



## **SVC MANUAL (Exploded View)**

# **Air Conditioner**

### **Cassette Air Conditioner**

**ENGLISH**

**FRANÇAIS**

### **MODEL**

**ZMNR07GTCA0 [KNMFB071A]**

**ZMNR09GTCA0 [KNUFB091A]**

**ZMNR12GTCA0 [KNUFB121A]**

**ZMNR18GTCA0 [KNUFB181A]**

P/No.: MFL68020012

Rev.01\_112625

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This manual may contain images or content different from the model you purchased.

This manual is subject to revision by the manufacturer.

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# 1. SPECIFICATIONS

## Indoor Unit

| Model Name                                     |                    |             | ZMNR07GTCA0<br>[KNMFB071A] | ZMNR09GTCA0<br>[KNUFB091A]       | ZMNR12GTCA0<br>[KNUFB121A]       | ZMNR18GTCA0<br>[KNUFB181A]       |                                  |
|------------------------------------------------|--------------------|-------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Cooling Capacity                               |                    | kW          | 2.1                        | 2.7                              | 3.5                              | 5.3                              |                                  |
|                                                |                    | kcal/h      | 1766                       | 2270                             | 3027                             | 4540                             |                                  |
|                                                |                    | Btu/h       | 7000                       | 9000                             | 12000                            | 18000                            |                                  |
| Heating Capacity                               |                    | kW          | 2.4                        | 3.5                              | 4.5                              | 5.9                              |                                  |
|                                                |                    | kcal/h      | 2041                       | 3024                             | 3881                             | 5040                             |                                  |
|                                                |                    | Btu/h       | 8100                       | 12000                            | 15400                            | 20000                            |                                  |
| Power Supply                                   |                    | Ø, V, Hz    | 1, 208 / 230, 60           | 1, 208 / 230, 60                 | 1, 208 / 230, 60                 | 1, 208 / 230, 60                 |                                  |
| Casing                                         |                    | -           | Galvanized Steel Plate     | Galvanized Steel Plate           | Galvanized Steel Plate           | Galvanized Steel Plate           |                                  |
| Dimensions                                     |                    | W x H x D   | mm                         | 1020 x 195 x 340                 | 1020 x 195 x 340                 | 1020 x 195 x 340                 | 1020 x 195 x 340                 |
|                                                |                    |             | inch                       | 40-5/32 x 7-3/4 x 13-3/8         | 40-5/32 x 7-3/4 x 13-3/8         | 40-5/32 x 7-3/4 x 13-3/8         | 40-5/32 x 7-3/4 x 13-3/8         |
| Net Weight                                     |                    | kg (lbs)    | 13.8 (30.4)                | 13.8 (30.4)                      | 13.8 (30.4)                      | 13.8 (30.4)                      |                                  |
| Heat Exchanger                                 | Row x Column x FPI |             | -                          | 2 x 12 x 20                      | 2 x 12 x 20                      | 2 x 12 x 20                      | 2 x 12 x 20                      |
|                                                | Face Area          |             | m² (ft²)                   | 0.20 (2.17)                      | 0.20 (2.17)                      | 0.20 (2.17)                      | 0.20 (2.17)                      |
| Fan                                            | Type               |             | -                          | Cross Flow Fan                   | Cross Flow Fan                   | Cross Flow Fan                   | Cross Flow Fan                   |
|                                                | Air Flow Rate      | H / M / L   | CMM                        | 8.2 / 7.3 / 6.4                  | 9.2 / 8.5 / 8.2                  | 10.0 / 9.2 / 8.2                 | 13.5 / 11.5 / 9.5                |
|                                                |                    |             | cfm                        | 289 / 258 / 226                  | 325 / 300 / 289                  | 353 / 325 / 289                  | 477 / 406 / 335                  |
| Fan Motor                                      | Type               |             | -                          | BLDC                             | BLDC                             | BLDC                             | BLDC                             |
|                                                | Output             |             | W x No.                    | 30 x 1                           | 30 x 1                           | 30 x 1                           | 30 x 1                           |
|                                                | Running Current    |             | A                          | 0.58                             | 0.58                             | 0.58                             | 0.58                             |
| Sound Pressure Level                           |                    | H / M / L   | dB(A)                      | 30 / 28 / 25                     | 33 / 31 / 30                     | 35 / 33 / 30                     | 44 / 40 / 35                     |
| Pipe Connections                               | Liquid Side        |             | mm (inch)                  | Ø 6.35 (1/4)                     | Ø 6.35 (1/4)                     | Ø 6.35 (1/4)                     | Ø 6.35 (1/4)                     |
|                                                | Gas Side           |             | mm (inch)                  | Ø 9.52 (3/8)                     | Ø 9.52 (3/8)                     | Ø 9.52 (3/8)                     | Ø 12.7 (1/2)                     |
|                                                | Drain              | O.D. / I.D. | mm (inch)                  | Ø 32 (1-1/4) / Ø 25 (31/32)      | Ø 32 (1-1/4) / Ø 25 (31/32)      | Ø 32 (1-1/4) / Ø 25 (31/32)      | Ø 32 (1-1/4) / Ø 25 (31/32)      |
| Power and Communication Cable (Included Earth) |                    |             | No. x mm² (AWG)            | 3C x 2.08 (14)<br>2C x 0.82 (18) | 3C x 2.08 (14)<br>2C x 0.82 (18) | 3C x 2.08 (14)<br>2C x 0.82 (18) | 3C x 2.08 (14)<br>2C x 0.82 (18) |
| Safety Device                                  |                    |             | -                          | Fuse                             | Fuse                             | Fuse                             | Fuse                             |
| Front Panel                                    | Model Name         |             | -                          | PT-UCA                           | PT-UCA                           | PT-UCA                           | PT-UCA                           |
|                                                | Color              |             | -                          | Matt White                       | Matt White                       | Matt White                       | Matt White                       |
|                                                | Dimensions         | W x H x D   | mm                         | 1270 x 30 x 412                  | 1270 x 30 x 412                  | 1270 x 30 x 412                  | 1270 x 30 x 412                  |
|                                                |                    |             | inch                       | 50 x 1-3/16 x 16-7/32            | 50 x 1-3/16 x 16-7/32            | 50 x 1-3/16 x 16-7/32            | 50 x 1-3/16 x 16-7/32            |
|                                                | Net Weight         |             | kg (lbs)                   | 4.9 (10.8)                       | 4.9 (10.8)                       | 4.9 (10.8)                       | 4.9 (10.8)                       |

### NOTE

1. All data are based on the following conditions:

- Cooling Temperature : Indoor 27°C(80.6°F) DB / 19°C(66.2°F) WB  
Outdoor 35°C(95°F) DB / 24°C(75.2°F) WB
- Heating Temperature : Indoor 20°C(68°F) DB / 15°C(59°F) WB  
Outdoor 7°C(44.6°F) DB / 6°C(42.8°F) WB
- Piping Length : Interconnected Pipe Length = 7.5m (24.6ft)
- Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.

2. Wiring cable size must comply with the applicable local and national code.

3. Due to our policy of innovation some specifications may be changed without notification.

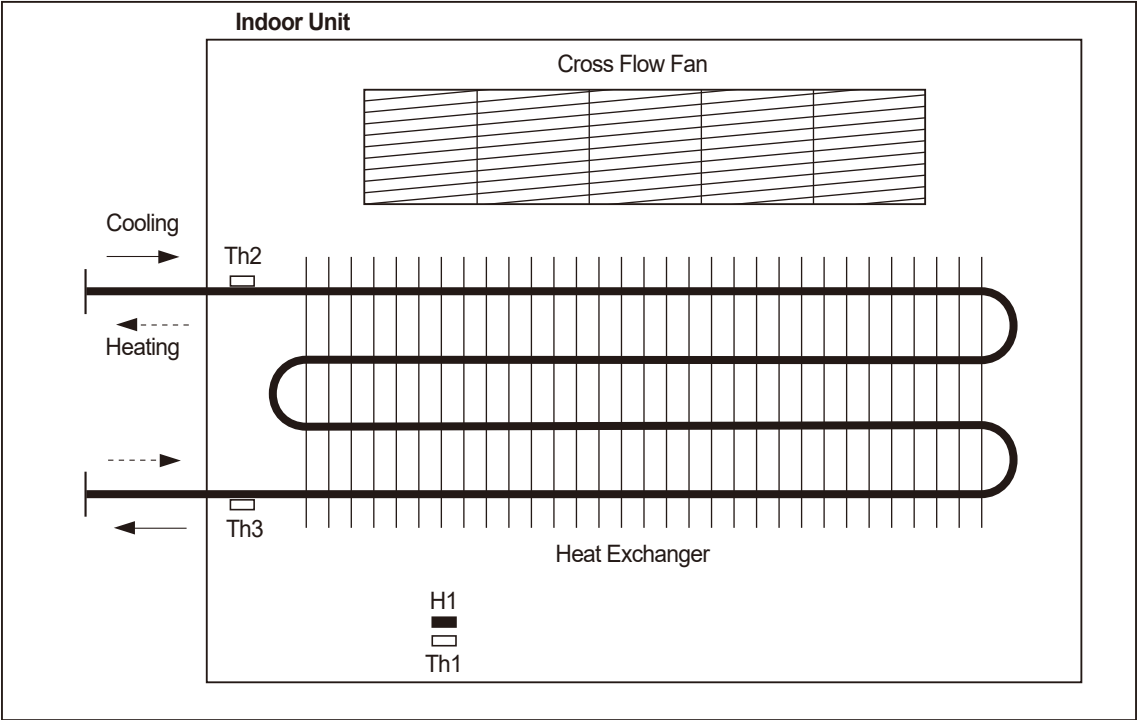
4. Sound Level Values are measured at Anechoic chamber.

Therefore, these values can be increased(maximum 3dB(A)) owing to ambient conditions during operation.

#### Conversion Formula

kcal/h = kW x 860  
Btu/h = kW x 3 412  
cfm = CMM x 35.3  
l/s = CMM x 1 000 / 60

2. PIPING DIAGRAMS



| LOC. | Description                                  | PCB Connector |
|------|----------------------------------------------|---------------|
| Th1  | Thermistor for indoor air temperature        | CN_ROOM       |
| Th2  | Thermistor for evaporator inlet temperature  | CN_PIPE_IN    |
| Th3  | Thermistor for evaporator outlet temperature | CN_PIPE_OUT   |
| H1   | Humid sensor for indoor air humidity         | CN_ROOM_HUMID |

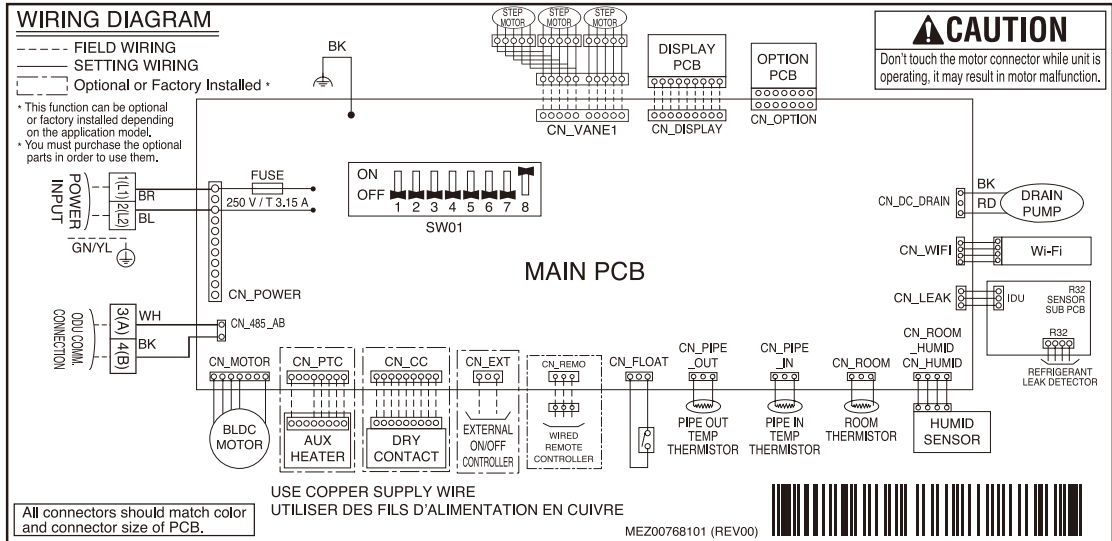
# 3. WIRING DIAGRAMS

ZMNR07GTCA0 [KNMFB071A]

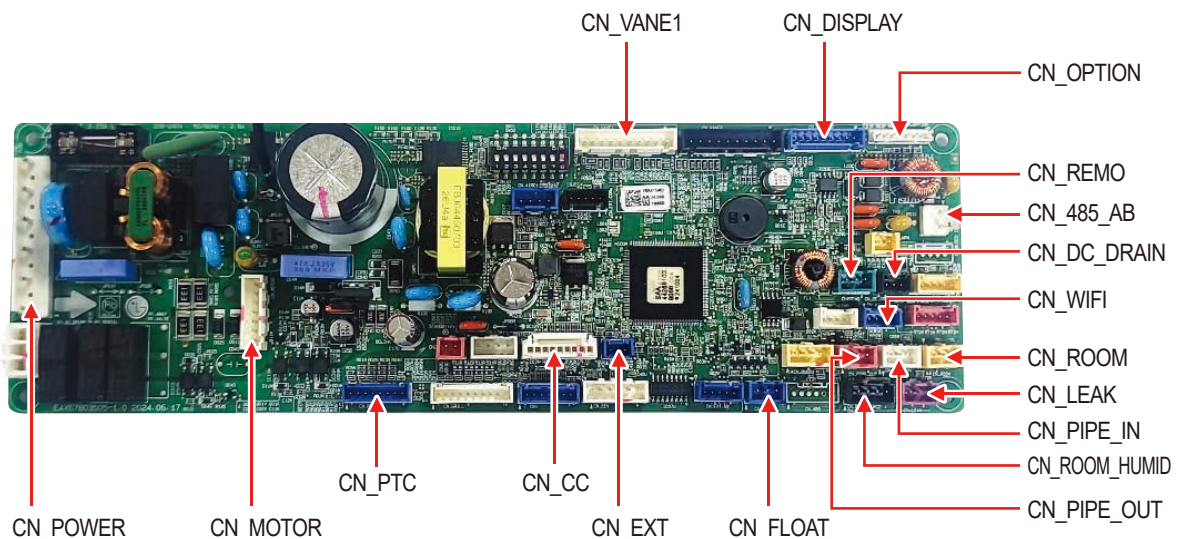
ZMNR09GTCA0 [KNUFB091A]

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ZMNR18GTCA0 [KNUFB181A]



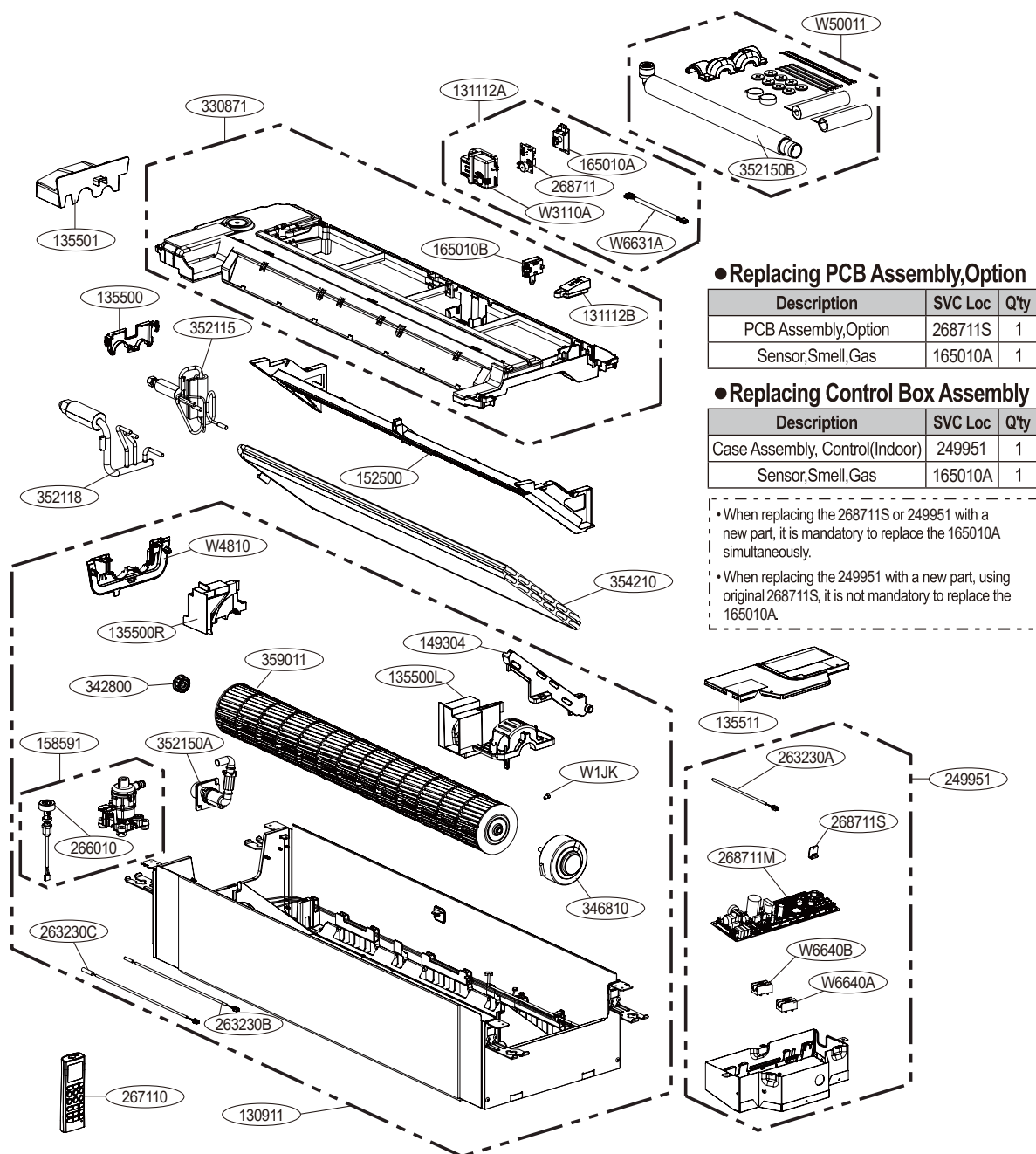
## PCB



## 4. EXPLODED VIEW

### Indoor Unit

ZMNR07GTCA0 [KNMFB071A] / ZMNR09GTCA0 [KNUFB091A]  
ZMNR12GTCA0 [KNUFB121A] / ZMNR18GTCA0 [KNUFB181A]

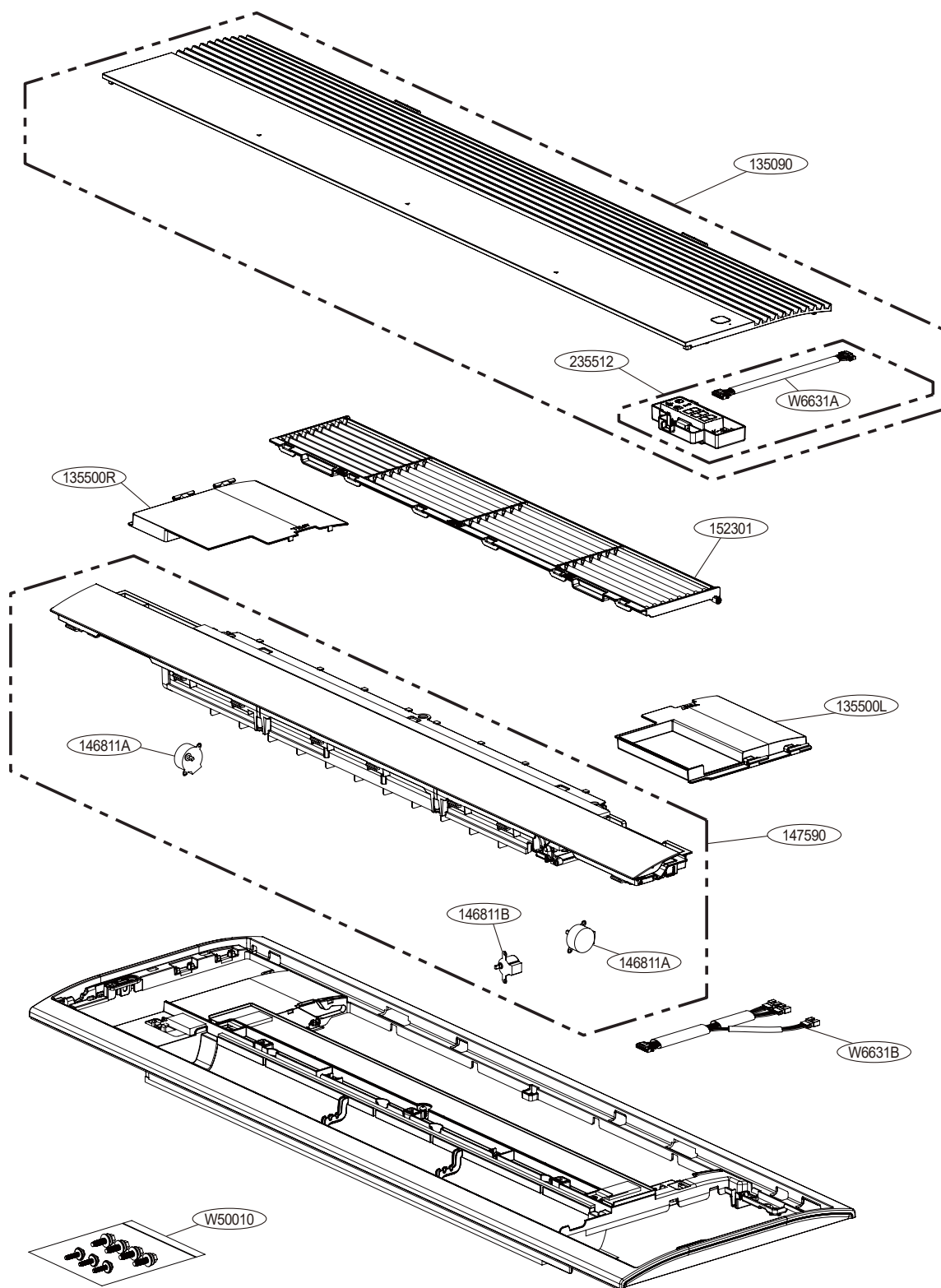


| Location No. | Description             | Sensor Information | Housing Color |
|--------------|-------------------------|--------------------|---------------|
| 263230A      | Thermistor Assembly,NTC | CN_ROOM            | Yellow        |
| 263230B      | Thermistor Assembly,NTC | CN_PIPE_IN         | White         |
| 263230C      | Thermistor Assembly,NTC | CN_PIPE_OUT        | Red           |

# Front Panel

## PT-UCA

ENGLISH



## 5. R32 LEAK DETECTION SYSTEM

R32 Leak Detection System is composed with R32 Sub PCB and R32 Sensor. R32 Sensor detects concentration of refrigerant(R32) in the air. When the concentration of the refrigerant in the air is over 5000 ppm or components have a problem, leak detection system will be activated.(CH228, 229, 230).

When leak detection system is activated, all the following actions will be operated automatically.

- All indoor and outdoor units connected with indoor unit error occurred will stop and display error code.
- All indoor and outdoor units cannot be controlled until error code disappears.
- Fan of indoor unit error occurred will operate high speed.(Some models will operate maximum speed)
- All the safety components connected with indoor unit error occurred will operate.

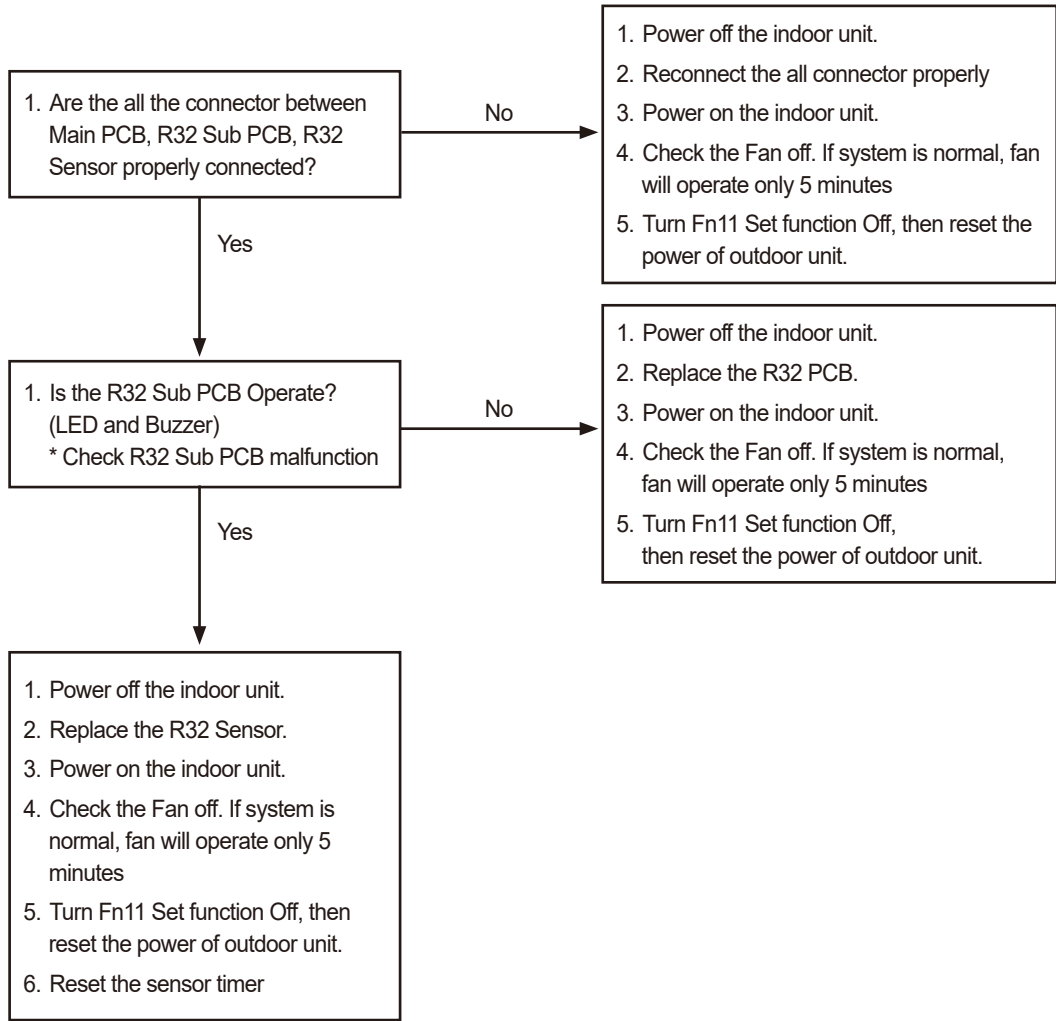
If leak detection system is activated, ventilate room and contact authorized personnel immediately.

Since the lifetime of the R32 sensor is 3,650 days, the sensor must be replaced before its lifetime reaches the end. The indoor unit will display error code(CH236) to indicate that the remaining lifetime is under six month. If there is an error code of 236, contact authorized personnel as soon as possible.

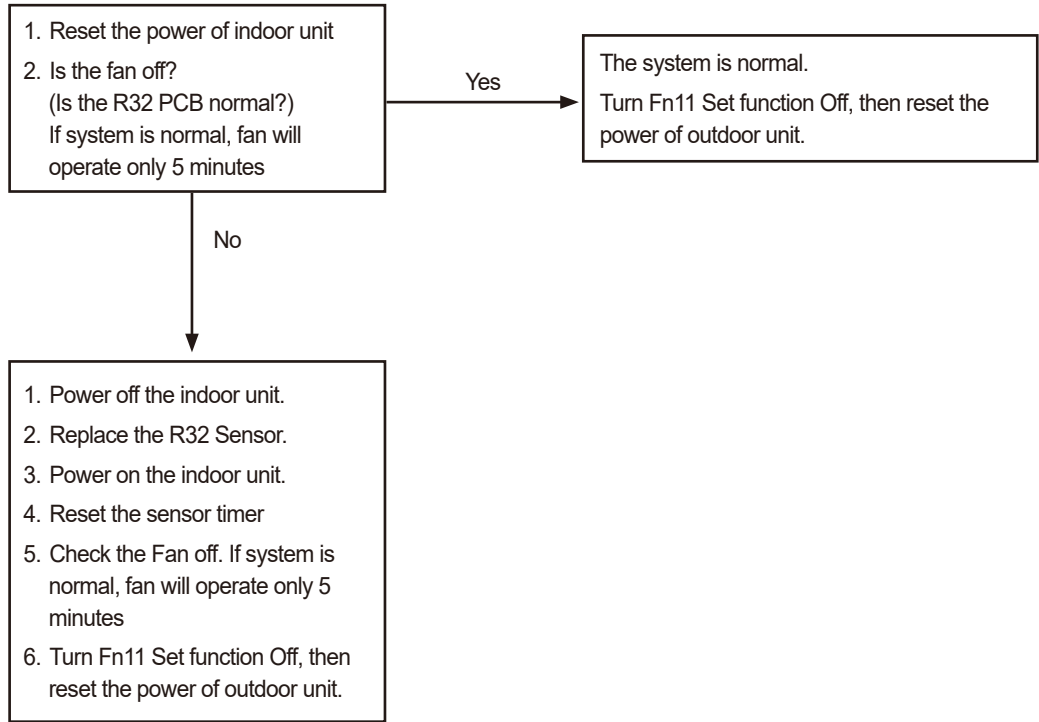
## Trouble Shooting for R32 Leak Detection System

The following troubleshooting procedures shall be performed to restore the system to its normal operating state after activation of the leak detection system. All procedures must be carried out exclusively by authorized personnel.

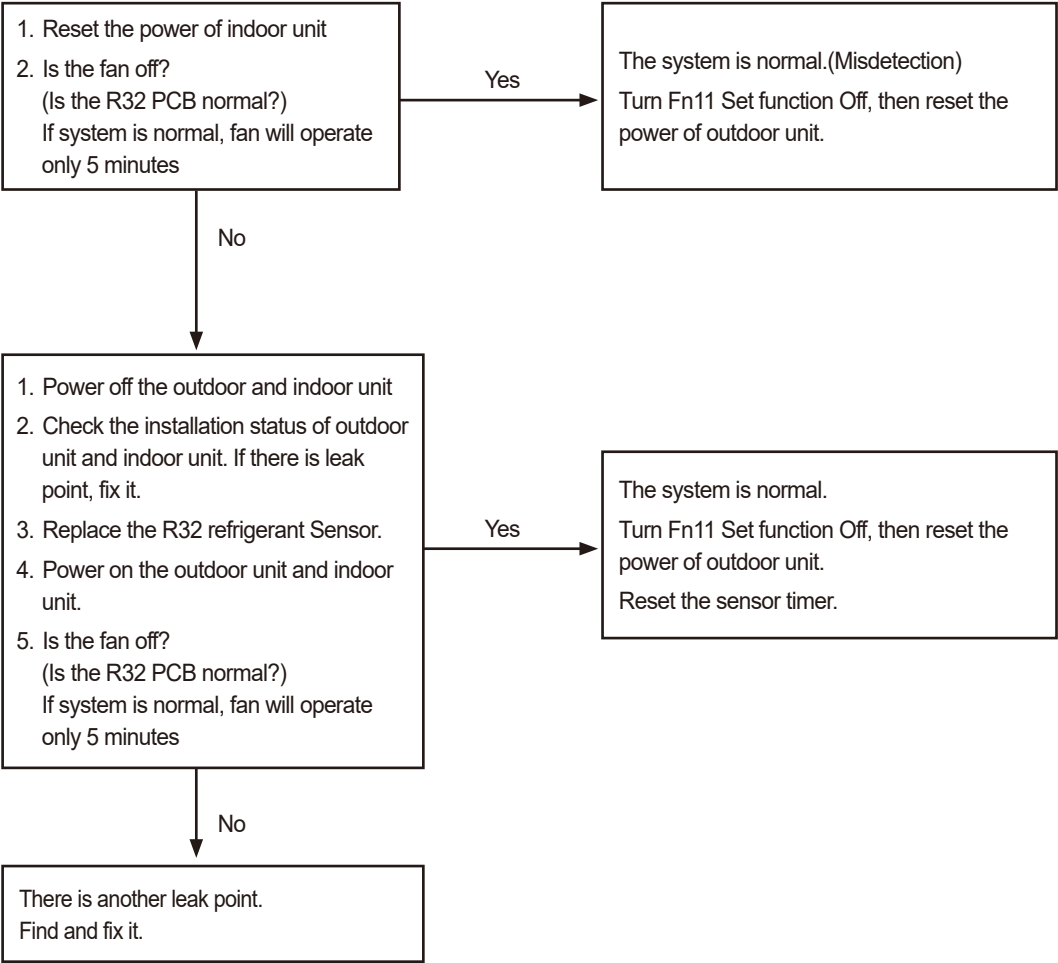
| Error No. | Error Type               | Error Point                                                                                                |
|-----------|--------------------------|------------------------------------------------------------------------------------------------------------|
| CH 228    | System malfunction Error | <ul style="list-style-type: none"><li>• R32 Sub PCB malfunction</li><li>• R32 Sensor malfunction</li></ul> |



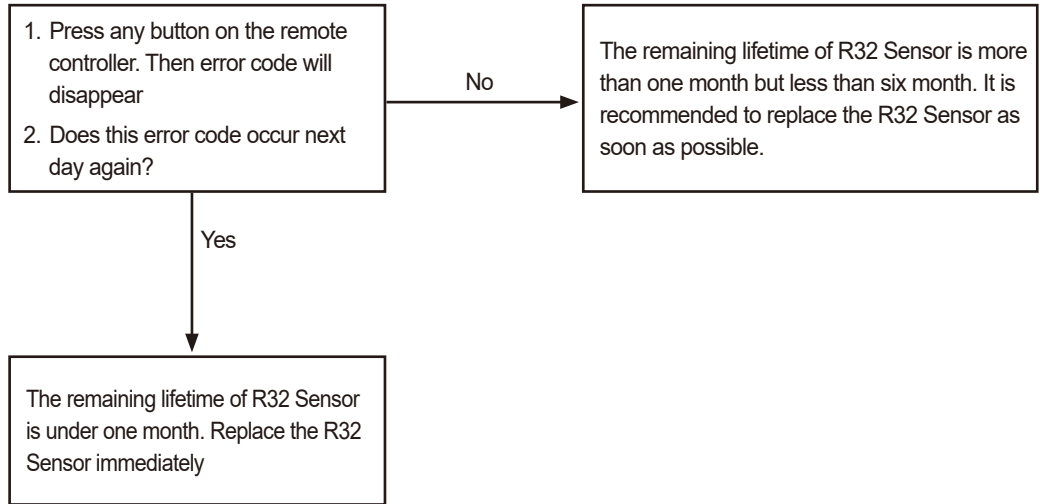
| Error No. | Error Type                | Error Point                                                                                         |
|-----------|---------------------------|-----------------------------------------------------------------------------------------------------|
| CH 229    | R32 Sensor Lifetime error | <ul style="list-style-type: none"><li>The R32 sensor has reached the end of its lifetime.</li></ul> |



| Error No. | Error Type                       | Error Point                                                                                                                |
|-----------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| CH 230    | Refrigerant Leak Detection Error | <ul style="list-style-type: none"><li>• Misdetection by other gases</li><li>• There is leak point in the system.</li></ul> |

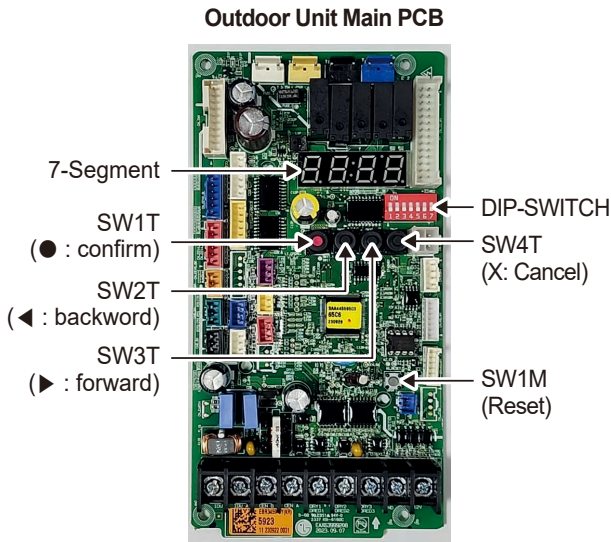
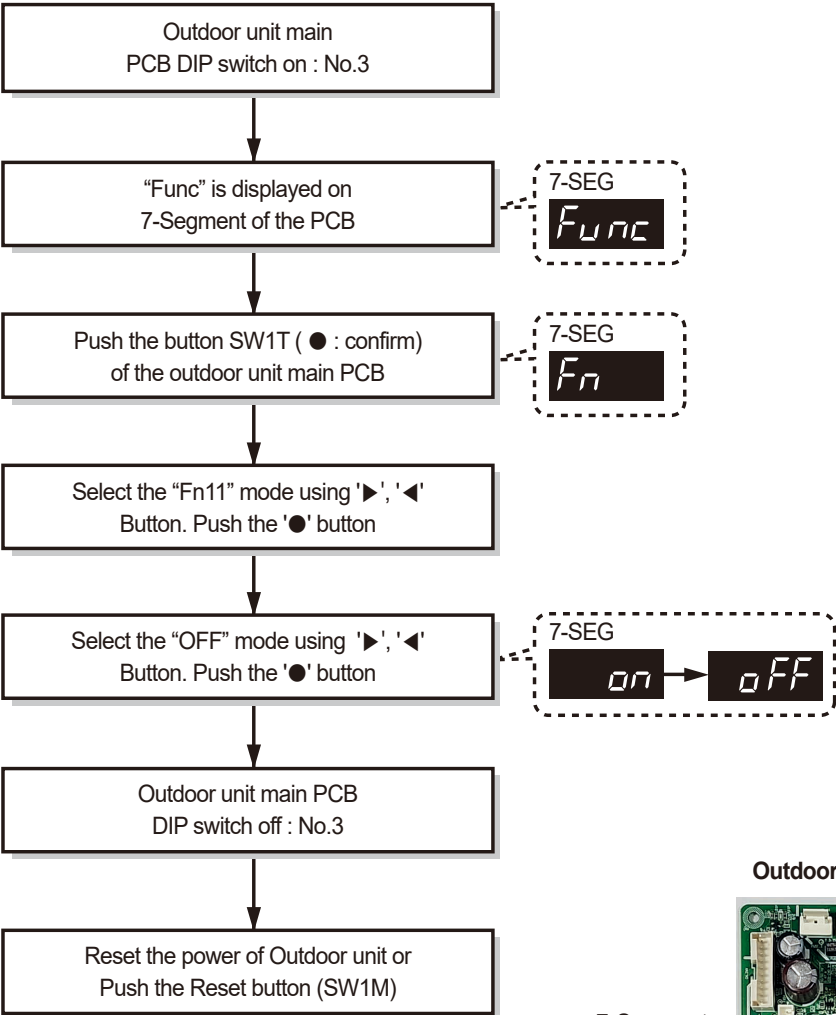


| Error No. | Error Type                    | Error Point                                                                                              |
|-----------|-------------------------------|----------------------------------------------------------------------------------------------------------|
| CH 236    | R32 Sensor Lifetime Pre Alarm | <ul style="list-style-type: none"><li>The remaining lifetime of R32 Sensor is under six month.</li></ul> |



## F11 Setting Process

After clear issue, F11 Set function should be deactivated from On to Off

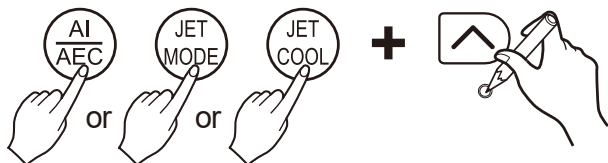


## Reset the Refrigerant Leak Sensor Timer

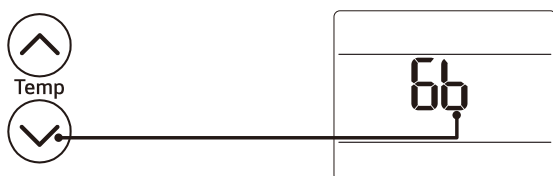
After Replace the R32 Sensor, the sensor timer should be reset

### Wireless remote controller

1. With the  or  or  button pressed, press the reset button.



2. By using the  or  button, set the installer code "6B"

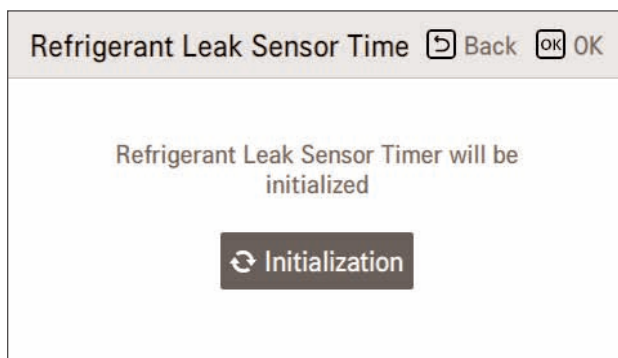
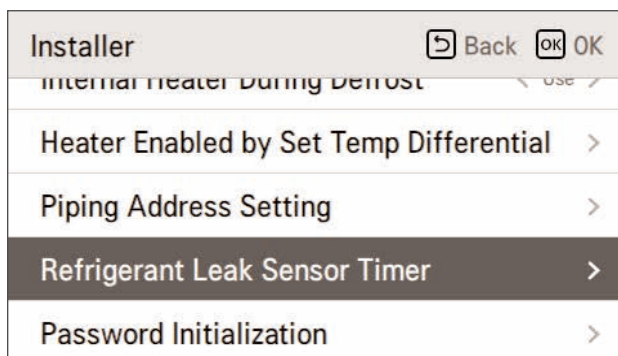


3. press the  button toward the indoor unit 1 time.
4. Reset the remote controller to use the general operation mode.V

### Standard 3 Wired remote controller

This feature resets the life timer of the refrigerant leakage detection sensor.

- In the installer setting list, select Refrigerant Leak Sensor Timer category, and press [OK] button to move to the detail screen.



- Please make sure to reset the refrigerant leakage detection sensor, if you replaced it. The product may malfunction, if you don't reset it.

#### NOTE

- Depending on the version of remote control, this feature may not be activated.

