



SVC MANUAL(Exploded View)

Multi Air Conditioner

ENGLISH

FRANÇAIS

MODEL

ZMNR07GTRA0(KNMDB071A)

ZMNR09GTRA0(KNUDB091A)

ZMNR12GTRA0(KNUDB121A)

ZMNR18GTQA0(KNUDB181A)

P/No.: MFL68020007

Rev.03_012926

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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

ENGLISH

Indoor unit type			Ceiling Cassette - 4way	
Model			ZMNR07GTRA0(KNMDB071A)	ZMNR09GTRA0(KNUDB091A)
Decoration Panel Name			PT-QAGW0	PT-QAGW0
Power Supply		V, Ø, Hz	208/230, 1, 60	208/230, 1, 60
Cooling Capacity		Btu/h class	7,000	9,000
Heating Capacity		Btu/h class	8,100	10,400
Current	Running Current	A	0.25	0.25
Fan	Motor Type		BLDC	BLDC
	Fan Type		Turbo Fan	Turbo Fan
	Motor Output(W) x No. of Unit		43 x 1	43 x 1
	Air Flow Rate (H / M / L)	CMM	7.5 / 6.0 / 5.0	8.5 / 7.5 / 6.5
		CFM	265 / 212 / 177	300 / 265 / 230
	External Static Pressure	mmAq	-	-
	Capacitor	µF / Vac	-	-
Drive			Direct Drive	Direct Drive
Coil	Row x Column x FPI		1R x 8C x 18	2R x 8C x 18
Dimensions (W x H x D)	Body	mm (inch)	570 × 214 × 570 (22-7/16 x 8-7/16 x 22-7/16)	570 × 214 × 570 (22-7/16 x 8-7/16 x 22-7/16)
	Decorative Panel	mm (inch)	620 x 34 x 620 (24-13/32 x 1-11/32 x 24-13/32)	620 x 34 x 620 (24-13/32 x 1-11/32 x 24-13/32)
Net Weight	Body	kg (lbs)	11.6 (25.6)	12.9 (28.4)
	Decorative Panel	kg (lbs)	2.85(6.3)	2.85(6.3)
Sound Level (H / M / L)		dB(A)	31 / 27 / 24	36 / 33 / 30
Piping Connections	Liquid	mm (inch)	6.35 (1/4)	6.35 (1/4)
	Gas	mm (inch)	9.52 (3/8)	9.52 (3/8)
	Drain(OD/ID)	mm (inch)	32.0(1-1/4) / 25.4(1)	32.0(1-1/4) / 25.4(1)
Safety Devices			Fuse, thermal protector for fan motor	Fuse, thermal protector for fan motor
Refrigerant			R32	R32
Refrigerant Control			EEV(in Outdoor unit)	EEV(in Outdoor unit)
Power and Communication Cable (included Earth)		No. x mm²A (WG)	3C x 0.82 (18) / 2C x 0.82 (18)	3C x 0.82 (18) / 2C x 0.82 (18)

NOTE

1. Capacities are based on the following conditions:
Cooling: - Indoor Temperature 26.7°C(80°F) DB/19.4°C(67°F)
- Outdoor Temperature 35°C(95°F) DB/23.9°C(75°F)
Heating - Indoor Temperature 21.1°C(70°F) DB/15.6°C(60°F) WB
- Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB
Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)
- 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.
4. For more Capacity(*),refer to the combination table

Conversion Formula
kW = Btu/h class X 0.0002931
cfm = CMM x 35.3

Indoor unit type			Ceiling Cassette - 4way	
Model			ZMNR12GTRA0(KNUDB121A)	ZMNR18GTQA0(KNUDB181A)
Decoration Panel Name			PT-QAGW0	PT-QAGW0
Power Supply		V, Ø, Hz	208/230, 1, 60	208/230, 1, 60
Cooling Capacity		Btu/h class	12,000	18,000
Heating Capacity		Btu/h class	13,800	20,800
Current	Running Current	A	0.25	0.25
Fan	Motor Type		BLDC	BLDC
	Fan Type		Turbo Fan	Turbo Fan
	Motor Output(W) x No. of Unit		43 x 1	43 x 1
	Air Flow Rate	CMM	9.5 / 8.0 / 7.0	13.0 / 12.0 / 11.0
	(H / M / L)	CFM	335 / 283 / 247	459 / 424 / 388
	External Static Pressure	mmAq	-	-
	Capacitor	µF / Vac	-	-
	Drive		Direct Drive	Direct Drive
Coil	Row x Column x FPI		2R x 8C x 18	2R x 10C x 18
Dimensions (W x H x D)	Body	mm (inch)	570 × 214 × 570 (22-7/16 x 8-7/16 x 22-7/16)	570 × 256 × 570 (22-7/16 x 10-3/32 x 22-7/16)
	Decorative Panel	mm (inch)	620 x 34 x 620 (24-13/32 x 1-11/32 x 24-13/32)	620 x 34 x 620 (24-13/32 x 1-11/32 x 24-13/32)
Net Weight	Body	kg (lbs)	12.9 (28.4)	14(30.9)
	Decorative Panel	kg (lbs)	2.85(6.3)	2.85(6.3)
Sound Level (H / M / L)		dB(A)	38/ 35/ 32	41 / 39 / 36
Piping Connections	Liquid	mm (inch)	6.35 (1/4)	6.35 (1/4)
	Gas	mm (inch)	9.52 (3/8)	12.7 (1/2)
	Drain(OD/ID)	mm (inch)	32.0(1-1/4) / 25.4(1)	32.0(1-1/4) / 25.4(1)
Safety Devices			Fuse, thermal protector for fan motor	Fuse, thermal protector for fan motor
Refrigerant			R32	R32
Refrigerant Control			EEV(in Outdoor unit)	EEV(in Outdoor unit)
Power and Communication Cable (included Earth)		No. x mm ² A (WG)	3C x 0.82 (18) / 2C x 0.82 (18)	3C x 0.82 (18) / 2C x 0.82 (18)

NOTE

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 - Outdoor Temperature 8.3°C(47°F) DB/6.1°C(43°F) WB
 Piping Length - Interconnecting Piping Length 7.5m(24.6 ft.)
 - 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.

4. For more Capacity(*),refer to the combination table

Conversion Formula
kW = Btu/h class X 0.0002931
cfm = CMM x 35.3

2. FUNCTION TABLE

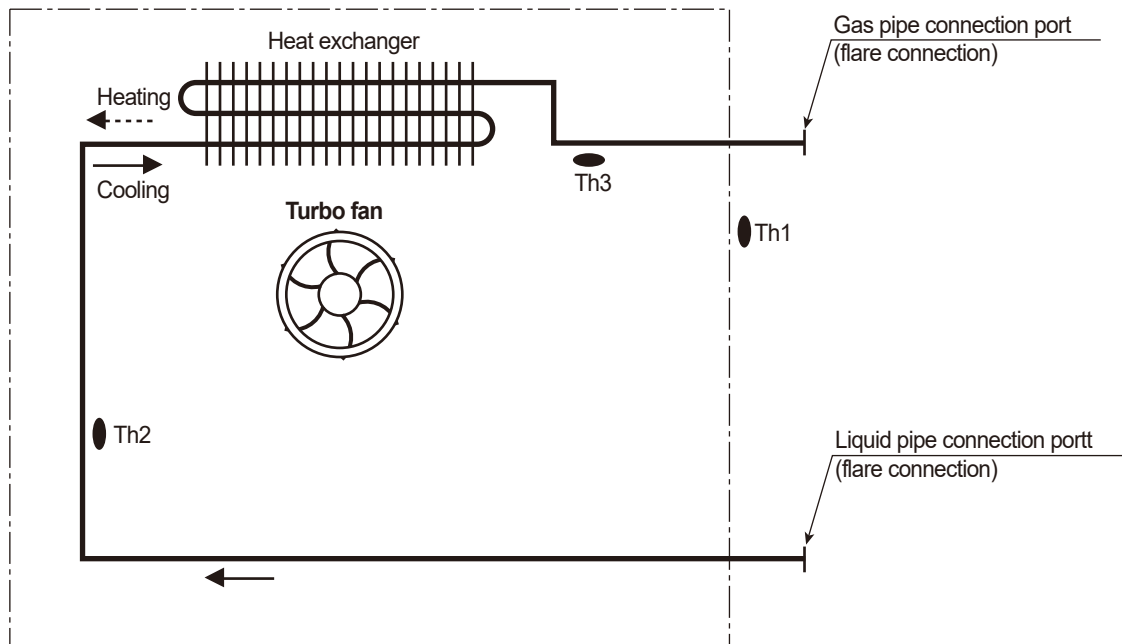
Category	Function	ZMNR07GTRA0(KNMDB071A) ZMNR09GTRA0(KNUDB091A) ZMNR12GTRA0(KNUDB121A)	ZMNR18GTQA0(KNUDB181A)
Air flow	Air supply outlet	4	4
	Airflow direction control(left & right)	X	X
	Airflow direction control(up & down)	Auto	Auto
	Auto swing(left & right)	X	X
	Auto swing(up & down)	O	O
	Airflow steps(fan / cool / heat)	4/5/4	4/5/4
	Chaos swing	X	X
	Chaos wind(auto wind)	O	O
	Jet cool(Power wind)	O	O
Air Purifier	Swirl wind	O	O
	Deodorizing filter	X	X
	Plasma air purifier	X	X
Installation	Prefilter(washable)	O	O
	Drain pump	O	O
	E.S.P. control	-	-
	Electric heater(operation)	X	X
Reliability	High ceiling operation	O	O
	Hot start	O	O
	Self diagnosis	O	O
Convenience	Soft dry operation	O	O
	Auto changeover	X	X
	Auto cleaning	X	X
	Auto operation(artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Energy-Saving Cooling Mode	X	X
	Forced operation	O	O
	Group control	O	O
	Sleep mode	O	O
Individual Control	Timer(on/off)	O	O
	Timer(weekly)	O	O
	Two thermistor control	O	O
	Standard III wired remote controller	Accessory(PREMTB100/PREMTB101/PREMTBB10/PREMTBB11)	
CAC Network Function	Deluxe wired remote controller	Accessory(PREMTA200/PREMTA201)	
	Simple wired remote controller	Accessory(PREMTC00U)	
	Wireless LCD remote control(Ez)	O	O
	General central controller (Non LGAP)	X	X
	Dry contact	Accessory(PDRYCB100/PDRYCB300/PDRYCB320/PDRYCB400/PDRYCB500)	
	Central control	Accessory(PACS5A000/PACP5A000)	
	PDI(power distribution indicator)	X	X
Special Function Kit	PI 485	X	X
	Wi-Fi module w/cable	Accessory(PWFMDD200)	
	CTIE	X	X
	Zone control	-	-
Others	R32 refrigerant sensor	O	O
	Aux heater relay kit	Accessory(PRARH1)	
	Zigbee Dongle	Accessory(PWLGBW100)	
	Group control wire	Accessory(PZCWRCG3)	

NOTE

O : Applied, X : Not applied, - : No relation

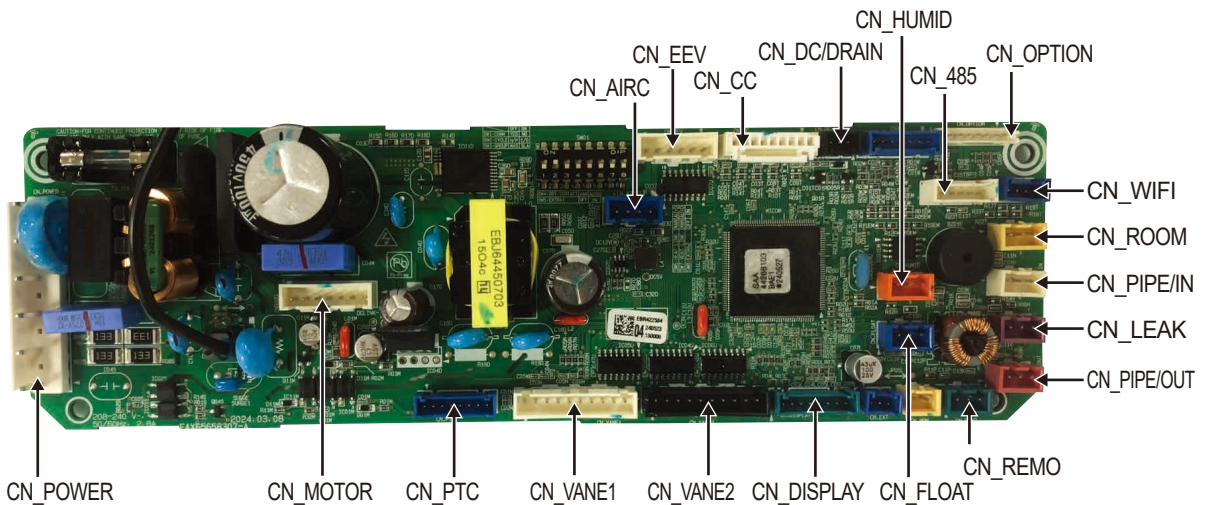
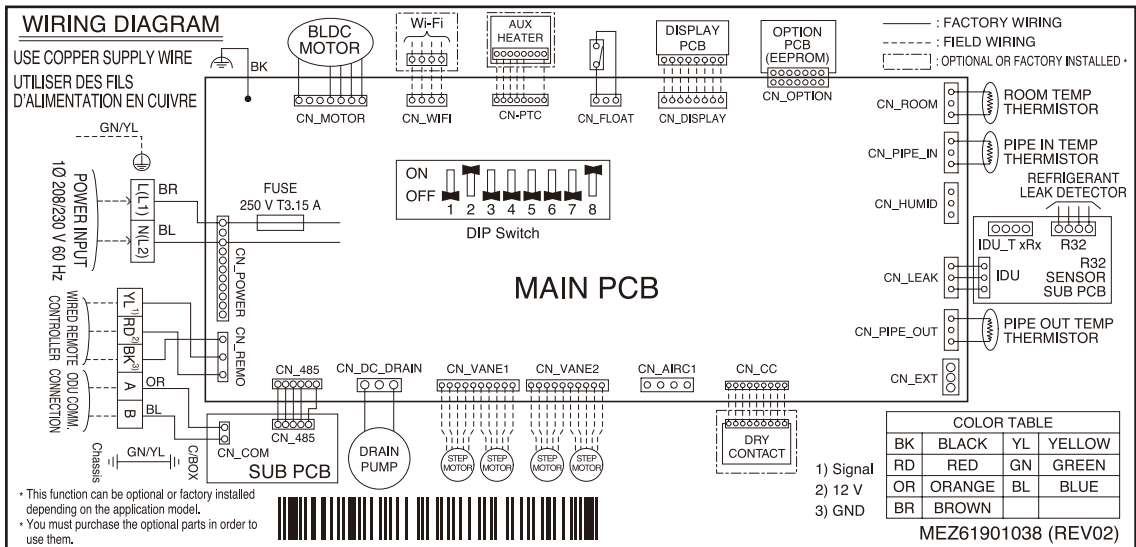
- Option : Model name & price are different according to options, and assembled in factory with main unit.
- Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

3. PIPING DIAGRAMS



Location No.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN_ROOM
Th2	Thermistor for evaporator inlet temperature	CN_PIPE/IN
Th3	Thermistor for evaporator outlet temperature	CN_PIPE/OUT

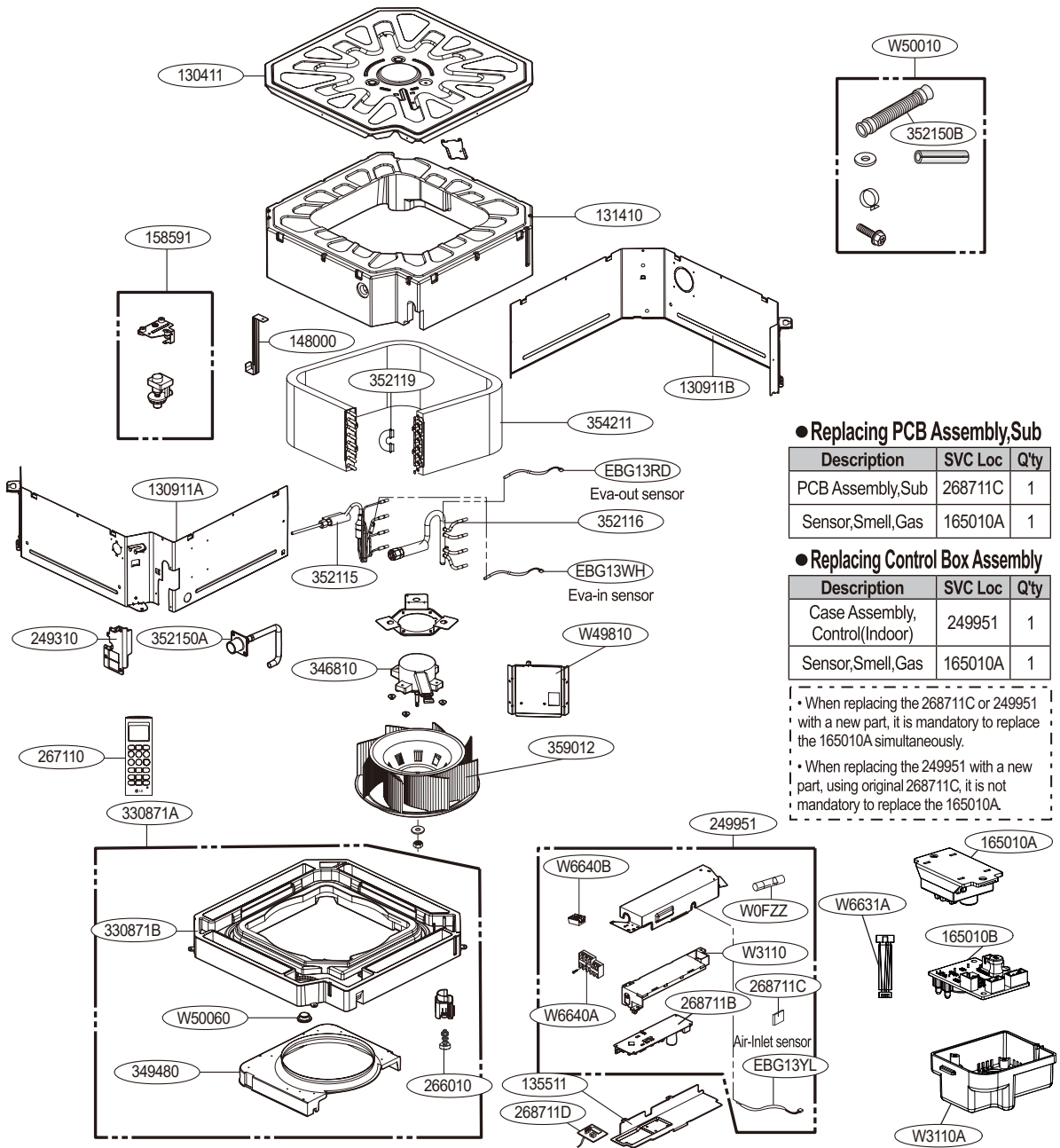
4. WIRING DIAGRAMS



5. EXPLODED VIEW

TR Chassis

ZMNR07GTRA0(KNMDB071A)

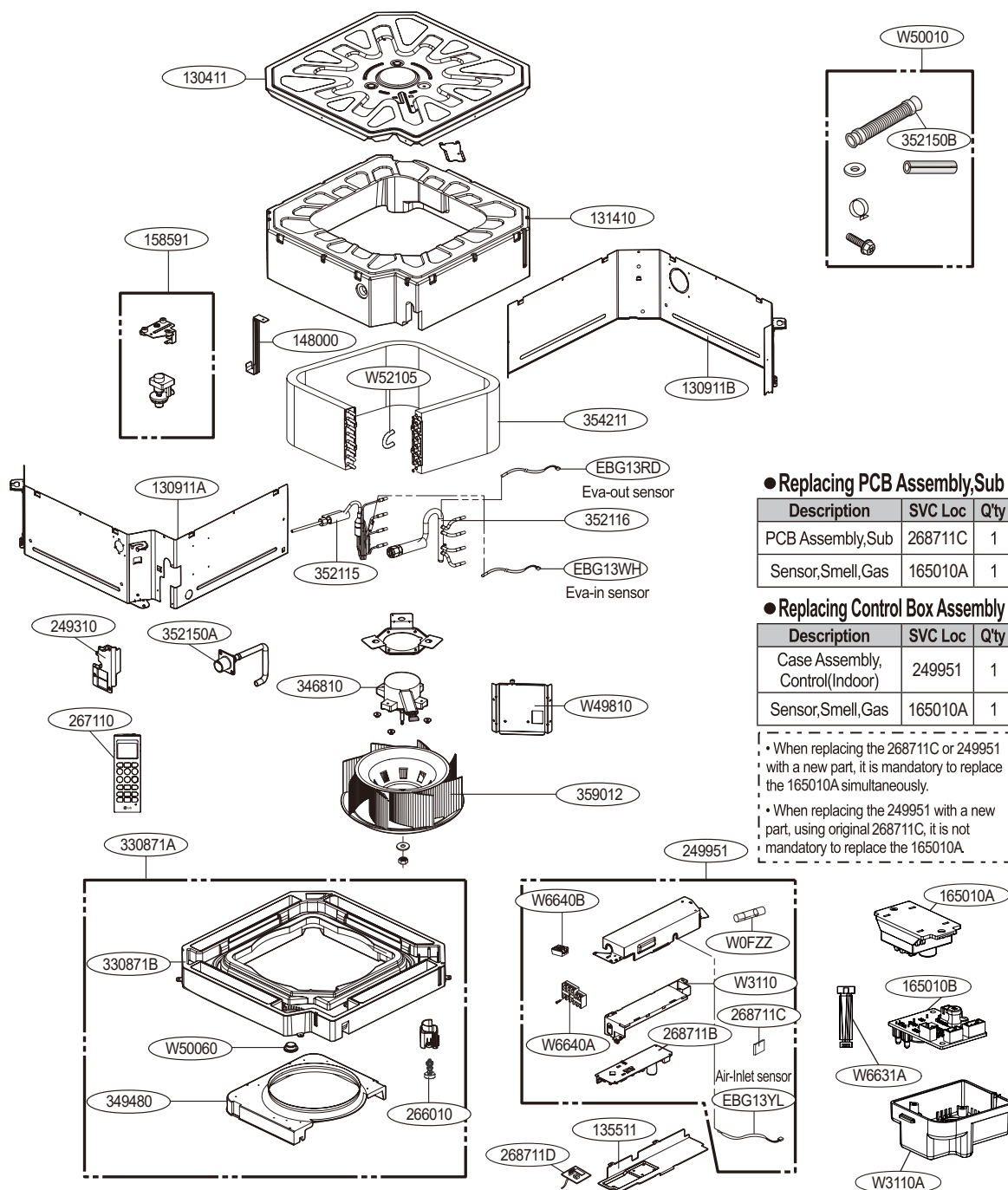


Description	SVC Loc	PCB Connector
R32 detection sensor	165010A	CN_LEAK

Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1 (CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2 (CN_PIPE/IN)	Eva-in	White
EBG13RD	Thermistor3 (CN_PIPE/OUT)	Eva-out	Red

TR Chassis

ZMNR09GTRA0(KNUDB091A) / ZMNR12GTRA0(KNUDB121A)

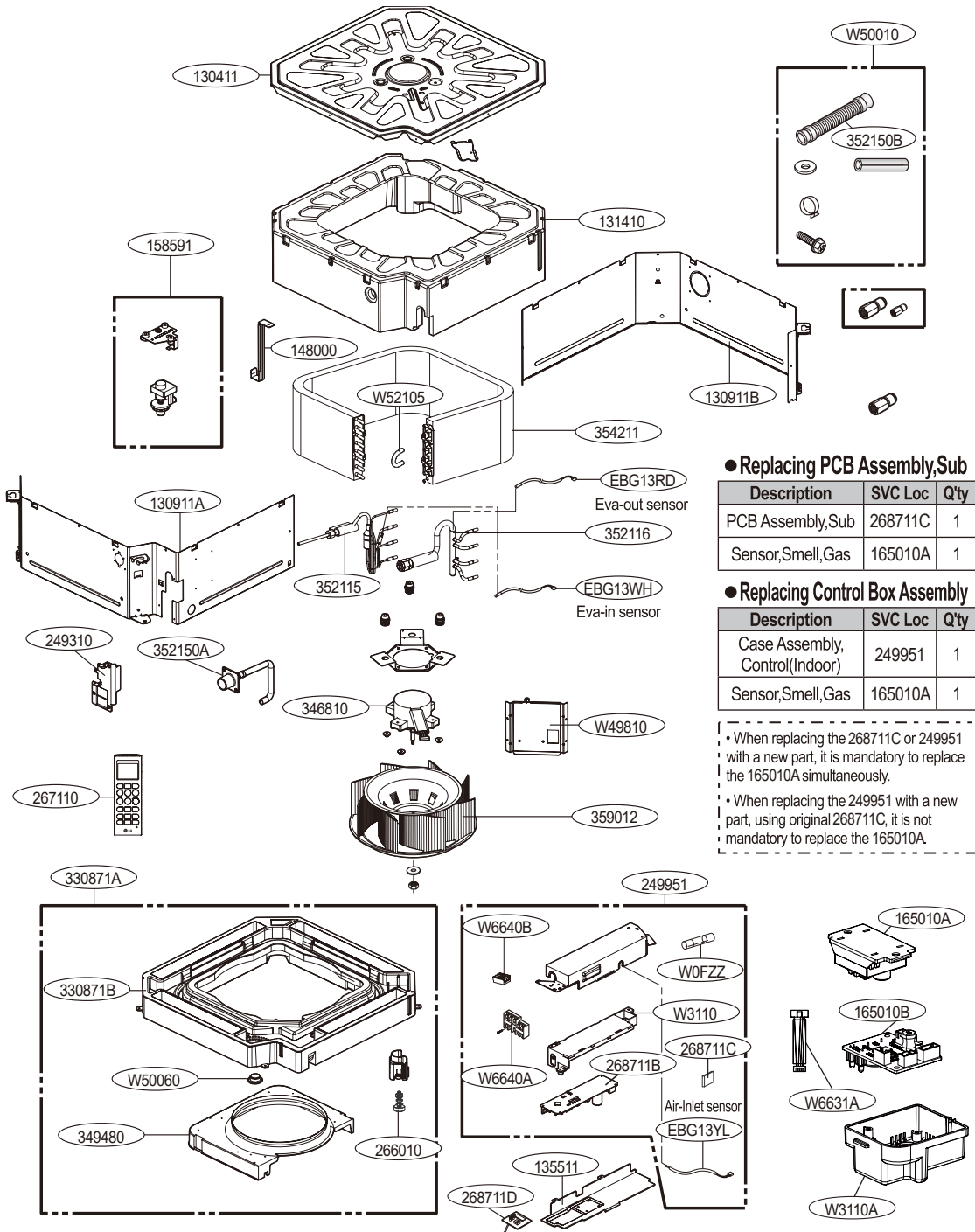


Description	SVC Loc	PCB Connector
R32 detection sensor	165010A	CN_LEAK

Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1 (CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2 (CN_PIPE/IN)	Eva-in	White
EBG13RD	Thermistor3 (CN_PIPE/OUT)	Eva-out	Red

TQ Chassis

ZMNR18GTQA0(KNUDB181A)



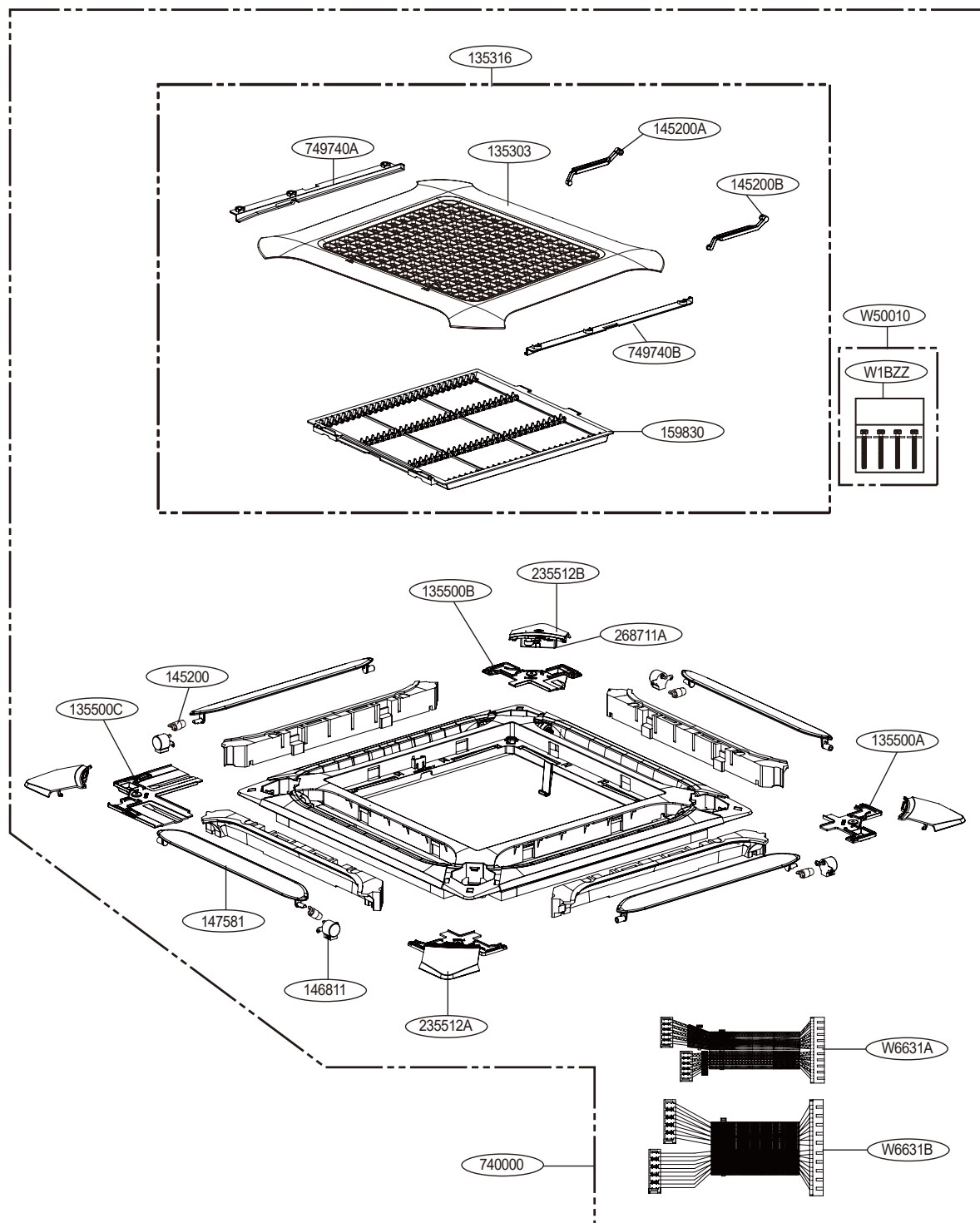
Description	SVC Loc	PCB Connector
R32 detection sensor	165010A	CN_LEAK

Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1 (CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2 (CN_PIPE/IN)	Eva-in	White
EBG13RD	Thermistor3 (CN_PIPE/OUT)	Eva-out	Red

Front Panel (Accessory)

PT-QAGW0

ENGLISH



6. 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.

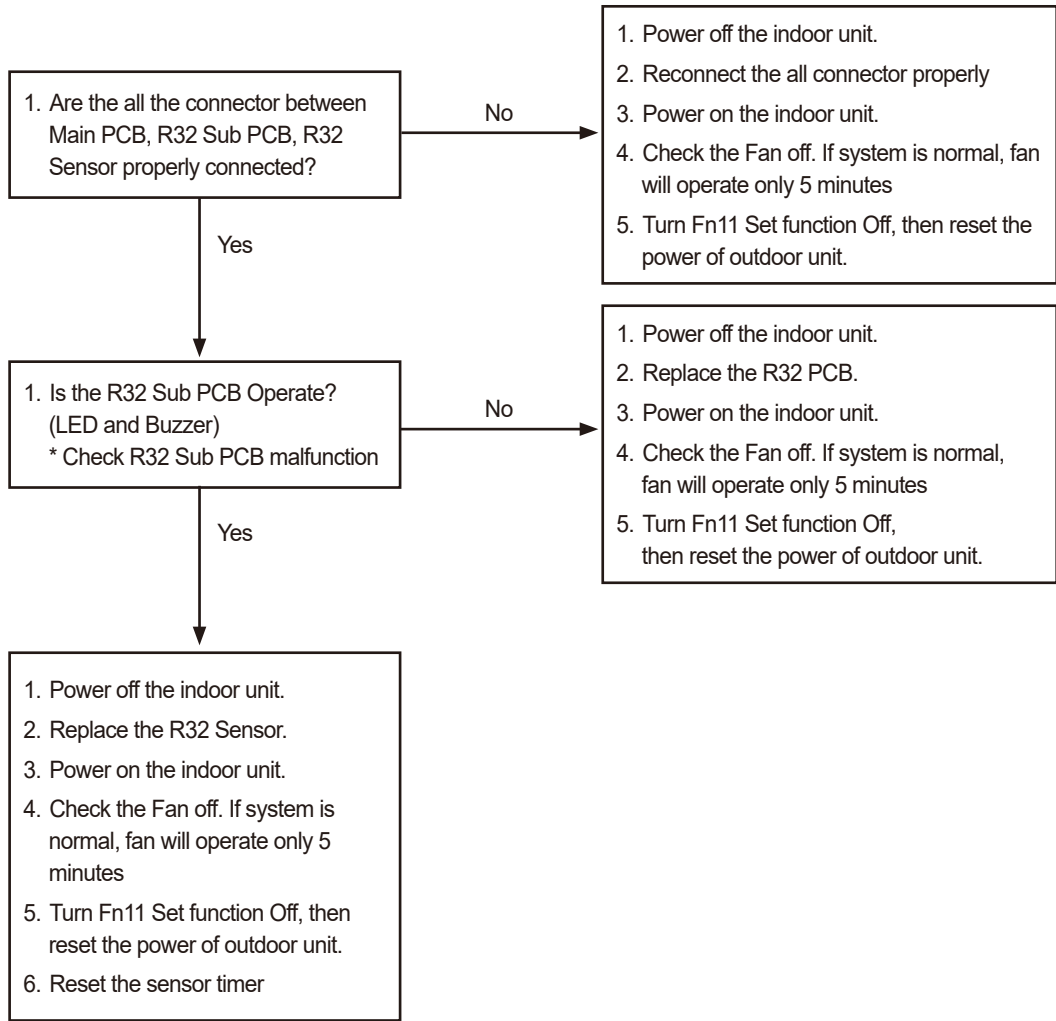
If leak detection system is activated, ventilate room and contact authorized personnel immediately.

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.

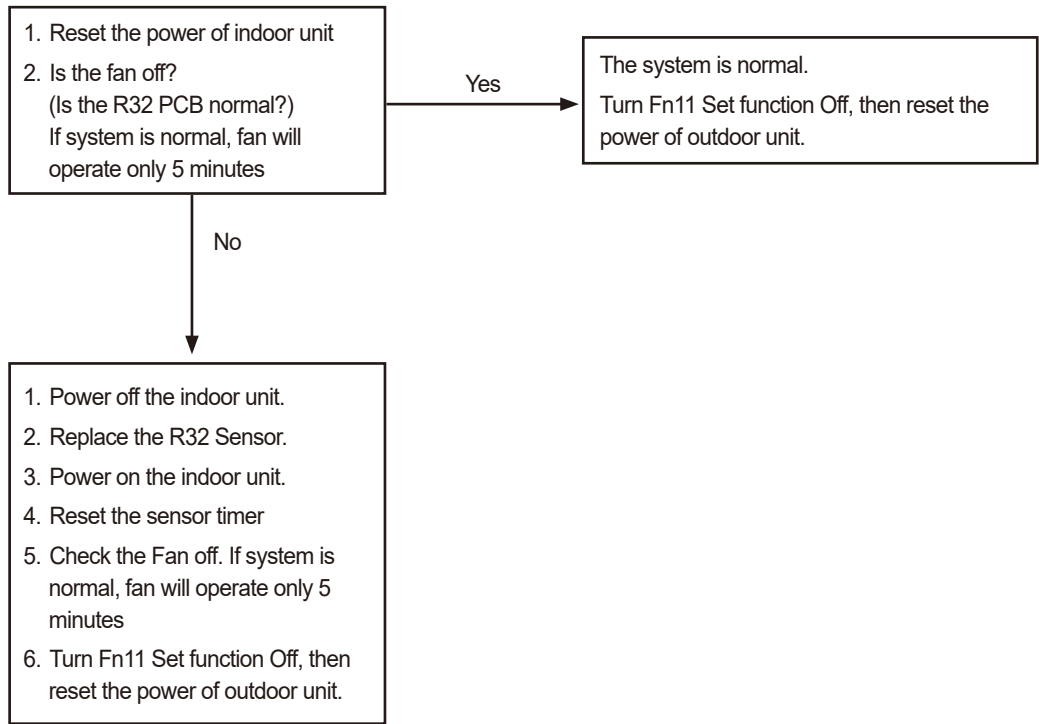
Trouble Shooting for R32 Leak Detection System

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.

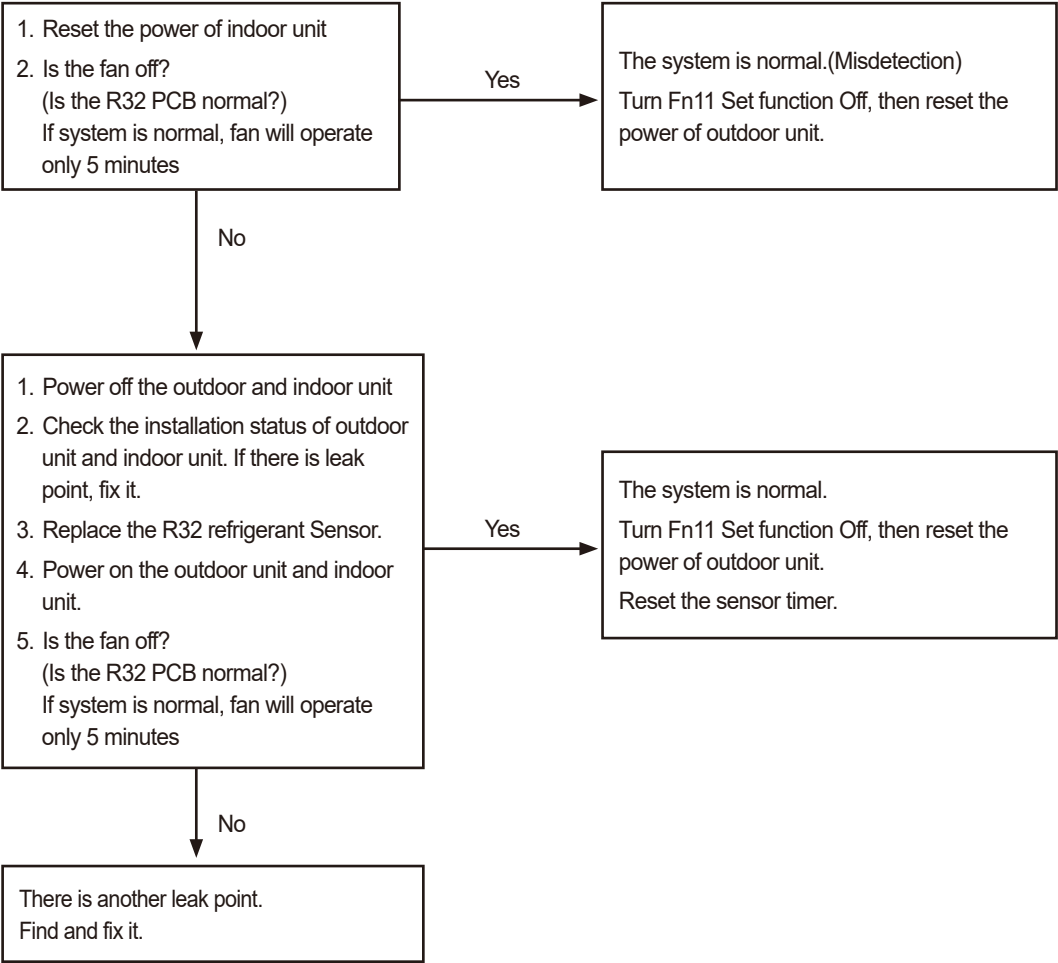
Error No.	Error Type	Error Point
CH 228	System malfunction Error	• R32 Sub PCB malfunction • R32 Sensor malfunction



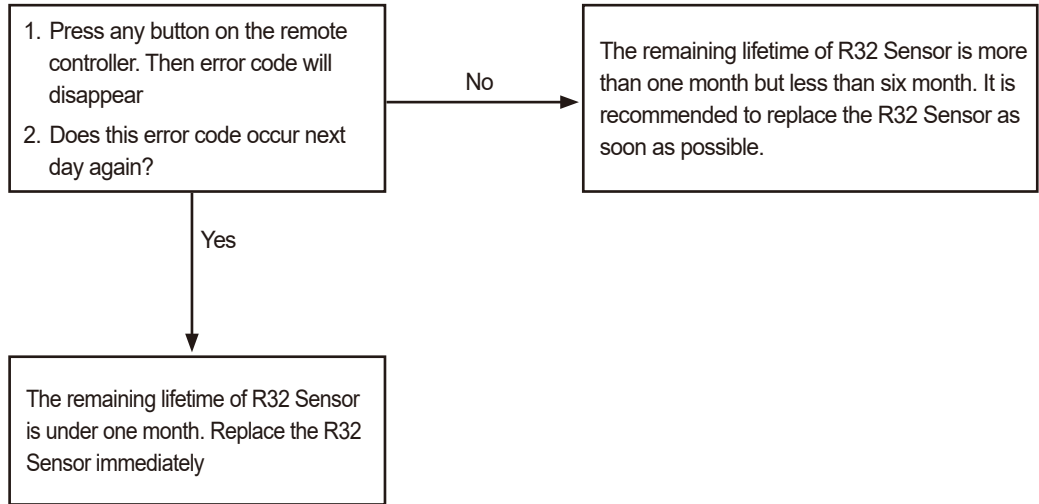
Error No.	Error Type	Error Point
CH 229	R32 Sensor Lifetime error	The R32 sensor has reached the end of its lifetime.



Error No.	Error Type	Error Point
CH 230	Refrigerant Leak Detection Error	• Misdetection by other gases • There is leak point in the system.

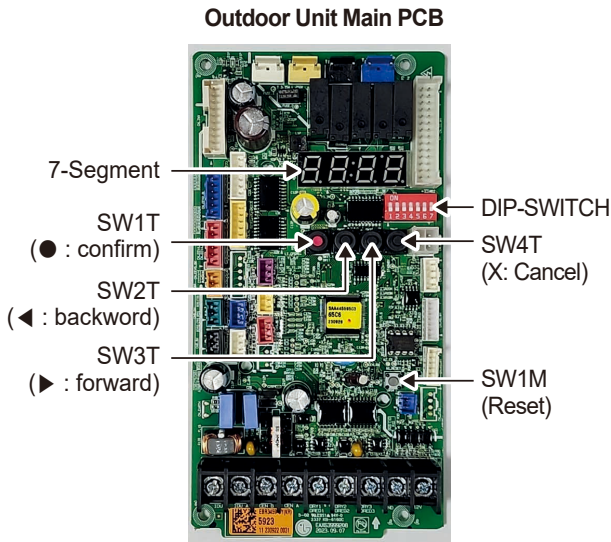
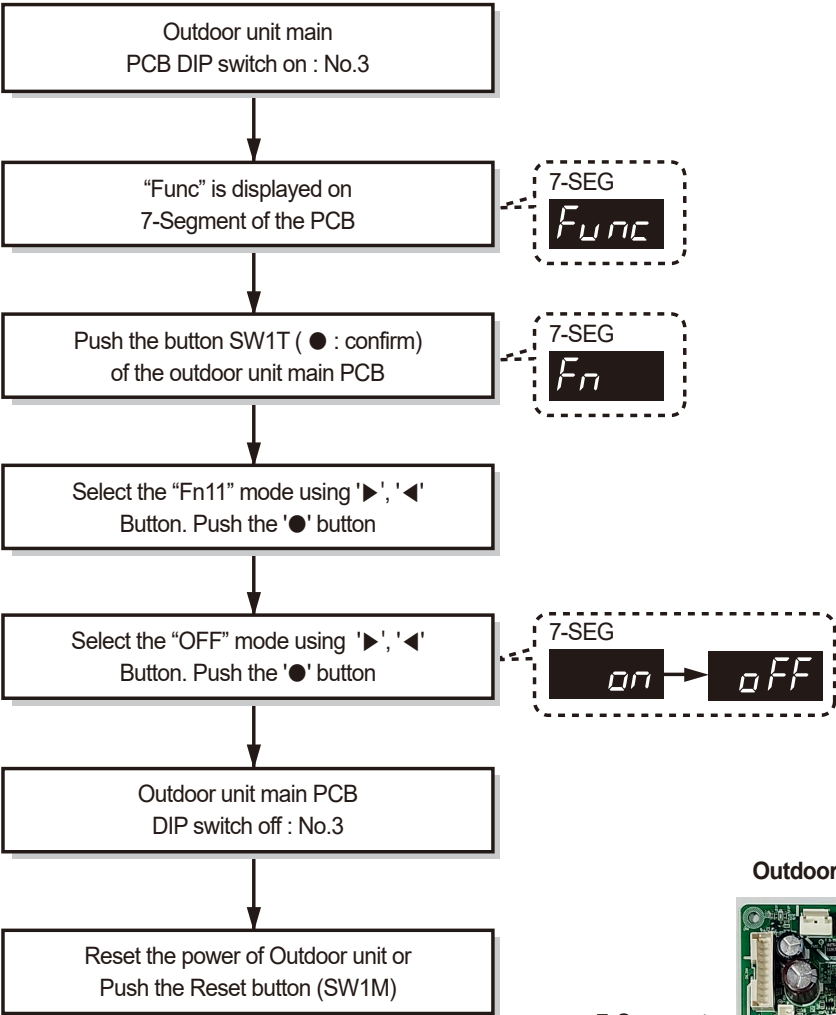


Error No.	Error Type	Error Point
CH 236	R32 Sensor Lifetime Pre Alarm	The remaining lifetime of R32 Sensor is under six month.



F11 Setting Process

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

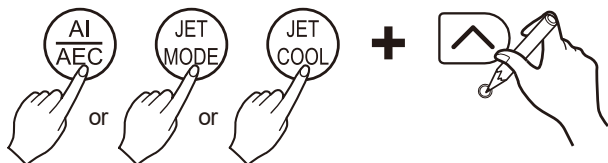


Reset the Refrigerant Leak Sensor Timer

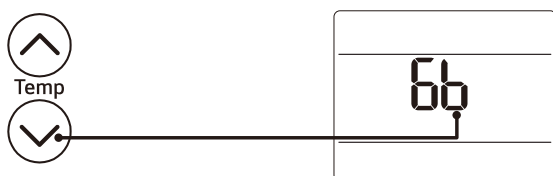
After Replace the R32 Sensor, the sensor timer should be reset

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"

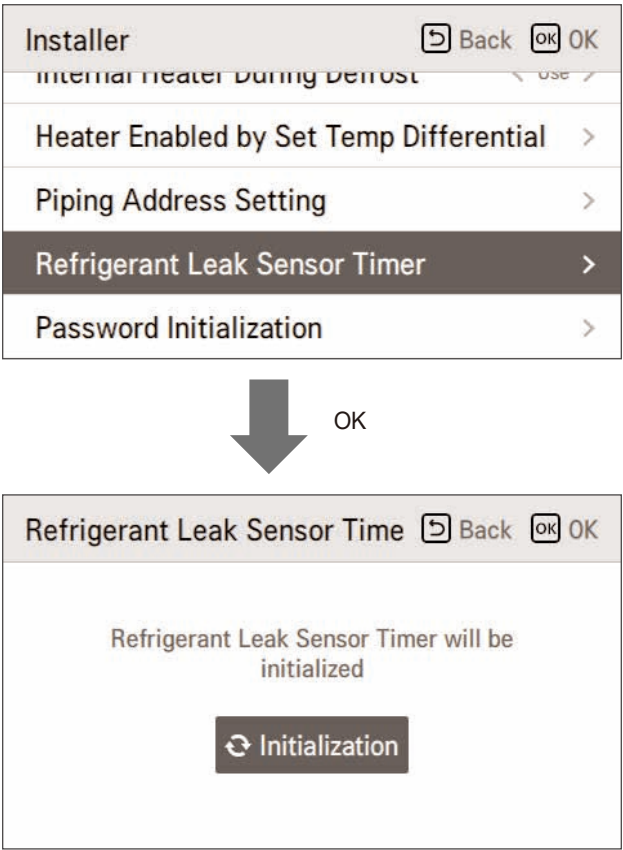


3. press the  button toward the indoor unit 1 time.
4. Reset the remote controller to use the general operation mode.V

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.

