

Air Conditioning Control System - Optional Parts

Electrical Box

Installation Manual

For distribution to dealers and contractors only

PAC-YK94UTB

Contents

Safety precautions	3
1. Parts	5
1-1. Supplied parts	5
1-2. Commercial parts	5
1-3. External dimensions	6
2. Overview of installation	7
3. Selecting the installation site	8
3-1. Installation space	8
3-1-1. Peripheral space	8
3-1-2. Depth	9
4. Installation	10
4-1. Progress of building construction and construction conditions	10
4-2. Installation methods	10
4-2-1. Making knockout holes	10
4-2-2. Installing the electrical box	11
4-2-3. Cutting a hole in the wall	13
4-2-4. Installing the front frame	14
5. Electrical wiring	15

Before installing the product, please read this Installation Manual carefully to ensure proper operation.
Retain this manual for future reference.



Manual Download



<http://www.mitsubishielectric.com/ldg/ibim/>



- en** Go to the above website to download manuals, select model name, then choose language.
- de** Besuchen Sie die oben stehende Website, um Anleitungen herunterzuladen, wählen Sie den Modellnamen und dann die Sprache aus.
- fr** Rendez-vous sur le site Web ci-dessus pour télécharger les manuels, sélectionnez le nom de modèle puis choisissez la langue.
- es** Visite el sitio web anterior para descargar manuales, seleccione el nombre del modelo y luego elija el idioma.
- it** Andare sul sito web indicato sopra per scaricare i manuali, selezionare il nome del modello e scegliere la lingua.
- pt** Aceda ao site Web acima indicado para descarregar manuais, seleccione o nome do modelo e, em seguida, escolha o idioma.
- tr** Kılavuzları indirmek için yukarıdaki web sitesine gidin, model adını ve ardından dili seçin.
- ru** Чтобы загрузить руководства, перейдите на указанный выше веб-сайт; выберите название модели, а затем язык.
- 中<简> 前往上述网站下载手册, 选择产品型号, 然后选择语言。

Note

- en** Controller model is abbreviated as "AE-C" in this manual.
- de** Das Steuerungsmodell wird in diesem Handbuch mit „AE-C“ abgekürzt.
- fr** Le modèle de contrôleur est désigné par l'abréviation « AE-C » dans le présent manuel.
- es** El modelo del controlador se abrevia como «AE-C» en este manual.
- it** In questo manuale il modello di unità di controllo è abbreviato in "AE-C".
- pt** O modelo do controlador é abreviado como "AE-C" neste manual.
- tr** Kumanda birimi modeli bu kılavuzda "AE-C" şeklinde kısaltılmıştır.
- ru** В этом руководстве модель контроллера обозначается сокращенно — «AE-C».
- 中<简> 本手册中, 控制器型号简称为“AE-C”。

Safety precautions

- ▶ Thoroughly read the following safety precautions prior to installation.
- ▶ Observe these precautions carefully to ensure safety.

 WARNING	: indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	: indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

- ▶ After reading this manual, pass the manual on to the end user to retain for future reference.
- ▶ The user should keep this manual for future reference and refer to it as necessary. The manual should be made available to those who repair or relocate the product. Make sure that the manual is passed on to any future air conditioning system user.

■ General precautions

WARNING

To reduce the risk of injury, electric shock, or fire, do not alter or modify the product.

To reduce the risk of injury, keep children away while installing, inspecting, or repairing the product.

CAUTION

To reduce the risk of injury, electric shock, or malfunction, do not touch the edges of the product.

To reduce the risk of injury, do not hold the product by its edges.

To reduce the risk of injury, do not touch burrs of knockout holes.

To reduce the risk of injury, wear protective gear before working on the product.

■ Precautions for installation

WARNING

Properly dispose of the packing materials. Plastic bags pose a suffocation hazard to children.

Installation work must be performed by the dealer or qualified personnel according to the instructions in the Installation Manual. Improper installation work or installation work performed by the user may cause trouble.

Take appropriate safety measures against earthquakes to prevent the product from falling and causing injury.

Install the product where the weight of the product can be held. Installation in a place with insufficient strength or improper installation may cause the product to fall, causing injury.

■ Precautions for electrical wiring

WARNING

To reduce the risk of electric shock, malfunction, or fire, seal the cable access holes with putty to prevent dew or water droplets from entering the product.

■ Precautions for relocating or repairing the product

WARNING

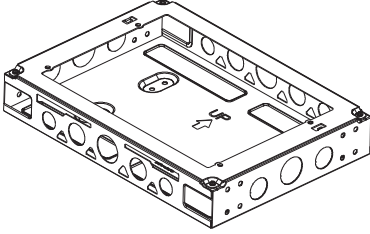

The product must be relocated or repaired only by qualified personnel. The user must not disassemble or modify the product. Improper installation or repair may result in injury, electric shock, or fire.

1. Parts

1-1. Supplied parts

The package contains the following items.

- Transport them to the installation site as packed.

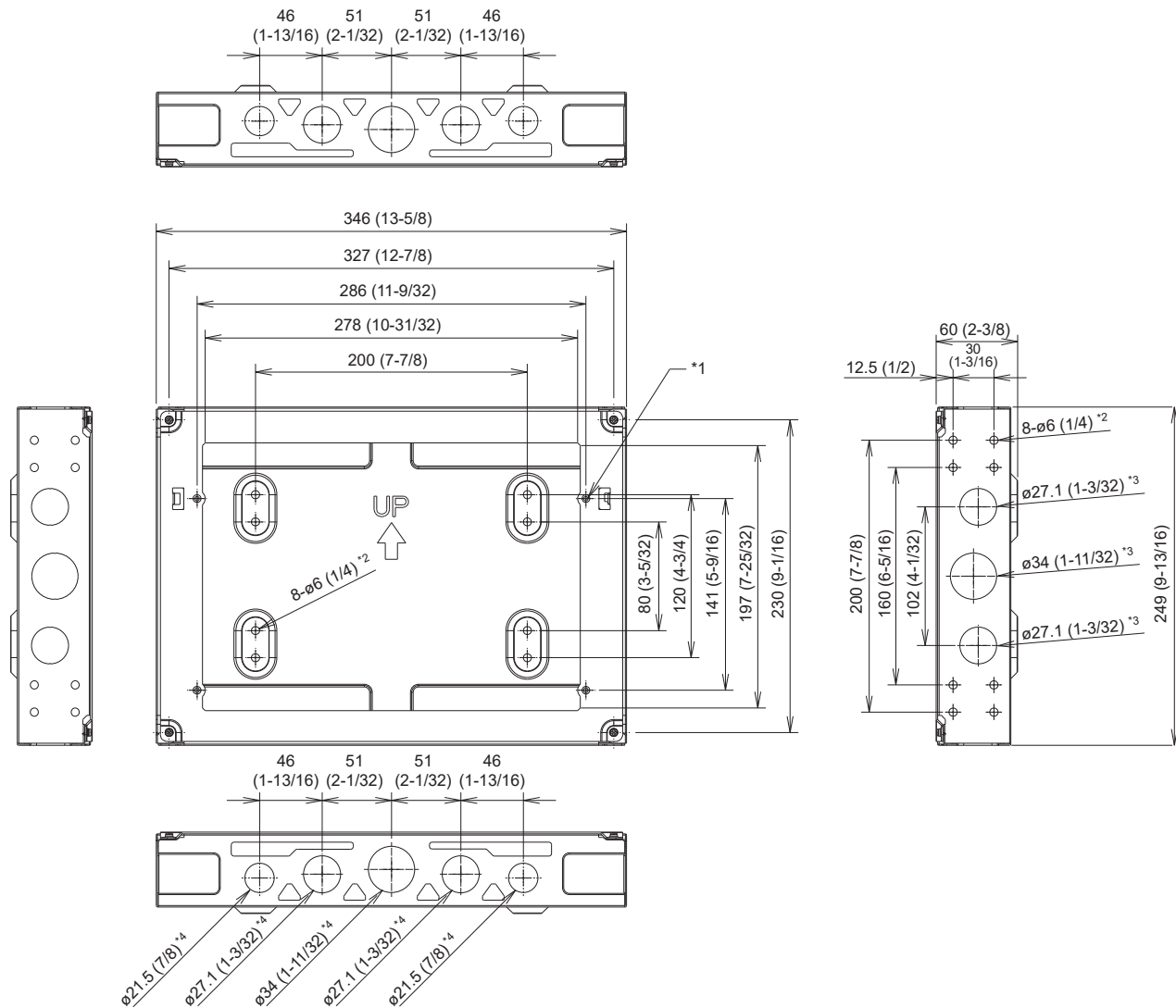
No.	Item	Shape	Quantity
D-1	Electrical box		1
D-2	Mounting screw (Wood screw M4.1 × 25)		4
D-3	Installation Manual (this manual)	—	1

1-2. Commercial parts

When installing the electrical box to a non-wooden structure, prepare four screws suitable for the structure.

1-3. External dimensions

Unit: mm (in.)



*1 4-M4 screw

*2 Electrical box mounting hole

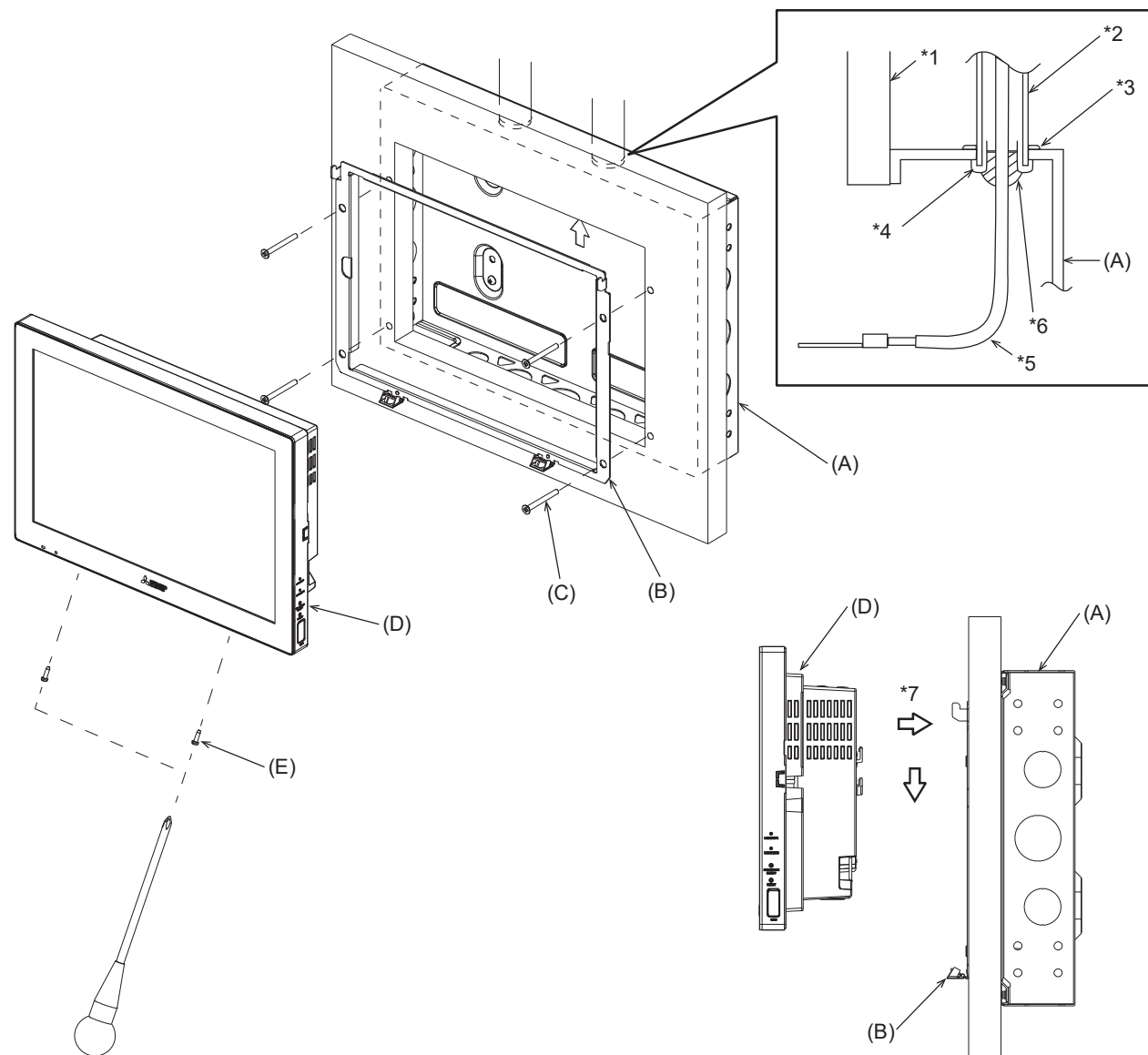
*3 Knockout hole

*4 Conduit tube hole

Note

- Install the electrical box in the orientation shown by the arrow on the body of the electrical box.

2. Overview of installation



- (A) Electrical box (supplied part D-1)
- (B) Front frame (supplied with AE-C)
- (C) Flathead screw (M4 × 40) (supplied with AE-C)
- (D) AE-C
- (E) Roundhead screw (M3 × 6) (supplied with AE-C)

- *1 Wall
- *2 Conduit tube
- *3 Locknut
- *4 Bushing
- *5 Cable (M-NET transmission cable, AC power cable, etc.)
 - Adjust the length of the cables so that they fit in the electrical box.
- *6 Seal the gap with putty.
- *7 Hook the AE-C onto the hooks of the front frame, and slide the AE-C down.

3. Selecting the installation site

WARNING

Install the product where the weight of the product can be held. Installation in a place with insufficient strength or improper installation may cause the product to fall, causing injury.

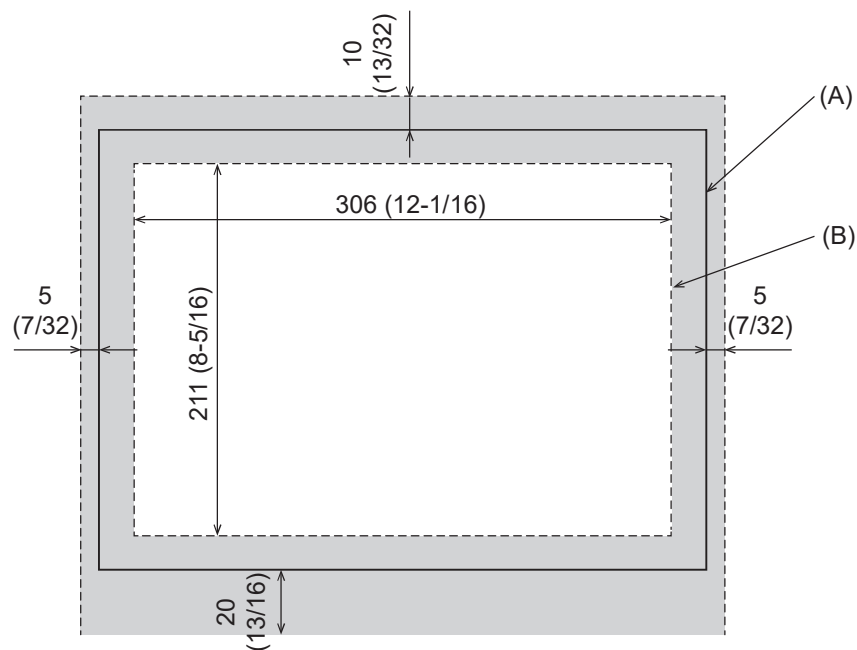
Install the electrical box (supplied part D-1) where the weight of the electrical box (1.4 kg (4 lbs)) can be held. Do not install the electrical box where it is subjected to continuous vibrations, which can cause the connectors to become loose or disconnected.

3-1. Installation space

3-1-1. Peripheral space

Install the electrical box (supplied part D-1) where the space shown below is available.

Unit: mm (in.)

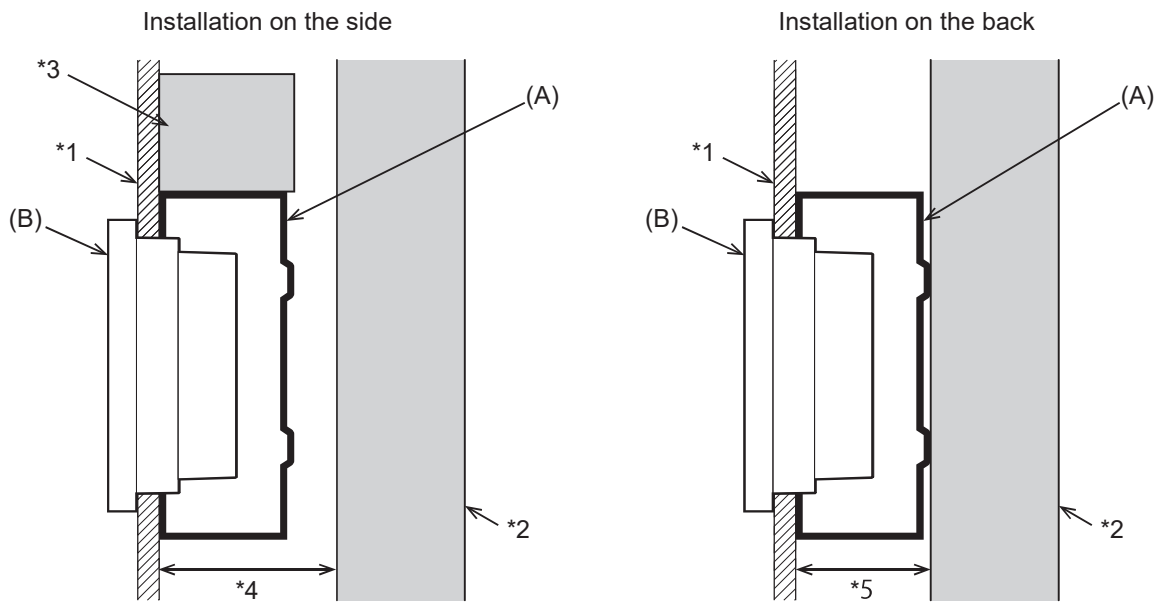


(A) Electrical box

(B) AE-C

3-1-2. Depth

The electrical box (supplied part D-1) is installed on a pillar on its side or on the building structure on its back. In either case, before installing the electrical box, check that there is a specified distance between the wall and the building structure.



(A) Electrical box

(B) AE-C

*1 Wall

*2 Building structure

*3 Pillar

*4 Distance between the wall and the building structure (60 mm (2-3/8 in.) or longer)

*5 Distance between the wall and the building structure (60 mm (2-3/8 in.))

4. Installation

CAUTION

To reduce the risk of injury, electric shock, or malfunction, do not touch the edges of the product.

To reduce the risk of injury, do not touch burrs of knockout holes.

4-1. Progress of building construction and construction conditions

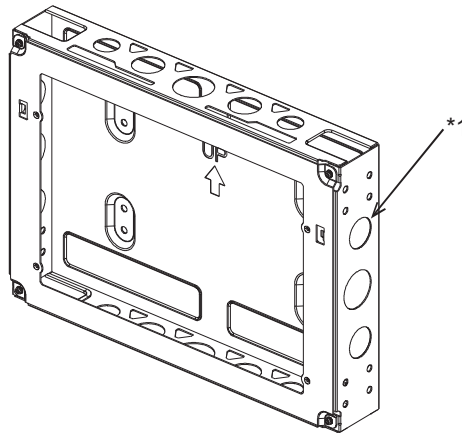
None.

4-2. Installation methods

4-2-1. Making knockout holes

Steps

1. Punch out a knockout hole for routing cables.



*1 Knockout hole

Note

- When routing cables from above, let the cables hang loose behind the AE-C as shown in the figure below to prevent water from running down the cables into the connectors.



Good example



Bad example

4-2-2. Installing the electrical box

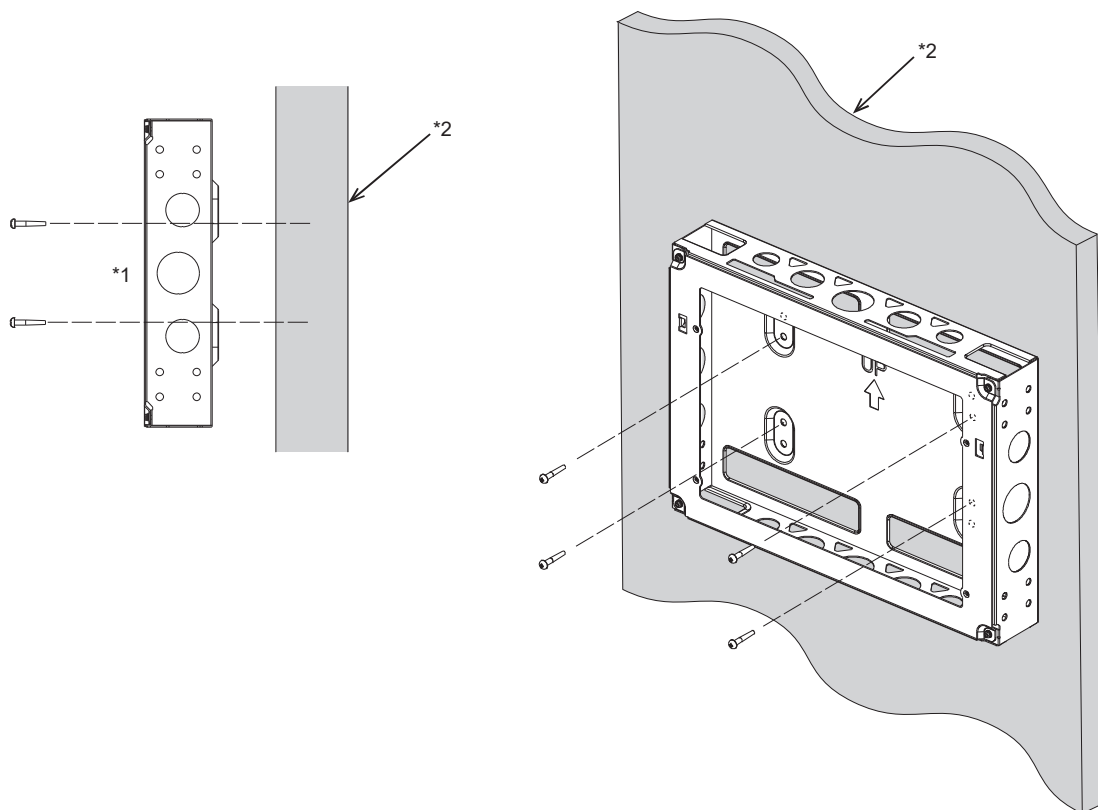
Install the electrical box on a building structure or a pillar inside a wall before walls are built in the building.

[1] Installing the electrical box on a building structure inside a wall on its back

Steps

1. Fasten the electrical box (supplied part D-1) to a building structure, using four screws as shown below.

- Use screws suitable for the building structure.
- Install the electrical box where the weight of the electrical box can be held.
- The holes at four corners of the electrical box are additional holes for securing the electrical box.



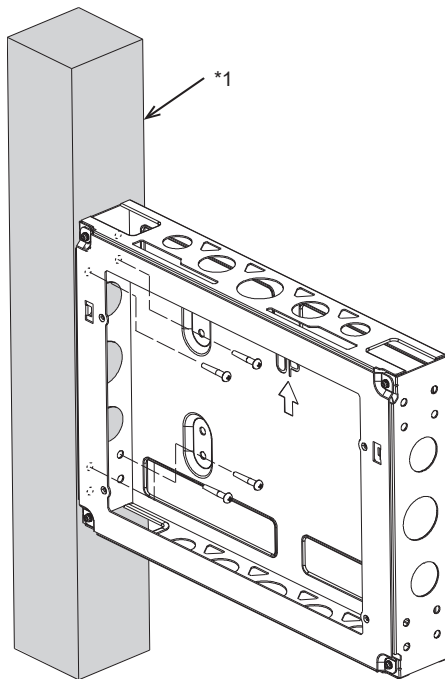
*1 Front

*2 Building structure inside a wall

[2] Installing the electrical box on a pillar inside a wall on its side

Steps

1. Fasten the electrical box (supplied part D-1) to a pillar, using four screws as shown below.
 - Use screws suitable for the building structure.
 - Install the electrical box where the weight of the electrical box can be held.
 - The holes at four corners of the electrical box are additional holes for securing the electrical box.



*1 Pillar inside a wall

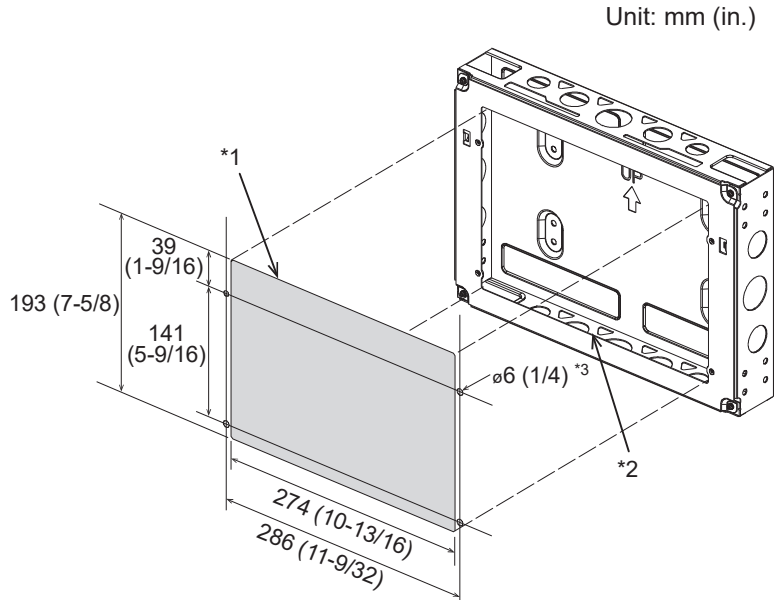
4-2-3. Cutting a hole in the wall

Steps

1. After walls are built in the building, cut a hole in the wall.

- Cut a hole of 274 mm (10-13/16 in.) (W) × 193 mm (7-5/8 in.) (H) along the inner edges of the electrical box.

If the size of the hole is not correct, the AE-C cannot be installed.



*1 Hole

*2 Cut a hole in the wall along the inner edges of the electrical box.

*3 Pilot hole

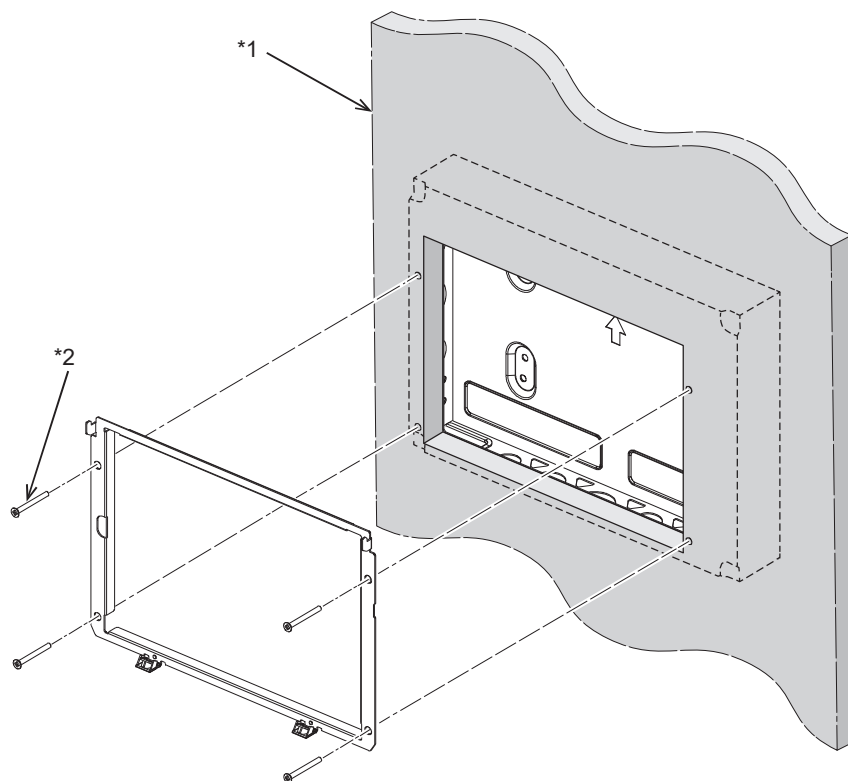
Note

- It is recommended to drill pilot holes (approx. $\phi 6$ mm (1/4 in.)) in the wall as shown above to make it easy to align the screw holes of the front frame and the electrical box.
(Drill pilot holes in a suitable way for the material of the wall.)

4-2-4. Installing the front frame

Steps

1. Fit the front frame (supplied with the AE-C) to the hole in the wall.
2. Sandwich the wall with the front frame and the electrical box (supplied part D-1), and fasten them together, using the flathead screws (M4 × 40) (supplied with AE-C).



*1 Wall

*2 Flathead screw

Install the AE-C, and the installation completes. Refer to "2. Overview of installation" and the Installation Manual for the AE-C.

5. Electrical wiring

Refer to the Installation Manual for the AE-C for details of wiring.

Please be sure to put the contact address/telephone number
on this manual before handing it to the customer.

mitsubishi electric corporation

HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
MANUFACTURER: MITSUBISHI ELECTRIC CORPORATION Air-conditioning & Refrigeration Systems Works
5-66, Tebira 6 Chome, Wakayama-city, 640-8686, Japan

872C767A10



WT10526X01_en