Service Manual

High Temperature Hydro Module

SMK-D140HHN1-3
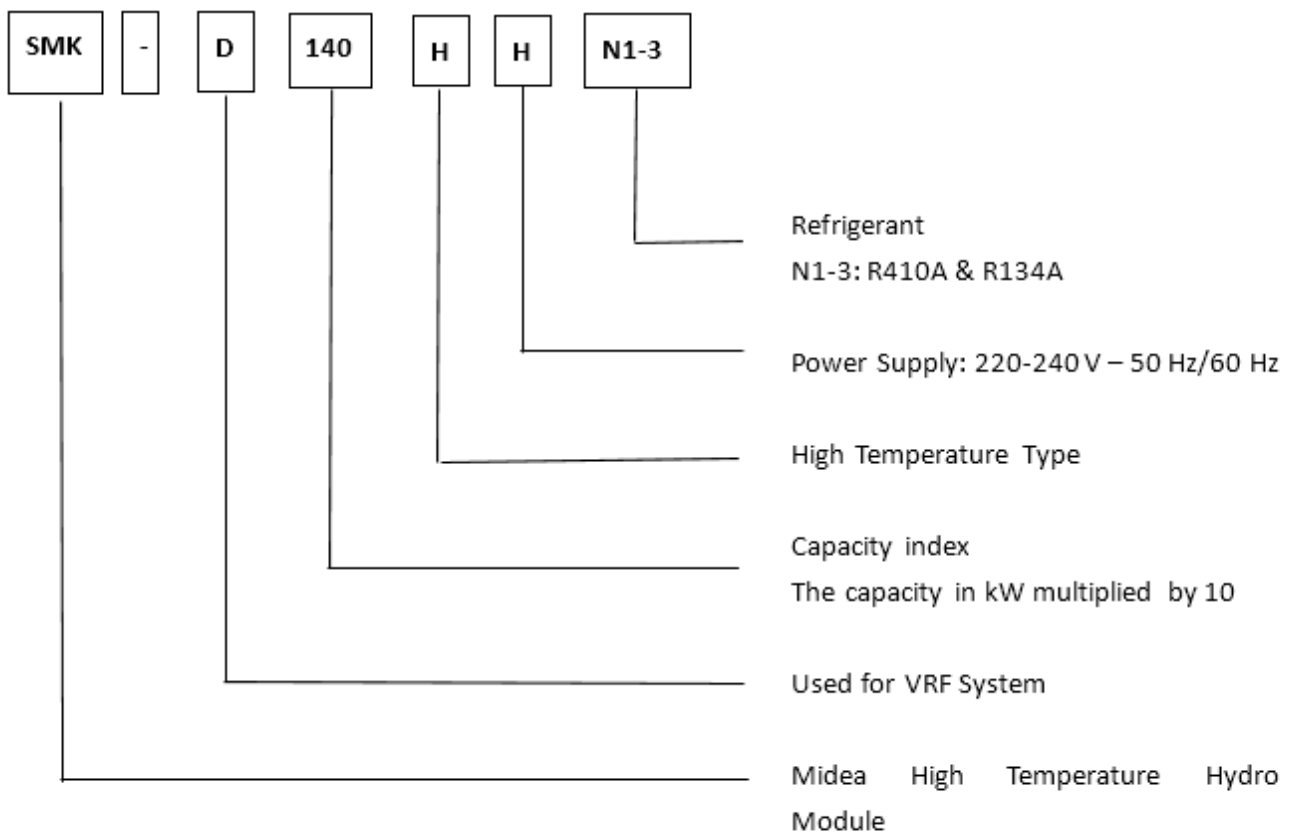
CONTENTS

Service Manual

Midea V6R High Temperature Hydro Module

1 External Appearance

Figure 1.1: Appearance

2 Nomenclature

SMK - D 140 H H N1-3

Refrigerant
N1-3: R410A & R134A

Power Supply: 220-240 V – 50 Hz/60 Hz

High Temperature Type

Capacity index
The capacity in kW multiplied by 10
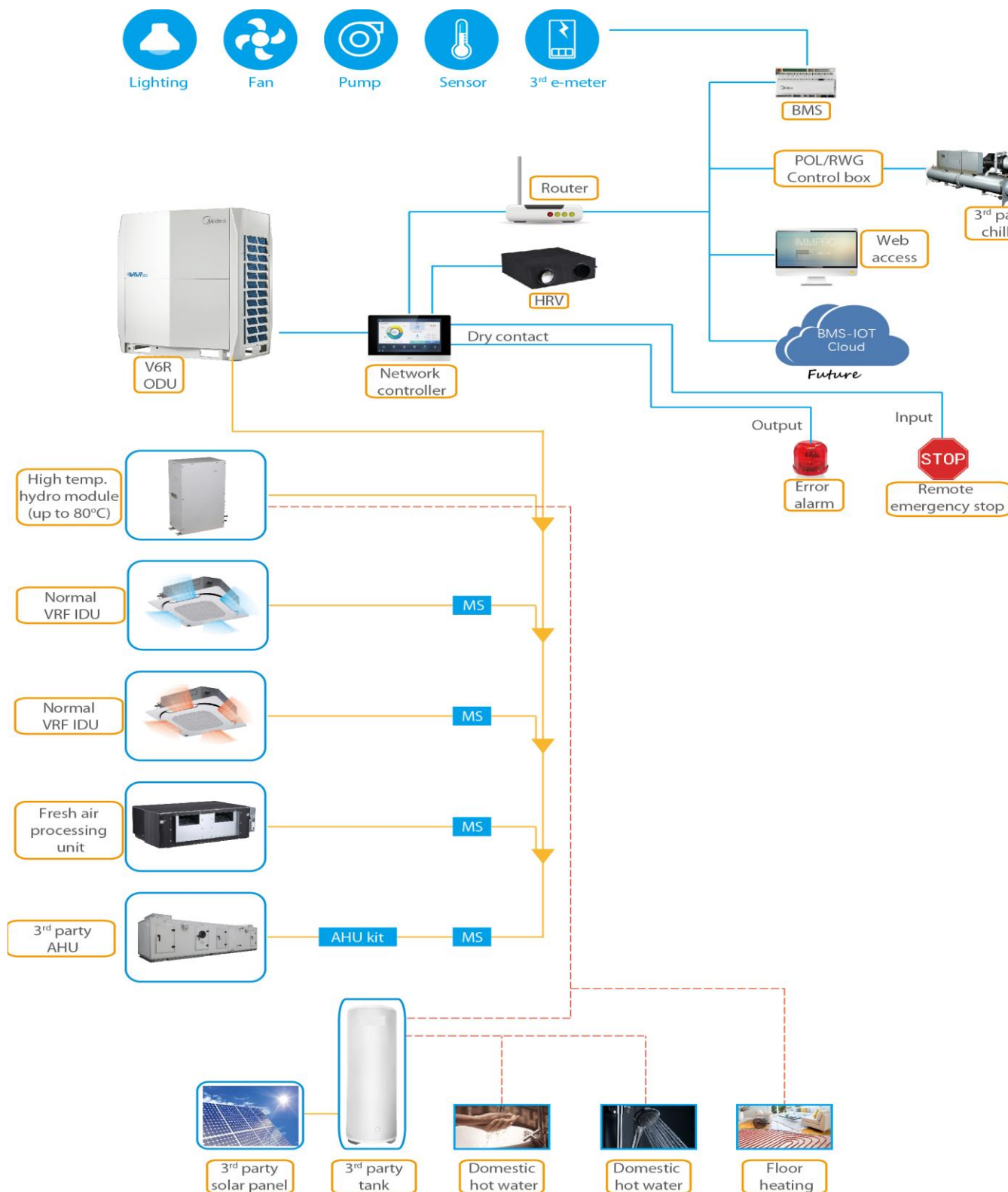
Used for VRF System

Midea High Temperature Hydro Module

3 System Schematic

Figure 3.1: High Temperature Hydro Module connection method

4 Specifications

Specification	Standard	Unit	Value
Heating capacity	Rated Water outlet : 45°C, inlet 40°C Outdoor air : 7°C DB / 6°C WB	kW	14
Casing	Colour		Polar white
Net Dimensions	Height	mm	795
	Width	mm	450
	Depth	mm	300
Packaging Dimensions	Height	mm	940
	Width	mm	748
	Depth	mm	390
Weight	Unit	kg	63
	Packed unit	kg	71
Water Flow Rate	Minimum	m³/h	1.2
	Nominal	m³/h	2.4
	Maximum	m³/h	2.9
Water circuit	Inlet piping connection diameter	mm	25.4
	Outlet piping connection diameter	mm	25.4
	Connection type		External screw thread
Design pressure	Allowed water pressure	MPa	0.1~0.3
	R410a	MPa	4
	R134a	MPa	3.1
R134a refrigerant circuit	Refrigerant type		R-134a
	Refrigerant charged volume	kg	1.2
	Oil type		FV50S
	Oil charged volume	L	0.4
R410a refrigerant circuit	Gas piping connection diameter	mm	12.7
	Liquid piping connection diameter	mm	9.52
	Connection type		Welding
Sound pressure level	Nom.	dB (A)	43
Sound Power Level	Nom.	dB (A)	54
Heating Operation Range	Ambient, Min	°C	-20
	Ambient, Max	°C	30
	Water Side, Min	°C	25
	Water Side, Max	°C	80
Domestic Hot Water Operation Range	Ambient, Min	°C	-20
	Ambient, Max	°C	43
	Water Side, Min	°C	25
	Water Side, Max	°C	80

High Temperature Hydro Module

Specification	Standard	Unit	Value
Refrigerant side heat exchanger	Type		Plate heat exchanger
	Quantity		1
	Plate	Pieces	76
Water side heat exchanger	Type		Plate heat exchanger
	Quantity		1
	Plate	Pieces	38
Unit Location	Ambient, Min-Max	°C	0~40
Installation place			Indoor only
Power supply	Phase		1-ph
	Frequency	Hz	50/60
	Voltage	V	220 ~ 240
	Voltage Range, Min/Max	%	± 10
Current Amperes	Maximum running current (MCA)	A	16
	Recommended Fuse	A	20

Notes:

*Nominal heating conditions

Inlet water temperature: 40 ℃

Water Flow rate: 2.4 m3/h

Outdoor Temperature: 7℃DB/6℃CWB

*The water circuit must use a closed circuit.

*Please do not use it as a drinking water.

* Due to continuous improvement, the above specifications may be subject to change without notice.

* Please don't use the steel material for the water piping material. *

* Please always make water circulate or pull out the circulation water completely when not using it.

*Please do not use groundwater and well water.
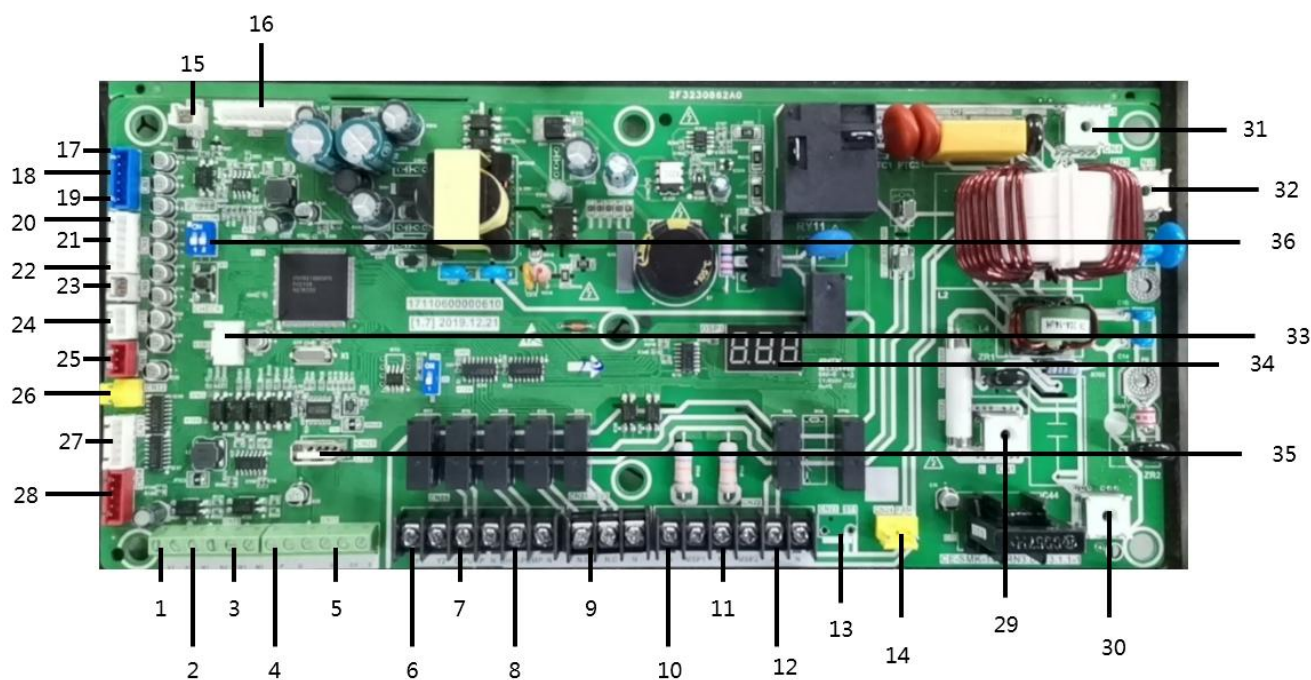
5 Electric Control Box Layout

Electric Control Box

Inverter Module

Main PCB

5.1 Main PCB

NO.	Port code	Port code	Content	Port voltage
1	X1X2	CN15	Port for communication with wired controller	0 or 18VDC
2	N1N2		Port for signal of free electricity	0 or 12VDC
3	M1M2		Port for signal of cheap electricity	0 or 12VDC
4	PQE	CN17	Port for communication with outdoor unit	2.5-2.7VDC
5	D1D2E		Port for communication with KNX gateway or port for communication with slave hydro box (group control)	2.5-2.7VDC
6	Y1Y2	CN20	Reserved	\
7	C-PUMP N		Port for circulating pump	220V AC
8	DHW-PUMP N		Port for DHW pump	220V AC
9	SV3	CN21	Port for three way valve (NC. N for normal close valve, NO. N for normal open valve)	220V AC
10	N MSP1	CN22	Port for multiple set point 1	220V AC
11	N MSP2		Port for multiple set point 2	220V AC
12	AL. N		Reserved	\

NO.	Port code	Port code	Content	Port voltage
13	ST 1	CN23	Reserved	\
14	FAN	CN24	Port for fan	220V AC
15	OD	CN6	Port for communication with PC	2.5-2.7VDC
16	FS	CN5	Port for water flow switch as well as connect between main control board and inverter module board	0 - 12V
17	Twin	CN7	Port for inlet water temperature sensor	0-5V DC(varying)
18	Twout		Port for outlet water temperature sensor	0-5V DC(varying)
19	Ttank		Port for water tank temperature sensor	0-5V DC(varying)
20	T7	CN8	Port for suction pipe temperature sensor	0-5V DC(varying)
21	T2A		Port for R410a circle liquid pipe temperature sensor	0-5V DC(varying)
22	T3		Port for R134a circle liquid pipe temperature sensor	0-5V DC(varying)
23	T7C	CN9	Port for discharge pipe temperature sensor	0-5V DC(varying)
24	H-YL	CN10	Port for high pressure sensor	0-5V DC(varying)
25	L-YL	CN11	Port for low pressure sensor	0-5V DC(varying)
26	H-Pro	CN12	Port for high pressure switch	0 or 5V DC
27	EEV2	CN13	Port for electronic expansion valve 2	0 or 12V DC
28	EEV1	CN14	Port for electronic expansion valve 1	0 or 12V DC
29	L	CN1	Power supply port for main PCB (L)	220V AC
30	N	CN2	Power supply port for main PCB (N)	220V AC
31	L-1	CN4	Power supply port for inverter PCB (L)	220V AC
32	N-1	CN3	Power supply port for inverter PCB (N)	220V AC
33	DEBUG	CN30	Port for IC programming	0-5V DC(varying)
34	DSP1	DSP1	Digital display	\
35	USB	CN25	USB port for IC programming	0-5V DC(varying)
36	SW4	SW4	DIP switch	\

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Inverter Module
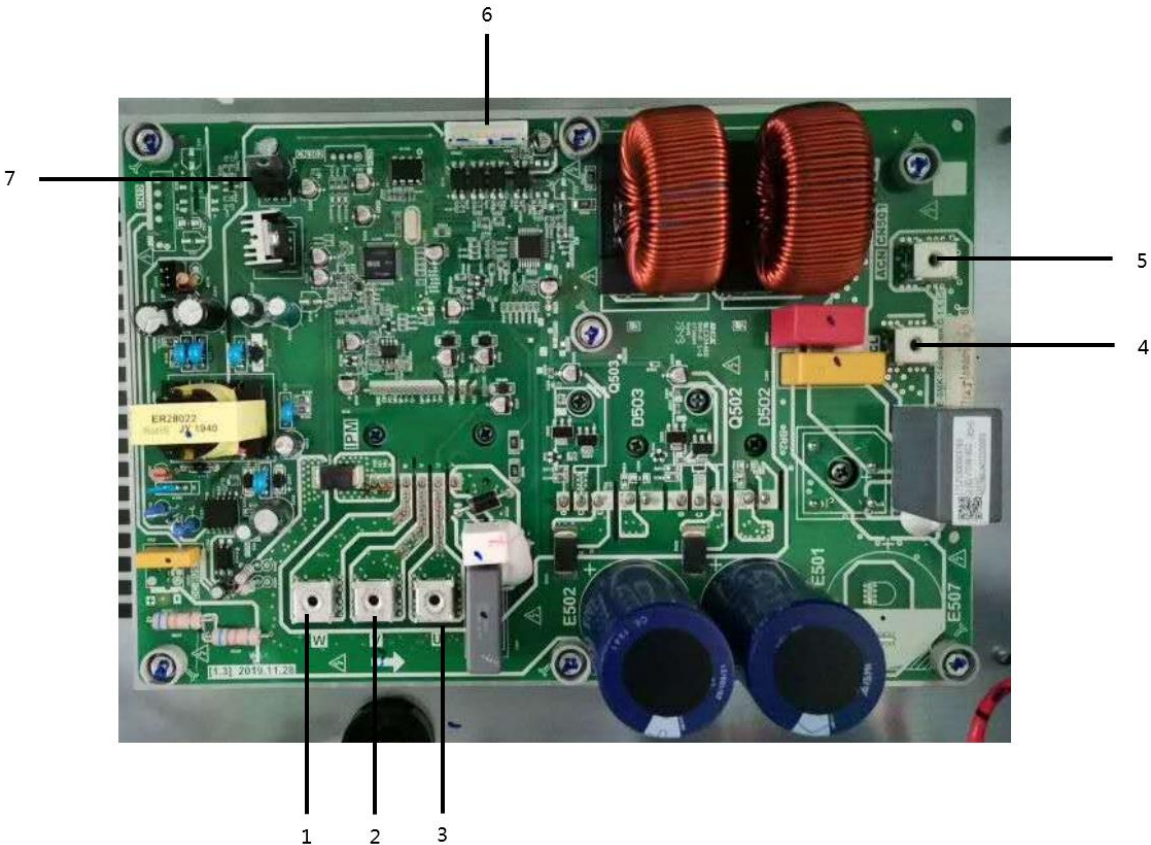
NO.	Port code	Port code	Content	Port voltage
1	/	U	Compressor connection port U	380V AC
2	/	V	Compressor connection port V	380V AC
3	/	W	Compressor connection port W	380V AC
4	ACL	CN502	Power supply port for inverter PCB (L)	310V AC
5	ACN	CN501	Power supply port for inverter PCB (N)	310V AC
6	/	CN32	Communication with main PCB	0-5V DC(varying)
7	/	IC315	7805 Power chip	\

Installation Cables

- CN22 Alarm output 220V
- Energy demand adjustment 1 input
- Energy demand adjustment 2 input
- To three way valve
- To AC contactor controlling water tank pump
- Water pump AC contactor
- High Temperature Hydro module group control interface/connecting to the KNX gateway
- Outdoor unit communication bus
- Cheap electrical signal
- Free electrical signal
- To wired controller

- Power supply

▬▬	Power supply cables
▬▬	High voltage output
▬▬	High voltage input
▬▬	Low voltage input
▬▬	Low voltage communication cable

6 Working Range

Heating Mode
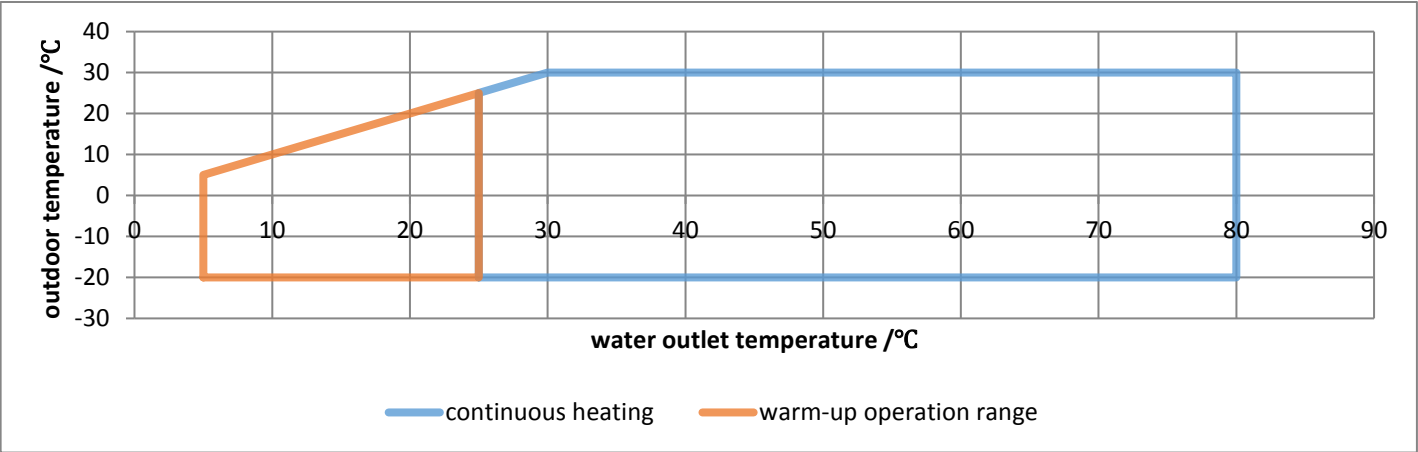
DHW Mode
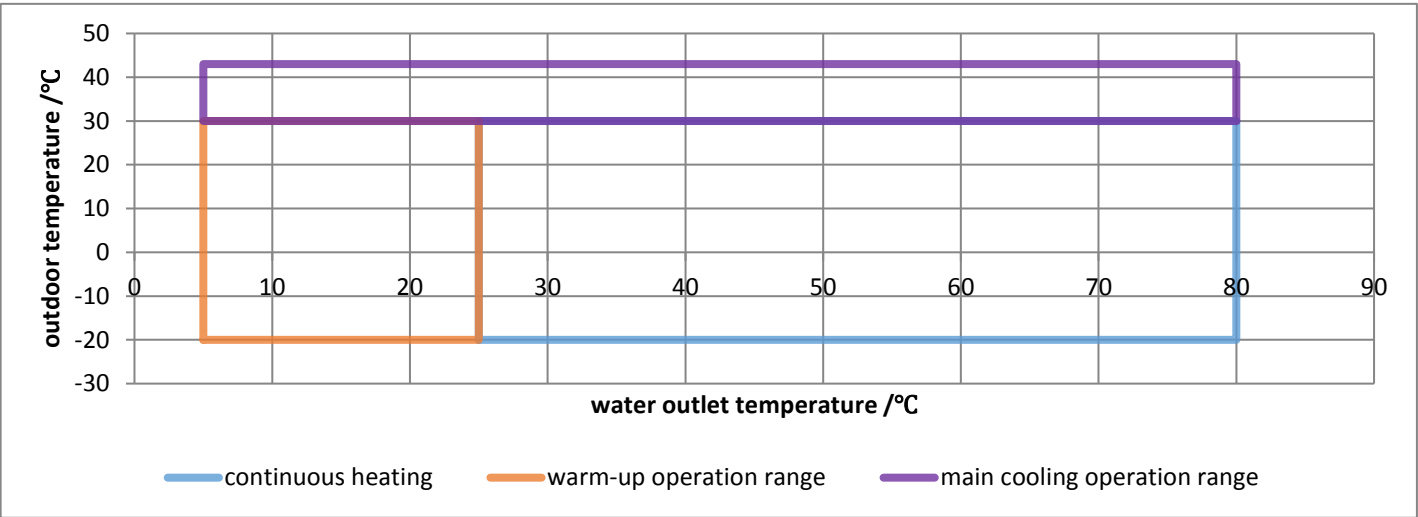
7 Wiring Diagram

SW4 definition

SW4	Group control function:
	00:(Factory Default)
	01:Reserve
	11:Indicating that the Group control function is available and this hydraulic module is the main box
	10:Indication that the Group control function is available and this hydraulic module is the sub box

S1 Query Instruction

Display	Discription
1	Mode
2	Address
3	Compressor frequency
4	Twout
5	Twin
6	Ttank
7	Pc
8	Pe
9	Tc
10	Te
11	Ta
12	T7C
13	T7
14	T3
15	T2A
16	NTC
17	EEV1
18	EEV2
19	ODU_Pc
20	ODU_Pe
21	ODU_Tc
22	ODU_Te
23	ODU_DSH
24	ODU_T4
25	ODU_INV
26	Primary current
27	Secondary current
28	Secondary voltage
29	Software version
30	The sixth to last fault
31	The fifth to last fault
32	The fourth to last fault
33	The third to last fault
34	Penulimate fault
35	Last to last fault
36	ODU set address times
37	Number of times the address is set by the remote controller
38	Last set address source

Factory code	Date	Revision
1601060000888	22th.Jan.2020	A

Error code

Error code	Meaning
FE	Undefined address error
EE	EEPROM error
C7	PL protection appears three times in 100 minutes
E9	EEPROM mismatch
H4	Inverter module protection
H5	P2 protection appears three times in 60 minutes
H6	P4 protection appears three times in 100 minutes
1F6	Electronic expansion valve 1 connection error
2F6	Electronic expansion valve 2 connection error
E1	Communication error between hydro box and wired controller
E8	Water flow failure(FS)
F3	Water outlet temperature sensor error(Twout)
F9	Water inlet temperature sensor error (Twin)
F5	Tank temperature sensor error(Ttank)
E7	Discharge pipe temperature sensor error(T7C)
FA	Suction pipe temperature sensor error (T7)
F7	IDU same address error
FC	R410a loop liquid pipe temperature sensor error(T2A)
Fd	R134a loop liquid pipe temperature sensor error(T3)
H8	Room temperature sensor error
F8	High pressure sensor error(H-YL)
Hb	Low pressure sensor error(L-YL)
E2	Communication error between hydro box and outdoor unit
H0	Communication error between main control chip and inverter driver chip
E0	Communication error between master hydro module and slave hydro module
Ed	Outdoor unit error
E5	Abnormal power supply
PP	Compressor discharge insufficient superheat protection
P1	Discharge pipe high pressure protection
P2	Suction pipe low pressure protection
P3	Compressor current protection
P4	Discharge temperature protection
PL	Inverter module temperature protection
F1	DC bus voltage error

WARNING

ELECTRIC HAZARD 380 VOLTS DC

WAIT 3 MINUTES AFTER DISCONNECTING POWER,THEN VERIFY DC VOLTAGE LESS THAN 42 VDC AT INVERTER TEST POINTS DC-BUS.COMPONENTS MAY STORE A DANGEROUS ELECTRICAL POTENTIAL OF 380 VOLTS DC. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN PERSONAL INJURY OR DEATH
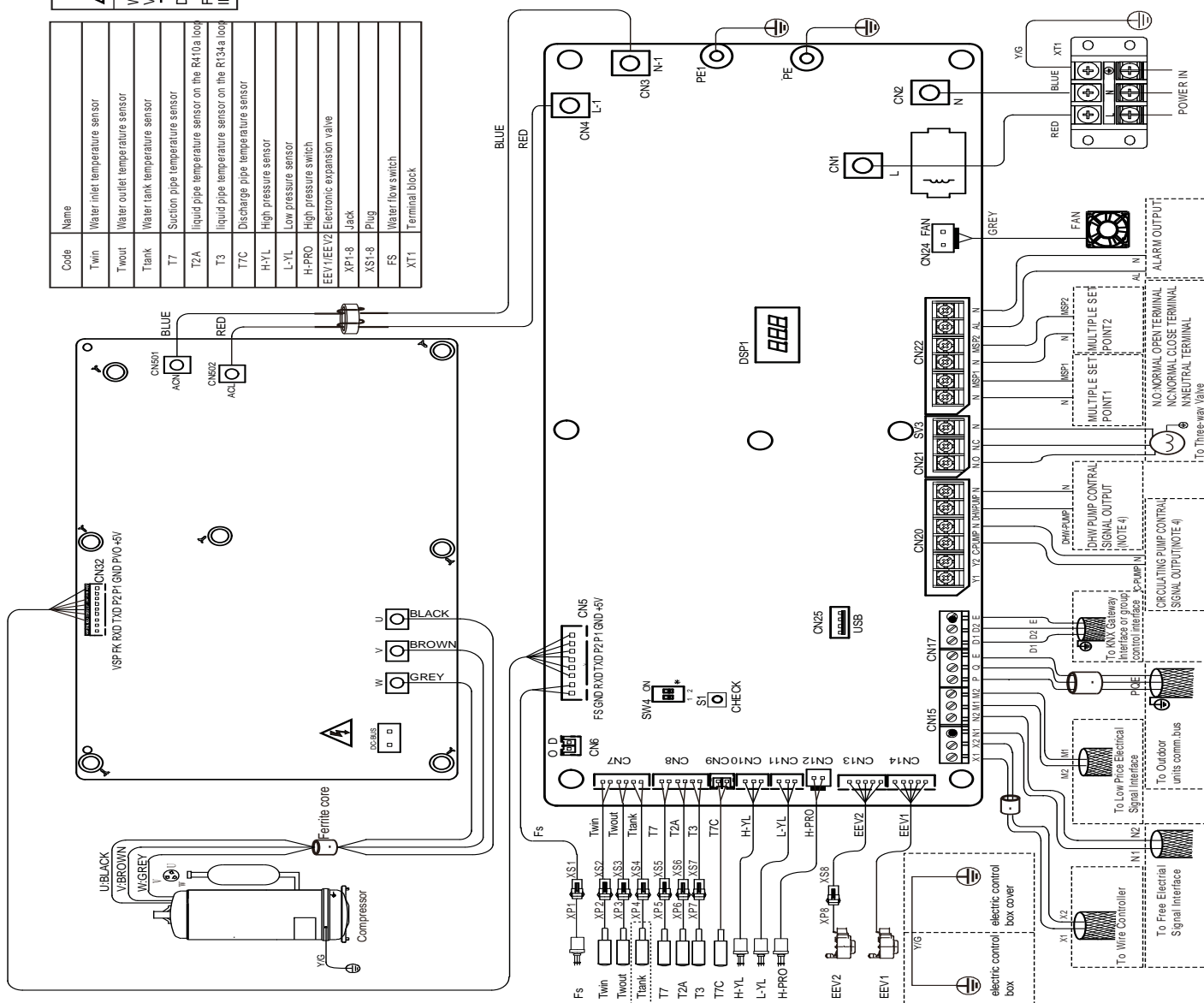
Code	Name
Twin	Water inlet temperature sensor
Twout	Water outlet temperature sensor
Ttank	Water tank temperature sensor
T7	Suction pipe temperature sensor
T2A	liquid pipe temperature sensor on the R410a loop
T3	liquid pipe temperature sensor on the R134a loop
T7C	Discharge pipe temperature sensor
H-YL	High pressure sensor
L-YL	Low pressure sensor
H-PRO	High pressure switch
EEV1/EEV2	Electronic expansion valve
XP1-8	Jack
XS1-8	Plug
FS	Water flow switch
XT1	Terminal block

NOTE:

1.Refer to manual for communication wiring
2.Please use the 3-core shielded wire for communication
3.Ground connection in PQE is different from D1D2E
4.The water pump and tank pump are connected to an external contactor for control
5.For more details,please read installation menu

8 Refrigerant Flow Diagrams

ONLY HEATING

Indoor heating + Hydro box

Or only Hydro box

Midea V6R High Temperature Hydro Module

———	high pressure gas
———	low pressure gas
———	liquid
———	cold water
———	hot water
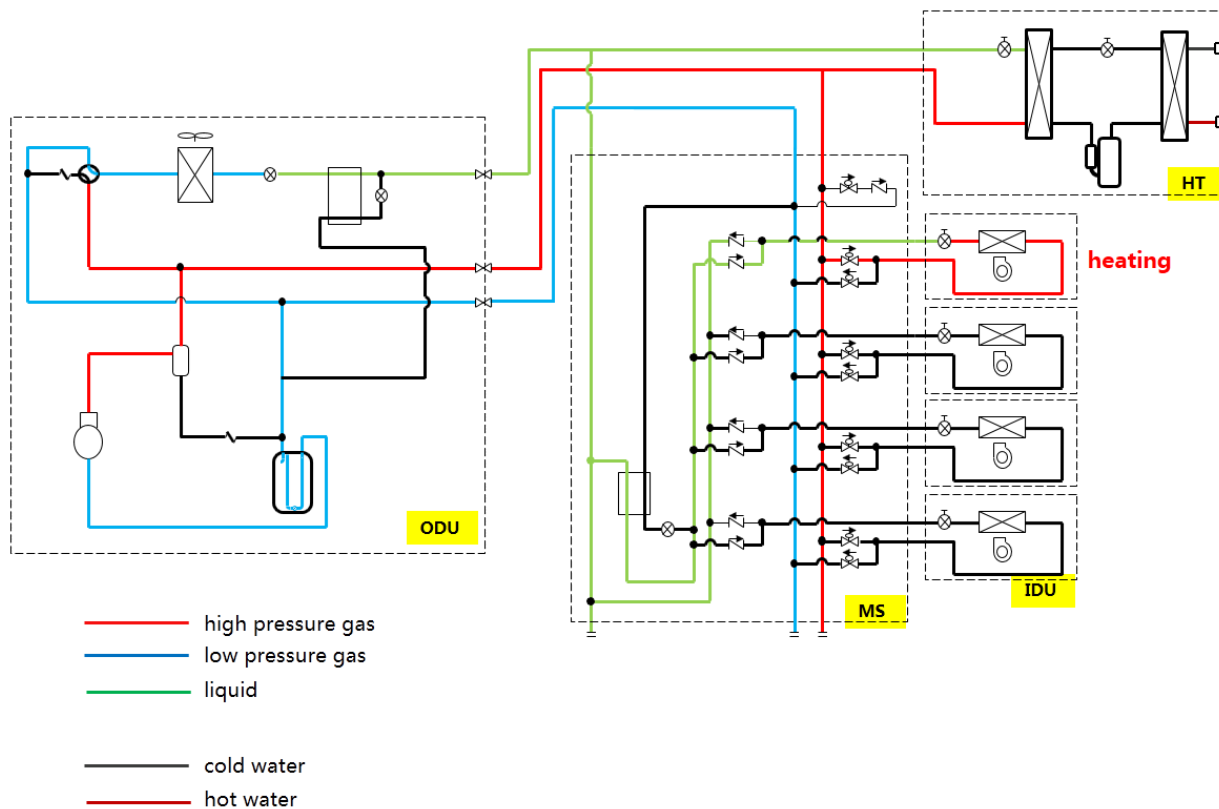
MAIN HEATING (Outdoor heat exchanger works as evaporator）

Indoor units in cooling mode +Hydro box

Indoor units in cooling/heating + Hydro box

	high pressure gas
	low pressure gas
	liquid
	cold water
	hot water
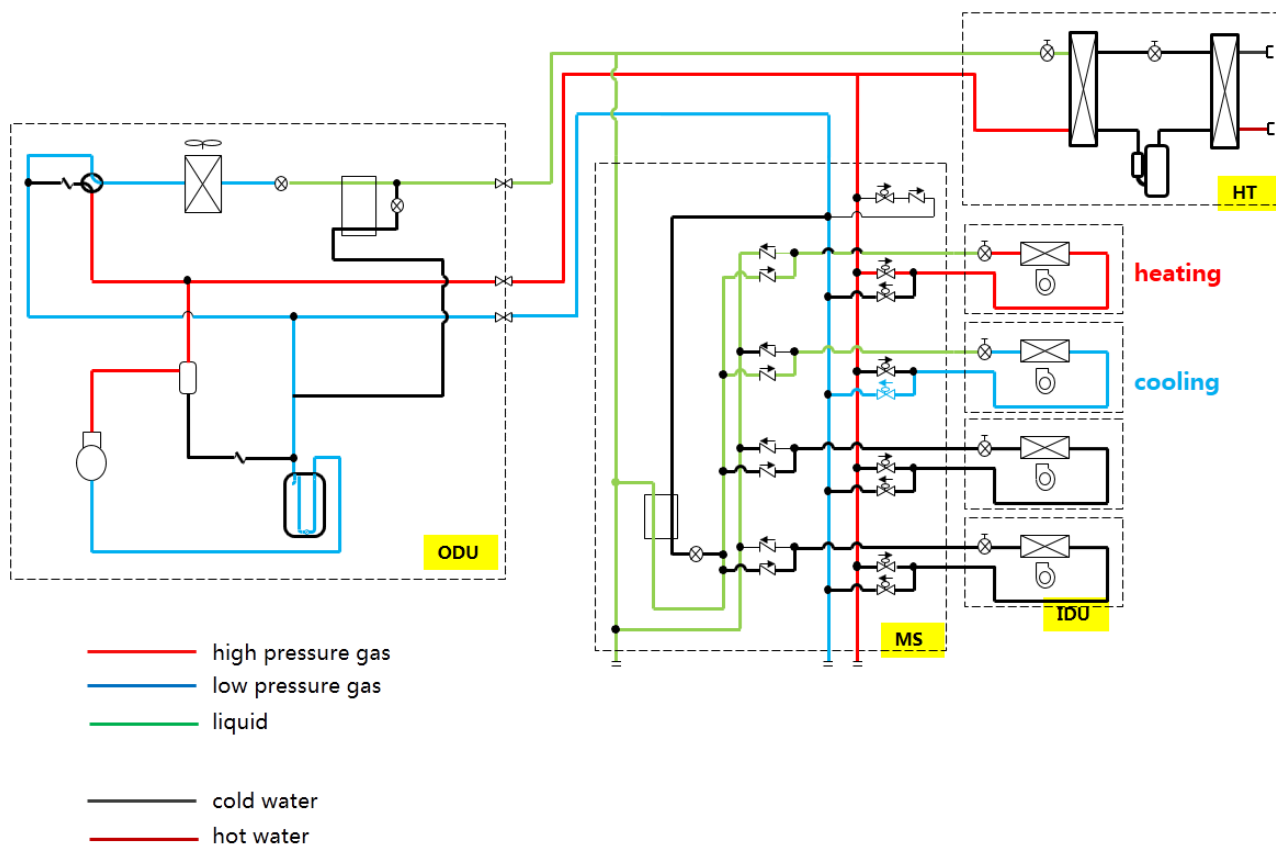
MAIN COOLING (Outdoor heat exchanger works as evaporator）

Indoor units in cooling mode +Hydro box

Indoor units in cooling/heating + Hydro box

Midea V6R High Temperature Hydro Module

——	high pressure gas
——	low pressure gas
——	liquid
——	cold water
——	hot water
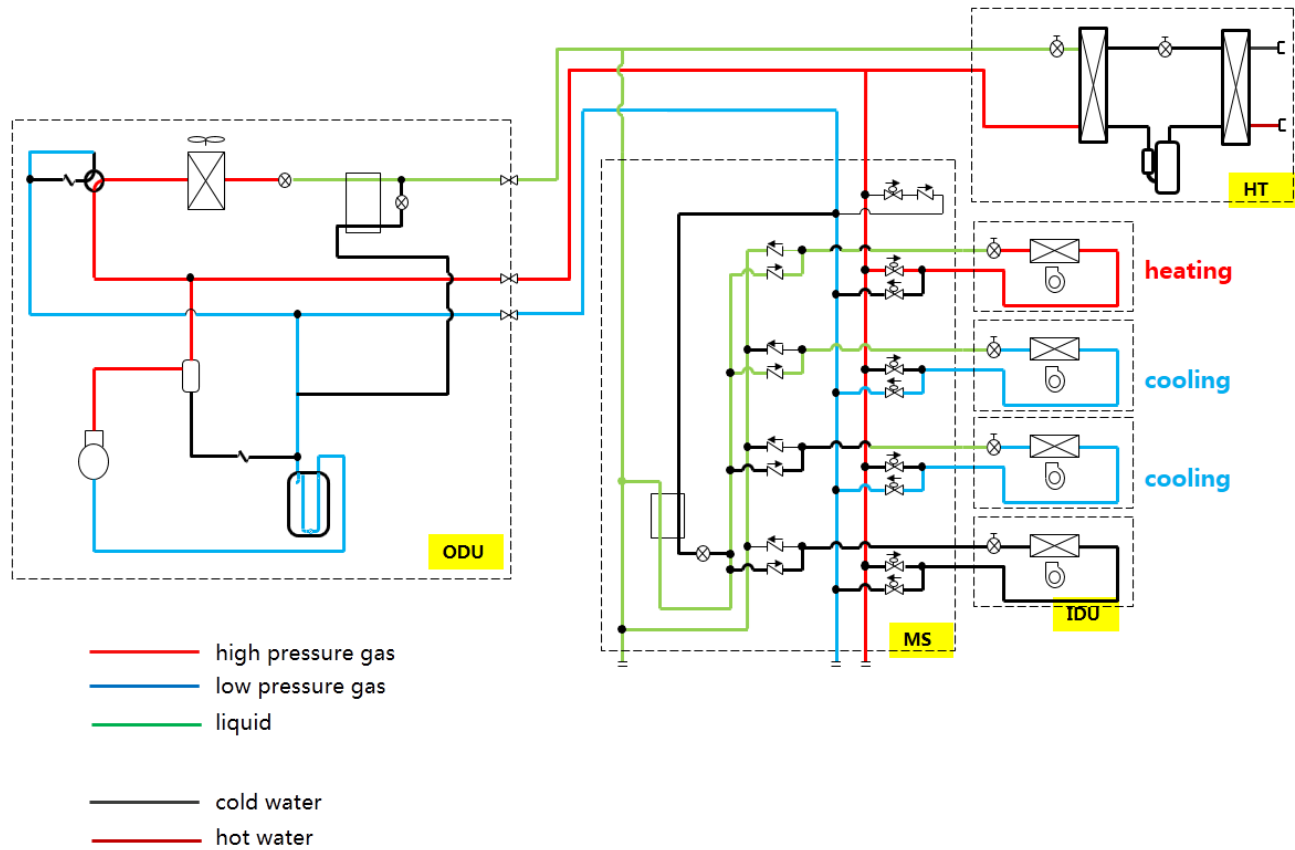
HEAT RECOVERY (Free to provide hot water)

All indoor units in cooling mode + Hydro box

running

HT

cooling

cooling

cooling

ODU

MS

IDU

	high pressure gas
	low pressure gas
	liquid
	cold water
	hot water
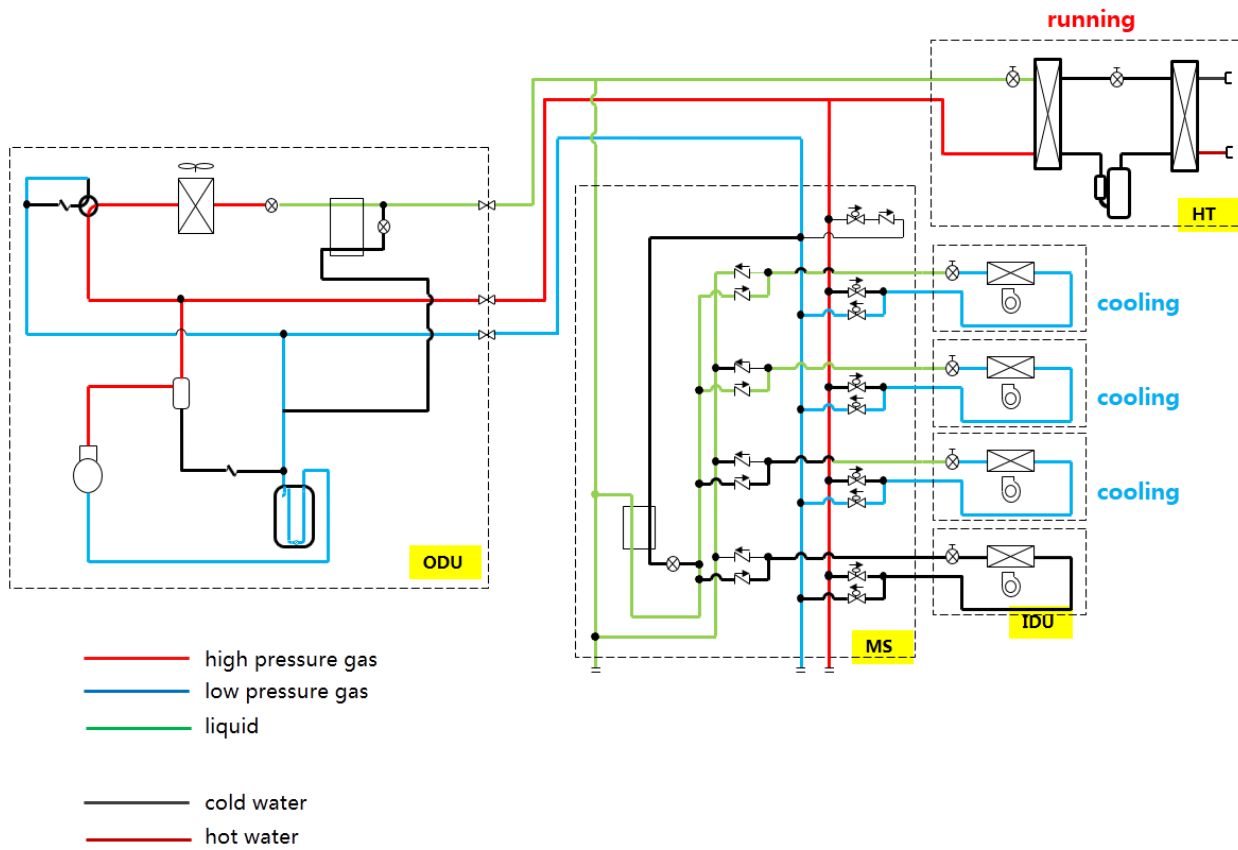
9 High Temperature Hydro Module Control Logic

9.1 Start/Stop/ Mode Change

Midea V6R High Temperature Hydro Module
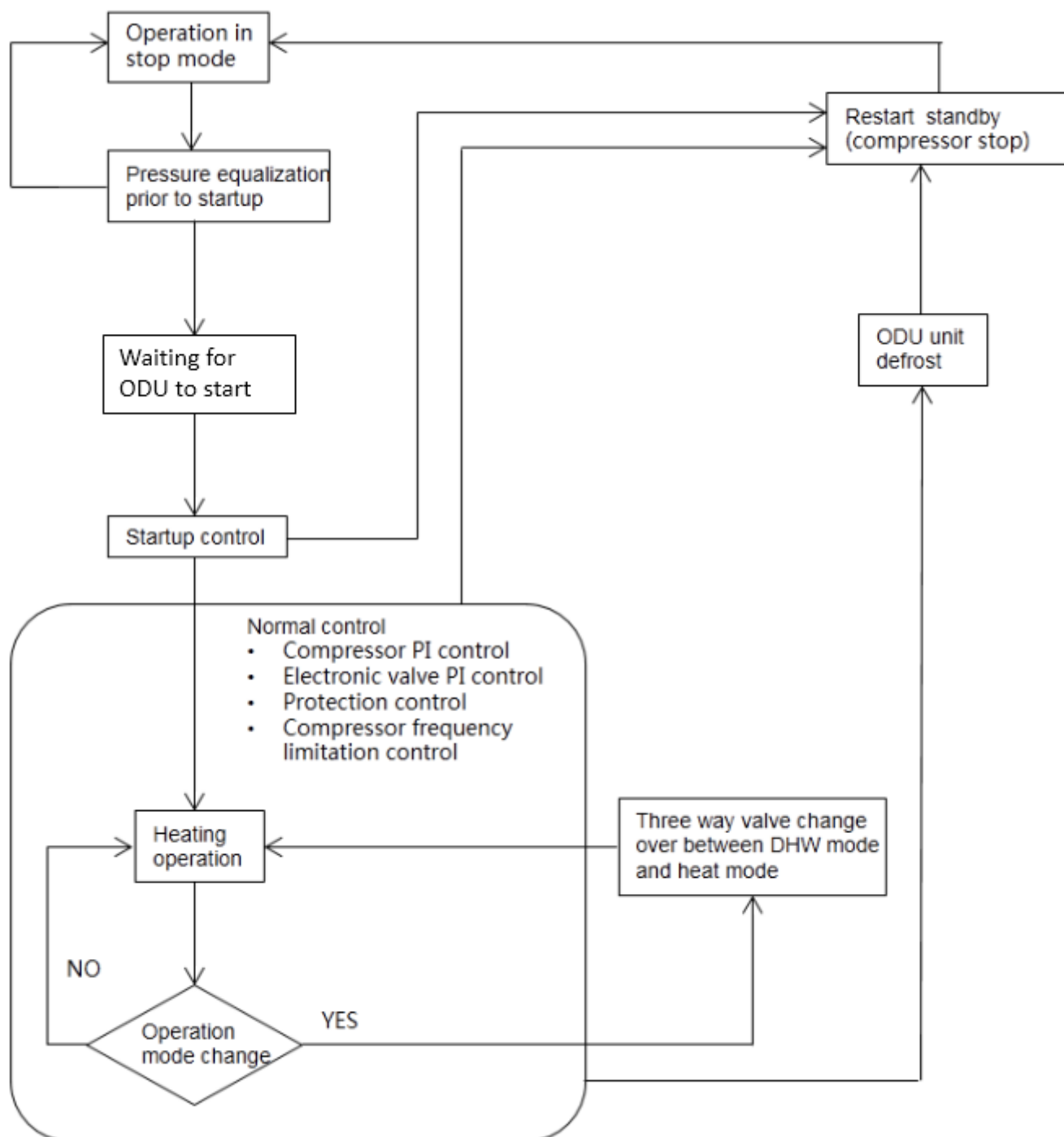
9.2 High Temperature Hydro Module Control Principle

9.2.1 Compressor Control

The compressor frequency is calculated according to the deviation between Tc and Tcs.

Tc: Measured high pressure saturation temperature

Tcs: Target high pressure saturation temperature

9.2.2 EEV1 Control

EEV1 opening degree is calculated according to the deviation of DSH= T7C-Tc from the DSHS

DSH=T7C-Tc: measured discharge superheat

DSHS: Target discharge superheat

9.2.3　EEV 2 Control

EEV2 open degree is calculated according to the deviation of SC= ODU Tc-T2a from SCS.

SC: Measured supercooling from the outlet coper pipe of plate heat exchanger

SCS: Target supercooling from the outlet coper pipe of plate heat exchanger

9.2.4   Frequency Limit and Protection Control

High Pressure limits the frequency

Pc: high pressure sensor detection value

```
                        ┌─────────────────────────┐
                        │ High pressure not limited │
                        └─────────────────────────┘
                           │                 ↑
                    Pc≥2.75MPa         or  ┌ Pc<2.65MPa
                           │                └ Compressor stop
                           ↓
High pressure limited  ┌─────────────────────────┐
                       │ INV upper limit frequency : │
                       │ current compressor          │
                       │ frequency can not increase   │
                       └─────────────────────────┘
                           │                 ↑
                    Pc≥2.85MPa         Pc∈[2.65,2.85) MPa
                           │
                           ↓
High pressure down     ┌─────────────────────────┐
                       │ INV upper limit frequency : 4 │
                       │ Hz down from current          │◄─┐
                       │ compressor frequency          │  │
                       └─────────────────────────┘  │
                           │                            │
                         10 sec                    Pc≥2.85MPa
                           ↓                            │
                       ┌─────────────────────┐          │
                       │ Keep the current      │──────────┘
                       │ frequency             │
                       └─────────────────────┘
                           │
                    Pc≥3.05MPa
                           ↓
                       ┌─────────────────┐
                       │ High pressure     │
                       │ standby           │
                       │ Error code"P1"    │
                       └─────────────────┘
```
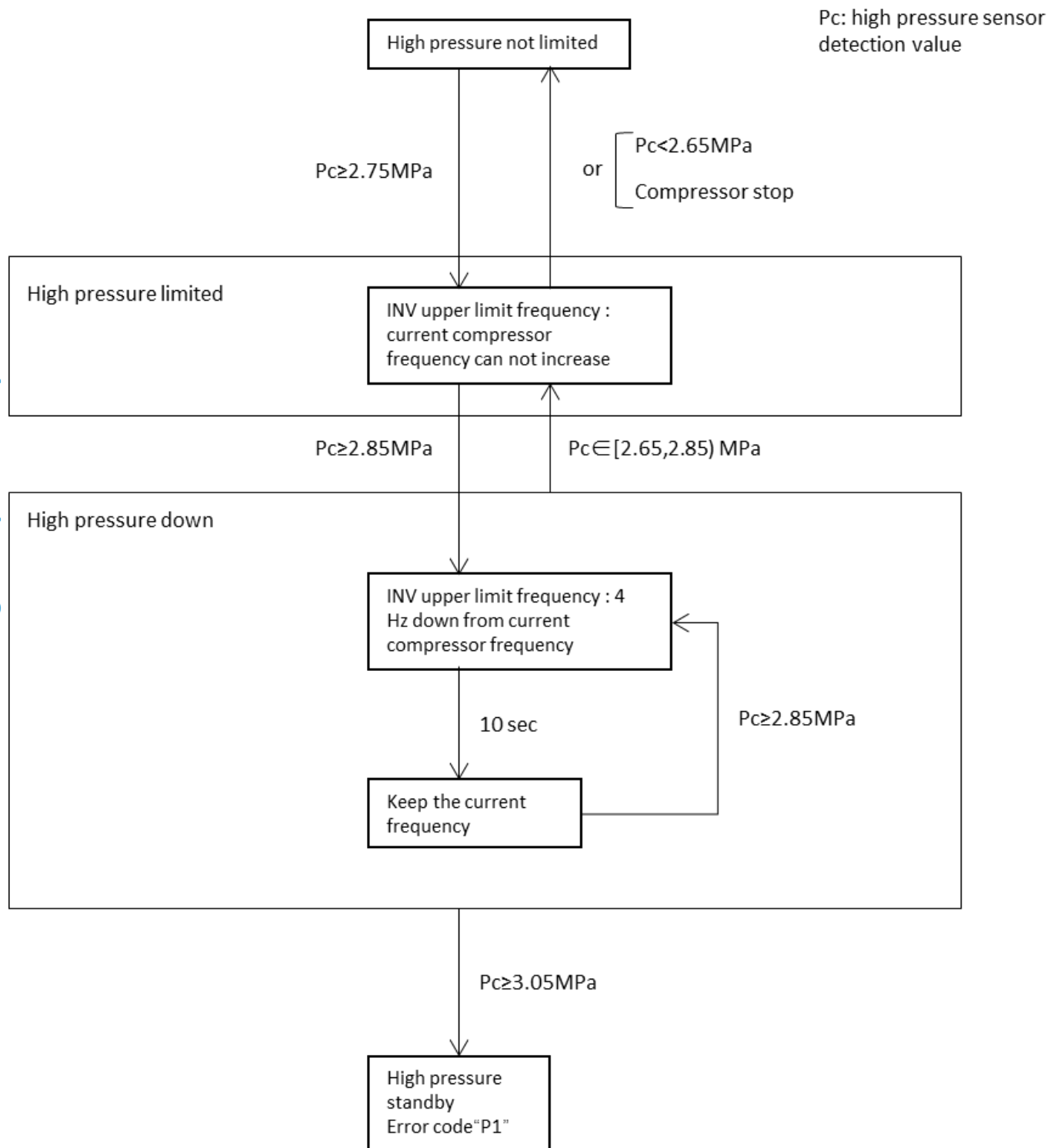
Pe: low pressure sensor
detection value

```
                    ┌─────────────────────┐
                    │ Low pressure not    │
                    │ limited             │
                    └─────────────────────┘
```

Pe≤0.18MPa   or   ⌈ Pe>0.2MPa
                            ⌊ Compressor stop

low pressure limited

```
                    ┌─────────────────────┐
                    │ INV upper limit     │
                    │ frequency :         │
                    │ current compressor  │
                    │ frequency can not   │
                    │ increase            │
                    └─────────────────────┘
```

Pe≤0.15MPa   Pe∈(0.15,0.2]MPa

low pressure down

```
                    ┌─────────────────────┐
                    │ INV upper limit     │
                    │ frequency : 4       │
                    │ Hz down from current│
                    │ compressor frequency│
                    └─────────────────────┘
```

10 sec   Pe≤0.15MPa

```
                    ┌─────────────────────┐
                    │ Keep the current    │
                    │ frequency           │
                    └─────────────────────┘
```

Pe<0.1 Mpa for 5 seconds

```
        ┌─────────────────────┐
        │ Low pressure        │          When occurring 3 times within
        │ standby             │  ──────> 60 min., the malfunction code
        │ Error code"P2"      │          "H5" is output.
        └─────────────────────┘
```

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discharge pipe temperature not limited

T7C: Value of INV compressor discharge pipe temperature

T7C≥90℃

or $\begin{cases} \text{T7C<85℃} \\ \text{Compressor stop} \end{cases}$

discharge pipe temperature limited

INV upper limit frequency : current compressor frequency can not increase

T7C≥100℃

Pe∈[85,100)℃

discharge pipe temperature down

INV upper limit frequency : 4 Hz down from current compressor frequency

20 sec

T7C≥100℃

Keep the current frequency

T7C≥110℃

discharge pipe temperature standby Error code"P4"

When occurring 3 times within 100 min., the malfunction code "H6" is output.

Compressor current limits the frequency protection

Invert current not limited

Invert current ≥ 7.4 A

or ⌈ Invert current < 6.7 A
⌊ Compressor stop

Invert current limited

INV upper limit frequency :
current compressor
frequency can not increase

Invert current ≥ 8.1 A

Invert current ∈ [6.7,8.1) A

Invert current down

INV upper limit frequency : 4
Hz down from current
compressor frequency

10 sec

Invert current ≥ 8.1 A

Keep the current
frequency

Invert current ≥ 9.5 A

Invert current
standby
Error code "P3"
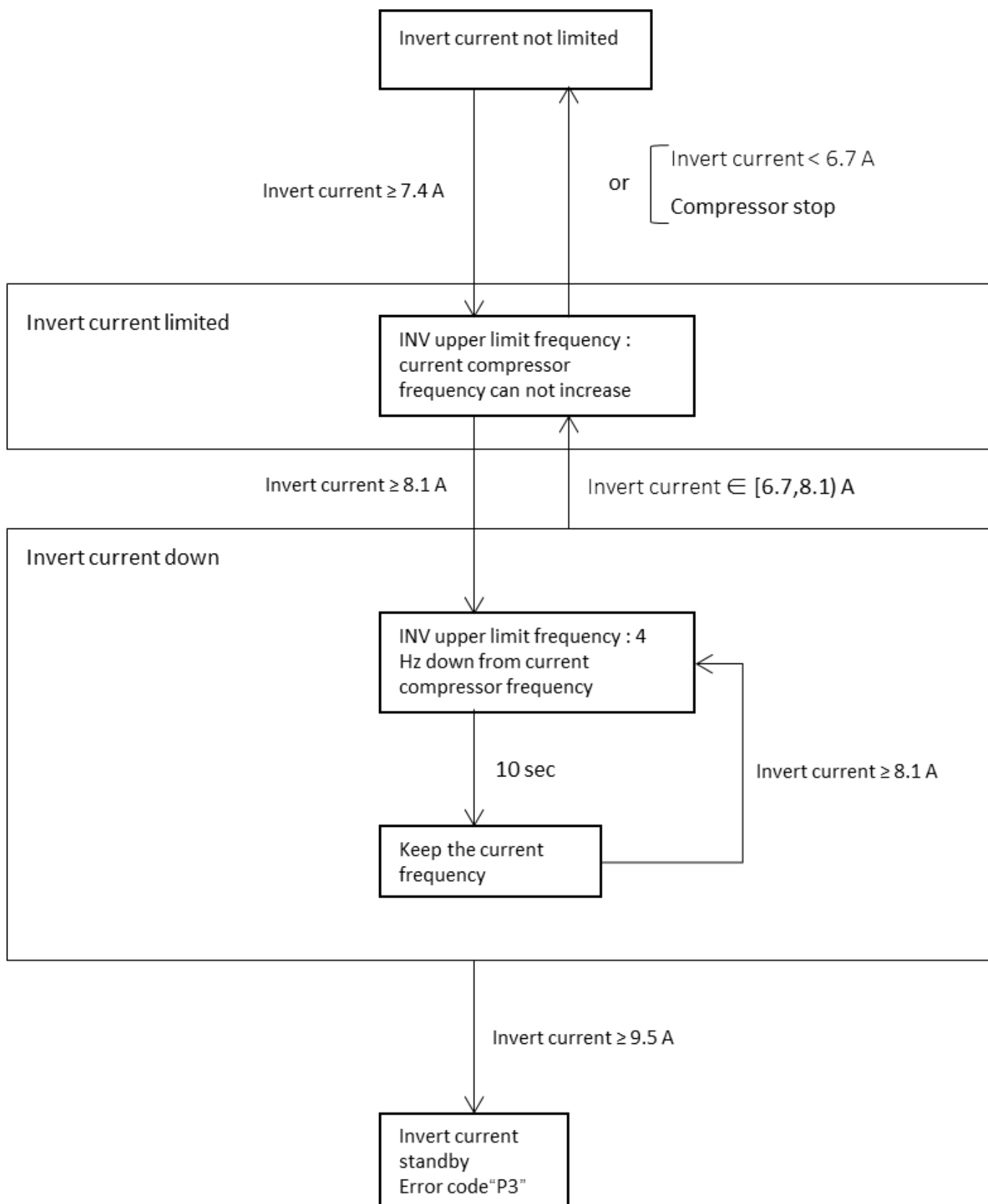
Inverter module temperature limits the frequency protection

NTC temperature not limited

NTC ≥ 75℃ for 3 sec.

NTC < 72℃ for 3 sec.

or

Compressor stop

NTC temperature limited

INV upper limit frequency : current compressor frequency can not increase

NTC ≥ 77℃ for 3 sec.

Invert current ∈ [72,77) ℃

NTC temperature down

INV upper limit frequency : 4 Hz down from current compressor frequency

10 sec

NTC ≥ 77℃ for 3 sec.

Keep the current frequency

NTC ≥ 80℃ for 3 sec.

NTC temperature standby
Error code"PL"

When occurring 3 times within 60 min., the malfunction code "C7" is output.

Midea V6R High Temperature Hydro Module

10 Appearance of the Wired Controller

Enter the menu structure from the home page

Enable or disable the heat mode, or enable or disable DHW mode in the menu

Navigate the cursor on the display/navigate in the menu structure/adjust the settings

Return to the previous level

Press and hold to unlock/lock the controller

Go to the next step when programming a schedule in the menu / confirm a selection/enter a submenu in the menu

Service Manual

11 Status Icons

Holiday mode has been enabled

Silent mode has been enabled

Free electrical signal

Cheap electrical signal

The heat recovery function has been enabled

The compressor has been started

MAIN | Water outlet temperature control

ROOM | Room temperature control

Preset temp. is unchanged

Preset temp. decreases

Preset temp. increases

The disinfection mode has been enabled

The ODU is being defrosted

The anti-freezing protection function has been enabled

The hydraulic module is in a centralized control state

The weekly timer has been enabled

The timer has been enabled

Fault and protection

Locking button of the wired controller

04:27   27-05-2019   sun

MAIN ☀ ON   DHW 🚿 ON

SET **45** °C   TANK 45 °C

▶ 04:27

12 Using Home Pages

The hydro module features the heating function and water heating function, which can be classified into the hydro module that supports heat mode only (''FOR SERVICEMAN'' > ''Heat mode setting'' > ''HEAT MODE=YES'' and ''FOR SERVICEMAN'' > ''DHW mode setting'' > ''DHW MODE=NON''), the hydro module that supports DHW mode only (FOR SERVICEMAN'' > ''Heat mode setting'' > ''HEAT MODE=NON'' and ''FOR SERVICEMAN'' > ''DHW mode setting'' > ''DHW MODE=YES''), and the hydro module that supports both heat mode and DHW mode (''FOR SERVICEMAN'' > ''Heat mode setting'' > ''HEAT MODE=YES'' and ''FOR SERVICEMAN'' > ''DHW mode setting'' > ''DHW MODE=YES''). The heat mode is classified into water outlet temperature control (''FOR SERVICEMAN'' > ''Heat mode setting'' > ''LEAVING WATER TEMP.=YES'') and room temperature control (''FOR SERVICEMAN'' > ''Heat mode setting'' > ''ROOM TEMP.=YES''). The water outlet temperature control and room temperature control is either-or. In water outlet temperature control mode, the hydro module sets the desired water outlet temperature and operates according to the defined desired temperature. In room temperature control mode, the hydro module sets the desired room temperature and conducts control according to the room temperature collected by the wired controller.

The wired controller interfaces are subject to on-site settings. Definitions of symbols of the wired controller:

ROOM---Room temperature control

MAIN---Water outlet temperature control

DHW--- Water heating mode

12.1 Scenario 1

Only heating mode is available and the hydro module is operating in water outlet temperature control mode. (For more information, please read the *Engineering Data Book*.)

04:27   27-05-2019   sun
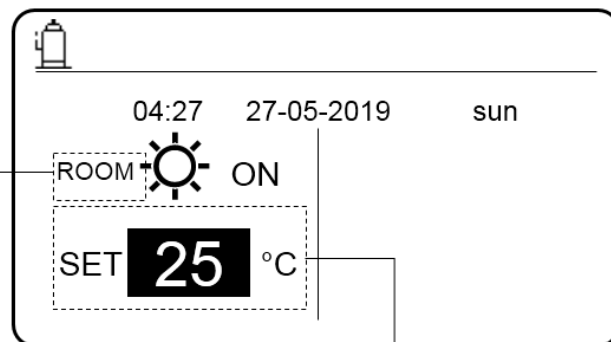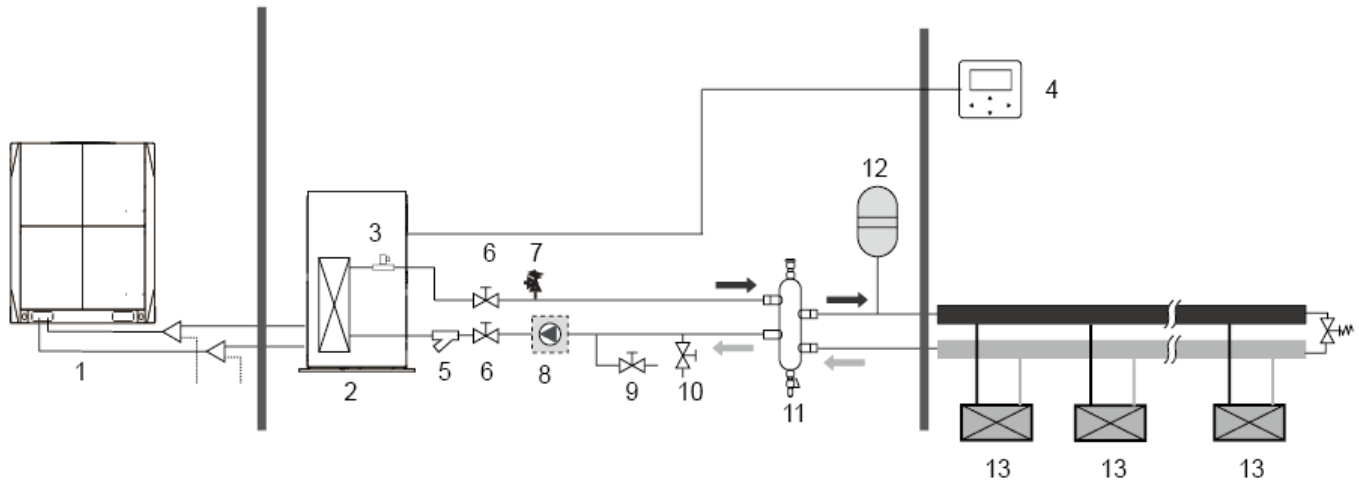
MAIN ☼ ON

SET **45** °C
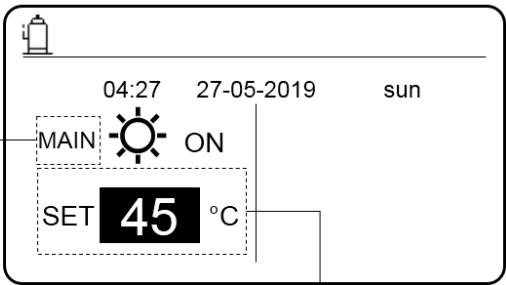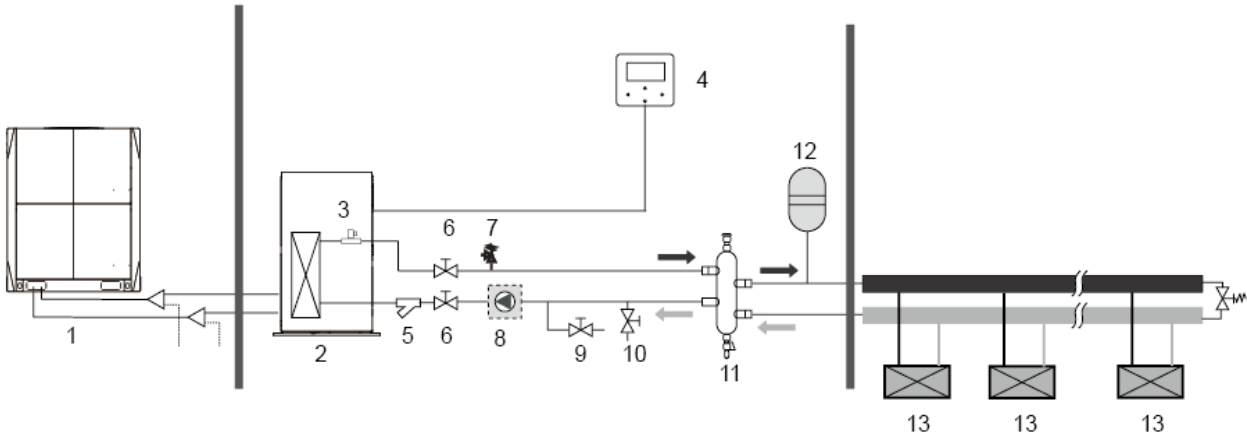
Indicates that the hydraulic module operates in water outlet temperature control mode.

Sets the desired water outlet temperature, ranging from 25°C to 80°C.

12.2 Scenario 2

Only heating mode is available and the hydro module operates in water outlet room control mode. (For more information, please read the *Engineering Data Book*.)

Note: The wired controller must be installed indoors, where heating is required. The wired controller is equipped with a temperature sensor for detecting room temperature.

Indicates that the hydraulic module operates in room temperature control mode.

Sets the desired room temperature, ranging from 17°C to 30°C.
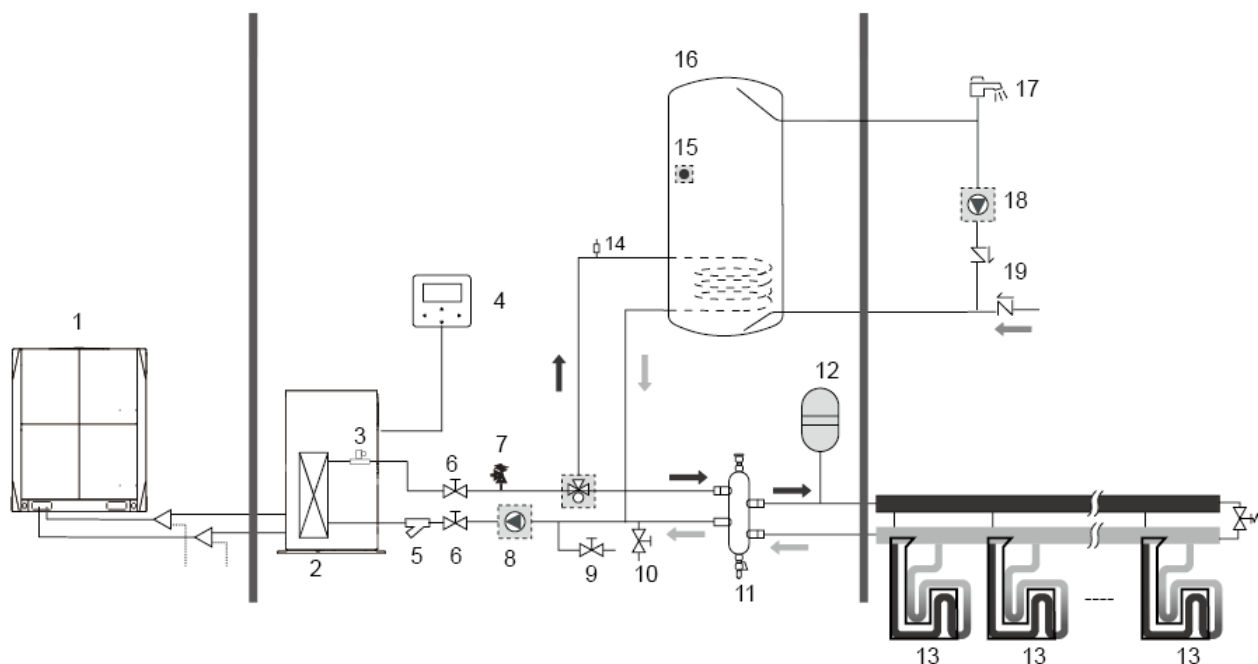
12.3 Scenario 3

Only heating mode is available. (For more information, please read the *Engineering Data Book*)
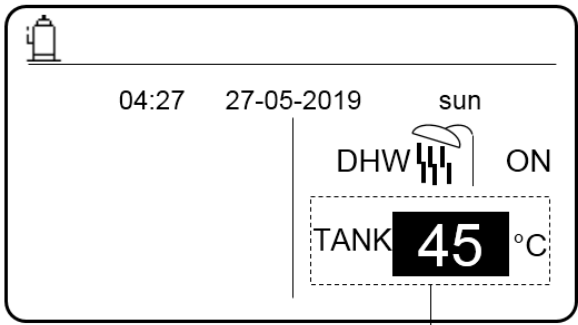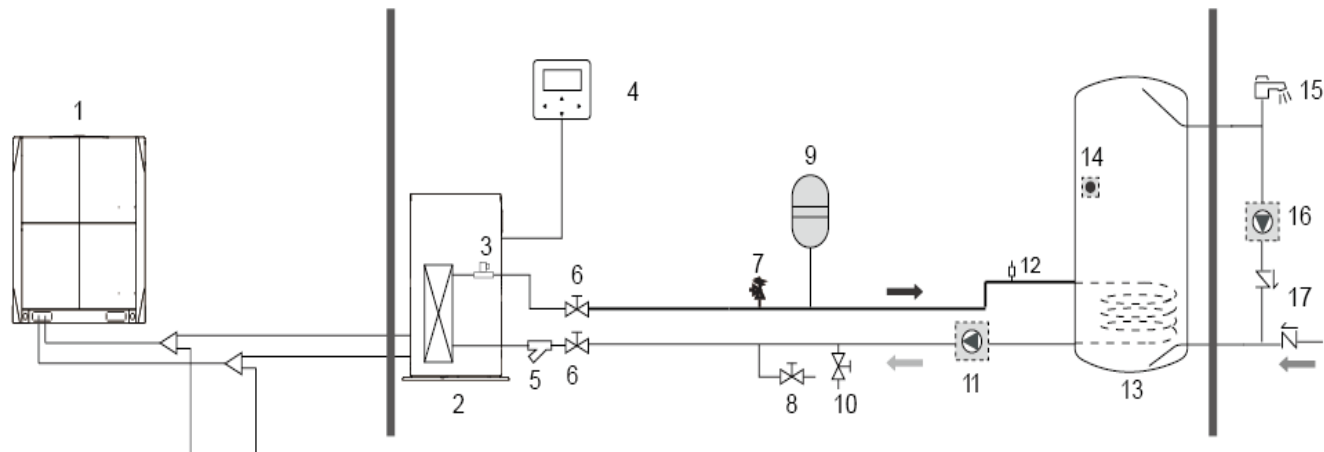
Sets the desired water tank
temperature, ranging from
25°C to 80°C.

12.4 Scenario 4

Both heating mode and DHW mode are available. (For more information, please read the *Engineering Data Book*)
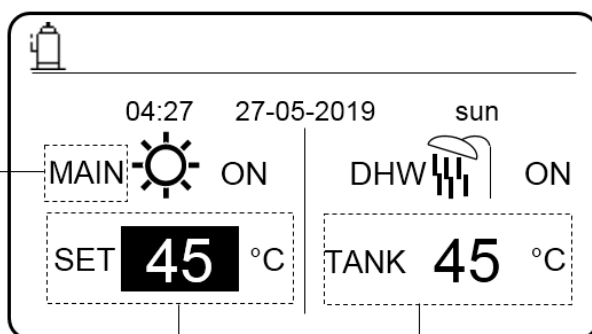
Indicates water outlet temperature control.

Sets the desired water outlet temperature, ranging from 25°C to 80°C.

Sets the desired water tank temperature, ranging from 25°C to 80°C.

Service Manual

12.5 Scenario 5

Only heating mode is available and there are multiple set points for the heating mode. (For more information, please read the *Engineering Data* and see ''Multiple Set Points'' on Page XX in this document.)

The settings of multiple set points do not affect the main interface. The temperature of multiple set points is set through the menu of the wired controller, while only the main room temperature is set on the main interface.

Note: The temperature of multiple set point 2 is lower than the temperature of multiple set point 1 and the temperature of multiple set point 1 is lower than the temperature set on the main interface.
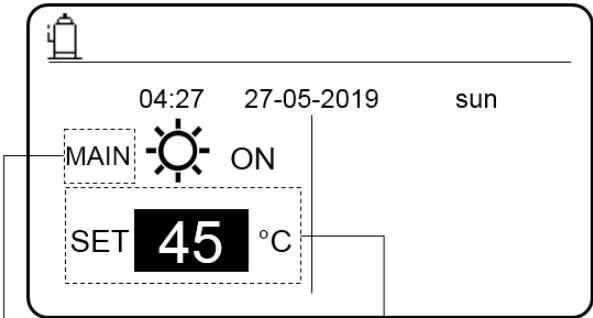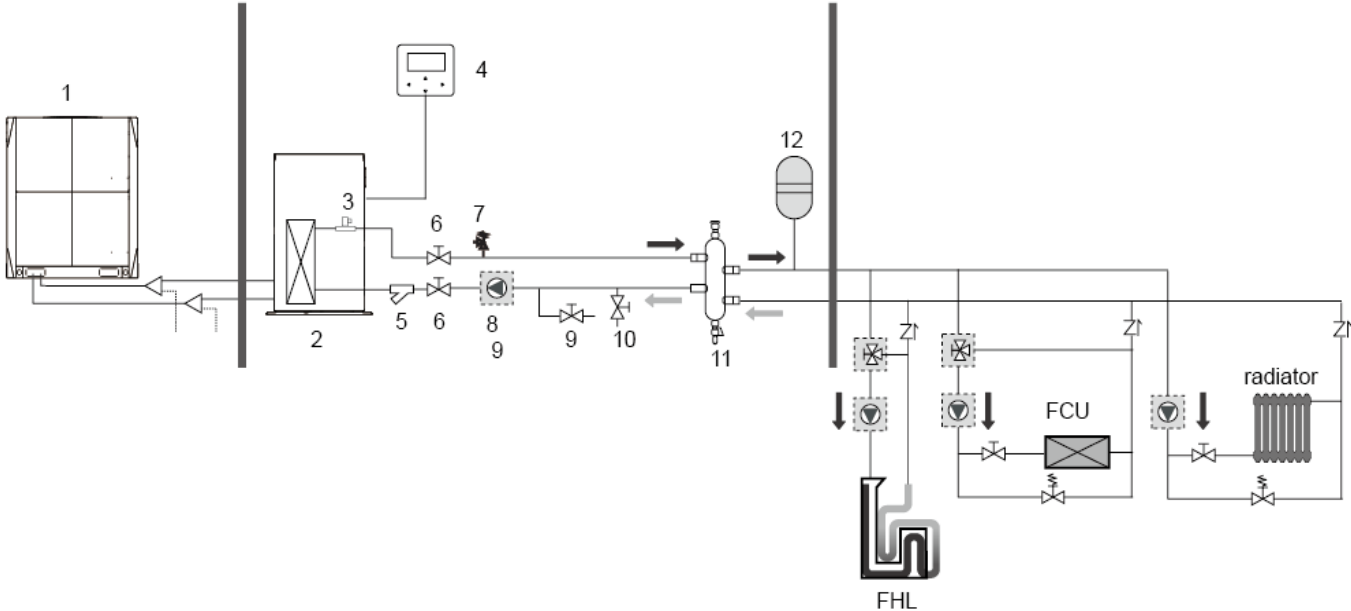
MAIN: Water outlet temperature control
ROOM: Room temperature control

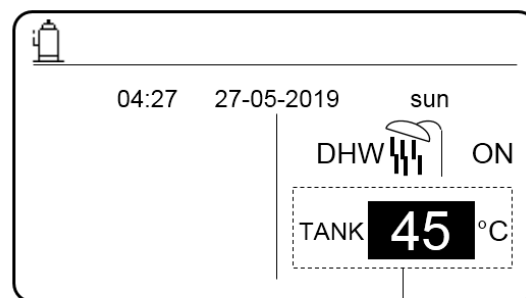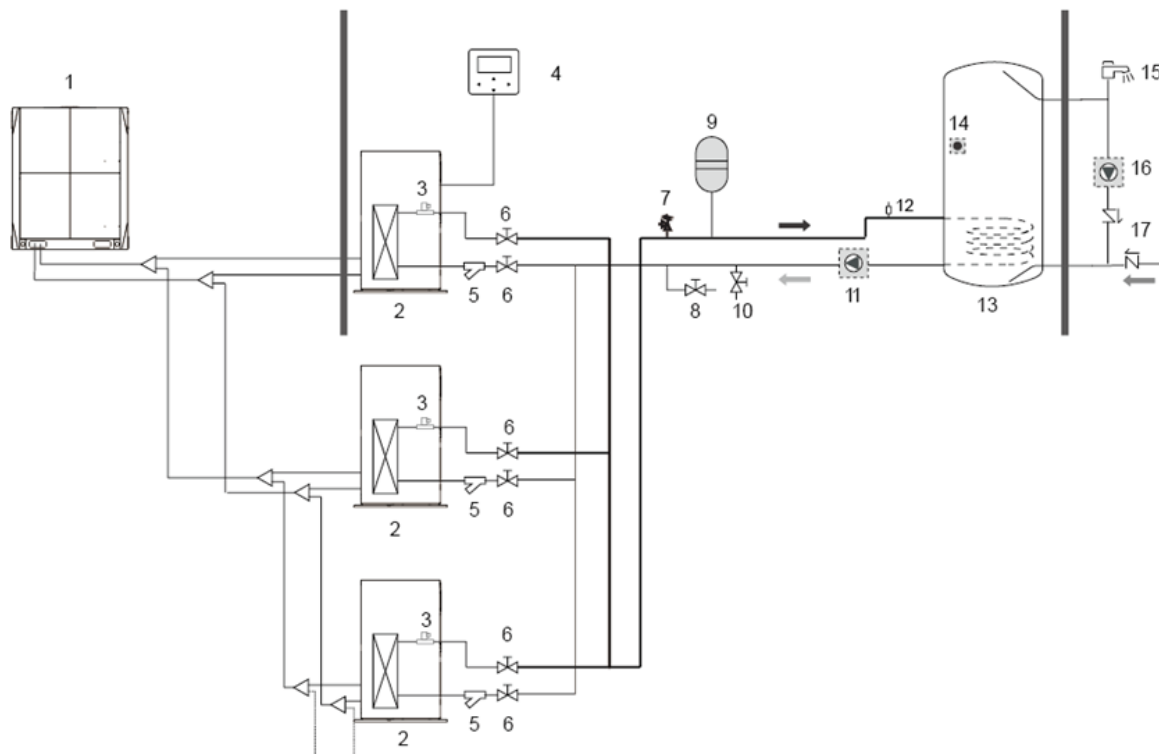Sets the desired temperature of the main set point.

12.6 Scenario 6

Group control of the hydro module.

When multiple hydro modules heat water in one water tank, the group control function of the hydro module should be used. (For more information, please read the *Engineering Data*.) The group control function is only valid for the DHW mode.

Notes:

1. The group control function of the hydro module is valid for the DHW mode only.

2. Master and slave hydro modules should be set. For instructions on how to set master and slave hydro modules, see the Engineering Data.

3. The master hydro module must be connected to a wired controller. The main wired controller can be used to set temperature.

4. The slave hydro module can be connected to or not connected to a wired controller. The secondary wired controller provides some functions, such as parameter query.

5. The circulating pump and water tank temperature sensor should be connected to the master hydro module.

Sets the desired water tank temperature, ranging from 25°C to 80°C.

High Temperature Hydro Module

To enable the group control function, you need to set the DIP switch on the main board as follows: for the master hydro module, turn digit 11; for the slave hydro module, turn digit 10:

SW4 (ON, 1 2)

> **Notes for installers and service engineers** ✖
>
> - The master unit must be connected to a wired controller. The wired controller is used to set the desired water tank temperature.
> - The slave unit can be connected to or not connected to a wired controller. The wired controller of the slave unit provides the query function only.
> - The pump is controlled by the master unit. The temperature sensor of the water tank is connected to the master unit.
> - The wired controller connected to the master unit is used to set the desired water tank temperature.

13 Basic Application

13.1 Unlocking the screen

If the ⬛ icon is displayed on the screen, it indicates that the wired controller has been locked. If you press any key, the ⬛ icon blinks. Press and hold the **UNLOCK** key, the ⬛ icon will disappear. In this case, you can operate using the wired controller interface.
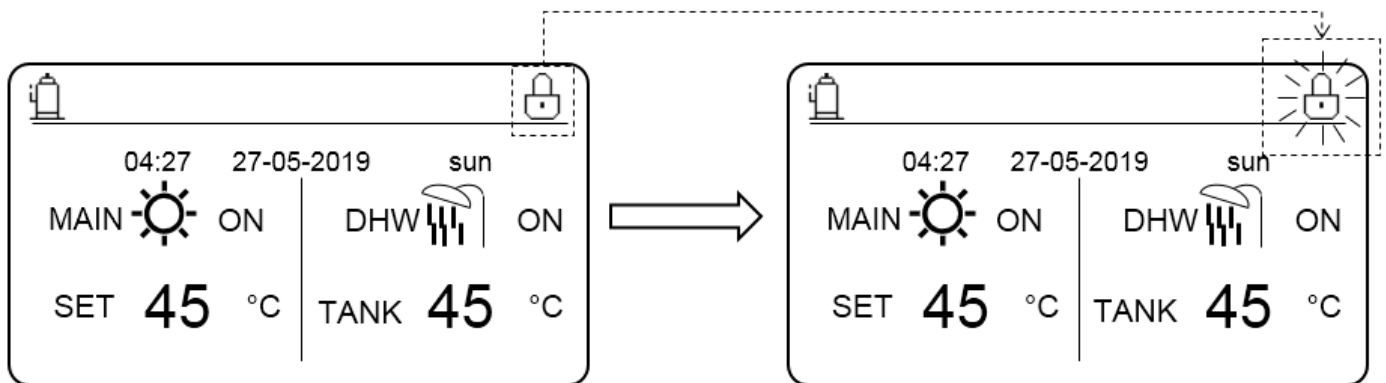
If you do not operate the wired controller for a long time (by default, 120s, which can be set on the wired controller. For details, see section 6.7 ''Service Information''.), the wired controller will lock automatically. If the wired controller is unlocked, press and hold the **UNLOCK** key, and the wired controller will be locked.
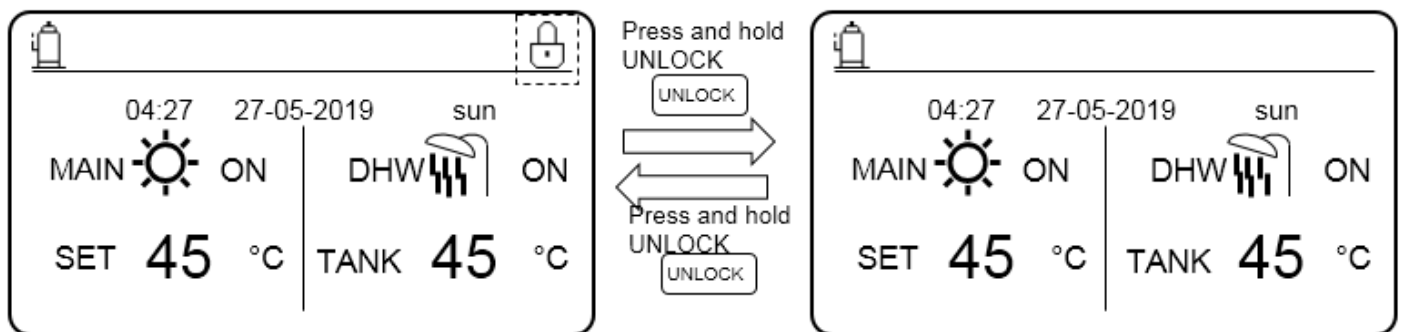
13.2 Enabling/Disabling Mode and Setting Temperature

Both heat mode and DHW mode can be enabled and disabled through the wired controller

13.2.1 Heat Mode

There are two control methods for the heat mode:

- Water outlet temperature control
- Room temperature control

Water outlet temperature control

In water outlet temperature control mode, the hydro module operates according to the defined water outlet temperature so that the water outlet temperature reaches the defined desired water outlet temperature. The water outlet temperature can be set manually, or through the timer function and weather temperature curve.

- Steps for setting the water outlet temperature control mode of the hydro module: **MENU** > **FOR SERVICEMAN** > **HEAT MODE** > L**EAVING WATER TEMP.**.
- Set **LEAVING WATER TEMP.** to **YES**.
- The water outlet temperature ranges from 25°C to 80°C.
- Sets the mode to water outlet temperature control and heating main interface to MAIN.

Notes:

If **LEAVING WATER TEMP.** is set to **YES**, **ROOM TEMP.** is automatically set to **NON**. If **ROOM TEMP.** is set to **YES**, **LEAVING WATER TEMP.** is automatically set to **NON**

Notes:

If **LEAVING WATER TEMP.** is set to **YES**, **ROOM TEMP.** is automatically set to **NON**. If **ROOM TEMP.** is set to **YES**, **LEAVING WATER TEMP.** is automatically set to **NON**

04:27   27-05-2019   sun

MAIN ✖ OFF   DHW 🚿 ON

SET **45** °C   TANK **45** °C

Press ▲ to choose heat mode.

Press ▲
▲

04:27   27-05-2019   sun

MAIN ✖ OFF   DHW 🚿 ON

SET **45** °C   TANK **45** °C

Press ▲ and ▼ to adjust desired temperature.

Press ▲   Press ▼
▲   ▼

04:27   27-05-2019   sun

MAIN ✖ OFF   DHW 🚿 ON

SET **46** °C   TANK **45** °C

Press ON/OFF to turn on/off heat mode.

Press ON/OFF   Press ON/OFF
ON/OFF   ON/OFF

04:27   27-05-2019   sun

MAIN ☀ ON   DHW 🚿 ON

SET **46** °C   TANK **45** °C
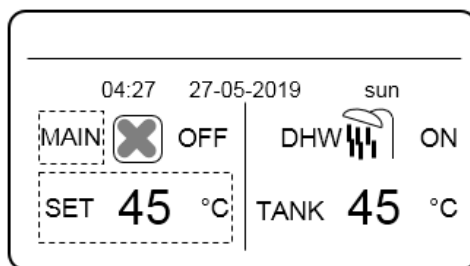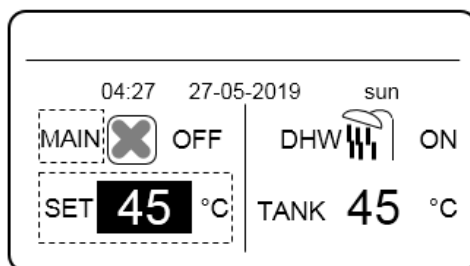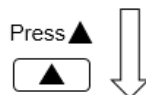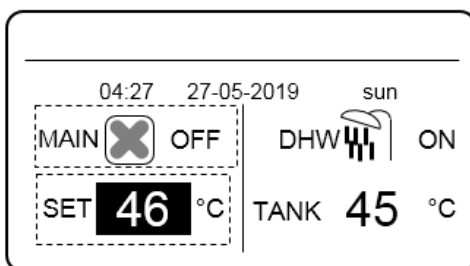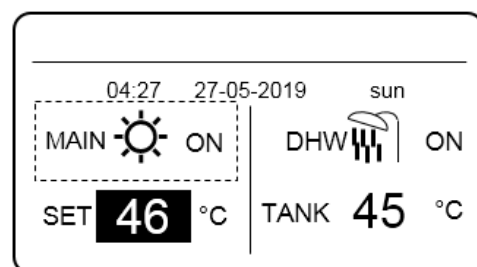
Room Temperature Control

In room temperature control mode, set the desired room temperature. The hydro module will control the operating of the hydro module according to the room temperature collected by the wired controller. The desired room temperature can be set manually, or through the timer function and weather temperature curve.

- Take the following steps to set room temperature control mode: **MENU** > **FOR SERVICEMAN** > **HEAT MODE** > **ROOM TEMP.**.
- Set **ROOM TEMP.** to **YES**.
- Room temperature ranges from 17 C to 30 C.
- Sets the mode to water outlet temperature control and heating main interface to ROOM.

Notes:

1. The wired controller should be installed where heating is needed.
2. If **LEAVING WATER TEMP.** is set to **YES**, **ROOM TEMP.** is automatically set to **NON**. If **ROOM TEMP.** is set to **YES**, **LEAVING WATER TEMP.** is automatically set to **NON**.

3.

Press ▲ to choose heat mode.

Press ▲

Press ▲ and ▼ to adjust desired temperature.

press ▲   press ▼

Press ON/OFF to turn on/off heat mode.

Press ON/OFF   Press ON/OFF

Assume that the temperature adjustment function in heat mode or mode on/off function are locked on the wired controller.

If you adjust temperature or enable/disable a mode, the following interface is displayed:

If you press **NO**, you will return to the main interface. If you press **YES**, you will enter the **CHILD LOCK** interface.

```
┌────────────────────────────────────┐
│  _____  │
│   04:27     27-05-2019      sun    │
│                                    │
│  Heating temperature adjusting     │
│  function is locked. Do you want   │
│  to unlock ?                       │
│  ┌──────────────┐                  │
│  │     NO       │        YES       │
│  └──────────────┘                  │
│  ┌────┐                 ┌──┐        │
│  │ OK │ CONFIRM         │◄►│ SCROLL │
│  └────┘                 └──┘        │
└────────────────────────────────────┘
```

```
┌────────────────────────────────────┐
│  _____  │
│    04:27    27-05-2019      sun    │
│                                    │
│  Heat mode ON/OFF function is      │
│  locked. Do you want to unlock it? │
│  ┌──────────────┐                  │
│  │     NO       │        YES       │
│  └──────────────┘                  │
│  ┌────┐                 ┌──┐        │
│  │ OK │ CONFIRM         │◄►│ SCROLL │
│  └────┘                 └──┘        │
└────────────────────────────────────┘
```

If temperature adjustment function or mode on/off function are locked on the centralized controller, the icon on the top will be lit. If you adjust temperature or enable/disable a mode on the wired controller, the following interface is displayed:

In this case, the hydro module can be only unlocked on the centralized controller.

```
┌────────────────────────────────────┐
│              ┌────┐                 │
│              │ 🔒 │                 │
│  _____ └────┘ _____   │
│    04:27    27-05-2019      sun    │
│                                    │
│  HEAT TMEPERATURE ADJUSTING        │
│  FUNCTION IS LOCKED BY CENTRALIZED │
│  CONTROLLER.                       │
│  ┌────┐                             │
│  │ OK │ CONFIRM                     │
│  └────┘                             │
└────────────────────────────────────┘
```

```
┌────────────────────────────────────┐
│              ┌────┐                 │
│              │ 🔒 │                 │
│  _____ └────┘ _____   │
│    04:27    27-05-2019      sun    │
│                                    │
│  HEAT MODE ON/OFF FUNCTION IS      │
│  LOCKED BY CENTRALIZED             │
│  CONTROLLER.                       │
│  ┌────┐                             │
│  │ OK │ CONFIRM                     │
│  └────┘                             │
└────────────────────────────────────┘
```
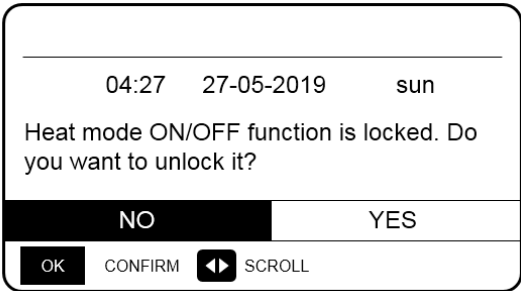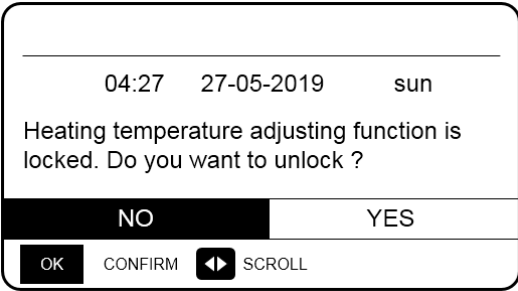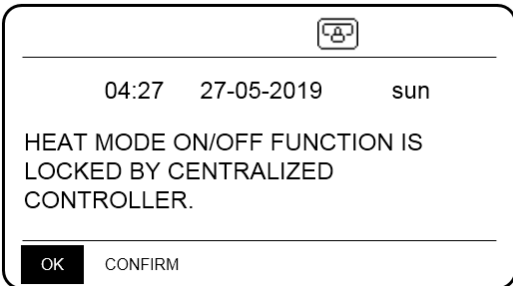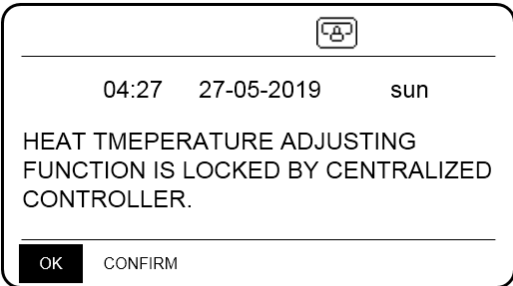
13.2.2 DHW Mode

- Take the following steps to set the DHW mode: **MENU** > **FOR SERVICEMAN** > **DHW MODE**.
- Set **DHW MODE** to **YES**.
- The water tank temperature ranges from 25°C to 80°C.
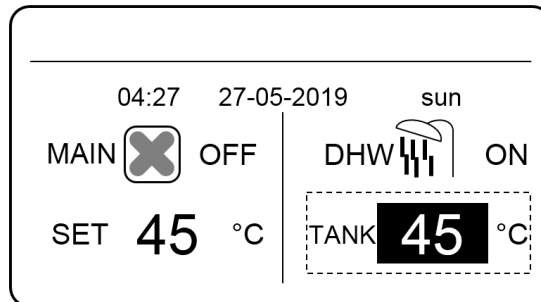
Press ▲ and ▼ to adjust desired temperature.
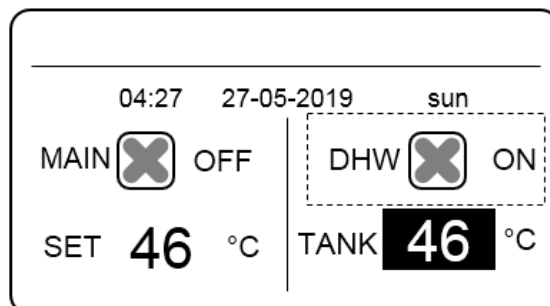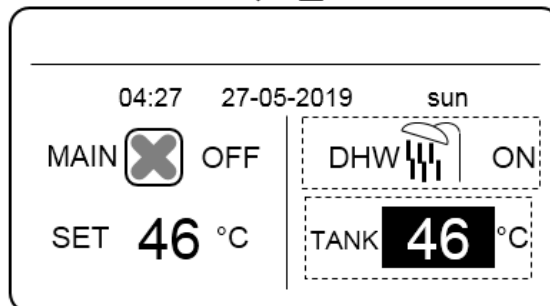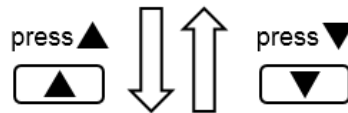
Press ON/OFF to turn on/off heat mode.

Assume that the temperature adjustment function in DHW mode or mode on/off function are locked on the wired controller. If you adjust temperature or enable/disable a mode, the following interface is displayed:

If you press **NO**, you will return to the main interface. If you press **YES**, you will enter the **CHILD LOCK** interface.

<div style="text-align: right">Service Manual</div>

Midea V6R High Temperature Hydro Module

```
        04:27    27-05-2019         sun

  DHW temperature adjusting function is
  locked. Do you want to unlock it?

          NO                    YES
   OK    CONFIRM   ◀▶  SCROLL
```

```
        04:27    27-05-2019         sun

  DHW mode ON/OFF function is locked. Do
  you want to unlock it?

          NO                    YES
   OK    CONFIRM   ◀▶  SCROLL
```

If temperature adjustment function or mode on/off function are locked on the centralized controller, the icon on the top will be lit. If you adjust temperature or enable/disable a mode on the wired controller, the following interface is displayed:

In this case, the hydro module can be only unlocked on the centralized controller.

```
                  🔒
        04:27    27-05-2019         sun

  DHW MODE ON/OFF FUNCTION IS
  LOCKED BY CENTRALIZED
  CONTROLLER.

   OK    CONFIRM
```

```
                  🔒
        04:27    27-05-2019         sun

  DHW TEMPERATURE ADJUSTING
  FUNCTION IS LOCKED BY CENTRALIZED
  CONTROLLER.

   OK    CONFIRM
```

14 Functions

14.1 Heat Mode

In heat mode, PRESET TEMP.\WEATHER TEMP. SET\MULTIPLE SET POINT are available.

14.1.1 Pre-set Temperature

In heat mode, PRESET TEMP.\WEATHER TEMP. SET\MULTIPLE SET POINT are available.

- PRESET TEMP. =PRESET TEMPERATURE
- The PRESET TEMP. function will be automatically disabled in the following conditions:

1) Timer is set.

2) Weekly schedule is set.

Take the following steps to enable PRESET TEMP.: **MENU** > **PRESET TEMPERATURE** > **PRESET TEMP**. Press **OK**.

The following interface is displayed:

use "▲ ", "▼ ", "▶ ", "◀ " to scroll and use▲ ", "▼ " to adjust the time and the temperature. When the cursor is on "■", as in the following page:

Press "OK", and the "■" becomes "☑". The timer 1 is selected. Press "OK" again, and "☑" becomes "■". The timer 1 is unselected.
Use "▲ ", "▼ ", "▶ ", "◀ " to scroll and use "▲ ", "▼" to adjust the time and the temperature. Six temperatures can be set.

For example:

The time is 8:00 and temperature is 60℃. If PRESET TEMP. is set as follows, the hydro module will operate according to the following curve.
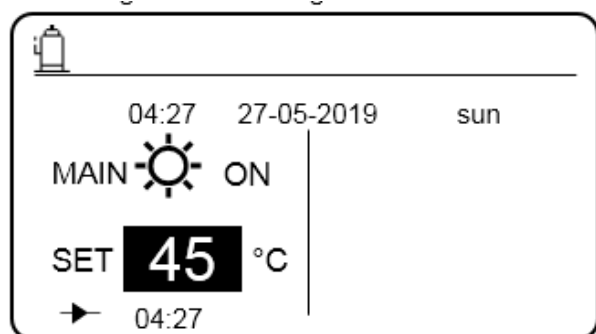
No.	TIME	TEMP.
1	8:00	70℃
2	12:00	60℃
3	15:00	70℃
4	18:00	60℃
5	20:00	70℃
6	23:00	60℃
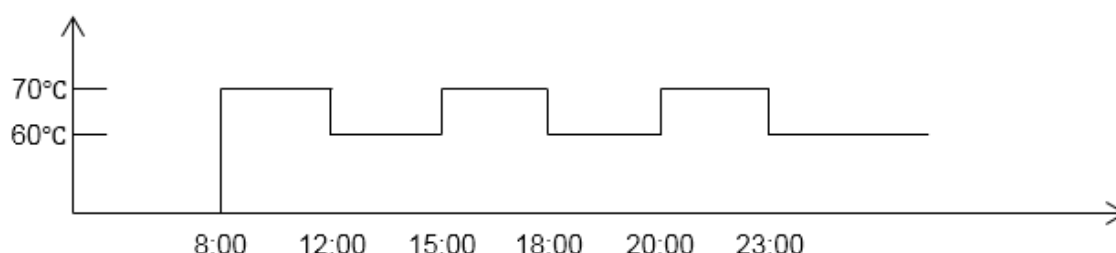
Notes for installers and service engineers ✕

Important Notes

- When the multiple set point function is enabled, the PRESET TEMP. function is valid to space0 only.
- If the hydro module is powered off, the preset temperature at the current time is invalid. The hydro module will be started at the time point where the next preset temperature is set.
- When the timer function is valid, if you move the cursor to PRESET TEMP. and press the OK key, the following prompt is displayed:
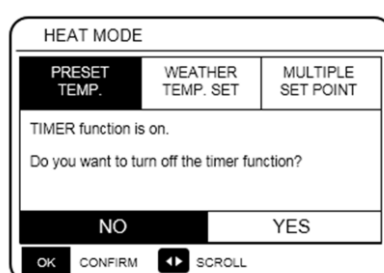
- The preset temperature is only valid for the water outlet temperature control of heat mode. If ROOM TEMP. is set to YES on the wired controller, the following information is displayed:
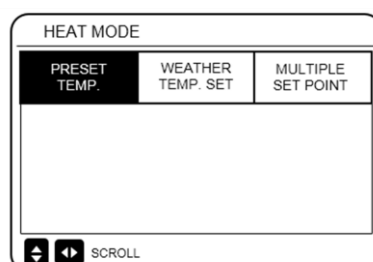
14.1.2 Weather Temperature Set

- WEATHER TEMP. SET=WEATHER TEMPERATURE
- On the **WEATHER TEMP.SET** page, you cannot set the desired water outlet temperature. The desired water outlet temperature is calculated according to the outside ambient temperature. The higher the outside ambient temperature, the lower the desired water temperature.
- During the operation of the weather temperature curve, you can set the shift value of the weather temperature curve with the range of [-5,+5]. The shift value is the difference between the calculation value and the actual operation value. Example: +5℃ indicates that the actual operation value is 5℃ greater than the calculation value.
- Take the following steps to set the weather temperature curve: **MENU** > **PRESET TEMPERATURE** > **WEATHER TEMP. SET**. Press **OK**. The following interface is displayed:
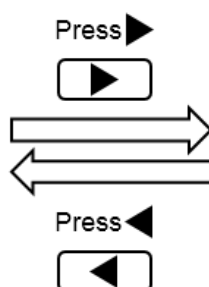
Press ON/OFF button to turn on/off weather temperature function.
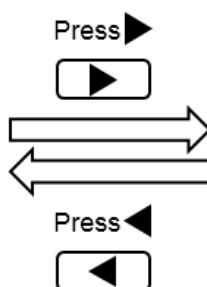
Press "▲" or "▼" to adjust the shift value.
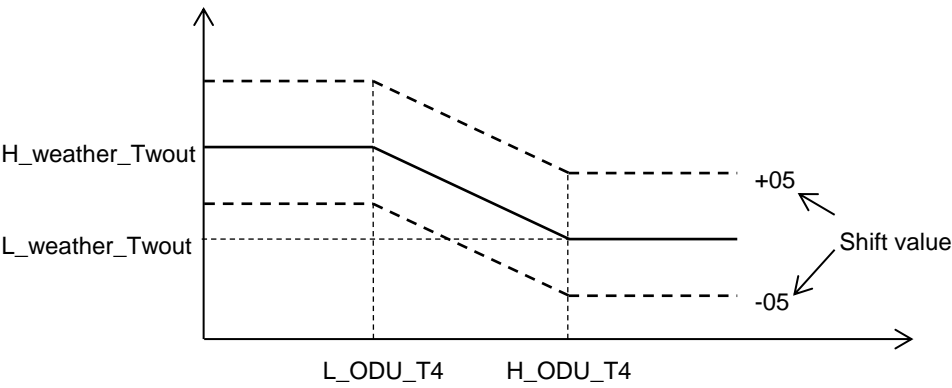
H_ODU_T4: high outdoor temperature (indicates the high temperature point among outdoor ambient temperature)

L_ODU_T4: low outdoor temperature (indicates the low temperature point among outdoor ambient temperature)

L_weather_Twout: the desired leaving water temperature when the outdoor temperature equals or drops below the low ambient temperature (indicates that the desired water outlet temperature is lower than the low temperature point of the outdoor ambient temperature)

H_weather_Twout: the desired leaving water temperature when the outdoor temperature equals or rises above the high ambient temperature (indicates the desired water outlet temperature is higher than the high temperature point of the outside ambient temperature)

If Weather TEMP.SET is enabled, you cannot set the desired water outlet temperature. If you press ▼ or ▲, the following interface is displayed.

Press **OK** at **NO** to return to the main interface. Move the cursor to **YES**, and then press **OK**. The weather temperature curve setting interface is displayed as follows.

14.1.3 Multiple Set Point Function

When the hydro module is connected to multiple terminals that raise different water temperature requirements, you need to use the multiple set point function. The multiple set point function is used to set the desired water outlet temperature of space1 and space2. (For more information, please read the *Engineering Data*.)

The hydro module will calculate the space that requires energy and operate at the highest water temperature among the water outlet temperature requirements.

Note: For space0, water temperature is set on the main interface.
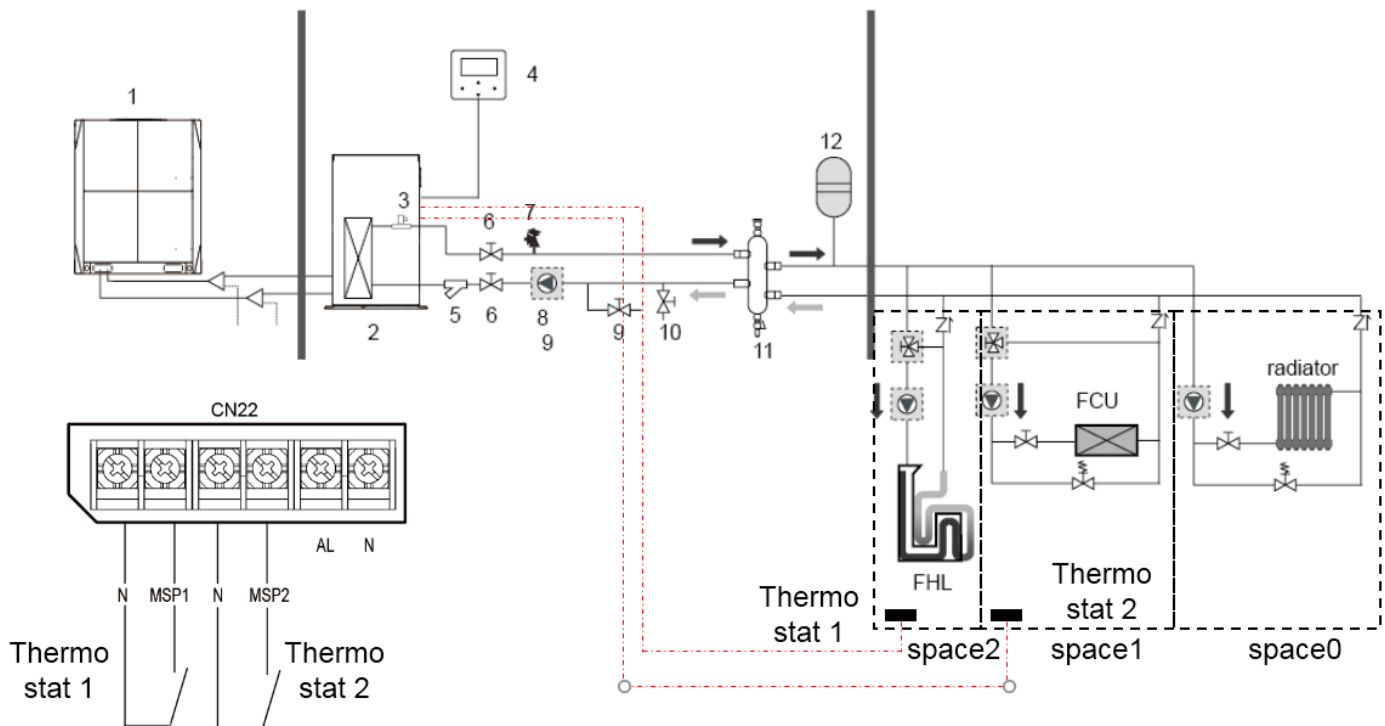
Notes:

1. The hydro module can meet the control requirements at different water temperatures. You must connect an external third-party temperature reduction device to the circuits of space1 and space2.

2. The multiple set point switch can be set on the FOR SERVICEMAN interface of the wired controller. If multiple set point 1=YES or multiple set point 2=YES, this indicates that multiple set points exist.

3. On the wired controller, multiple set point 1 required temp. is corresponding to the required water temperature of multiple set point 1, while multiple set point 2 required temp. is corresponding to the required water temperature of multiple set point 2.

4. The energy demand of space1 is determined according to the level signal of the external thermostat 1 of the main control board. If the level is low, it indicates that there is an energy demand, while if the level is high, it indicates that energy is not demanded.

5. Energy demand of space2 is determined according to the level signal of the external thermostat 2 of the main control board. If the level is low, it indicates that there is an energy demand, while if the level is high, it indicates that energy is not demanded.

```
┌─────────────────────────────────────────┐
│  HEAT MODE                                │
│  ├──────────────┬──────────────┬────────┤│
│  │ PRESET       │ WEATHER      │MULTIPLE ││
│  │ TEMP.        │ TEMP. SET    │SET POINT││
│  ├──────────────┴──────────────┴────────┤│
│  │ SPACE 1 DESIRED TEMP.        45  °C   ││
│  ├───────────────────────────────────────┤│
│  │ SPACE 2 DESIRED TEMP.        30  °C   ││
│  ├───────────────────────────────────────┤│
│  │                                       ││
│  ├───────────────────────────────────────┤│
│  │                                       ││
│  ├───────────────────────────────────────┤│
│  │ ⬍ ◀▶ SCROLL                           ││
└─────────────────────────────────────────┘
```

No.	Desired temperature	Thermo status (energy demand status)			
space 0	a	OFF	ON	OFF	OFF
space 1	b	OFF	ON/OFF	ON	OFF
space 2	c	OFF	ON/OFF	ON/OFF	ON
Resulting desired temp.		OFF	a	b	c

14.2 Domestic Hot Water

DOMESTIC HOT WATER (DHW) has DISINFECT/DHW PUMP 2 items.

14.2.1 Disinfection Mode

In disinfection mode, legionella bacteria can be killed. In disinfection mode, the water tank temperature will forcedly rise to 70℃ to 80℃. The disinfection temperature can be set on the FOR SERVICEMAN interface

Choose **MENU** > **DOMESTIC HOT WATER** > **DISINFECT**. Press **OK**. The following interface is displayed.
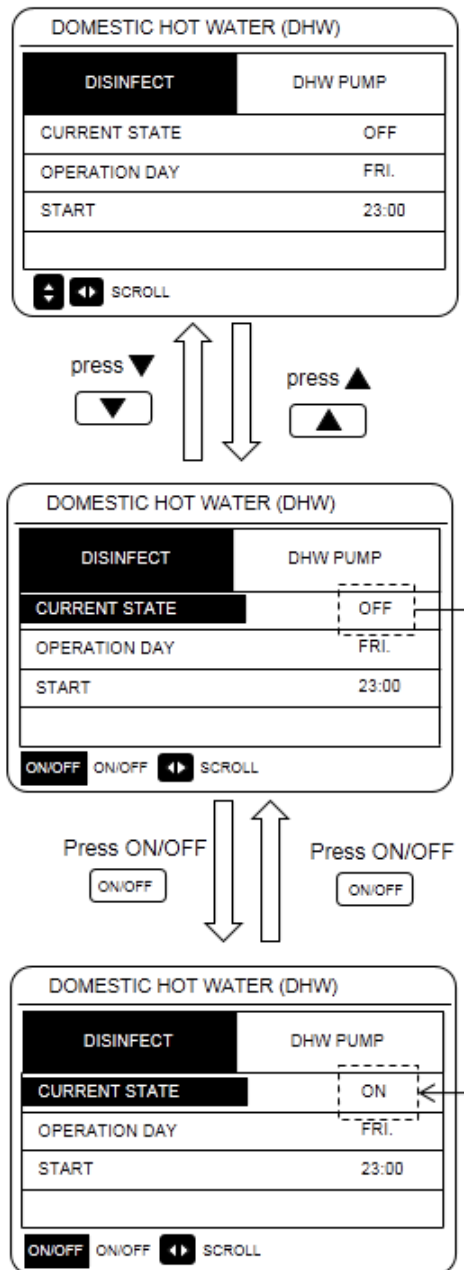
Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the parameters when setting "OPERATE DAY" and "START". If the OPERATE DAY is set to FRIDAY and the START is set 23:00, the disinfect function will activate at 23:00 on Friday. If the disinfect function is running, the following page will appear
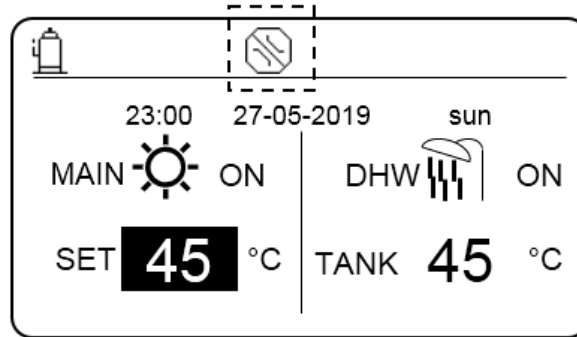
Note:

When the hydro module operates in disinfection mode, if you press the **On/Off** key, the pressing is invalid and the following interface is displayed.
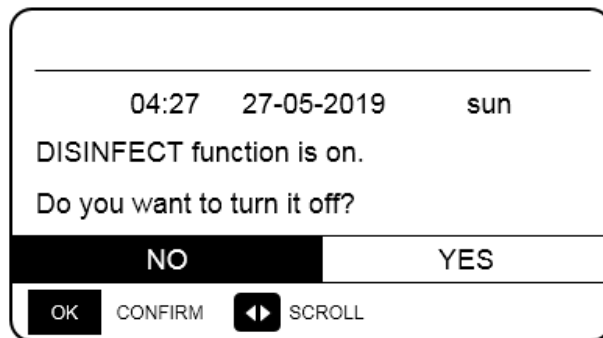
In disinfection mode, the hydro module will operate according to the following figure. The water temperature of the water tank will keep the disinfection temperature TtankS_DI.
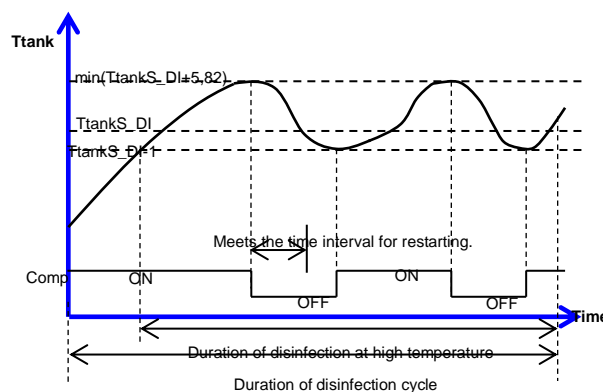
14.2.2 DHW Pump

The DHW PUMP function is used to control the start time of the water tank and pump so that hot water can flow out of the tap at any time.

Choose **MENU** > **DOMESTIC HOT WATER** > **DHW PUMP**. Press **OK**. The following interface is displayed.

Move to "■", press " OK " to select or unselect. (☑ the timer is selected. ☐ the timer is unselected.)

Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the parameters.

Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the parameters.

For example: You have set the parameter about the DHW PUMP (See ''FOR SERVICEMAN'' > ''DHW MODE SETTING'' on ''Engineering Data''). PUMP RUNNING TIME is 30 minutes.

Set as follows:

No.	START
1	06:00
2	07:00
3	8:00
4	09:00
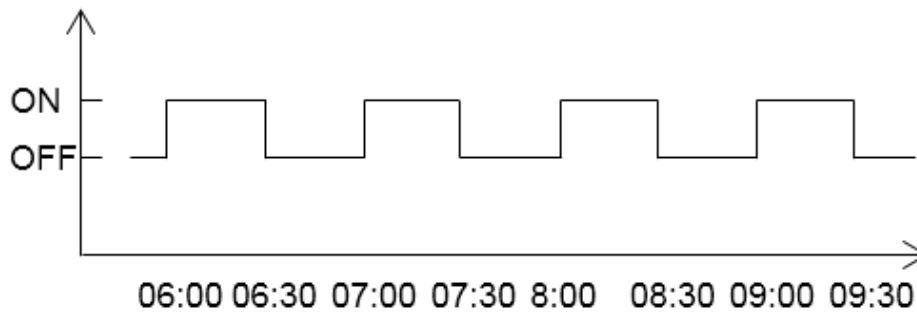
Notes for installers and service engineers 🛠

Important Notes

- If DHW MODE=NON, choose MENU > DOMESTIC HOT WATER. Press OK. The following interface is displayed.
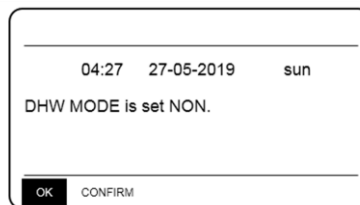
- If DISINFECT MODE=NON on the FOR SERVICEMAN interface, choose MENU > DOMESTIC HOT WATER > DOMESTIC HOT WATER. Press OK. The following interface is displayed.
- If DISINFECT MODE=NON on the FOR SERVICEMAN interface, choose MENU > DOMESTIC HOT WATER > DOMESTIC HOT WATER. Press OK. The following interface is displayed.
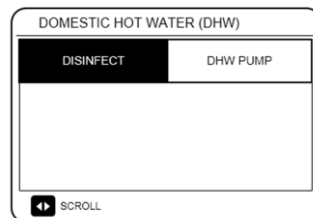
- If DHW PUMP RUNNING TIME=NON, choose MENU > DOMESTIC HOT WATER > DHW PUMP. Press OK. The following interface is displayed.
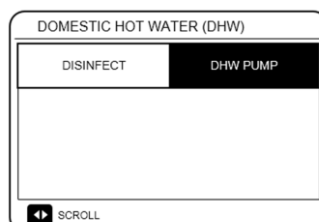
14.3 Schedule Function

The **SCHEDULE** menu contains the following items:

1) TIMER

2) WEEKLY SCHEDULE

3) SCHEDULE CHECK

4) CANCEL TIMER

14.3.1   TIMER Function

If the timer function is enabled, the icon ⌊⌋ will be displayed on the main interface of the wired controller. If the weekly schedule function is enabled, the timer function will be disabled.

Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the time, the mode and the temperature.

Move to "■", press " OK " to select or unselect.

(☑ the timer is selected. ⬜ the timer is unselected.) six timers can be set.

If you want to cancel the TIMER, change the cursor to " ☑ ", and press "OK". The ☑ will become ⬜ , and the timer is disabled.

If the start time is later than the end time, the following interface is displayed.

```
SCHEDULE

┌────────┬──────────┬──────────┬──────────┐
│ TIMER  │ WEEKLY   │ SCHEDULE │ CANCEL   │
│        │ SCHEDULE │ CHECK    │ TIMER    │
└────────┴──────────┴──────────┴──────────┘

TIMER1 is disabled.

Please check the timer setting and temperature
setting.


┌────┐
│ OK │    CONFIRM
└────┘
```

For example:

Six groups of schedules are set, as shown in the following table:

No.	START	END	MODE	TEMP.
1	01:00	03:00	DHW	70
2	07:00	09:00	HEAT	50
3	11:30	13:00	DHW	70
4	14:00	16:00	HEAT	50
5	15:00	19:00	DHW	70
6	18:00	23:30	HEAT	50

The hydro module will operate as shown in the following figure:
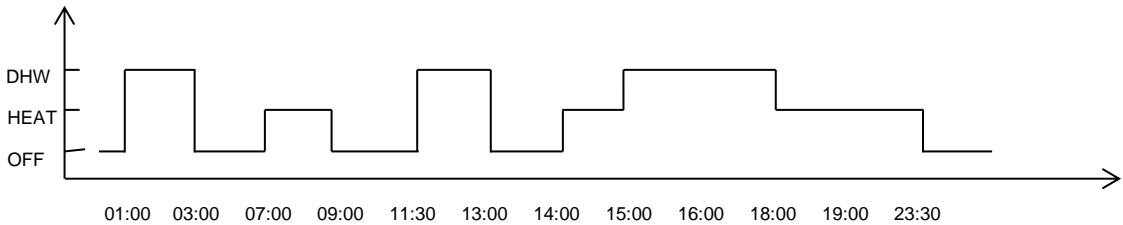
TIME	The operation of the controller
01:00	DHW mode is turned ON
03:00	DHW mode is turned OFF
07:00	HEAT MODE is turned ON
09:00	HEAT MODE is turned OFF
11:30	DHW MODE is turned ON
13:00	DHW MODE is turned OFF
14:00	HEAT MODE is turned ON
15:00	DHW MODE is turned ON and HEAT MODE is turned OFF
18:00	HEAT MODE is turned ON and DHW MODE is turned OFF
23:30	HEAT mode is turned OFF

Notes for installers and service engineers 🛠

Caution

If the start time is the same as the end time, the schedule is invalid.

14.3.2 Weekly Schedule

Timer and weekly schedule cannot take effect at the same time. The time which is set later will take effect first. If the weekly schedule is set, the   icon will be displayed on the main interface.

Choose **MENU** > **SCHEDULE** > **WEEKLY SCHEDULE** . Press **OK**. The following interface is displayed.

First select the days of the week you wish to schedule. Use ''◄'' and ''►'' to scroll. Press ''OK'' to select or unselect the day. ''   '' means that the day is selected, '' MON. '' means that the day is unselected.

Use ''◄'' or ''►'' to SET, and press ''ENTER''. The Monday to Friday are selected to be scheduled and they have the same schedule. The following pages will appear:

Use ''◄'', ''►'', ''▼'', ''▲'' to scroll and adjust the time, the mode and the temperature. Timers can be set, including start time and end time, mode and temperature. The mode includes heat mode, cool mode and DHW mode. The setting method refer to timer setting. The end time must be later than the start time. Otherwise this will show that Timer is disabled.

14.3.3 Schedule Check

Schedule check can only check the weekly schedule. Go to ''MENU'' > ''SCHEDULE'' >''SCHEDULE' CHECK''. Press ''OK''. The following page will appear:

```
 SCHEDULE
┌────────┬──────────┬──────────┬────────┐
│        │  WEEKLY  │ SCHEDULE │ CANCEL │
│ TIMER  │ SCHEDULE │  CHECK   │ TIMER  │
├────────┴──────────┴──────────┴────────┤
│ WEEKLY SCHEDULE CHECK.                 │
│                                        │
│                                        │
│                                        │
├────────────────────────────────────────
│ OK   ENTER  [⇕] [◄►] SCROLL            │
└────────────────────────────────────────
```

```
 SCHEDULE
┌─────┬─────┬──────┬──────┬───────┬──────┐
│ DAY │ NO. │ MODE │ SET  │ START │ END  │
├─────┼─────┼──────┼──────┼───────┼──────┤
│     │ T1 ☐│ HEAT │ 45°C │ 00:00 │00:00 │
│     │ T2 ☐│ HEAT │ 45°C │ 00:00 │00:00 │
│     │ T3 ☐│ HEAT │ 45°C │ 00:00 │00:00 │
│     │ T4 ☐│ HEAT │ 45°C │ 00:00 │00:00 │
│     │ T5 ☐│ HEAT │ 45°C │ 00:00 │00:00 │
│ ⇕   │ T6 ☐│ HEAT │ 45°C │ 00:00 │00:00 │
├─────┴─────┴──────┴──────┴───────┴──────┤
│ OK   ENTER [⇕] [◄►] SCROLL             │
└────────────────────────────────────────
```

Press ''▼'', ''▲'', the timer from Monday to Sunday will appear.

14.3.4 Cancel Timer

Go to ''MENU'' > ''SCHEDULE'' >''CANCEL TIMER''. Press ''OK''. The following page will appear:

```
 SCHEDULE
┌────────┬──────────┬──────────┬────────┐
│        │  WEEKLY  │ SCHEDULE │ CANCEL │
│ TIMER  │ SCHEDULE │  CHECK   │ TIMER  │
├────────┴──────────┴──────────┴────────┤
│ Do you want to cancel the timer and weekly │
│ schedule ?                             │
│                                        │
├──────────────────┬─────────────────────┤
│       NO         │        YES           │
├──────────────────┴─────────────────────┤
│ OK  CONFIRM [⇕] [◄►] SCROLL            │
└────────────────────────────────────────
```

Use ''◄'', ''►'', ''▼'', ''▲'' to move to ''YES''. Press ''OK'' to cancel the timer. If you want to exit CANCEL TIMER, press ''BACK''.

If TIMER or WEEKLY SCHEDULE is activated, the timer icon ''⟨L⟩'' or weekly schedule icon ''⟨⊕7⟩'' will display on the home page. If TIMER or WEEKLY SCHEDULE is canceled, icon ''⟨L⟩'' or ''⟨⊕7⟩'' will disappear on the home page.
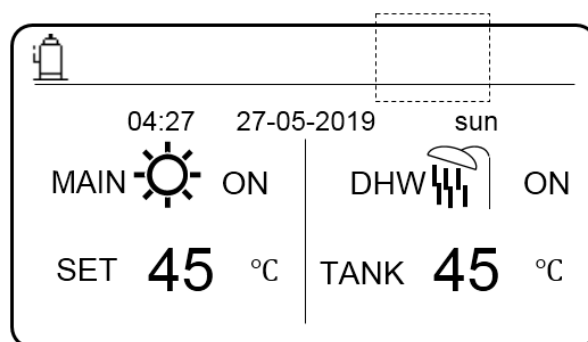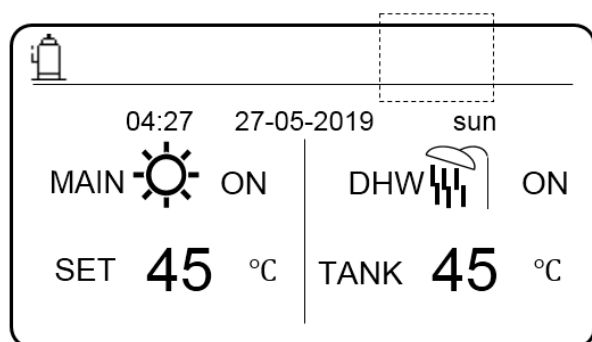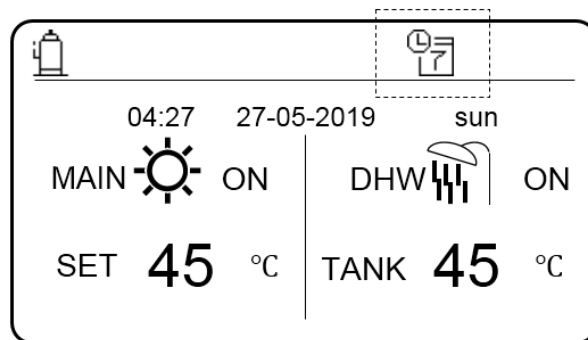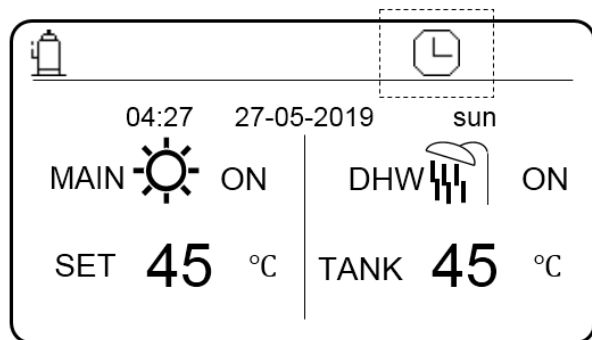
You have to reset TIMER/WEEKLY SCHEDULE, if you change the LEAVING WATER TEMP. to the ROOM TEMP. or you change the ROOM TEMP. to the LEAVING WATER TEMP.

Service Manual

14.4   Options

OPTIONS menu contents as follows:

1) SILENT MODE

2) HOLIDAY AWAY

3) HOLIDAY HOME

14.4.1 Silent Mode

The silent mode is used to reduce the noise of the hydro module, which may degrade the capability of the hydro module. You can set the hydro module to always operate in silent mode or to enter silent mode within a period of time.

- On the main interface, you can check whether silent mode is enabled. If it is, the icon will be displayed on the main interface.
- Choose **MENU** > **OPTIONS** > **SILENT MODE**. Press **OK**. The following interface is displayed.
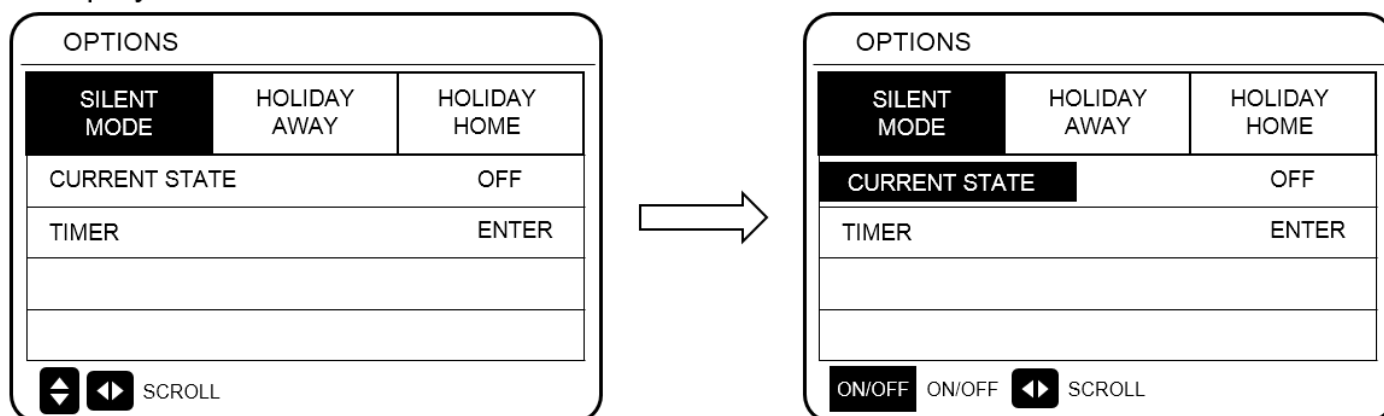
Choose **ON/OFF** to determine whether the silent mode is enabled. If CURRENT STATE=OFF, silent mode is invalid. If CURRENT STATE=ON, silent mode is invalid. On the TIMER page, you can set the time for enabling the silent mode. Two periods of time can be set. The silent mode will be started at the START time, and disabled at the END time. If TIMER is not set, the hydro module will remain in silent mode.
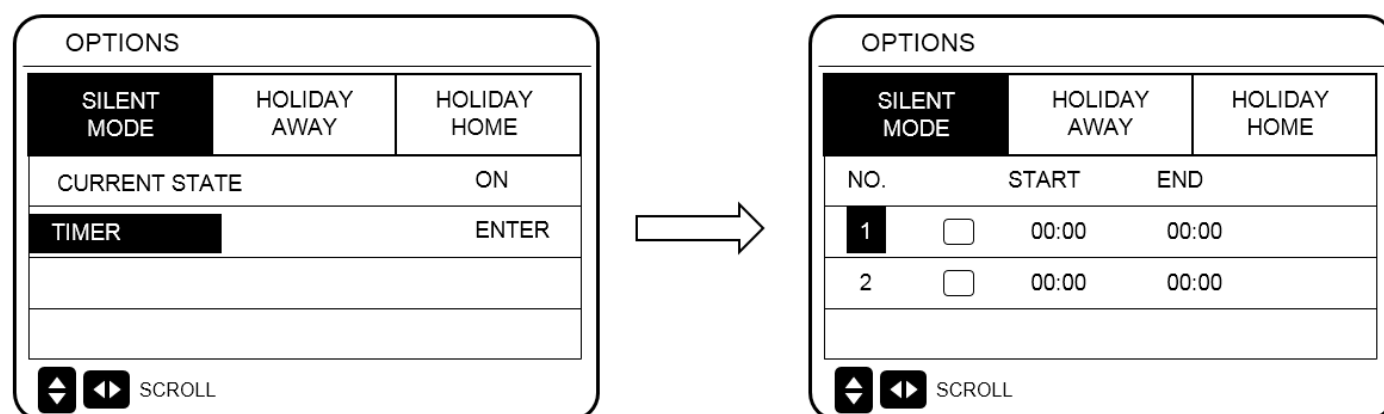
14.4.2 Holiday Away

If the holiday away mode is enabled, the ⛽ icon will be displayed on the main interface. The holiday away mode can prevent water from freezing during holidays and start heating and water heating before you are back home thus guaranteeing comfort and hit water at home.

Go to "MENU" > "OPTIONS" > "HOLIDAY AWAY". Press "OK". The following page will appear.

Service Manual

SETTING	VALUE
HOLIDAY AWAY	on
DHW MODE	on
DISINFECT	on
HEAT MODE	on
FROM	02-01-2019
UNTIL	16-01-2019

When DISINFECT is set to ON, and you set the disinfection mode, the hydro module will automatically perform disinfection at the set disinfection time prior to the end of the holiday. For example, if FROM=2019-01-02, UNTIL=2019-01-16, and disinfection time is set to 23:00 on Friday, disinfection begins from 23:00 on 2015-12-11. If you do not set the disinfection mode, the hydro module will forcedly enter disinfection mode at 22:00 on the day before the end of the holiday. If you do not set the disinfection mode, the hydro module will begin disinfection from 22:00 on 2015-12-19. After the hydro module exits disinfection mode, the wired controller will send the heat mode start-up command and DHW mode start-up command to the hydro module. TwoutS=TwoutS_H.A_H indicates the heat mode, while TtankS=TtankS_H.A_DHW indicates the DHW mode.

TwoutS_H.A_H and TtankS_H.A_DHW are set on the FOR SERVICEMAN interface of the wired controller.

Notes:

- In holiday mode, timer and weekly schedule are invalid until the hydro module exits from holiday mode.
- The CURRENT STATE option determines whether to enable holiday mode. If CURRENT STATE = OFF, HOLIDAY AWAY = OFF. If CURRENT STATE = ON, HOLIDAY AWAY = ON.
- The multiple set point is invalid when the hydro module operates in holiday mode.
- If disinfection mode is set in holiday mode, the hydro module will enter the disinfection mode at 22:00 on the day before the end of the holiday mode.
- In holiday mode, the weather temperature curve is invalid until the hydro module exits from holiday mode.
- In holiday mode, Preset Temp. is invalid until the hydro module exits from holiday mode.

If you operate the wired controller in holiday mode, the following prompt is displayed:

```
  04:27   27-05-2019      sun

The "HOLIDAY AWAY FUNCTION" is on.
Do you want to turn off the holiday away
function ?

       NO                   YES

OK    CONFIRM   ◀▶  SCROLL
```

14.4.3 HOLIDAY HOME Mode

In holiday home mode, the hydro module can operate according to the schedule settings of the holiday mode without affecting the normal schedule.

Period	Then…
Before and after your holiday	Your normal schedules will be used.
During your holiday	The configured holiday setting will be used.

If the holiday home mode is activated,　　　　　　　　will display on the home page.

Go to ''MENU'' > ''OPTIONS'' > ''HOLIDAY HOME''. Press ''OK'' . The following page will appear:

```
┌──────────────────────────────────────┐
│  OPTIONS                             │
│  ┌──────────┬──────────┬──────────┐  │
│  │ SILENT   │ HOLIDAY  │ HOLIDAY  │  │
│  │ MODE     │ AWAY     │ HOME     │  │
│  ├──────────┴──────────┴──────────┤  │
│  │ CURRENT STATE          OFF     │  │
│  ├────────────────────────────────┤  │
│  │ FROM                02-01-2019 │  │
│  ├────────────────────────────────┤  │
│  │ UNTIL               16-01-2019 │  │
│  ├────────────────────────────────┤  │
│  │ TIMER                    ENTER │  │
│  └────────────────────────────────┘  │
│  ON/OFF  ON/OFF   ⬍ SCROLL           │
└──────────────────────────────────────┘
```

Use ''ON/OFF'' to select ''OFF'' or ''ON'' and use '' ◄'', ''►'', ''▼'', ''▲'' to scroll and adjust.

If the CURRENT STATE is OFF, the HOLIDAY HOME is OFF. If the CURRENT STATE is ON, the HOLIDAY HOME is ON. Use ''▼'' and ''▲'' to adjust the date. Before and after your holiday, your normal schedule will be used. During your holiday, you will save energy and prevent your house from freezing.

Notes for installers and service engineers ⚒

Important Points

- If both HOLIDAY AWAY and HOLIDAY HOME are set to ON, FROM and UNTIL set on the HOLIDAY AWAY page cannot coincide or overlap with those set on the HOLIDAY HOME page. If they coincide or overlap, the following page is displayed:

14.5 Child Lock

The CHILD Lock function is used to prevent children error operation. The mode setting and temperature adjusting can be locked or unlocked by using CHILD LOCK function.

Go to'' MENU'' > ''CHILD LOCK''. The page is displayed:

```
┌──────────────────────────────────────┐
│  CHILD LOCK                           │
│  ──────────────────────────────────   │
│  Please input the password:           │
│                                       │
│         ■1■  2   3                     │
│                                       │
│  ──────────────────────────────────   │
│  ■OK■ ENTER  ⬍ ADJUST  ◀▶ SCROLL     │
└──────────────────────────────────────┘
```

Input the correct password, and the following page will appear:

```
┌──────────────────────────────────────┐
│  CHILD LOCK                           │
│  ──────────────────────────────────   │
│  ■HEAT TEMP. ADJUST■        UNLOCK    │
│  ──────────────────────────────────   │
│  HEAT MODE ON/OFF           UNLOCK    │
│  ──────────────────────────────────   │
│  DHW TEMP. ADJUST           UNLOCK    │
│  ──────────────────────────────────   │
│  DHW MODE ON/OFF            UNLOCK     │
│                                       │
│  ──────────────────────────────────   │
│  ■UNLOCK■ LOCK/UNLOCK ⬍ SCROLL       │
└──────────────────────────────────────┘
```

Use ''▼'' and ''▲'' to scroll and'' ON/OFF'' to select LOCK or UNLOCK.

The heat/DHW temperature can't be adjusted when the HEAT TEMP. ADJUST/DHW TEMP. ADJUST is locked. If you want to adjust the heat/DHW temperature when heat/DHW temperature is locked, the following page will appear:

The heat/DHW mode can't turn on or off when the HEAT/DHW MODE ON/OFF is locked. If you want to turn the heat/DHW mode on or off when HEAT/DHW MODE ON/OFF is locked, the following page will appear:

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```
          04:27    27-05-2019        sun

The heating temperature adjusting function
is locked. Do you want to unlock it?

              NO              YES
  OK    CONFIRM   ◀▶ SCROLL
```

```
          04:27    27-05-2019        sun

The heat mode ON/OFF function is locked.
Do you want to unlock it?

              NO              YES
  OK    CONFIRM   ◀▶ SCROLL
```

```
          04:27    27-05-2019        sun

The DHW temperature adjusting function is
locked. Do you want to unlock it?

              NO              YES
  OK    CONFIRM   ◀▶ SCROLL
```

```
          04:27    27-05-2019        sun

The DHW mode ON/OFF function is locked.
Do you want to unlock it?

              NO              YES
  OK    CONFIRM   ◀▶ SCROLL
```

If you press NO, you will return to the home page. If you press YES, you will go to the CHILD LCOK page.

14.6   Service Information

14.6.1 About Service Information

Service information menu contents are as follows:

1) SERVICE CALL

2) ERROR CODE

3) PARAMETER

4) DISPLAY

14.6.2   How to go to Service Information Menu

Go to ''MENU'' > ''SERVICE INFORMATION''. Press ''OK'' . The following page will appear:

The service call can show the service phone or mobile number. The installer can input the phone number. See ''FOR SERVICEMAN''.

```
┌─────────────────────────────────────┐
│       SERVICE INFORMATION            │
│ ┌────────┬───────┬─────────┬────────┐│
│ │SERVICE │ ERROR │PARAMETER│DISPLAY ││
│ │ CALL   │ CODE  │         │        ││
│ ├────────┴───────┴─────────┴────────┤│
│ │ PHONE NO.      0000000000000000000││
│ ├───────────────────────────────────┤│
│ │ MOBILE NO.     0000000000000000000││
│ ├───────────────────────────────────┤│
│ │                                   ││
│ └───────────────────────────────────┘│
│  ◀▶  SCROLL                          │
└─────────────────────────────────────┘
```

An error code is used to show when the fault happened and show the meaning of the error code.

```
┌─────────────────────────────────────┐
│       SERVICE INFORMATION            │
│ ┌────────┬───────┬─────────┬────────┐│
│ │SERVICE │ ERROR │PARAMETER│DISPLAY ││
│ │ CALL   │ CODE  │         │        ││
│ ├────────┼───────┼─────────┼────────┤│
│ │ HB01#  │  E1   │ 17:32   │03-06-2019│
│ ├────────┼───────┼─────────┼────────┤│
│ │ HB01#  │  E2   │ 09:20   │04-06-2019│
│ ├────────┼───────┼─────────┼────────┤│
│ │ HB01#  │  Ed   │ 12:10   │20-06-2019│
│ ├────────┼───────┼─────────┼────────┤│
│ │ HB01#  │  PL   │ 19:32   │03-07-2019│
│ └────────┴───────┴─────────┴────────┘│
│  ▲▼  ◀▶  SCROLL              1/5     │
└─────────────────────────────────────┘
```

Press OK and the following page will appear:

```
SERVICE INFORMATION

SERVICE      ERROR     PARAMETER    DISPLAY
CALL         CODE

HB01#        E1        17:32        03-06-2019
HB01#        E2        09:20        04-06-2019
HB01#        Ed        12:10        20-06-2019
HB01#        PL        19:32        03-07-2019

OK    ENTER   ⬍  SCROLL              1/5
```

Press OK to show the mean of the error code：

```
04:27    27-05-2019        sun

HB01#  E1
Communication fault between controller and
hydro box.

Please contact your dealer.

OK    CONFIRM
```

NOTE:

A total of twenty fault codes can be recorded.

The parameter function is used to display the main parameter, and there are two pages to show the parameter:

```
SERVICE INFORMATION

SERVICE      ERROR     PARAMETER    DISPLAY
CALL         CODE

ROOM SET TEMP.                        --°C
MAIN SET TEMP.                        45°C
TANK SET TEMP.                        50°C
ROOM ACTUAL TEMP.                     --°C

⬍  SCROLL                             1/2
```

```
SERVICE INFORMATION
┌──────────┬─────────┬───────────┬─────────┐
│ SERVICE  │  ERROR  │ PARAMETER │ DISPLAY │
│  CALL    │  CODE   │           │         │
├──────────┴─────────┴───────────┴─────────┤
│ MAIN ACTUAL TEMP.                   25°C  │
├──────────────────────────────────────────┤
│ TANK ACTUAL TEMP.                   55°C  │
├──────────────────────────────────────────┤
│                                           │
├──────────────────────────────────────────┤
│                                           │
├──────────────────────────────────────────┤
│ ⬍ SCROLL                            2/2   │
└──────────────────────────────────────────┘
```

The display function is used to set the interface:

```
SERVICE INFORMATION
┌──────────┬─────────┬───────────┬─────────┐
│ SERVICE  │  ERROR  │ PARAMETER │ DISPLAY │
│  CALL    │  CODE   │           │         │
├──────────┴─────────┴───────────┴─────────┤
│ TIME                               18:39  │
├──────────────────────────────────────────┤
│ DATE                          03-06-2019  │
├──────────────────────────────────────────┤
│ LANGUAGE                             EN   │
├──────────────────────────────────────────┤
│ BACKLIGHT                            ON   │
├──────────────────────────────────────────┤
│ ⬍ SCROLL                            1/2   │
└──────────────────────────────────────────┘
```

```
SERVICE INFORMATION
┌──────────┬─────────┬───────────┬─────────┐
│ SERVICE  │  ERROR  │ PARAMETER │ DISPLAY │
│  CALL    │  CODE   │           │         │
├──────────┴─────────┴───────────┴─────────┤
│ BUZZER                               ON   │
├──────────────────────────────────────────┤
│ SCREEN LOCK TIME                300 SEC   │
├──────────────────────────────────────────┤
│                                           │
├──────────────────────────────────────────┤
│                                           │
├──────────────────────────────────────────┤
│ ON/OFF  ON/OFF  ⬍ SCROLL            2/2   │
└──────────────────────────────────────────┘
```

Use "OK" to enter and use "◄", "►", "▼", "▲" to scroll.

Service Manual

14.7   Operation Parameters

Spot check the operating parameters of the hydro module and some operating parameters of the ODU.

This menu is for installer or service engineer reviewing the operation parameter of hydro box and ODU units.

- At the home page, go to ''MENU'' > ''OPERATION PARAMETERS''.
- Press ''OK''. There are six pages for the operating parameter as following. Use ''▼'', ''▲'' to scroll.

```
┌─────────────────────────────────────┐
│      OPERATION PARAMETERS            │
│ ┌─────────────────────────────────┐ │
│ │ HYDRO BOX                       │ │
│ ├─────────────────────────────────┤ │
│ │ OUTDOOR UNITS                   │ │
│ ├─────────────────────────────────┤ │
│ │                                 │ │
│ │                                 │ │
│ │                                 │ │
│ │                                 │ │
│ └─────────────────────────────────┘ │
│  ▐OK▌  ENTER  ▲▼  SCROLL            │
└─────────────────────────────────────┘
```

```
┌─────────────────────────────────────┐
│      OPERATION PARAMETERS            │
│ ─────────────────────────────────── │
│  OPERATION MODE            OFF       │
│ ─────────────────────────────────── │
│  CURRENT                  0.0 A      │
│ ─────────────────────────────────── │
│  COMPRESSOR FREQUENCY     0 HZ       │
│ ─────────────────────────────────── │
│  COMP. RUN TIME 1       1   MIN      │
│ ─────────────────────────────────── │
│  COMP. RUN TIME 2      95   MIN      │
│ ─────────────────────────────────── │
│  COMP. RUN TIME 3       3   MIN      │
│ ─────────────────────────────────── │
│  ▲▼  SCROLL                1/6       │
└─────────────────────────────────────┘
```

The parameters of high temperature hydro module are as follows:

OPERATION PARAMETERS	
COMP. RUN TIME 4	80 Hrs
EXPANSION VALVE 1	0 P
EXPANSION VALVE 2	0 P
TWOUT	25 ℃
TWIN	25 ℃
TTANK	25 ℃
⬍ SCROLL	2/6

OPERATION PARAMETERS	
SC	25 ℃
PRIMARY CURRENT	0.0 A
SECONDARY CURRENT	0.0 A
PRIMARY VOLTAGE	0 V
POWER CONSUMPTION	0 W
HEAT POWER	0 W
⬍ SCROLL	5/6

OPERATION PARAMETERS	
TCS	25 ℃
PC	0 kPa
PE	0 kPa
TC	25 ℃
TE	25 ℃
T7C	25 ℃
⬍ SCROLL	3/6

OPERATION PARAMETERS	
HYDRO BOX SOFTWARE	V00
CONTROLLER SOFTWARE	V01
⬍ SCROLL	6/6

OPERATION PARAMETERS	
T7	25 ℃
T3	25 ℃
T2A	25 ℃
TF	25 ℃
DSH	25 ℃
SSH	25 ℃
⬍ SCROLL	4/6

The parameters of ODU units are as follows:

OPERATION PARAMETERS

HYDRO BOX	
OUTDOOR UNITS	

OK   ENTER ⬍ SCROLL

OPERATION PARAMETERS

ODU2_INV	0 HZ
ODU2_PC	0 kPa
ODU2_PE	0 kPa
ODU2_DSH	0 ℃
ODU2_T4	25 ℃
ODU2_SOFTWARE	V01
⬍ SCROLL	1/3

OPERATION PARAMETERS

ODU1_INV	0 HZ
ODU1_PC	0 kPa
ODU1_PE	0 kPa
ODU1_DSH	0 ℃
ODU1_T4	25 ℃
ODU1_SOFTWARE	V01
⬍ SCROLL	1/3

OPERATION PARAMETERS

ODU3_INV	0 HZ
ODU3_PC	0 kPa
ODU3_PE	0 kPa
ODU3_DSH	0 ℃
ODU3_T4	25 ℃
ODU3_SOFTWARE	V01
⬍ SCROLL	1/3

Parameter	Meaning
OPERATION MODE	Operating Mode
CURRENT	Current
COMPRESSOR FREQUENCY	Compressor frequency
COMP. RUN TIME 1	Compressor operating time
COMP. RUN TIME 2	
COMP. RUN TIME 3	
COMP. RUN TIME 4	
EXPANSION VALVE 1	EEV1 open degree
EXPANSION VALVE 2	EEV2 open degree
TWOUT	Water outlet temperature
TWIN	Water inlet temperature
TTANK	Water tank temperature
TCS	Desired saturation temperature
PC	Discharge pressure
PE	Air return pressure
TC	Discharge pressure saturation temperature
TE	Air return pressure saturation temperature
T7C	Discharge temperature
T7	Suction temperature
T3	Cold outlet temperature
T2A	Liquid pipe temperature at R410a side
TF	Module temperature
DSH	Discharge Superheat
SSH	Air return superheat
SC	Supercoiling degree of liquid pipe at R410a side
PRIMARY CURRENT	Primary current
SECONDARY CURRENT	Secondary current
PRIMARY VOLTAGE	Primary voltage
POWER CONSUMPTION	Secondary voltage
HEAT POWER	Heating ability

14.8   User Settings

Code	Description	Default Value	Min. Value	Max. Value	Adjustment Step	Unit
TwoutS	Water outlet temperature of heating mode set on the main interface	45	25	80	1	°C
TaS	Room temperature of heating mode set on the main interface	24	17	30	1	°C
TtankS	Water tank temperature of DHW mode set on the main interface	50	25	80	1	°C
HEAT	Heat mode on/off: 0 = Off, 1 = On	0	0	1	1	/
DHW	DHW mode on/off: 0 = Off, 1 = On	0	0	1	1	/
PRESET TEMP. TIMER1	PRESET TEMP. timer 1 on/off: 0 = Off , 1 = On	0	0	1	1	/
PRESET TEMP. TIME1	PRESET TEMP. time 1	00:00	00:00	23:50	1/10	h/min
Temper.1	PRESET TEMP. 1	45	25	80	1	°C
PRESET TEMP. TIMER2	PRESET TEMP. timer 2 on/off: 0 = Off , 1 = On	0	0	1	1	/
PRESET TEMP. TIME2	PRESET TEMP. time 2	00:00	00:00	23:50	1/10	h/min
Temper.3	PRESET TEMP. 2	45	25	80	1	°C
PRESET TEMP. TIMER3	PRESET TEMP. timer 2 on/off: 0 = Off , 1 = On	0	0	1	1	/
PRESET TEMP. TIME3	PRESET TEMP. time 3	00:00	00:00	23:50	1/10	h/min
Temper.3	PRESET TEMP. 3	45	25	80	1	°C
PRESET TEMP. TIMER4	PRESET TEMP. timer 3 on/off: 0 = Off , 1 = On	0	0	1	1	/
PRESET TEMP. TIME4	PRESET TEMP. time 4	00:00	00:00	23:50	1/10	h/min
Temper.4	PRESET TEMP. 4	45	25	80	1	°C
PRESET TEMP. TIMER5	PRESET TEMP. timer 4 on/off: 0 = Off , 1 = On	0	0	1	1	/
PRESET TEMP. TIME5	PRESET TEMP. time 5	00:00	00:00	23:50	1/10	h/min
Temper.5	PRESET TEMP. 5	45	25	80	1	°C
PRESET TEMP. TIMER6	PRESET TEMP. timer 6 on/off: 0 = Off , 1 = On	0	0	1	1	/

PRESET TEMP. TIME6	PRESET TEMP. time 6	00:00	00:00	23:50	1/10	h/min
Temper.6	PRESET TEMP. 6	45	25	80	1	°C
weather temp. set	Temperature setting curve on/off: OFF = 0, ON = 1	0	0	1	1	/
shift value	Temperature setting curve shift value	0	-5	5	1	°C
multiple set point 1 required temp.	Sets water temperature at multiple set point 1	65	25	80	1	°C
multiple set point 2 required temp.	Sets water temperature at multiple set point 2	35	25	80	1	°C
DISINFECT CURRENT STATE	Disinfection on/off: OFF = 0, ON = 1	0	0	1	1	/
DISINFECT OPERATE DAY	Disinfection week	FRI	MON	SUN	1	/
DISINFECT START	Start time for disinfection	23:00	00:00	23:50	1/10	h/min
DHW PUMPTIMER1-16	Pipeline water return pump timer on/off: OFF = 0, ON = 1	0	0	1	1	/
DHW PUMP START 1-16	Pipeline water return pump start time: 1-16	00:00	00:00	23:50	1/10	h/min
TIMER1-TIMER6	Timers 1-6 on/off: 0 = Off , 1 = On	0	0	1	1	/
TIMER1-TIMER6 START	Timers 1-6 start time	00:00	00:00	23:50	1/10	h/min
TIMER1-TIMER6 END	Timers 1-6 end time	00:00	00:00	23:50	1/10	h/min
TIMER MODE 1-6	Timer mode: 0 = HEAT, 3 = DHW	0	0	3	1	/
TIMER TEMP. 1-6	Temperature setting timer	45	25	80	1	°C
CANCEL TIMER	Cancels all the defined timers	0	0	1	1	/
SILENT MODE CURRENT STATE	Silent mode on/off: 0 = Off , 1 = On	0	1	1	1	/
SILENT TIMER	Silent mode timer on/off: 0 = Off , 1 = On	1	0	1	1	/
SILENT MODE TIMER START 1	Silent mode timer start time 1	12:00	00:00	23:50	1/10	h/min
SILENT MODE TIMER END 1	Silent mode timer end time 1	15:00	00:00	23:50	1/10	h/min
SILENT MODE TIMER START 2	Silent mode timer start time 2	22:00	00:00	23:50	1/10	h/min
SILENT MODE TIMER ENDT 2	Silent mode timer end time 2	07:00	00:00	23:50	1/10	h/min
HOLIDAY AWAY CURRENT STATE	Holiday away mode on/off: 0 = Off , 1 = On	0	0	1	1	/

Midea V6R High Temperature Hydro Module

HOLIDAY AWAY DHW MODE	Holiday away DHW mode on/off: 0 = Off , 1 = On	1	0	1	1	/
HOLIDAY AWAY DISINFECT	Holiday away disinfection mode on/off: 0 = Off , 1 = On	1	0	1	1	/
HOLIDAY AWAY HEAT MODE	Holiday away heat mode on/off: 0 = Off , 1 = On	1	0	1	1	/
HOLIDAY AWAY FROM	Holiday away start date	Current date + 1	1/1/2018	1/1/2100	1	/
HOLIDAY AWAY UNTIL	Holiday away end date	Current date + 8	1/1/2018	1/1/2100	1	/
HOLIDAY home CURRENT STATE	Holiday home mode on/off: 0 = Off , 1 = On	0	0	1	1	/
HOLIDAY home FROM	Holiday home start date	Current date	1/1/2018	1/1/2100	1	/
HOLIDAY home UNTIL	Holiday home end date	Current date + 7	1/1/2018	1/1/2100	1	/
HOLIDAY home TIMER	Holiday home timer on/off: 0 = Off , 1 = On	0	0	1	1	/
CURRENT TIME	Current time	00:00	00:00	23:59	1/10	h/min
CURRENT DATE	Current date	1/1/2018	1/1/2018	1/1/2100	1	/
LANGUAGE	Language: EN = 0 , FR = 1 , IT = 2 , SP = 3 , PL = 4 , DE = 5, TR = 6	0	0	5	1	/
BACKLIGHT	Backlight on/off: 0 = Off , 1 = On	1	0	1	1	/
BUZZER	Buzzer on/off: 0 = Off , 1 = On	1	0	1	1	/
SCREEN LOCK TIME	Screen locking time	120	60	300	10	Second

14.9   On- Site FOR SERVICEMAN Settings

14.9.1 About FOR SERVICEMAN

FOR SERVICEMAN is used for installers and service engineers.
- Setting the function of equipment.
- Setting the parameters.

14.9.2 How to go to "FOR SERVICEMAN"

Go to ''MENU'' > ''FOR SERVICEMAN''. Press ''OK''.

```
┌─────────────────────────────────────┐
│  FOR SERVICEMAN                      │
│  ─────────────────────────────────   │
│  Please input the password:          │
│                                      │
│          ▐2▌  3  4                    │
│                                      │
│  ─────────────────────────────────   │
│  │OK│ ENTER ▲▼ ADJUST ◄► SCROLL      │
└─────────────────────────────────────┘
```
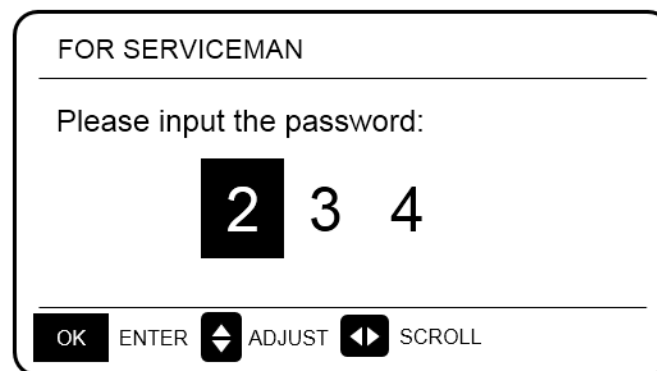
- The FOR SERVICEMAN is used for installers or service engineers. It is NOT intended for home owners to alter setting with this menu.
- It is for this reason that password protection is required to prevent unauthorised access to the service settings.
- The password is 234.

14.9.3   How to exit "FOR SERVICEMAN"

If you have set all the parameters. Press ''BACK'', and the following page will appear:

```
┌─────────────────────────────────────┐
│  FOR SERVICEMAN                      │
│  ─────────────────────────────────   │
│  Apply settings and exit?            │
│                                      │
│                                      │
│  ─────────────────────────────────   │
│       NO          │      YES         │
│  │OK│ CONFIRM ▲▼ ADJUST              │
└─────────────────────────────────────┘
```
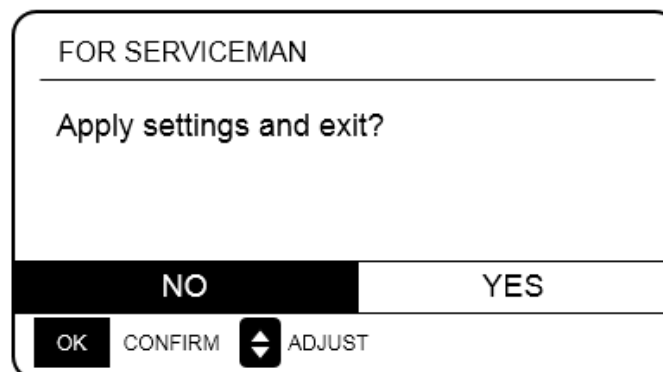
Select ''YES'' and press ''OK'' to exit the FOR SERVICEMAN. After exiting the FOR SERVICEMAN, the unit will be turned off.

14.9.4 Meanings of each setting item

No.		Code	Description	Default Value	Min. Value	Max. Value	Adjustment Step	Unit
1	DHW MODE SETTING	DHW MODE	DHW mode on/off: 0 = NON，1 = YES	1	0	1	1	/
2		DISINFECT MODE	Disinfection on/off: 0 = NON，1 = YES	1	0	1	1	/
3		DHW PRIORITY	Water heating priority on/off: 0 = NON，1 = YES	1	0	1	1	/
4		dTtankSH	Power-on return difference of water heating	5	2	10	1	°C
5		TtankS_DI	Sets temperature for disinfection	65	60	70	1	°C
6		t_DI_HIGHTEMP.	Duration of disinfection at high temperature	15	5	60	5	MIN
7		t_DI_MAX	Longest disinfection duration	210	90	300	5	MIN
8		DHW PUMP RUNNING TIME	Time-based control of pipeline water return pump on/off: 0 = Off, 1 = On	1	0	1	1	/
9	HEAT MODE SETTING	HEAT MODE	Heat mode on/off: 0 = NON，1 = YES	1	0	1	1	/
10		LEAVING WATER TEMP.	Water outlet temperature control on/off: 0 = NON，1 = YES	1	0	1	1	/
11		ROOM TEMP.	Room temperature control on/off: 0 = NON，1 = YES	0	0	1	1	/
12		t_ODU_T4_FRESH_H	Weather temperature curve T4 refresh time in heat mode	0.5	0.5	6	0.5	hours
13		dTwoutSH	Power-on return difference in heat mode (Water outlet temperature control)	5	2	10	1	°C
14		dTaSH	Power-on return difference in heat mode (ambient temperature sensor control Ta)	2	1	10	1	°C
15	WEATHER TEMP. SETTING	L_weather_Twout	Water outlet temperature at low air temperature	70	25	80	1	°C
16		H_weather_Twout	Water outlet temperature at high air temperature	45	25	80	1	°C
17		L_ODU_T4	Low ambient temperature	-10	-20	5	1	°C
18		H_ODU_T4	High ambient temperature	15	10	20	1	°C

19	MULTIPLE SET POINT	multiple set point 1	Multiple set point 1 on/off: 0 = OFF, 1 = YES	0	0	1	1	/
20	SETTING	multiple set point 2	Multiple set point 2 on/off: 0 = OFF, 1 = YES	0	0	1	1	/
21	HOLIDAY AWAY	TwoutS_H.A_H	Water outlet temperature of holiday mode	25	28	80	1	°C
22	SETTING	TtankS_H.A_DHW	Water tank temperature of holiday mode	40	25	80	1	°C
23	HEAT RECOVERY MODE	HEAT RECOVERY	Heat recovery mode on/off: 0 = NON，1 = YES	1	0	1	1	/
24	SRTTING	Ttank_recovery_max	Max. heat recovery water tank temperature	70	45	80	1	°C
25	POWER INPUT LIMITATION	POWER INPUT LIMITATION	Sets input power limitation gear: 0 = Not limited, 1 = Gear 1, 2 = Gear 2, 3 = Gear 3	0	0	3	1	/
26	SMART GRID	SMART GRID	Sets smart grid on/off: 0 = NON，1 = YES	0	0	1	1	/
27		Ttank_smartgrid_max	Sets the highest water tank temperature of the smart grid	70	45	80	1	°C
28	HYDRO BOX ADDERSSING	HYDRO BOX ADDERSSING	Sets hydro module address	0	0	63	1	/
29	TEST RUN	VACUUM PUMPING	Sets vacuumizing mode on/off	0	0	1	1	/
30		CIRCULATED PUMP RUNNING	Sets external water pump on/off	0	0	1	1	/
31		DHW PUMP RUNNING	Sets water tank and pump on/off	0	0	1	1	/

14.9.5 Setting of Special Functions

Maximum Power Limitation Function

This function can limit the power consumption of the hydro module. Choose **MENU** > **FOR SERVICEMAN** > **POWER INPUT LIMITATION**. Press **OK**. The following interface is displayed.

```
┌─────────────────────────────────────┐
│      10. POWER INPUT LIMITATION      │
│  ─────────────────────────────────── │
│ ███████████████████                  │
│ █LIMITATION LEVEL█            0       │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│  ◄► SCROLL                           │
└─────────────────────────────────────┘
```

Select speed. 0 = Not limited; 1 = Speed 1; 2 = Speed 2; 3 = Speed 3.

Speed 0: It indicates that the maximum current for hydro module operation is 16 A.

Speed 1: It indicates that the maximum current for hydro module operation is 15 A.

Speed 2: It indicates that the maximum current for hydro module operation is 14 A.

Speed 3: It indicates that the maximum current for hydro module operation is 13 A.

Heat recovery Function

This function will automatically enable the heat recovery function of the hydro module to produce hot water when the start-up capacity of the chiller's IDU is great. Choose **MENU** > **FOR SERVICEMAN** > **HEAT RECOVERY MODE SETTING**. Press **OK**. The following interface is displayed.

```
┌─────────────────────────────────────┐
│     9. HEAT RECOVERY MODE SETTING    │
│  ─────────────────────────────────── │
│ █████████████       ☑ YES ☐ NON      │
│ █HEAT RECOVERY█                      │
│ ─────────────────────────────────────│
│  Ttank_recovery_max        70 ℃      │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│ ─────────────────────────────────────│
│                                      │
│  ⬍ ◄► SCROLL                        │
└─────────────────────────────────────┘
```

HEAT RECOVERY=YES indicates that the heat recovery function is enabled. HEAT RECOVERY=NON indicates that heat recovery function is disabled.

Ttank_recovery_max indicates that the desired tank temperature of the heat recovery function is set.

15 Menu Structure Overview

15.1 Structure

1. Preset temp.
2. Weather temp. set

1. Disinfect
2. DHW pump

1. Timer
2. Weekly schedule
3. Schedule check
4. Cancel timer

1. Silent mode
2. Holiday away
3. Holiday home

1. Heat temp. adjust
2. Heat mode on/off
3. DHW temp. adjust
4. DHW mode on/off

1. Service call
2. Error code
3. Parameter
4. Display

1. Hydro box
2. Outdoor units

1. DHW mode setting
2. Heat mode setting
3. Weather temp. setting
4. Multiple set point setting
5. Holiday away setting
6. Service call
7. Restore factory setting
8. Test run
9. Heat recovery mode setting
10. Power input limitation
11. SMART GRID
12. Hydro box addressing

1. Heat mode
2. Domestic hot water(DHW)
3. Schedule
4. Options
5. Child lock
6. Service information
7. Operation parameter
8. For serviceman

1. DHW MODE
2. Disinfect mode
3. DHW priority
4. dTtankSH
5. TtankS_DI
6. t_DI_HIGHTEMP.
7. t_DI_MAX
8. DHW PUMP RUNNING TIME

1. HEAT MODE
2. LEAVING WATER TEMP.
3. ROOM TEMP.
4. t_ODU_t4_FRESH_H
5. dTwoutSH
6. dTaSH

1. L_weather_Twout
2. H_weather_Twout
3. L_ODU_T4
4. H_ODU_T4

1. Multiple set point 1
2. Multiple set point 2

1. TwoutS_H.A_H
2. TtankS_H.A_DHW

1. HEAT RECOVERY
2. Ttank_recovery_max

1. POWER INPUT LIMITATION

1. SMART GRID
2. Ttank_smartgrid_max

1. HYRDO BOX ADDRESSING

16 Maintenance

Note:

Before repair and maintenance, ensure that the hydro module is powered off.

● Water pressure

Check if the water pressure is above 0.3 bar. Add water if necessary.

● Water filter

Clean the water filter.

● Water pressure relief valve

Check for correct operation of the pressure relief valve by turning the red knob along the valve counter-clockwise:

1. If you do not hear a clacking sound, contact your local dealer.

2. If water keeps running out of the unit, close both the water inlet and outlet shut-off valves first and then contact your local dealer.

● Pressure relief valve hose

Check that the pressure relief valve hose is positioned appropriately to drain the water. If the drain pan kit is installed, make sure that the pressure relief valve hose end is positioned in the drain pan.

● Auxiliary heater vessel insulation cover

Check that the auxiliary heater insulation cover is fastened tightly around the auxiliary heater vessel.

● Sanitary hot water tank pressure relief valve (field supply)

Applies only to installations with a sanitary hot water tank. Check for correct operation of the pressure relief valve on the sanitary hot water tank.

● Sanitary hot water electric heater

Applies only to installations with a sanitary hot water tank. It is advisable to remove lime buildup on the electric heater to extend its life span, especially in regions with hot water. To do so, drain the sanitary hot water tank, remove the electric heater from the sanitary hot water tank and immerse in a bucket (or similar) with lime-removing product for 24 hours.

● Indoor unit control box

1. Carry out a through visual inspection of the control box and look for obvious defects such as loose connections or defective wiring.

2. Check for correct operation of contactors by the use of an ohmmeter. All of these contactors must be in open position.

17 Error Code Table

Error Code	Item
EE	EPROM failure
FE	No address set for High Temperature Hydro Module
C7	Protection against excessively high temperature of the inverter module
E9	Unmatched compressor model
H4	Report error H4 after 3 x L0 or L1 failure is displayed.
H5	Low pressure protection (Unrecoverable)
H6	Discharge temperature protection (Unrecoverable)
1F6	EEV1 R134A electronic expansion valve failure
2F6	EEV2 R410A electronic expansion valve failure
E1	Communication failure between wired controller and hydro module
E8	Water flow failure
F3	T_{wout} water outlet temperature sensor failure
F9	Twin water inlet temperature sensor failure
F5	T_{Tank} water tank temperature sensor failure
E7	T7C Discharge pipe temperature sensor failure
FA	T7 Suction Pipe temperature sensor failure
F7	Address is same as another indoor unit
FC	Liquid pipe temperature sensor failure at R410A side of T2A evaporation condenser
Fd	T3 cold outlet temperature sensor failure
F8	Ta room temperature sensor wired controller failure
H8	High-pressure sensor failure
Hb	Low-pressure sensor failure
E2	Communication failure between hydro module and ODU
H0	Communication failure between main control chip and driver chip
E0	Slave unit communication failure (only valid to group control)
Ed	ODU failure
E5	Voltage protection failure
PP	Insufficient superheat degree protection
P1	High pressure protection
P2	Low pressure protection
P3	Compressor overcurrent protection (secondary current protection)
P4	T7C discharge temperature protection
PL	Module high-temperature protection
F1	Loop relay protection of module plate

18 Troubleshooting

In this section, we will have a look as to how to do the troubleshooting if we encounter any error code while operating the High Temperature Hydro Module machine.

18.1 EE Troubleshooting

18.1.1 Wired Controller Output:

18.1.2 Description:

- High Temperature Hydro Module Main Board EEPROM error
- High Temperature Hydro Module stops
- Error Code is shown both on the Main Control Board and wired controller

18.1.3 Trigger Condition:

Main Control Board cannot read the EEPROM data

18.1.4 Recover Condition:

Main Control Board is able to read the EEPROM data

18.1.5 Reset Method:

Manual reset

18.1.6 Troubleshooting:
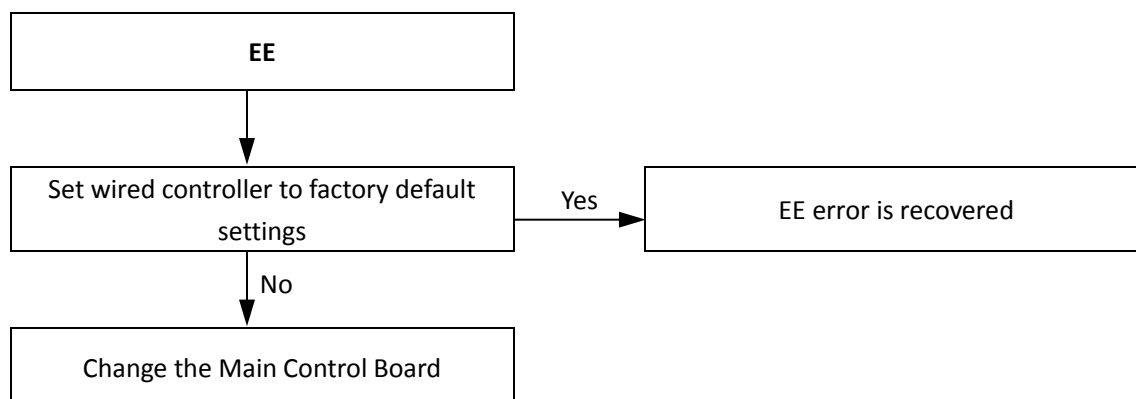
18.2 FE Troubleshooting

18.2.1 Wired Controller Output:

18.2.2 Description:

Indoor unit has not been assigned an address

18.2.3 Trigger Condition:

There is no address set for the High Temperature Hydro Module

18.2.4 Recover Condition:

Auto recover

18.2.5 Reset Method:

Auto recover

18.2.6 Possible Causes:

Initial power ON without address

18.2.7 Troubleshooting:

```
┌─────────────────────────────────┐
│               FE                │
└─────────────────────────────────┘
                │
                ▼
┌──────────────────────────┐  Yes  ┌──────────────────────────┐
│ High Temperature Hydro   │──────▶│ Assign an address to the │
│ Module has not been      │       │ high temperature hydro   │
│ assigned an address      │       │ module                   │
└──────────────────────────┘       └──────────────────────────┘
```
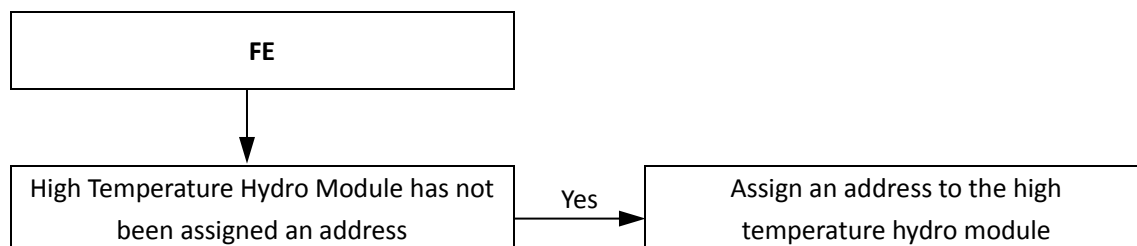
18.3 E9 Troubleshooting

18.3.1 Wired Controller Output:

18.3.2 Description:

- Compressor Mismatch
- High Temperature Hydro Module stops
- Error code is shown on the main board and the wired controller

18.3.3 Trigger Condition:

- Compressor drive parameters mismatch

18.3.4 Recover Condition:

- Compressor Drive parameters match

18.3.5 Reset Method:

- Manual reset

18.3.6 Possible Causes

- Power ON immediately after power OFF
- Inverter module is damaged

18.3.7 Troubleshooting:
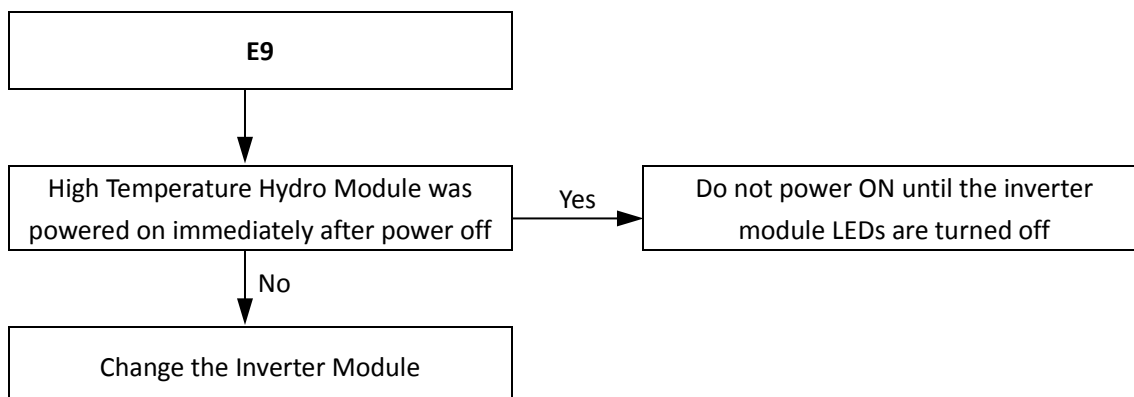
18.4 F6 Troubleshooting

18.4.1 Wired Controller Output:

```
1F6   2F6
```
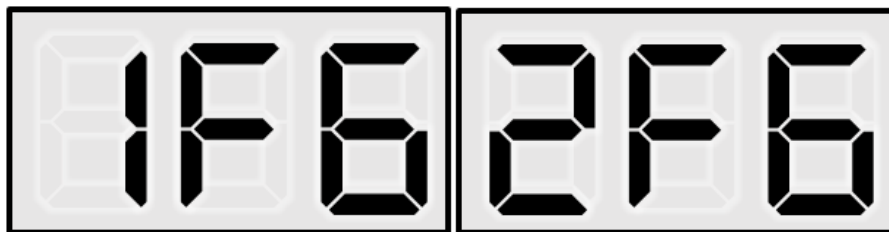
18.4.2 Description:

- EEV connection error
- High Temperature Hydro Module stops
- Error code is shown on the main board and wired controller

18.4.3 Trigger Condition:

- Main Control Board cannot receive feedback from EEV

18.4.4 Recover Condition:

- Main Board is able to receive feedback from EEV

18.4.5 Reset Method

- Manual Reset

18.4.6 Possible Causes:

- EEV is not connected to high temperature hydro module main control board.
- High Temperature Hydro Module Main Control Board is damaged

18.4.7 Troubleshooting:

```
         ┌─────────────────────────┐
         │         1F6/2F6          │
         └─────────────────────────┘
                     │
                     ▼
  ┌─────────────────────────┐   Yes   ┌─────────────────────────┐
  │ EEV connection to the   │────────▶│ Make sure that the EEV  │
  │ main PCB is loosened     │         │ is properly connected   │
  └─────────────────────────┘         └─────────────────────────┘
                     │ No
                     ▼
  ┌─────────────────────────┐   Yes   ┌─────────────────────────┐
  │   EEV Coil is damaged    │────────▶│   Change the EEV coil    │
  └─────────────────────────┘         └─────────────────────────┘
                     │ No
                     ▼
  ┌─────────────────────────┐
  │ Change the Main Control  │
  │         Board            │
  └─────────────────────────┘
```

Service Manual
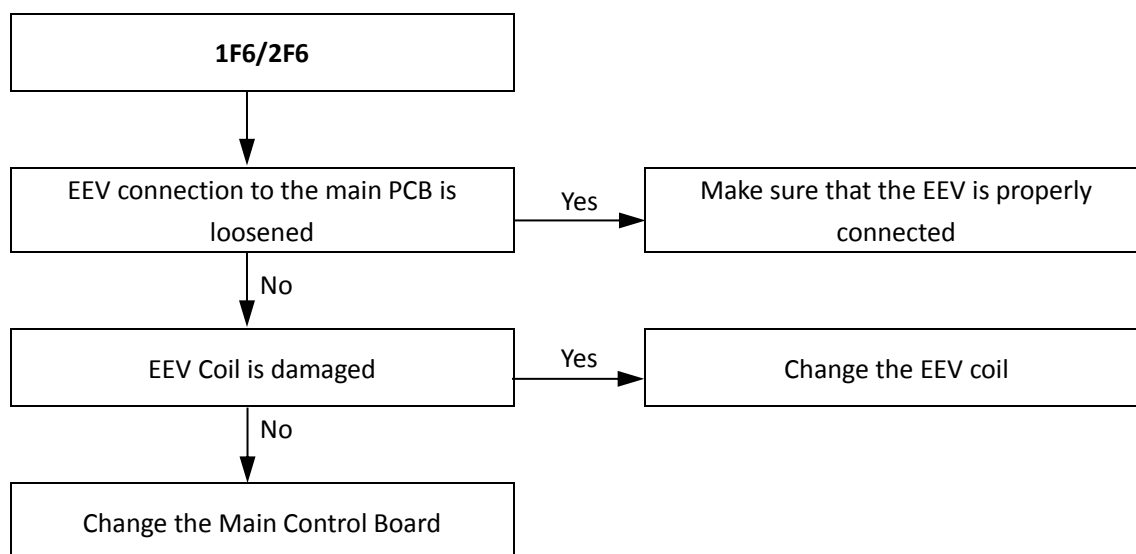
18.5 E1 Troubleshooting

18.5.1 Wired Controller Output:

18.5.2 Description:

- Communication error between high temperature hydro module and wired controller
- High Temperature Hydro Module stops
- Error code is shown on the main control board and the wired controller

18.5.3 Possible Causes

- The connection between the high temperature hydro module and wired controller is incorrect
- X1X2 cable is incorrectly connected
- High voltage or other electromagnetic signal interference
- High Temperature hydro module main control board is damaged or wired controller is damaged

18.5.4 Trigger Condition:

- Communication between high temperature hydro module and wired controller is not normal

18.5.5 Recover Condition:

- Communication between high temperature hydro module and wired controller is normal

18.5.6 Troubleshooting:

```
┌─────────────────────────────────┐
│               E1                │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐     Yes    ┌─────────────────────────────────┐
│  Communication cable X1X2 is    │ ─────────> │  Reconnect the communication    │
│         short circuit           │            │            wires                │
└─────────────────────────────────┘            └─────────────────────────────────┘
                 │ No
                 ▼
┌─────────────────────────────────┐     Yes    ┌─────────────────────────────────┐
│ Communication wires between the │ ─────────> │  Reconnect and make the         │
│ high temperature hydro module   │            │      connection better          │
│ and wired controller are        │            │                                 │
│ loosened                        │            │                                 │
└─────────────────────────────────┘            └─────────────────────────────────┘
                 │ No
                 ▼
┌─────────────────────────────────┐     Yes    ┌─────────────────────────────────┐
│ Interference from high voltage  │ ─────────> │  Ensure the communication wires │
│ (220V or higher) wires[3]       │            │  and high voltage wires are     │
│                                 │            │          separated              │
└─────────────────────────────────┘            └─────────────────────────────────┘
                 │ No
                 ▼
┌─────────────────────────────────┐     Yes    ┌─────────────────────────────────┐
│ The length of communication     │ ─────────> │ Reduce the wire length to less  │
│ wire is over 50m                │            │ than 50m or strengthen the      │
│                                 │            │            signal               │
└─────────────────────────────────┘            └─────────────────────────────────┘
                 │ No
                 ▼
┌─────────────────────────────────┐
│     Replace indoor main PCB     │
└─────────────────────────────────┘
                 │ No
                 ▼
┌─────────────────────────────────┐
│    Change the wired controller  │
└─────────────────────────────────┘
```

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18.6 E8 Troubleshooting

18.6.1 Wired Controller Output:

18.6.2 Description:

- Water Flow Error
- High Temperature Hydro Module stops
- Error code is shown on the main control board and the wired controller

18.6.3 Trigger Condition:

- High Temperature Hydro Module cannot receive feedback from water switch

18.6.4 Recover Condition:

- High Temperature Hydro Module can receive feedback from water switch

18.6.5 Possible Causes:

- Water Flow switch is not connected or open circuit
- Water flow is too small
- Water Flow switch is damaged
- Water Flow is too big

18.6.6 Troubleshooting:

```
          ┌──────────────────────┐
          │          E8          │
          └──────────────────────┘
                     │ No
                     ▼
┌──────────────────────────────┐   Yes  ┌──────────────────────────────┐
│ Water Flow Switch connected   │──────▶ │ Make sure the water flow      │
│ with the main control board   │        │ switch is well connected      │
│ is loosened                   │        │                               │
└──────────────────────────────┘        └──────────────────────────────┘
                     │ No
                     ▼
┌──────────────────────────────┐   Yes  ┌──────────────────────────────┐
│ Water Flow is too big or too  │──────▶ │ Make sure that the water flow │
│ small                         │        │ is correct                    │
└──────────────────────────────┘        └──────────────────────────────┘
                     │ No
                     ▼
┌──────────────────────────────┐   Yes  ┌──────────────────────────────┐
│ Water flow switch is damaged  │──────▶ │ Change the water flow switch  │
└──────────────────────────────┘        └──────────────────────────────┘
                     │ No
                     ▼
┌──────────────────────────────┐
│ Change the main control board │
└──────────────────────────────┘
```
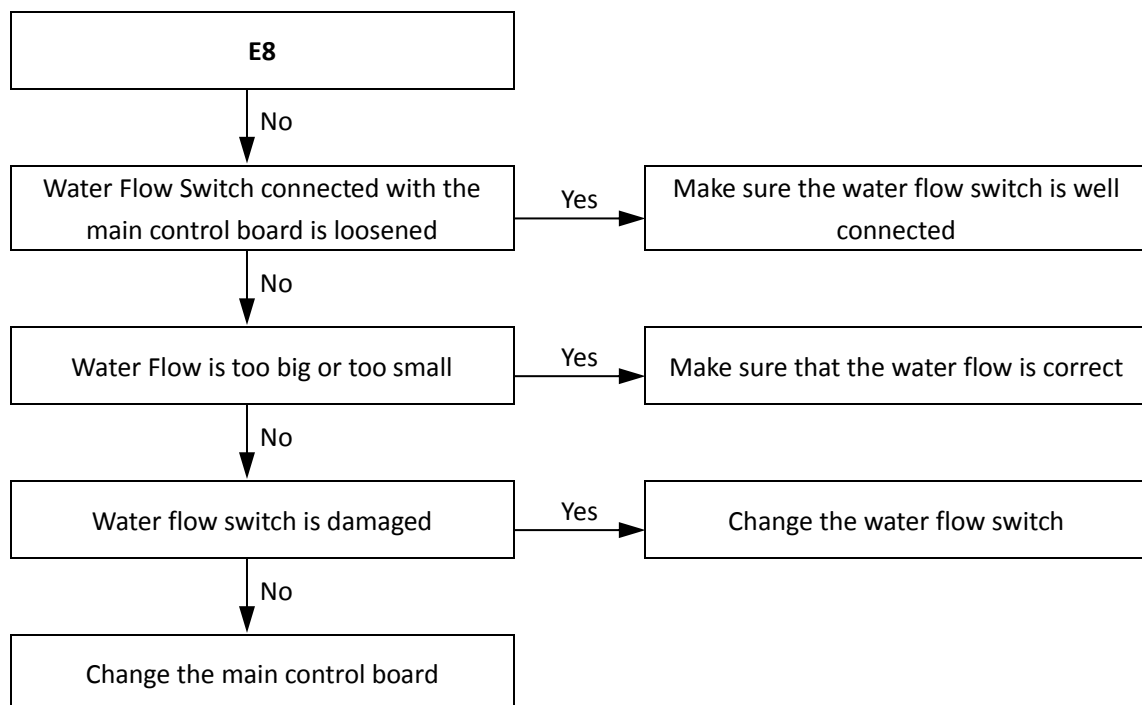
18.7 F3/F9/FA/FC/Fd Troubleshooting
18.7.1 Wired Controller Output:
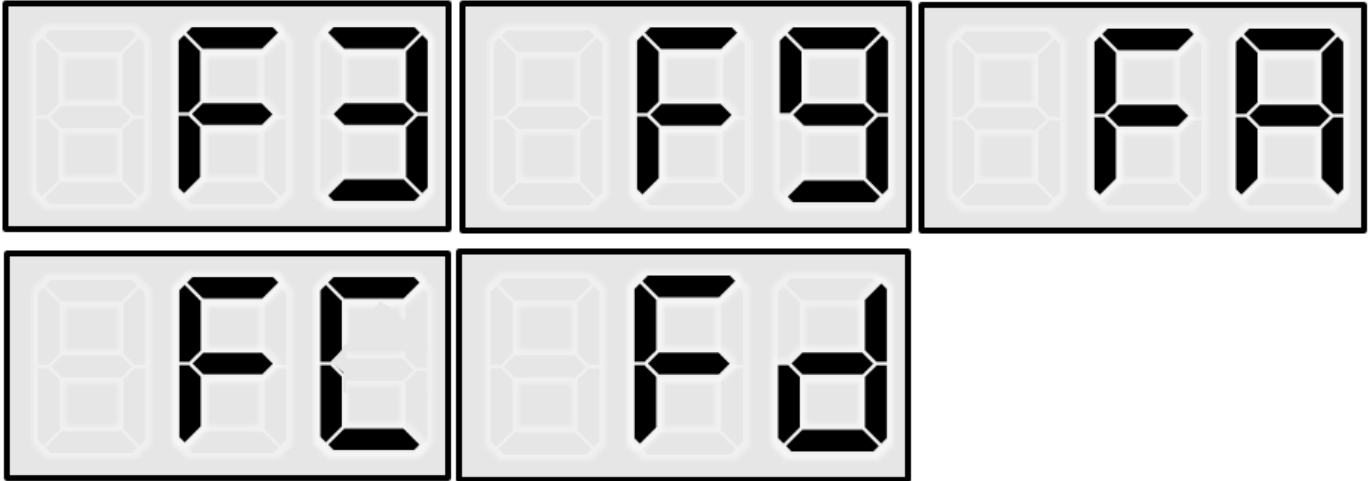
18.7.2 Description:

- F3 indicates water outlet temperature sensor (T_{Wout}) error.
- F9 indicates water inlet temperature sensor (T_{Win}) error.
- FA indicates suction temperature sensor (T2A) error
- FC indicates R410A circuit liquid pipe temperature sensor (T2A) error
- Fd indicates R134a circuit pipe temperature sensor (T3) error
- High Temperature Hydro Module stops
- Error code is shown on the main control board and the wired controller

18.7.3 Trigger Condition:

- Main control Board cannot receive feedback signal from T_{Wout} / T_{Win} /T7/T2A/T3 sensors

18.7.4 Recover Condition:

- Main control Board cannot receive feedback signal from T_{Wout} / T_{Win} /T7/T2A/T3 sensors

18.7.5 Reset Method:

- Auto Reset

18.7.6 Possible Causes

- Sensors are not well connected to the high temperature hydro module main control board
- High temperature hydro module main control board Is damaged.

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18.7.7 Troubleshooting:

```
┌─────────────────────────────┐
│      F3/F9/FA/FC/Fd          │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐           ┌─────────────────────────────┐
│ The connections between the  │   Yes     │ Make sure that there is      │
│ T_Wout / T_Win /T7/T2A/T3    │ ────────▶ │ proper connection            │
│ sensors and main control     │           │                              │
│ board respectively are       │           │                              │
│ loosened                     │           │                              │
└─────────────────────────────┘           └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐           ┌─────────────────────────────┐
│ Sensor is short circuit or   │   Yes     │ Change the sensors           │
│ open circuit                 │ ────────▶ │                              │
└─────────────────────────────┘           └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐
│ Change the Main Control Board│
└─────────────────────────────┘
```
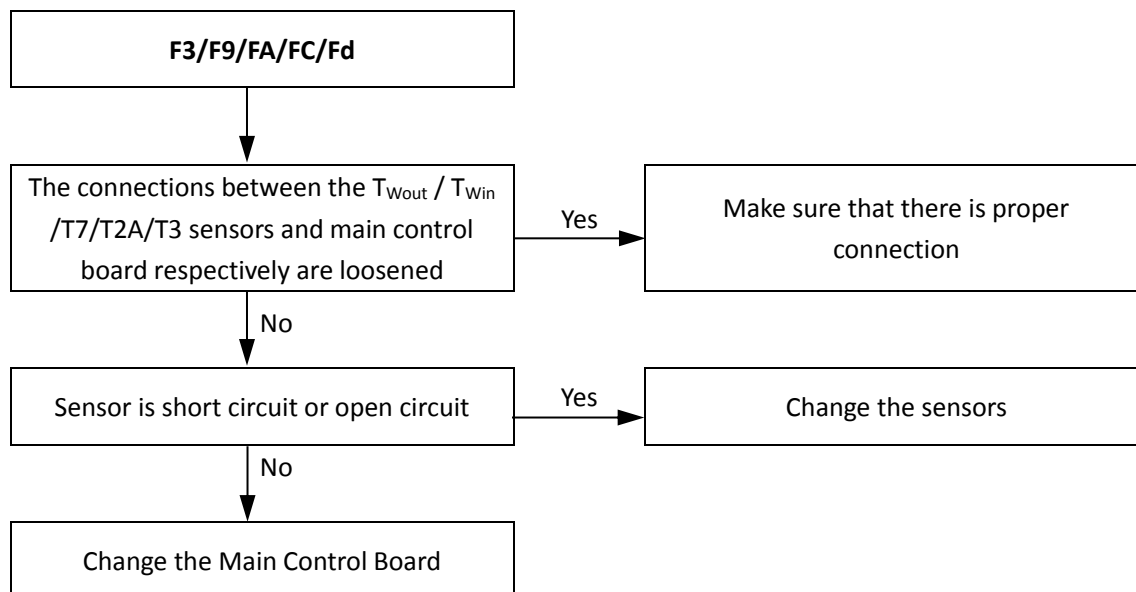
18.8 E7 Troubleshooting

18.8.1 Wired Controller Output:

18.8.2 Description:

- Compressor discharge temperature sensor (T7C) error
- High Temperature Hydro Module stops
- Error code is shown on the main control board and the wired controller

18.8.3 Trigger Condition:

- Discharge pressure≥ 1.2 MPa and discharge temperature≤15°C and lasts for 2 minutes

18.8.4 Recover Condition:

- Discharge temperature and pressure both have normal value

18.8.5 Possible Causes

- Sensor is not connected well with the high temperature hydro module
- High Temperature Hydro Module Main control board is damaged

18.8.6 Troubleshooting:
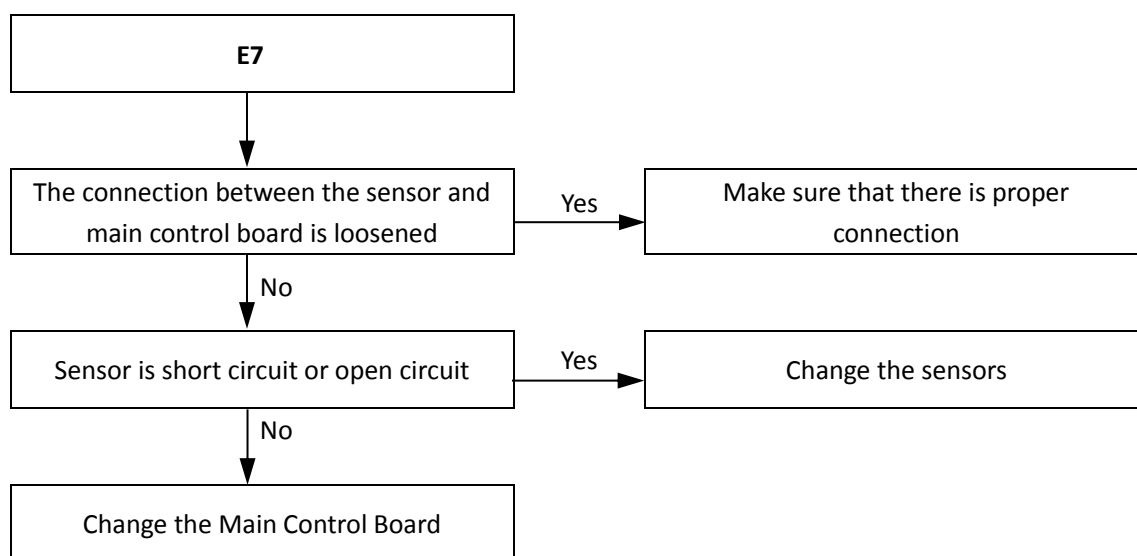
18.9 F8 Troubleshooting

18.9.1 Wired Controller Output:

18.9.2 Description:

- Room temperature sensor error (Room Temperature sensor is inside the wired controller)
- High Temperature Hydro Module stops
- Error code is shown on the main control board and the wired controller

18.9.3 Trigger Condition:

- High Temperature Hydro Module cannot receive signal from the room temperature sensor which might be damaged.

18.9.4 Recover Condition:

- High Temperature Hydro Module can receive signal from the room temperature sensor.

18.9.5 Possible Causes:

- The wired controller PCB is broken

18.9.6 Troubleshooting:

```
        ┌─────────────────────────────┐
        │             F8              │
        └─────────────┬───────────────┘
                      │
                      ▼
        ┌─────────────────────────────┐
        │  Change the wired controller │
        └─────────────────────────────┘
```
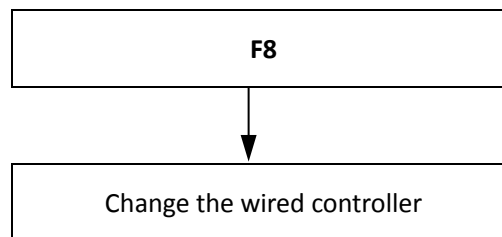
18.10 F7 Troubleshooting

18.10.1 Wired Controller Output:

18.10.2 Description:

- High Temperature Hydro Module has same address as another indoor unit.
- High Temperature Hydro Module stops
- Error code is shown on the main control board and the wired controller

18.10.3 Trigger Condition:

- High Temperature Hydro Module has same address as another indoor unit.

18.10.4 Recover Condition:

- High Temperature Hydro Module address is different than all other indoor units.

18.10.5 Reset Method:

- Auto Recovery

18.10.6 Troubleshooting:

```
                    ┌─────────────────────────────┐
                    │             F7              │
                    └─────────────────────────────┘
                                  │
                                  ▼
                    ┌─────────────────────────────┐
                    │  Make sure that the address  │
                    │  of High Temperature Hydro   │
                    │  Module is different than    │
                    │  all other indoor units      │
                    └─────────────────────────────┘
                                  │ No
                                  ▼
                    ┌─────────────────────────────┐
                    │  Change the main control Board│
                    └─────────────────────────────┘
```
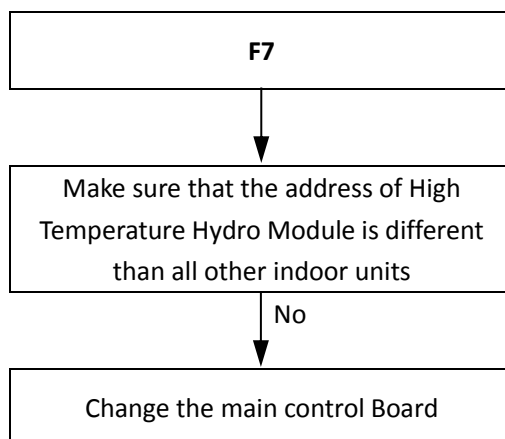
18.11 F5 Troubleshooting (Only when DHW Mode= Yes)

18.11.1 Wired Controller Output:

18.11.2 Description:

- Water Tank temperature sensor error
- High Temperature Hydro Module stops
- Error code is show on the main control board and the wired controller

18.11.3 Trigger Condition:

- High Temperature Hydro Module cannot receive signal from the water tank temperature sensor which might be damaged.

18.11.4 Recover Condition:

- High Temperature Hydro Module can receive signal from the water tank temperature sensor.

18.11.5 Possible Causes:

- Temperature sensor is connected improperly
- Wrong setting in job site (MENU > FOR SERVICEMAN)
- High Temperature Hydro Module main control board is broken

18.11.6 Troubleshooting:

```
                    ┌─────────────────────┐
                    │         F5          │
                    └──────────┬──────────┘
                               │
                               ▼
        ┌─────────────────────────────┐   No    ┌──────────────────────────────┐
        │  The project has water tank  ├────────►│ Enter "FOR SERVICEMAN" to set │
        └──────────────┬──────────────┘          │      DHW mode= NON            │
                       │ Yes                      └──────────────────────────────┘
                       ▼
        ┌─────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │  The communication cable     ├────────►│ Make sure there is a proper  │
        │  connection between the high │         │         connection           │
        │  temperature hydro module    │         └──────────────────────────────┘
        │  and sensor is loose         │
        └──────────────┬──────────────┘
                       │ No
                       ▼
        ┌─────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │  Temperature sensor is open  ├────────►│ Change the water tank        │
        │  circuit or close circuit    │         │ temperature sensor           │
        └──────────────┬──────────────┘          └──────────────────────────────┘
                       │ No
                       ▼
        ┌─────────────────────────────┐
        │  Change the main control board │
        └─────────────────────────────┘
```
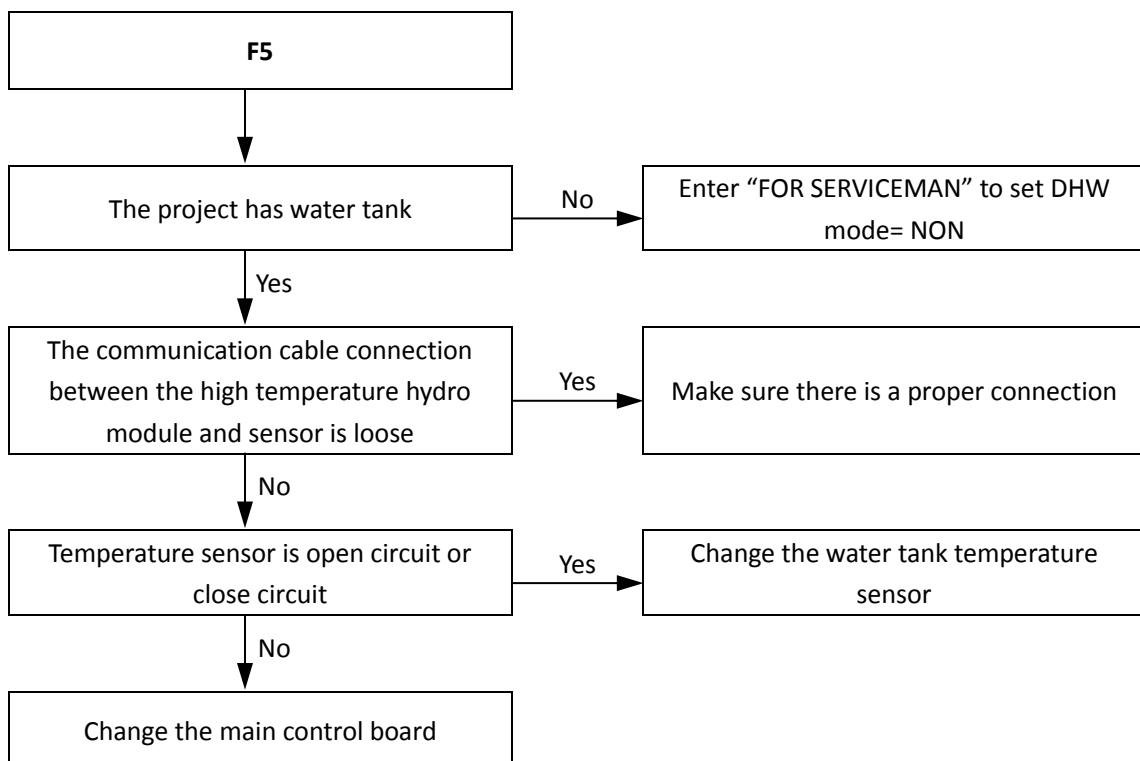
18.12 H8/Hb Troubleshooting

18.12.1 Wired Controller Output:
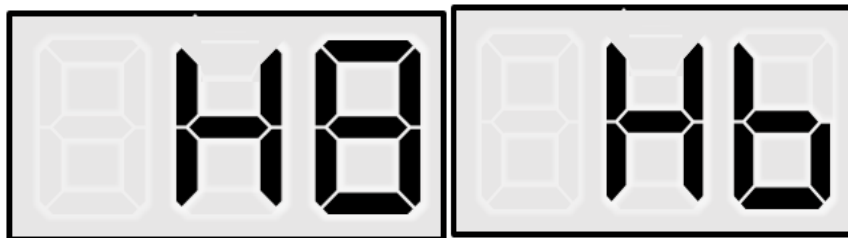
18.12.2 Description:

- H8 indicates high pressure sensor error
- Hb indicates low pressure sensor error
- High Temperature Hydro module stops
- Error code is shown on the main control board and wired controller

18.12.3 Trigger Condition:

- DC Voltage output by pressure sensors is less than 0.5 V or more than 4.5 V

18.12.4 Recover Condition:

- DC Voltage output by pressure sensors is more than 0.5 V or less than 4.5 V

18.12.5 Reset Method:

- Auto Reset

18.12.6 Possible causes:

- Sensor is connected incorrectly or is damaged
- High Temperature Hydro Module main control board is broken

18.12.7 Troubleshooting:

Service Manual
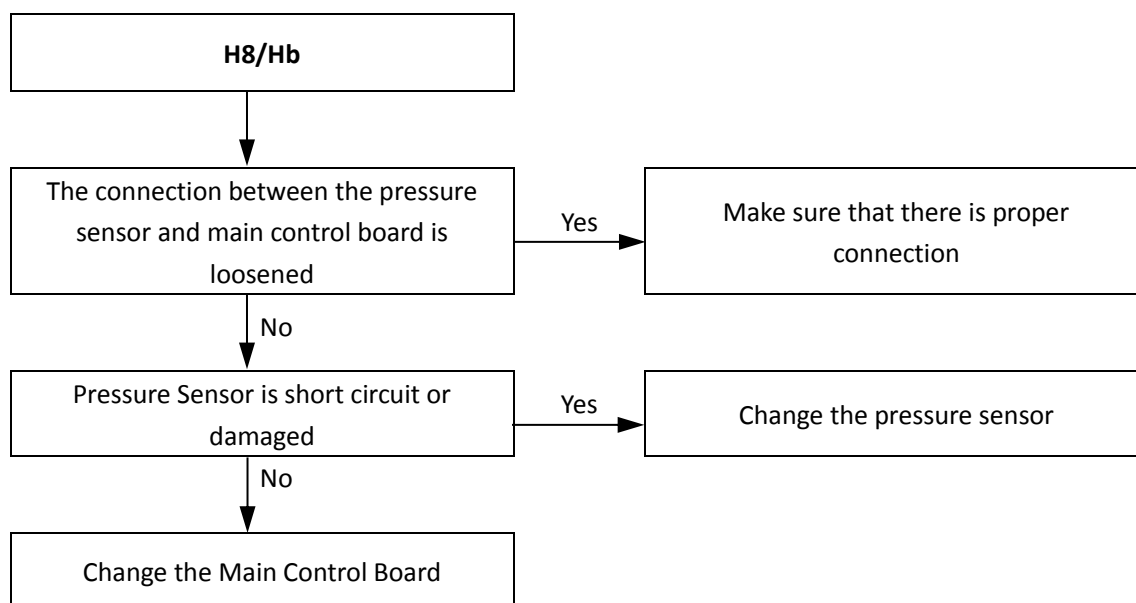
18.13 E2 Troubleshooting

18.13.1 Wired Controller Output:

18.13.2 Description:

- Communication Error between high temperature hydro module and outdoor unit within 2 minutes
- High Temperature hydro module stops
- Error code is shown on the main control board and wired controller

18.13.3 Trigger Condition:

- There is no communication between high temperature hydro module

18.13.4 Recover Condition:

- Once the communication between high temperature hydro module and outdoor unit is normal

18.13.5 Reset Method:

- Auto reset

18.13.6 Possible Causes:

- The communication cable is not well connected between hydro box and outdoor unit
- The communication is effected by high voltage or other electromagnetic interference
- Communication cable length is too long
- Outdoor unit power input is abnormal
- Hydro box main board is broken
- Outdoor unit main board is broken

18.13.7 Troubleshooting:

```
                    ┌─────────────────────────┐
                    │           E2            │
                    └────────────┬────────────┘
                                 │
                                 ▼
   ┌──────────────────────────────────┐   Yes   ┌──────────────────────────────────┐
   │ Communication cable PQE is connected ├────────▶│  Reconnect the communication wires │
   │ incorrectly or is short circuit   │         └──────────────────────────────────┘
   └────────────────┬─────────────────┘
                    │ No
                    ▼
   ┌──────────────────────────────────┐   Yes   ┌──────────────────────────────────┐
   │ Outdoor unit power supply is abnormal ├──────▶│  Make sure that the power supply is │
   │                                  │         │              normal               │
   └────────────────┬─────────────────┘         └──────────────────────────────────┘
                    │ No
                    ▼
   ┌──────────────────────────────────┐   Yes   ┌──────────────────────────────────┐
   │  Communication cable PQE is loose  ├────────▶│  Make sure that there is proper   │
   │                                  │         │             connection            │
   └────────────────┬─────────────────┘         └──────────────────────────────────┘
                    │ No
                    ▼
   ┌──────────────────────────────────┐   Yes   ┌──────────────────────────────────┐
   │ Interference from high voltage (220V or ├───▶│  Ensure the communication wires and │
   │ higher) wires[3]                 │         │  high voltage wires are separated  │
   └────────────────┬─────────────────┘         └──────────────────────────────────┘
                    │ No
                    ▼
   ┌──────────────────────────────────┐   Yes   ┌──────────────────────────────────┐
   │ Communication wires are close to a │        │ Remove the source of interference, or │
   │ source of electromagnetic radiation such ├──▶│  add additional shielding to the   │
   │ as transformer or strong fluorescent lamp │  │        communication wires         │
   └────────────────┬─────────────────┘         └──────────────────────────────────┘
                    │ No
                    ▼
   ┌──────────────────────────────────┐   Yes   ┌──────────────────────────────────┐
   │ The length of communication wire is over ├──▶│   Reduce the wire length to less than │
   │ 1200m                            │         │  1200m or strengthen the signal   │
   └────────────────┬─────────────────┘         └──────────────────────────────────┘
                    │ No
                    ▼
   ┌──────────────────────────────────┐
   │      Replace indoor main PCB      │
   └──────────────────────────────────┘
```

Service Manual

Midea V6R High Temperature Hydro Module

18.14 H0 Troubleshooting

18.14.1 Wired Controller Output:

18.14.2 Description:

- Communication error between main control board and inverter module
- High Temperature Hydro Module stops
- Error code is shown on the main control board and wired controller

18.14.3 Trigger Condition:

- Main Control board chip cannot communicate with inverter module chip for more than 2 minutes and above

18.14.4 Recover Condition:

- Communication between Main Control Board and inverter module is recovered

18.14.5 Reset Method:

- Auto Reset

18.14.6 Possible Causes:

- Communication cable between main board and inverter module is loosen
- High Temperature Hydro Module Main Board is damaged
- Inverter module is damaged

18.14.7 Troubleshooting:

```
                    ┌─────────────────────┐
                    │         H0          │
                    └──────────┬──────────┘
                               │
                               ▼
        ┌──────────────────────────────┐   Yes   ┌──────────────────────────┐
        │ The communication cable       │────────>│ Make sure that there is  │
        │ between Main Control Board     │         │ proper connection        │
        │ and inverter module is         │         └──────────────────────────┘
        │ loosened                       │
        └───────────────┬────────────────┘
                        │ No
                        ▼
        ┌──────────────────────────────┐
        │ Change the Main Control Board │
        └───────────────┬────────────────┘
                        │ No
                        ▼
        ┌──────────────────────────────┐
        │ Change the Inverter Module    │
        └──────────────────────────────┘
```
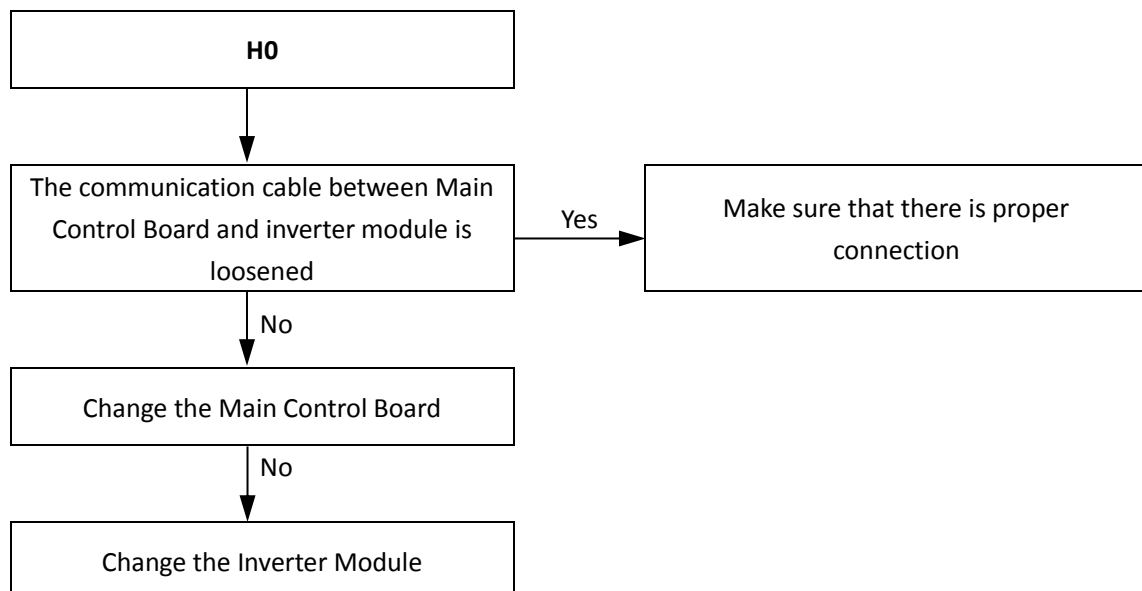
18.15 E0 (Only in Group Control) Troubleshooting

18.15.1 Wired Controller Output:

18.15.2 Description:

- Master hydro box and slave hydro box communication error
- Hydro box stops
- Error code is showed on main board and wired controller of master and slave hydro box

18.15.3 Trigger Condition:

- Slave High Temperature Hydro Module cannot receive signal from master high temperature hydro module for 1 minute.

18.15.4 Recover Condition:

- Slave High Temperature Hydro Module can receive the signal from master high temperature hydro module

18.15.5 Reset Method:

- Auto Reset

18.15.6 Possible Causes:

- Wrong communication cables connection between the master high temperature hydro module and slave high temperature hydro module.
- Switch is set incorrect
- D1 D2 E The wiring block is loosen
- Master or slave high temperature hydro module main control board is damaged

18.15.7 Troubleshooting:
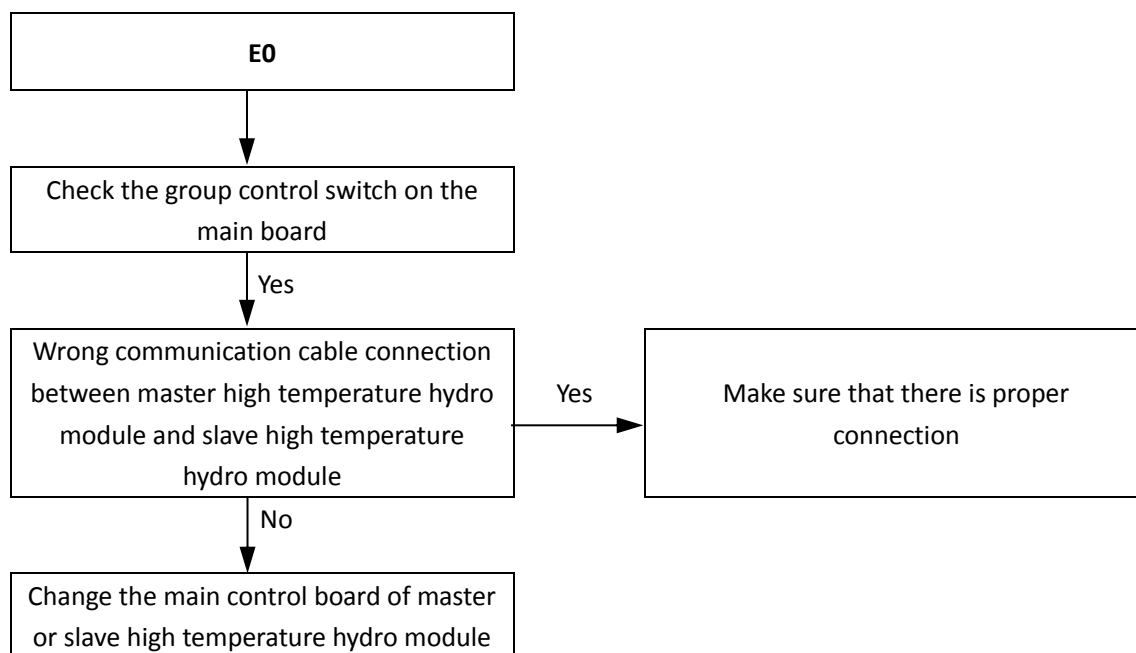
Notes:

1. The master high temperature hydro module SW4 should be set as 11 and slave high temperature hydro module should be set as 10.
2. Communication cable D1 D2 E should be three cores shielded cable and cannot be open circuit or short circuit

18.16 Ed Troubleshooting

18.16.1 Wired Controller Output:

18.16.2 Description:

- Outdoor Unit Error

18.16.3 Trigger Condition:

- Outdoor Unit Error

18.16.4 Recover Condition:

- Outdoor unit error disappears

18.16.5 Reset Method:

- Auto Reset

18.16.6 Possible Causes:

- Outdoor unit error
- High Temperature Hydro Module Main Control Board is broken

18.16.7 Troubleshooting:

```
                    ┌─────────────────────────┐
                    │           Ed            │
                    └─────────────────────────┘
                                 │
                                 ▼
      ┌─────────────────────────────┐   Yes   ┌─────────────────────────────┐
      │ Outdoor Unit main control    │────────▶│ Change the outdoor unit main │
      │ board is damaged             │         │ control board                │
      └─────────────────────────────┘         └─────────────────────────────┘
                    │ No
                    ▼
      ┌─────────────────────────────┐
      │ Change the High Temperature  │
      │ Hydro Module Main PCB        │
      └─────────────────────────────┘
```
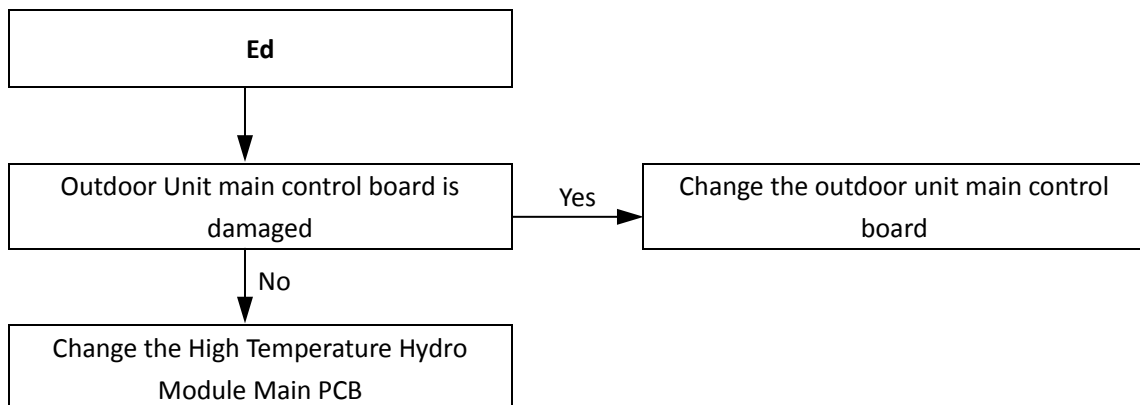
18.17 E5 Troubleshooting

18.17.1 Wired Controller Output:

18.17.2 Description:

- Power Supply is abnormal
- High Temperature Hydro Module stops
- Error code is shown on main control board and wired controller

18.17.3 Trigger Condition:

- Power supply voltage< 170V or >270V

18.17.4 Recover Condition:

- Hydro box power supply ≥170V and ≤270V

18.17.5 Reset Method:

- Auto reset

18.17.6 Possible Causes"

- High Temperature Hydro Module power supply is abnormal
- High Temperature Hydro Module main control board is broken

18.17.7 Troubleshooting:
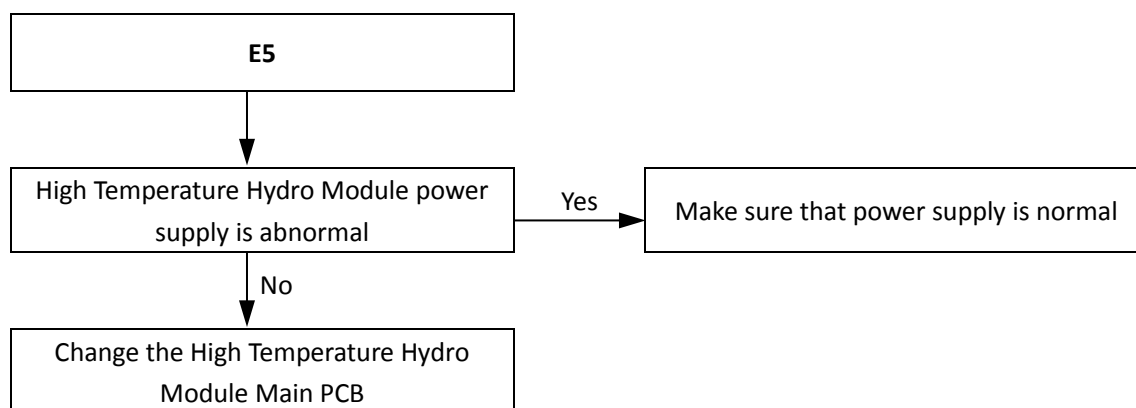
18.18 PP Troubleshooting

18.18.1 Wired Controller Output:

18.18.2 Description:

- This protection will occur when the discharge superheat for compressor is not sufficient
- High Temperature Hydro module stops
- Error code is shown on the main control board and wired controller

18.18.3 Trigger Condition:

- Discharge Superheat $\leqslant$ 6℃ and lasts 90min

18.18.4 Recover Condition:

- Discharge superheat recovers to normal value

18.18.5 Reset Method:

- Auto reset

18.18.6 Possible Causes:

- Discharge temperature sensor is damaged or connected incorrectly
- Discharge pressure is too high
- High Temperature Hydro Module main control board is damaged

18.18.7 Troubleshooting:

```
┌─────────────────────────────────┐
│               PP                │
└─────────────────────────────────┘
                │
                ▼
┌─────────────────────────────────┐      Yes   ┌──────────────────────────────────┐
│ Discharge temperature sensor is │───────────▶│ Make sure there is a proper       │
│ connected to the main board     │            │ connection                        │
│ incorrectly                     │            └──────────────────────────────────┘
└─────────────────────────────────┘
                │ No
                ▼
┌─────────────────────────────────┐      Yes   ┌──────────────────────────────────┐
│ Discharge Temperature Sensor    │───────────▶│ Change the Discharge Temperature  │
│ open circuit or short circuit   │            │ Sensor                            │
└─────────────────────────────────┘            └──────────────────────────────────┘
                │ No
                ▼
┌─────────────────────────────────┐      Yes   ┌──────────────────────────────────┐
│ Discharge pressure is too high  │───────────▶│ Refer to P1 troubleshooting       │
└─────────────────────────────────┘            └──────────────────────────────────┘
                │ No
                ▼
┌─────────────────────────────────┐
│ Change the main control board   │
└─────────────────────────────────┘
```
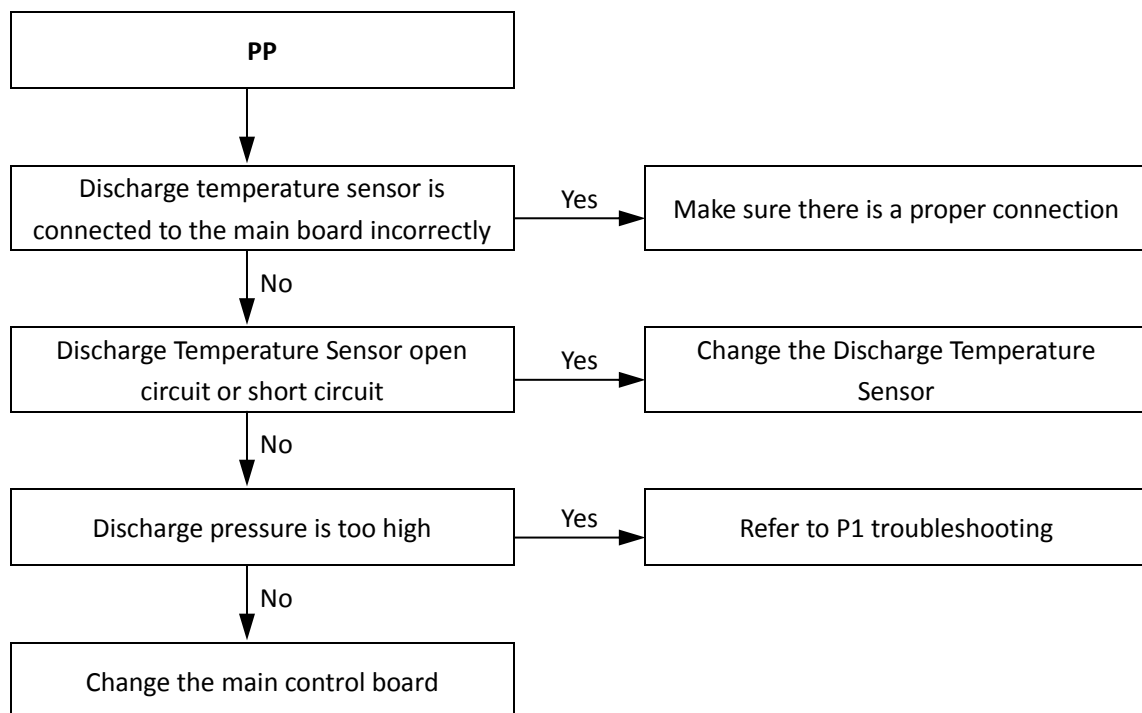
18.19 P1 Troubleshooting

18.19.1 Wired Controller Output:
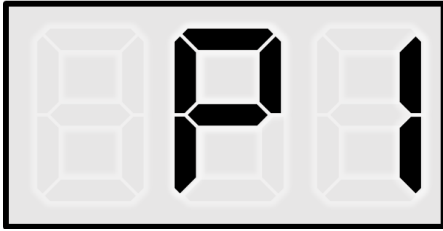
18.19.2 Description:

- High pressure protection
- High Temperature Hydro Module stops
- Error code is shown on main control board and wired controller

18.19.3 Trigger Condition:

- High pressure $\geqslant$ 3.05MPa

18.19.4 Recover Condition:

- High pressure $\leqslant$ 2.65MPa

18.19.5 Reset Method:

- Auto Reset

18.19.6 Possible Causes:

- Inlet water temperature is more than 80℃
- High pressure sensor or high pressure switch is connected incorrectly or is damaged
- R134a circuit is blocked
- Condenser heat exchange is not good
- Condenser plate heat exchanger is dirty and blocked
- High Temperature Hydro Module Main Control Board is broken

Midea

18.19.7 Troubleshooting:

```
┌─────────────────────────────┐
│             P1              │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐       Yes    ┌─────────────────────────────┐
│ Inlet water temperature is  │─────────────▶│ Make sure that the inlet    │
│ higher than 80℃             │              │ water temperature is less   │
│                             │              │ than 80℃                    │
└─────────────────────────────┘              └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐       Yes    ┌─────────────────────────────┐
│ High pressure sensor or     │─────────────▶│ Make sure that there is     │
│ high pressure switch is     │              │ proper connection           │
│ connected incorrectly       │              │                             │
└─────────────────────────────┘              └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐       Yes    ┌─────────────────────────────┐
│ High pressure sensor is     │─────────────▶│ Change the pressure sensor  │
│ damaged                     │              │                             │
└─────────────────────────────┘              └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐       Yes    ┌─────────────────────────────┐
│ R134a circuit blocked by    │─────────────▶│ Check the refrigerant       │
│ copper pipe bending or EEV  │              │ system                      │
│ blocked                     │              │                             │
└─────────────────────────────┘              └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐       Yes    ┌─────────────────────────────┐
│ Condenser heat exchange is  │─────────────▶│ Check the refrigerant or    │
│ not good                    │              │ water system                │
└─────────────────────────────┘              └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐
│ Change the High Temperature │
│ Hydro Module Main Control   │
│ Board                       │
└─────────────────────────────┘
```

18.20 P2/H5 Troubleshooting

18.20.1 Wired Controller Output:
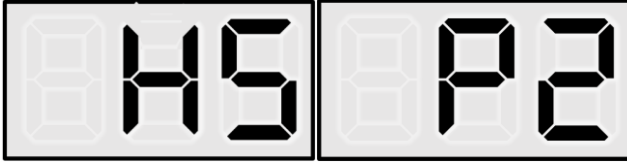
18.20.2 Description:

- Low pressure protection
- High Temperature hydro module stops
- Error code is shown on the main control board and wired controller

18.20.3 Trigger Condition:

- For P2 protection: suction pressure $\leqslant$ 0.1MPa
- For H5 protection: P2 occurs three times within 60min

18.20.4 Recover Condition:

- Suction pressure $\geqslant$ 0.2MPa

18.20.5 Reset Method:

- For P2 protection: Auto reset
- For H5 protection: manual reset

18.20.6 Possible Causes:

- High Temperature Hydro Module is installed outside and the ambient temperature is lower than -5℃
- R134a refrigerant circuit leakage
- Evaporating capacity is not sufficient
- High Temperature Hydro Module Main Control Board is damaged

18.20.7 Troubleshooting:

```
                    ┌─────────────────────┐
                    │        P2/H5        │
                    └──────────┬──────────┘
                               │
                               ▼
        ┌──────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │ Inlet water temperature is   │────────▶│ Make sure that the inlet     │
        │ higher than 80℃              │         │ water temperature is less    │
        └──────────────┬───────────────┘         │ than 80℃                     │
                       │ No                       └──────────────────────────────┘
                       ▼
        ┌──────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │ High pressure sensor or high │────────▶│ Make sure that there is      │
        │ pressure switch is connected │         │ proper connection            │
        │ incorrectly                  │         └──────────────────────────────┘
        └──────────────┬───────────────┘
                       │ No
                       ▼
        ┌──────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │ High pressure sensor is      │────────▶│ Change the pressure sensor   │
        │ damaged                      │         └──────────────────────────────┘
        └──────────────┬───────────────┘
                       │ No
                       ▼
        ┌──────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │ R134a circuit blocked by     │────────▶│ Check the refrigerant system │
        │ copper pipe bending or EEV   │         └──────────────────────────────┘
        │ blocked                      │
        └──────────────┬───────────────┘
                       │ No
                       ▼
        ┌──────────────────────────────┐   Yes   ┌──────────────────────────────┐
        │ Evaporating Capacity is not  │────────▶│ Check the refrigerant system │
        │ sufficient                   │         └──────────────────────────────┘
        └──────────────┬───────────────┘
                       │ No
                       ▼
        ┌──────────────────────────────┐
        │ Change the High Temperature  │
        │ Hydro Module Main Control    │
        │ Board                        │
        └──────────────────────────────┘
```

18.21 P3 Troubleshooting

18.21.1 Wired Controller Output:
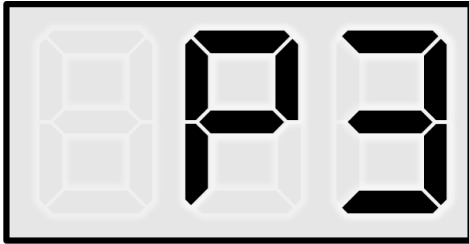
18.21.2 Description:

- Compressor current protection
- High Temperature Hydro Module stops
- Error code is shown on the Main Control Board and the wired controller

18.21.3 Trigger Condition:

- Compressor current $\geqslant$ 9.5 A.

18.21.4 Recover Condition:

- Compressor current $\leqslant$ 6.7 A.

18.21.5 Possible causes:

- Power supply is abnormal
- Condenser heat exchange capacity is insufficient
- R134a refrigerant circuit is blocked
- Inverter module is damaged
- Compressor is damaged
- Hydro module main control board is damaged

18.21.6 Troubleshooting:

```
┌─────────────────────────────┐
│             P3              │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐   Yes   ┌─────────────────────────────┐
│   Power supply is abnormal  │────────▶│    Check the power supply   │
└─────────────────────────────┘         └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐   Yes   ┌─────────────────────────────┐
│ Condenser heat exchange     │────────▶│      Check the system       │
│ capacity is insufficient    │         └─────────────────────────────┘
└─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐   Yes   ┌─────────────────────────────┐
│ R134a refrigerant circuit   │────────▶│      Check the system       │
│ is blocked by bending       │         └─────────────────────────────┘
│ copper pipe or EEV blocked  │
└─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐   Yes   ┌─────────────────────────────┐
│  Inverter module is damaged │────────▶│   Change the inverter module│
└─────────────────────────────┘         └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐   Yes   ┌─────────────────────────────┐
│    Compressor is damaged    │────────▶│    Change the compressor    │
└─────────────────────────────┘         └─────────────────────────────┘
              │ No
              ▼
┌─────────────────────────────┐
│ Change the High Temperature │
│ Hydro Module Main Control   │
│ Board                       │
└─────────────────────────────┘
```

18.22 P4/H6 Troubleshooting

18.22.1 Wired Controller Output:
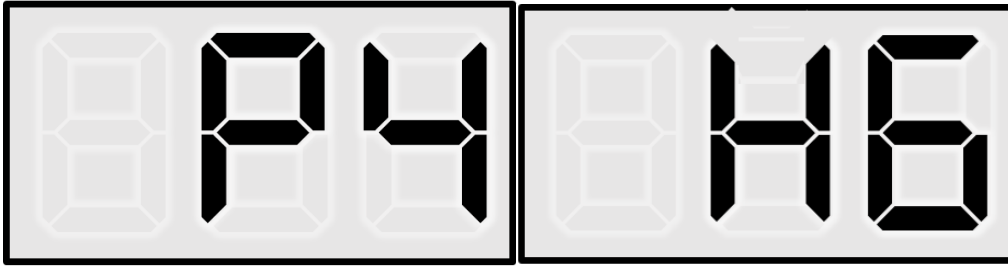
18.22.2 Description:

- High discharge temperature protection
- High Temperature Hydro module stops
- Error code is shown on main control board and wired controller

18.22.3 Trigger Condition:

- For P4 protection: Discharge temperature (T7C) $\geqslant$ 110℃.
- For H6 protection: P4 protection occurs three times within 100min

18.22.4 Recover Condition:

- Discharge temperature (T7C) $<$ 85℃

18.22.5 Possible Causes:

- Temperature sensor is connected improperly or damaged
- Insufficient refrigerant
- R134a refrigerant circuit blocked
- Condenser heat exchange capacity is insufficient
- High Temperature Hydro Module main control board is damaged

18.22.6 Troubleshooting:

```
                          ┌─────────────────────────┐
                          │          P4/H6          │
                          └─────────────────────────┘
                                       │
                                       ▼
    ┌─────────────────────────────────────────┐  Yes  ┌─────────────────────────────┐
    │ Temperature sensor is connected          │──────▶│ Make sure that there is     │
    │ improperly   to the main control board   │       │ proper connection           │
    └─────────────────────────────────────────┘       └─────────────────────────────┘
                       │ No
                       ▼
    ┌─────────────────────────────────────────┐  Yes  ┌─────────────────────────────┐
    │ Compressor discharge temperature         │──────▶│ Change the sensor           │
    │ sensor is damaged                         │       │                             │
    └─────────────────────────────────────────┘       └─────────────────────────────┘
                       │ No
                       ▼
    ┌─────────────────────────────────────────┐  Yes  ┌─────────────────────────────┐
    │ Refrigerant is leaking                    │──────▶│ Check the R134a circuit and │
    │                                           │       │ add additional refrigerant  │
    │                                           │       │ to the system               │
    └─────────────────────────────────────────┘       └─────────────────────────────┘
                       │ No
                       ▼
    ┌─────────────────────────────────────────┐  Yes  ┌─────────────────────────────┐
    │ R134a refrigerant circuit is blocked by   │──────▶│ Check the system            │
    │ bending copper pipe or blocked EEV1       │       │                             │
    └─────────────────────────────────────────┘       └─────────────────────────────┘
                       │ No
                       ▼
    ┌─────────────────────────────────────────┐  Yes  ┌─────────────────────────────┐
    │ Condenser heat exchange capacity is       │──────▶│ Check the system            │
    │ insufficient                              │       │                             │
    └─────────────────────────────────────────┘       └─────────────────────────────┘
                       │ No
                       ▼
    ┌─────────────────────────────────────────┐
    │ Change the High Temperature Hydro         │
    │ Module Main Control Board                 │
    └─────────────────────────────────────────┘
```

18.23 PL/C7 Troubleshooting

18.23.1 Wired Controller Output:
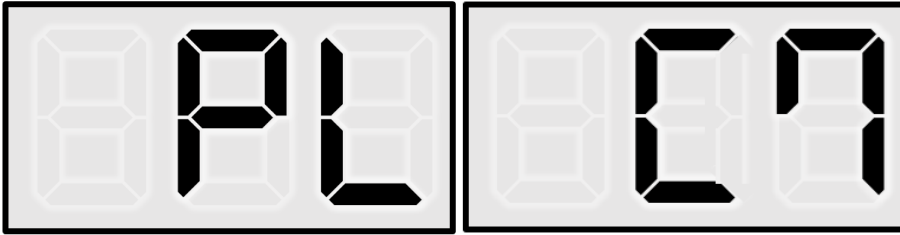
18.23.2 Description:

- Inverter module high temperature protection
- High Temperature Hydro module stops
- Error code is shown on main control board and wired controller
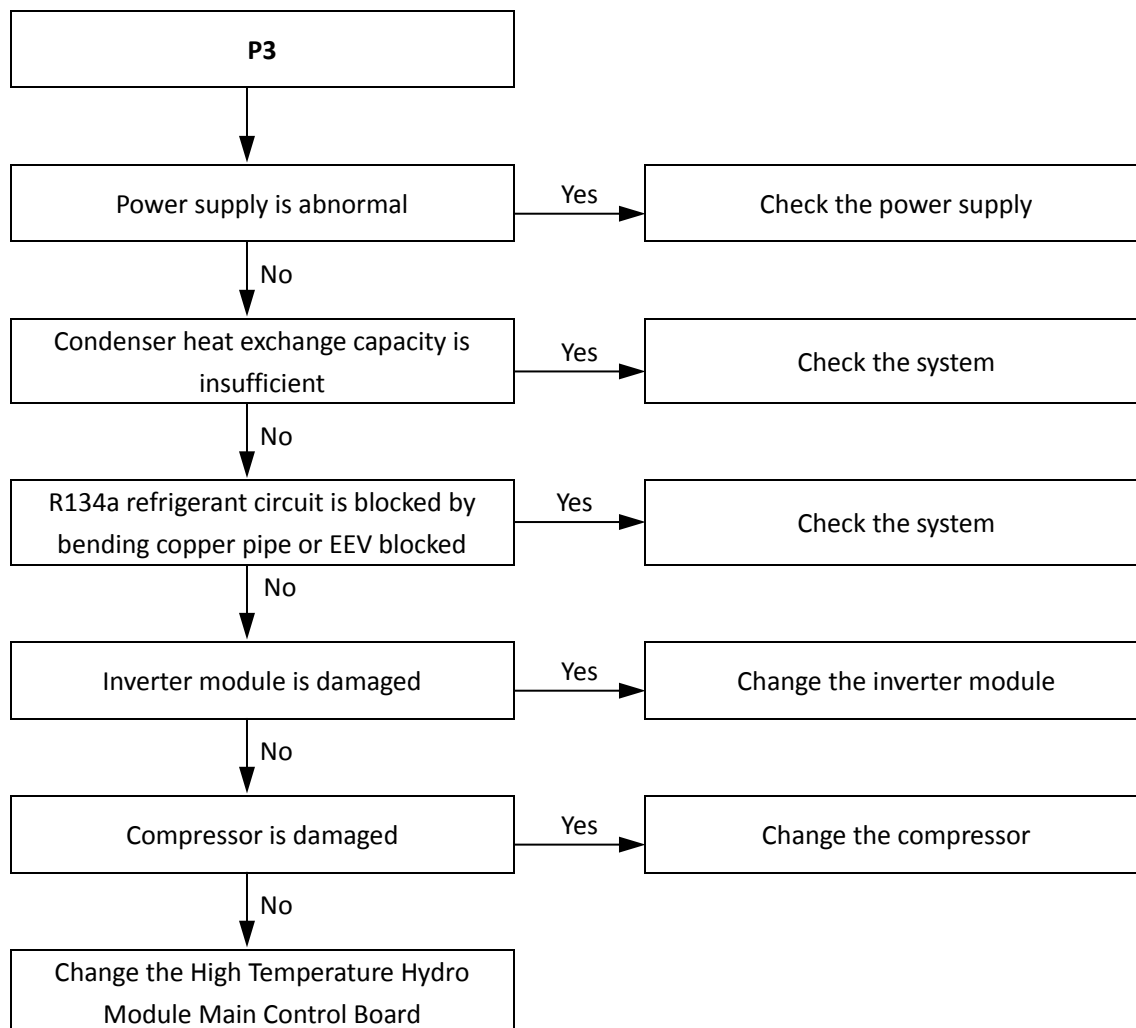
18.23.3 Trigger Condition:

- For PL protection: inverter module temperature (NTC) $\geqslant$ 80℃.
- For C7 protection: PL protection occurs three times within 100min

18.23.4 Recover Condition:

- Inverter module temperature (NTC) < 72℃

18.23.5 Reset Method:

- For PL protection: auto reset
- For C7 protection: manual reset

18.23.6 Possible Causes:

- Fan failure.
- Heat sink is loose
- Inverter module heat sink is dirty or heat exchanger is blocked
- High Temperature Hydro Module main control board is damaged

18.23.7 Troubleshooting:

```
                    ┌─────────────────────────┐
                    │          PL/C7          │
                    └─────────────────────────┘
                                 │
                                 ▼
        ┌─────────────────────────────────────┐   Yes   ┌─────────────────────────────────┐
        │ Inverter module heat sink is dirty  │ ──────▶ │    Clean or change a heat sink   │
        │  or heat exchange is blocked        │         └─────────────────────────────────┘
        └─────────────────────────────────────┘
                                 │ No
                                 ▼
        ┌─────────────────────────────────────┐   Yes   ┌─────────────────────────────────┐
        │ The screws used to fix the heat     │ ──────▶ │          Fix the screws          │
        │ sink to inverter module is loosen   │         └─────────────────────────────────┘
        └─────────────────────────────────────┘
                                 │ No
                                 ▼
        ┌─────────────────────────────────────┐   Yes   ┌─────────────────────────────────┐
        │      Inverter module is damaged     │ ──────▶ │    Change the inverter module    │
        └─────────────────────────────────────┘         └─────────────────────────────────┘
                                 │ No
                                 ▼
        ┌─────────────────────────────────────┐
        │ Change the High Temperature Hydro   │
        │  Module Main Control Board          │
        └─────────────────────────────────────┘
```
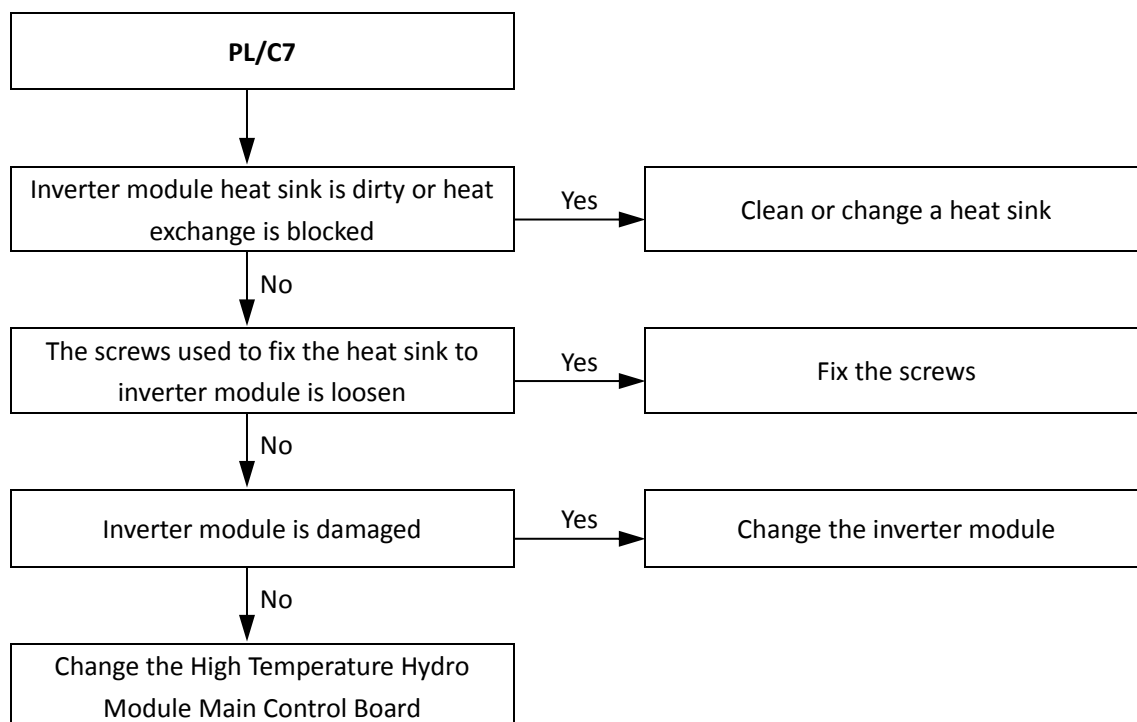
18.24 F1 Troubleshooting

18.24.1 Wired Controller Output:
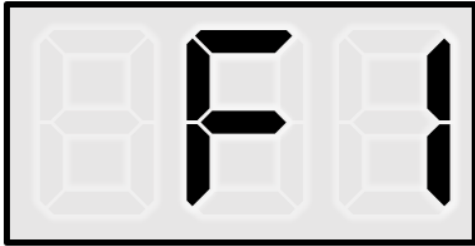
18.24.2 Description:

- Compressor DC Bus voltage is too high or too low
- High Temperature Hydro module stops
- Error code is shown on main control board and wired controller

18.24.3 Trigger Condition:

- DC bus voltage < 350V or DC bus voltage > 700V continuously for 10 seconds.

18.24.4 Recover Condition:

- DC bus voltage goes back to normal

18.24.5 Reset Method:

- Restart automatically

18.24.6 Possible Causes:

- Loosened wiring of the compressor inverter module.
- Incorrect wiring of the reactor and DC bus wire.
- Abnormal power supply.
- Inverter module damaged

18.24.7 Troubleshooting:

```
                    ┌────────────────────────────┐
                    │             F1             │
                    └──────────────┬─────────────┘
                                   │
                                   ▼
        ┌────────────────────────────────┐   Yes   ┌────────────────────────────┐
        │ Compressor power supply        │────────▶│ Make sure that there is    │
        │ connection is incorrect        │         │ proper connection          │
        └───────────────┬────────────────┘         └────────────────────────────┘
                        │ No
                        ▼
        ┌────────────────────────────────┐   Yes   ┌────────────────────────────┐
        │ Power supply is abnormal       │────────▶│ Check the power supply     │
        └───────────────┬────────────────┘         └────────────────────────────┘
                        │ No
                        ▼
        ┌────────────────────────────────┐
        │ Change the inverter module     │
        └────────────────────────────────┘
```
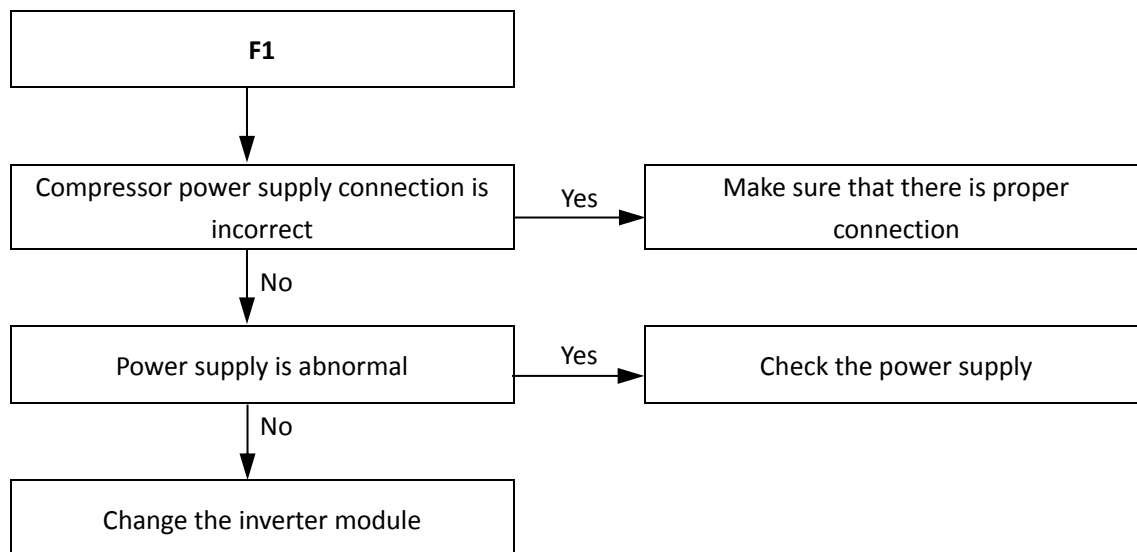
18.25 H4 Troubleshooting

18.25.1 Wired Controller Output:

18.25.2 Description:

- Compressor inverter module protection
- High Temperature Hydro module stops
- Error code is shown on main control board and wired controller

18.25.3 Trigger Condition:

- Three times inverter module protection occurs for compressor

18.25.4 Recover Condition:

- Inverter module is normal

18.25.5 Reset Method:

- Manual reset

18.25.6 Possible Causes:

- Inverter module protection
- DC bus low or high voltage protection.
- MCE error.
- Zero speed protection
- Phase sequence error
- Compressor frequency has big difference than the target frequency
- High Temperature Hydro Module main control board is damaged

18.25.7 Troubleshooting:

When H4 occurs, enter the check points lists by check button from 30~35, to check the last 6 error codes, the error codes are referred as below： L0, L1, L2, L4, L5, L7, L8, L9

Specific error code	Content
L0	Inverter module protection
L1	DC bus low voltage protection
L2	DC bus high voltage protection
L4	MCE error
L5	Zero speed protection
L7	Phase sequence protection
L8	Compressor frequency changes and the difference is bigger than 15Hz
L9	Compressor frequency has big difference than the target frequency

L0, L1, L2, L4 errors can also be confirmed by LEDs on inverter module, when inverter module fails, LED2 is on and LED1 flashes

LED1 flashes situation	Error code
Flash 8 times then quit 1 second (repeat)	L0
Flash 9 times then quit 1 second (repeat)	L1
Flash 10 times then quit 1 second (repeat)	L2
Flash 11 times then quit 1 second (repeat)	L4

L0: Inverter Module Protection

```
                        ┌─────────────────────────┐
                        │           L0            │
                        └─────────────────────────┘
                                     │
                                     ▼
        ┌─────────────────────────┐  Yes   ┌─────────────────────────┐
        │ Compressor power supply │ ─────▶ │ Make sure that there is │
        │ connection is incorrect │        │    proper connection    │
        └─────────────────────────┘        └─────────────────────────┘
                     │ No
                     ▼
        ┌─────────────────────────┐  Yes   ┌─────────────────────────┐
        │ Power supply is abnormal│ ─────▶ │ Make sure power supply  │
        │                         │        │       is normal         │
        └─────────────────────────┘        └─────────────────────────┘
                     │ No
                     ▼
        ┌─────────────────────────┐  Yes   ┌─────────────────────────┐
        │ The heat exchange       │ ─────▶ │ Add sufficient silicone │
        │ between IPM and heat    │        │ between IPM and heat    │
        │ sink is insufficient    │        │         sink            │
        └─────────────────────────┘        └─────────────────────────┘
                     │ No
                     ▼
        ┌─────────────────────────┐        ┌─────────────────────────┐
        │ The resistance between  │        │                         │
        │ UVW is zero or infinite │  Yes   │                         │
        │ (normally is from 0.9 to│ ─────▶ │  Change the compressor  │
        │ 5Ω) or The resistance   │        │                         │
        │ between the UVW and     │        │                         │
        │ ground is less than     │        │                         │
        │ 100kΩ                   │        │                         │
        └─────────────────────────┘        └─────────────────────────┘
```
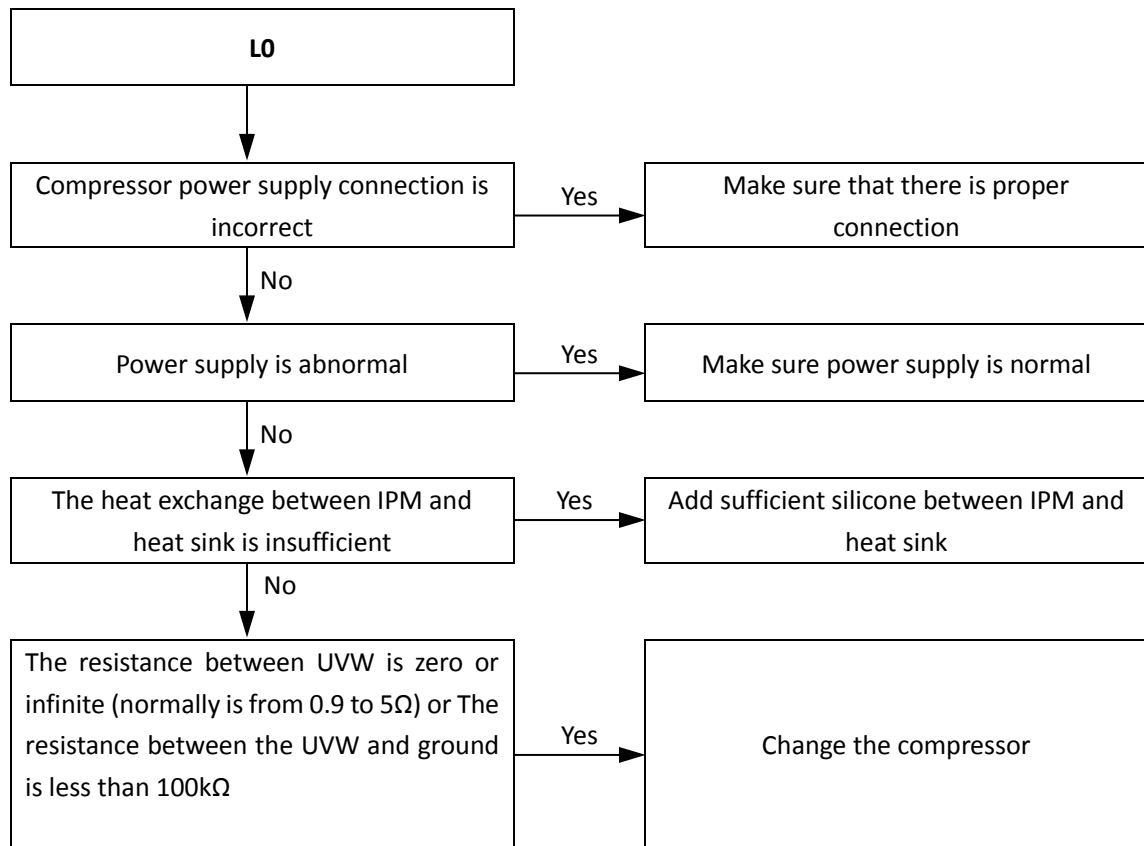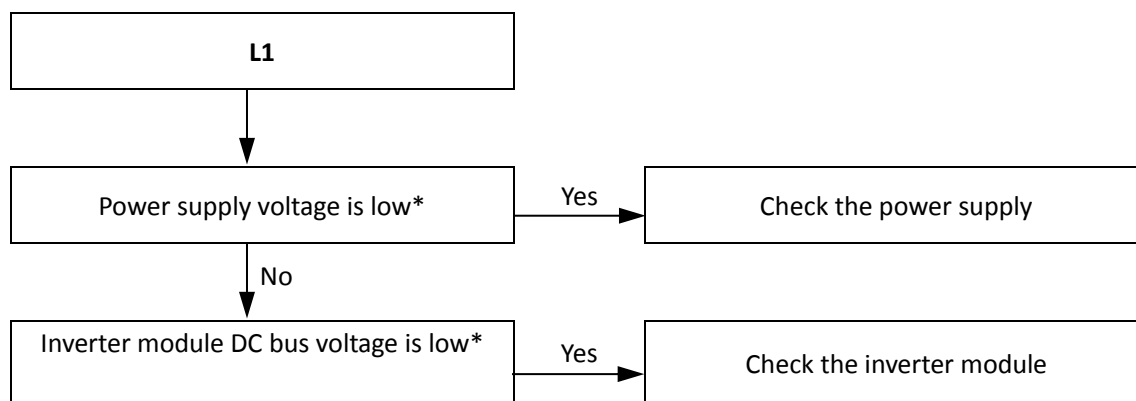
Service Manual

L1: DC Bus Low Voltage Protection

```
┌─────────────────────────────────┐
│               L1                │
└─────────────────────────────────┘
                │
                ▼
┌─────────────────────────────────┐    Yes    ┌─────────────────────────────────┐
│   Power supply voltage is low*  │ ────────► │     Check the power supply      │
└─────────────────────────────────┘           └─────────────────────────────────┘
                │ No
                ▼
┌─────────────────────────────────┐    Yes    ┌─────────────────────────────────┐
│ Inverter module DC bus voltage  │ ────────► │    Check the inverter module    │
│           is low*               │           └─────────────────────────────────┘
└─────────────────────────────────┘
```
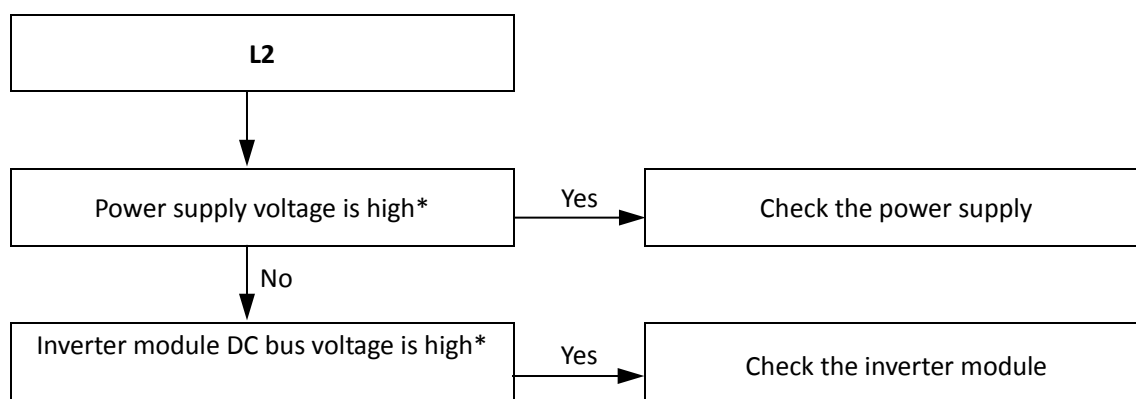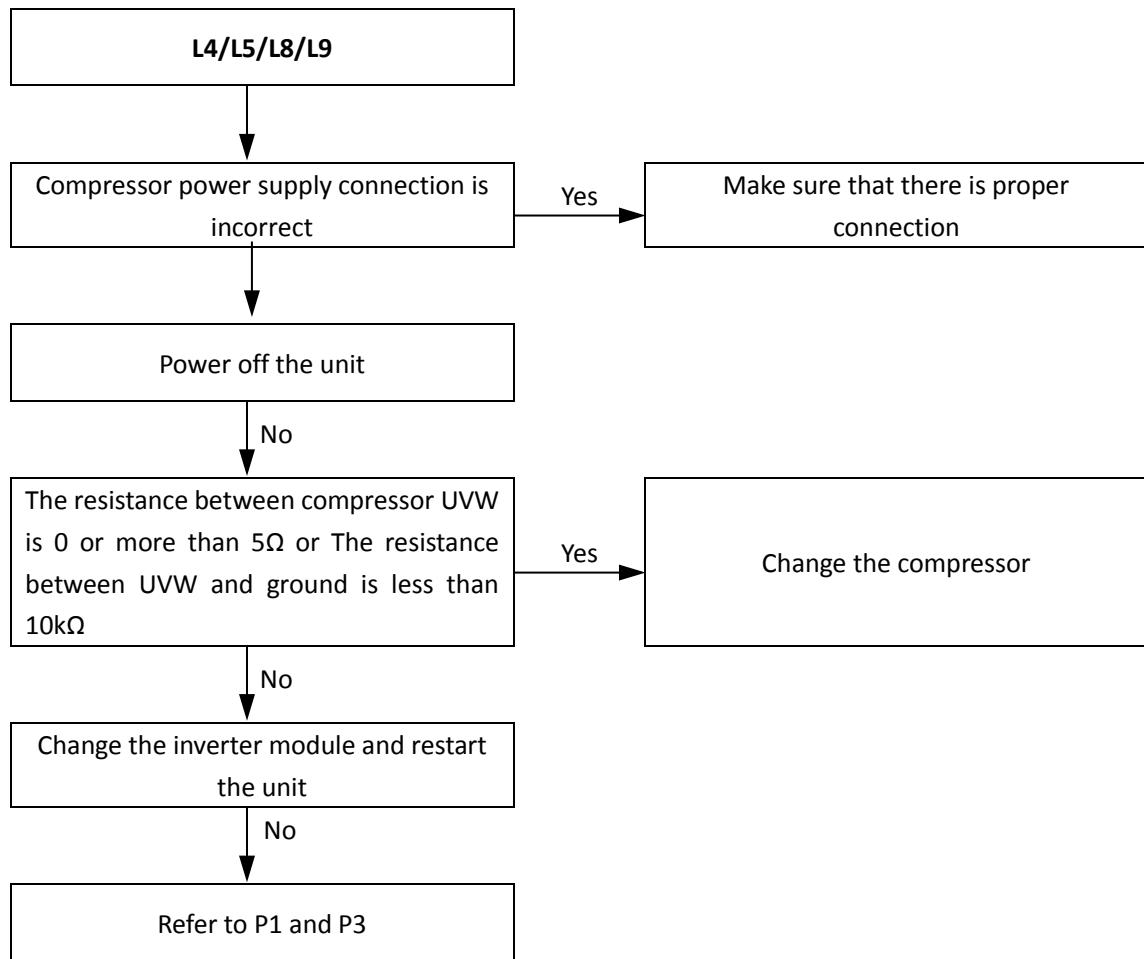
*Notes:

1. Power supply voltage is lower than 113AC

2. Inverter DC bus voltage is lower than 160V testing by CN52

L2: DC Bus High Voltage Protection

```
┌─────────────────────────────────┐
│               L2                │
└─────────────────────────────────┘
                │
                ▼
┌─────────────────────────────────┐    Yes    ┌─────────────────────────────────┐
│  Power supply voltage is high*  │ ────────► │     Check the power supply      │
└─────────────────────────────────┘           └─────────────────────────────────┘
                │ No
                ▼
┌─────────────────────────────────┐    Yes    ┌─────────────────────────────────┐
│ Inverter module DC bus voltage  │ ────────► │    Check the inverter module    │
│           is high*              │           └─────────────────────────────────┘
└─────────────────────────────────┘
```
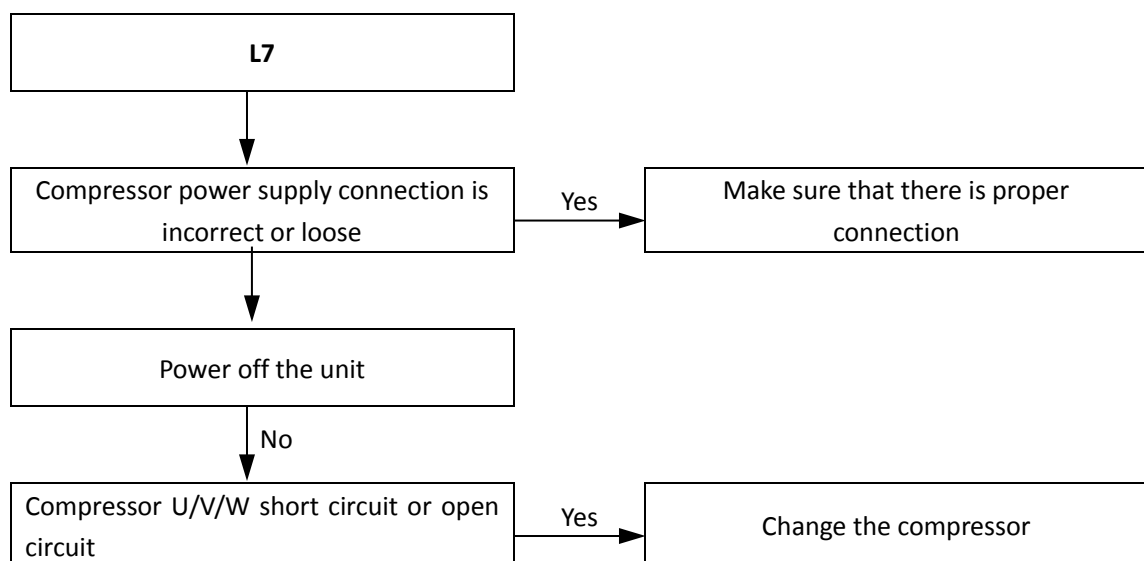
*Notes:

1. Power supply voltage is higher than 353AC

2. Inverter DC bus voltage is higher than 500V testing by CN52

```
┌─────────────────────────┐
│       L4/L5/L8/L9        │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐    Yes   ┌─────────────────────────┐
│ Compressor power supply │─────────▶│ Make sure that there is │
│ connection is incorrect │          │    proper connection    │
└─────────────────────────┘          └─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Power off the unit   │
└─────────────────────────┘
             │ No
             ▼
┌─────────────────────────┐    Yes   ┌─────────────────────────┐
│ The resistance between  │─────────▶│                         │
│ compressor UVW is 0 or  │          │  Change the compressor  │
│ more than 5Ω or The     │          │                         │
│ resistance between UVW  │          │                         │
│ and ground is less than │          │                         │
│ 10kΩ                    │          │                         │
└─────────────────────────┘          └─────────────────────────┘
             │ No
             ▼
┌─────────────────────────┐
│ Change the inverter     │
│ module and restart the  │
│ unit                    │
└─────────────────────────┘
             │ No
             ▼
┌─────────────────────────┐
│    Refer to P1 and P3   │
└─────────────────────────┘
```
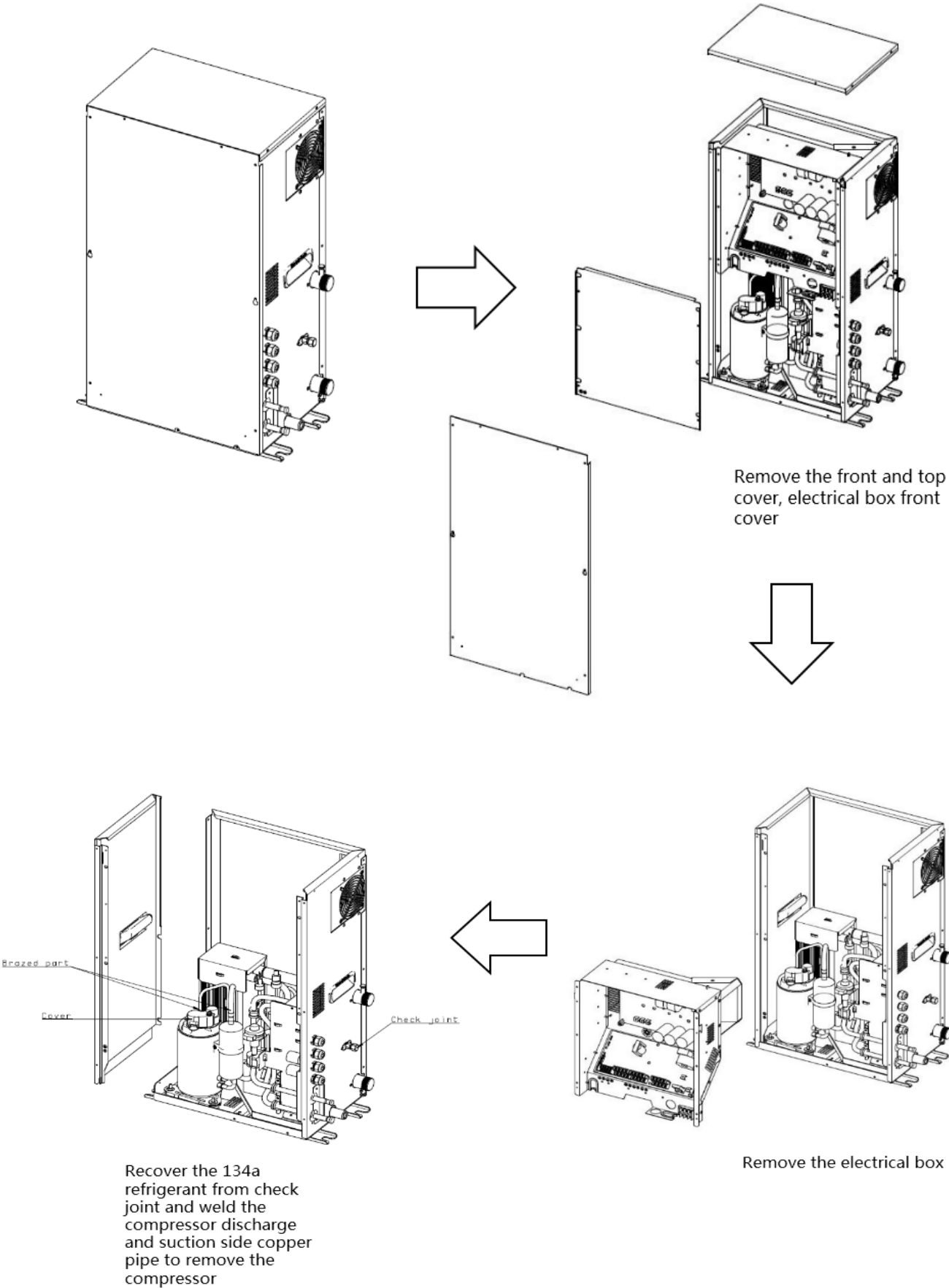
L7

```
┌─────────────────────────┐
│           L7            │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐    Yes   ┌─────────────────────────┐
│ Compressor power supply │─────────▶│ Make sure that there is │
│ connection is incorrect │          │    proper connection    │
│ or loose                │          │                         │
└─────────────────────────┘          └─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Power off the unit   │
└─────────────────────────┘
             │ No
             ▼
┌─────────────────────────┐    Yes   ┌─────────────────────────┐
│ Compressor U/V/W short  │─────────▶│  Change the compressor  │
│ circuit or open circuit │          │                         │
└─────────────────────────┘          └─────────────────────────┘
```

Service Manual

Compressor Change Process:

Midea V6R High Temperature Hydro Module

Remove the front and top cover, electrical box front cover

Remove the electrical box

Brazed part

Cover

Check joint

Recover the 134a refrigerant from check joint and weld the compressor discharge and suction side copper pipe to remove the compressor

19 Accessories

Installation Manual	1		———
User Manual	1		———
Connecting pipe assembly (Including safety valve)	1		Connected to the water-outlet pipe side
Water discharge hose	1		Connected to the outlet of the drainage pan
Wired controller	1		To control the unit
Water temperature sensor	1		For detecting water tank temperature
Y-shaped filter	1		Connected to the water-inlet pipe side
Network Matching Wire	2		———
Cable tie	6		Fixing the wire and magnetic ring
Magnetic ring	2		———

Service Manual

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Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.