

Controller Operation



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Top area



Cooling mode symbol.



Heating mode symbol.



Automatic mode symbol.



SU:Sunday;

MO:Monday;

TU:Tuesday;

WE:Wednesday;

TH:Thursday;

FR:Friday;

SA:Saturday

Middle area



display return water temperature



It is holiday mode icon, only display when holiday mode is set.



It is temperature setting icon, only display when enter into temperature settings.



display water outlet temperature

Bottom area



Safety lock;



Defrosting and anti-freezing in winter



Clock and

timer area




ON/OFF or holiday mode: on/off switch if short press.

when in off status, press this button for 5 seconds enter into holiday mode.



Mode selection/Setting key:

Short Press to select the mode. The sequence is: automatic-cooling-heating-automatic.

if press this button for long time enter into temperature settings mode, will display  at same time.



Up: increase temperature or time if short press, enter into night mode if press this key for long time



Down: reduce temperature or time if short press

Press them to adjust the value of water temperature, clock, timer, parameters;



Timer or clock settings: press to enter into clock time setting


and enter into timer mode settings if press this key for long time.

How to use the mode

Before setting your temperature, you must first choose a mode operation for your remote control




Automatic mode (hot, cold)

Select  for the Auto mode

In this mode, the heat pump will automatically change to heating or cooling your pool (depending on the actual temperature) to reach the desired temperature. No electric heating.



Cooling mode

Select  for the cooling mode

In this mode, the heat pump will cooling the water in your pool .



Heating mode





Select  for the heating mode




In this mode, the heat pump will heating the water in your pool .

HOW TO USE THE AUTOMATIC MODE

CAUTION: Before you begin, make sure the filter pump is in a state of operation.

Step 1: Press  once to turn on your pump.

Step 2: Press  to select from one mode to the other until you see the Automatic mode.

Step 3: Use  or  to select the desired temperature (8-40 ° C), press  confirm and exit.

Example



Current water inlet temp. (in our example 28 °).



Desired temp. (in our example 27 °)

Good to know about the operation of the automatic mode

Automatic Cooling:

When the temperature of the incoming water is greater than the required temperature + (Ta +2) ° C, the compressor will enter cooling mode. The compressor stops when the temperature of the incoming water will be equal to the required temperature.

Automatic heating:

When the water temperature is less than the required temperature-Ta ° C, the compressor will enter heating mode. The compressor stops when the temperature of the incoming water will be equal to the required temperature.


Attention :Following the selection of heating or cooling mode, the current program can not be changed in 5 minutes.


Directions for setting range Ta




Ta: parameter adjust from 2 ° to 5 ° C, the default setting is 2° C

HOW TO USE THE COOLING MODE

CAUTION: Before you begin, make sure the filter pump is in a state of operation.

Step 1: Press  once to turn on your pump.

Step 2: Press  to select from one mode to the other until you see the Cooling mode.

Step 3: Use  or  to select the desired temperature (8-40 ° C), press  confirm and exit.

Example



Current water inlet temp. (in our example 28 °).



Desired temp. (in our example 23 °)

Good to know about the operation of the cooling mode


When the temperature of the incoming water is greater than the required temperature + T_a ° C, the compressor will enter cool down mode. The compressor stops when the temperature of the incoming water is equal to the required temperature.


Directions for setting range T_a




T_a : parameter adjust from 2 ° to 5 ° C, the default setting is 2 ° C

HOW TO USE THE HEATING MODE

CAUTION: Before you begin, make sure the filter pump is in a state of operation.

Step 1: Press  once to turn on your pump.

Step 2: Press  to select from one mode to the other until you see the heating mode.

Step 3: Use  or  to select the desired temperature (8-40 ° C), press  confirm and exit.

Example



current water inlet temp.(in our example 28 °).



Desired temp. (in our example 31°)

Good to know about the operation of the heating mode



When the temperature of the incoming water is less than the required temperature - T_a ° C, the compressor will start in heating mode. The compressor stops when the temperature of incoming water is equal to the required temperature.




Directions for setting range T_a




T_a : parameter adjust from 2 ° to 5 ° C, the default setting is 2 ° C

Clock setting


Set the system time according to the local time as follows:

Step 1:press  to start clock setting ,the symbol  flashes.

Step 2:press  or  select week value, press  confirm and enter hour setting

Step 3:press  or  select hour value, press  confirm and enter minute setting

Step 4: press  or  select minute value, press  confirm and exit.



Remark:during the setting ,press  to return last step

ON/OFF timer setting

With this function ,the heat pump can turn on or turn off automatically at the set time.

ON/OFF timer setting as follows:

How to set an ON time

Step 1:long press  5 seconds to start ON timer setting, ,the symbol  flashes




Step 2:press  enter ON timer setting interface, press  again ,




 flash ,press  or  to select which


day you need to setting (if press 6 times  ,the

 will flash and the timer will valid from


 Sunday to Saturday), press  confirm and enter hour setting

Step 3:press  or  select hour value, press  confirm and enter minute setting



Step 4: press  or  select minute value, press  confirm and enter into next an OFF timer setting . (if not operation for 5 seconds ,it will save the timer and exit)

Remark:during the setting ,press  to return last step



How to set an OFF time

Step 1: long press  5 seconds to start OFF timer setting , the symbol






Step 2: press  and then press  or  enter OFF timer setting interface,




press  again ,  flash, press  or


 to select which day you need to setting (if press 6 times , the

 will flash and the timer will valid from

Sunday to Saturday), press  confirm and enter hour setting

Step 3: press  or  select hour value, press  confirm and enter minute setting

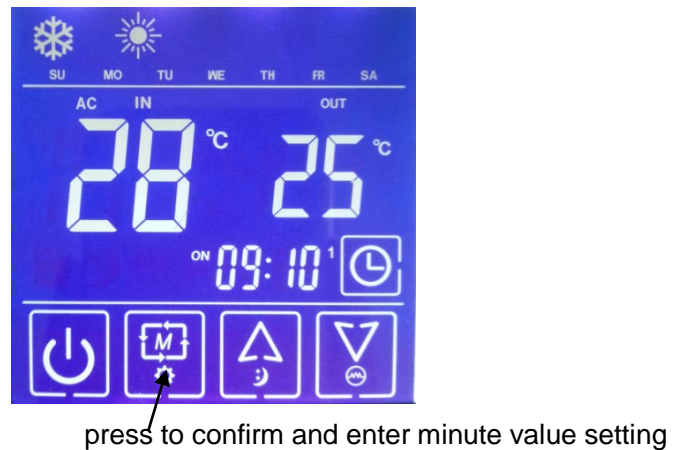
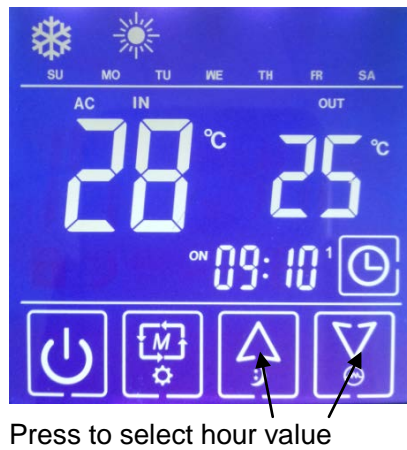
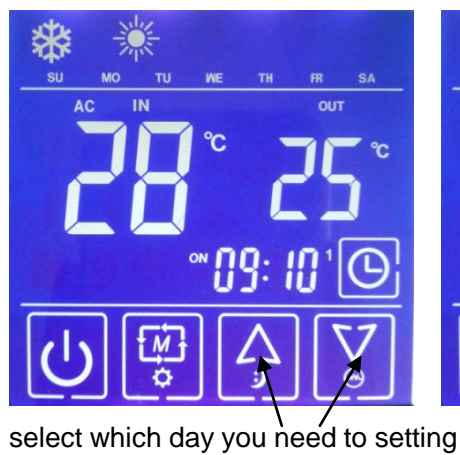
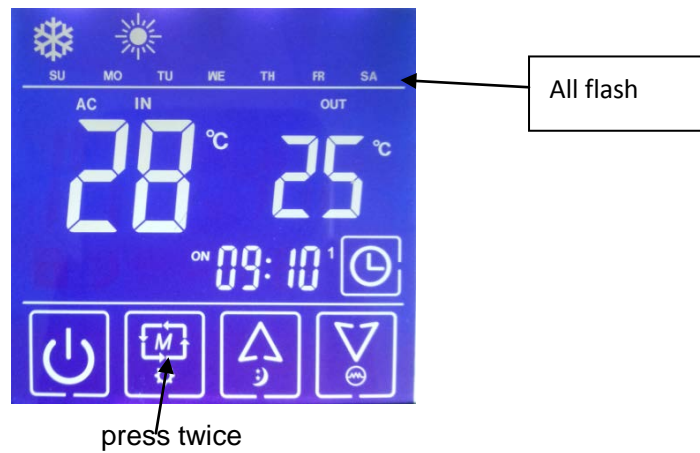
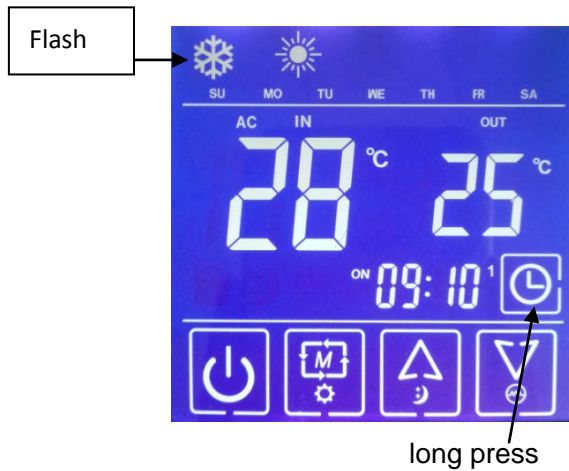
Step 4: press  or  select minute value, press  confirm .and enter into next timer setting .

Remark: during the setting ,press  to return last step

Totally 3 ON/OFF timer can be set. And they can be applied to use for **only one day or every day** If it shows "00:00" on bottom, it means timer invalid or cancel.

Below examples show how to set heat pump to switch on at 9:10 and switch off at 12:30, and switch on again at 14:10 and switch off at 17:30 and switch on again at 19:10 and switch off at 23:30.

The 1st ON/OFF time setting:





Press to select minutes value



press to confirm

1 ON timer is finished

flash



Press to enter 1 OFF timer setting



select which day you need to setting



press to confirm day and enter hour value setting



Press to select hour value



press to confirm and enter minute value setting



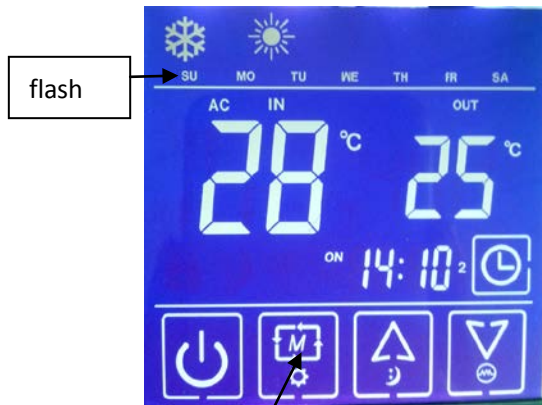
Press to select minute value



1 OFF timer is finished

Press confirm 1OFF setting

The 2nd ON/OFF timer setting:



Press to enter 2 ON timer setting



select which day you need to setting



press to confirm day and enter hour value setting



Press to select hour value



press to confirm and enter minute value setting



Press to select minute value



Press to confirm

2 ON timer
is finished



Press to enter 2 OFF timer setting

flash



select which day you need to setting



press to confirm and enter hour value setting



Press to select hour value



press to confirm and enter minute value setting



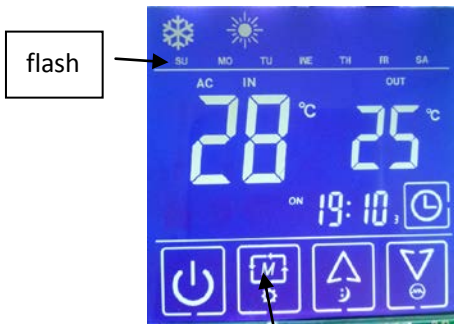
Press to select minute value



Press to confirm

2 OFF timer
is finished

The 3rd ON/OFF timer setting



Press to enter 3 ON timer setting



select which day you need to setting



press to confirm and enter hour value setting



Press to select hour value



press to confirm and enter minute value setting



Press to select minute value



press to confirm

3 ON timer is finished



Press to enter 3 OFF timer setting



select which day you need to setting press to confirm and enter hour value setting



Press to select hour value



press to confirm and enter minute value setting



Press to select minute value






press to confirm

3 OFF timer is finished







no action for 30 seconds to save and exit .




or press  and  flashes ,long press  for 5 sconds to save and exit.

now 3 ON/OFF TIMER are seted !

Timer cancelling

step 1:long press  5 seconds,the symbol  flashes

Step 2:press  enter timer setting interface, showing 1 ON , long press  to cancel 1 ON timer, 00:00 flash.

Step 3:press  or  to enter canceling 1 OFF timer, long press  to cancel 1 OFF timer ,00:00 flash ,canceling is finished.









1 ON canceled



1 OFF canceled

Failure Code Checking

Step 1:long press  +  5 seconds,enter failure code checking ,press  or  to check failure code ,long press  +  to exit .

Error Code	Error Name	Possible reasons	Correction methods
P01	Water flow protection	1) Too low water flow 2) Water flow switch damaged 3) Main PCB damaged	1) Check the water pump, if needed replace one 2) Check if the supplement is ok 3) Replace the water flow switch 4) Replace the PCB
P02	HP1 High pressure protection	1) Too small cooling water flow rate or a high temp 2)The uncompressed gas in refrigerant system 3) Overcharge refrigerant 4) Too high setting water temp 5) Bad connect of pressure switch	1) Check if the water pump works in good condition or adjust water control valve 2) Discharge and them recharge the refrigerant 3) Discharge some refrigerant 4) Set lower water temp

		6) The pressure switch failure 7) Main PCB damaged	5) Reconnect the switch 6) Replace the pressure switch 7) Replace the PCB
P04	LP1 Low pressure protection	1) Too less refrigerant 2) Capillary block 3) Bad connect of pressure switch 4) The pressure switch failure Main PCB damaged	1) Add some refrigerant 2) Replace the capillary 3) Reconnect the switch 4) Replace the pressure switch 5) Replace the PCB
P05	TP Exhaust gas temperatue protection	1) System lack of gas; 2) exhaust gas sensor temperature deviation.	1) Fix leakage and recharge gas 2) change temperature sensor
P07	Big temperature difference of outlet and inlet water protection	1) Too low water flow 2) Main PCB damaged	1) Check the water filter and water circuit (no block) 2) Replace the PCB
P09	phrase sequence or lack-phase protection	1)Three phase power sequence error 2)Three phase power is short of phase 3) Main PCB damaged	1) Exchang the sequence of three phase power 2) Check the three phase power 3) Replace the PCB
E01	Communication failure	1)Communication failure 2)Wired control damaged 3) Main PCB damaged	1) Check the connection wiring/ports between controller and PCB 2) Replace the controller 3) Replace the main PCB
E02	ambient temperature sensor failure	1)sensor open circuit 2)sensor shot circuit 3) Main PCB damage	1) Check the sensor connection 2) Replace the sensor 3) Replace the main PCB
E03	Suction temperature sensor failure	same as above	same as above
E04	Exhaust gas temperature sensor failure	same as above	same as above
E05	return water temperature sensor failure	same as above	same as above
E06	Outlet water temperature sensor failure	same as above	same as above
E07	Coil of condenser temperature sensor failor	same as above	same as above
E08	throttle valve outlet temperature sensor failure	same as above	same as above















Maintenance & Troubleshooting







Parameter checking and adjustment

The system parameters can be checked and adjusted via the controller. But they should not be changed casually, especially by house owners.

This operation is reserved to facilitate future service and maintenance. All parameters should not be changed casually, especially by house owners!

How to check and adjust parameters:







Step 1: long press  +  5 seconds, enter password interface AB:CD,A flash ,press  or  to select value ,press  confirm and enter into B flash, setp 2:press  or  to select value ,press  confirm and enter into C flash, step 3:press  or  to select value ,press  confirm and enter into D flash, step 4:press press  or  to select value ,press  confirm and enter into parameter adjustment. The password AB:CD is 12:12

step 5: press  or  to select the parameter code Number ,press  to enter parameter value setting, press  or  to adjust value ,press  to confirm and exit.

No.	Parameter Name	Code	Default Value	Unit	Range	Accuracy
1	Water temperature difference	Ta	2	℃	0~5	1
3	EEV Superheat under cooling	SHc	8	℃	2~15	1
4	EEV Superheat under heating	SHh	3	℃	-5~10	1
11	Defrosting enter temperature	DST	-4	℃	-15~0	1





12	Defrosting enter temperature difference	Ddt	5	℃	0~15	1
13	Defrost interval time	Tn	40	Min	20~90	1
14	EEV open angle under defrosting	Opl	350/5	P	(0~480)/5	1
18	Power lost memory	PR	0	0/1	0-without 1-with	/

How to check parameters (these parameter just for check can't be adjusted):

Step 1:long press  +  5 seconds, enter parameter checking interface ,press 
or  to select parameter checking , long press  +  to exit .

No.	Name	Description
1	EEV valve open angle	Current open angle/5
3	Ambient temperature	Current temperature
4	Outlet water temperature	Current temperaure
5	Exhaust gas temperature	Current temperature
6	Suction gas temperature	Current temperature
7	Coil temperature	Current temperature
8	EEV valve outlet temperature	Current temperature
11	Water pump status	0-OFF;1-ON
12	4-way valve status	0-OFF;1-ON
13	Fan status	0- OFF; 1- low fan speed; 2- high fan speed;

How to use Safety lock

Long press  +  to setting safety lock . Long press  +  to cancel safety lock