MITSUBISHI ELECTRIC

Air-Conditioners For Building Application

Remote Sensor   PAC-SE41TS-E
PAC-SE42TS-E

Installation Manual

For your safety, first be sure to read " 1 Safety Precautions " described below thoroughly and then install the remote sensor correctly.

1 | Safety Precautions

● The following two symbols are used to denote dangers that may be caused by incorrect use and their degree:

| ⚠ WARNING | This symbol denotes what could lead to serious injury or death if your misuse the remote sensor. |
| ⚠ CAUTION | This symbol denotes what could lead to a personal injury or damage to your property if you misuse the remote sensor. |

● After reading this installation manual, keep it in a place where the final user can see it anytime he or she wants to it.
  When someone moves, repairs or uses the remote sensor, make sure that this manual is forwarded to the final user.

⚠ WARNING

■ **Ask your dealer or technical representative to install the unit.**
Any deficiency caused by your own installation may result in an electric shock or fire.

■ **Install in a place which is strong enough to withstand the weight of the remote sensor.**
Any lack of strength may cause the remote sensor to fall down, resulting in personal injury.

■ **Firmly connect the wiring using the specified cables. Carefully check that the cables do not exert any force on the terminals.**
Improper wiring connections may produce heat and possibly a fire.

■ **Never modify or repair the remote sensor by yourself.**
Any deficiency caused by your modification or repair may result in an electric shock or fire.
Consult with your dealer about repairs.

■ **Ensure that installation work is done correctly following this installation manual.**
Any deficiency caused by installation may result in an electric shock or fire.

■ **All electrical work must be performed by a licensed technician, according to local regulations and the instructions given in this manual.**
Any lack of electric circuit or any deficiency caused by installation may result in an electric shock or fire.

■ **Do not move and re-install the remote sensor yourself.**
Any deficiency caused by installation may result in an electric shock or fire.
Ask your distributor or special vendor for moving and installation.

■ **Do not turn on the main power until installation has been completed.**
Fail to do so may cause an electric shock or fire.

⚠ CAUTION

■ **Do not install in any place exposed to flammable gas leakage.**
Flammable gases accumulated around the body of the remote sensor may cause an explosion.

■ **Do not use in any special environment.**
Using in any place exposed to oil (including machine oil), steam and sulfuric gas may deteriorate the performance significantly or give damage to the component parts.

■ **Wire so that it does not receive any tension.**
Tension may cause wire breakage, heating or fire.

■ **Completely seal the wire lead-in port with putty etc.**
Any dew, moisture, cockroaches, insects entering the unit may cause an electric shock or a malfunction.

■ **Do not wash with water.**
Doing so may cause an electric shock or a malfunction.

■ **Do not install in any place where acidic or alkaline solution or special spray are often used.**
Doing so may cause an electric shock or malfunction.

■ **Use standard wires in compliance with the current capacity.**
A failure to this may result in an electric leakage, heating or fire.

■ **Do not install in any steamy place such a bathroom or kitchen.**
Avoid any place where moisture is condensed into dew.
Doing so may cause an electric shock or a malfunction.

■ **Do not touch any PCB (Printed Circuit Board) with your hands or with tools. Do not allow dust to collect on the PCB.**
Doing so may cause fire or an electric shock.

■ **Do not install in any place at a temperature of more than 40°C or less than 0°C or exposed to direct sunlight.**

Additional Precautions

■ If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

■ This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

■ This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

2 | Confirming the Supplied Parts

Confirm that following parts are enclosed in the box in addition to this Installation Manual.

(1)Remote sensor unit · · · · · · · · · · · · · · · · · 1
(2)2-core cable (12 m) · · · · · · · · · · · · · · · · · 1
(3)Wood screw 4.1X16 · · · · · · · · · · · · · · · · 2
(4)Post for connection · · · · · · · · · · · · · · · · · 1
(5)Convert cable · 2

3 | How to Install

(1)Determine the installation of the remote sensor (switch box). The follwing items must be observed.
  ①Select a place where the remote sensor will detect an average temperature of the room, and where the sensor will not be subject to direct sunlight, heat sources, or the blow-off from the air conditioner, etc.
  ②Install the sensor within the length of the cable provided (12m). (The cable cannot be extented. If extented, it may cause misoperation due to noise.)
  ③The following parts must be procured at the site.
    •Cross-recessed pan head screw
     M4 .... Tow screws
    •Single switch box
    •Thin steel conduit
    •Lock nut, bushing

Remote sensor external
Switch box
Center of switch box
Installation pitch
83.5 ± 0.4
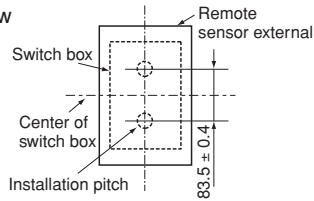
(2)Connect the wires.
  •Connect the 2-core cable to the terminal block in the lower case. Peel the sheath of the 2-core cable as shown in Fig.1 , and correctly wire it as shown in Fig.2.
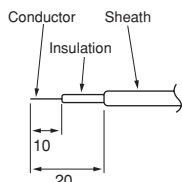
Conductor Sheath
Insulation
10
20
Fig.1

ELV ELV
To lead wiring from rear of remote sensor
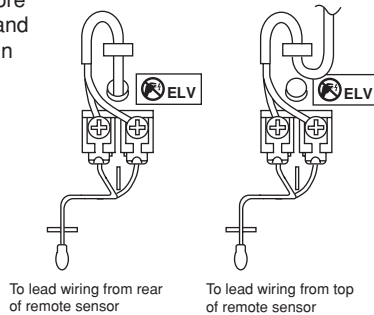To lead wiring from top of remote sensor
Fig.2

•The wiring connection of the indoor unit's electrical box and remote sensor is an shown in Fig.3. There are three methods of connecting the 2-core cable to the electrical box.
Exchange 2-core cable (connector 20)
  ①When using the connector attached to the end of the 2-core cable as it is.
  ②When cutting the connector attached to the end of the 2-core cable and connecting the cable to the terminal block in the I.B. (Indoor Board).
  ③When using the enclosed post for connection and convert cable.
The above three methods are used according to the indoor unit being used. If the 2-core cable is to be embedded in the wall, follow Fig.4.
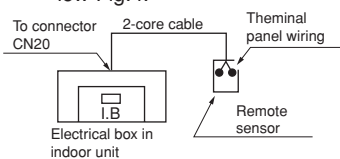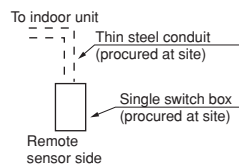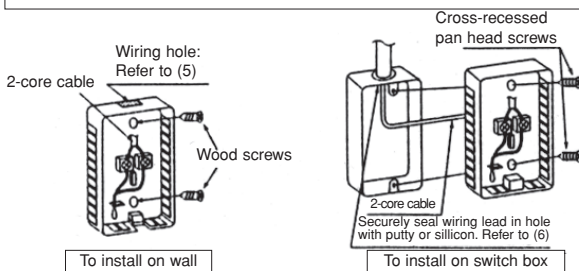
To connector CN20 2-core cable Theminal panel wiring
I.B
Electrical box in indoor unit Remote sensor
Fig.3

To indoor unit
Thin steel conduit (procured at site)
Single switch box (procured at site)
Remote sensor side
Fig.4

(3)Install the lower case on the wall or switch box.

NOTE The recommended tightening torque for installing the 2-core cable to the terminal block is 1.17N·m.

Wiring hole: Refer to (5)
2-core cable
Wood screws
To install on wall

Cross-recessed pan head screws
2-core cable
Securely seal wiring lead in hole with putty or sillicon. Refer to (6)
To install on switch box

⚠CAUTION •If the screws are tightened too hard, the case may break or deform.
 •Install the sensor on a flat wall. If installed on a bumpy wall, the case may break or trouble may occur.

(4)Fit the upper case.
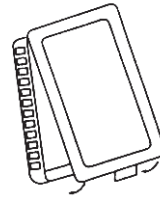
Catch the two upper claws first, and fit the case as shown on the left.

⚠CAUTION •Securely fit the case until a catching sound is heard. It may drop off if is not fitted securely.

To remove the case, fit a flat-flap screwdriver into the claw section as shown below, and move the screwdriver in the direction of the arrow.
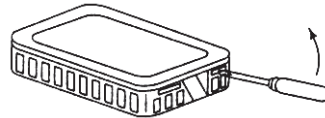
⚠CAUTION •Do not turn the screwdriver when it is fit into the claw section as the claws may be broken.

(5)Wiring hole for direction installation on wall, etc.
Cut the thin section (shaded section) of the lower case with a knife or pair of nippers, etc. The 2-core cable connected to the terminal block is led out from here.
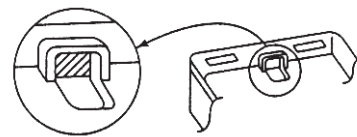
(6)Securely seal the wiring lead hole with putty or silicon to prevent dew, water drops, cockroaches and other insects from entering.
•When installing directly on the wall, seal the section cut on the lower case with putty or silicon.
If the wiring is to be passed through a hole in the wall (when leading the wiring from the rear of the remote sensor), seal the hole in the same manner.
•When installing on a switch box, seal the connection of the switch box and conduit with putty or silicon.
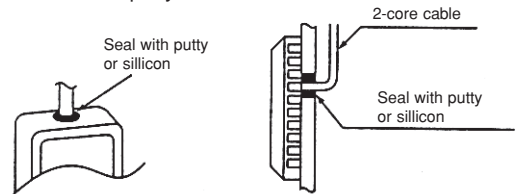
Seal with putty or sillicon
2-core cable
Seal with putty or sillicon
To lead wiring from top of remote sensor.
To lead wiring from rear of remote sensor.
To install directly on wall
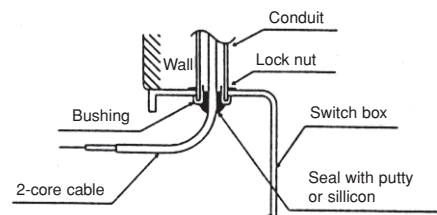
Conduit
Wall Lock nut
Bushing Switch box
2-core cable Seal with putty or sillicon
To use switch box

4 | Setting of the indoor unit

When the remote sensor is connected to the indoor unit and room temeprature detection poisition is changed, reset the setting of "Set temp. 4-deg. up" in the heating mode as shown below.

① K control models : DIP switch Nos 1-6 on the control PCB of the indoor unit.
② M-NET control models : DIP switch Nos 3-8 on the control PCB of the indoor unit.
③ A control models : Refer to A-control air-conditioners SERVICE TECHNICAL GUIDE.

MITSUBISHI ELECTRIC CORPORATION