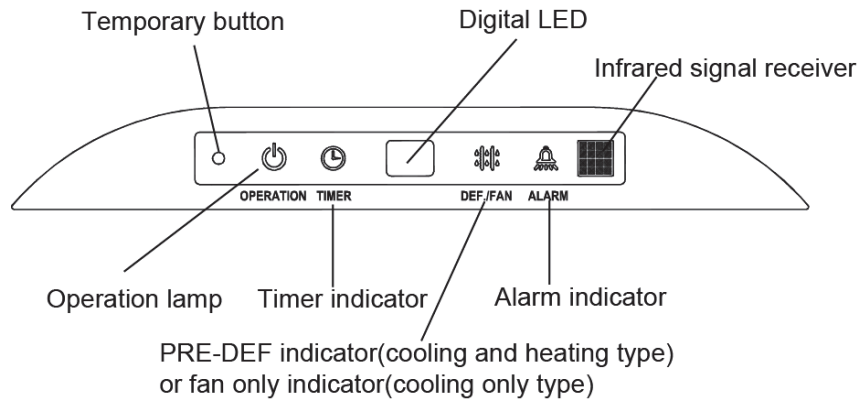


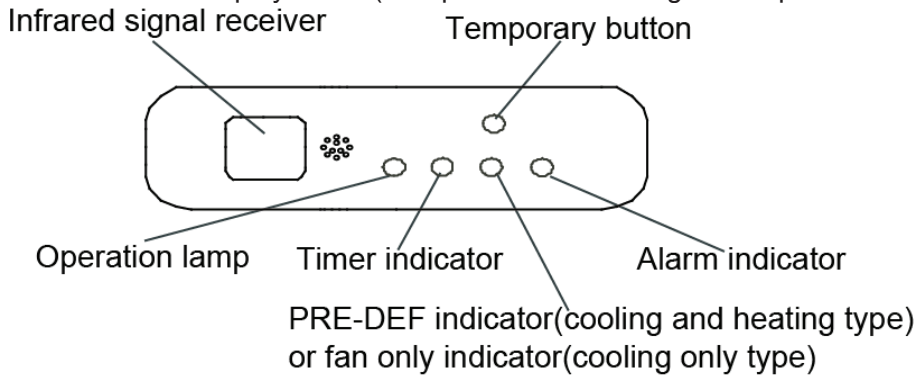
## 2. Troubleshooting

### 2.1 Display board

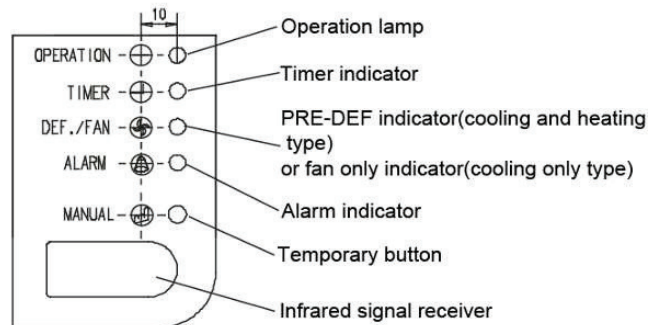
#### 2.1.1 Icon explanation on indoor display board (Big cassette).



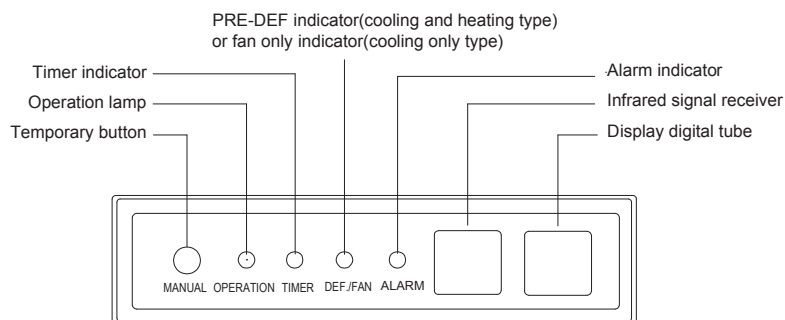
#### 2.1.2 Icon explanation on indoor display board (Compact cassette & High static pressure Duct).



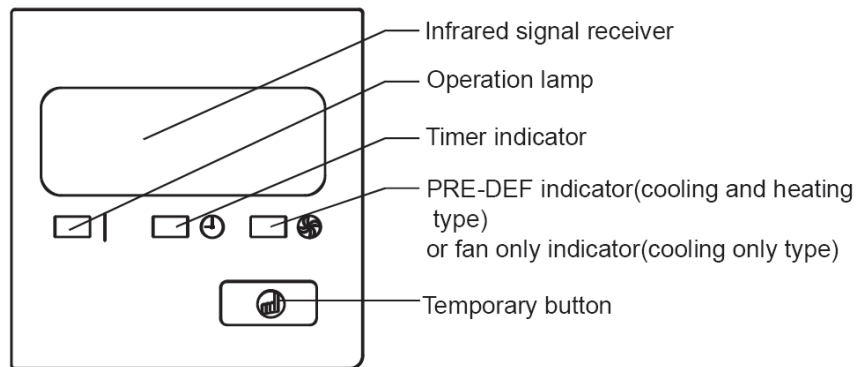
#### 2.1.3 Icon explanation on indoor display board (Ceiling & Floor)



#### 2.1.4 Icon explanation on indoor display board (A5 Duct)



### 2.1.5 Icon explanation on indoor display board (Console)



## 2.2 Indoor unit malfunction For compact 4-way cassette(12K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp
1	Communication malfunction between indoor and outdoor units.	X	☆	X	X
2	Open or short circuit of T1 temperature sensor	☆	X	X	X
3	Open or short circuit of T2 temperature sensor	X	X	☆	X
4	Full-water malfunction	X	X	X	☆
5	Indoor EEPROM malfunction	☆	☆	X	X
6	IPM module protection	☆	X	X	O
7	Open or short circuit of T3 or T4 temperature sensor	☆	O	X	X
8	Outdoor unit voltage protection	☆	O	X	O
9	Outdoor unit over-current protection	☆	☆	X	☆
10	Top temperature protection of compressor	☆	☆	☆	☆
11	Inverter compressor drive protection	☆	◎	X	X
12	Discharge temperature protection of compressor	☆	X	O	X
O(light) X(off) ☆(flash at 2.5Hz) ◎(flash at 0.5Hz)					

### For ceiling & floor(12K),

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp
1	Communication malfunction between indoor and outdoor units.	X	☆	X	X
2	Open or short circuit of T1 temperature sensor	☆	X	X	X
3	Open or short circuit of T2 temperature sensor	X	X	☆	X
4	Full-water malfunction	X	X	X	☆
5	Indoor EEPROM malfunction	☆	☆	X	X
6	IPM module protection	☆	X	X	O
7	Open or short circuit of T3 or T4 temperature sensor	☆	O	X	X
8	Outdoor unit voltage protection	☆	O	X	O
9	Outdoor unit over-current protection	☆	☆	X	☆
10	Top temperature protection of compressor	☆	X	O	X
O(light) X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)					

### For Duct type(12K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp	Display(nixie tube)
1	Open or short circuit of T1 temperature sensor	☆	X	X	X	E0
2	Open or short circuit of T2 temperature sensor	X	X	☆	X	E1
3	Communication malfunction between indoor and outdoor units.	X	☆	X	X	E2
4	Full-water malfunction	X	X	X	☆	E3
5	Indoor EEPROM malfunction	☆	☆	X	X	E4

## Troubleshooting

6	IPM module protection	☆	X	X	O	E5
7	Open or short circuit of T3 or T4 temperature sensor	☆	O	X	X	E6
8	Outdoor unit voltage protection	☆	O	X	O	P0
9	Compressor temperature protection	☆	X	O	X	P1
10	Outdoor unit over-current protection	☆	☆	X	☆	P2
O(light) X(off) ☆(flash at 5Hz)						

### For console type(12K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp
1	Communication malfunction between indoor and outdoor units.	X	☆	X
2	Open or short circuit of T1 temperature sensor	☆	X	X
3	Open or short circuit of T2 temperature sensor	X	X	☆
5	Indoor EEPROM malfunction	☆	☆	X
6	IPM module protection	☆	X	☆
7	Open or short circuit of T3 or T4 temperature sensor	☆	☆	☆
8	Outdoor unit voltage protection	☆	☆	O
9	Outdoor unit over-current protection	☆	O	O
10	Top temperature protection of compressor	☆	O	X
11	Inverter compressor drive protection	☆	◎	X
12	Indoor fan Speed has been out of control.	☆	O	☆
O(light) X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)				

### For console type(18K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp
1	Communication malfunction between indoor and outdoor units.	X	☆	X
2	Open or short circuit of T1 or T2 temperature sensor	☆	☆	X
3	Fan motor malfunction.	☆	X	☆
4	Outdoor unit malfunction	X	X	◎
5	Indoor EEPROM malfunction	☆	☆	☆
X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)				

### For compact 4-way cassette(18K)&ceiling & floor(18-30K)

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp
1	Communication malfunction between indoor and outdoor units.	X	☆	X	X
2	Open or short circuit of T1 or T2 temperature sensor	☆	X	X	X
3	Full-water malfunction	X	X	X	☆
4	Outdoor unit malfunction	X	X	X	◎
X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)					

**For Normal 4-way cassette(24K-30K)**

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp	Display(nixie tube)
1	Communication malfunction between indoor and outdoor units.	X	☆	X	X	E1
2	Open or short circuit of T1 temperature sensor	☆	X	X	X	E2
3	Open or short circuit of T2 temperature sensor	☆	X	X	X	E3
4	Open or short circuit of T2B temperature sensor	☆	X	X	X	E4
5	Full-water malfunction	X	X	X	☆	EE
6	Indoor EEPROM malfunction	◎	X	X	X	E7
7	Outdoor unit malfunction	X	X	X	◎	Ed
X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)						

**For Duct type(18-30K)**

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp	Display(nixie tube)
1	Communication malfunction between indoor and outdoor units.	X	☆	X	X	E1
2	Open or short circuit of T1 temperature sensor	☆	X	X	X	E2
3	Open or short circuit of T2 temperature sensor	☆	X	X	X	E3
4	Open or short circuit of T2B temperature sensor	☆	X	X	X	E4
5	Full-water malfunction	X	X	X	☆	EE
6	Indoor EEPROM malfunction	X	X	☆	X	E7
7	Outdoor unit malfunction	X	X	X	◎	Ed
X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)						

**For Normal 4-way cassette(36K-60K), ceiling & floor(36K-60K), Duct type(36K-60K), High pressure static duct**

NO.	Malfunction	Running lamp	Timer lamp	Defrosting lamp	Alarm lamp	Display(nixie tube)
1	Communication malfunction between indoor and outdoor units.	X	☆	X	X	E1
2	Open or short circuit of T1 temperature sensor	☆	X	X	X	E2
3	Open or short circuit of T2 temperature sensor	☆	X	X	X	E3
4	Open or short circuit of T2B temperature sensor	☆	X	X	X	E4
5	Full-water malfunction	X	X	X	☆	EE
6	Indoor EEPROM malfunction	X	X	☆	X	E7
7	Outdoor unit malfunction	X	X	X	◎	Ed
X(off) ☆(flash at 5Hz) ◎(flash at 0.5Hz)						
Note: Digital display is only available for normal 4-way cassette & duct type.						

## 2.3 Outdoor unit malfunction

### 12k

Indoor Display	Malfunction or Protection	LED6 (Green)	LED5 (Red)
P0	IGBT over-strong current protection	☆	X
P1	Voltage protection of compressor	O	O
P4	Indoor / outdoor units communication error	☆	☆
O(light) X(off) ☆(flash at 2.5Hz)			

### 18~60k

Display	Malfunction or Protection
E0	Outdoor EEPROM malfunction
E2	Indoor / outdoor units communication error
E3	Communication malfunction between IPM board and outdoor main board
E4	Open or short circuit of T3 or T4 temperature sensor
E5	Voltage protection of compressor
E6	PFC module protection (Only for 36K, 48K with 1 phase)
P0	Top temperature protection of compressor
P1	High pressure protection(Only for 30K~60K)
P2	Low pressure protection(Only for 30K~60K)
P3	Current protection of compressor
P4	Discharge temperature protection of compressor
P5	High temperature protection of condenser
P6	IPM module protection
P7	High temperature protection of evaporator