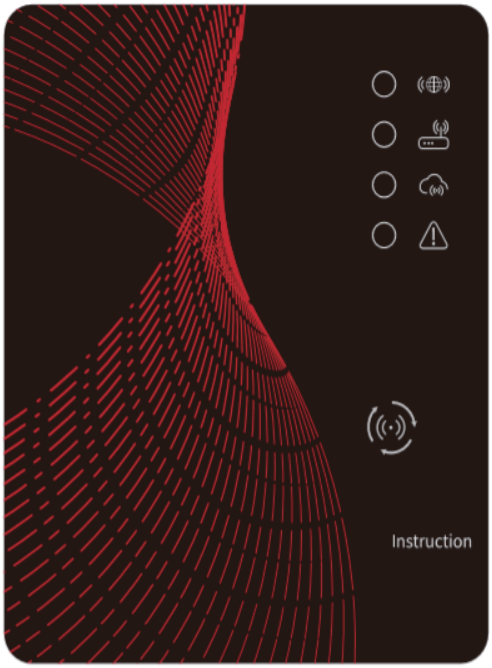
solstice®
HEAT PUMPS

Model CC32
WIFI Module
USER'S MANUAL



Please read this user's manual carefully before use.

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User Privacy Instructions

We take your privacy very seriously and we promise to inform you how we use the data. Users' private data, such as mailboxes, address, before uploading to the cloud, we will get your permission, and we will work hard to protect your data security.

Description

- Receive data signal from cloud server and transmit to the main device;
- Receive data signal from main device and transmit to cloud server;
- To achieve remote upgrade the WIFI module baseplate MCU by cloud server;
- To achieve the remote upgrade of the main device by WIFI module baseplate MCU.

Technical Parameters

OPERATING VOLTAGE: DC8V~12V (Recommended value 12V)

OPERATING CURRENT: Max. recurrent peak 1A, average standby current 50mA

TEMP. RANGE: Operating Temp.: -22°F~+158°F; Storage Temp.: -40°F~+185°F

LED INDICATOR LIGHT:

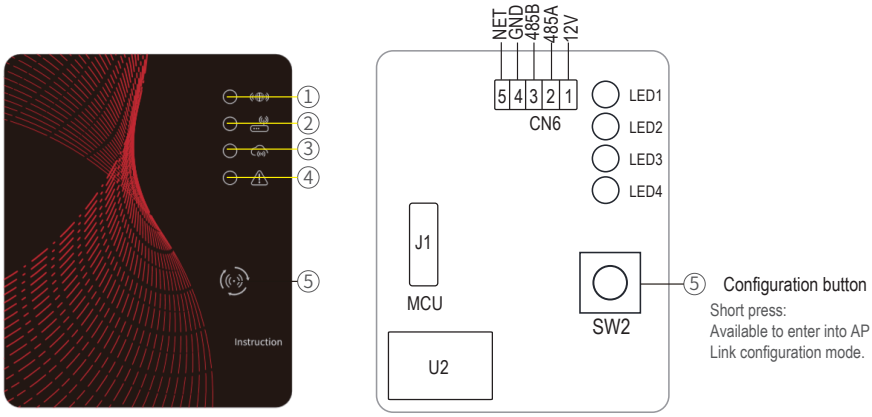
4 lights, Network configuration indicator,router connection indicator, cloud server connection indicator, 485 communication indicator;

DIMENSION (L×W×H): 3" x 2.5" x 1"

Installation

- There is a magnet on the back of the WIFI module, it can be installed indoors or outdoors, and avoid direct sunlight;

Functional Description



ITEM	NAME	LONG LIGHT	SLOW FLASH	EXTINGUISH
①	Network configuration indicator	Configuring Network	SmartLink configuring	Done
②	Router connection indicator	Normal	Abnormal	----
③	Cloud server connection indicator	Normal	Abnormal	----
④	485 communication indicator	Normal	Abnormal	----

Account Login

Use email address and password to register, login or reset the password.

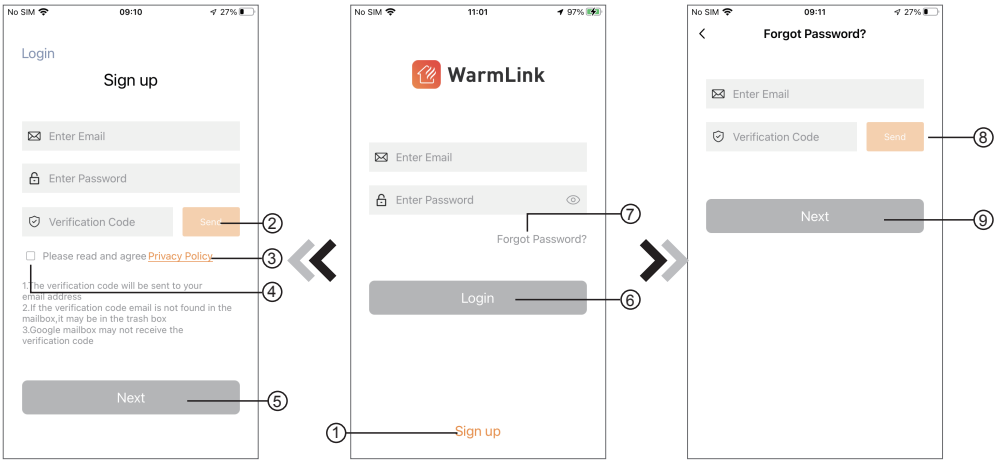


Fig.2 Account Registration interface

Fig.1 Login interface

Fig.3 Forgot Password interface

1. Account Registration: To register an account, click ① (Fig.1) to jump to the Account Registration interface, fill in the relevant information and click ② to receive verification code, after completing the application information, click ③ to read the details of the Privacy Policy, then click ④ to agree, and click ⑤, registration is done.

   Please note, the valid time of one verification code is 15min, please fill in the verification code within 15min, otherwise you need to ask for a new one.

2. Log in: Follow the instructions on the page (Fig.1), enter your registered email address and password, click ⑥ and jump to device list;

3. Forgot Password: If you forget your password, click ⑦ (Fig.1), jump to the Forgot Password interface (Fig.3). Follow the instructions on the page, fill in the relevant informations, click ⑧ to receive verification code from your mailbox, click ⑨ to comfirm and password reset is done.

Add Device

After log in, displays My Device interface (Fig. 4), follow the instruction to add WIFI.

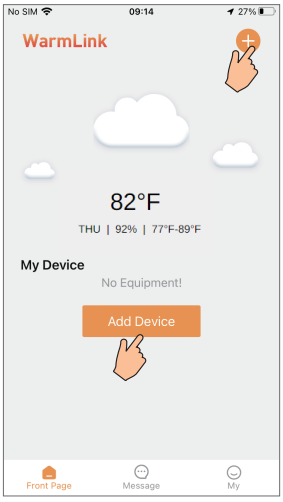


Fig.4 My Device interface

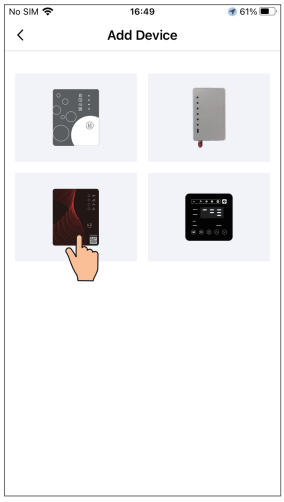


Fig.5 Add Device interface

WIFI Configure Network

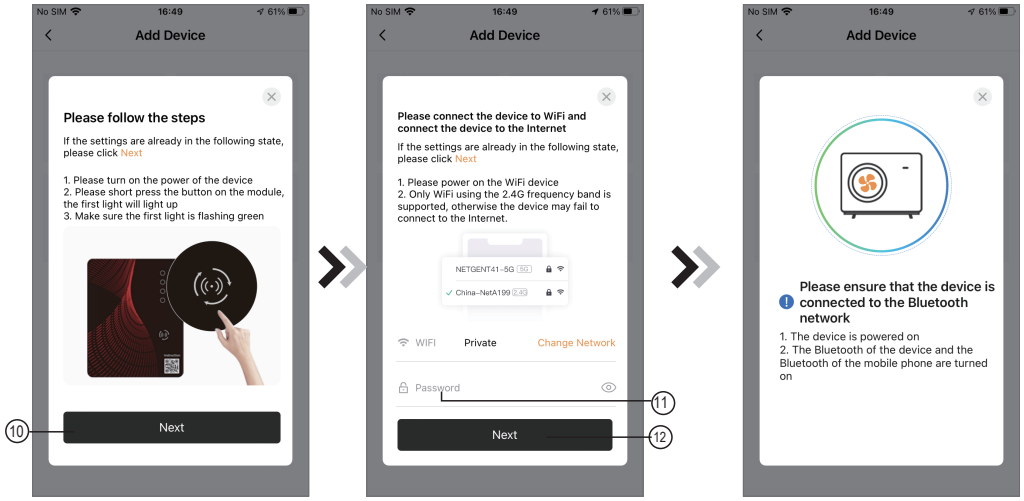


Fig.6 WIFI Module On interface　　Fig.7 Enter password interface　　Fig.8 Searching device interface

1. Follow the instructions on the page (Fig.6), press button on module and hold for 1 second until two lights are on, then AP connection is activated, click ⑩ to turn the page;
2. Click⑪ to enter the WIFI password for the current connection, click⑫ to confirm;
3. The APP automatically searches for WIFI module (Fig 8);
4. Click "To Scan"（Fig.9） to allow the App to use the camera for scanning the WF code on the WIFI module（Fig.11.1）, or click "Manual input" to enter the WF code (Fig.11.2).

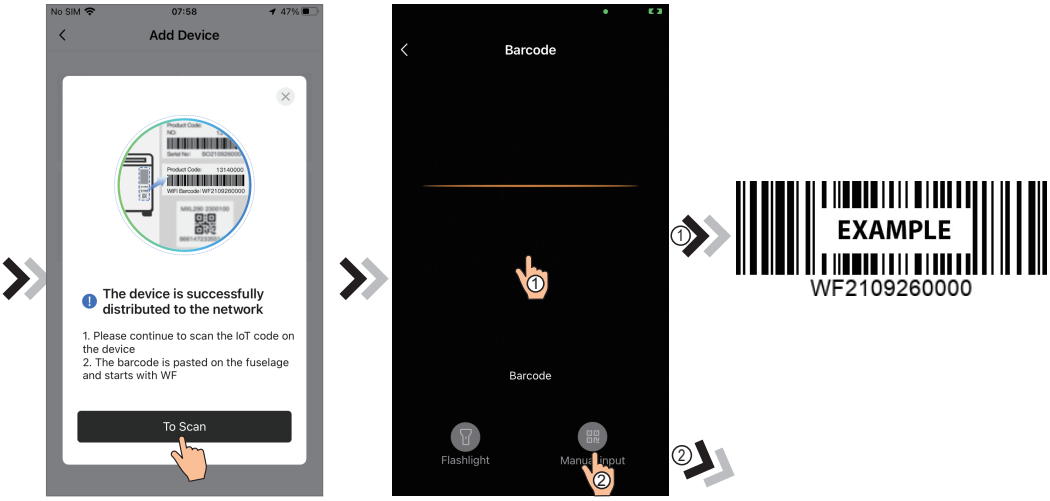


Fig.9 Bond device interface　　Fig.10 Scanning interface　　Fig.11.1 WF barcode

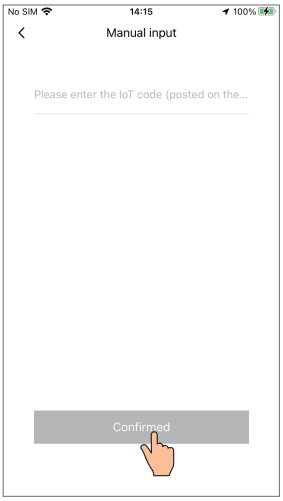


Fig.11.2 Manual input interface

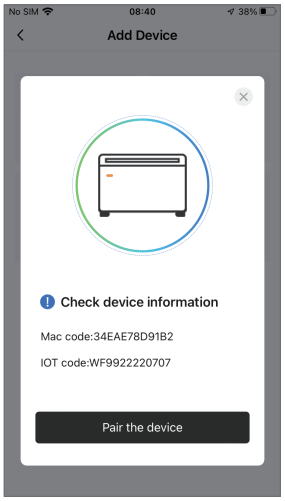


Fig.12 Bond Device interface. This should match the information in your specific unit.

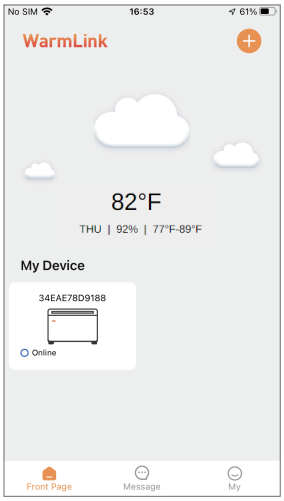


Fig.13 Device management interface

5. Click “Pair the device”, device bond is done (Fig.12);
6. After WIFI bonding is done, and jump back to My Device (Fig. 13).

Device Management

Device management operations are as below :

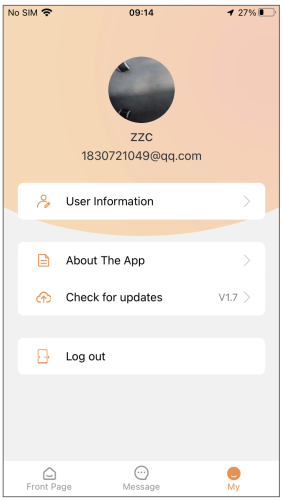


Fig.15 My information interface

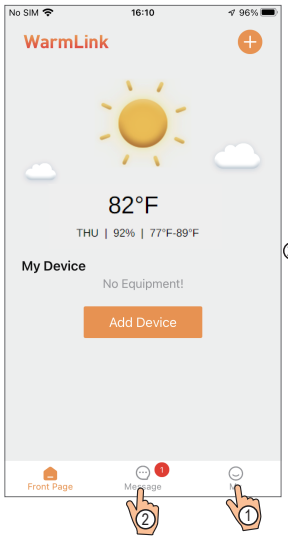


Fig.14 Device management interface

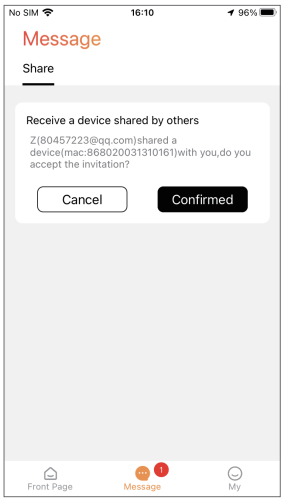


Fig.16 Share invitation data interface

Heating Device Control

Guidelines for interface jumps

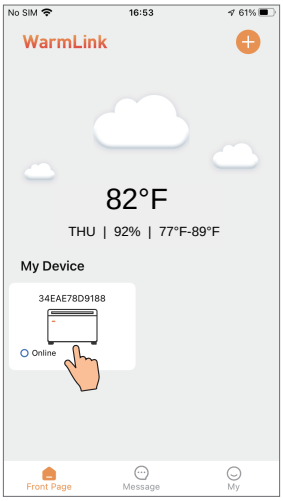


Fig.17 Device management interface

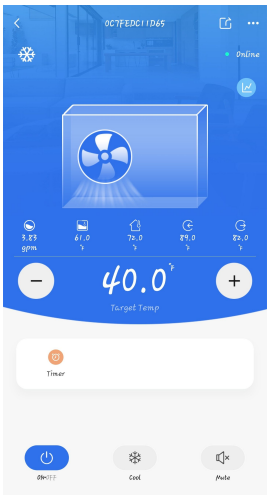


Fig.18 Device Main interface

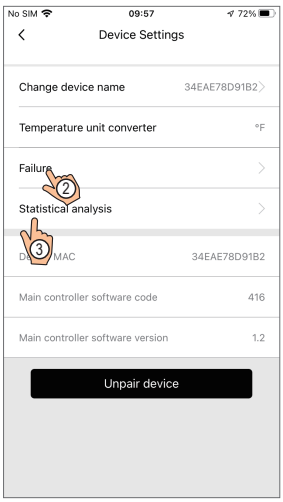


Fig.19 Setting interface

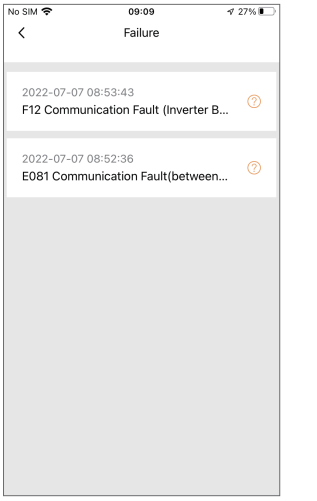


Fig.20 The failure interface

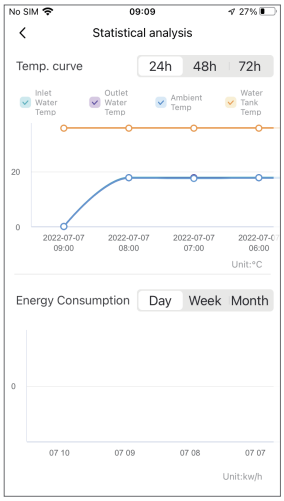


Fig.21 Statistical analysis interface

Heating Device Control

Guidelines for interface jumps

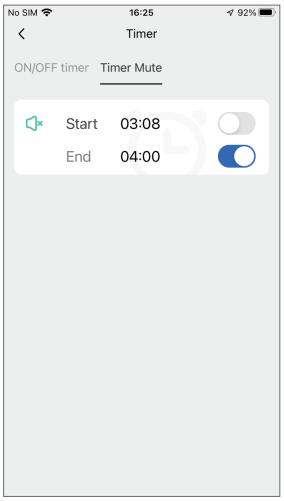


Fig.22 Time Mute interface

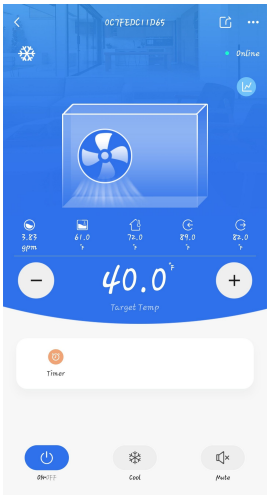


Fig.23 Device Main interface

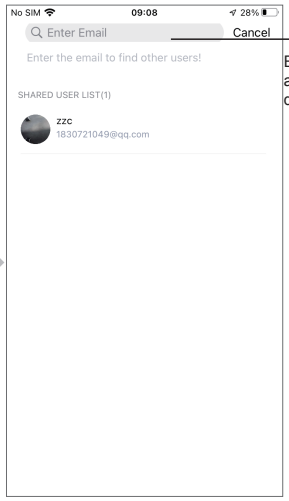


Fig.24 Device share interface

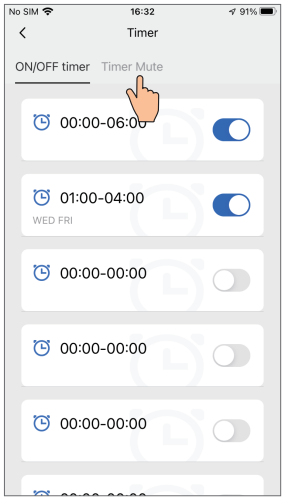


Fig.25 Timer Setting interface

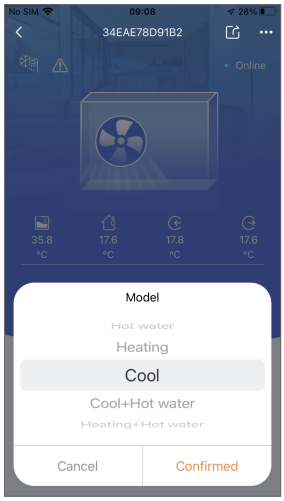


Fig.26 Mode switching interface

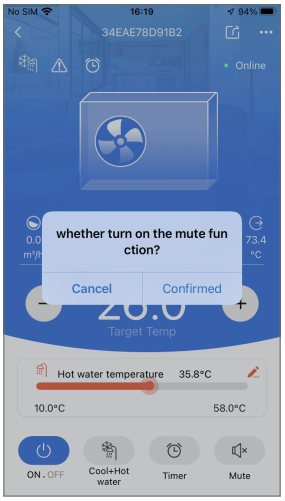


Fig. 27 Mute Setting interface

Fan Coil Device Control

Guidelines for interface jumps

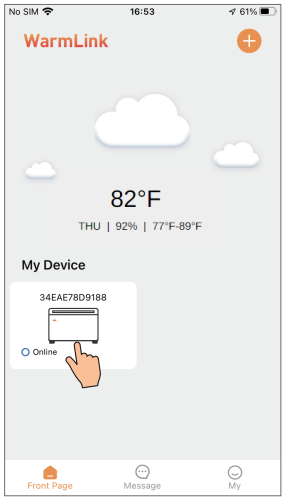


Fig.28 Device management interface

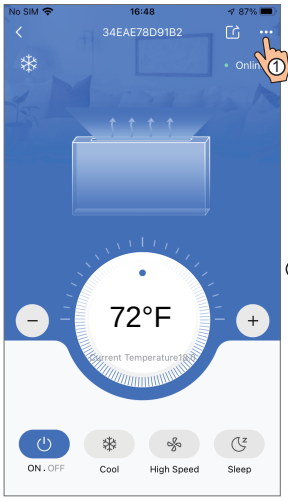


Fig.29 Device Main interface

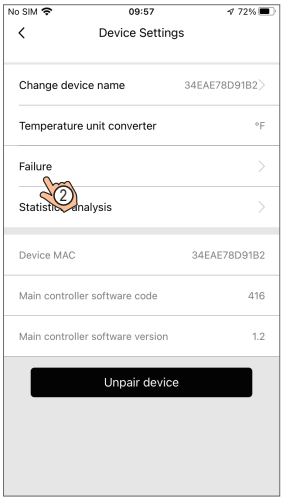


Fig.30 Setting interface

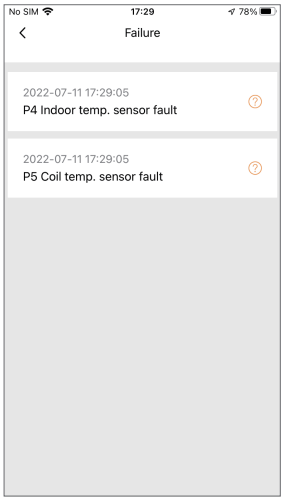


Fig.31 The failure interface

Fan Coil Device Control

Guidelines for interface jumps

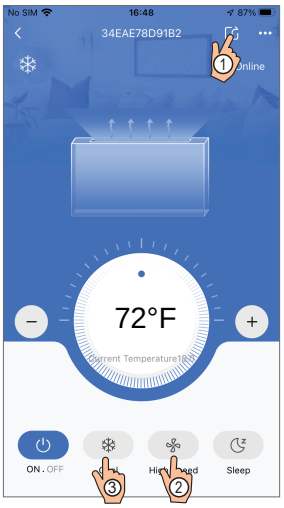


Fig.32 Device Main interface

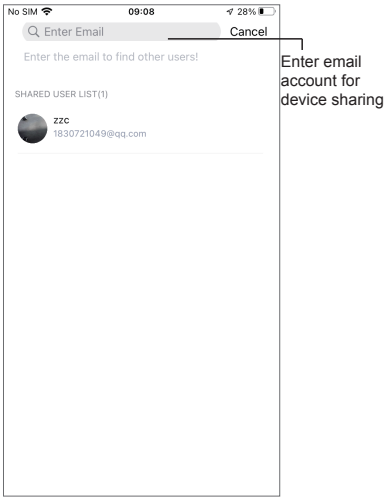


Fig.24 Device share interface

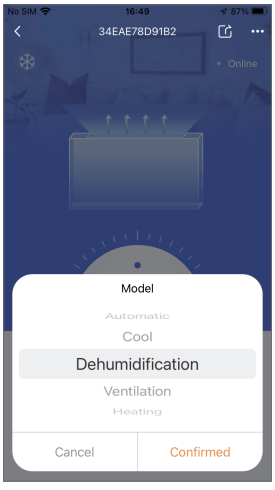


Fig.26 Mode switching interface

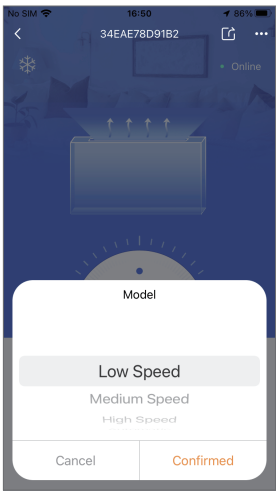


Fig. 27 Speed setting interface

ICON	NAME	FUNCTIONS
	ON/ OFF	Click it to turn on/ off the unit
	Silent Mode Off/on	Displays mute mode. Click to switch mute mode
	Timers settings	Click to enter timer on/off
	Troubleshooting	Click to view device failure information
	heating and hot water	Select Save to change the working mode
	hot water	Select Save to change the working mode
	heating	Select Save to change the working mode
	refrigeration	Select Save to change the working mode
	refrigeration and hot water	Select Save to change the working mode
	Electric heating condition	Display electric heating status
	Defrost status	Display defrost status
	Water flow	Display water flow
	The environment temperature	Display ambient temperature
	water inlet temperature	Display inlet temperature
	Tank temperature	Display tank temperature
	Indoor temperature	Display room temperature (room temperature)
	hot water temperature	Display outlet water temperature
	Setting	Click to change the functions setting of unit

MODBUS COMMUNICATIONS PROTOCOL

From: To:

Vesion V2.1 update: 20230330

1.Transmission Format

Baud Rate	9600bps
Start bit	1
Byte width	8
Parity	N
Stop bits	1
Slave address	H10

2.Packet Format

Address	Function	Data	CRC checksum
16bits	16bits 03:Function of reading multi registers 16:Function of presenting multi registers	N*16bits	16bits

3.Data types

Data Types	Description
TEMP	have symble byte，0.1℃resolution，formula：T*10，temperature range :-30~97℃ （When the temperature show 25 ℃，the protocol data transmission is 250;When the temperature show -25 ℃，the protocol data transmission is -250 ；when bit15 is 1 represents the negative number，when the bit15 is 0，it represents Integer；），When the value is 32767,it represents the sensor failure
DIGI1	No symbol byte，unit :1，When show 123,the data transmission is 123；
DIGI2	No symbol byte，unit :10，When show 1230,the data transmission is 123；
DIGI3	No symbol byte，unit :100，When show 12300,the data transmission is 123；
DIGI4	No symbol byte，unit :5，When show 10,the data transmission is 2；
DIGI5	No symbol byte，unit :0.1，When show 12.3,the data transmission is 123；
DIGI6	No symbol byte，unit :0.001，When show 0.123,the data transmission is 123；
DIGI9	No symbol byte，unit :0.01，When show 0.12,the data transmission is 12；

4.Modbus address

Address	Function	Number	Content	Byte length	Mode	Description	Remark	协议备注
1011	03/16		ON/OFF	double byte	read/write	0-OFF/1-ON	DIGI1	
1012	03/16		Mode	double byte	read/write	H05=1：0-Hot water/1-Heating/2-Cooling/3-Hot water+heating/4-Hot water+Cooling H05=0：0-Hot water/1-Heating/3-Hot water+heating	DIGI1	
1013	06		Water Tank Temp(Write in by Centralized Control when H37=1)	double byte	read/write	(according to centralized control)	TEMP1	
1014	06		Allow heatpump get into defrosting when D26=1	double byte	read/write	0-not allow/1- allow	DIGI1	When D26=1 and needs to enter defrosting,the heat pump applies for defrost first through address 2015，and then waits for the central controller to approve the defrost through address 1014.If it is still not approved for more than 8 minutes, the heat pump will forcibly enter defrost to prevent the frosting
1016	03/16		Manual Control	double byte	read/write	bit0：Manual defrost(0-off 1-on) bit1：Mute flag bit (0-off 1-on) bit2：A key manual heating (0-off 1-on)	DIGI1	
1018	03/16	H01	Enable Power-off Memory	double byte	read/write	0-no/1-yes	DIGI1	
1021	03/16	H05	Enable Cooling Function	double byte	read/write	0-No/1-Yes	DIGI1	
1023	03/16	H07	Controller choice	double byte	read/write	0-display control 1-remote control	DIGI1	
1024	03/16	H10	Unit address	double byte	read/write	1~32	DIGI1	
1025	03/16	H38	Language choice	double byte	read/write			
1028	03/16	H28	Heating/Cooling and Hot Water Function Enabled	double byte	read/write	0-no/1-yes	DIGI1	
1029	03/16	H21	Temperature Unit	double byte	read/write	0-℃/1-℉	DIGI1	
1030	03/16	H22	Enable Silent Mode	double byte	read/write	0-no/1-yes	DIGI1	
1031	03/16	A35	Electric Heater OFF Temp. Diff	double byte	read/write	0-30℃	TEMP1	
1032	03/16	H18	Electric Heater Stage	double byte	read/write	1-Electric heater stage 1 2-Electric heater stage 2 3-Electric heater stage 3	DIGI1	
1033	03/16	H20	3-Way Valve Polarity	double byte	read/write	0-ON on hot water mode/1-OFF on hot water mode	DIGI1	
1035	03/16	H25	Temp. Control Selection	double byte	read/write	0-outlet water temp./1-room temp./2-buffer tank temp./3-inlet water temp.	DIGI1	
1036	03/16	H30	Enable Hydraulic Module	double byte	read/write	0-no,1-yes	DIGI1	
1037	03/16	A03	Shutdown Ambient Temp.	double byte	read/write	-40.0~10.0℃	TEMP1	
1038	03/16	A04	Antifreeze Temp.	double byte	read/write	A22~10.0℃	TEMP1	
1043	03/16	A23	Min. Outlet Water Temp. Protect	double byte	read/write	-30~20℃	TEMP1	
1044	03/16	A24	Excess Temp. Diff. Between Inlet and Outlet Temp.	double byte	read/write	0~30℃	TEMP1	
1045	03/16	H32	Force Switch Mode Time	double byte	read/write	1~180min	DIGI1	
1047	03/16	D26	Enable Centralized Control Defrosting Function	double byte	read/write	0-no/1-yes	DIGI1	
1048	03/16	H37	Water Tank Temp Source	double byte	read/write	0-water tank temp. sensor/1-centralized controller	DIGI1	
1049	03/16	A31	Electric Heater On AT	double byte	read/write	-30~60℃	TEMP1	
1050	03/16	A32	Electric Heater Delays Comp. On Time	double byte	read/write	10~999min	DIGI1	
1053	03/16	A22	Min. Antifreeze Temp.	double byte	read/write	-20℃~10℃	TEMP1	
1055	03/16	A25	Minimum Evaporation Temp. of Cooling	double byte	read/write	-50℃~30℃	TEMP1	
1056	03/16	A27	Temp. Diff. of Limiting Frequency	double byte	read/write	-20~20℃	TEMP1	
1057	03/16	A28	Temp. Diff. Between Outlet and DHW Temp.	double byte	read/write	-20~20℃	TEMP1	
1063	03/16	A33	Electric Heater Opening Temp. Diff	double byte	read/write	0~20℃	TEMP1	
1064	03/16	A34	Crank Preheating Time	double byte	read/write	0~360min	DIGI1	
1087	03/16	F22	Enable Manual-control Fan Speed	double byte	read/write	0-no/1-yes	DIGI1	
1089	03/16	F23	Rated DC Fan Motor Speed	double byte	read/write	10~1300	DIGI1	
1103	03/16	F25	Max. Fan Speed in Cooling	double byte	read/write	10~1300	DIGI1	
1104	03/16	F26	Max. Fan Speed in Heating	double byte	read/write	10~1300	DIGI1	
1105	03/16	D01	Ambient Temp. of Starting Defrosting	double byte	read/write	-37~45℃	TEMP1	
1106	03/16	D02	Heating Operation Time Before Defrosting	double byte	read/write	0~120min	DIGI1	
1107	03/16	D03	Interval Time Between Defrosting Cycles	double byte	read/write	30~90min	DIGI1	
1108	03/16	D04	Exhaust Temp. Correction for Defrosting Cycle	double byte	read/write	0~150℃	TEMP1	
1109	03/16	D05-1	Defrosting Suction Pressure 1	double byte	read/write	0~45bar	DIGI5	
1110	03/16	D05-2	Defrosting Suction Pressure 2	double byte	read/write	0~45bar	DIGI5	
1111	03/16	D06	Defrosting Cycle Time Correction	double byte	read/write	0~120min	DIGI1	
1112	03/16	D07	Ambient Temp. of Start Sliding Defrosting	double byte	read/write	-37~45℃	TEMP1	
1113	03/16	D08	Suction Temp. of Start Sliding Defrosting	double byte	read/write	-37~45℃	TEMP1	
1114	03/16	D09	Ambient Temp. of Stop Sliding Defrosting	double byte	read/write	-37~45℃	TEMP1	
1115	03/16	D10	Suction Temp. of Stop Sliding Defrosting	double byte	read/write	-37~45℃	TEMP1	
1116	03/16	D11	Min. Inlet Water Temp. of Defrosting	double byte	read/write	4~65℃	DIGI5	
1117	03/16	D12	Suction Pressure of Forced Defrosting	double byte	read/write	0~45bar	DIGI5	
1118	03/16	D13	Heating Operation Time Before Forced Defrosting	double byte	read/write	0~240min	DIGI1	
1122	03/16	D17	Coil Temp. of Exit Defrosting	double byte	read/write	-37~45℃	TEMP1	
1124	03/16	D19	Max. Defrosting Time	double byte	read/write	0~20min	DIGI1	
1125	03/16	D20	Defrosting Frequency	double byte	read/write	30-90Hz	DIGI1	

1126	03/16	D21	Enable Electric Heater During Defrosting	double byte	read/write	(0-no/1-yes)	DIGI1	
1129	03/16	D24	Defrosting Water Tank Source When In Heating+DHW/Cooling+DHW Mode	double byte	read/write	0-don't switch 1-DHW side(DHW tank) 2-Heating side(Buffer tank)	DIGI1	
1131	03/16	E01	EEV Adjust Mode	double byte	read/write	0-Manual/1-Auto/2-Smart	DIGI1	
1133	03/16	E03	EEV Initial Steps for Heating	double byte	read/write	0~500N	DIGI1	
1138	03/16	E08	EEV Initial Steps for Cooling	double byte	read/write	0~500N	DIGI1	
1139	03/16	E09	EVI EEV: Adjustment Mode	double byte	read/write	0-Manual/1-Auto	DIGI1	
1140	03/16	E10	EVI EEV: Initial Steps	double byte	read/write	0~500N	DIGI1	
1152	03/16	G01	Disinfection Water Temp.	double byte	read/write	60~70℃	TEMP1	
1153	03/16	G02	Time Duration of Disinfection	double byte	read/write	0~60min	DIGI1	
1154	03/16	G03	Disinfection Starting Time	double byte	read/write	0~23h	DIGI1	
1155	03/16	G04	Interval Period of Disinfection	double byte	read/write	1~30days	DIGI1	
1156	03/16	G05	Enable Disinfection	double byte	read/write	0-no/1-yes	DIGI1	
1157	03/16	R01	Domestic Hot Water / DHW Target Temp.	double byte	read/write	R36-R37	TEMP1	
1158	03/16	R02	Heating Target Temp.	double byte	read/write	R10~R11	TEMP1	
1159	03/16	R03	Cooling Target Temp.	double byte	read/write	R08~R09	TEMP1	
1160	03/16	R04	Temp. Diff. for Power-on in Heating	double byte	read/write	0~10℃	TEMP1	
1161	03/16	R05	Temp. Diff. for Standby in Heating	double byte	read/write	0~10℃	TEMP1	
1162	03/16	R08	Min. Cooling Target Temp.	double byte	read/write	-30.0~R09	TEMP1	
1163	03/16	R09	Max. Cooling Target Temp.	double byte	read/write	R08~80.0	TEMP1	
1164	03/16	R10	Min. Heating Target Temp.	double byte	read/write	-30.0~R11	TEMP1	
1165	03/16	R11	Max. Heating Target Temp.	double byte	read/write	R10~99	TEMP1	
1173	03/16	R35	Location of Electric Heater	double byte	read/write	0-no use/1-water loop heater /2-water tank heater/buffer tank heater	DIGI1	
1174	03/16	R06	Temp. Diff. for Power-on in Cooling	double byte	read/write	0.0~10.0℃	TEMP1	
1175	03/16	R07	Temp. Diff. for Standby in Cooling	double byte	read/write	0.0~10.0℃	TEMP1	
1176	03/16	R36	Min. DHW Target Temp.	double byte	read/write	0~R37℃	TEMP1	
1177	03/16	R37	Max. DHW Target Temp.	double byte	read/write	R36~75℃	TEMP1	
1192	03/16	R39	AT for Auto-start Heating Mode	double byte	read/write	5~20℃	TEMP1	
1195	03/16	R16	Temp. Diff. for Power-on in DHW	double byte	read/write	0~10℃	TEMP1	
1196	03/16	R17	Temp. Diff. for Standby in DHW	double byte	read/write	0~10℃	TEMP1	
1197	03/16	P01	Main Circulation Pump Operation Mode	double byte	read/write	0-Normal/1-Economic/2-Interval	DIGI1	
1198	03/16	P02	Interval Time	double byte	read/write	1~120min	DIGI1	
1199	03/16	P03	Operation Duration Time	double byte	read/write	1~30min	DIGI1	
1201	03/16	P05	DHW Pump Operation Mode	double byte	read/write	0-Normal/1-Economic/2-Interval	DIGI1	
1202	03/16	P06	Main Circulation Pump Manual Control	double byte	read/write	0-OFF/1-ON	DIGI1	
1203	03/16	P09	Interval Period of Enable Water Pump Protection Mode	double byte	read/write	0~30days	DIGI1	
1205	03/16	P10	Water Pump Speed	double byte	read/write	0-100%		
1218	03/16	C01	Manual Comp. Frequency	double byte	read/write	0~120Hz	DIGI1	
1220	03/16	C03	Max. Comp. Frequency	double byte	read/write	30~120Hz	DIGI1	
1227	03/16	C10	Min. Comp. Frequency in Heating at Low Ambient Temp.	double byte	read/write	0~120Hz	DIGI1	
1228	03/16	R42	Max. Outlet Water Temp. in Heating	double byte	read/write	20~60℃	TEMP1	
1231	03/16	R45	AT to Start Electric Heater Without Delay	double byte	read/write	-50~20℃	TEMP1	
1232	03/16	R46	Temp. Diff. between Max. DHW Target Temp. & Max.	double byte	read/write	0~15℃	TEMP1	
1236	03/16	H36	Weather compensation function enable during heating	double byte	read/write	0-no,1-yes	DIGI1	
1239	03/16	R70	Target Room Temp.	double byte	read/write	5~27℃	TEMP1	
1240	03/16	R71	Temp. Diff. for Power-on in Heating	double byte	read/write	0.1~3℃	TEMP1	
1241	03/16	R72	Temp. Diff. for Standby in Heating	double byte	read/write	0.1~3℃	TEMP1	
1242	03/16	R73	Temp. Diff. for Power-on in Cooling	double byte	read/write	0.1~3℃	TEMP1	
1243	03/16	R74	Temp. Diff. for Standby in Cooling	double byte	read/write	0.1~3℃	TEMP1	
1256	03/06	KG1	The first segment of timed on/off start time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1257	03/06	KG2	The first segment of timed on/off end time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1258	03/06	KG3	The second segment of timed on/off start time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1259	03/06	KG4	The second segment of timed on/off end time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1260	03/06	KG5	The third segment of timed on/off start time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1261	03/06	KG6	The third segment of timed on/off end time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1262	03/06	KG7	The fourth segment of timed on/off start time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1263	03/06	KG8	The fourth segment of timed on/off end time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1264	03/06	KG9	The fifth segment of timed on/off start time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1265	03/06	KG10	The fifth segment of timed on/off end time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1266	03/06	KG11	The sixth segment of timed on/off start time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1267	03/06	KG12	The sixth segment of timed on/off end time (high eight bits: hours, low eight bits: minutes)	double byte	read/write		DIGI1	
1268	03/06	KG13~KG28	bit0:whether the first timer switch is enabled on Monday bit1:Whether the first timer switch is enabled on Tuesday bit2:Whether the first timer switch is enabled on Wednesday bit3:Whether the first timer switch is enabled on Thursday bit4:Is the first period of timer switch Friday enabled or not bit5:Is the first timer switch on Saturday enabled bit6:Is the first timer switch on Sunday enabled bit7:Whether the first timer switch is enabled or not bit8:Whether the second timer switch is enabled on Monday bit9:Whether the second timer switch is enabled on Tuesday bit10:Whether the second timer switch is enabled on Wednesday bit11:Whether the second timer switch is enabled on Thursday bit12:Is the second period of timer switch Friday enabled bit13:Is the second period of timer switch on Saturday enabled bit14:Is the second period of timer switch on/off Sunday enabled bit15:Whether the second timer is enabled or not	double byte	read/write	0-no/1-yes	DIGI1	

1269	03/06	KG29~KG44	bit0:Whether the third timer switch is enabled on Monday bit1:Whether the third timer switch is enabled on Tuesday bit2:Whether the third timer switch is enabled on Wednesday bit3:Whether the third timer switch is enabled on Thursday bit4:Is the third period of timer switch Friday enabled bit5:Is the third timer switch on Saturday enabled bit6:Is the third period of timer switch Sunday enabled bit7:Whether the third timer switch is enabled or not bit8:Whether or not the fourth timer switch is enabled on Monday bit9:Whether or not the fourth timer is enabled on Tuesday bit10:Whether or not the fourth timer is enabled on Wednesday bit11:Whether or not the fourth timer switch is enabled on Thursday bit12:Is the fourth segment timer on/off Friday enabled bit13:Is the fourth segment timer switch on Saturday enabled bit14:Is the fourth segment timer switch on/off Sunday enabled bit15:Whether or not the fourth timer is enabled	double byte	read/write	0-no/1-yes	DIGI1	
1270	03/06	KG45~KG60	bit0:Whether the fifth timer switch is enabled on Monday bit1:Whether or not the fifth timer switch is enabled on Tuesday bit2:Whether or not the fifth timer is enabled on Wednesday bit3:Whether or not the fifth timer is enabled on Thursday bit4:Is the fifth period of timer switch Friday enabled bit5:Is the fifth segment timer switch on Saturday enabled bit6:Whether the fifth timer switch is enabled on Sunday bit7:Whether the fifth timer is enabled or not bit8:Is the sixth segment timer switch on Monday enabled bit9:Whether or not the sixth timer is enabled on Tuesday bit10:Whether or not the sixth timer is enabled on Wednesday bit11:Whether or not the sixth segment timer switch is enabled on Thursday bit12:Is the sixth segment timer on/off Friday enabled bit13:Is the sixth segment timer switch on Saturday enabled bit14:Is the sixth period of the timer switch Sunday enabled bit15:Whether or not the sixth timer is enabled	double byte	read/write	0-no/1-yes	DIGI1	
2011	16		Unit state	double byte	read	0-off/1-on	DIGI1	
2012	16		Unit mode	double byte	read	0-cooling/1-heating/2-defrost/3-sterilize/4-hot water	DIGI1	
2013	16		Temperature vlaue after limiting	double byte	read		TEMP1	
2014	16		Temperature vlaue after weather compensation during heating	double byte	read		TEMP1	
2015	16		Apply for Centralized Control Defrosting Mode	double byte	read	0-no/1-defrosting mode available	DIGI1	
2018	16	O25	Load output(Water Tank Electric Heater)	double byte	read	0-off/1-on	DIGI1	
2019	16	O01~023	Load output	double byte	read	bit0：O01 compressor output（0-OFF/1-ON） bit1：Reserved bit2：O03 fan high speed output（0-OFF/1-ON） bit3：O04 fan low speed output（0-OFF/1-ON） bit4：O05 water pump output（0-OFF/1-ON） bit5：O06 hot water pump output（0-OFF/1-ON） bit6：O07 4 way valve 1（0-OFF/1-ON） bit7：O08 Electric heater stage 1（0-OFF/1-ON） bit8：O09 Electric heater stage 2（0-OFF/1-ON） bit9：O10 3 way valve（0-OFF/1-ON） bit10：O11 alarm output（0-OFF/1-ON） bit11：O12 Crankcase Heater（0-OFF/1-ON） bit12：O13 Pan heater（0-OFF/1-ON） bit13：O21 heating water pump（0-OFF/1-ON） bit14：O22 Hydraulic module water loop electric heater（0-OFF/1-ON） bit15：O23 Hydraulic module DHW tank electric heater（0-OFF/1-ON）	DIGI1	
2020	16	O15	EEV Steps	double byte	read	0~500N	DIGI1	
2022	16	O17	EVI EEV Steps	double byte	read	0~500N	DIGI1	
2029	16	T52	InputCurrent1	double byte	read		DIGI5	Current transformer 1
2030	16	T53	InputCurrent2	double byte	read		DIGI5	Current transformer 2
2031	16	T54	InputCurrent2	double byte	read		DIGI5	Current transformer 3
2034	16	S01~S10	Switch state	double byte	read	bit0：S01 High pressure switch （0-on/1-off） bit1：S02 Low pressure switch （0-on/1-off） bit2：S03 Water flow switch （0-on/1-off） bit3：S04 Electric heater overheat switch （0-on/1-off） bit4：S05 Remote ON/OFF（0-on/1-off） bit5：S06 Remote heating/cooling（0-on/1-off） bit6：S07 Hot water switch（0-on/1-off） bit7：Reserved bit8：Reserved bit9: Heating/cooling ON/OFF（0-on/1-off） bit10：Reserved bit11：Reserved bit12：Reserved bit13：Reserved bit14：Reserved bit15：Reserved	DIGI1	
2035	16	T40	Heating Returning Water Temp.	double byte	read	real test value	TEMP1	Only enable when connecting the hydraulic module
2036	16	T41	Heating Leaving Water Temp.	double byte	read	real test value	TEMP1	Only enable when connecting the hydraulic module
2037	16	T42	Mix Tube Outlet Water Temp.	double byte	read	real test value	TEMP1	Only enable when connecting the hydraulic module
2038	16	T43	DHW Returning Water Temp.	double byte	read	real test value	TEMP1	Only enable when connecting the hydraulic module
2039	16	T44	DHW Leaving Water Temp.	double byte	read	real test value	TEMP1	Only enable when connecting the hydraulic module
2042	16	T36	Phase Current of Compressor	double byte	read	real test value	DIGI5	
2043	16	T37	DC Power Bus Voltage	double byte	read	real test value	DIGI1	
2044	16	T38	IPM Temp..	double byte	read	real test value	TEMP1	
2045	16	T01	Inlet Water Temp.	double byte	read	real test value	TEMP1	
2046	16	T02	Outlet Water Temp.	double byte	read	real test value	TEMP1	
2047	16	T08	DHW Tank Temp.	double byte	read	real test value	TEMP1	
2048	16	T04	Ambient Temp. (AT)	double byte	read	real test value	TEMP1	
2049	16	T03	Coil Temp.	double byte	read	real test value	TEMP1	
2051	16	T05	Suction Temp.	double byte	read	real test value	TEMP1	
2052	16	T07	Buffer Tank Temp.	double byte	read	real test value	TEMP1	
2053	16	T12	Exhaust Temp.	double byte	read	real test value	TEMP1	
2055	16	T06	Antifreeze Temp.	double byte	read	real test value	TEMP1	

2057	16	T35	AC Input Current	double byte	read	real test value	DIGI5	
2058	16	T09	Room Temp.	double byte	read	real test value	TEMP1	Valid only if H25=1, now replaced by multi-zone control
2061	16	T33	IPM High Fault Temp.	double byte	read	real test value	TEMP1	
2062	16	T34	AC Input Voltage	double byte	read	real test value	DIGI1	
2063	16	T10	EVI Inlet Temp.	double byte	read	real test value	TEMP1	
2064	16	T11	EVI Outlet Temp.	double byte	read	real test value	TEMP1	
2065	16	T49	Evaporation temperature	double byte	read	real test value	TEMP1	
2066	16	T50	Exhaust Superheat	double byte	read	real test value	TEMP1	
2067	16	T51	Suction Superheat	double byte	read	real test value	DIGI5	
2069	16	T15	Low Pressure	double byte	read		DIGI5	
2071	16	T30	Target Compressor Frequency	double byte	read	real test value	DIGI1	
2072	16	T31	Operation Frequency of Compressor	double byte	read	real test value	DIGI1	
2073	16	T32	Max. Frequency from Comp. Driver	double byte	read	real test value	DIGI1	
2074	16	T27	Speed of Fan Motor 1	double byte	read	real test value	DIGI1	
2075	16	T28	Speed of Fan Motor 2	double byte	read	real test value	DIGI1	
2076	16	T29	Target Speed of Fan Motor	double byte	read	real test value	DIGI1	
2077	16	T39	Water Flow Rate	double byte	read	real test value	DIGI9	
2078	16		Power Consumption	double byte	read	High 16 KW*h	DIGI1	Energy consumption , in KW-h, is a 32-bit data, need to amount 2078 (high 16 bits) and 2079 (low 16
2079	16		power Consumption	double byte	read	Low 16	DIGI1	
2081	16		Failure 7	double byte	read	bit0: IPM overheat bit1: compressor start failure bit2: compressor over currents bit3: Input voltage phase loss bit4: IPM current sampling fault bit5: Overheat protection of drive board devices bit6: Pre-charge failure bit7: DC busbar overvoltage bit8: DC bus undervoltage bit9: AC input voltage undervoltage bit10: AC input overcurrent shutdown bit11: Input voltage sampling fault bit12: DSP and PFC communication failure bit13: Drive plate temperature fault bit14: DSPand communication board communication failure bit15: mainboard communication failure	DIGI1	
2082	16		Failure 8	double byte	read	bit0: IPM overheat stop bit1：compressor default phase bit2：Reserved Bit3: The input current sampling is faulty bit4：Reserved bit5：Reserved bit6：EEPROM fault bit7：Input voltage overlimiting protection bit8：Reserved bit9：Reserved bit10：Reserved bit11：Reserved bit12：Reserved bit13：Reserved bit14：Reserved bit15：Compressor overspeed protection	DIGI1	
2083	16		Failure 9	double byte	read	bit0: Voltage electromechanical current down frequency alarm bit1: Compressor weak magnetic protection alarm bit2: Power unit overheating alarm bit3: Reserved bit4: AC input current down alarm bit5: EEPROM failure warning bit6: Reserved bit7: Burned E2 Prohibited start fault bit8: Reserved bit9: Reserved bit10:Reserved bit11:Reserved bit12:Reserved bit13:Reserved bit14:Reserved bit15:Reserved	DIGI1	
2084	16		Fault 10 (fault of external drive fan)	double byte	read	Bit0:Reserved Bit1:Reserved Bit2:Reserved Bit3:Reserved Bit4:Reserved Bit5:Reserved Bit6:Reserved Bit7:Reserved Bit8:Temperature sensor fault Bit9:IPM overtemperature protection Bit10:IPM hardware overcurrent protection Bit11:Phase loss protection Bit12:Current sampling fault Bit13:Start-up failure (zero speed) Bit14:Software Overcurrent Bit15:Overspeed protection	DIGI1	
2085	16		Failure 1	double byte	read	bit0：Reserved bit1：Reserved bit2：Heating return temp sensor failure（0-no/1-yes） bit3：Heating outlet water temp sensor failure(0-no/1-yes) bit4：High pressure protection（0-no/1-yes） bit5：Low ambient temperature does not allow cooling protection（0-no/1-yes） bit6：Low pressure protection（0-no/1-yes） bit7：Defrost flow shortage warning（0-no/1-yes） bit8：water flow protection（0-no/1-yes） bit9：Electric heating overload protection（0-no/1-yes） bit10：Winter first class anti-freeze protection（0-no/1-yes） bit11：Winter second class anti-freeze protection（0-no/1-yes） bit12：anti-freeze protection（0-no/1-yes） bit13：Reserved bit14：Room temp failure（0-no/1-yes） bit15：Reserved	DIGI1	

2086	16		Failure 2	double byte	read	bit0：Exhaust temperature overprotection（0-no/1-yes） bit1：Reserved bit2：Reserved bit3：Fan 1 overload speed limit（0-no/1-yes） bit4：Fan 2 overload speed limit（0-no/1-yes） bit5：The temp difference of inlet water and outlet water over large protection （0-no/1-yes） bit6：Outlet water over heat (0-no/1-yes) bit7：Mixing outlet water temp sensor failure(0-no/1-yes) bit8：Hot water return temp sensor failure (0-no/1-yes) bit9：Hot water outlet water temp sensor failure(0-no/1-yes) bit10：Reserved bit11：Reserved bit12：Reserved bit13：Reserved bit14：Reserved bit15：Reserved	DIGI1	
2087	16		Failure 3	double byte	read	bit0：Reserved bit1：Reserved bit2：Reserved bit3：Reserved bit4：high pressure protection 3 times（0-no/1-yes） bit5：Reserved bit6：low pressure protection 3 times（0-no/1-yes） bit7：Reserved bit8：water flow protection 3 times（0-no/1-yes） bit9：Electric heating protection 3 times（0-no/1-yes） bit10：Reserved bit11：Reserved bit12：Anti-freeze protection 3 times（0-no/1-yes） bit13：Reserved bit14：Reserved bit15：Reserved	DIGI1	
2088	16		Failure 4	double byte	read	bit0：Discharge over heat protection 3 times（0-no/1-yes） bit1：Reserved bit2：The temp difference of inlet water and outlet water temp over large 3 times（0-no/1-yes） bit3：The outlet water temp too lower 3 times（0-no/1-yes） bit4：Outlet water overtemp protection 3 times（0-no/1-yes） bit5：Reserved bit6：Reserved bit7：Reserved bit8：Reserved bit9：Reserved bit10：Reserved bit11：Reserved bit12：Reserved bit13：Reserved bit14：Reserved bit15：Reserved	DIGI1	
2089	16		Failure 5	double byte	read	bit0：Inlet water temp failure（0-no/1-yes） bit1：Outlet water temp failure（0-no/1-yes） bit2：Coil temp failure（0-no/1-yes） bit3：Ambient temp failure（0-no/1-yes） bit4：Suction temp failure（0-no/1-yes） bit5：Anti- freeze temp failure（0-no/1-yes） bit6：The coil outlet water temp sensor failure （0-no/1-yes）(reserved) bit7：System 1 buffer tank temperature sensor fault (0-no/1-yes) bit8：Reserved bit9：EVI inlet temp failure（0-no/1-yes） bit10：EVI outlet temp failure（0-no/1-yes） bit11：discharge temp failure（0-no/1-yes） bit12：Reserved bit13：Syetem 1 pressure sensor failure（0-no/1-yes） bit14：low ambient temp failure（0-no/1-yes） bit15：Outlet temp too low protection（0-no/1-yes）	DIGI1	
2090	16		Failure 6	double byte	read	bit0：Reserved bit1：Reserved bit2：Reserved bit3：Reserved bit4：Reserved bit5：Reserved bit6：Reserved bit7：Reserved bit8：Hot water temp failure（0-no/1-yes） bit9：Reserved bit10：Reserved bit11：Fan 1 failure（0-no/1-yes） bit12：Fan 2 failure（0-no/1-yes） bit13：Communication failure(main board with fan motor module board)（0-no/1-yes） bit14：Communication failure with hydronic module bit15：Communication failure(main board with fan motor 2 module board)（0-no/1-yes）	DIGI1	
2130	16	T46	Exernal Fan Motor Driver IPM Temp.	double byte	read		DIGI5	
2131	16	T47	Exernal Fan Motor Driver Power	double byte	read		DIGI1	
2132	16	T48	Exernal Fan Motor Driver Current	double byte	read		DIGI6	
2133-2180	16		Reserved	double byte	read			

IMPORTANT NOTICE

PRODUCT REGISTRATION & EXTENDED WARRANTY

Extended Warranty Requirements

- Project/Equipment Registration
- Active SpacePak Certified Contractor Status at Time of Installation

CLICK or SCAN

To visit the **Product Registration Page**, click or scan the QR code.

Are You Certified?

Check our **Contractor Locator** map to find out.

Benefits of Becoming a SpacePak Certified Contractor:

- Local Leads
- Listed on SpacePak Website
- Sales & Marketing Support
- Pre-Sale Application Support & Load Calculations
- Extended Warranty

SpacePak Offers Factory Authorized Training for Certification On:

- Small Duct High Velocity Equipment
- Air-to-Water Heat Pump & Hydronic Equipment

Available Training Certification - Methods Include:

- Online Webinar Training
- Local Field Training
- Corporate Headquarter Factory Training

For All Training Inquiries, Contact Your Local Spacepak Manufacturers Representative:

https://www.spacepak.com/RepLocator

Limited Warranty Statement

SpacePak "Solstice Inverter"* Series Air to Water Heat Pumps

Subject to the terms and conditions of this Limited Warranty Statement (the "Limited Warranty"), SpacePak warrants to the original purchaser of the "Solstice Inverter" Series that:

1) The parts are warranted for a period of two (2) years to the original owner of the System (as such term is defined in part (4) below). If any parts should prove defective due to improper workmanship and/or material for a period of two (2) years from the date of installation, SpacePak will replace any defective part without charge for that part. Replacement parts are warranted for the remainder of the original 2-year warranty period. Parts used as replacement may be of like kind and quality and may be new or remanufactured. Defective parts must be available for SpacePak in exchange for the replacement parts and become the property of SpacePak.
2) The compressor is warranted for a period of five (5) years to the original owner of the System. If the compressor should prove defective due to improper workmanship and/or material for a period of five (5) years from the date of installation, SpacePak will replace the defective compressor without charge for the compressor. Replacement compressors are warranted for the remainder of the original 5-year warranty period. Compressors used for replacement may be of like kind and quality and may be new or remanufactured. Defective compressors must be made available to SpacePak in exchange for the replacement compressor and become the property of SpacePak.
3) **Notwithstanding the foregoing, if the System is installed in a residential single-family home by a SPACEPAK CERTIFIED CONTRACTOR the parts will be warranted for five (5) years and compressor will be warranted for a period of ten (10) years, to the original owner, so long as the original owner resides in the home.** Specifically, if any parts and/or the compressor should prove defective due to improper workmanship and/or material for the period listed above from the date of installation, SpacePak will replace any defective parts or compressor without charge for the part or compressor. The replacement parts and/or compressor are warranted for the remainder of the original warranty period. Parts and/or compressors used for replacement may be of like kind and quality and may be new or remanufactured. Defective parts and/or compressors must be made available to SpacePak in exchange for the replacement parts and become the property of SpacePak.
4) For purposes of this Solstice Inverter" Series Limited Warranty, as used herein, the term "System" shall mean the Solstice Inverter outdoor and indoor components connected via refrigerant piping and electrical wiring purchased on or after February 1, 2021, (i) sold from a licensed HVAC representative of SpacePak (and not an unauthorized third party) to the original owner, (ii) installed by such contractor in accordance to local and National regulations in the continental U.S., Alaska, Hawaii, and Canada; and (iii) registered on SpacePak's website located at www.SpacePak.com/warranty)

*For any Solstice equipment that is non-inverter, please refer to warranty located in the equipment original installation manual.

SpacePak Small Duct High Velocity Air Handlers and Hydronic Fan Coils

Subject to the terms and conditions of this Limited Warranty Statement (the "Limited Warranty"), SpacePak warrants to the original purchaser of the Small Duct High Velocity Air Handlers and hydronic fan coils that:

1) The parts are warranted for a period of one (1) year to the original owner of the System (as such term is defined in part (3) below). If any parts should prove defective due to improper workmanship and/or material for a period of one (1) year from the date of installation, SpacePak will replace any defective part without charge for that part. Replacement parts are warranted for the remainder of the original 1-year warranty period. Parts used as replacement may be of like kind and quality and may be new or remanufactured. Defective parts must be available for SpacePak in exchange for the replacement parts and become the property of SpacePak.
2) Notwithstanding the foregoing, if the System is installed in a residential single-family home by a SPACEPAK CERTIFIED CONTRACTOR the parts will be warranted for five (5) years, to the original owner, so long as the original owner resides in the home. Specifically, if any parts should prove defective due to improper workmanship and/or material for the period listed above from the date of installation, SpacePak will replace any defective parts or compressor without charge for the part or compressor. The replacement parts are warranted for the remainder of the original warranty period. Parts used for replacement may be of like kind and quality and may be new or remanufactured. Defective parts must be made available to SpacePak in exchange for the replacement parts and become the property of SpacePak.
3) For purposes of this Small Duct High Velocity Air Handlers and hydronic fan coils limited warranty, as used herein, the term "System" shall mean the "SpacePak Small Duct High Velocity Air Handlers, hydronic fan coils purchased on or after February 1, 2021, (i) sold from a licensed HVAC representative of SpacePak (and not an unauthorized third party) to the original owner, (ii) installed by such contractor in accordance to local and National regulations in the continental U.S., Alaska, Hawaii, and Canada; (iii) registered on SpacePak's website located at www.SpacePak.com/warranty); and (iv) comprised of SpacePak original components or SpacePak certified components. TO THE EXTENT THAT NON-SPACEPAK OR NON-SPACEPAK CERTIFIED COMPONENTS ARE UTILIZED IN THE SYSTEM, ALL WARRANTIES SHALL NOT BE APPLICABLE.

SpacePak Buffer Tanks

The “Manufacturer” warrants to the original owner at the original installation site that the Hydronic Buffer Tanks (the “Product”) will be free from defects in material or workmanship for a period not to exceed ten (10) years from the startup, provided the product is installed in accordance with the manufacturers installation instructions. If upon examination by the Manufacturer the Product is shown to have a defect in material or workmanship during the warranty period, the Manufacturer will repair or replace, at its option, that part of the Product which is shown to be defective.

The following items apply to each Limited Warranty offered by SpacePak.

4) **NO LABOR.** Each Limited Warranty offered by SpacePak does NOT include labor or any other costs incurred for service, maintenance, repair, removing, replacing, installing, complying with local building and electric codes, shipping or handling, or replacement of the System/Products, compressors or any other parts. For items that are designed to be maintained or replaced by the original owner, the original owner is solely responsible for all labor and other costs of maintaining, installing, replacing, disconnecting or dismantling the System/ Products and parts in connection with owner-required maintenance. Please consult the applicable technical documentation for regularly suggested maintenance procedures.
5) **PROPER INSTALLATION.** This Limited Warranty applies only to Systems/Products that are sold by SpacePak HVAC representatives, installed by contractors who are licensed for HVAC installation under applicable local and state law, and who install the Systems/Products in accordance with (i) all applicable building codes and permits: (ii) SpacePak’s installation and operation instructions: and (iii) good trade practices.
6) **BEFORE REQUESTING SERVICE,** please review the applicable technical documentation to insure proper installation and correct customer control adjustment for the System/Products. If the problem persists, please arrange for warranty service.
    a. **TO OBTAIN WARRANTY SERVICE:**
        i. Contact the licensed contractor who installed the System/Products or the nearest licensed contractor, dealer, or distributor (whose name and address may be obtained on our website at www.SpacePak.com of any defect within the applicable warranty time period.
        ii. Proof of the installation date by a licensed contractor is required when requesting warranty service. Present the sales receipt, building permit or other document which establishes proof and date of installation. In the absence of acceptable proof, this Limited Warranty shall be deemed to begin one hundred twenty (120) days after the date of manufacture stamped on the System/Products.
        iii. This Limited Warranty applies only to System/Products purchased on or after February 1, 2021 only while the System/Products remains at the site of the original installation, and only to locations within the continental United States, Alaska, Hawaii and Canada.
        iv. Shipment, to the Manufacturer, of that part of the Product thought to be defective. Goods can only be returned with prior written approval from the Manufacturer. All returns must be freight prepaid. Determination, in the reasonable opinion of the Manufacturer, that there exists a defect in material or workmanship.
    b. **THIS LIMITED WARRANTY DOES NOT COVER:** property damages, malfunction or failure of the System/ Products, or personal injury caused by or resulting from: (a) accident, abuse, negligence or misuse; (b) operating the System/Products in a corrosive or wet environment, including those containing chlorine, fluorine or any other hazardous or harmful chemicals or environmental factors, including sea- or salt-water; (c) installation, alteration, repair or service by anyone other than a licensed contractor or other than pursuant to the manufacturer’s instructions; (d) improper matching of System/Products components; (e) improper sizing of the System/Products; (f) improper or deferred maintenance contrary to the manufacturer’s instructions; (g) physical abuse to or misuse of the System/Products (including failure to perform any maintenance as described in the Operation manual, or any System/ Products damaged by excessive physical or electrical stress; (h) System/Productss that have had a serial number or any part thereof altered, defaced or removed; (i) System/Products used in any manner contrary to the Operation Manual; (j) freight damage; or (k) events of force majeure or damage caused by other external factors such as lightning, power surges, fluctuations in or interruptions of electrical power, rodents, vermin, insects, or other animal- or pest-related issues.
    c. **THIS LIMITED WARRANTY ALSO EXCLUDES:** (a) SERVICE CALLS WHERE NO DEFECT IN THE SYSTEM/ PRODUCTS COVERED UNDER THIS WARRANTY IS FOUND: (b) System/Products installation or set-ups; (c) Adjustments of user controls; (d) System/Products purchased or installed outside the continental United States, Alaska, Hawaii and Canada; or (e) System/Products purchased or installed prior to **February 1, 2021**. Consult the operating instructions for information regarding user controls.