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1 FOR SERVICEMAN

The "FOR SERVICEMAN" function is designed for the installer to set the parameters.
Go to "☰">"FOR SERVICEMAN", press "↵", input the password "234", press "↵" again, the following pages will be displayed:

FOR SERVICEMAN	1/3
1. DHW MODE SETTING	
2. COOL MODE SETTING	
3. HEAT MODE SETTING	
4. AUTO MODE SETTING	
5. TEMP.TYPE SETTING	
6. ROOM THERMOSTAT	
← ENTER	↕

FOR SERVICEMAN	2/3
7. OTHER HEATING SOURCE	
8. HOLIDAY AWAY SETTING	
9. SERVICE CALL SETTING	
10. RESTORE FACTORY SETTINGS	
11. TEST RUN	
12. SPECIAL FUNCTION	
← ENTER	↕

FOR SERVICEMAN	3/3
13. AUTO RESTART	
14. POWER INPUT LIMITATION	
15. INPUT DEFINE	
16. CASCADE SET	
17. HMI ADDRESS SET	
18. COMMON SET	
← ENTER	↕

Press "▼", "▲" to scroll and press "↵" to enter submenu.

1.1 DHW MODE SETTING

DHW = Domestic Hot Water
If the unit has no DHW function, the "DHW MODE SETTING" cannot be set.
If the unit has DHW function, go to "☰">"FOR SERVICEMAN">"DHW MODE SETTING", press "↵", the following pages will be displayed:

1 DHW MODE SETTING	1/4
1.1 DHW MODE	YES
1.2 DISINFECT	YES
1.3 DHW PRIORITY	YES
1.4 PUMP_D	YES
1.5 DHW PRIORITY TIME SET	NON
↕ ADJUST	↔

1 DHW MODE SETTING	2/4
1.6 dT5_ON	5 °C
1.7 dT1S5	10°C
1.8 T4DHWMAX	43°C
1.9 T4DHWMIN	-10°C
1.10 t_INTERVAL_DHW	5 MIN
↕ ADJUST	↔

1 DHW MODE SETTING	3/4
1.11 T5S_DISINFECT	65 °C
1.12 t_DI_HIGHTEMP.	15MIN
1.13 t_DI_MAX	210 MIN
1.14 t_DHWHP_RESTRICT	30MIN
1.15 t_DHWHP_MAX	120MIN
↕ ADJUST	↔

1 DHW MODE SETTING	4/4
1.16 PUMP_D TIMER	YES
1.17 PUMP_D RUNNING TIME	5 MIN
1.18 PUMP_D DISINFECT	NON
1.19 ACS FUNCTION	NON
↕ ADJUST	↔

1.2 COOL MODE SETTING

Go to "☰">"FOR SERVICEMAN">"COOL MODE SETTING", press "↵", the following pages will be display:

2 COOL MODE SETTING	1/3
2.1 COOL MODE	YES
2.2 t_T4_FRESH_C	2.0Hrs
2.3 T4CMAX	43°C
2.4 T4CMIN	20°C
2.5 dT1SC	5°C
↕ ADJUST	↔

2 COOL MODE SETTING	2/3
2.6 dTSC	2 °C
2.7 t_INTERVAL_C	5MIN
2.8 T1SetC1	10°C
2.9 T1SetC2	16°C
2.10 T4C1	35°C
↕ ADJUST	↔

2 COOL MODE SETTING	3/3
2.11 T4C2	25 °C
2.12 ZONE1 C-EMISSION	FCU
2.13 ZONE2 C-EMISSION	FHL
↕ ADJUST	↔

1.3 HEAT MODE SETTING

Go to "☰">"FOR SERVICEMAN">"HEAT MODE SETTING", press "↵", the following pages will be displayed:

3 HEAT MODE SETTING	1/3
3.1 HEAT MODE	YES
3.2 t_T4_FRESH_H	2.0Hrs
3.3 T4HMAX	16°C
3.4 T4HMIN	-15°C
3.5 dT1SH	5°C
↕ ADJUST	↔

3 HEAT MODE SETTING	2/3
3.6 dTSH	2°C
3.7 t_INTERVAL_H	5MIN
3.8 T1SetH1	35°C
3.9 T1SetH2	28°C
3.10 T4H1	-5°C
ADJUST	

3 HEAT MODE SETTING	3/3
3.11 T4H2	7°C
3.12 ZONE1 H-EMISSION	RAD.
3.13 ZONE2 H-EMISSION	FHL
3.14 FORCE DEFROST	NON
ADJUST	

1.4 AUTO MODE SETTING

Go to "☰" > "FOR SERVICEMAN" > "AUTO MODE SETTING", press "←", the following page will be displayed:

4 AUTO. MODE SETTING	
4.1 T4AUTOCMIN	25°C
4.2 T4AUTOHMAX	17°C
ADJUST	

1.5 TEMP. TYPE SETTING

The "TEMP. TYPE SETTING" function is used to select whether the water flow temperature or room temperature controls ON/OFF of the heat pump.

Go to "☰" > "FOR SERVICEMAN" > "TEMP. TYPE SETTING", press "←", the following page will be displayed:

5 TEMP. TYPE SETTING	
5.1 WATER FLOW TEMP.	YES
5.2 ROOM TEMP.	NON
5.3 DOUBLE ZONE	NON
ADJUST	

When WATER FLOW TEMP. is set YES and ROOM TEMP. is set NON, ON/OFF of the heat pump is controlled by the set water temperature, the following pages will be displayed:

01-01-2018	23:59	13°
☰	ON	☰
Δ 35 °C	☀	38 °C

Water temperature setting
DHW mode is set available

01-01-2018	23:59	13°
☰ ₂	ON	☰
Δ 35 °C	☀	

Water temperature setting
Without DHW function or
DHW mode is set unavailable

When WATER FLOW TEMP. is set NON and ROOM TEMP. is set YES, ON/OFF of the heat pump is controlled by the set room temperature, the following pages will be displayed:

01-01-2018	23:59	13°
☰	ON	☰
23.5 °C	☀	38 °C

Room temperature setting
DHW mode is set available

01-01-2018	23:59	13°
☰	ON	☰
23.5 °C	☀	

Room temperature setting
Without DHW function or
DHW mode is set unavailable

When WATER FLOW TEMP. and ROOM TEMP. are both set YES, ON/OFF of the heat pump is controlled by the set water temperature in ZONE1, ON/OFF of the heat pump is controlled by the set room temperature in ZONE2, the following pages will be displayed:

01-01-2018	23:59	13°
☰	ON	☰
Δ 38 °C	☀	23 °C

01-01-2018	23:59	13°
☰	ON	☰
Δ 38 °C	☀	



01-01-2018	23:59	13°
☰ ₂	ON	☰
23.5 °C	☀	

DHW mode is set available

01-01-2018	23:59	13°
☰ ₂	ON	☰
23.5 °C	☀	

Without DHW function or
DHW mode is set unavailable

NOTE

- When WATER FLOW TEMP. and ROOM TEMP. are both set YES, DOUBLE ZONE will be set YES automatically.
- When ROOM TEMP. is enabled, the water temperature will be calculated according to temperature curves.

1.6 ROOM THERMOSTAT

The "ROOM THERMOSTAT" function is used to set whether the room thermostat is available or unavailable.

Go to "☰" > "FOR SERVICEMAN" > "ROOM THERMOSTAT", press "←", the following page will be displayed:

6 ROOM THERMOSTAT	
6.1 ROOM THERMOSTAT	MODE SET
6.2. MODE SET PRIORITY	HEAT
ADJUST	

NOTE

1. ROOM THERMOSTAT = NON, the room thermostat is unavailable.
2. ROOM THERMOSTAT = MODE SET, operation mode and ON/OFF of the unit are controlled via the room thermostat, water temperature is set on the user interface.
3. ROOM THERMOSTAT = ONE ZONE, ON/OFF of the unit is controlled by the room thermostat, operation mode and water temperature are set on the user interface.
4. ROOM THERMOSTAT = DOUBLE ZONE, operation mode and water temperature are set on the user interface, ON/OFF of the unit is controlled by the room thermostat.
5. Only when ROOM THERMOSTAT =NON, the settings in TEMP. TYPE SETTING can be adjusted.

1.7 OTHER HEATING SOURCE

The "OTHER HEATING SOURCE" function is used to set the parameters of IBH (Backup heater),AHS(Auxiliary heating source) ,TBH(Tank booster heater) and solar energy. Go to "☐">"FOR SERVICEMAN">"OTHER HEATING SOURCE", press "←", the following pages will be displayed:

7 OTHER HEATING SOURCE	1/6
7.1 IBH FUNCTION	HEAT
7.2 IBH LOCATE	PIPE LOOP
7.3 dT1_IBH_ON	5°C
7.4 t_IBH_DELAY	30MIN
7.5 T4_IBH_ON	-5°C
ADJUST	

7 OTHER HEATING SOURCE	2/6
7.6 P_IBH1	0.0kW
7.7 P_IBH2	0.0kW
7.8 AHS FUNCTION	NON
7.9 AHS_PUMPI CONTROL	RUN
7.10 dT1_AHS_ON	5°C
ADJUST	

7 OTHER HEATING SOURCE	3/6
7.11 t_AHS_DELAY	30MIN
7.12 T4_AHS_ON	-5°C
7.13 EnSWITCHPDC	NON
7.14 GAS_COST	0.85
7.15 ELE_COST	0.20
ADJUST	

7 OTHER HEATING SOURCE	4/6
7.16 MAX_SETHEATER	80°C
7.17 MIN_SETHEATER	30°C
7.18 MAX_SIGHEATER	10V
7.19 MIN_SIGHEATER	3V
7.20 TBH FUNCTION	YES
ADJUST	

7 OTHER HEATING SOURCE	5/6
7.21 dT5_TBH_OFF	5°C
7.22 t_TBH_DELAY	30MIN
7.23 T4_TBH_ON	5°C
7.24 P_TBH	2,0kW
7.25 SOLAR FUNCTION	NON
ADJUST	

7 OTHER HEATING SOURCE	6/6
7.26 SOLAR CONTROL	Tsolar
7.27 DELTATSOL	10°C
ADJUST	

NOTE

1. If the unit has no DHW function or DHW mode is set unavailable, 7.20-7.27 will not be displayed on the interface.
2. The default setting of EnSWITCHPDC is NON, T4_AHS_ON is set manually. When EnSWITCHPDC is set YES, T4_AHS_ON cannot be set manually.
3. When AHS FUNCTION is set NON, EnSWITCHPDC is set NON forcibly.
4. When SOLAR FUNCTION is set NON, Tsolar(Solar temperature) will not be detected . When SOLAR FUNCTION is not set NON and SOLAR CONTROL is set Tsolar, Tsolar(Solar temperature) will be detected.

1.8 HOLIDAY AWAY SETTING

The HOLIDAY AWAY SETTING function is used to set the water temperature or water tank temperature to prevent freezing when away for holiday. If the unit has no DHW function or DHW mode is set unavailable, T5S_H.A._DHW will not be displayed on the interface.

Go to "☐">"FOR SERVICEMAN">"HOLIDAY AWAY SETTING", press "←", the following page will be displayed:

8 HOLIDAY AWAY SETTING	
8.1 T1S_H.A._H	20°C
8.2 T5S_H.A._DHW	20°C
ADJUST	

1.9 SERVICE CALL

The installers can set the phone number or mobile number of the local dealer in SERVICE CALL. If the unit doesn't operate properly, call the number for help.

Go to "☐">"FOR SERVICEMAN">"SERVICE CALL", press "←", the following page will be displayed:

9 SERVICE CALL SETTING	
PHONE NO.	000000000000
MOBILE NO.	000000000000
CONFIRM	ADJUST

The maximum length of the phone number(or mobile number) is 13 digits, if the length of the number is short than 12 digits, please input █.

Example: If the phone number is set 1234577, please input the number as below:

9 SERVICE CALL	
PHONE NO.	1234577██████
MOBILE NO.	000000000000
CONFIRM	ADJUST

1.10 RESTORE FACTORY SETTINGS

The RESTORE FACTORY SETTINGS function is used to restore all parameters set on the user interface to factory settings. Go to "☰" > "FOR SERVICEMAN" > "RESTORE FACTORY SETTINGS", press "↵", the following page will be displayed:

10 RESTORE FACTORY SETTINGS	
ALL THE SETTINGS WILL COME BACK TO FACTORY DEFAULT. DO YOU WANT TO RESTORE FACTORY SETTINGS?	
NO	YES
← CONFIRM	→

Use "◀", "▶" to scroll the cursor to YES and press "↵", the following page will be displayed:

10 RESTORE FACTORY SETTINGS	
PLEASE WAIT...	
5%	

After a few seconds, all parameters set on the user interface will be restored to factory settings.

1.11 SPECIAL FUNCTION

Go to "☰" > "FOR SERVICEMAN" > "SPECIAL FUNCTION", press "↵", the following page will be displayed:

12 SPECIAL FUNCTION	
ACTIVE THE SETTINGS AND ACTIVE THE "SPECIAL FUNCTION"?	
NO	YES
← CONFIRM	→

Use "◀", "▶" to scroll the cursor to YES and press "↵", the following page will be displayed:

12 SPECIAL FUNCTION	
12.1 PREHEATING FOR FLOOR	
12.2 FLOOR DRYING UP	
← ENTER	

The PREHEATING FOR FLOOR function is used to preheat the room (The terminal type is floor heating loop). Press "↵" on the above interface, the following page will be displayed:

12.1 PREHEATING FOR FLOOR	
T1S	30°C
t_FIRSTFH	72 HOURS
ENTER	EXIT
↕ ADJUST	→

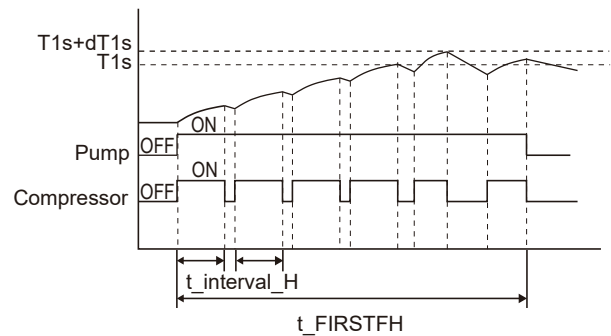
The value of T1S and t_FIRSTFH can be adjusted by using "▲", "▼".

12.1 PREHEATING FOR FLOOR	
T1S	30°C
t_FIRSTFH	72 HOURS
ENTER	EXIT
← ENTER	→

Use "◀", "▶" to scroll the cursor to ENTER and press "↵", the following page will be displayed:

12.1 PREHEATING FOR FLOOR	
PREHEATING FOR FLOOR IS RUNNING FOR 0 HOURS. WATER FLOW TEMPERATURE IS 20°C.	
← CONFIRM	

The operation of the unit during PREHEATING FOR FLOOR is described in the picture below:



Press "↵", the following page will be displayed:

12.1 PREHEATING FOR FLOOR	
DO YOU WANT TO TURN OFF THE PREHEATING FOR FLOOR FUNCTION?	
NO	YES
← ENTER	→

Use "◀", "▶" to scroll the cursor to YES and press "↵", the PREHEATING FOR FLOOR function will be turned off. The FLOOR DRYING UP function is used to avoid floor condensation. When the heat pump fails, the FLOOR DRYING UP function is still available when the backup heater or auxiliary heating source is available. If FLOOR DRYING UP is selected, press "↵", the following page will be displayed:

12.2 INPUT DEFINE		1/2
WARM UP TIME(t_DRYUP)		8 DAYS
KEEP TIME(t_HIGHPEAK)		5 DAYS
TEMP.DOWN TIME(t_DRYD)		5 DAYS
PEAK TEMP.(t_DRYPEAK)		45°C
START TIME		21:00
↕ ADJUST		→

12.2 INPUT DEFINE		2/2
START DATE	21-10-2021	
ENTER	EXIT	
← ENTER	→	

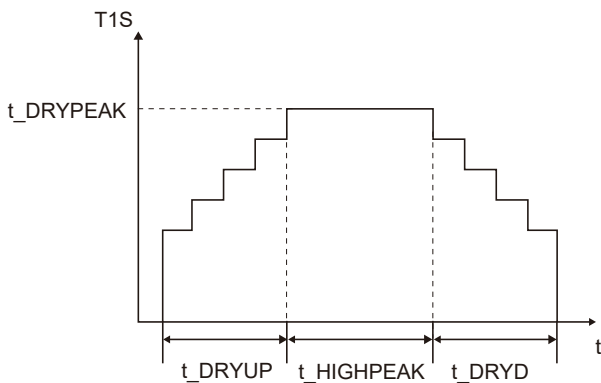
The parameters in FLOOR DRYING UP can be adjusted by using “▲”, “▼”. Use “◀”, “▶” to scroll the cursor to ENTER and press “↵”, the following page will be displayed:

12.2 FLOOR DRYING UP	
THE UNIT WILL OPERATE FLOOR DRYING UP ON 21:00 21-10-2021.	
← CONFIRM →	

When the set time (START TIME/START DATE) is reached, the following page will be displayed:

12.2 FLOOR DRYING UP	
THE FLOOR DRYING IS RUNNING FOR	
5 DAYS.	
LEAVING WATER TEMPERATURE IS 30°C.	
← CONFIRM →	

Change of target outlet water temperature (T1S) during FLOOR DRYING UP is described in the picture below:



Press “↵”, the following page will be displayed:

12.2 FLOOR DRYING UP	
DO YOU WANT TO TURN OFF THE FLOOR DRYING UP FUNCTION?	
NO	YES
← CONFIRM	→

Use “◀”, “▶” to scroll the cursor to YES and press “↵”, the FLOOR DRYING UP function will be turned off.

NOTE

- During special function operation, other functions (WEEKLY SCHEDULE/TIMER, HOLIDAY AWAY, HOLIDAY HOME) cannot be used.
- It is necessary to use the AIR PURGE function to release the air (make sure the air purge valve is open) before the unit runs.

1.12 AUTO RESTART

The AUTO RESTART function is used to restart the unit according to the operation mode before the power supply failure. If the unit has no DHW (Domestic Hot Water) function or DHW mode is set unavailable, DHW MODE will not be displayed on the interface. Go to “☰” > “FOR SERVICEMAN” > “AUTO RESTART”, press “↵”, the following page will be displayed:

13 AUTO RESTART	
13.1 COOL/HEAT MODE	YES
13.2 DHW MODE	YES
← ADJUST →	

NOTE

- ① COOL/HEAT MODE and DHW MODE are set YES by default.
- ② If the operation mode before power supply failure is cool mode or heat mode and COOL/HEAT MODE is set YES, then the unit can be restarted after the power supply returns to normal.
- ③ If the operation mode before power supply failure is DHW mode and DHW MODE is set YES, then the unit can be restarted after the power supply returns to normal.
- ④ If the operation mode before power supply failure is cool mode or heat mode and COOL/HEAT MODE is set NON, then the unit cannot be restarted after the power supply returns to normal.
- ⑤ If the operation mode before power supply failure is DHW mode and DHW MODE is set NON, then the unit cannot be restarted after the power supply returns to normal.
- ⑥ If ROOM THERMOSTAT is set available, ON/OFF of the unit is controlled by the room thermostat.

1.13 POWER INPUT LIMITATION

Go to “☰” > “FOR SERVICEMAN” > “POWER INPUT LIMITATION”, press “↵”, the following page will be displayed:

14 POWER INPUT LIMITATION	
14.1 POWER INPUT LIMITATION	0
← ADJUST →	

Use “▲”, “▼” to adjust the power input limitation.

1.14 INPUT DEFINE

Go to “☰” > “FOR SERVICEMAN” > “INPUT DEFINE”, press “↵”, the following page will be displayed:

15 INPUT DEFINE	
15.1 M1M2	REMOTE ON/OFF
15.2 SMART GRID	NON
15.3 T1T2	NON
15.4 Tbt	NON
15.5 P_X PORT	DEFROST
← ADJUST →	

P_X PORT is set DEFROST by default. When P_X PORT is set ALARM, it represents the fault signal output of the unit.

1.15 CASCADE SET

Go to "☰">"FOR SERVICEMAN">"CASCADE SET", press "↵", the following page will be displayed:

16 CASCADE SET	
16.1 PER_START	10%
16.2 TIME_ADJUST	5 MIN
16.3 ADDRESS RESET	FF
<div style="display: flex; justify-content: space-between;"> ⬅️ ADJUST ➡️ </div>	

1.16 HMI ADDRESS SET

Go to "☰">"FOR SERVICEMAN">"HMI ADDRESS SET", press "↵", the following page will be displayed:

17 HMI ADDRESS SET	
17.1 HMI SET	MASTER
17.2 HMI ADDRESS FOR BMS	1
17.3 STOP BIT	1
<div style="display: flex; justify-content: space-between;"> ⬅️ ADJUST ➡️ </div>	

1.17 COMMON SET

Go to "☰">"FOR SERVICEMAN">"COMMON SET", press "↵", the following page will be displayed:

18 COMMON SET		1/2
18.1 t_DELAY_PUMP	2.0	MIN
18.2 t1_ANTILOCK PUMP	24	h
18.3 t2_ANTILOCK PUMP RUN	60	s
18.4 t1_ANTILOCK SV	24	h
18.5 t2_ANTILOCK SV RUN	30	s
<div style="display: flex; justify-content: space-between;"> ⬅️ ADJUST ➡️ </div>		

18 COMMON SET		2/2
18.6 Ta_adj.	-2	°C
18.7 F-PIPE LENGTH	<10	m
18.8 PUMP_I_SILENT OUTPUT	100	%
<div style="display: flex; justify-content: space-between;"> ⬅️ ADJUST ➡️ </div>		

2 SETTING RANGE OF PARAMETERS IN "FOR SERVICEMAN"

The parameters related to this chapter are shown in the table below.

Order number	Code	State	Default	Minumum	Maximum	Setting interval	Unit
1.1	DHW MODE	Enable or disable the DHW mode:0=NON,1=YES	1	0	1	1	/
1.2	DISINFECT	Enable or disable the disinfect mode:0=NON,1=YES	1	0	1	1	/
1.3	DHW PRIORITY	Enable or disable the DHW priority mode:0=NON,1=YES	1	0	1	1	/
1.4	PUMP_D	Enable or disable the DHW pump mode:0=NON,1=YES	0	0	1	1	/
1.5	DHW PRIORITY TIME SET	Enable or disable the DHW priority time set:0=NON,1=YES	0	0	1	1	/
1.6	dT5_ON	The temperature difference for starting the heat pump	10	1	30	1	°C
1.7	dT1S5	The difference value between Twout and T5 in DHW mode	10	5	40	1	°C
1.8	T4DHWMAX	The maximum ambient temperature that the heat pump can operate at for domestic water heating	43	35	43	1	°C
1.9	T4DHWMIN	The minimum ambient temperature that the heat pump can operate for domestic water heating	-10	-25	30	1	°C
1.10	t_INTERVAL_DHW	The start time interval of the compressor in DHW mode.	5	5	5	1	min
1.11	T5S_DISINFECT	The target temperature of water in the domestic hot water tank in the DISINFECT function.	65	60	70	1	°C
1.12	t_DI_HIGHTEMP	The time that the highest temperature of water in the domestic hot water tank in the DISINFECT function will last.	15	5	60	5	°C
1.13	t_DI_MAX	The maximum time that disinfection will last.	210	90	300	5	min
1.14	t_DHWHP_RESTRICT	The operation time for the space heating/cooling operation.	30	10	600	5	°C
1.15	t_DHWHP_MAX	The maximum running time of heat pump in DHW PRIORITY mode.	90	10	600	5	min
1.16	PUMP_D TIMER	Enable or disable the DHW pump run as timed and keeps running for PUMP RUNNING TIME:0=NON,1=YES	1	0	1	1	/
1.17	PUMP_D RUNNING TIME	The certain time that the DHW pump will keep running.	5	5	120	1	min
1.18	PUMP_D DISINFECT	Enable or disable the DHW pump operates when the unit is in disinfect mode and T5≥T5S_DI-2:0=NON,1=YES	1	0	1	1	/
1.19	ACS FUNCTION	Enable or disable the second water tank control T5_2: 0=NON,1=YES	0	0	1	1	/
2.1	COOL MODE	Enable or disable the cooling mode:0=NON,1=YES	1	0	1	1	/
2.2	t_T4_FRESH_C	The refresh time of climate related curves for cooling mode	0.5	0.5	6	0.5	hours
2.3	T4CMAX	The highest ambient operation temperature for cooling mode	52	35	52	1	°C
2.4	T4CMIN	The lowest ambient operating temperature for cooling mode	10	-5	25	1	°C
2.5	dT1SC	The temperature difference between T1 and T1S(the set water temperature) for starting the heat pump	5	2	10	1	°C
2.6	dTSC	The temperature difference between actual room temperature Ta and the set room temperature Tas for starting the heat pump.	2	1	10	1	°C
2.7	t_INTERVAL_C	The start time interval of the compressor in cooling mode	5	5	5	5	min
2.8	T1SetC1	The setting temperature 1 of climate related curves for cooling mode.	10	5	25	1	°C
2.9	T1SetC2	The setting temperature 2 of climate related curves for cooling mode.	16	5	25	1	°C
2.10	T4C1	The ambient temperature 1 of climate related curves for cooling mode.	35	-5	46	1	°C
2.11	T4C2	The ambient temperature 2 of climate related curves for cooling mode.	25	-5	46	1	°C
2.12	ZONE1 C-EMISSION	The terminal type of zone 1 for cooling mode: 0=FCU(fan coil unit), 1=RAD.(radiator), 2=FHL(floor heating loop)	0	0	2	1	/
2.13	ZONE2 C-EMISSION	The terminal type of zone 2 for cooling mode: 0=FCU(fan coil unit), 1=RAD.(radiator), 2=FHL(floor heating loop)	0	0	2	1	/
3.1	HEAT MODE	Enable or disable the heating mode	1	0	1	1	/
3.2	t_T4_FRESH_H	The refresh time of climate related curves for heating mode	0.5	0.5	6	0.5	hours

Order number	Code	State	Default	Minumum	Maximum	Setting interval	Unit
3.3	T4HMAX	The maximum ambient operating temperature for heating mode	25	20	35	1	°C
3.4	T4HMIN	The minimum ambient operating temperature for heating mode	-15	-25	30	1	°C
3.5	dT1SH	The temperature difference between T1 and T1S(the set water temperature) for starting the heat pump	5	2	20	1	°C
3.6	dTSH	The temperature difference between actual room temperature Ta and the set room temperature Tas for starting the heat pump	2	1	10	1	°C
3.7	t_INTERVAL_H	The start time interval of the compressor in heating mode	5	5	5	5	min
3.8	T1SetH1	The setting temperature 1 of climate related curves for heating mode	35	25	65	1	°C
3.9	T1SetH2	The setting temperature 2 of climate related curves for heating mode	28	25	65	1	°C
3.10	T4H1	The ambient temperature 1 of climate related curves for heating mode	-5	-25	35	1	°C
3.11	T4H2	The ambient temperature 2 of climate related curves for heating mode	7	-25	35	1	°C
3.12	ZONE1 H-EMISSION	The terminal type of zone 1 for heating mode: 0=FCU(fan coil unit), 1=RAD.(radiator), 2=FHL(floor heating loop)	1	0	2	1	/
3.13	ZONE2 H-EMISSION	The terminal type of zone 2 for heating mode: 0=FCU(fan coil unit), 1=RAD.(radiator), 2=FHL(floor heating loop)	2	0	2	1	/
3.14	FORCE DEFROST	Enable or disable the FORCE DEFROST function: 0=NON,1=YES	0	0	1	1	/
4.1	T4AUTOCMIN	The minimum operating ambient temperature for cooling in auto mode	25	20	29	1	°C
4.2	T4AUTOHMAX	The maximum operating ambient temperature for heating in auto mode	17	10	17	1	°C
5.1	WATER FLOW TEMP.	Enable or disable the WATER FLOW TEMP.:0=NON,1=YES	1	0	1	1	/
5.2	ROOM TEMP.	Enable or disable the ROOM TEMP.:0=NON,1=YES	0	0	1	1	/
5.3	DOUBLE ZONE	Enable or disable the ROOM THERMOSTAT DOUBLE ZONE:0=NON,1=YES	0	0	1	1	/
6.1	ROOM THERMOSTAT	Room thermostat type: 0=NON,1=MODESET,2=ONE ZONE 3=DOUBLE ZONE	0	0	3	1	/
6.2	MODE SET PRIORITY	Select the priority mode in ROOM THERMOSTAT: 0=HEAT,1=COOL	0	0	1	1	/
7.1	IBH FUNCTION	Select the mode that IBH (BACKUP HEATER) can run: 0=HEAT+DHW,1=HEAT	0 (DHW=valid) 1 (DHW=invalid)	0	1	1	/
7.2	IBH LOCATE	The installation location of IBH (PIPE LOOP=0)	0	0	0	0	/
7.3	dT1_IBH_ON	The temperature difference between T1S and T1 for starting the backup heater.	5	2	10	1	°C
7.4	t_IBH_DELAY	The time that the compressor has run before starting the first step backup heater.	30	15	120	5	min
7.5	T4_IBH_ON	The ambient temperature for starting the backup heater.	-5	-15	30	1	°C
7.6	P_IBH1	Power input of IBH1	0	0	20	0.5	kW
7.7	P_IBH2	Power input of IBH2	0	0	20	0.5	kW
7.8	AHS FUNCTION	Enable or disable the AHS (AUXILIARY HEATING SOURCE) function: 0=NON,1=HEAT,2=HEAT+DHW	0	0	2	1	/
7.9	AHS_PUMPI CONTROL	Select the pump operating status when only AHS runs: 0=RUN,1=NOT RUN	0	0	1	1	/
7.10	dT1_AHS_ON	The temperature difference between T1S and T1B for starting the auxiliary heating source	5	2	20	1	°C
7.11	t_AHS_DELAY	The time that the compressor has run before starting the additional heating source	30	5	120	5	min
7.12	T4_AHS_ON	The ambient temperature for starting the additional heating source	-5	-15	30	1	°C
7.13	EnSWITCHPDC	Enable or disable the function that heat pump and auxiliary heating source switch automatically based on running cost: 0=NON,1=YES	0	0	1	1	/

Order number	Code	State	Default	Minumum	Maximum	Setting interval	Unit
7.14	GAS_COST	Price of gas	0.85	0.00	5.00	0.01	€/m³
7.15	ELE_COST	Price of electricity	0.20	0.00	5.00	0.01	€/kWh
7.16	MAX_SETHEATER	Maximum setting temperature of additional heating source	80	0	80	1	°C
7.17	MIN_SETHEATER	Minimum setting temperature of additional heating source	30	0	80	1	°C
7.18	MAX_SIGHEATER	The voltage corresponding to the maximum setting temperature of additional heating source	10	0	10	1	V
7.19	MIN_SIGHEATER	The voltage corresponding to the minimum setting temperature of additional heating source	3	0	10	1	V
7.20	TBH FUNCTION	Enable or disable the TBH (TANK BOOSTER HEATER) function: 0=NON,1=YES	1	0	1	1	/
7.21	dT5_TBH_OFF	The temperature difference between T5 and T5S(The set water tank temperature) that turns the booster heater off.	5	0	10	1	°C
7.22	t_TBH_DELAY	The time that the compressor has run before starting the booster heater	30	0	240	5	MIN
7.23	T4_TBH_ON	The ambient temperature for starting the tank booster heater	5	-5	50	1	°C
7.24	P_TBH	Power input of TBH	2	0	20	0.5	kW
7.25	SOLAR FUNCTION	Enable or disable the SOLAR function: 0=NON,1=ONLY SOLAR, 2=SOLAR+HP (HEAT PUMP)	0	0	2	1	/
7.26	SOLAR CONTROL	The solar pump (pump_s) control method : 0=Tsolar, 1=SL1SL2	0	0	1	1	/
7.27	DELTASOL	The deviation temperature that SOLAR turns on	10	5	20	1	°C
8.1	T1S_HA_H	The target outlet water temperature for space heating in holiday away mode	25	20	25	1	°C
8.2	T5S_HA_DHW	The target tank temperature for domestic hot water heating in holiday away mode	25	20	25	1	°C
12	PREHEATING FOR FLOOR-T1S	The setting temperature of outlet water during first preheating for floor	25	25	35	1	°C
	FLOOR DRYING UP	The function of drying up the floor	/	/	/	/	/
	t_FIRSTFH	Running time for first preheating of the floor	72	48	96	12	HOUR
	t_DRYUP	Temp-up days for floor drying up	8	4	15	1	DAY
	t_HIGHPEAK	Days for floor drying up	5	3	7	1	DAY
	t_DRYD	Temp-down days for floor drying up	5	4	15	1	DAY
	t_DRYPEAK	Outlet temperature of floor drying up	45	30	55	1	°C
	START TIME	The start time of floor drying up	Hour: the present time(not on the hour +1, on the hour +2) Minute:00	0:00	23:30	1/30	h/min
START DATE	The start date of floor drying up	The present date	1/1/2000	31/12/2099	1/1/1	d/m/y	
13.1	AUTO RESTART COOL/HEAT MODE	Enable or disable the auto restart cooling/heating mode. 0=NON,1=YES	1	0	1	1	/
13.2	AUTO RESTART DHW MODE	Enable or disable the auto restart DHW mode. 0=NON,1=YES	1	0	1	1	/
14.1	POWER INPUT LIMITATION	The type of power input limitation	0	0	8	1	/

Order number	Code	State	Default	Minumum	Maximum	Setting interval	Unit
15.1	M1M2	Define the function of the M1M2 switch: 0= REMOTE ON/OFF,1= TBH ON/OFF,2= AHS ON/OFF	0	0	2	1	/
15.2	SMART GRID	Enable or disable the SMART GRID: 0=NON,1=YES	0	0	1	1	/
15.3	T1T2	Control options of Port T1T2: 0=NON,1=RT/Ta_PCB	0	0	1	1	/
15.4	Tbt	Enable or disable the Tbt: 0=NON,1=YES	0	0	1	1	/
15.5	P_X PORT	Select the function of P_X PORT:0=DEFORST,1=ALARM	0	0	1	1	/
16.1	PER_START	Start-up percentage of multiple units	10	10	100	10	%
16.2	TIME_ADJUST	Adjustment time of loading and unloading units	5	1	60	1	min
16.3	ADDRESS RESET	Reset the address code of the unit	FF	0	15	1	/
17.1	HMI SET	Choose the HMI: 0=MASTER	0	0	1	1	/
17.2	HMI ADDRESS FOR BMS	Set the HMI address code for BMS	1	1	16	1	/
17.3	STOP BIT	Upper computer stop bit:1=STOP BIT1,2=STOP BIT2	1	1	2	1	/
18.1	t_DELAY PUMP	The time that the compressor has run before starting the pump.	2	0.5	20	0.5	min
18.2	t1_ANTILOCK PUMP	The pump anti-lock interval time	24	5	48	1	h
18.3	t2_ANTILOCK PUMP RUN	The pump anti-lock running time.	60	0	300	30	s
18.4	t1_ANTILOCK SV	The valve anti-lock interval time.	24	5	48	1	h
18.5	t2_ANTILOCK SV RUN	The valve anti-lock running time.	30	0	120	10	s
18.6	Ta_adj.	The corrected value of Ta inside wired controller.	-2	-10	10	1	°C
18.7	F-PIPE LENGTH	Select the total length of the liquid pipe(F-PIPE LENGTH): 0=F-PIPE LENGTH<10m,1=F-PIPE LENGTH>=10m	0	0	1	1	/
18.8	PUMP_I SILENT OUTPUT	The pump_I max output limitation.	100	50	100	5	%

3 MODBUS MAPPING TABLE

3.1 MODBUS PORT COMMUNICATION SPECIFICATION

Port: RS-485; the wired controller XYE is the communication port for connecting with the hydraulic module. H1 and H2 are the Modbus communication ports.

Communication address: It is consistent with the DIP switch address of the hydraulic module.

Baud rate: 9600.

Number of digits: Eight

Verification: none

Stop Bit: 1 bit

Communication protocol: Modbus RTU (Modbus ASCII is not supported)

3.1.1 Mapping of registers in the wired controller

The following addresses can use 03H, 06H (write single register), 10H (write multiple register)

Register address	Description	Remarks	
0 (PLC:40001)	Power on or off	BIT15 Reserved	
		BIT14 Reserved	
		BIT13 Reserved	
		BIT12 Reserved	
		BIT11 Reserved	
		BIT10 Reserved	
		BIT9 Reserved	
		BIT8 Reserved	
		BIT7 Reserved	
		BIT6 Reserved	
		BIT5 Reserved	
		BIT4 Reserved	
		BIT3	0: power off floor heating; 1: power on floor heating;(zone 2) (water flow temperature control)
		BIT2	0: DHW(T5S) power off; 1: DHW(T5S) power on
		BIT1	0: power off floor heating; 1: power on floor heating;(zone 1) (water flow temperature control)
		BIT0	0: power off air conditioner; 1: power on air conditioner; (zone 1) (room temperature control)

Register address	Description	Remarks	
1(PLC: 40002)	Setting the mode	1: Auto; 2: Cool; 3: Heat; Others: Invalid	
2(PLC: 40003)	Setting water water temperature T1S	Bit8-Bit15	Water temperature T1s is corresponding to the floor heating.(zone 2)
		Bit0-Bit7	Water temperature T1s is corresponding to the floor heating.(zone 1)
3(PLC: 40004)	Setting air temperature Ts	The room temperature range is between 17°C and 30°C, and is valid when there is Ta. Portocol value=actual value*2	
4(PLC: 40005)	T5s	The water tank temperature range is between 20°C and 75°C.	
5(PLC: 40006)	Function Setting	BIT15	Reserved
		BIT14	Reserved
		BIT13	1: climate curve setting is valid; 0: climate curve setting is invalid. (zone2)
		BIT12	1: climate curve setting is valid; 0: climate curve setting is invalid. (zone1)
		BIT11	DHW pump's running constant-temperature water recycling
		BIT10	ECO mode
		BIT9	Reserved
		BIT8	Holiday home (the status can only be read, not changed)
		BIT7	0: Silent mode level1; 1: Silent mode level2
		BIT6	Silent mode
		BIT5	Holiday away (the status can only be read, but cannot be changed)
		BIT4	Disinfect
		BIT3	Reserved
		BIT2	Reserved
		BIT1	Reserved
BIT0	Reserved		
6(PLC: 4000 7)	Curve selection	Bit8-Bit15	Climate Curve 1-9(zone 2)
		Bit0-Bit7	Climate Curve 1-9(zone 1)
7(PLC: 40008)	Forced water heating	0: Invalid 1: Forced on 2: Forced off	TBH is the electric water tank heater. IBH1 and 2 are the hydraulic module's rear electric heater. IBH1 and 2 can be activated together. TBH cannot be activated together with IBH1 and IBH2.
8(PLC: 4000 9)	Forced TBH		
9(PLC: 40010)	Forced IBH1		
10(PLC: 40011)	Reserved	Reserved	
11(PLC: 40012)	T1S	Water temperature T1S is corresponding to the floor heating.(zone 1)	
12(PLC: 40013)	T1S	Water temperature T1S is corresponding to the floor heating.(zone 2)	
Leaving water temperature T1s setting range instruction: In cooling mode, T1S low temp setting range is 5~25°C;T1S high temp setting range is 18~25°C. In heating mode, T1S low temp setting range is 22~55°C;T1S high temp setting range is 35~70°C.			

3.1.2 When the wired controller is connected to the hydraulic module, the parameters of the whole unit can be checked:

The following address table can only use 03H function code(Read register).

Whole unit parameter mapping address table

1) Running parameters			
Register address	Description	Remarks	
100(PLC: 40101)	Operating frequency	Compressor operating frequency in Hz	
101(PLC: 40102)	Operating Mode	Outdoor unit's actual operating mode, 2: cooling, 3: heating, 0: off	
102(PLC: 40103)	Fan Speed	Fan speed, in r/min	
103(PLC: 40104)	PMV openness	Openness of the outdoor unit's electronic expansion valve in P	
104(PLC: 40105)	Water inlet temperature	TW_in, unit: °C	
105(PLC: 40106)	Water outlet temperature	TW_out, unit: °C	
106(PLC: 40107)	T3 Temperature	Condenser temperature, unit: °C	
107(PLC: 40108)	T4 Temperature	Outdoor ambient temperature unit: °C	
108(PLC: 40109)	Discharge temperature	Compressor discharge temperature Tp unit: °C	
109(PLC: 40110)	Return air temperature	Compressor air return temperature unit: °C	
110(PLC: 40111)	T1	Total water outlet temperature unit: °C	
111(PLC: 40112)	T1B	System total water outlet temperature (behind the auxiliary heater) , unit: °C	
112(PLC: 40113)	T2	Refrigerant liquid side temperature, unit: °C	
113(PLC: 40114)	T2B	Refrigerant gas side temperature, unit: °C	
114(PLC: 40115)	Ta	Room temperature, unit: °C	
115(PLC: 40116)	T5	Water tank temperature, unit: °C	
116(PLC: 40117)	Pressure 1	Outdoor unit high pressure value, unit: kPa	
117(PLC: 40118)	Pressure 2	Outdoor unit low pressure value, unit: kPa	
118(PLC: 40119)	Outdoor unit current	Outdoor unit operating current, unit: A	
119(PLC: 40120)	Outdoor unit voltage	Outdoor unit voltage, unit: V	
120(PLC: 40121)	Tbt1	Tbt1, unit: °C	
121(PLC: 40122)	Tbt2	Tbt2, unit: °C	
122(PLC: 40123)	Compressor operation time	Compressor operating time in hour	
123(PLC: 40124)	Unit capacity	0702 for 200 register is reserved. When it is 071x, data 4-30 means 4-30kW	
124(PLC: 40125)	Current fault	Check the code table for detailed fault codes	
125(PLC: 40126)	Fault 1	Check the code table for detailed fault codes.	
126(PLC: 40127)	Fault 2		
127(PLC: 40128)	Fault 3		
128(PLC: 40129)	Status bit 1	BIT15	Request to send operation parameter, 1: request; 0: not request
		BIT14	Request to send software version, 1: request; 0: not request
		BIT13	Request to send SN code, 1: request; 0: not request
		BIT12	Reserved
		BIT11	EUV 1: free electricity; 0: judge by SG's signal
		BIT10	SG 0:normal electricity; 1: high price electricity(judge when EUV is 0)
		BIT9	Anti-freezing operation for water tank
		BIT8	Solar energy signal input
		BIT7	Cooling mode set by room thermostat
		BIT6	Heating mode set by room thermostat
		BIT5	Outdoor unit test mode mark
		BIT4	Remote On/Off (1: d8)
		BIT3	Oil return
		BIT2	Anti-freezing
		BIT1	Defrosting
BIT0	Reserved		
129(PLC: 40130)	Load output	BIT15	DEFROST
		BIT14	Auxiliary heat source
		BIT13	RUN
		BIT12	ALARM
		BIT11	Solar water pump
		BIT10	HEAT4
		BIT9	SV3

1) Running parameters			
129(PLC: 40130)	Load output	BIT8	Mixed water pump P_c
		BIT7	Water return water P_d
		BIT6	External water pump P_o
		BIT5	SV2
		BIT4	SV1
		BIT3	Water pump PUMP_I
		BIT2	Electric heater TBH
		BIT1	Electric heater IBH2
		BIT0	Electric heater IBH1
130(PLC: 40131)	Software version	1~99 is the software version of hydronic module	
131(PLC: 40132)	Wired controller version No.	1~99 is the wired controller's version number.	
132(PLC: 40133)	Unit target frequency	Hz	
133(PLC: 40134)	DC bus current	Unit: A	
134(PLC: 40135)	DC bus voltage	The actual value/10, unit: V	
135(PLC: 40136)	TF module temperature	Feedback on outdoor unit, unit: °C	
136(PLC: 40137)	Climate curve T1S calculated value 1	The corresponding calculated T1S of zone 1	
137(PLC: 40138)	Climate curve T1S calculated value 2	The corresponding calculated T1S of zone 2	
138(PLC: 40139)	Water flow	The actual value*100, unit: m3/H	
139(PLC: 40140)	Limit scheme of outdoor unit current	Scheme value	
140(PLC: 40141)	Ability of Hyd raulic module	The actual value*100, unit: kW	
141(PLC: 40142)	Tsolar	Tsolar	
142(PLC: 40143)	Quantity of units in parallel	BIT1-BIT15	Respectively represent the online status of slaves unit 1-15
		BIT0	Reserved
143(PLC: 40144)	Higher bits for electricity consumption		
144(PLC: 40145)	Lower bits for electricity consumption		
145(PLC: 40146)	Higher bits for power output		
146(PLC: 40147)	Lower bits for power output		
<p>Note :</p> <p>1. When T1B unavailable, "25" would display in upper unit address 113.</p> <p>2. When Ta unavailable, "25" would display in upper unit address 113.</p>			

The following register address 200-208 can only use 03H(Read register) function code. Register address 209 and after can use 03H, 06H (write single register), 10H (write multiple register).

2) Parameter setting		
Register address	Description	Remarks
200(PLC: 40201)	Home appliance type	The upper 8 bits are the types of home appliances: Air to water heat pump: 0x07 The middle 4 bits are product codes: 0x1* The lower 4 bits are sub-type: R32: 0x*2
201(PLC: 40202)	Temperature upper limit of T1S cooling	Lower 8 bits are for zone 1. higher 8 bits are for zone 2
202(PLC: 40203)	Temperature lower limit of T1S cooling	Lower 8 bits are for zone 1. higher 8 bits are for zone 2
203(PLC: 40204)	Temperature upper limit of T1S heating	Lower 8 bits are for zone 1. higher 8 bits are for zone 2
204(PLC: 40205)	Temperature lower limit of T1S heating	Lower 8 bits are for zone 1. higher 8 bits are for zone 2
205(PLC: 40206)	Temperature upper limit of TS setting	Protocol value = actual value * 2
206(PLC: 40207)	Temperature lower limit of TS setting	Protocol value = actual value * 2
207(PLC: 40208)	Temperature upper limit of water heating	
208(PLC: 40209)	Temperature lower limit of water heating	
209(PLC: 40210)	PUMP RUNNING TIME	DHW PUMP water return running time. It is five minutes by default and can be adjusted between 5 and 120 min at an interval of 1 min.
210(PLC: 40211)	Parameter setting 1	BIT15 Enable water heating
		BIT14 Supports water tank electric heater TBH(Read-only)
		BIT13 Supports disinfection
		BIT12 DHW PUMP, 1: supported; 0: not supported
		BIT11 Reserved
		BIT10 DHW pump is valid in disinfection mode
		BIT9 Enable cooling
		BIT8 T1S cooling high/low temperature settings(Read-only)
		BIT7 Enable heating
		BIT6 T1S heating high/low temperature settings(Read-only)
		BIT5 PUMPI silent mode, 1; valid, 0: invalid
		BIT4 Supports room temperature Sensor Ta
		BIT3 Supports room thermostat
		BIT2 Room thermostat
BIT1 Dual Room Thermostat, 0: not supported;1: supported		
BIT0 0: room cooling/heating first, 1: water heating first		
211(PLC: 40212)	Parameter setting 2	BIT15 Reserved, wrong address is reported when this register is queried
		BIT14 M1M2 is used for AHS control 1: Yes 0: No
		BIT13 RT_Ta_PCNE(enable Temperature Collection Kit) 1: Yes 0: No
		BIT12 Tbt2 sensor is valid 1: Yes 0: No
		BIT11 Piping length selection 1: >10m 0: <10m
		BIT10 Solar energy input port 1: CN18 0: CN11
		BIT9 Solar energy kit enable 1: Yes 0: No
		BIT8 Define the port, 0=remote ON/OFF; 1=DHW heater
		BIT7 Smart grid, 0=NON; 1=YES
		BIT6 T1B sensor enable 0: None 1: Yes
		BIT5 Setting the high/low temperature of cooling mode T1S
		BIT4 Setting the high/low temperature of heating mode T1S
		BIT3 Double zone setting is valid
		BIT2 Ta sensor position 1: IDU 0: HMI
BIT1 Tbt sensor enable 1: Yes 0: No		
BIT0 IBH/AHS installation position 1: buffer tank 0: pipe		
212(PLC: 40213)	dT5_On	Default setting: 10° C, range: 1~30° C;
213(PLC: 40214)	dT1S5	Default setting: 10° C, range: 5~40° C, setting interval: 1° C
214(PLC: 40215)	T_Interval_DHW	Default setting: 5 min, range: 5~30 min, setting interval: 1 min
215(PLC: 40216)	T4DHWmax	Default setting: 43°C, range: 35~43°C, setting interval: 1°C
216(PLC: 40217)	T4DHWmin	Default: -10° C, range: -25~30° C;
217(PLC: 40218)	t_TBH_delay	Default setting: 30 min, range: 0~240 min, setting interval: 5 min

2) Parameter setting		
218(PLC: 40219)	dT5S_TBH_off	Default setting: 5°C, range: 0~10°C, setting interval: 1°C
219(PLC: 40220)	T4_TBH_on	Default setting: 5°C, range: -5~50°C;
220(PLC: 40221)	T5s_DI	Temperature for the disinfection operation, range: 60~70°C, default setting: 65°C
221(PLC: 40222)	t_DI_max	Maximum disinfection duration, range: 90~300 min, default setting: 210 min
222(PLC: 40223)	t_DI_hightemp	Disinfection high temperature duration, range: 5~60 min, default setting: 15 min
223(PLC: 40224)	t_interval_C	Time interval of compressor start-up in cooling mode; range: 5~30 min, default setting: 5 min
224(PLC: 40225)	dT1SC	Default setting: 5°C, range: 2~10°C, setting interval: 1°C
225(PLC: 40226)	dTSC	Default setting: 2°C, range: 1~10°C, setting interval: 1°C
226(PLC: 40227)	T4cmax	Default setting: 43°C, range: 35~46°C, setting interval: 1°C
227(PLC: 40228)	T4cmin	Default setting: 10°C, range: -5~25°C, setting interval: 1°C
228(PLC: 40229)	t_interval_H	Time interval of compressor start-up in the heating mode; range: 5~60 min, default setting: 5 min
229(PLC: 40230)	dT1SH	Default setting: 5°C, range: 2~20°C;
230(PLC: 40231)	dTSH	Default setting: 2°C, range: 1~10°C, setting interval: 1°C
231(PLC: 40232)	T4hmax	Default setting: 25°C, range: 20~35°C, setting interval: 1°C
232(PLC: 40233)	T4hmin	Default setting: -15°C, range: -25~30°C, Setting interval 1°C
233(PLC: 40234)	T4_IBH_on	Ambient temperature for enabling the hydraulic module auxiliary electric heating IBH, range: -15~10°C; default setting: -5°C
234(PLC: 40235)	dT1_IBH_on	Temperature return difference for enabling the hydraulic module auxiliary
235(PLC: 40236)	t_IBH_delay	Delay time of enabling the hydraulic module auxiliary electric heating IBH,
237(PLC:40238)	T4_AHS_on	The trigger ambient temperature for turning on AHS, range: -15~30°C; default setting: -
238(PLC:40239)	dT1_AHS_on	The temperature difference between the heat pump ' leaving water set temperature (T1S) and the heat; range: 2~20°C; default setting: 5°C
240(PLC: 40241)	t_AHS_delay	Delay time for enabling the external heater AHS, range: 5~120 min; default setting: 30 min
241(PLC: 40242)	t_DHWHP_max	Longest duration of water heating by the heat pump, range: 10~600 min, default setting: 120 min;
242(PLC: 40243)	t_DHWHP_restrict	Duration of limited water heating by the heat pump, range: 10~600 min, default setting: 30 min;
243(PLC: 40244)	T4autocmin	Default setting: 25°C, range: 20~29°C, setting interval: 1°C
244(PLC: 40245)	T4autohmax	Default setting: 17°C, range: 10~17°C, setting interval: 1°C
245(PLC: 40246)	T1S_H.A_H	Default setting: 25°C, range: 20~29°C, setting interval: 1°C
246(PLC: 40247)	T5S_H.A_DHW	In the holiday mode, setting of T1 in the water heating mode, range: 20~25°C, default setting: 25°C
247(PLC: 40248)	PER_START ratio	Range10-100, default setting10.Setting interval10
248(PLC: 40249)	TIME_ADJUST	Range1-60 default setting5
249(PLC: 40250)	dTbt2	Range0-50 default setting15
250(P LC: 40251)	IBH1 power	Range0-200, default setting0, unit: 100W
251(PLC: 40252)	IBH2 power	Range0-200, default setting0, unit: 100W
252(P LC: 40253)	TBH power	Range0-200, default setting0,unit: 100W
253(PLC: 40254)	Comfort parameter	Reserved, wrong address is reported when this register is queried
254(P LC: 40255)	Comfort parameter	Reserved, wrong address is reported when this register is queried
255(PLC: 40256)	t_DRYUP	Temperature rise day number, range: 4~15 days, default setting: 8 days
256(PLC: 40257)	t_HIGHPEAK	Drying day number, range: 3~7 days, default setting: 5 days
257(PLC: 40258)	t_DRYD	Temperature drop day number, range: 4~15 days, default setting: 5 days
258(PLC: 40259)	T_DRYPEAK	Highest drying temperature, range: 30~55°C, default setting: 45°C
259(PLC: 40260)	t_firstFH	Running time of floor heating for the first time, default setting: 72 hrs, range: 48-96 hrs
260(PLC: 40261)	T1S (first floor heating)	T1S of floor heating for the first time, range: 25~35°C, default setting: 25°C

