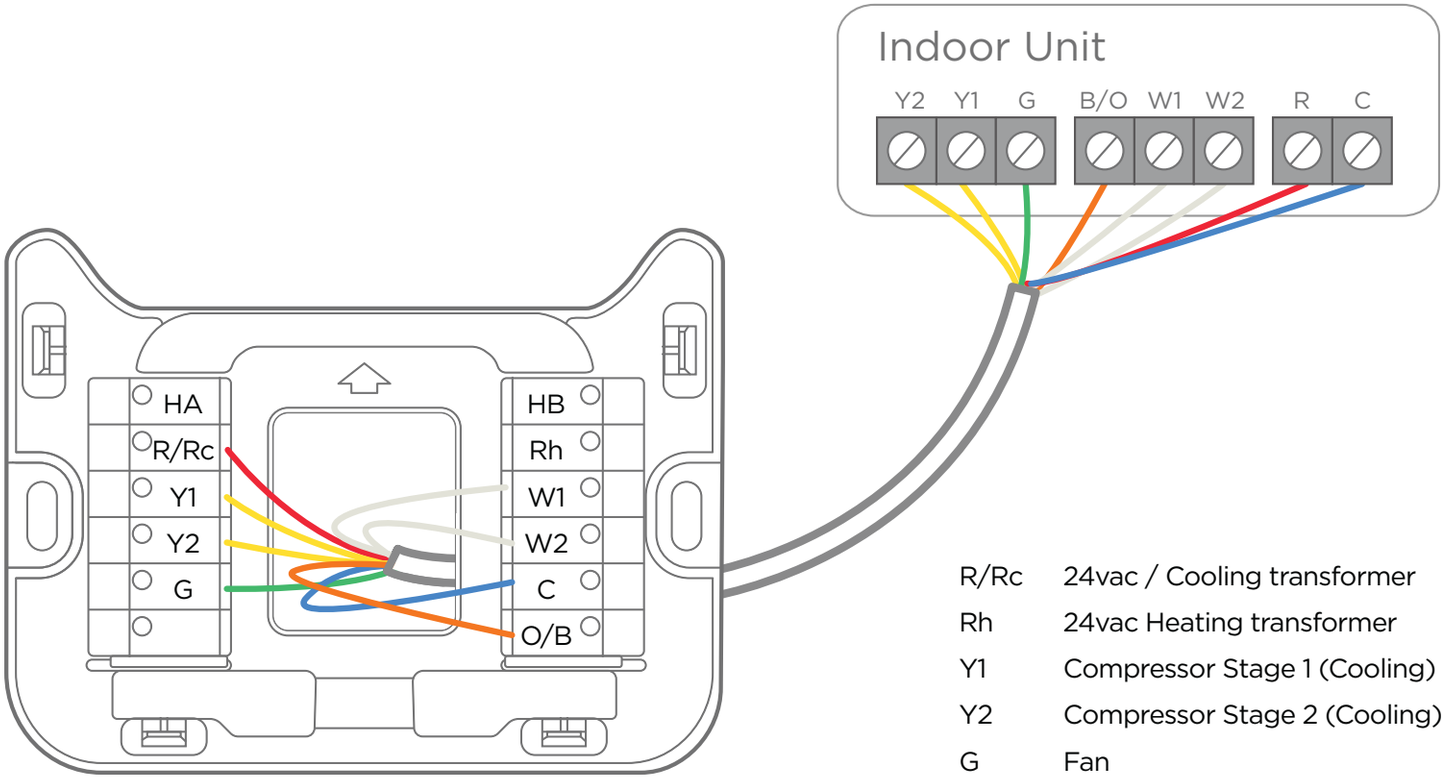


Fig. 7 Connect 24V Wires

24 Volts

This is for example only,
please refer to the manual of the Indoor Unit for details.



Smart Thermostat

R/Rc	24vac / Cooling transformer
Rh	24vac Heating transformer
Y1	Compressor Stage 1 (Cooling)
Y2	Compressor Stage 2 (Cooling)
G	Fan
W1	Heat Stage 1 (Heating)
W2	Heat Stage 1 (Heating)
C	Common
O/B	Reversing valve for Heat Pump systems

Fig. 8 - 24V Connections

Step 7 Finish the Installation

- Gently press the thermostat onto the M-base by using the "ears" of the M-base to align. (See Fig. 9)

IMPORTANT: If the thermostat doesn't automatically turn on or suddenly shuts down after turning on the power, it may due to an insufficient power supply from the indoor unit. It is recommended that you connect the R/Rc and C terminals of the thermostat with the R/Rc and C terminals of the indoor unit to obtain additional power. You can also contact professional installers for assistance. For more information, please contact your sales representative.

- Turn ON the power to your system by using the master switch or breaker box.
- The unit is now ready to use

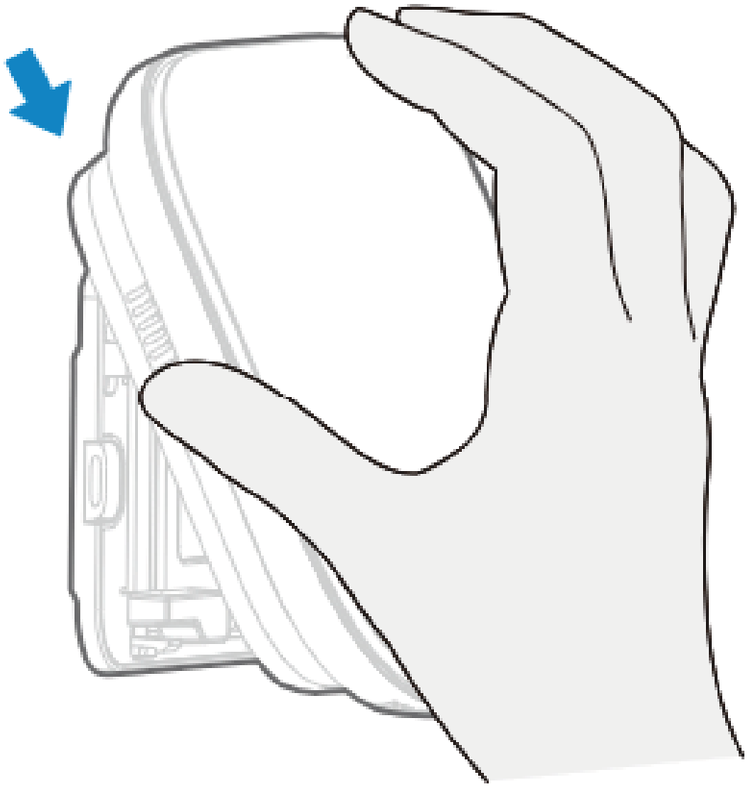


Fig. 9 Finish Installation

WIRED SMART THERMOSTAT - FCC COMPLIANCE

Model: KSACN1701BAA

FCC ID: 2ADQOMDNA26

IC: 12575A-MDNA26

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

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

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

--Reorient or relocate the receiving antenna.

--Increase the separation between the equipment and receiver.

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

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

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

IC Warning

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Product Information

Construction of Control: Independently Mounted Control

Operation Method: Type 1 Action

Pollution Degree: 2

Purpose of Control: Operation Control

Protection Class: I P00

Ambient operating Temperature: 32~95^{0}F (0~35^{0}C)

Storage Temperature: -40~140°F (-40~60°C)

Compatibility

This unit works with specific communication systems by HA & HB and most 24V systems.

For communication, HA & HB are communication non-polarity.

For 24V, it can control: Heating 1,2 stages (Wl, W2); Cooling 1,2 stages(Yl,Y2); Heat Pump with auxiliary and emergency heat (O/B, Wl, W2); Fan (G); Power (R/Rc, Rh, C).

Terminal Descriptions

Terminal	Description
HA, HB	Communication non-polarity
R/Rc	Cooling Power
Rh	Heating Power
Y1, Y2	1-2 stages of AC or 1-2 stages of heat pump compressor
W1, W2	1-2 stages of heat or 1-2 stages of auxiliary heat with heat pump 24VAC common
C	24VAC Common
G	Fan
O/B	Heat pump reversing valve

NOTES:

© 2026 Carrier Company
Edition Date: 03/26

Catalog No. IM- KSACN1701B-01

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.
Replaces: New