

MOTION SENSOR KIT INSTALLATION MANUAL

PJZ012D122

201802



WARNING

● Connect the wiring to the PWB in the control box on the indoor unit and hold the wiring securely so as not to apply unexpected stress on the PWB. Loose connection or hold will cause abnormal heat generation or fire.



● Make sure the power supply is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur.



CAUTION

● DO NOT install the motion sensor kit at the following places in order to avoid malfunction.

- | | |
|---|---|
| (1) Places exposed to direct sunlight | (8) Places where the motion sensor is affected by infrared rays of any other communication devices. |
| (2) Places near heat devices | (9) Places where some object may obstruct the motion sensor |
| (3) High humidity places | (10) Place that the motion sensor have a shock |
| (4) Hot surface or cold surface enough to generate condensation | (11) Place with the strong radio wave or Static electricity |
| (5) Places exposed to oil mist or steam directly | (12) Place that motion sensor lens become tainted or have damaged. Dusty place. |
| (6) Places affected by the direct airflow of the Indoor unit. | (13) Place where it runs in parallel with strong voltage lines such as power supply wiring. |
| (7) Places where the motion sensor is influenced by the fluorescent lamp or sunlight. | |



● DO NOT leave the motion sensor without the cover.

In case the cover needs to be detached, protect the motion sensor with a packaging or bag. In order to keep it away from water and dust.



Attention

- This manual describes how to install the motion sensor kit.
- Instruct the customer how to operate it correctly referring to the instruction manual.
- For the installation method of the air conditioner itself, refer to the installation manual enclosed in the package.

1 Accessories

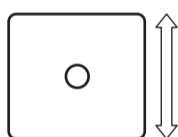
Please make sure that all components are in the package.

Motion sensor	Wiring <1>	Wiring <2>	2 screws	Manual
	In case of CNL connector on the indoor unit PWB (FDT/FDK/FDTC)	In case of CNL connector is not on the indoor unit PWB		

※ Please prepare a relay wiring for connecting the motion sensor and indoor unit on site. (0.2 mm² or thicker, triplex (red, white and black) cable for communication, with the maximum length of 8 m.)

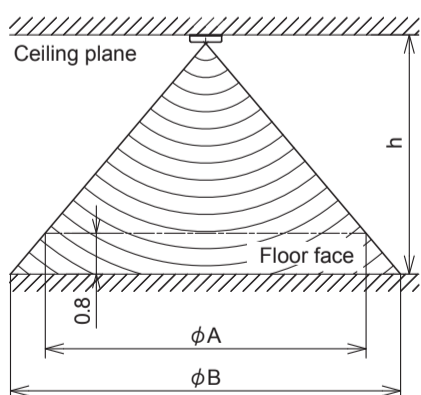
2 Installing the motion sensor

- The recommended height is lower than 4000 mm for motion sensor. When the installation height is higher, motion detection accuracy might be reduced.
- Sensor will detect the object with a different temperature from the surrounding.
- Motion sensor is more sensitive to motions in the direction of \leftrightarrow mark.
- Sensor may not detect small children or infants with little motion.
- Although motion sensor can be installed on a wall, it is recommended to install it on the ceiling plane.
- If the sensor is installed on the wall, the sensing distance in the front direction is about 5 m, covering the angle of about 100 degrees.



Side of screws for fixing the case

The detectable area



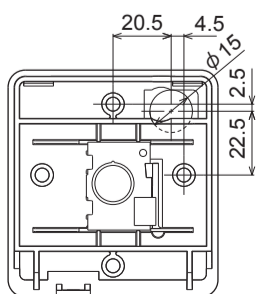
Height of the ceiling	h (m)	2.7	3.5	4.0
Detectable area	φ A (m)	4.5	6.4	7.6
Detectable area	φ B (m)	6.4	8.3	9.5

Installing the motion sensor

There are the following 3 methods to install the motion sensor on the ceiling plane or wall surface (hereinafter called "ceiling plane"). Select the method according to the installation position.

<How to install>

- Direct installation by screws to the ceiling plane with the wiring in the ceiling space.**
- Direct installation by screws to the ceiling plane with the wiring in the room.**
- Installation with switch box (prepare at the site)**

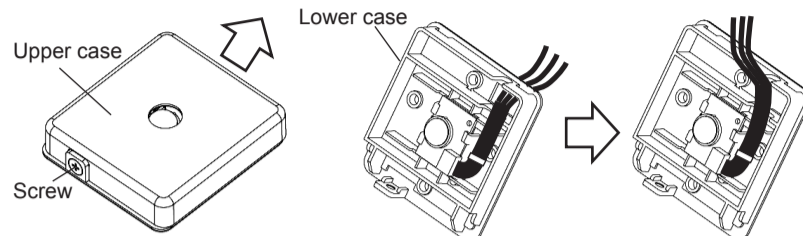
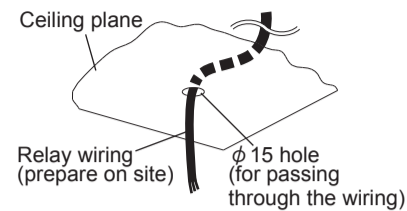


Positional relation for pulling out relay wiring hole and installing holes.

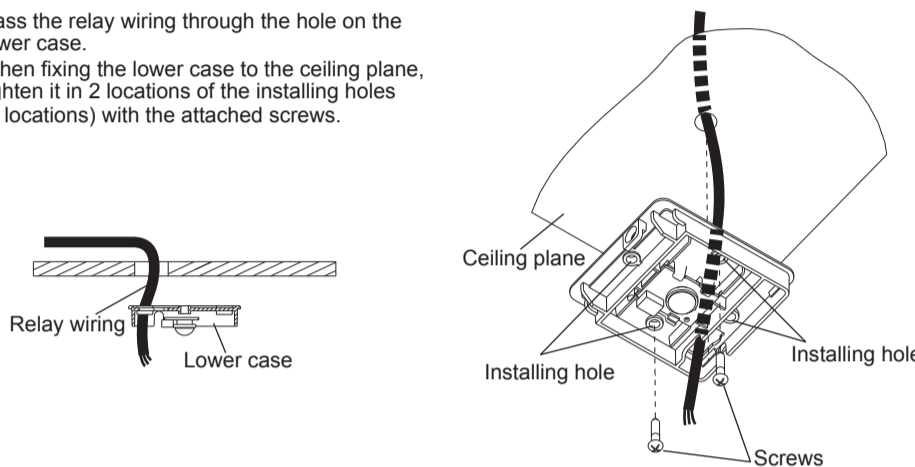
Option (A)

▶ Select this method if the ceiling plane has sufficient strength to install the motion sensor directly with screws.

- Prepare a relay wiring on site and lay out the wiring in advance.
- Remove the screw at the side of the motion sensor and slide the upper case in the direction of the arrow.
- Pull the wiring of the motion sensor as below.



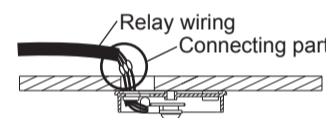
- Pass the relay wiring through the hole on the lower case.
- When fixing the lower case to the ceiling plane, tighten it in 2 locations of the installing holes (4 locations) with the attached screws.



- Using a crimping terminal, etc., connect the same color to the relay wiring (prepare on site) and the wiring of motion sensor.



- Place the connecting part inside of the ceiling space.
- Seal the wiring hole on the lower case with putty.
- Taking care not to pinch the wirings, slip the upper case into the lower case, and tighten the screws.

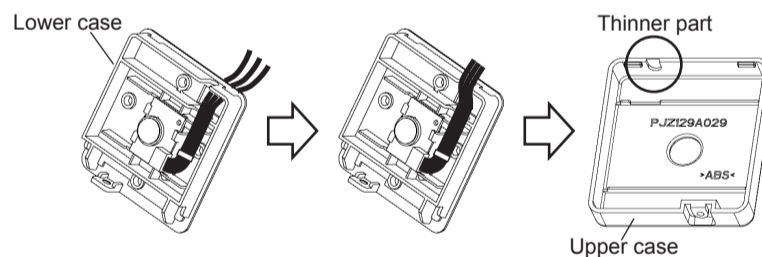


Caution: In order to prevent tracking, be sure to perform construction so as not to clog up the connecting part with dust, etc.

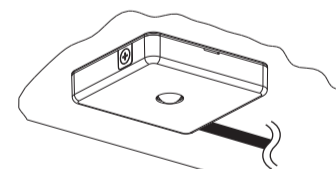
Option (B)

▶ Select this method if the ceiling plane has sufficient strength to install the motion sensor directly with screws.

- Remove the screw at the side of the motion sensor and slide the upper case in the direction of the arrow. (The same as ② of Option (A))
- Pull the wiring of the motion sensor toward the side. Cut off the thinner part of the upper case.

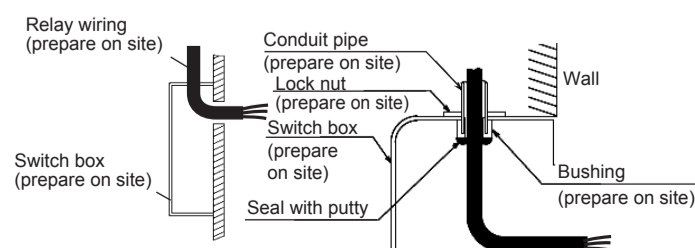
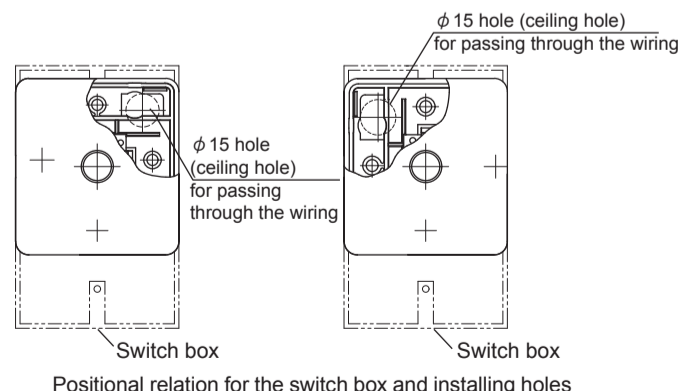


- When fixing the lower case to the ceiling plane, tighten it in 2 locations of the installing holes (4 locations) with the attached screws. (The same as ⑤ of Option (A))
- Using a crimping terminal, etc., connect the same color to the relay wiring (prepare on site) and the wiring of motion sensor. (The same as ⑥ of Option (A))
- Taking care not to pinch the wirings, slip the upper case into the lower case, and tighten the screws. (The same as ⑩ of Option (A))
- Seal the cut part at Step ② with putty.



Option (C)

- Set up the switch box and relay wiring (prepare on site) in advance. Seal the relay wiring inlet with putty.



② Remove the screw at the side of the motion sensor and slide the upper case in the direction of the arrow. (The same as ② of Option (A))

③ Pull the wiring of the motion sensor. (The same as ③ of Option (A))

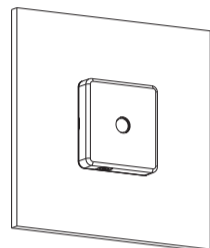
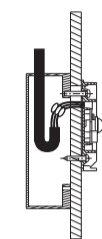
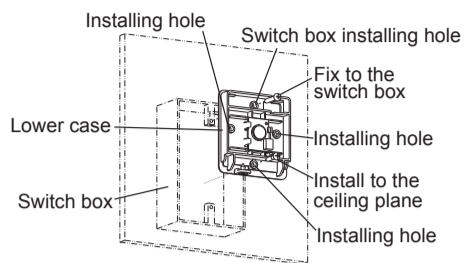
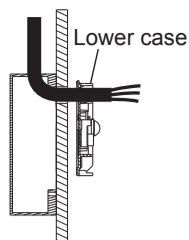
④ Pass the relay wiring through the hole on the lower case from switch box.

⑤ Fix the lower case to switch box using the installing hole (1 place).

⑥ Connect the same color to the relay wiring (prepare on site) and the wiring of motion sensor. (The same as ⑥ of Option (A))

⑦ Place the connecting part between switch box and the hole of the lower case through passed the wiring at step ④.

⑧ Taking care not to pinch the wirings, slip the upper case into the lower case, and tighten the screws. (The same as ⑧ of Option (A))

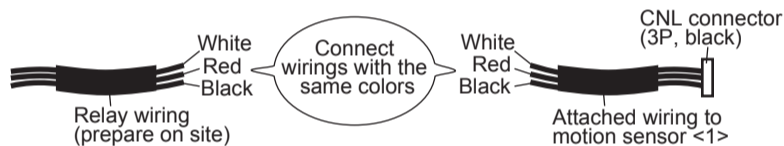


Wiring connection in the control box of indoor unit

CAUTION: Attached wirings to the motion sensor vary depending on the model of the indoor unit. Make sure your model before installing.

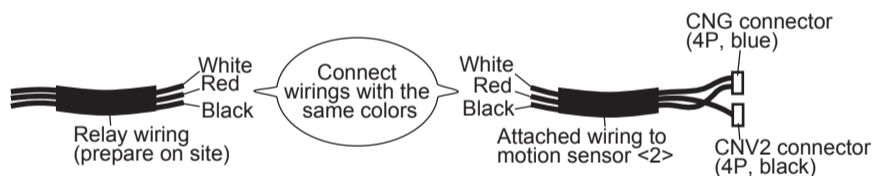
<In case of the CNL connector is on the indoor unit PWB (FDT/FDK/FDTC)>

- Connect the same color to the relay wiring (prepare on site) and the attached wiring <1>.
- Remove the control box cover from the indoor unit.
- Connect CNL connector (3P, black) to the PWB.



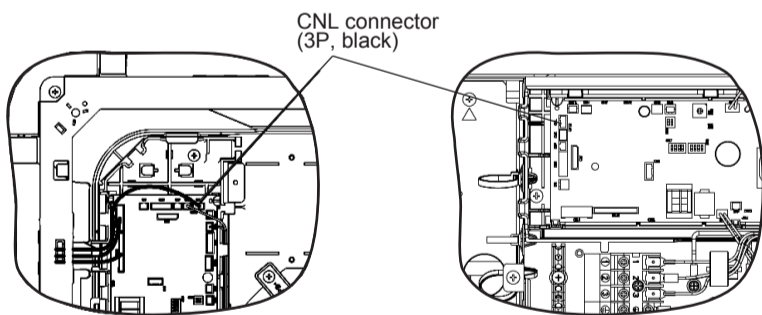
<In case of the CNL connector is not on the indoor unit PWB>

- Connect the same color to the relay wiring (prepare on site) and the attached wiring <2>.
- Remove the control box cover from the indoor unit.
- Connect CNG connector (4P, blue) to the PWB.
- Connect CNV2 connector (4P, black) to the PWB.



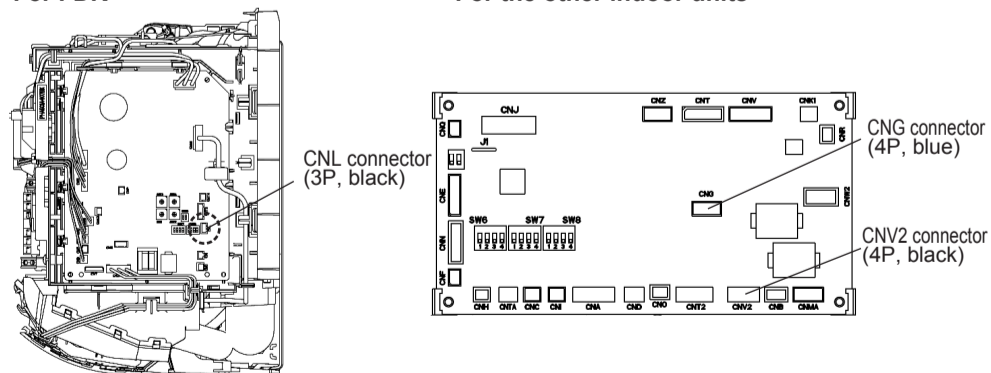
<For FDT>

<For FDTC>



<For FDK>

<For the other indoor units>



③ Setting the motion sensor

The motion sensor will not function if it is only installed. Set the function of the motion sensor by the wired or wireless remote controller. Refer to the manual instruction of each remote controller for the setting procedure.

Note: It is not possible to set by the following remote controller models or older.

- Wired: RC-EX1A, RC-E5, RCH-E3
- Wireless: RCN-E1R

MOTION SENSOR KIT USER'S MANUAL

Thank you very much for your purchase of this packaged air conditioning system and motion sensor kit by Mitsubishi Heavy Industries. This user's manual describes cautions for safety. Please read it along with the indoor unit and remote control user's manual.

SAFETY PRECAUTIONS

⚠ WARNING

- If a child, person with disease or other persons needed for assist uses this product, people around the person should take sufficient care.

A halt of the air conditioner due to abnormal situation or motion sensor's control may cause a feeling of sickness or accident.

ATTENTION

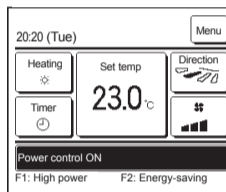
- The sensor may not detect a person near the border of detection range.
- Installation near an object with a different temperature from the surrounding may cause a false detection of human.
- Due to correction of temperature setting, some people may feel chilly.

This product uses infrared sensor to detect person's activity level to support control of air conditioner. Please set the control you like from the remote control.

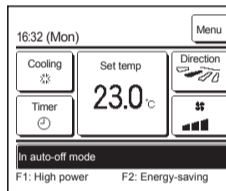
Indoor unit control	Detective situation	Description of control	Display of eco touch remote control
① Power control	Activity level is large	Lower the indoor temperature setting for comfort.	Power control ON
	Activity level is small	Raise the indoor temperature setting for energy-saving.	Power control ON
② Auto-off	No one is detected for 1 hour	Stop operation and stand by	In auto-off mode
	No one is detected for 12 hours	Stop operation	-
① + ②	Any combination of the above	Any of the above	Any of the above
All disabled (default setting)	-	Standard control	-

If the sensor is disconnected or defective, the control will be set as if it no detects (or less) activity level.

Refer to the next section for setting method.



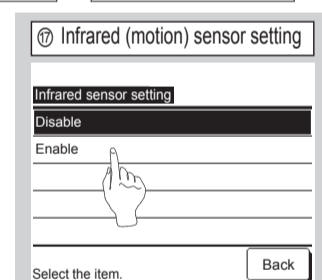
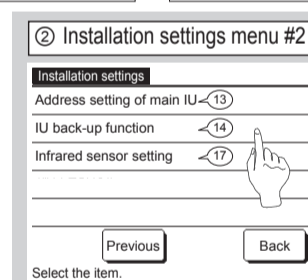
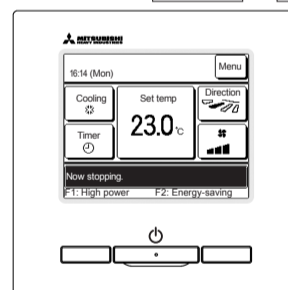
- When power control is enabled
The amount of human motion is detected by a motion sensor to adjust the Set temp. During power control, "Power control ON" will be displayed on the message display.



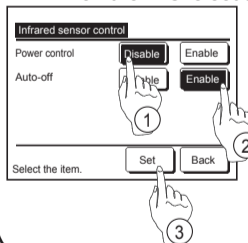
- When auto-off is enabled
The unit will enter the "Operation wait" state when an hour has elapsed since the last time a human presence was detected and will be in "Complete stop" state after another 12 hours. "Operation wait"...The unit stops but will resume operation when human presence is detected. When the unit is in "Complete stop", "In auto-off mode" will be displayed on the message display. "Complete stop"...When auto-off is enabled, the unit stops. The unit will not resume operation even when human presence is detected. The message "In auto-off mode" will disappear from the message display, and the operation lamp will turn off.

Control setting (from eco touch remote control)

- Refer to the installation manual for eco touch remote control to activate the infrared sensor (motion sensor).
TOP screen **Menu** ⇒ **Service setting** ⇒ **Installation settings** ⇒ **Service password**



- Refer to the installation manual for eco touch remote control to set control mode.
 - Infrared sensor (motion sensor) control (for IUs with motion sensors)
Presence of humans and the amount of motion are detected by a motion sensor to perform various controls.
 - When the R/C is set as the sub R/C, the infrared sensor (motion sensor) control cannot be set.



Tap the **Menu** button on the TOP screen and select **Energy-saving setting** ⇒ **Infrared sensor control** or **Motion sensor control**.
The Infrared sensor control screen and contents of the current settings are displayed.

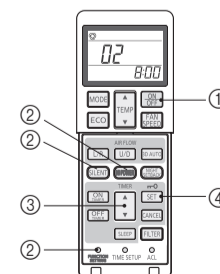
- Enable/disable power control.
- Enable/disable auto-off.
- After you set each item, tap the **Set** button.
The display returns to the Energy-saving setting menu screen.

Control setting (from wireless remote control)

- Refer to the installation manual for wireless remote control to enable motion sensor in **Indoor function settings**

Indoor function settings

- How to set indoor functions
 - Press the ON/OFF button to stop the unit.
 - Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
 - Use the selection buttons, ▲ and ▼, to change the setting.
 - Press the SET button.
The buzzer on the remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



2. Setting details

Button	Number indicator	Function setting
SILENT	00	Infrared sensor setting (Motion sensor setting) : Disable
	01	Infrared sensor setting (Motion sensor setting) : Enable
HI POWER	00	Infrared sensor control (Motion sensor control) : Disable
	01	Infrared sensor control (Motion sensor control) : Power control only
	02	Infrared sensor control (Motion sensor control) : Auto OFF only
	03	Infrared sensor control (Motion sensor control) : Power control and Auto OFF