



Package air-conditioner Optional parts Installation Manual of EXTERNAL LEV BOX PAC-SG95LE-E [For CITY MULTI INDOOR UNIT 20-63 MODELS]

* Before installing the unit, make sure to read the installation manual of the indoor unit and this manual.

Safety precautions

- Before installing the unit, make sure to read all the "Safety precautions".
- These precautions provide very important points regarding safety. Make sure to follow them.
- Symbols used in this manual are categorized according to the degree of risk when used improperly as follows:

Warning	Precautions that should be observed to prevent serious injury or death.
Caution	Precautions that should be observed to prevent injury or damage to the premises and/or contents thereof.

- After installation, perform the test run to ensure normal operation. Then explain the user the "Safety Precautions", use and maintenance of the unit based on the information in the Operation Manual. Both the Installation Manual and the Operation Manual must be given to the user. These manuals must always be kept by the actual users.

Warning

The unit must not be installed by the user. Ask the dealer or an authorized company to install the unit.

Installation must be properly done following this installation manual.

- If the unit is installed improperly, water leakage, electric shock or fire may be caused.

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Before installation (relocation) and electrical work

Caution

Keep plastic bags away from children.

- Children may put plastic bags over their head. And it may cause suffocation.

Make sure heat insulation for refrigerant piping is properly installed to prevent bedewing.

- Improper heat insulation may cause condensation on parts such as pipings, and wet ceilings, floors or other valuable items.

Use proper electrical cables to meet the standard for current capacity.

- If proper electrical cables are not used, short circuit, electric shock or fire may be caused.

Perform drain piping according to the installation manual and make sure water is drained properly and keep drain piping warm to prevent bedewing.

- If piping is not properly installed, water leakage may result, which will make the ceilings, floors or other household items wet.

1 Parts check

This unit is provided with this manual and following parts in the box.

Part name	① External LEV Box	② Joint pipe	③ Pipe cover	④ Band	⑤ Fastener
Q'ty	1	2	2	6	2
Figure					

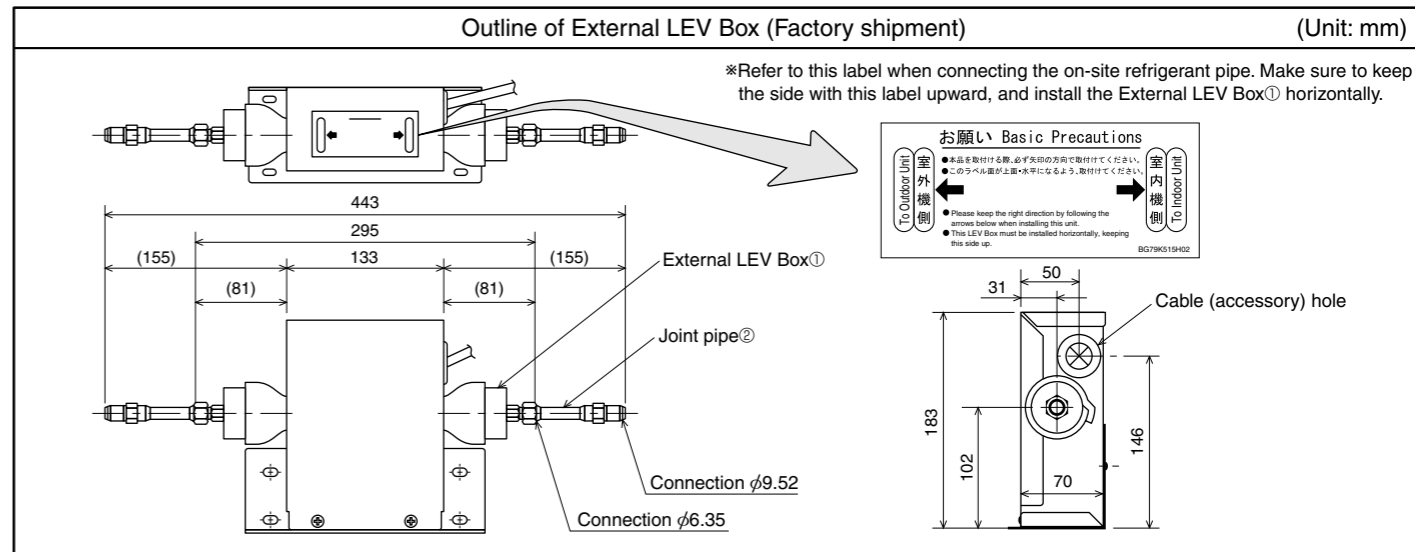
Note: Make sure to complete installation work of External LEV Box of optional parts before turning on the indoor unit. This unit may run improperly if the unit is not installed following this manual.

2 Installation procedure

Connect the External LEV Box to the liquid pipe and install it inside the ceiling (Do not install in an outdoor location. It may cause a breakdown). Make sure to install the access door on the ceiling.

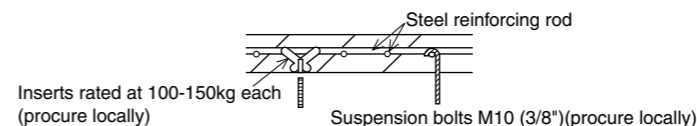
2-1 Installation location

- The installation patterns below are available. Select the installation pattern according to the preferred installation method. The distance between indoor unit and External LEV Box is within 5 m. (Pipe: 5m, Cable: 5.3m)

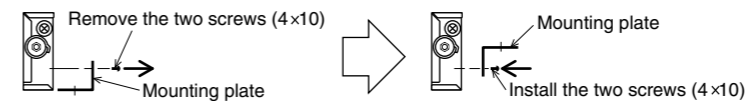


Installation pattern A (Using Suspension bolts; recommended pattern) (Unit: mm)

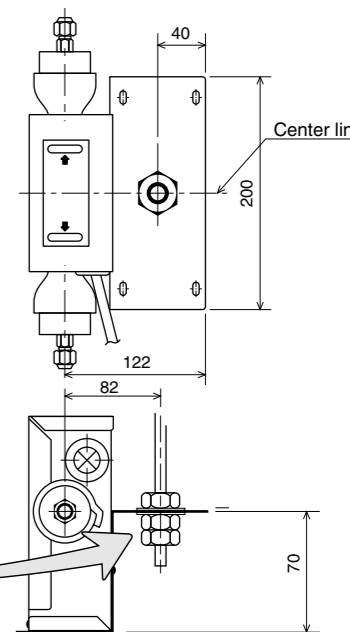
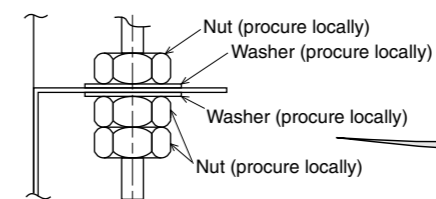
1. Install the suspension bolts M10 (3/8") (procure locally). Decide the installation location referring to the figure on the right. The unit must be suspended firmly.
 - Install the suspension bolts as shown below or install it with angles or blocks.



2. Change the position of External LEV Box mounting plate as shown below. The mounting plate can also be fixed to suspension bolts before it is fixed to the External LEV Box.

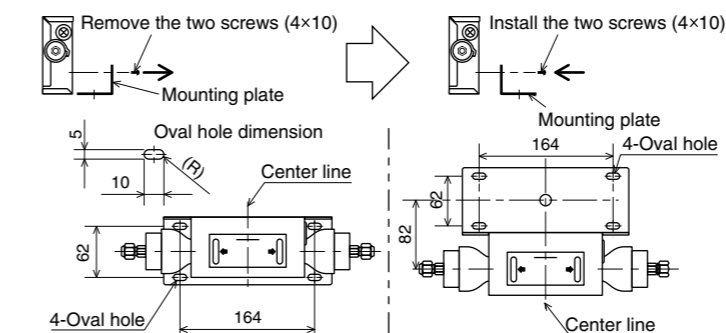


3. Set the External LEV Box to the suspension bolt and tighten each nuts and washers.



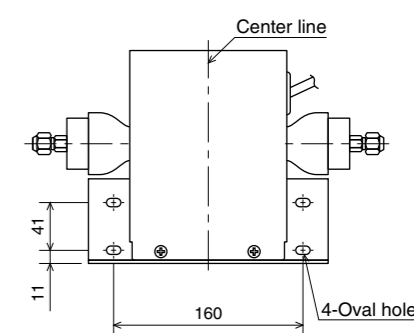
Installation pattern B (Unit: mm)

Two installation patterns are available by changing the position of the mounting plate. Install the four screws (procure locally) in oval holes.



Installation pattern C (Unit: mm)

Install the four screws (procure locally) in oval holes.

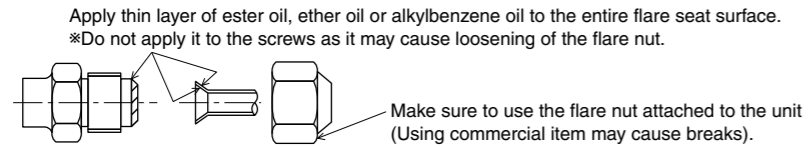


2-2 Connecting pipes

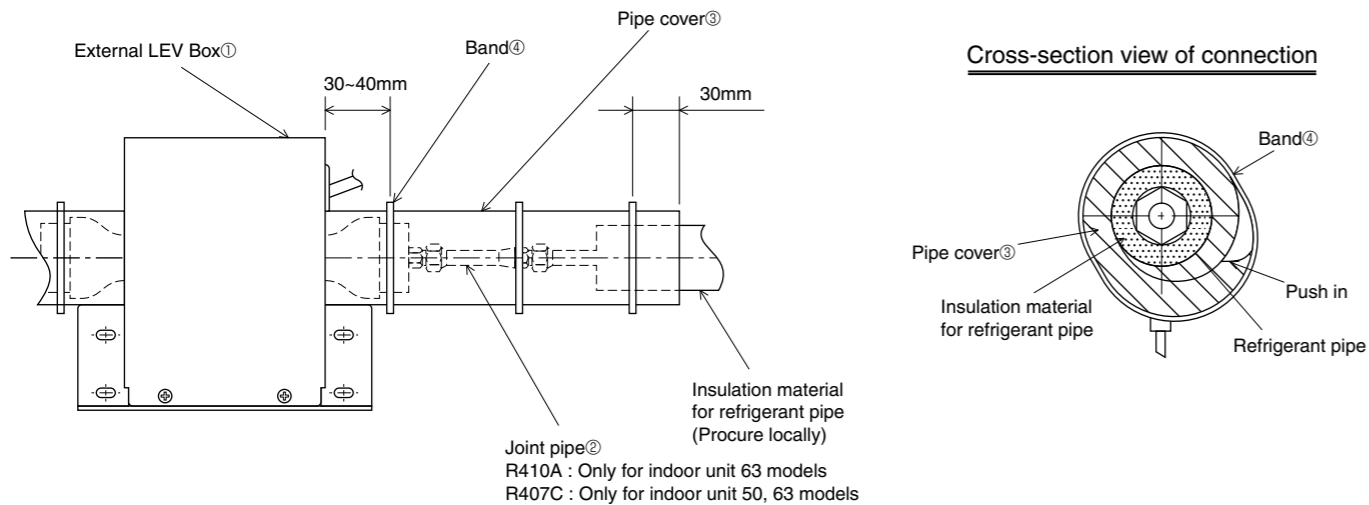
- After deciding the installation location, carry out flaring work of liquid pipe and apply thin layer of refrigerant oil (procure locally) to the flared seat surface.
- Connect the field refrigerant piping.

Copper pipe O.D. (mm)	A dimensions (mm)		Flare dimensions ϕB dimensions (mm)	Tightening torque N·m(kgf·cm)
	Flare tool for R410A	Flare tool for R22, R407C		
	Clutch-style			
$\phi 6.35(1/4")$	0~0.5	1.0~1.5	8.7~9.1	14~18(140~180)
$\phi 9.52(3/8")$	0~0.5	1.0~1.5	12.8~13.2	34~42(340~420)

* When flare tools for R22, R407C are used for R410A flaring work, refer to the table above. The size adjustment gauge can be used to secure A measurements.



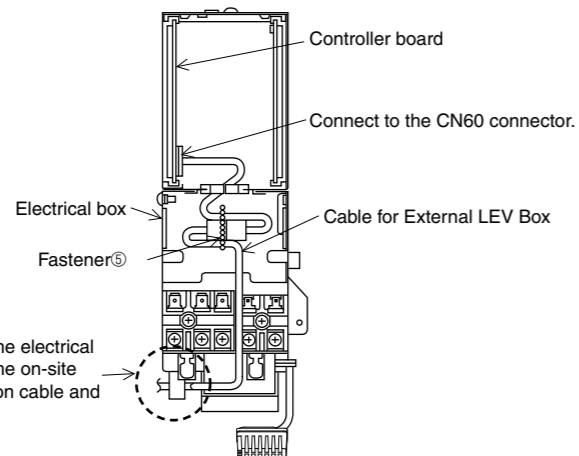
- Wrap the enclosed pipe cover^③ around the liquid pipe connection, pushing it on the outside of External LEV Box^①.
- Secure both ends of pipe cover^③ with the enclosed bands^④ to make sure it is insulated.



3 Wiring procedure

Wiring procedure differs depending on the indoor unit. To remove the electrical box cover when connecting the cables of each indoor unit, refer to the installation manuals of each indoor unit. Fix the cable together with the on-site wirings (power supply cable, transmission cable and remote controller cable). Use the fastener^⑤ to bind the cables in the electrical box.

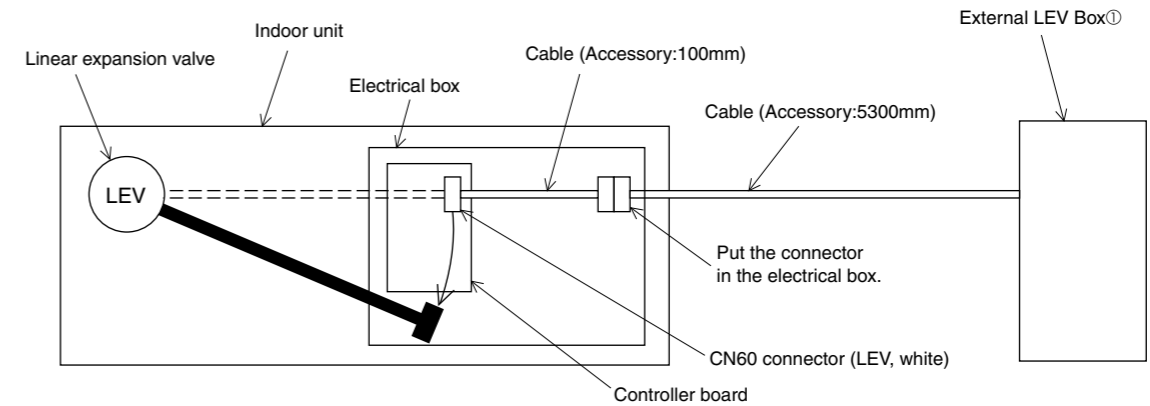
Example: PKFY-P-VBM-E



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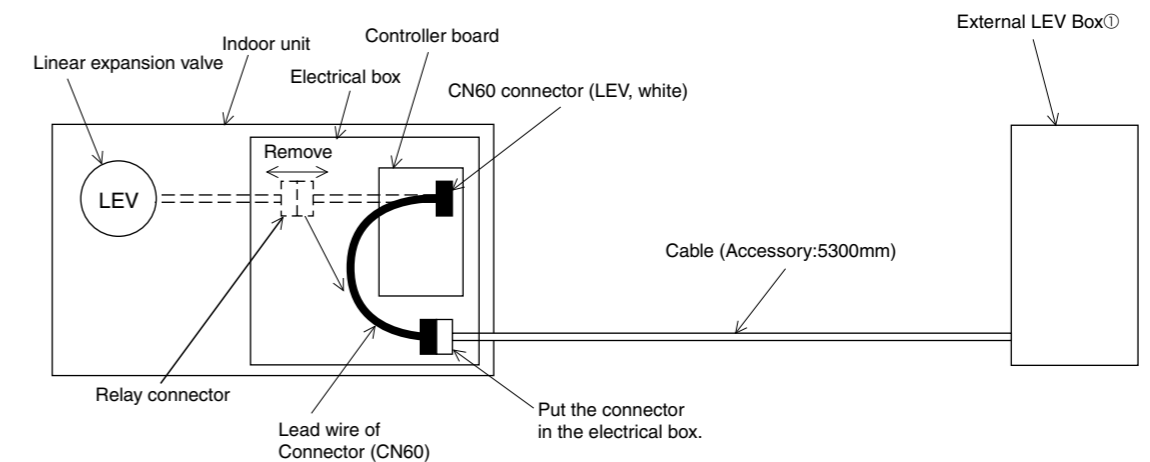
Make sure to complete the work below before turning on the indoor unit

At factory shipment, the connector for LEV in the indoor unit is connected to the connector (CN60) on indoor controller board. Replace the connector (CN60) with the white connector of the cable (accessory: 100mm) for External LEV Box^①. Bind the removed lead wire of LEV with fastener^⑤ and place it in the electrical box.



Wiring shown below can be applied when the connector board and LEV are connected with relay.

Remove the relay connector in electrical box. Connect the lead wire of the connector (CN60) to the connector of the cable (Accessory: 5300mm) of External LEV Box^①. Bind the removed lead wire of LEV with fastener^⑤ and place it in the electrical box. Remove the cable (accessory: 100mm) since it is unnecessary.



4 Test run

Carry out test run referring to the installation manual enclosed with indoor/outdoor unit.

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