

Installation Instructions

NOTE: Read the entire instruction manual before starting the installation.

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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 coil cleaning. All other operations should be performed by trained service personnel.

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 literature and attached to the unit. Consult local building codes and current editions of the National Electrical Code (NEC) NFPA 70. In Canada, refer to current editions of the Canadian electrical code CSA 22.1.

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.



CAUTION

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death. Before installing, modifying, or servicing system, main electrical disconnect switch must be in the **OFF** position. There may be more than one disconnect switch. Lock out and tag the switch with a suitable warning label.



WARNING



EXPLOSION HAZARD

Failure to follow this warning could result in death, serious personal injury, and/or property damage.

Never use air or gases containing oxygen for leak testing or operating refrigerant compressors. Pressurized mixtures of air or gases containing oxygen can lead to an explosion.



CAUTION

EQUIPMENT DAMAGE HAZARD

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

Do not bury more than 36 in. (914 mm) of refrigerant pipe in the ground. If any section of pipe is buried, there must be a 6 in. (152 mm) vertical rise to the valve connections on the outdoor units. If more than the recommended length is buried, refrigerant may migrate to the cooler buried section during extended periods of system shutdown. This causes refrigerant slugging and could possibly damage the compressor at start-up.

GENERAL

The Control Box Adapter

Main functions of the control box

1. Communicates the difference in space temperature and space setpoint temperature to the control that sets compressor speed.
2. Provides a signal to the indoor fan to set fan speed appropriate for compressor staging.

Features

- The control box is connected to the outdoor unit via RS485 communication and to the furnace via 24V control.
- It is installed in conjunction with the provided wire controller.
- Room temperature sensor and pipe temperature sensor are equipped as standard.



WARNING



Wires must be properly sized according to the NEC/NFPA 70, CEC and all prevailing codes, ordinances and standards.

All conductors must be installed with a strain relief eliminating stress on the wire following installation which may result in wire damage and/or overheating with a potential for fire.

Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.

All wiring to be rated for the control box amperage rating.

All wiring installed to meet general industry standards and practices.

Do not install adapter near flammable liquids or gases.

Do not operate the unit with wet hands, as this could lead to electrical shock.



CAUTION

When connecting with RS485 communication to the outdoor unit, shielded wire must be used and grounded at one end only.

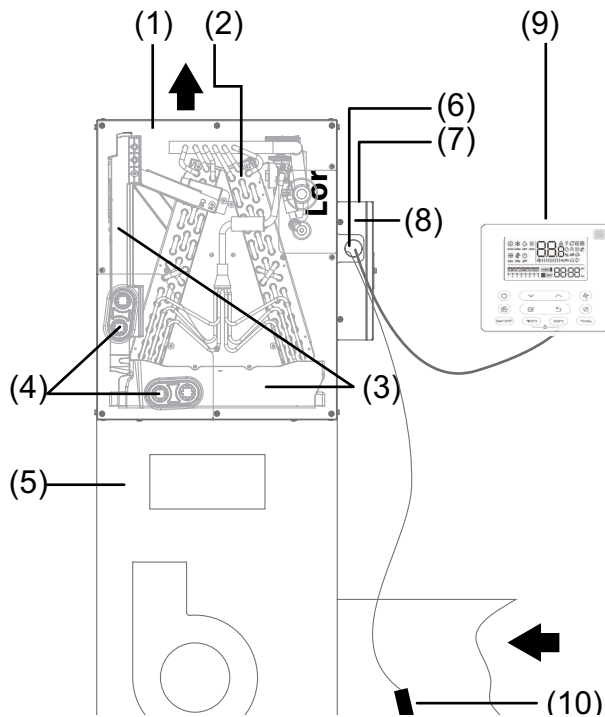
When using shielded wire the cable should be grounded at one end to reduce EMI. T1 sensor cable shall not exceed 23' (7 m).

NOTE: Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

PARTS LIST

Table 1 — Parts List

Part No.	Part Name	Remarks	Qty
1	Control box		1
2	Screws	M4*25 (For mounting on the wall)	5
3	Anchors	For mounting on the wall	5
4	Room Temp. Sensor (T1)	For connecting the sensor	1
5	Room Temp. Sensor Line (T1) (5m)		1
6	Ferrite Clamp		1
7	Coil Temp. Sensor (T2) (1.6m)		1
8	Zip tie		3
9	Wired remote Controller	Supplied controller must be used	1
10	Screws	For mounting on the A-coil	4
	T2 Clip (sold separately)	For clipping T2 sensor to coil	1



- (1). A-COIL
- (2). Pipe temperature sensor(T2)
- (3). Drain pan
- (4). Condensate drain connection
- (5). Furnace
- (6). Indoor and outdoor unit communication cable
- (7). Power supply system
- (8). Control interface
- (9). Wired wall controller
- (10). Room temperature sensor (T1)

NOTE:

The 1/2-inch wiring holes on the box need to be connected to standard conduit fitting conduit (flexible or rigid).

Extension wires for T1 and T2 are included in the accessory kit.

Fig. 1 —Coil Adapter with Call-outs

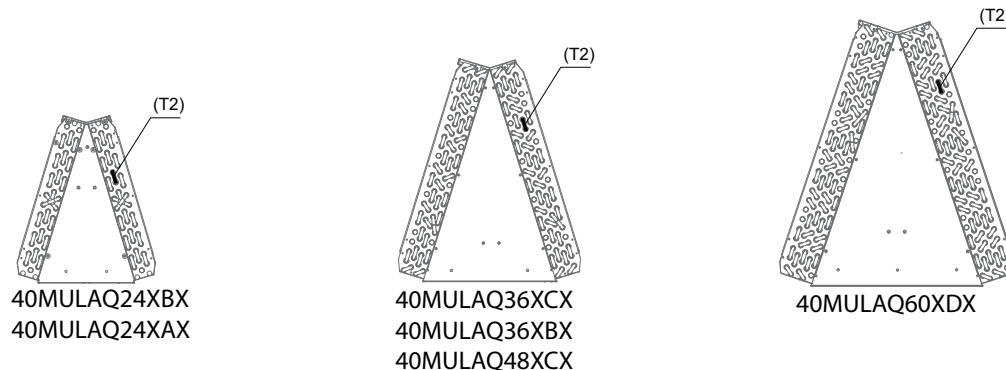


Fig. 2 — Position of Pipe Temperature Sensor (T2) On Evaporator Coil



WARNING

Before obtaining access to terminals, all supply circuits must be disconnected. Risk of electric shock. Can cause injury or death. Disconnect all remote electric power supplies before servicing.

SENSOR INSTALLATION

To Install the T1 Sensor:

1. Use a 1/4" drill bit (or Unibit) to drill an opening in the return plenum. The distance of the T1 location should be within the 16' of the T1 extension wire provided.
2. Connect the T1 extension to the T1 sensor and install the sensor into the return plenum. Seal the opening as needed to avoid air leakage.

To Install the T2 sensor:

1. Locate the marking on the coil cabinet for marking. If there is no marking, the location for drilling will be the upper left or upper right side of cabinet depending on install orientation (see Fig 3).
2. Use a 1/4" drill bit (or Unibit) to drill an opening on the appropriate side for installing T2 sensor. Use caution when drilling to not damage the coil.
3. Install the sensor through the opening and seal opening as needed to avoid air leakage.
4. Use Fig. 2 to match the T2 sensor location with the appropriate coil and install sensor with provided sensor clip.

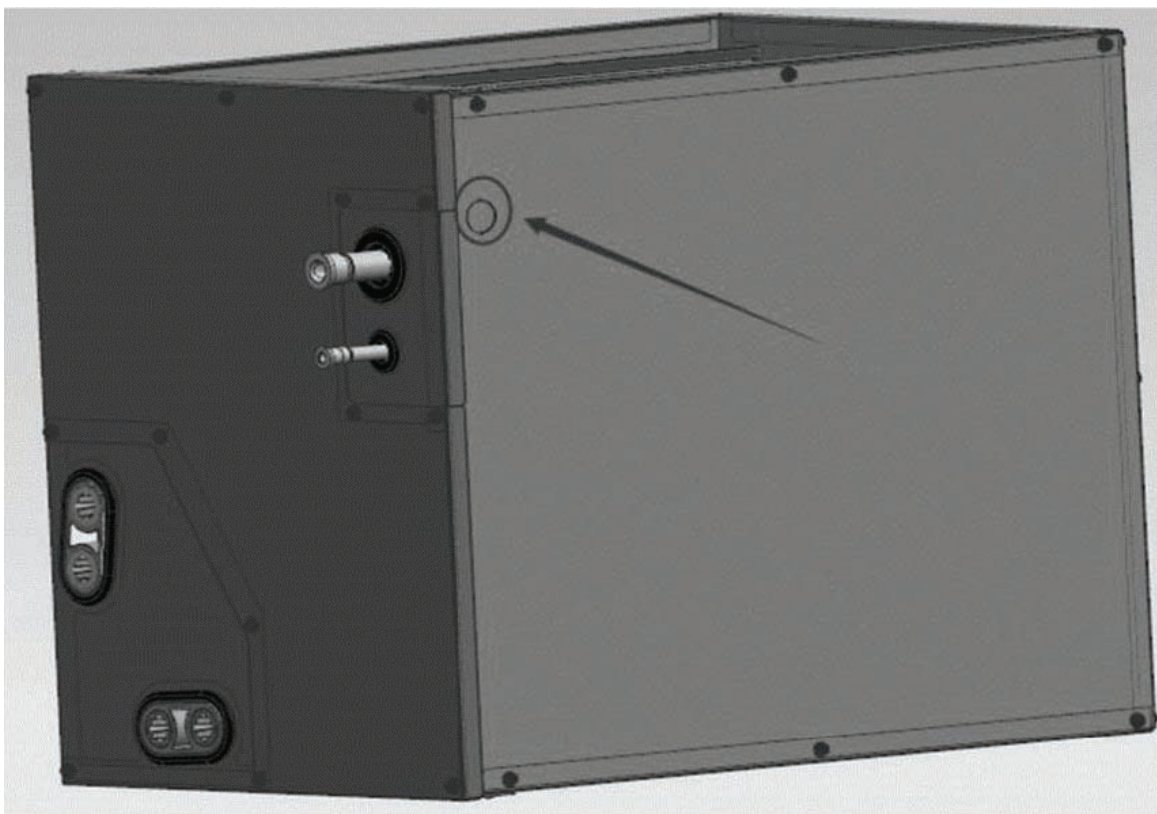


Fig. 3 — T2 Drill Point Location

DIMENSIONS

Table 2 — Dimensions

Kit Number		KSACN1101AAA
(Voltage)		115V/208/230-1-60
DIMENSIONS		
Height (H)	In/ (mm)	13.54(344)
Width (W)	In/ (mm)	8.39(213)
Depth (D)	In/ (mm)	2.24(57)
PACKING		
Height	In/ (mm)	16.54(420)
Width	In/ (mm)	11.82(300)
Depth	In/ (mm)	5.91(150)
Thickness	In/ (mm)	0.28(7)
Drawing No.		ZXW-405*285*135S-NSX
Weight-Gross	lbs. (kg)	5.78(2.62)
Weight -Net	lbs. (kg)	9.55(4.33)

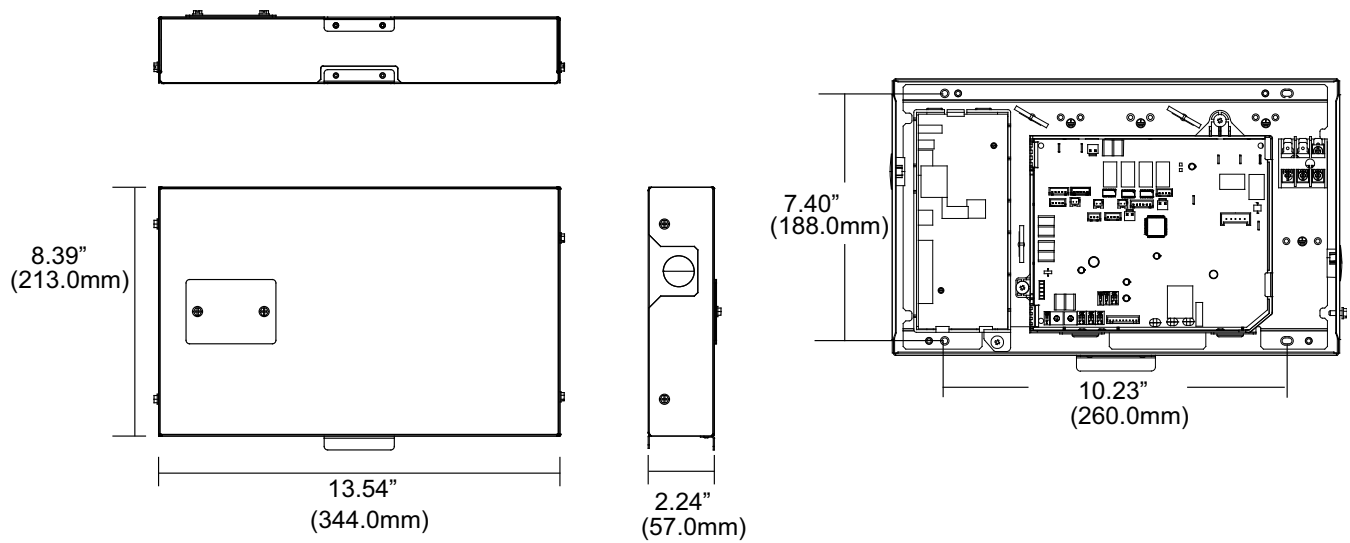


Fig. 4 — Coil Interface Dimensions

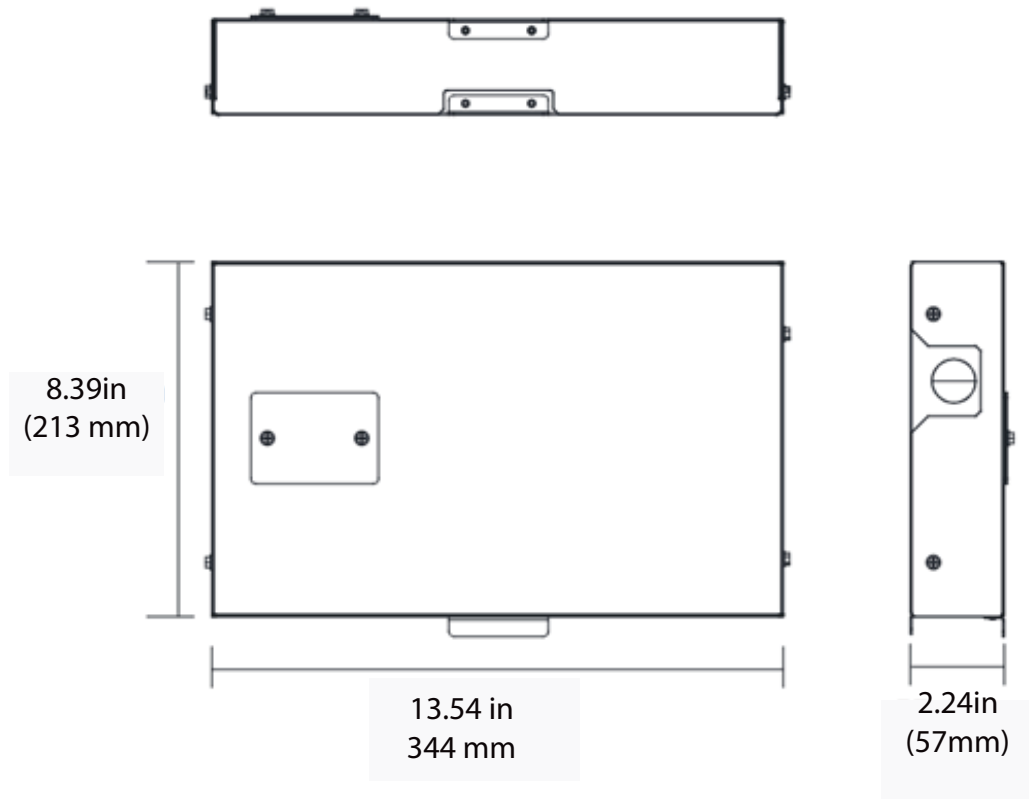


Fig. 5 — Coil Interface Dimensions

INSTALLATION METHOD

1. Remove the cover of the control box by removing all 4 exposed screws with a Phillips head screwdriver. Next, remove the cover.

NOTE: This may be tight due to the foam gasket seal.

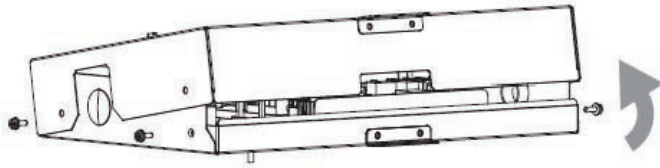


Fig. 6 — Remove the cover

NOTE: Minimum clearance required around the kit is 7" (180mm).

2. Mount the back plate of the control box. Mount control box vertically, and folding in on, fasten the back plate to the wall with 4 screws (M4x25) and anchors.

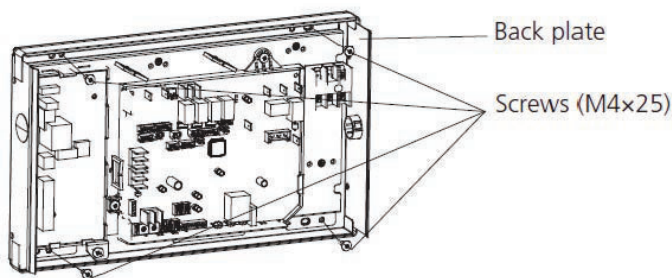


Fig. 7 — Back Plate

NOTE: Place the unit on a flat surface. Be careful not to distort the back plate of the control box by over tightening the screws. When installed vertically, the direction of the arrow on the cover, must point up.

3. Wiring

The power to the unit must be disconnected before any wiring. Be sure to show application of ferrite clamp and room temp sensor and cable. Make note to review the different application (scenarios) options for proper wiring. Make sure strain relief and proper conduit are used when connecting to the box, recommended use of metal cable.

NOTE: Use copper wire only. Separate the power supply leads and communication leads by the strain relief or segregate the power supply leads from communication leads.

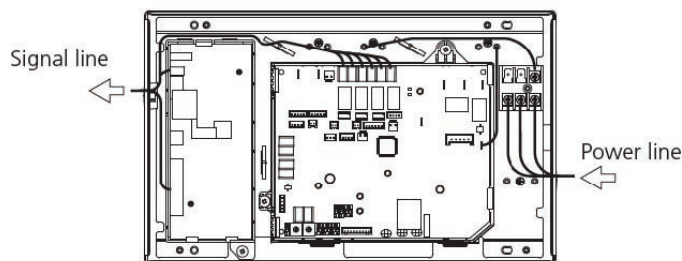


Fig. 8 — Signal Line

Table 3 — Wire Gauges

POWER LINE	LINE DIAMETER (AWG)	16 AWG
OUTDOOR-INDOOR SIGNAL LINE	LINE DIAMETER (AWG)	20 AWG
24V FURNACE SIGNAL LINE	LINE DIAMETER (AWG)	18 AWG
WIRED CONTROLLER	LINE DIAMETER (AWG)	20 AWG

NOTE: For wire gauges, review table 3 and check with your city's rules and regulations to be in compliance.

4. After the wiring is complete, reattach the cover, being sure not to pinch any wiring and tightening the 4 attachment screws. Cover the control box lid, locking screw.

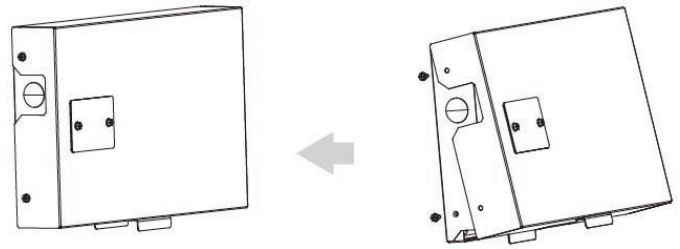


Fig. 9 — Reattach Cover

5. Installing the control box

The primary function of the control box is to control the operation of a heating and air conditioning system.

The control box is shipped with the coil unit and can be installed on the cabinet (see Fig. 10) or externally (not attached to the cabinet) at a location designated by the customer. If installed on the cabinet, control box must be installed in the designated location, depending on the coil unit orientation.

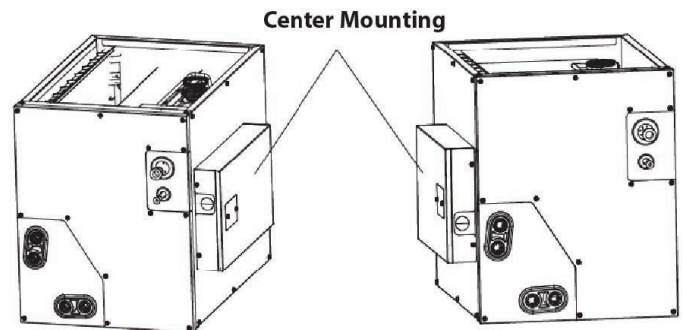


Fig. 10 — Center Mounting

NOTE: Recommended control box orientations on the cabinet (see Fig. 11).

6. Control box - external installation

NOTE: Mounting the control box on a secured wall close to the cabinet is an acceptable mounting method.

If the control box is to be installed on an alternative location, it is the responsibility of the installer to secure the control box properly and ensure all wiring between the control box and cabinet reaches and is secure. The distance between the cabinet and control box is limited by the length of the thermistor cables (approximately 3 meters) that come installed on the cabinet. Please consider this when locating the control box from the cabinet.

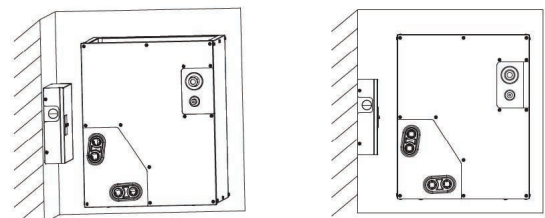
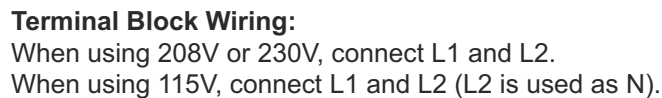


Fig. 11 — Control Box



NOTE: The orientation of modes of operation and error codes on the LED display maybe upside down depending on the installation.

Electrical Data

(Voltage)	115V / 208/230 - 1 Phase - 60Hz
Max Input Power (W)	N/A
Input Current (mA)	50
MCA (A)	N/A
Max Fuse Size (A)	15

CONTROL SIGNALS TO THE FURNACE

Control signals to the furnace are the standard thermostat control signals R,C,W1,W2,Y2 and Y1.

Table 5 — Control Signals to the Furnace

CONNECTOR	USAGE
R	Provides 24VAC power from the furnace to the board.
C	The 24VAC common wire between the furnace and the board.
W1	First stage of the furnace command line from the board to the furnace. If the furnaces have only a W and not a W2, connect W1 to the W of the furnace and do not make a connection with the W2 signal wire.
W2	Second stage of the furnace command line from the board to the furnace. W2 cannot be in the ON mode unless W1 is already ON.
Y1/G	For 1-speed configuration, connect this signal to G on the furnace. For 2-speed configuration, connect this signal to G and Y1 on the furnace.
Y2/Y	For 1-speed configuration, connect this signal to Y on the furnace. In this configuration, the Y2/Y signal turns on when the fan is requested while in the COOL mode or the HEAT mode using the heat pump. For 2-speed configuration, connect this signal to Y2 on the furnace. In this configuration, the Y/Y2 signal turns on as follows: In the FAN , COOL or HEAT modes with HP when high speed fan is requested. In the AUTO FAN and the COOL mode, the signal goes to high speed when the difference between the room temperature and the set point temperature is more than or equal to 34.7 °F(1.5 °C). The signal reverts to the low speed when the temperature difference is less than 33.8 °F(1° C). In the AUTO FAN and the HEAT mode with the HP, the signal goes to the high speed when the difference between the room temperature and the set point temperature is less than or equal to 29.3°F (-1.5° C). The signal goes back to the low speed when the temperature difference is more than 32°F(0° C).

In addition:

Room temperature sensor to be installed in the return air

Coil temperature sensor to be installed on the COIL as specified (see Fig. 2 — on page 3).

DIP SWITCH DEFINITIONS

Function DIP switch settings

SW1-1 and SW1-4 Function Combination Table

SW1	Control type	Stand alone or full system
	Auto Detect	Auto Detect
	Wired controller	Full system

Fig. 13 — Function Combination Table

Table 6 — Control Box Dial Code

	DIPSWITCH SETTING	FUNCTION	ON	OFF	
1	SW1-2	Anti-cold blow protection option	NO	[Default] YES]	
2	SW1-3	Single cooling / heating and cooling options	Cooling	[Default] Cooling & Heating	
3	SW2-1	Temperature differential to active first stage furnace heating for HP + furnace mode.	4°C	[Default] 3°C	
4	SW2-4	Compressor	DO NOT USE	The operation of heat pump is limited by the outdoor temperature, and the operation of furnace heat is not limited. The system makes decisions based on the following rules: The compressor cannot operate when the outdoor temperature is lower than the S3 DIP switch. The compressor can operate when the outdoor temperature is ≥ S3 DIP switch temperature 35.6°F (+2°C).	
5	SW2-4	Compressor/Auxiliary heat outdoor ambient lockout	DO NOT USE	[Default] Only one heat pump or auxiliary heat can operate. The system makes decisions based on the following rules: When the outdoor temperature is lower than the S3 DIP switch temperature, the compressor is not allowed to operate, however auxiliary heat is allowed to operate. When the outdoor temperature is ≥ S3 DIP switch temperature 35.6°F (+2°C), the compressor can operate, however auxiliary heat cannot operate.	SW2-4 and S3 need to be working together
6	Rotary Switch S3	Set outdoor temperature Limitation (for auxiliary heating or compressor)	Table A - NOTE: Use the S3 table below for setting outdoor temperature for dual fuel operation		
7	SW3-1	Maximum continuous runtime allowed before system automatically stages up capacity to satisfy set point. This adds 1 to 5°F to the user set point in the calculated control point to increase capacity and satisfy user set point	30 minutes	[Default] 90 minutes	
8	SW3-2	Cooling and heating Y/Y2 temperature differential adjustment.	Compressor slower speed	[Default] Faster Compressor	Only affects compressor
9	SW3-3	Temperature differential to active second stage furnace heating for furnace only or HP + furnace mode.	5°C	[Default] 4°C	

Table 7 — S3

S3	S3(°F)	S3(°C)
0	OFF	OFF
1	-22	-30
2	-18	-28
3	-15	-26
4	-11	-24
5	-8	-22
6	-4	-20
7	3	-16
8	10	-12
9	18	-8
A	25	-4
B	32	0
C	36	2
D	39	4
E	43	6
F	46	8

LINE CONTROLLER CONTROL MODES**Table 8 — Description of Line Controller Control Modes**

AUX	Single-furnace Heating
Heat	HP heating
AUX + Heat	Furnace heating, HP heating automatic control

NOTE: For dual fuel operation with the wired controller, the heat setting needs to be set to Heat + Aux (use heat and aux controller icons). If the controller is set to heat, only the heat pump heating operates. If the controller is set to AUX, only the furnace heating operates.

ERROR CODES

Table 9 — Error Codes

DISPLAY	MALFUNCTION & PROTECTION INDICATION
EH00	Indoor EEPROM malfunction
EH0A	Indoor EEPROM parameter error
EL01	Communication malfunction between indoor and outdoor units
EL11	Communication malfunction between main unit and secondary units
EH12	Main unit or secondary units malfunction
EC50	Outdoor temperature sensor error
EC51	Outdoor EEPROM malfunction
EC52	Condenser coil temperature sensor (T3) malfunction
EC53	Outdoor ambient temperature sensor (T4) malfunction
EC54	Outdoor unit exhaust temperature sensor error
EC0d	Outdoor unit malfunction or protection
EH60	Indoor room temperature sensor T1 error
EH61	Indoor evaporator coil temperature sensor T2 error
EC07	Outdoor DC fan speed malfunction
EH0b	Indoor PCB and display board communication error
EHb3	Communication malfunction between wire and master control
FL09	New and old platform match malfunction
PC00	Inverter module (IPM) protection
PC01	Over high voltage or over low voltage protection
PC02	High temperature protection of compressor top/ IPM temperature protection
PC04	Inverter compressor drive error
PC60	Discharge high temperature error
PC03	Pressure protection
PC0L	Low temperature protection of outdoor unit

Table 10 — Specifications

SPECIFICATIONS			
MODEL NUMBER	JYDK.ACOIL.KZH.V1	TEMPERATURE LIMITS OF MOUNTING SURFACES (Ts)	-22-133°F
POWER SOURCE	115V / 208/230 - 1 Phase - 60Hz	OPERATING CONTROL	Type 1
INPUT CURRENT	50mA	POLLUTION DEGREE	2
LOAD TYPE	GENERAL USE (SIGNAL USE)	RATED IMPULSE VOLTAGE	2500V
MAX.FUSE	15A	DEGREE OF PROTECTION	IP20
PROTECTION AGAINST ELECTRIC SHOCK	CLASS 1		

NOTE: The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details. Any updates to the manual will be uploaded to the service website, please check for the latest version.

WIRED CONTROLLER INSTALLATION INSTRUCTIONS

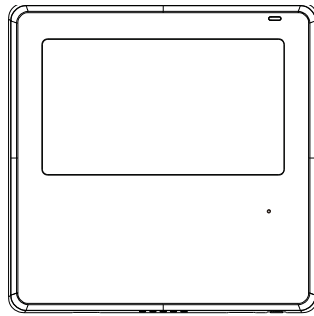


Fig. 14 — Wired Controller

NOTE: Read the entire instruction manual before installing the wired controller.

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

SAFETY CONSIDERATIONS

Read these instructions thoroughly and follow all warnings or cautions included in the literature and attached to the wired controller. Consult 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 wired controller 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.



CAUTION

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. On some systems both the fan coil and the outdoor unit may be on the same disconnect. Tag the disconnect switch with a suitable warning label. There may be more than one to disconnect.



CAUTION

INSTALLATION

Only the distributor or authorized professionals should install the unit. Installation by unskilled persons may lead to improper installation, electric shock, or fire. Re-installation must be performed by authorized professionals. Non-compliance may lead to electric shock or fire.

NOTES:

- This manual provides a detailed description of the precautions that the user should be mindful of during operation. Keep this manual, after reading it, for future reference.
- To ensure correct service of the wired controller, read this manual carefully.

NOTES:

- Do not install the wired controller in a location vulnerable to flammable gas leaks. A fire may occur if there is a gas leak around the controller.
- Do not operate with wet hands or allow water to enter the wired controller, otherwise an electric shock may occur.
- The wiring should be a compatible connection cable for the current wired controller. Otherwise, electric leakage or heating may occur and result in a fire.
- Use the specified cables for wiring. Do not allow any external force to be applied to the connection wire terminals. Use this wiring to ensure there is no mechanical damage. Ensure the wire insulation is rated for the temperature it will sustain during operation. Failure to use this wire could result in a fire.
- Do not disconnect when operating. Could result in mechanical failure and communication loss.

NOTE: The specified cables shall be applied in the wiring. No external force may be applied to the terminal. Otherwise, wire cut and heating may occur and result in fire.

PREPARATION BEFORE INSTALLATION

INSTALLATION ACCESSORY

Select the installation location

DO NOT install at a location covered with heavy oil, vapor or sulfured gas. This product would become deformed that could lead to system malfunction. Confirm the following required parts (see Table 11) have been supplied.

Table 11 — Parts

NO.	NAME	QTY.	REMARKS
1	Wire controller	1	
2	Installation and owner's manual	1	
3	Screws	3	M3.9*25 (For mounting on the wall)
4	Wall plugs	3	For mounting on the wall
5	Screws	2	M4*25 (for mounting on the switch box)
6	Plastic screw bars	2	For fixing on the switch box
7	Battery	1	CR2032 3VDC part number 11203304000003
8	The connective wires group	1	Optional
9	Screw	1	M4X8(For Mounting the connective wire group)

NOTES:

Extension wire available through RCD (Replacement Components)

- Part Number:.

Prepare the following assemblies on site.

Table 12 — Assemblies

NO.	NAME	QTY. (EMBEDDED INTO WALL)
1	Switch box	1
2	Wiring tube (insulating sleeve and tightening screw)	1

WIRED CONTROLLER INSTALLATION PRECAUTION

1. This manual provides the wired controller installation method. Refer to the wiring diagram (see Fig. 25 — on page 17) for guidance on wiring the wired controller to the indoor unit.
2. The wired controller works in a low voltage circuit (5-12 VDC). **DO NOT** connect directly to any line voltage. Wiring clearance between the configured tubes should range 11.81-19.69 inches (30-50 cm) or above.
3. The shielded wire of the wired controller must be properly grounded.

NOTE: Upon completion of the wired controller connection, do not use any device to test the insulation.

CONTROLLER DIMENSIONS

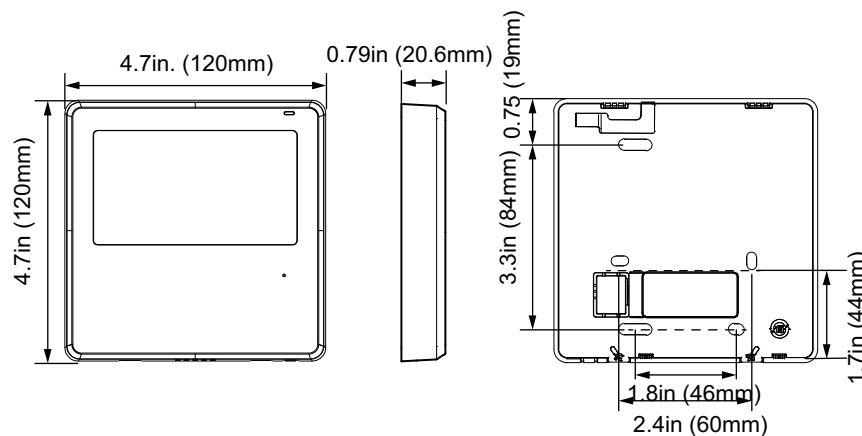


Fig. 15 — Wired remote controller structural dimensions

INSTALLATION

Use the following steps to install the wired controller.

1. Remove the back plate of the wired controller.
2. Insert a flat head screwdriver into the slots in the bottom of the wired controller (2 slots).

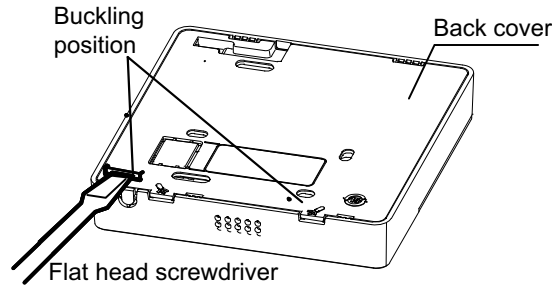


Fig. 16 — Remove the back plate of the wired controller

NOTE: The PCB is mounted to the front cover of the wired controller. Be careful not to damage the board with the screwdriver.

NOTE: Do not pry up and down, you can only 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 screwdriver.

3. For exposed mounting, fasten the back plate on the wall with the 3 screws (ST3.9*25) and plugs.

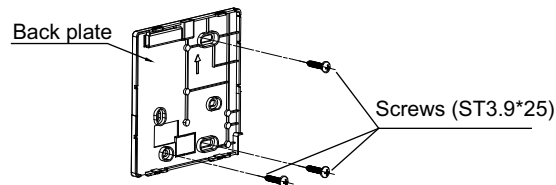


Fig. 17 — Back plate

4. Use two M4X25 screws to install the back plate. Use one ST3.9*25 screw to secure to the wall.

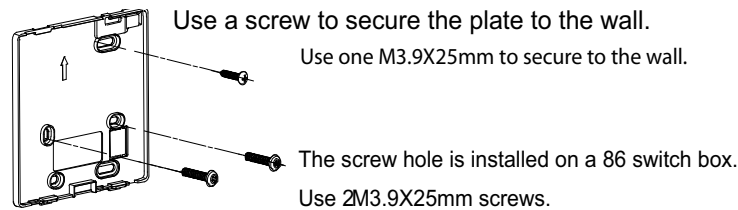


Fig. 18 — Screw plate to wall

BATTERY INSTALLATION AND CAUTION

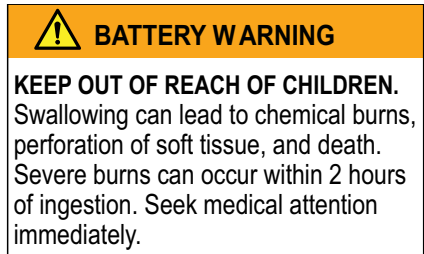
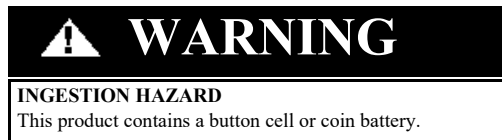


Fig. 19 — Battery Warning

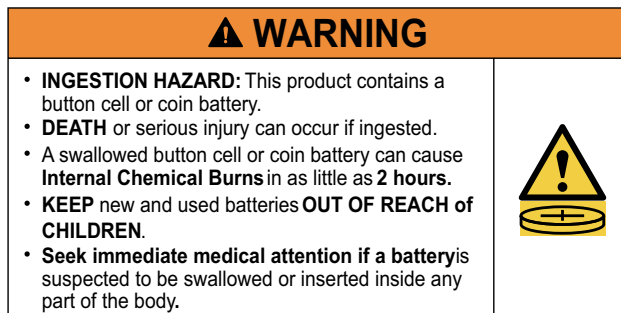


Fig. 20 — Ingestion Hazard



BATTERY WARNING

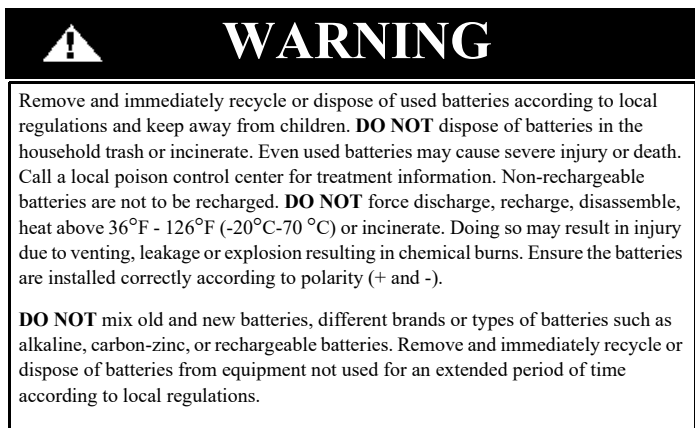


WARNING: Contains coin battery.



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.



Installation Method

- 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

- 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. 21).

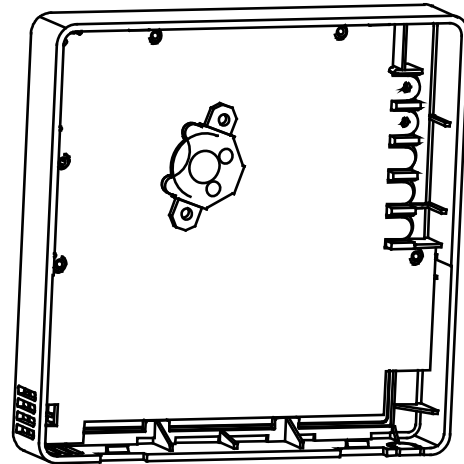


Fig. 21 — Battery Installation

- 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.

Installation Tips

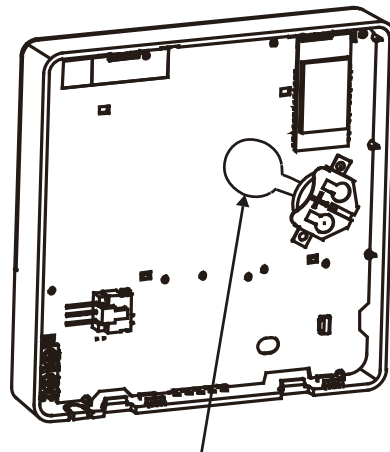
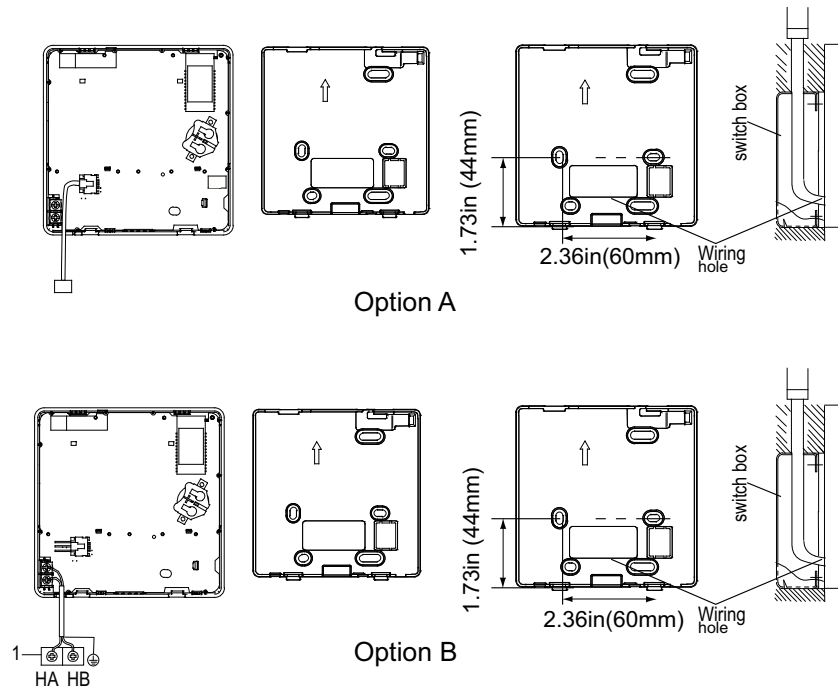


Fig. 22 — Installation Tips

NOTE: During installation remove the battery protective film to start the wired controller.

5. Wire the Indoor Unit

**Fig. 23 — Wire the indoor unit**

6. 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 remote control (see Figure 1 as reference).
7. Notch the part for the wiring to pass through with nippers. 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 a trap and putty to seal the wires. Connecting wires must be secured 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 Figure 24).

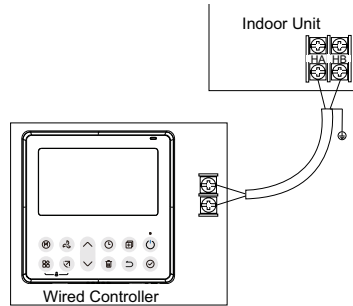


Fig. 24 — HA HB Ports

NOTE: Wire controller with wireless function does not have this function.

Seal the Wires

Figure 25 provides an illustration of how to seal wires.

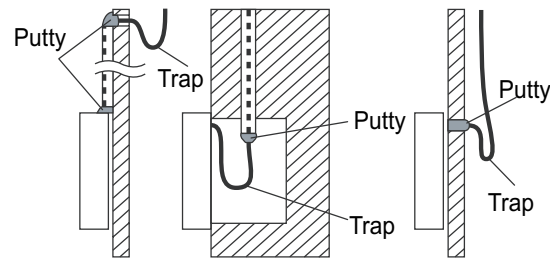


Fig. 25 — Seal the wires

8. Re-attaching the Front Cover of the Wired Controller
After adjusting the upper case and then buckle the upper case; avoid clamping the wiring during installation (see Fig 26).

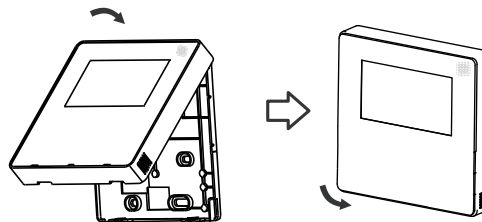


Fig. 26 — Reattach the Front Cover of the Wired Controller

TROUBLESHOOTING

For ease of service, the systems are equipped with diagnostic code display LEDs on the Wired Remote Controller, indoor and outdoor units. The indoor diagnostic display is a combination of flashing LEDs (on the display panel or the front of the unit). Some indoor units display error codes specifying failure modes in the outdoor units. If possible, always check the diagnostic codes displayed on the indoor unit **first**. The diagnostic codes displayed in the indoor and wired remote controller are listed in Table 13.

Table 13 — Troubleshooting

IDU DISPLAY AND WIRED CONTROLLER	ERROR INFORMATION
EH 00/EH 0A	Indoor unit EEPROM parameter error
EL 01	Indoor/outdoor unit communication error
EH 02	Zero-crossing signal detection error
EH 03	Indoor fan operating outside of the normal range
EC 51	Outdoor unit EEPROM parameter error
EC 52	T3 is in open circuit or has short circuited
EC 53	T4 is in open circuit or has short circuited
EC 54	TP is in open circuit or has short circuited
EC 56	T2B is in open circuit or has short circuited
EH 60	T1 is in open circuit or has short circuited
EH 61	T2 is in open circuit or has short circuited
EC 07	Outdoor fan operating outside of the normal range
EH 0b	Indoor PCB/Display board communication error
EL 0C	Refrigerant leakage detection
PC 00	IPM malfunction or IGBT OSCP
PC 01	Over voltage or over low voltage protection
PC 02	Compressor or IPM high temp/pressure protection
PC 04	Inverter compressor drive error
PC 08	Current overload protection
PC 40	Comm. error between outdoor chip and compressor chip
PC 03	Low pressure protection
EH b1	Indoor board and Multi-function communication error
FH 0d	Ionizer malfunction

SPECIFICATION

Table 14 — Specification

INPUT	KSAIC0601230: DC 5V
Ambient temperature	23~110F (-5~43C)
Ambient humidity	RH40%~RH90%

Table 15 — Wiring Specifications

WIRING TYPE	SIZE	MAXIMUM LENGTH
Sheathed vinyl cord or cable	0.029 in - 0.74mm	KSACN0901AAA: 66 ft (20m)
	(0.75 - 1.25mm2)	

TECHNICAL INDICATIONS AND REQUIREMENT

EMC and EMI comply with the CE certification requirements.