

# 10. Troubleshooting

## 10.1 Indoor Unit Error Display

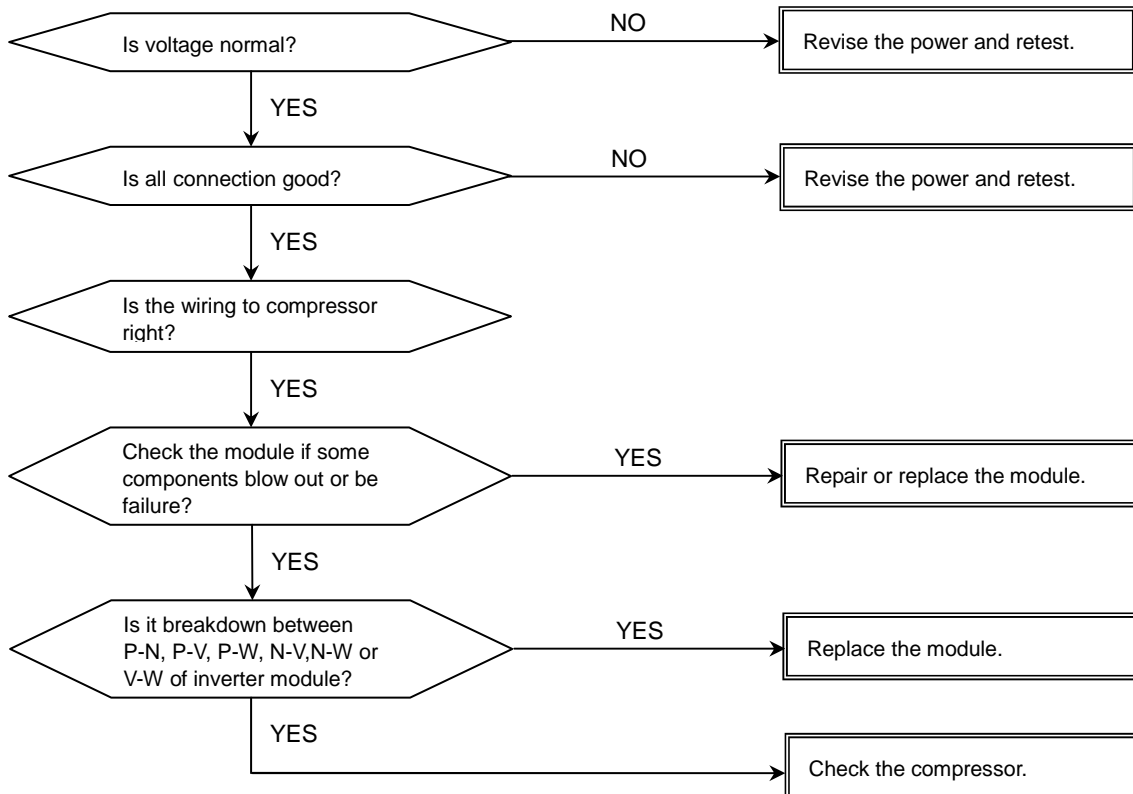
LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
×	×	○	☆	Module Protection
○	×	×	☆	Temp Protection of Top Compressor
×	○	×	☆	Outdoor Ambient Sensor Open or Short Circuit
×	○	○	☆	Voltage Too High or Too Low
○	○	○	☆	Room Sensor Open or Short Circuit
○	○	☆	☆	Indoor Fan Speed Out of Control
☆	×	○	☆	Zero-Cross Signal Error
○	○	○	○	EEPROM Error
☆	☆	☆	☆	Communication Protection Between Indoor & Outdoor Units
×	×	×	×	Rotor Position Error

○—Bright    ×—Extinguished    ☆—Blink

## 10.2 Diagnosis and Solution

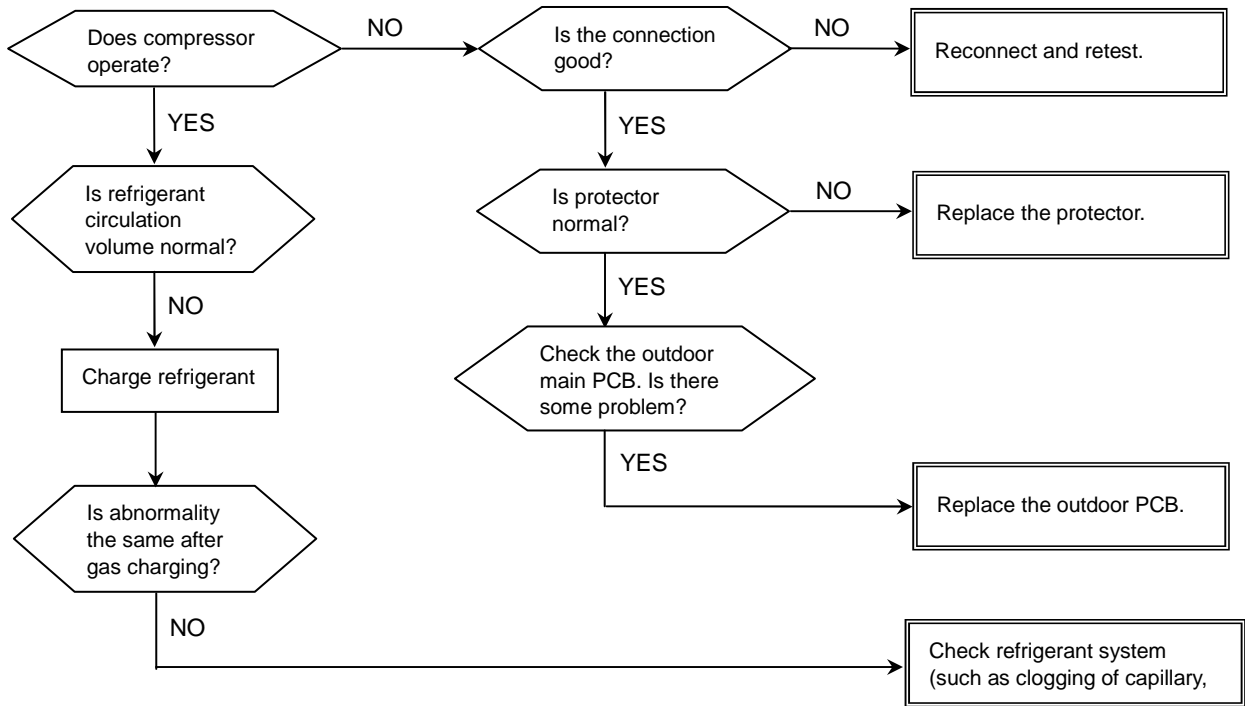
### 10.2.1

LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
×	×	○	☆	Module Protection



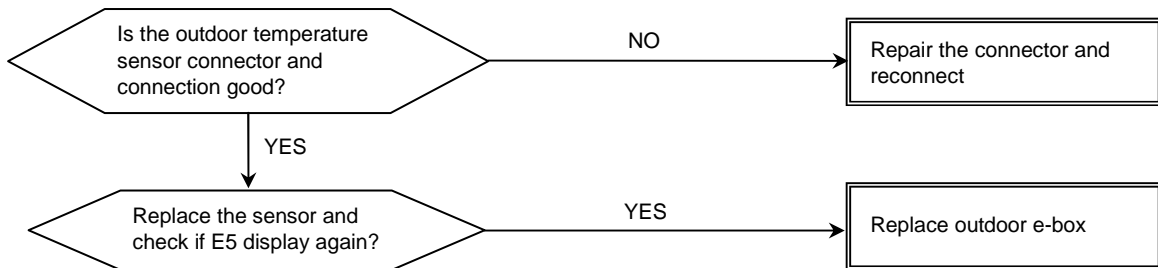
10.2.2

LED3	LED2	LED1	LED0	Explanation
DEFR	TIMER	AUTO	OPER	
○	×	×	☆	Temp Protection of Top Compressor



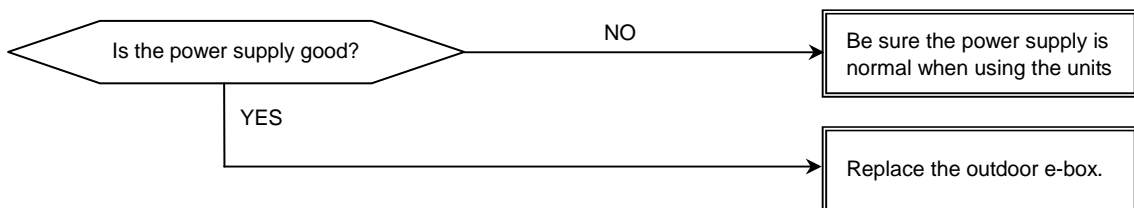
10.2.3

LED3	LED2	LED1	LED0	Explanation
DEFR	TIMER	AUTO	OPER	
×	○	×	☆	Outdoor Ambient Sensor Open or Short Circuit



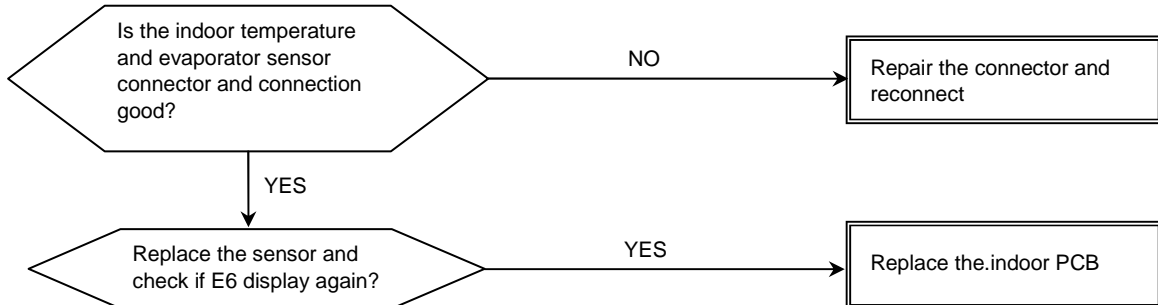
10.2.4

LED3	LED2	LED1	LED0	Explanation
DEFR	TIMER	AUTO	OPER	
×	○	○	☆	Voltage Too High or Too Low



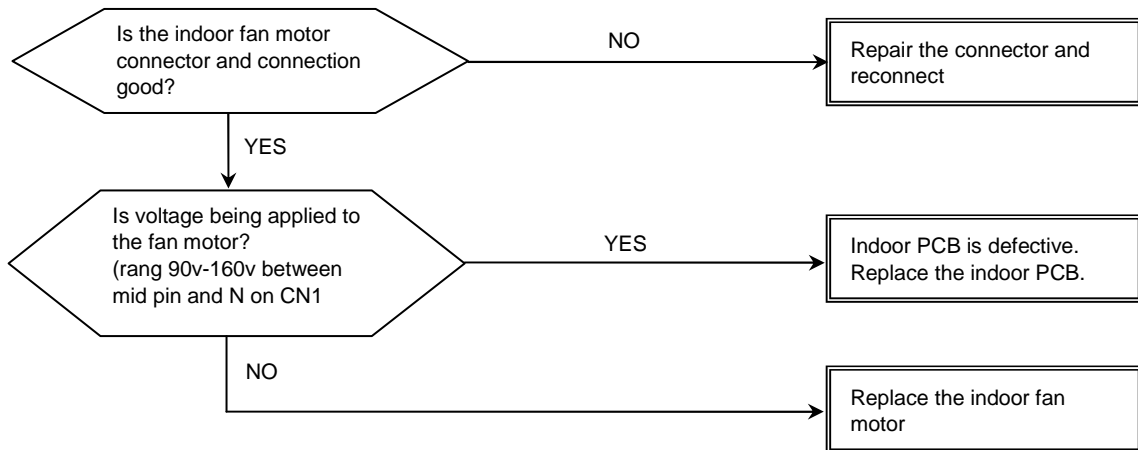
10.2.5

LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
○	○	○	☆	Room Sensor Open or Short Circuit



10.2.6

LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
○	○	☆	☆	Indoor Fan Speed Out of Control



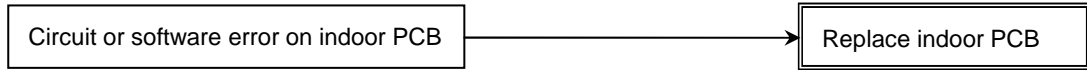
10.2.7

LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
☆	×	○	☆	Zero-Cross Signal Error



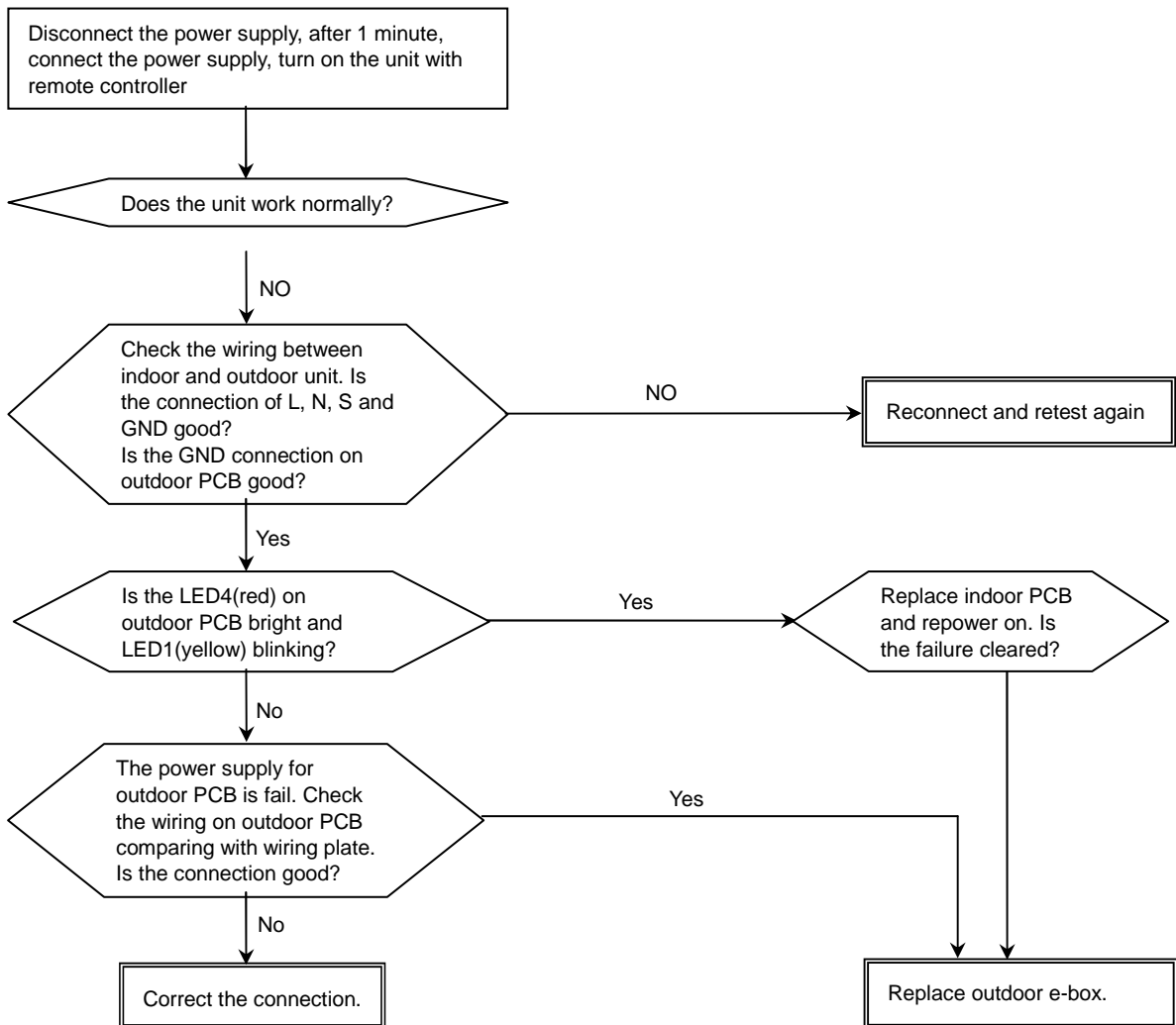
10.2.8

LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
○	○	○	○	EEPROM Error



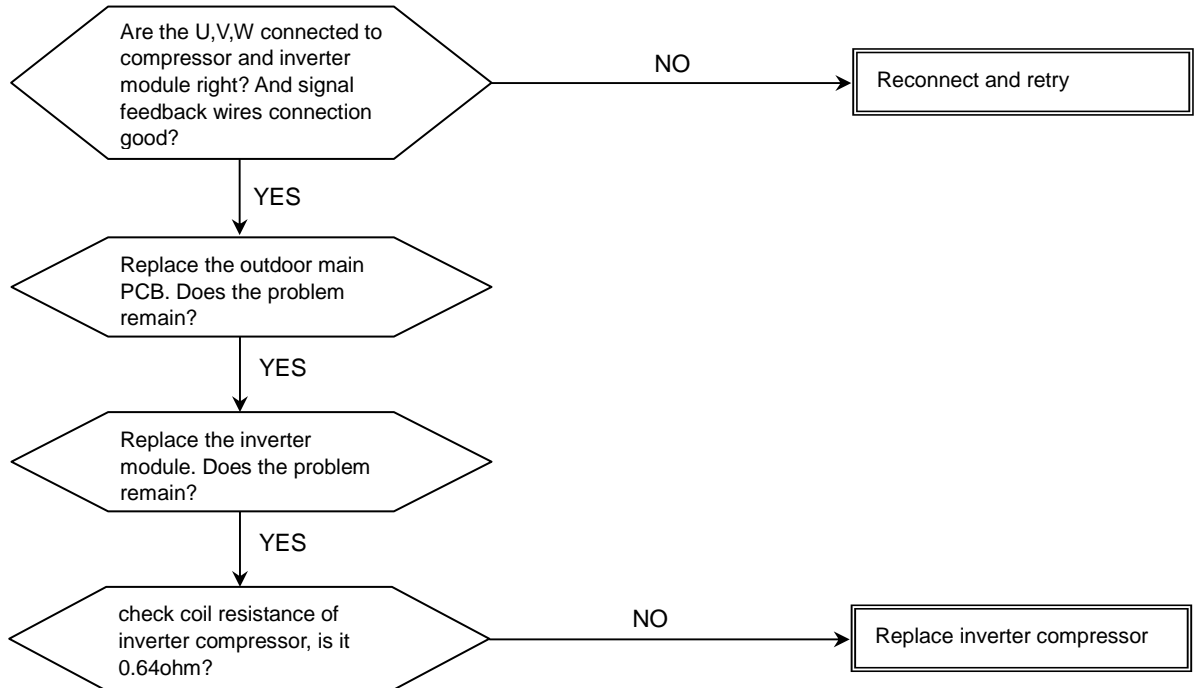
10.2.9

LED3 DEFR	LED2 TIMER	LED1 AUTO	LED0 OPER	Explanation
☆	☆	☆	☆	Communication Protection Between Indoor & Outdoor Units



10.2.10

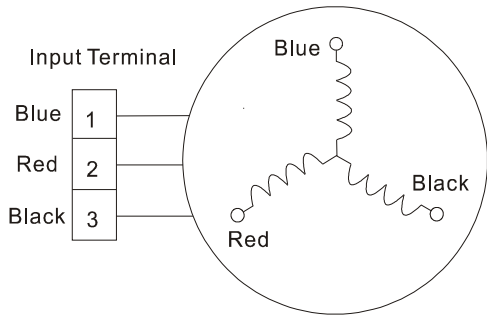
LED3	LED2	LED1	LED0	Explanation
DEFR	TIMER	AUTO	OPER	
×	×	×	×	Rotor Position Error



### 10.3 Key parts checking.

#### 10.3.1. Compressor checking (Model: DA89X1C-23FZ).

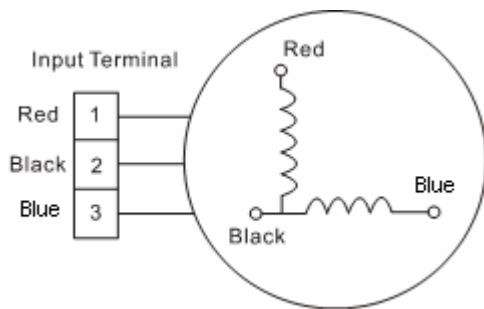
Measure the resistance value of each winding by using the multi-meter.



Position	Resistance Value
Blue - Red	1.10 Ω
Blue - Black	(20 °C)
Red - Blue	

#### 10.3.2 Outdoor Fan Motor (Model: YDK24-6E).

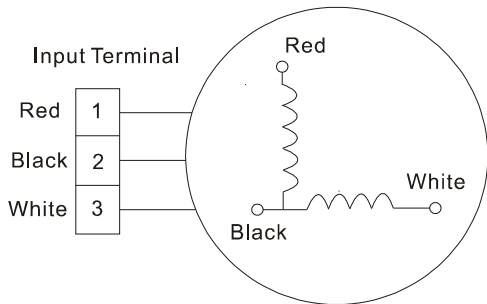
Measure the resistance value of each winding by using the multi-meter.



Position	Resistance Value
Black - Red	345Ω±8% (20 °C)
Blue - Black	180Ω±8% (20 °C)

#### 10.3.3 Indoor Fan Motor (Model: RPG13H).

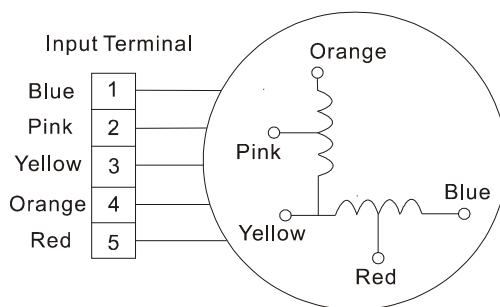
Measure the resistance value of each winding by using the multi-meter.



Position	Resistance Value
Black - Red	445Ω±8% (20 °C)
White - Black	405Ω±8% (20 °C)

#### 10.3.4 Step Motor (Model: MP2835).

Measure the resistance value of each winding by using the multi-meter.



Position	Resistance Value
Blue - Red	200Ω±7% (25 °C)
Pink - Orange	
Pink - Yellow	
Yellow - Red	

10.3.5 Temperature Sensors.

Room temp.(T1) sensor,

Indoor coil temp.(T2) sensor,

Outdoor coil temp.(T3) sensor,

Outdoor ambient temp.(T4) sensor,

Compressor exhaust temp.(Te) sensor.

Measure the resistance value of each winding by using the multi-meter.

Some frequently-used R-T data for T1,T2,T3 and T4 sensor:

Temperature (°C)	5	10	15	20	25	30	40	50	60
Resistance Value (KΩ)	26.9	20.7	16.1	12.6	10	8	5.2	3.5	2.4

Some frequently-used R-T data for Te sensor:

Temperature (°C)	5	15	25	35	60	70	80	90	100
Resistance Value (KΩ)	141.6	88	56.1	36.6	13.8	9.7	6.9	5	3.7

