



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

# **Multi Air Conditioner**

**ENGLISH**

**FRANÇAIS**

### **MODEL**

**ZMNR09GQA0 [KNUQB091A]**

**ZMNR12GQA0 [KNUQB121A]**

**ZMNR15GQA0 [KNMQB151A]**

**R32**

P/No.: MFL05739601  
Rev.03\_110725

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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. SPECIFICATION

Indoor

ENGLISH

| Indoor Unit Type          |                                 |                   | Console                               |                           |                           |
|---------------------------|---------------------------------|-------------------|---------------------------------------|---------------------------|---------------------------|
| Model                     |                                 |                   | ZMNR09GQA0<br>[KNUQB091A]             | ZMNR12GQA0<br>[KNUQB121A] | ZMNR15GQA0<br>[KNMQB151A] |
| Power Supply              |                                 | V / Ø / Hz        | 208/230, 1, 60                        | 208/230, 1, 60            | 208/230, 1, 60            |
| Cooling Capacity          |                                 | Btu/h             | 9,000                                 | 12,000                    | 15,710                    |
| Heating Capacity          |                                 | Btu/h             | 10,600                                | 13,650                    | 17,070                    |
| Current                   | Nominal Running Current         | A                 | 0.14                                  | 0.14                      | 0.18                      |
| Fan                       | Motor Type                      |                   | BLDC                                  | BLDC                      | BLDC                      |
|                           | Fan Type                        |                   | Turbo Fan                             | Turbo Fan                 | Turbo Fan                 |
|                           | Motor Output(W) x No. of Unit   |                   | 48*1                                  | 48*1                      | 48*1                      |
|                           | Air Flow Rate (H / M / L)       | CMM               | 8.5 / 6.7 / 5.0                       | 9.0 / 6.9 / 5.2           | 10.1 / 8.6 / 7.2          |
|                           |                                 | CFM               | 300 / 237 / 177                       | 318 / 244 / 184           | 357 / 304 / 254           |
|                           | Drive                           |                   | Direct Drive                          | Direct Drive              | Direct Drive              |
| Coil                      | Row x Column x FPI              |                   | 2R x 19C x 19                         | 2R x 19C x 19             | 2R x 19C x 19             |
| Dimensions<br>(W x H x D) | Body                            | mm                | 700 x 600 x210                        | 700 x 600 x210            | 700 x 600 x210            |
|                           |                                 | inch              | 27-9/16 x 23-5/8 x 8-9/32             | 27-9/16 x 23-5/8 x 8-9/32 | 27-9/16 x 23-5/8 x 8-9/32 |
| Net Weight                | Body                            | kg (lbs)          | 15.3 (33.7)                           | 15.3 (33.7)               | 15.3 (33.7)               |
| Air Filter                |                                 |                   | Pre Filter                            | Pre Filter                | Pre Filter                |
| Sound Level(H / M / L)    |                                 | dB(A)             | 38 / 32 / 27                          | 39 / 32 / 27              | 44 / 39 / 35              |
| Piping<br>Connections     | Liquid                          | mm (inch)         | 6.35(1/4)                             | 6.35(1/4)                 | 6.35(1/4)                 |
|                           | Gas                             | mm (inch)         | 9.52(3/8)                             | 9.52(3/8)                 | 12.7(1/2)                 |
|                           | Drain(OD/ID)                    | mm                | -                                     | -                         | -                         |
| Safety Devices            |                                 |                   | Fuse, Thermal Protector for Fan Motor |                           |                           |
| Wiring<br>Connections     | Power Cable<br>(Included Earth) | No.x mm²<br>(AWG) | 3C x 0.82 (18)                        | 3C x 0.82 (18)            | 3C x 0.82 (18)            |
|                           | Communication Cable             | No.x mm²<br>(AWG) | 2C x 0.82 (18)                        | 2C x 0.82 (18)            | 2C x 0.82 (18)            |

NOTE

1. Capacities are based on the following conditions:
- Cooling :

- Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB

- Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB

Heating :

- Indoor Temperature 20°C(68°F) DB/15°C(59°F) WB

- Outdoor Temperature 7°C(44.6°F) DB/6°C(42.8°F) WB

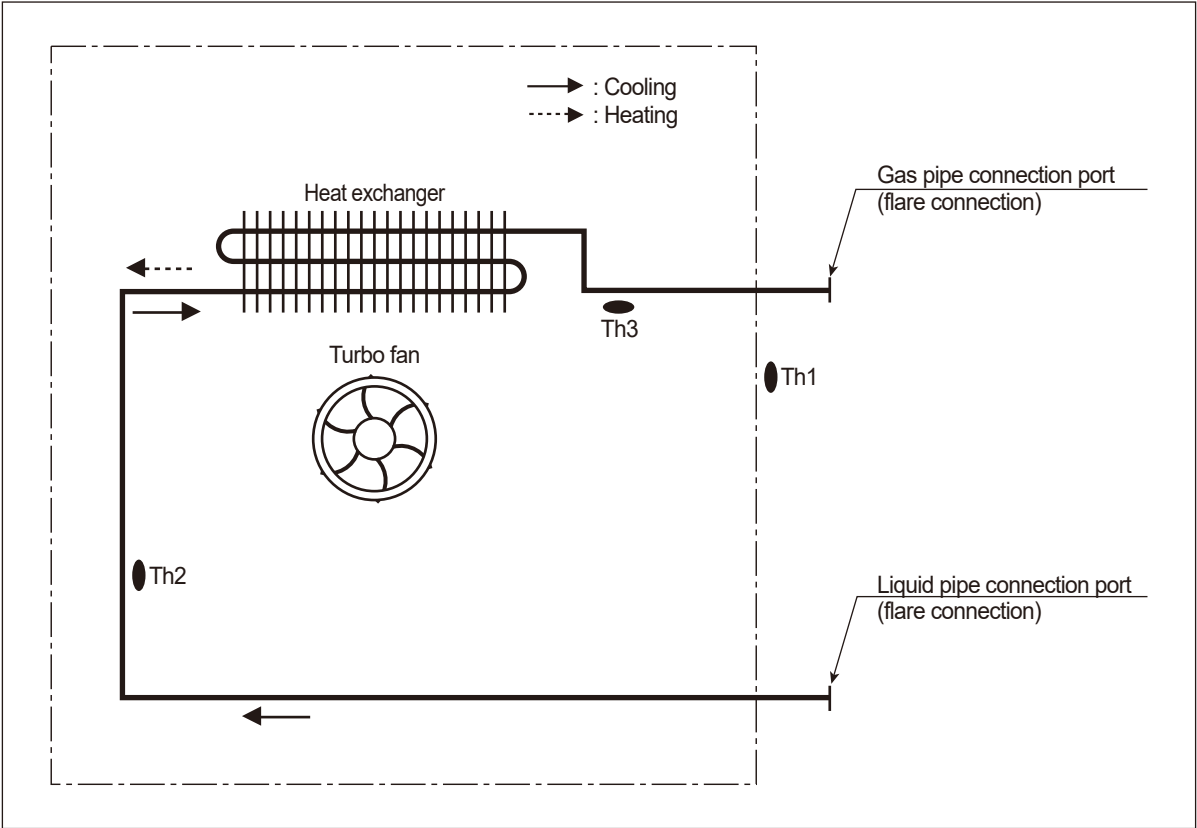
Piping Length :

- Interconnecting Piping Length 7.5m (24.6ft)

- Level Difference of Zero
2. Wiring cable size must comply with the applicable local and national code.
3. The specification may be subject to change without prior notice for purpose of improvement.

| Conversion Formula     |
|------------------------|
| kW = Btu/h x 0.0002931 |
| cfm = CMM x 35.3       |

2. PIPING DIAGRAMS



| LOC. | Description                                  | PCB Connector |
|------|----------------------------------------------|---------------|
| Th1  | Thermistor for sunction air temperature      | CN_ROOM       |
| Th2  | Thermistor for evaporator inlet temperature  | CN_PIPE_IN    |
| Th3  | Thermistor for evaporator outlet temperature | CN_PIPE_OUT   |



## 4. EXPLODED VIEW

### Indoor Unit

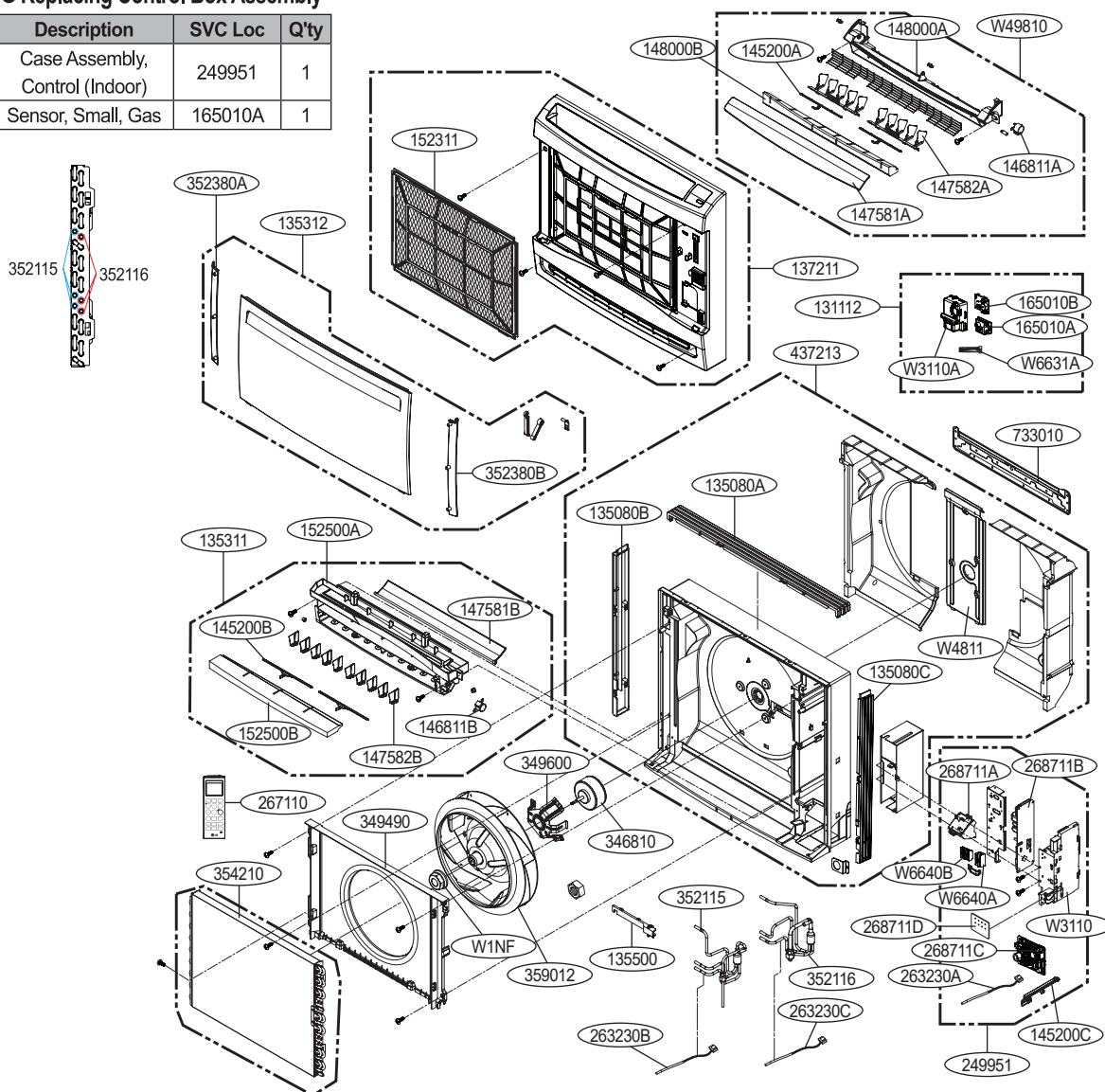
#### ● Replacing PCB Assembly Sub

| Description        | SVC Loc | Q'ty |
|--------------------|---------|------|
| PCB Assembly, Sub  | 268711D | 1    |
| Sensor, Small, Gas | 165010A | 1    |

- When replacing 268711D or 249951 with a new part, it is mandatory to replace the 165010A simultaneously.
- When replacing the 249951 with a new part, using original 268711D, it is not mandatory to replace the 165010A

#### ● Replacing Control Box Assembly

| Description                     | SVC Loc | Q'ty |
|---------------------------------|---------|------|
| Case Assembly, Control (Indoor) | 249951  | 1    |
| Sensor, Small, Gas              | 165010A | 1    |



| Loc. No | Description                      | Sensor Information    | Housing color |
|---------|----------------------------------|-----------------------|---------------|
| 263230A | Thermistor1 (CN_ROOM)            | Air-Inlet             | Yellow        |
| 263230B | Thermistor2 (CN_PIPE_IN)         | Heat Exchanger In     | White         |
| 263230C | Thermistor3 (CN_PIPE_OUT))       | Heat Exchanger Out    | Red           |
| 165010A | R32 Refrigerant Sensor (CN_LEAK) | Leak Detection System | Violet        |

| Loc. No | Description | P/No.    | QTY | Remark                     |
|---------|-------------|----------|-----|----------------------------|
| W1NF    | Nut, Common | 4H00947D | 1   | For Motor and Fan Assembly |

## 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.

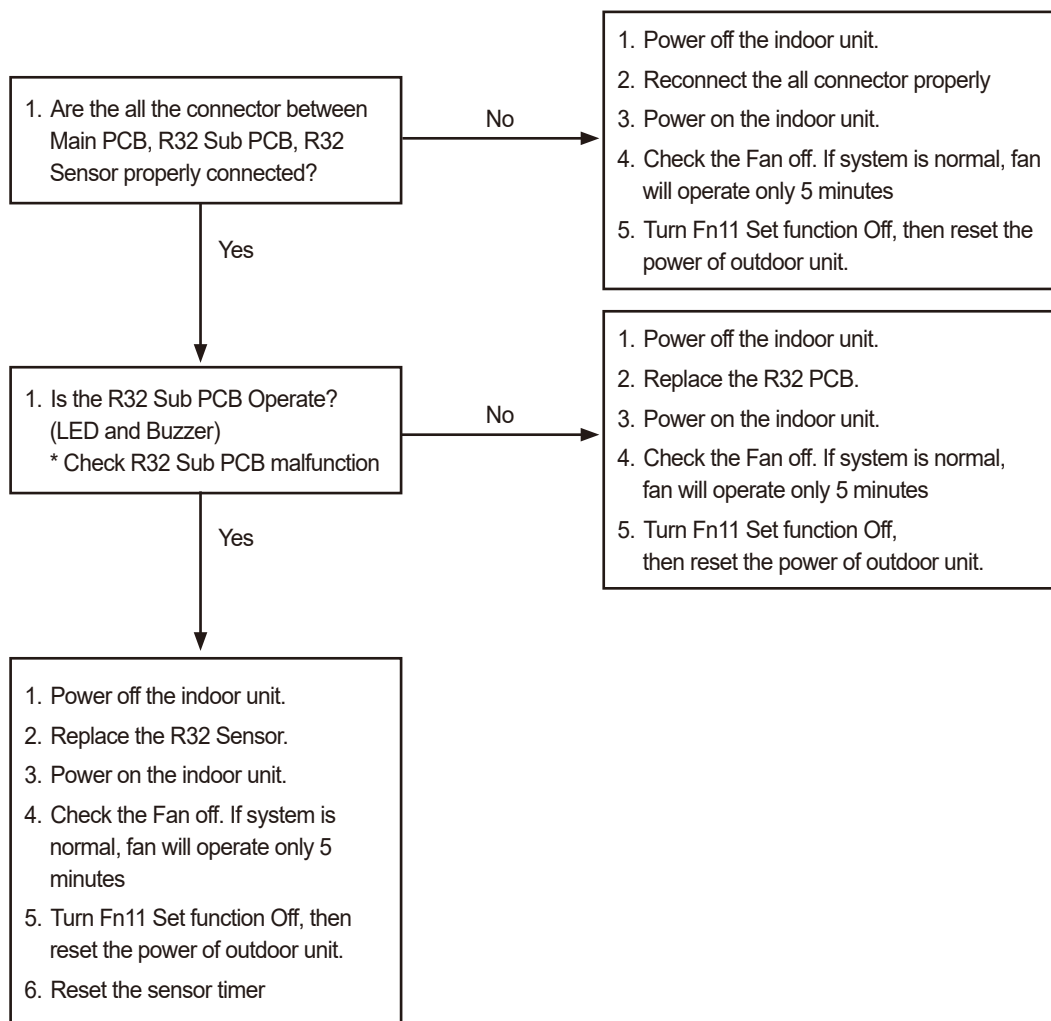
If leak detection system is activated, ventilate room and contact authorized personnel immediately.

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.

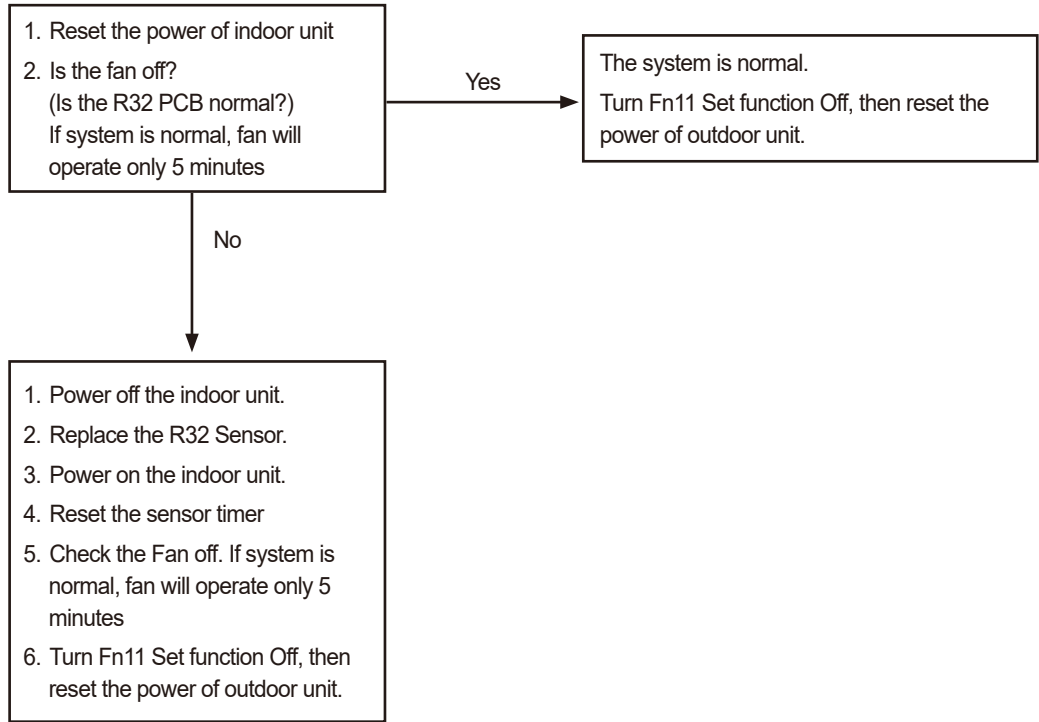
## Trouble Shooting for R32 Leak Detection System

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.

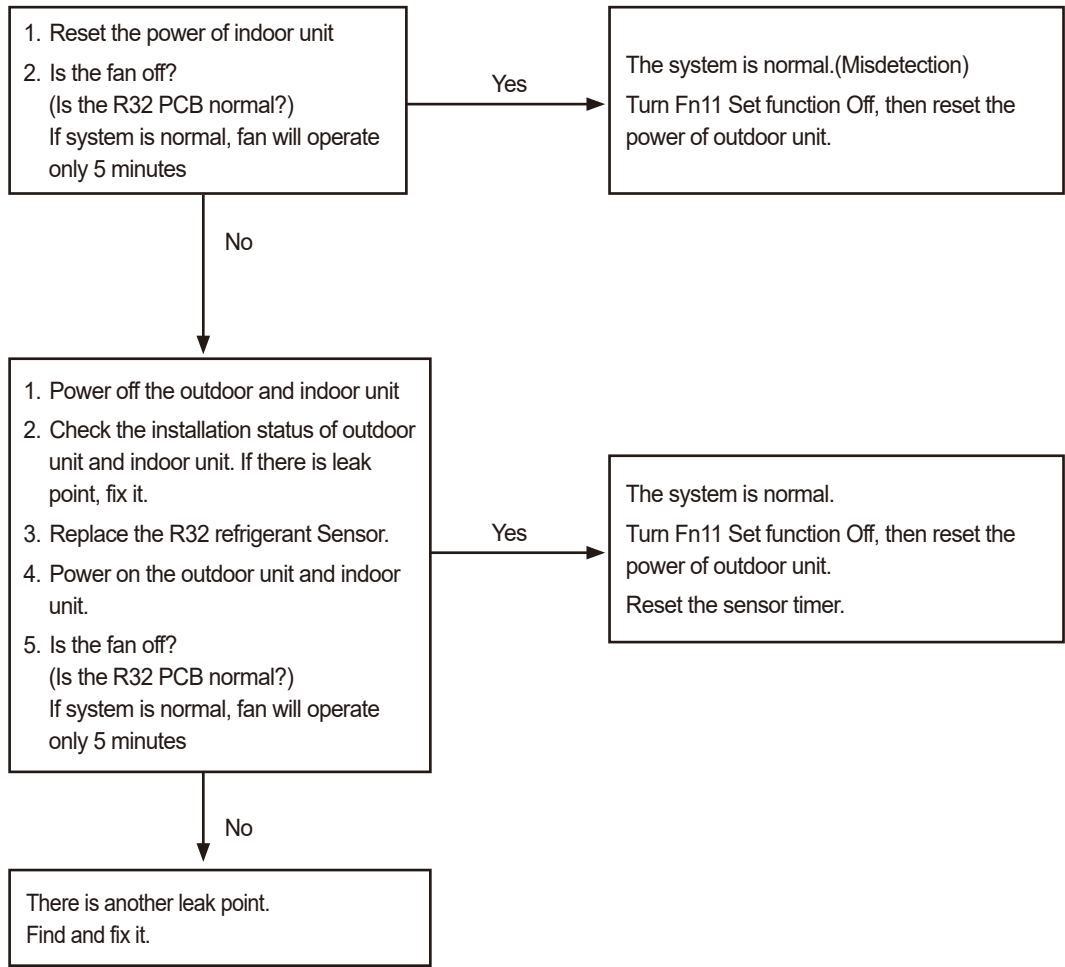
| Error No. | Error Type               | Error Point                                                                                               |
|-----------|--------------------------|-----------------------------------------------------------------------------------------------------------|
| CH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



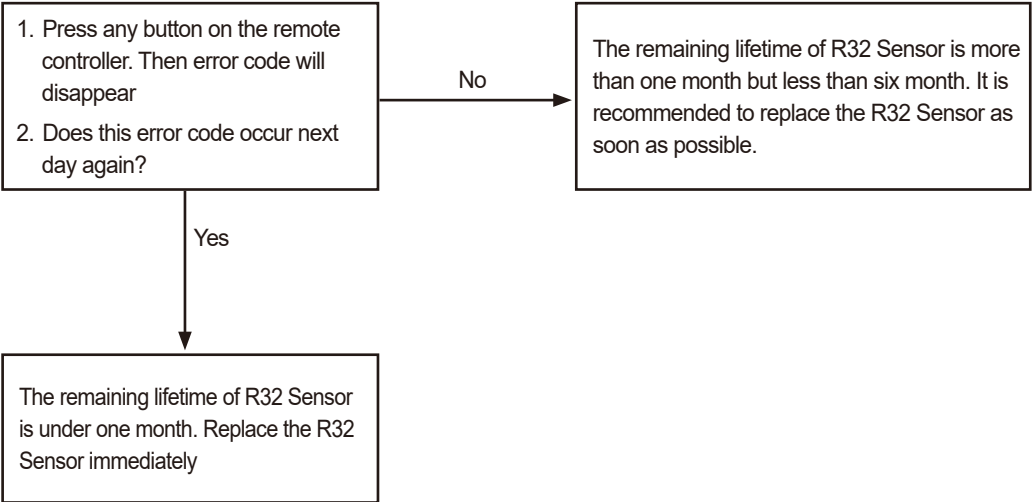
| Error No. | Error Type                | Error Point                                                                                         |
|-----------|---------------------------|-----------------------------------------------------------------------------------------------------|
| CH 229    | 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> |

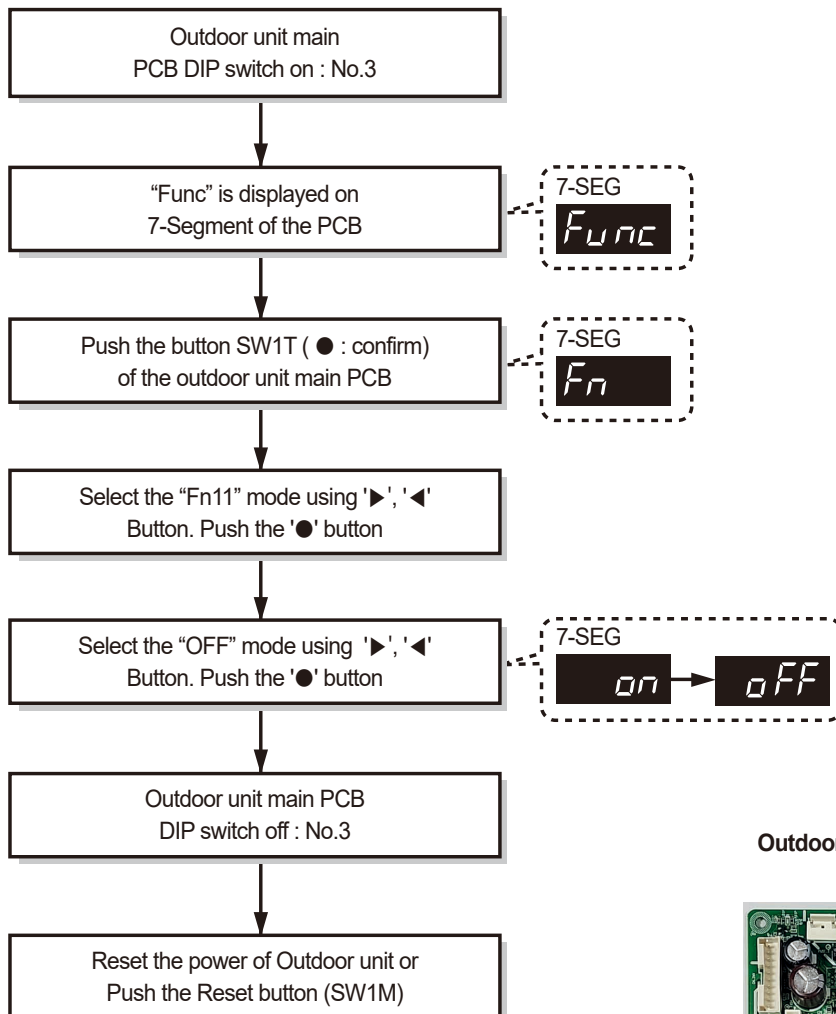


| Error No. | Error Type                    | Error Point                                                                                              |
|-----------|-------------------------------|----------------------------------------------------------------------------------------------------------|
| 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> |

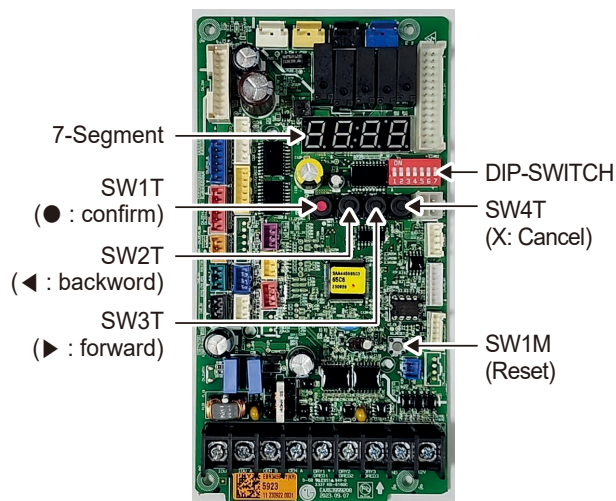


## F11 Setting Process

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



Outdoor Unit Main PCB

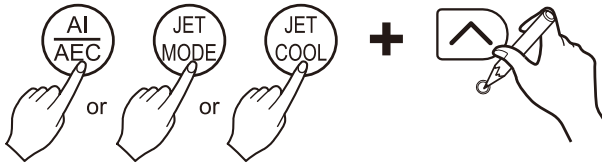


## Reset the Refrigerant Leak Sensor Timer

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"

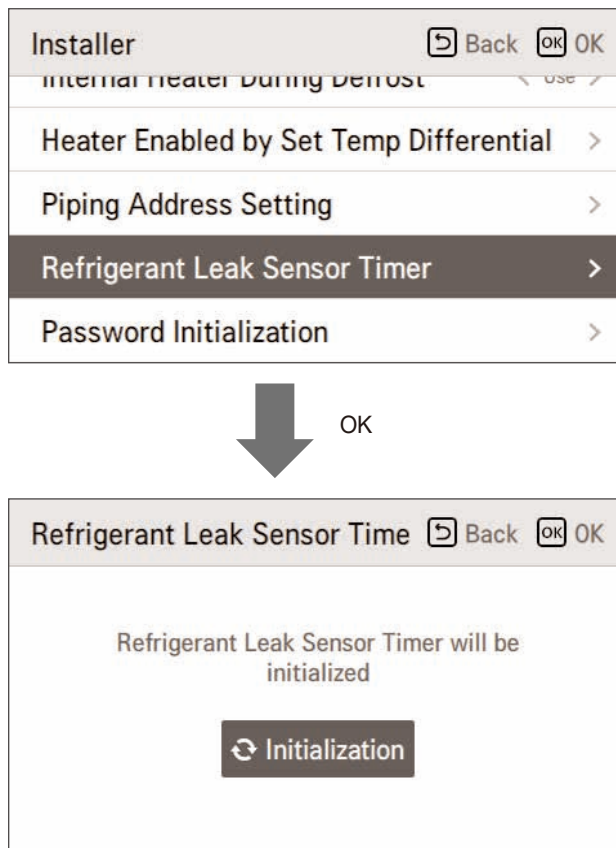


3. press the  button toward the indoor unit 1 time.
4. Reset the remote controller to use the general operation mode.V

### 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.

