

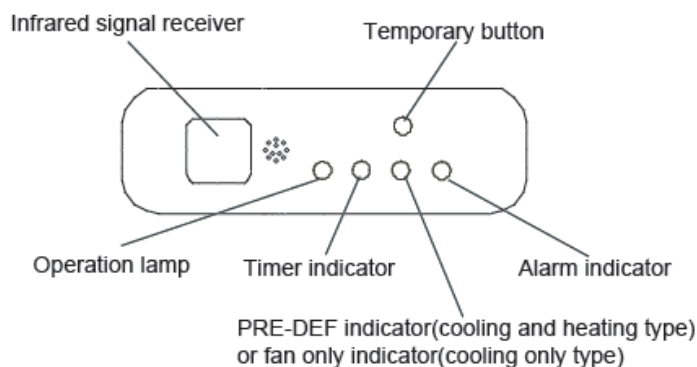
- 31—Forced cooling: After pressing this button, the indoor and outdoor units start, and indoor/outdoor fan and EXV open at a fixed degree. Normally it is not used
- 32—Electrical expansion valve drive port: EXV_B
- 33—Communication between indoor/outdoor units, RS-485 signal

Malfunction Code of Outdoor unit

Display	Malfunction or Protection	Remark
E0	Communication malfunction between outdoor units	Only auxiliary unit display
E1	Phase sequence error	
E2	Communication malfunction between indoor/outdoor units	
E3	T3 temperature sensor malfunction	
E4	T4 temperature sensor malfunction	
E5	T7D temperature sensor malfunction	
E8	Outdoor Unit address setting error	
H0	Mode conflict malfunction	Only main unit display
H1	Communication malfunction between 780034 and 9177	
H2	Amount of indoor units decrease malfunction	Only main unit display
H3	Amount of indoor units increase malfunction	Only main unit display
P1	High pressure protection	
P2	Low pressure protection	
P3	Digital Scroll Compressor current protection	
P4	Compressor discharge temperature protection	
P5	Condenser high temperature protection	
P7	NO.1 Fixed Compressor current protection	
P8	NO.2 Fixed Compressor current protection	

11. Troubleshooting

12.1 Indoor Units lamp flashes:



No	Display Contents	Explanation of Malfunction
1	All lamps are off	Standing-by
2	Operation lamp is on	ON
3	PRE./DEF. lamp is on	Anti-cooling or Defrosting
4	Timer lamp is on	Timer function is on
5	Timer lamp flashes	Indoor/outdoor communication malfunction
6	Operation lamp flashes	Indoors temperature Sensor abnormal
7	PRE/DEF. Lamp flashes	Mode-confliction malfunction
8	Alarm lamp flashes quickly	Water-level switch abnormal
9	Alarm lamp flashes slowly	Outdoor malfunction or protection

LED and LCD display on the new panel of 4-way cassette

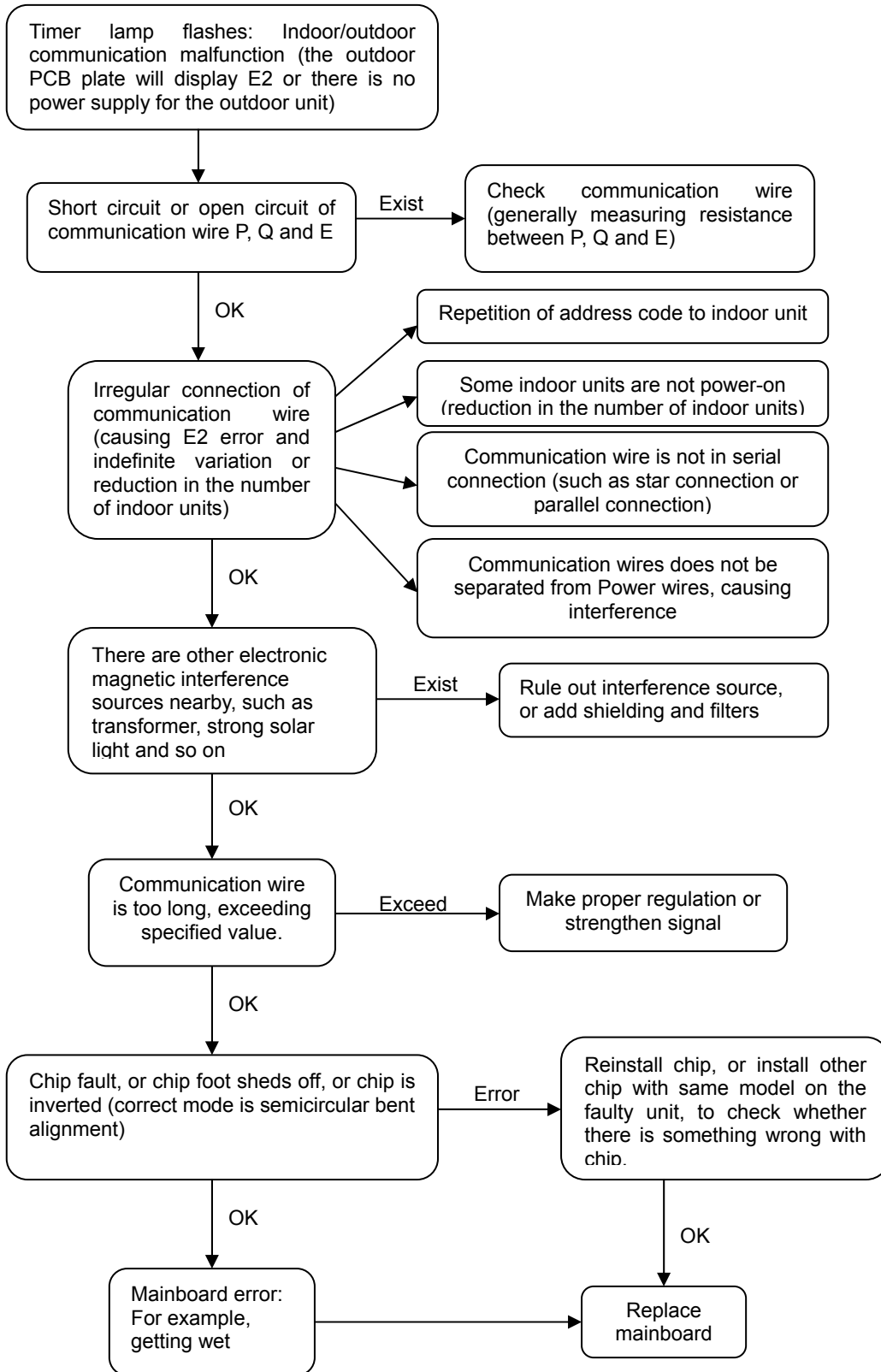
No.	Error or Protection	Operation	Timer	DEF/FAN	Alarm	Recoverable or not	Code
1	Room temperature sensor checking channel is abnormal	X	☆	X	X	Yes	E2
2	Evaporator temperature sensor checking channel is abnormal	☆	X	X	X	Yes	E3
3	Condenser temperature sensor checking channel is abnormal	X	X	☆	X	Yes	E4
4	Pump sensor malfunction	X	X	X	☆	Yes	E5
5	Outdoor protection (lack of phase, phase sequence, etc.)	☆	☆	☆	☆	Yes	E6
6	EEPROM malfunction	☆	☆	X	X	No	E7
7	Water level alarm	X	X	X	☆	Yes or No (if last for 3 min the error hasn't been eliminated yet)	E8
8	Communication malfunction					Yes	E1

(X stands for Elimination(OFF), ☆ stands for flashing at 5Hz)

LCD display on the wall mounted unit

Code	Malfunction	Remark
EE	Water level checking malfunction	
E6	Mode-confliction malfunction	
E5	T3 or T4 or digital scroll compressor discharge Temp. sensor malfunction	
E4	T2B Temp. sensor malfunction	
E3	T2A Temp. sensor malfunction	
E2	T1 Temp. sensor malfunction	
E1	Communication malfunction	

① **Timer lamp flashes: Indoor/outdoor communication malfunction**



Note:

1. Press the "manual" button on remote control receiver of indoor unit in turn (display the address code of this indoor unit when pressing and holding for 5 seconds (display capacity code when pressing and holding for 10 seconds), check all address codes.

Codes to be inspected are as follows:

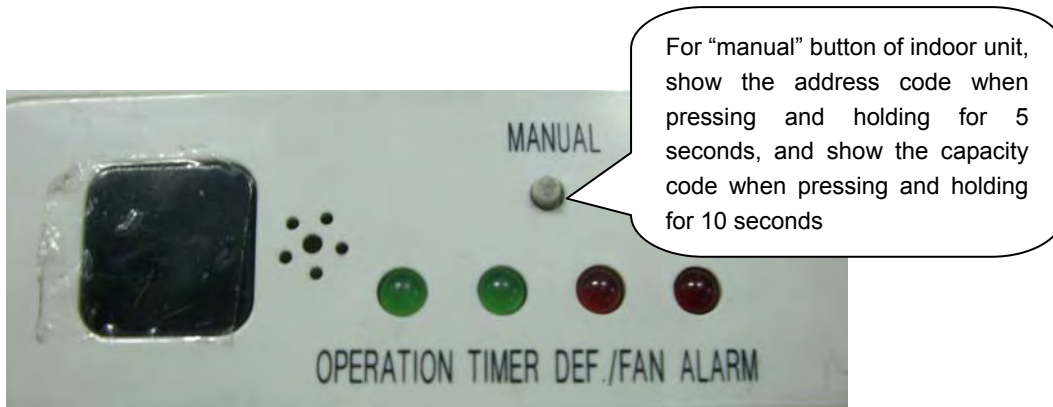
Indicator	OPERATION	TIMER	DEF / FAN	ALARM
Code	8	4	2	1

Address code	0	1	2	3	4	5	6	7	8	9
Capacity (x 100W)	22	28	36	45	56	71	80	90	112	140
Horsepower (HP)	0.8	1.0	1.2	1.6	2.0	2.5	3.0	3.2	4.0	5.0

For example: After pressing and holding for 5 seconds, "Operation" light and "Alarm" light is constant-on, which indicates that the address code is $(8 + 1) = 9$;

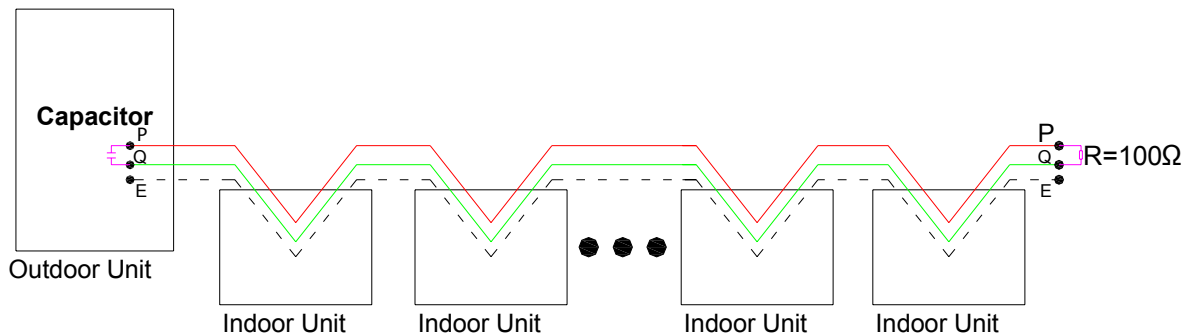
(Note: If the indicator is constant-on, calculate according to the above-mentioned formula. If the indicator is flashing, add 16 to the original calculated code, for example: After pressing and holding for 5 seconds, "Operation" light and "Alarm" light is flashing, which indicates that the address code is $16 + (8 + 1) = 25$.)

After pressing and holding for 10 seconds, "Operation" light and "Alarm" light is constant-on, which indicates that the address code is $(4 + 1) = 5$; indicating the capacity of this unit is $71 \times 100W$ (2.5 HP).

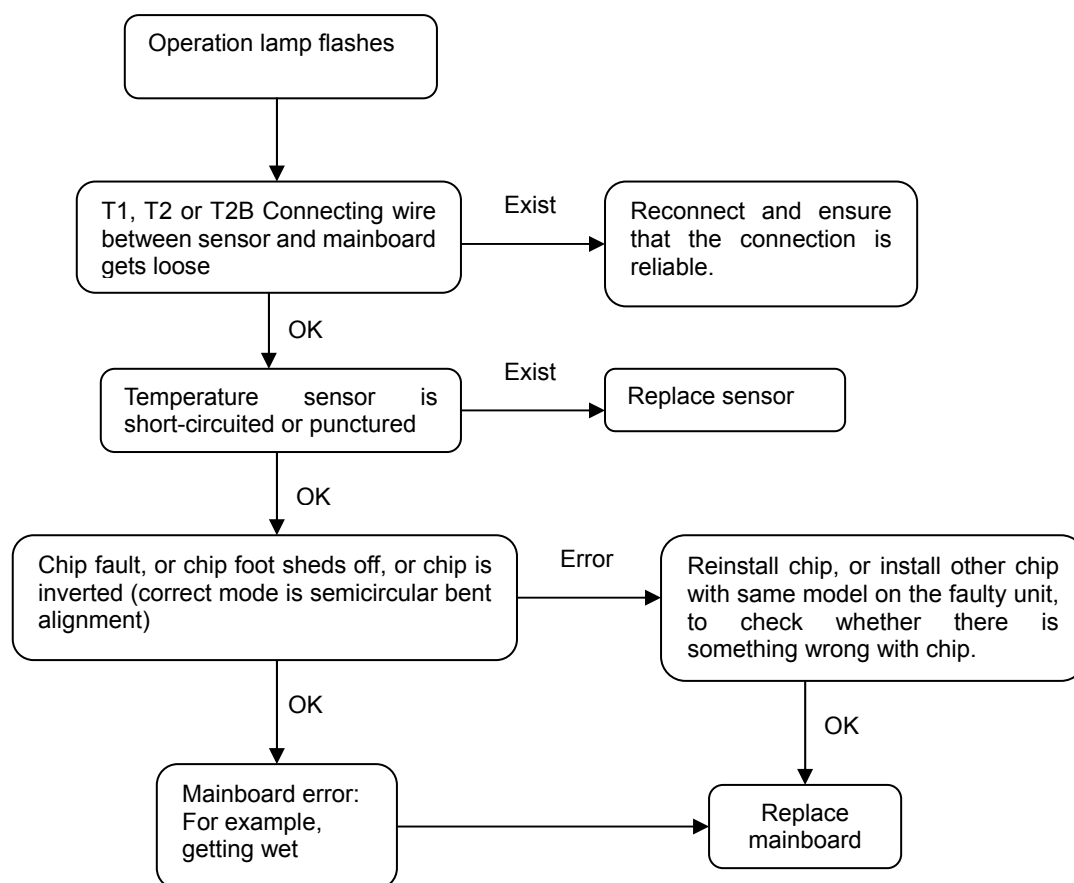


2. If the signal is weak, connect 100 Ω resistor between terminal P and Q on the end indoor unit in serial, or connect a small capacitor between terminal P and Q on outdoor unit in serial (as follows).

Signal wire must be shielded wire; indoor units must be connected in serial. At the end, connect a resistor on indoor unit or a capacitor between P and Q on outdoor unit.



② Operation lamp flashes: Indoors temp. Sensor abnormal



Caution: There are three temp. sensors in indoor unit, i.e. T1, T2 and T2B, of which fault in any one will cause operation light flashing and report error.

③ DEF. Lamp flashes: Mode-conflict malfunction

In the below table, “Yes” indicates existing mode conflict, “No” indicates no mode conflict.

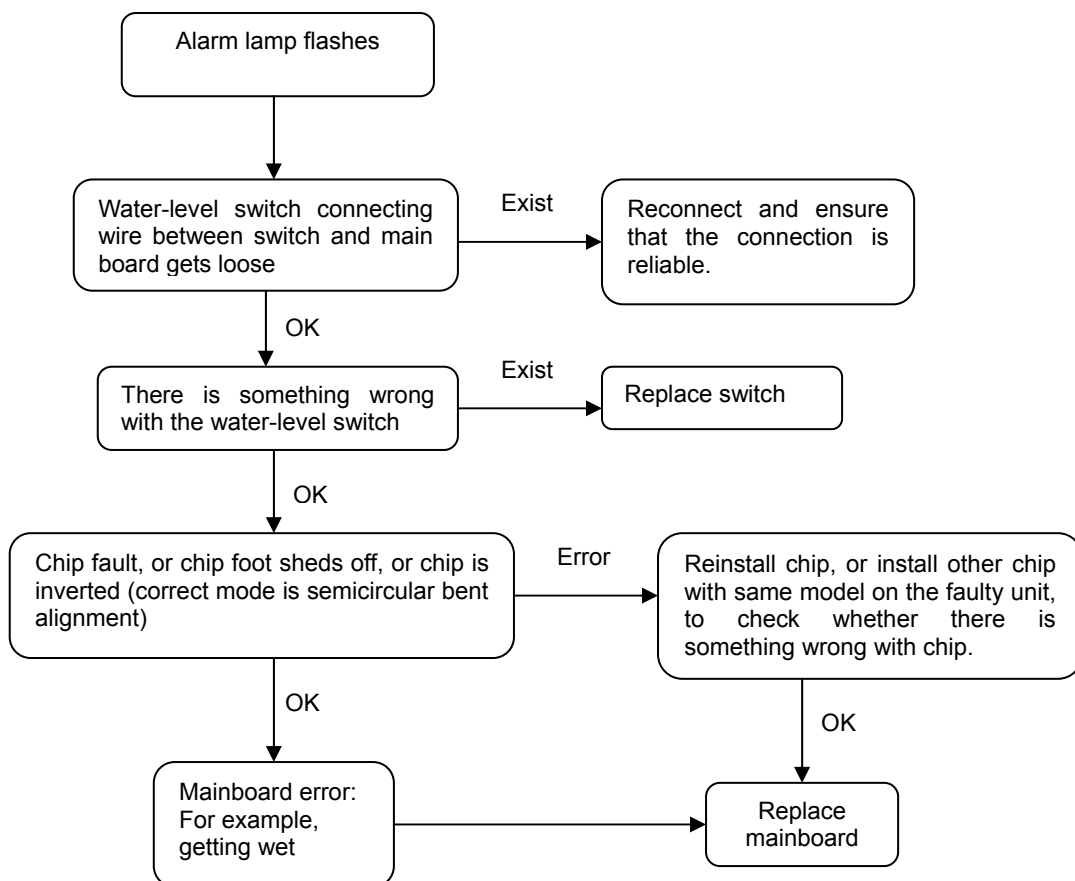
	Cooling	Heating	Air-supply	OFF
Cooling	No	Yes	No	No
Heating	Yes	No	Yes	No
Air-supply	No	Yes	No	No
OFF	No	No	No	No

When indoor unit receiving heating operation instruction, it will transmit the operation mode signal to outdoor unit to conduct prior heating control, including:

In process of cooling and air-supply mode operation: After receiving the heating operation instruction, outdoor unit stops cooling and supplying air, and transfers to heating mode three minutes later after the shutdown of compressor; indoor unit required to conduct cooling and air-supply mode operation is on standby mode and displays mode conflict fault.

In process of heating mode operation: Ignore cooling and air-supply mode operation instruction, outdoor unit keeps on operating according to heating mode; Indoor unit with cooling and air-supply mode operation displays mode conflict fault. If heating mode operation stops (except that indoor unit reaches setting temperature because of heating), cooling and air-supply mode restarts up and conducts operation three minutes later.

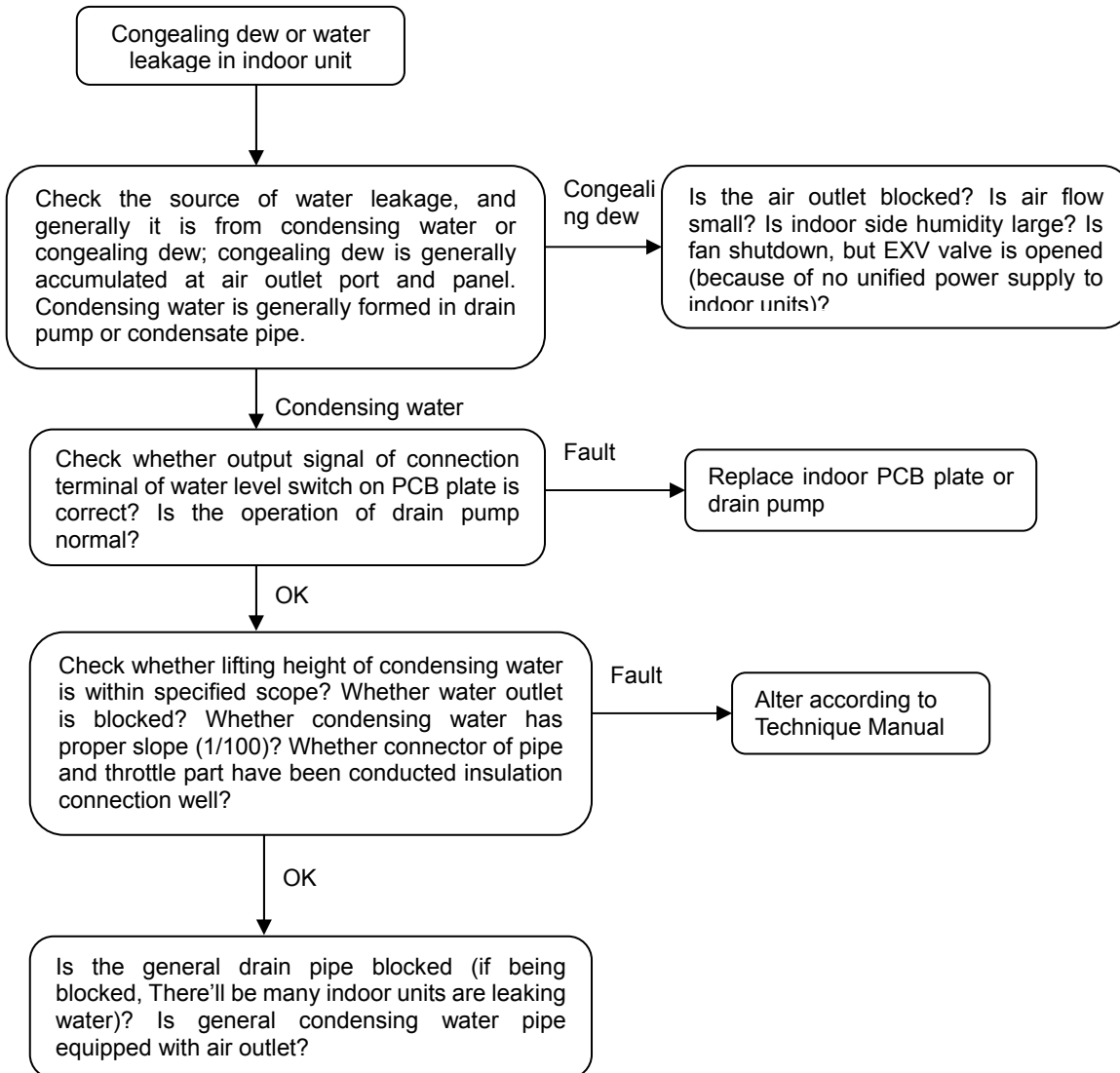
④ Alarm lamp flashes: Water-level switch abnormal



⑤ **Alarm lamp flashes slowly: Outdoor malfunction or protection**

Examine outdoor unit, and analyze according to actual condition

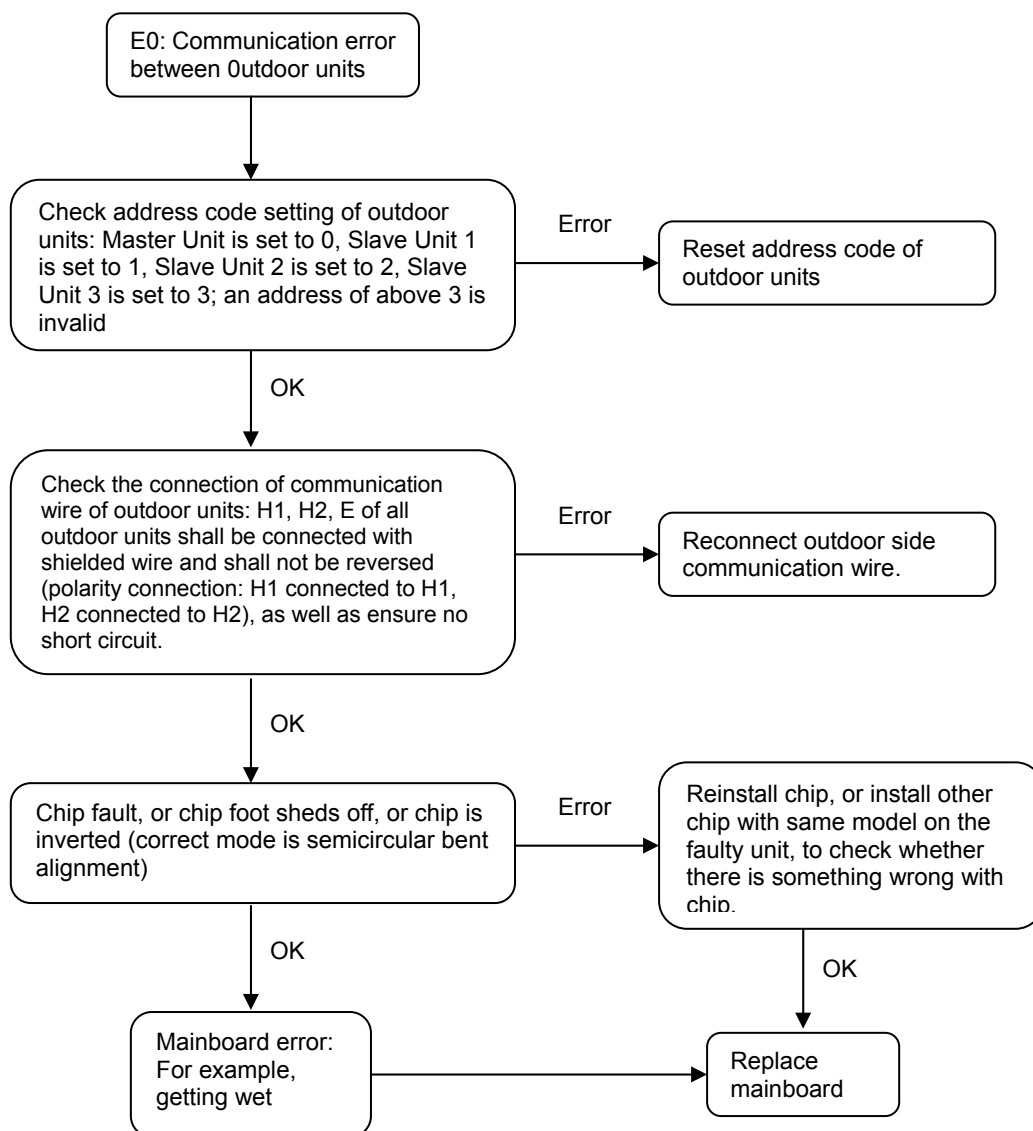
⑥ **Congealing Dew or Water Leakage in Indoor Units**



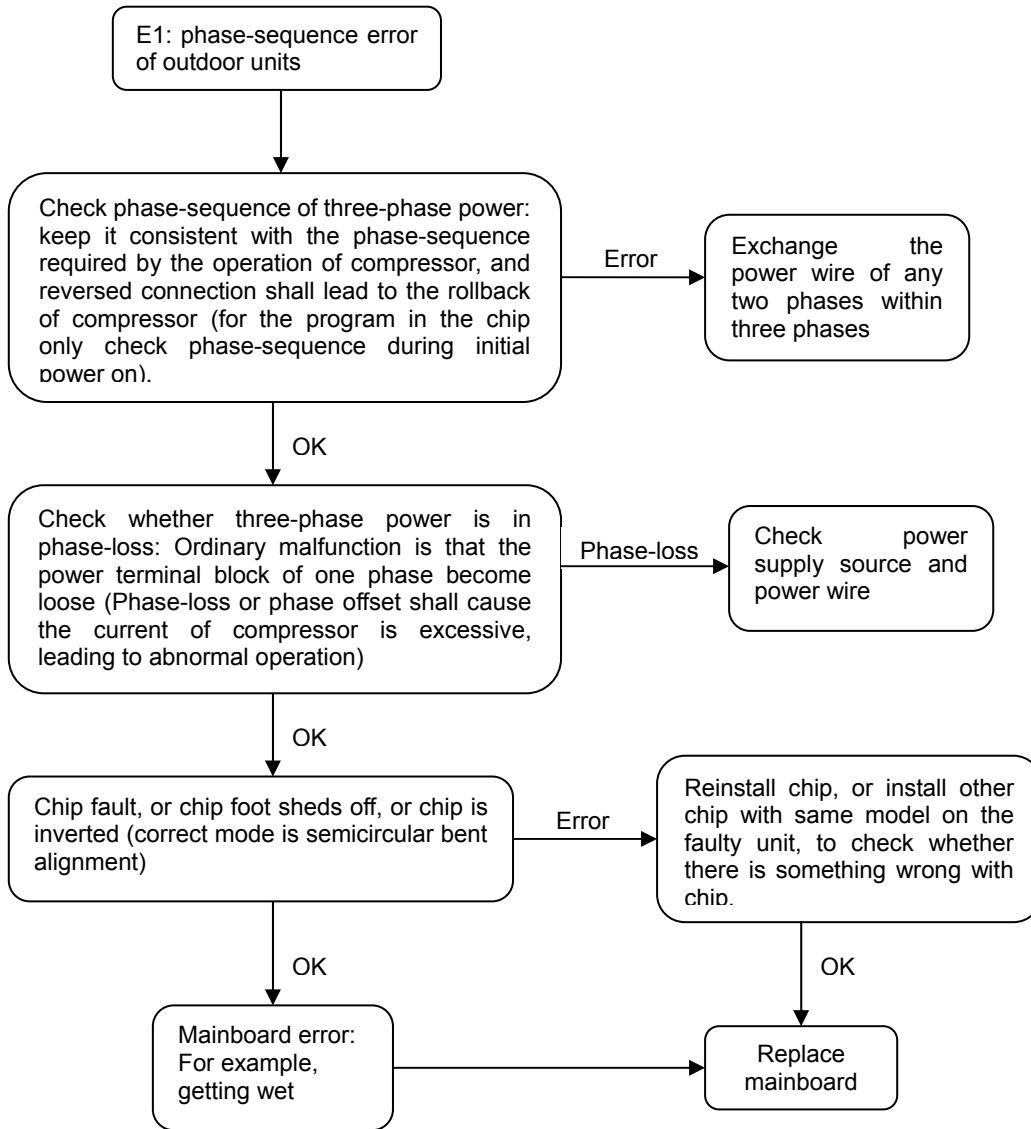
12.2 Outdoor unit's LED indication:

No	Display	Malfunction or Protection	Remark
1	E0	Communication error between outdoor units	Only slave unit display
2	E1	Phase protection	All the outdoor units display
3	E2	Communication error between indoor unit and master unit	All the outdoor units display
4	E4	Outdoor temperature sensor error	All the outdoor units display
5	E5	Digital discharge temperature sensor error	All the outdoor units display
6	E8	Outdoor unit address error	All the outdoor units display
7	H0	Model conflict error	All the outdoor units display
8	H1	Communication malfunction between chips	All the outdoor units display
9	H2	Quantity of outdoor unit decreases	Only master unit display
10	H3	Quantity of outdoor unit increases	Only master unit display
12	P1	Hi-pressure protection	All the outdoor units display
13	P2	Low-pressure protection	All the outdoor units display
14	P3	Compressor current Protection	All the outdoor units display
15	P4	Compressor discharge temperature protection	All the outdoor units display
16	P5	Outdoor condenser high temperature protection	All the outdoor units display
18	P7	Current protection, No.1 fixed compressor	All the outdoor units display
19	P8	Current protection, No.2 fixed compressor	14/16HP outdoor units display

I. E0: Communication error between outdoor units

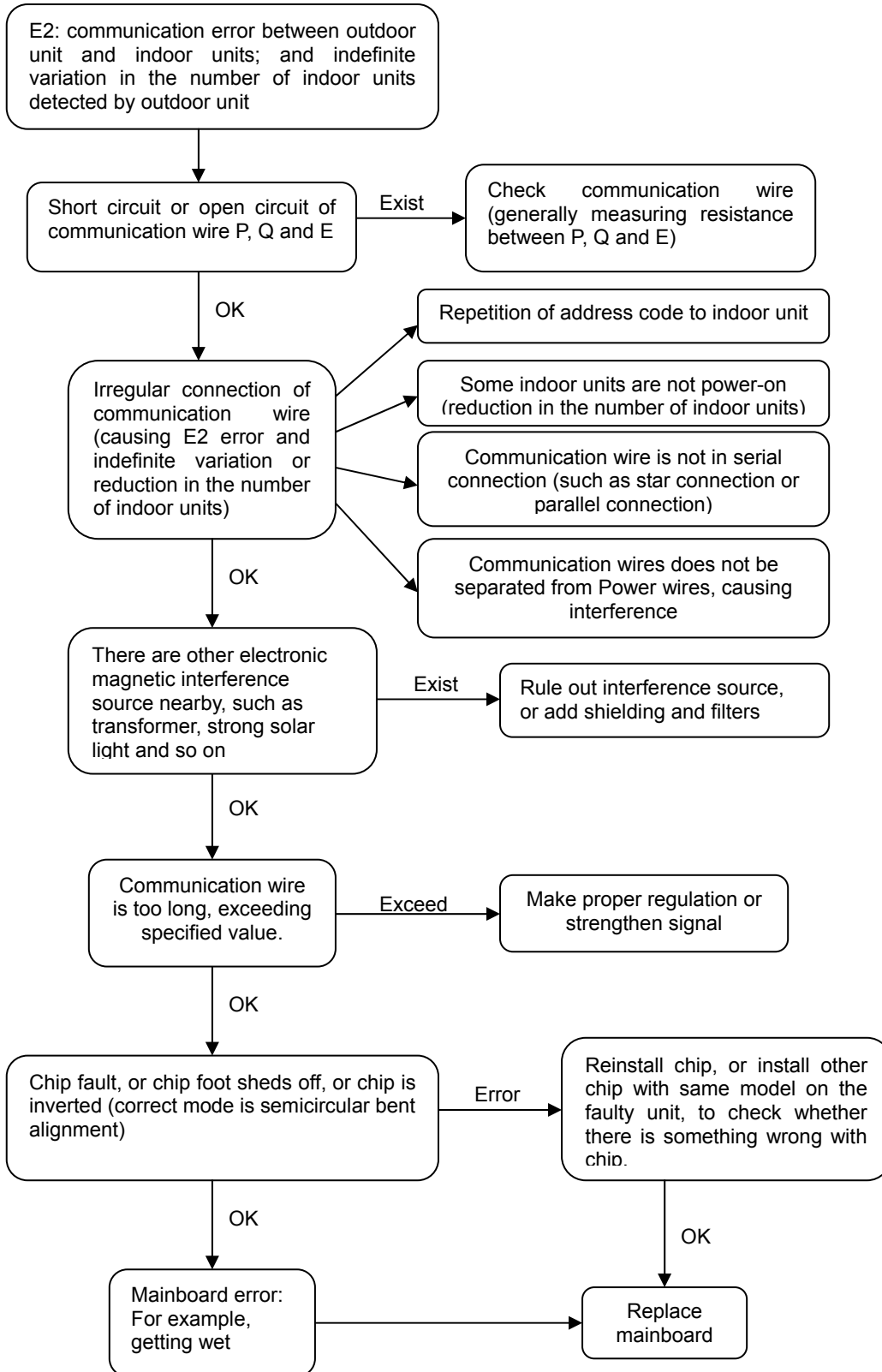


II. E1: Phase-sequence Error



Note: Because all electric motors of SDV III outdoor units are connected to phase C, if each outdoor unit is connected according to normal phase-sequence of A, B, and C. when the number of outdoor units is large, current difference between phase C and other two phases at main power supply shall be very large too, leading to disconnection of the air breaker at power distribution cabinet or fusing of terminal blocks. Therefore, when the number of outdoor units is large, the phase sequence shall be shifted for evenly distributing motor current to three phases.

III. E2: Communication Error between Outdoor Unit and Indoor Units; and indefinite variation in the number of indoor unit detected by outdoor unit



Note:

1. Press the "manual" button on remote control receiver of indoor unit in turn (display the address code of this indoor unit when pressing and holding for 5 seconds (display capacity code when pressing and holding for 10 seconds), check all address codes.

Codes to be inspected are as follows:

Indicator	OPERATION	TIMER	DEF / FAN	ALARM
Code	8	4	2	1

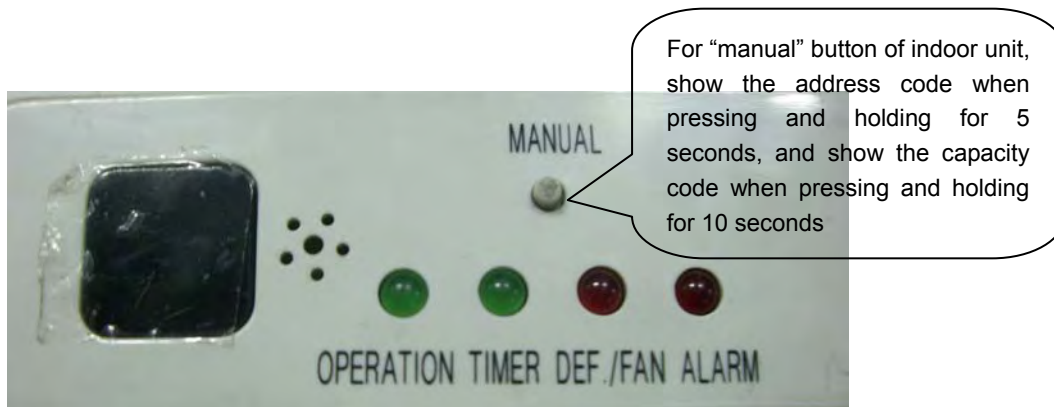
Address code	0	1	2	3	4	5	6	7	8	9
Capacity (x 100W)	22	28	36	45	56	71	80	90	112	140
Horsepower (HP)	0.8	1.0	1.2	1.6	2.0	2.5	3.0	3.2	4.0	5.0

For example: After pressing and holding for 5 seconds, "Operation" light and "Alarm" light is constant-on, which indicates that the address code is $(8 + 1) = 9$;

(Note: If the indicator is constant-on, calculate according to the above-mentioned formula.

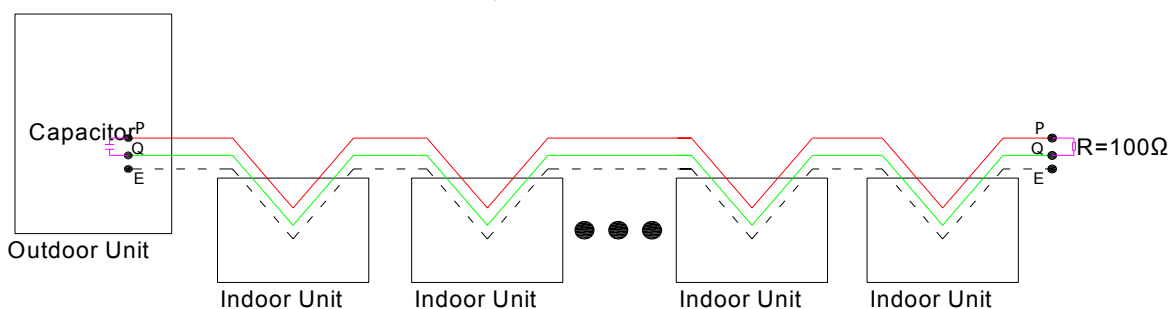
If the indicator is flashing, add 16 to the original calculated code, for example: After pressing and holding for 5 seconds, "Operation" light and "Alarm" light is flashing, which indicates that the address code is $16 + (8 + 1) = 25$.)

After pressing and holding for 10 seconds, "Operation" light and "Alarm" light is constant-on, which indicates that the address code is $(4 + 1) = 5$; indicating the capacity of this unit is $71 \times 100W$ (2.5 HP).

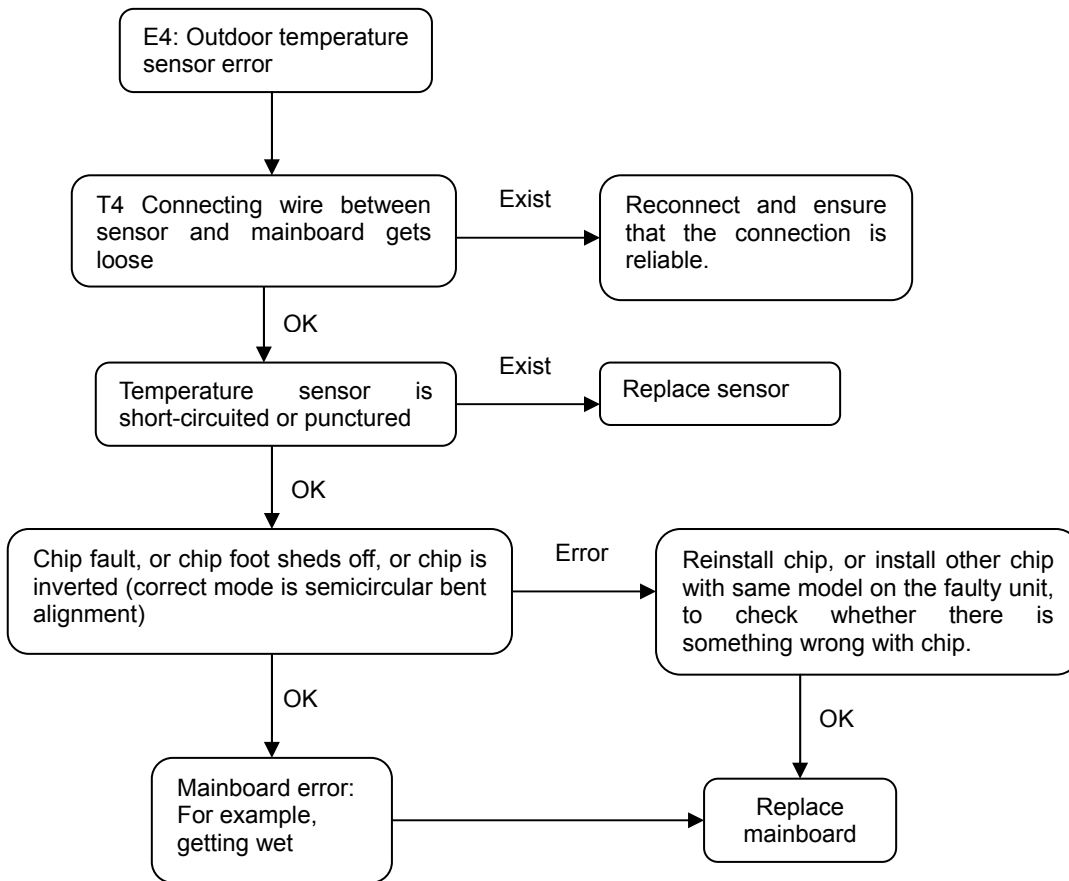


2. If the signal is weak, connect 100 Ω resistor between terminal P and Q on the end indoor unit in serial, or connect a small capacitor between terminal P and Q on outdoor unit in serial (as follows).

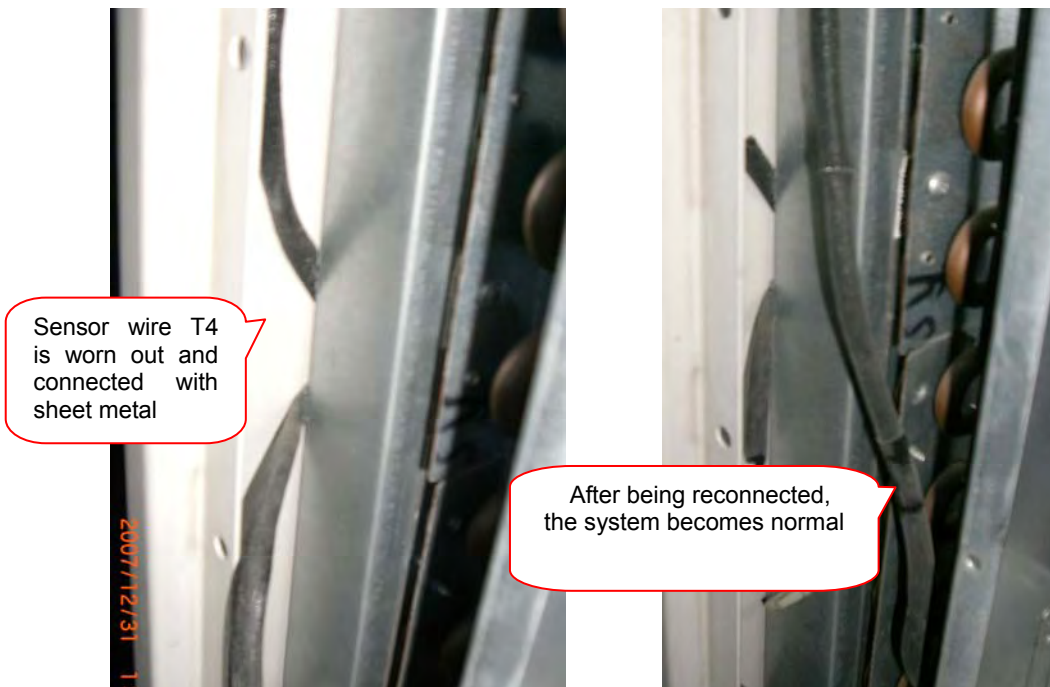
Signal wire must be shielded wire; indoor units must be connected in serial. At the end, connect a resistor on indoor unit or a capacitor between P and Q on outdoor unit.



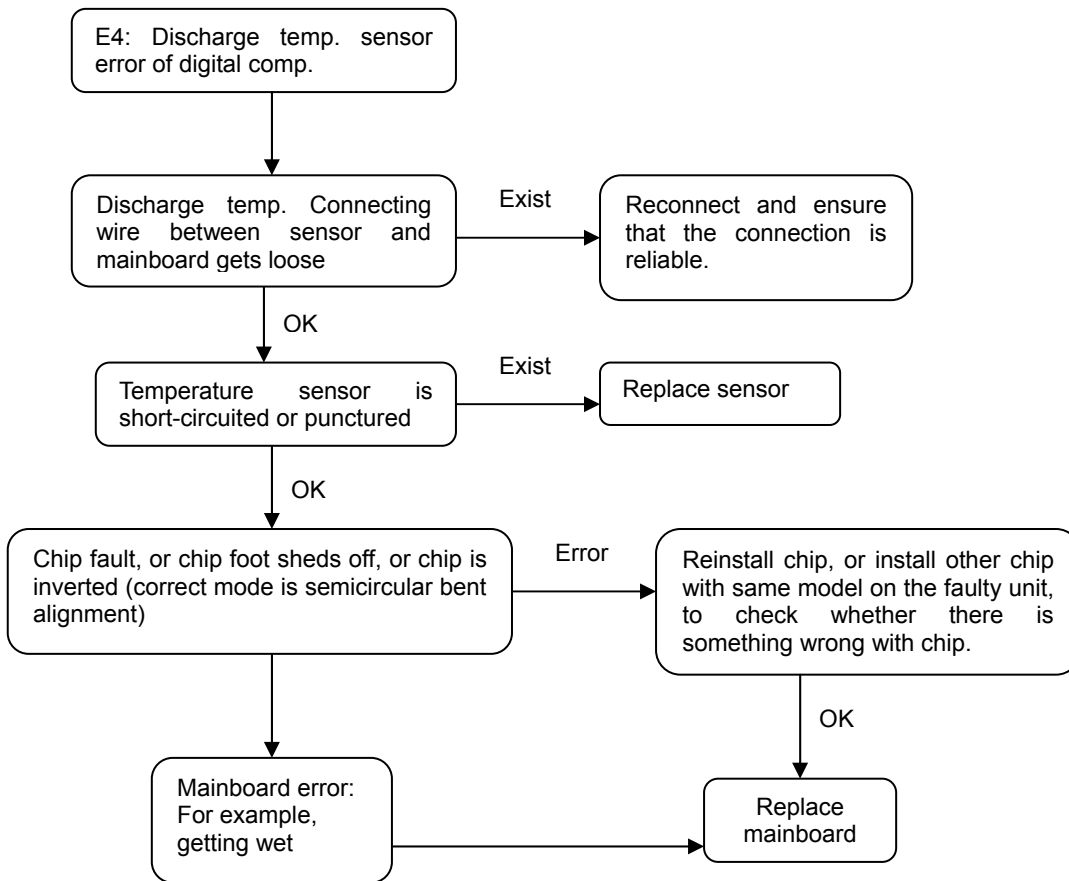
IV. E4: Outdoor temperature sensor error



Case: There is no display on PCB of one system, and the problem still exists after replacing mainboard. Voltage values on measuring plate (such as 220V, 5V, 12V, etc) are normal; after measuring resistance value of sensor, find that T4 thermo-bulb is earth-continuity, and further discover that the thermal cable of T4 sensor is punched by bolt, as follows:

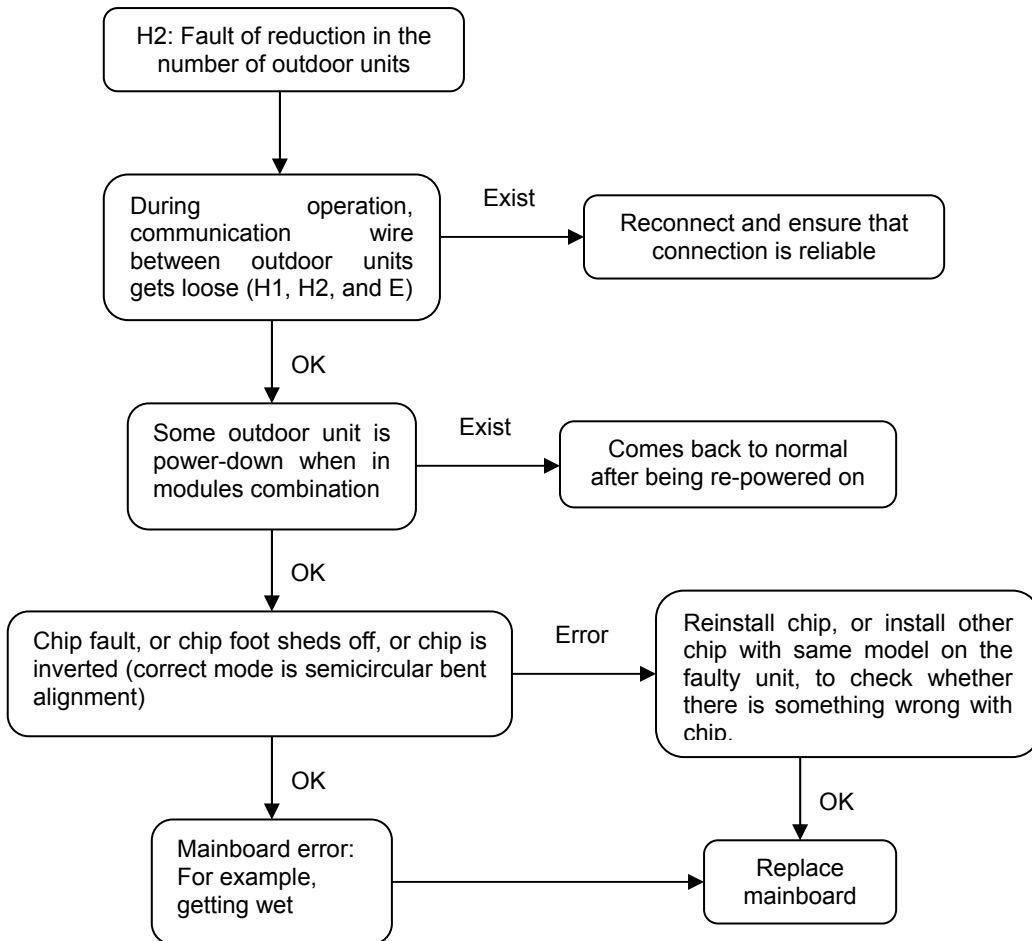


V. E5: Discharge temp. sensor error of digital comp.

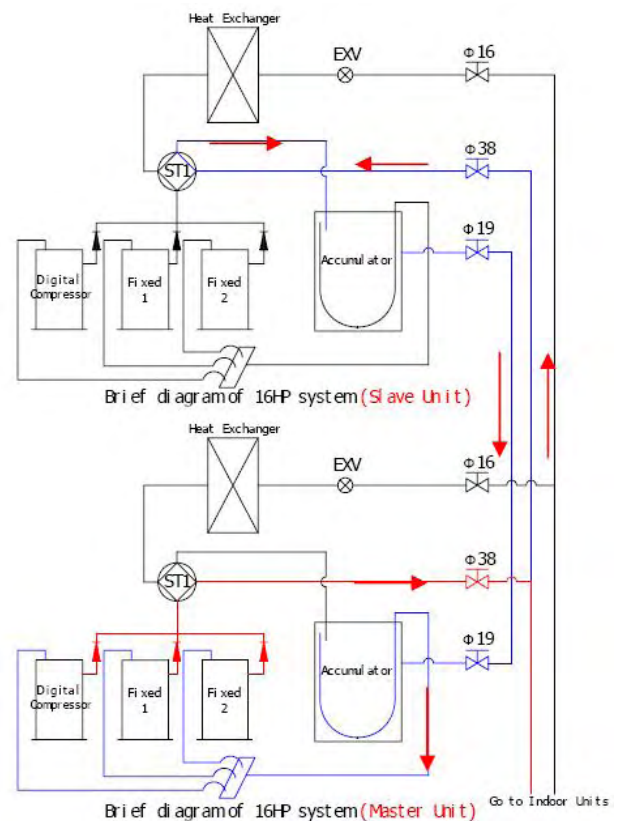


Case: Digital Scroll Comp. has two temperature sensors, one is in the compressor, the other one is on the discharge pipe.

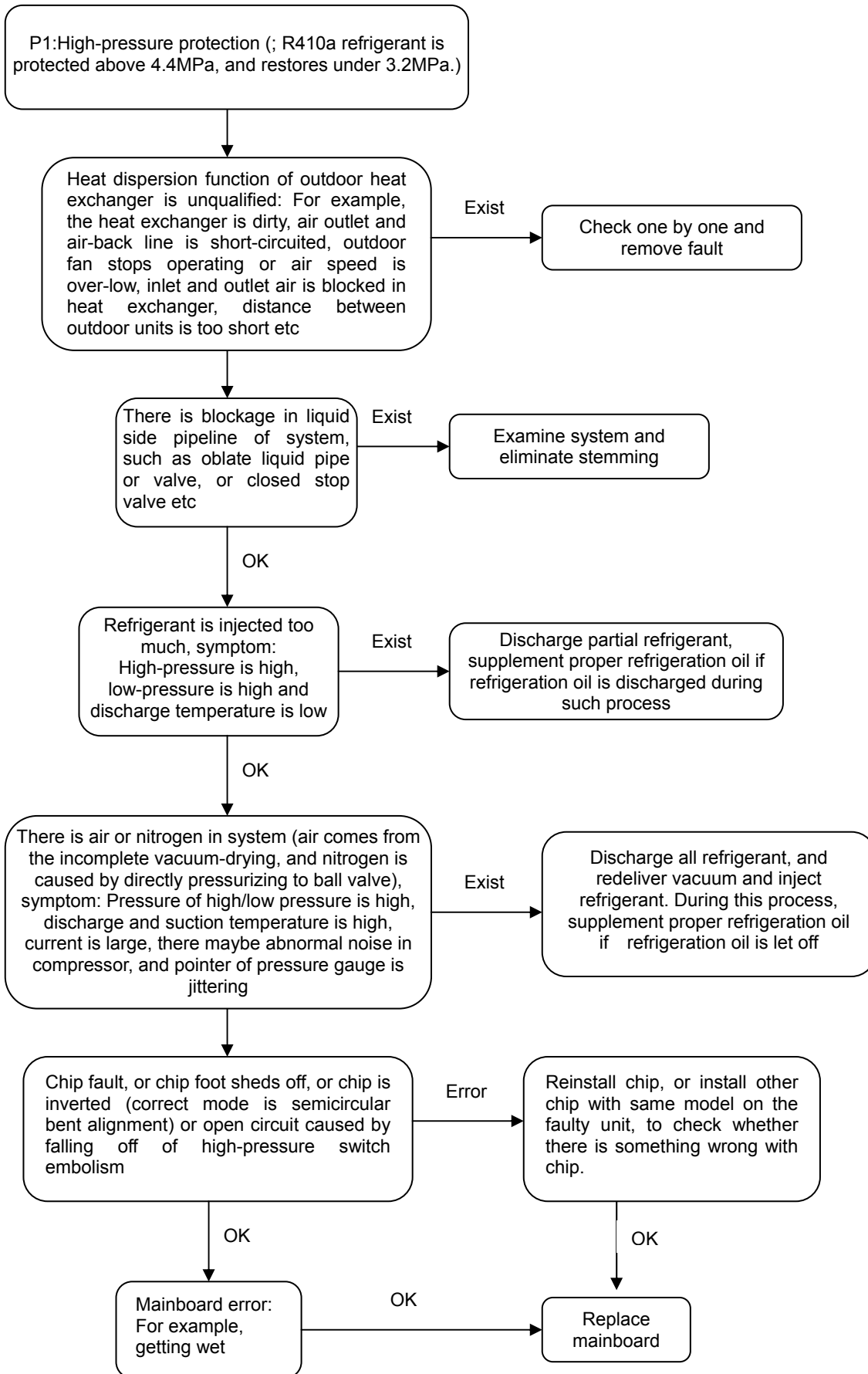
H2: Fault of Reduction in the Number of Outdoor Units



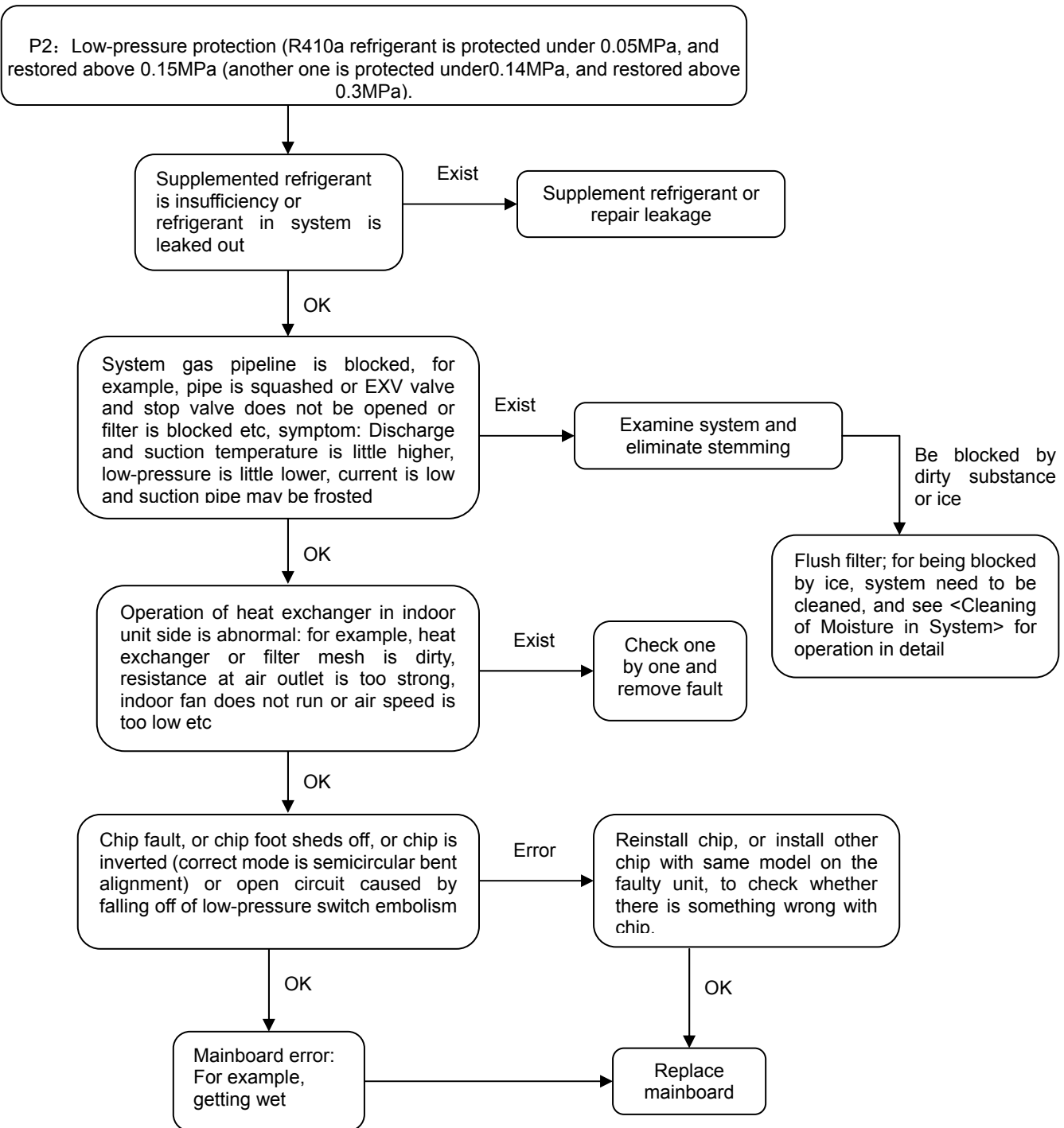
Note: For modules combination, slave unit shall not be started up due to power failure of one slave unit, damage of PCB or no communication between master unit and slave unit. Then under heating mode, the high-pressure gas discharged from gas pipe of master unit goes through gas pipe of slave unit, accumulator of slave unit, gas balance pipe, accumulator of master unit and then comes back to the suction pipe of compressors of master unit (as shown in blue solid line of right figure); That is equal to the high-temperature & high-pressure refrigerant after being discharged by master unit directly comes back to the suction side of compressor, which shall lead to the over-loading operation of compressors of master unit and even being burned out.



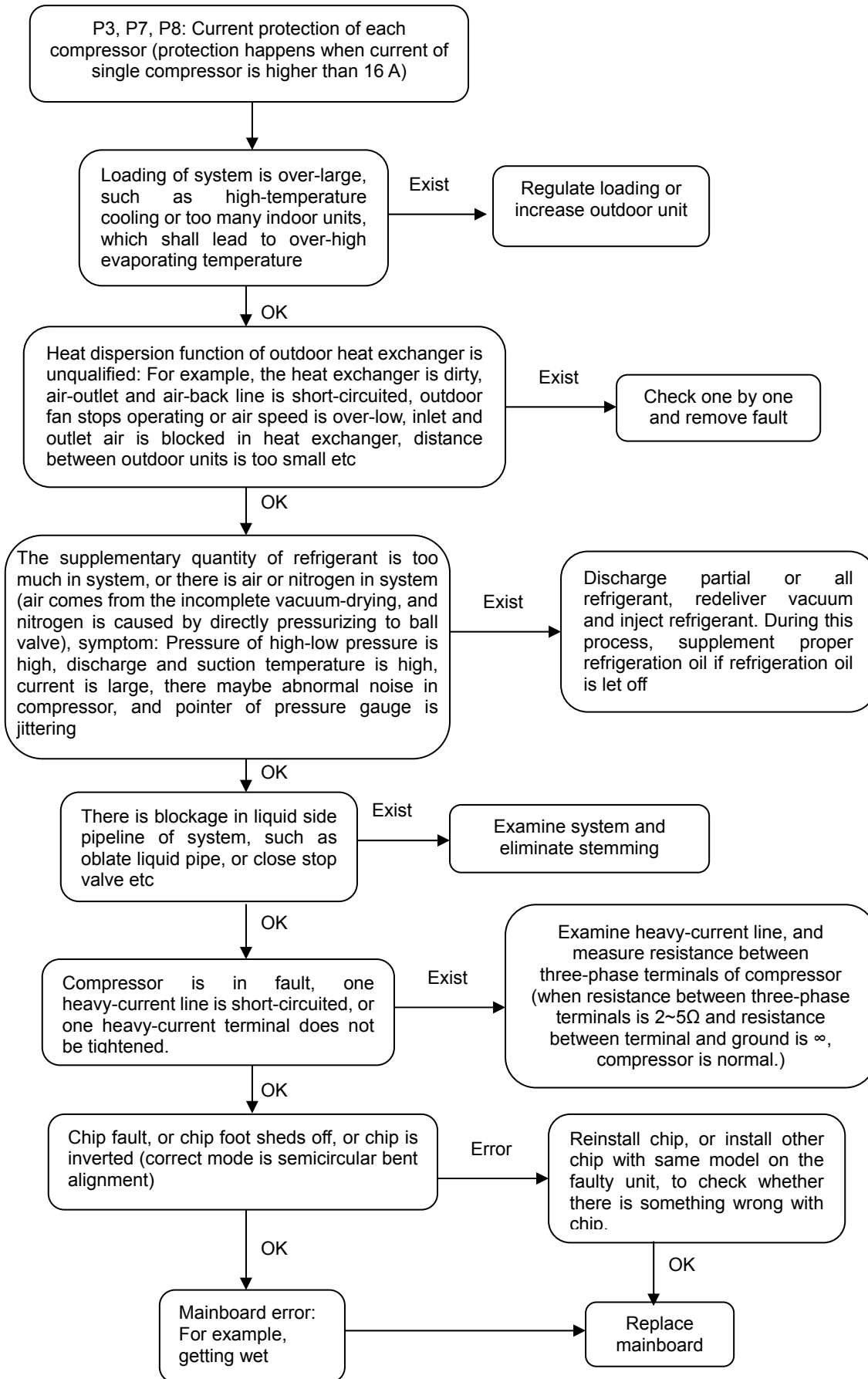
VII. P1: High-pressure Protection



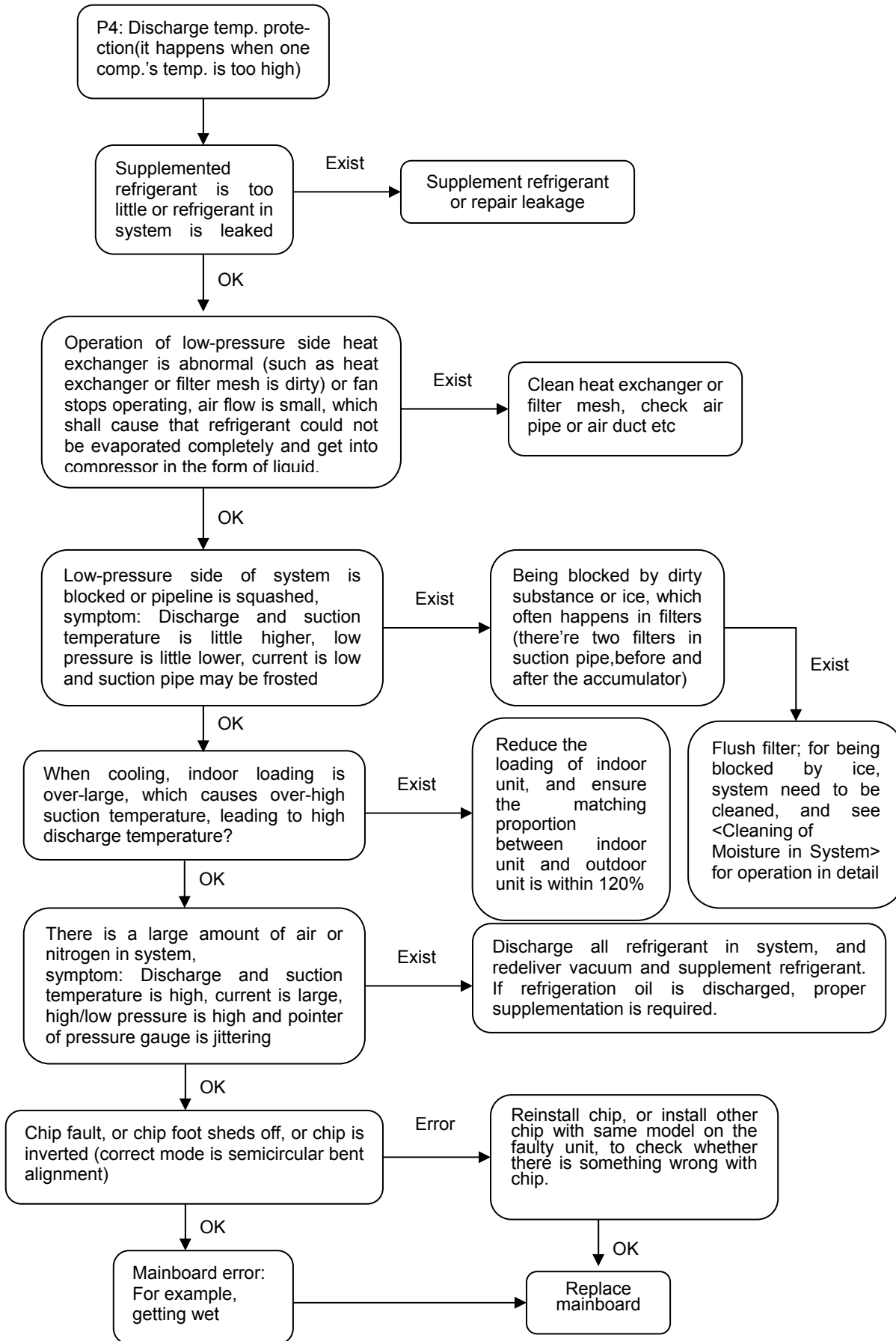
VIII. P2: Low-pressure Protection



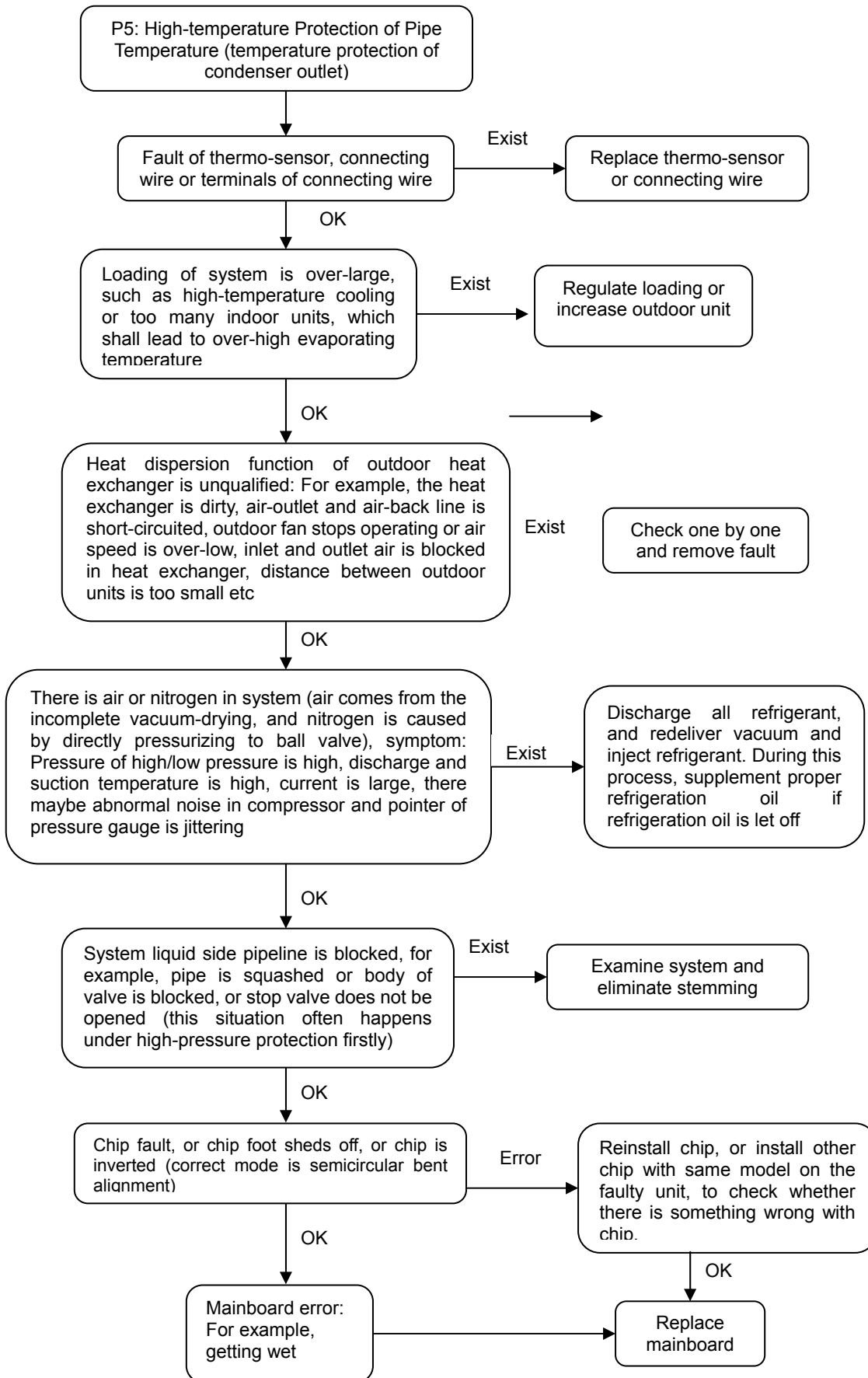
IX. P3, P7, P8: Current Protection of Each Compressor



X. P4: Discharge Temperature Protection



XI. P5: High-temperature Protection of Pipe Temperature



Note:

- ①. H1 (communication error between 9177 and 780034): General solution is to replace PCB plate.
- ②. H3 (Fault of Increase in the Number of Outdoor Units): This fault can resume itself after 3 minutes.
- ③. The Trouble-shooting of E3 (T3: outlet temperature of condenser) is similar with E5.