

Programmable controller with constant temperature and humidity

TH series manual



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Flow chart of operation setting

flow chart below

Stop of value (Fig. 2)



Fixed value startup (Figure 3)



Main picture (4)



Detailed value setting (Figure 5)



Program setting (Figure 6)



System settings (Figure 7)



Password setting (Figure 8)



1.1 initial picture

Display when power is switched on



Figure 9

1.2 main picture



Figure 10

Number	Name	Instructions
1	Monitor screen	Enter monitor screen
2	Setting value	Enter the set value setting screen
3	program settings	Enter the program settings screen
4	Curve monitoring	Enter the curve monitor screen
5	Operation setting	Enter the running picture
6	reserve set	Enter booking picture
7	file management	Enter the file management picture
8	alarm monitoring	Enter alarm monitor screen
9	catalogue	Enter the system settings screen

1.3 run screen

The display information status picture of the controller

1.3.1 program stop screen



Figure 11

Number	Name	Instructions
1	show value	Current temperature display value
2	form	Current program number that can start running
3	firing	Start button
4	segment	The current operating segment
5	headlamp	Light button
6	catalogue	Home

Program startup determination

Program stop determination

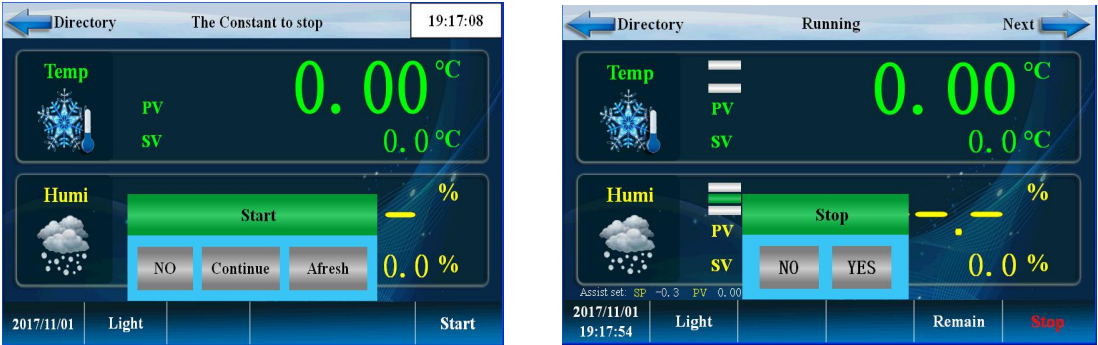


Figure 12

1.3.2 program running screen 1



figure 13

Number	Name	Instructions
1	Start the confirmation	The choice is to start effectively, and choose not to start invalid
2	Start to stop	The choice is to stop effectively and choose not to stop invalid
3	remaining time	The remaining time of the current section
4	headlamp	Light button
5	Program segment number	The currently running program, Sec
6	hops	Select "skip segment" to skip this paragraph
7	keep	Select "hold" to run, keep the timing unchanged
8	changing-over	Switch to Figure 14
9	Temperature display	Display current temperature
10	setting temperature	Display current setting temperature
11	Humidity display	Display current humidity
12	Humidity setting	temperature set point

1.3.3 program running detailed picture 2

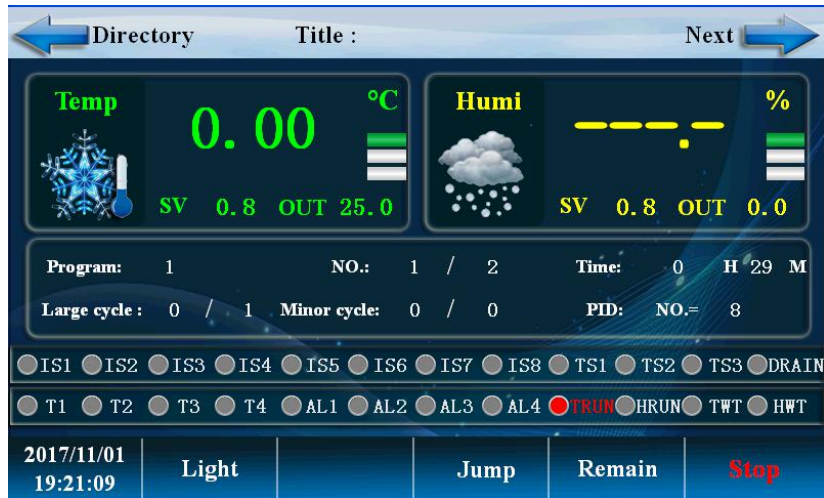


figure 14

Number	Name	Instructions
1	Temperature output intensity	Temperature PID control output power
2	Program cycle	Number of program cycles
3	PID number	The PID parameter group used in the current control
4	Segment number cycle	Segment number cycle
5	changing-over	Switch to the real time record curve screen
6	put forth one's strength	Humidity PID control output power
7	output listing	Detailed description at output

1.3.4 fixed value stop screen

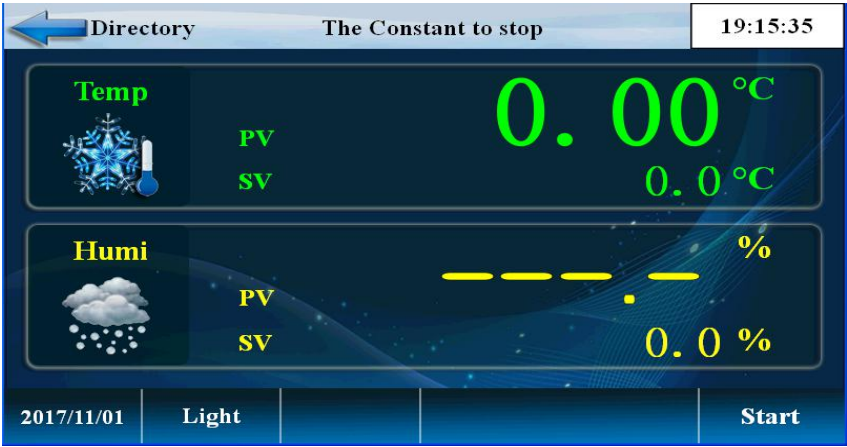
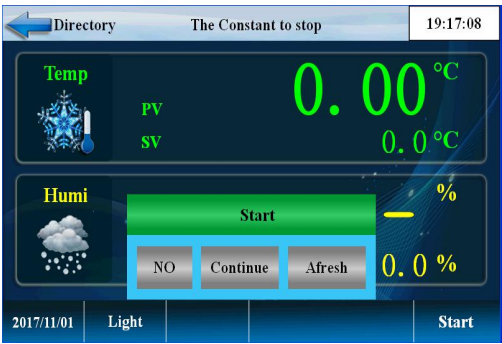


Figure 15

Number	Name	Instructions
1	catalogue	Return directory (Figure 10)
2	temperature set point	Setting temperature
3	Humidity setting value	Setting humidity
4	firing	Fixed value start button

1.3.5 fixed value start up screen

Fixed value start up determination



Setting stop determination



Fixed value running picture



Figure 16

Number	Name	Instructions
1	Turn on the start switch	The choice is to start effectively, and choose not to start invalid
2	Stop button	The choice is to stop effectively and choose not to stop invalid
3	catalogue	Return
4	temperature	Setting value and setting temperature
5	humidity	Setting value and setting humidity
6	floodlight	Switch lamp
7	keep	Select "keep" run time to stay the same.

Fixed value running screen 2



figure 17

Number	Name	Instructions
1	catalogue	Return directory
2	Output display	Temperature control PID output
3	PID number	The PID segment of the current setting
4	performance period	Timed running time
5	keep	Select "hold" to run, keep the timing unchanged
6		

1.4 operation settings screen



Figure 18

Click on 'run settings' and enter the following picture

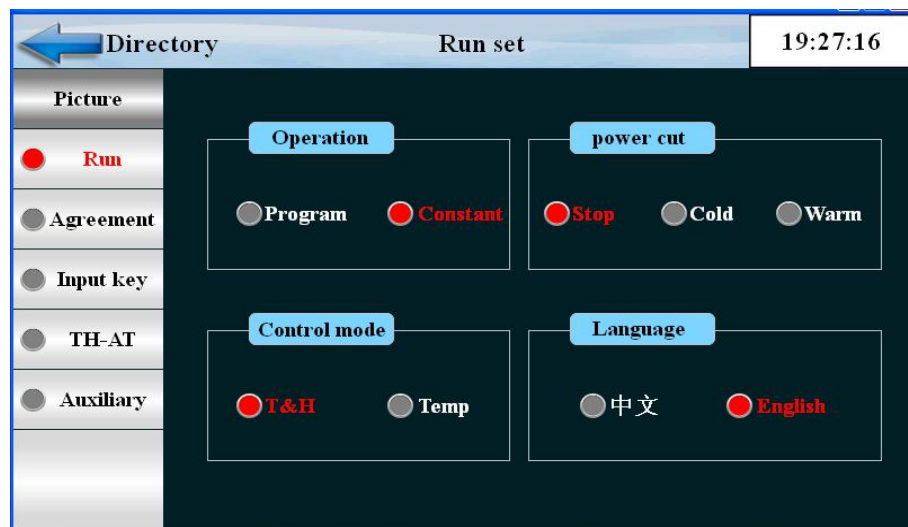


Figure 19

Click the 'communication settings' button and enter the following picture

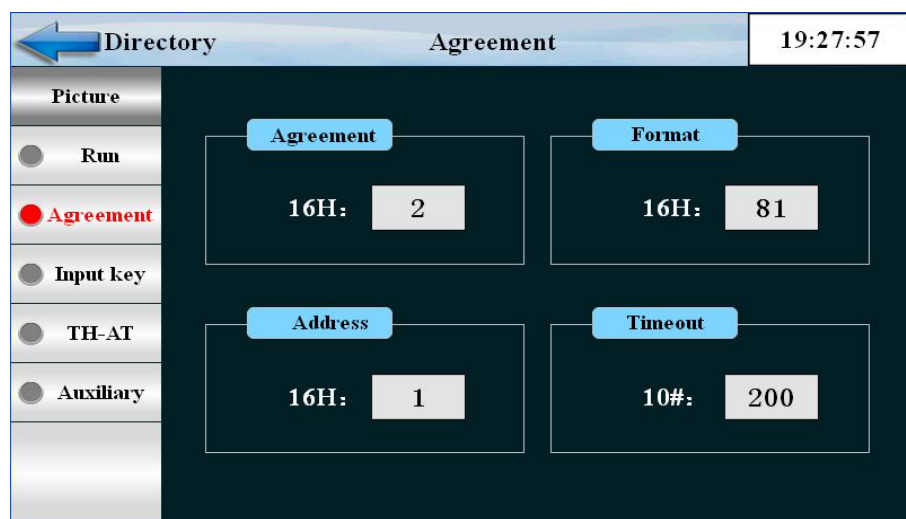


Figure 20

Number	Name	Instructions
1	Communication protocol	Communication port
2	The communication format	Baud rate
3	Address stand no.	From machine address number.
4	timeout	Communication timeout

Click the permissions settings button to enter the picture below

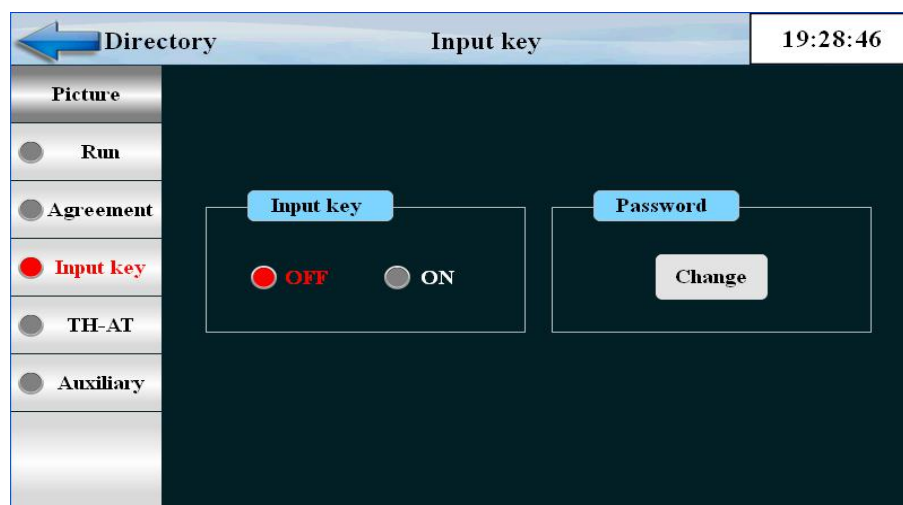


Figure 21

Number	Name	Instructions
1	Input permission	Input permissions open or close
2	Password authority	Password modification permission

Click the 'TH-AT' button and enter the following picture

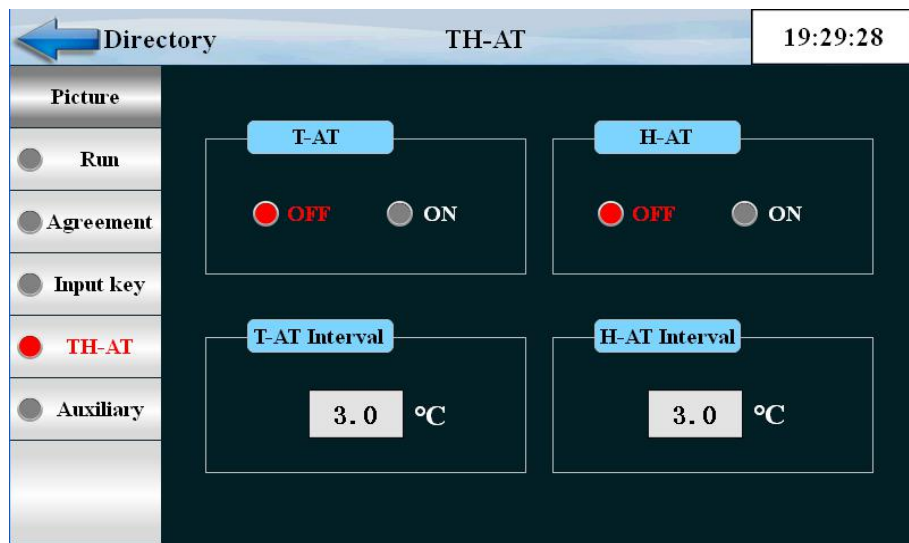


Figure 22

Number	Name	Instructions
1	T-AT	Temperature fuzzy control + adaptive PID
2	H-AT	Humidity fuzzy control + adaptive PID

Click the "auxiliary function" button to enter the picture below



Figure 23

Number	Name	Instructions
1	current"on"time	Power on time
2	PTEND	end of program
3	lighting hours	Set lighting time
4	buzzer	HMI alarm buzzer with on / off

1.5 appointment setting screen

Set the current time, set the appointment run time



Figure 24

Click 'appointment settings' to enter the following picture

The screenshot shows a 'Reservation' settings screen. At the top, there is a navigation bar with a back arrow, the word 'Directory', the title 'Reservation', and a digital clock displaying '19:32:02'. Below this, the settings are organized into four distinct panels. The top-left panel, titled 'Date&Time', shows the current date as '2017 Y 11 M 1 D' and the time as '19 H 32 Min'. The top-right panel, titled 'Reservation', features a toggle switch currently set to 'OFF' (indicated by a red dot) with an 'ON' option (grey dot). The bottom-left panel, also titled 'Reservation', displays time intervals: '0 Y 0 M 0 D' and '0 H 0 Min'. The bottom-right panel, titled 'Start the way', has a toggle switch currently set to 'Afresh' (red dot) with a 'Continue' option (grey dot).

Figure 25

Number	Name	Instructions
1	present time	present moment
2	Duty time	Machine reservation start time
3	Reservation mode	Reboot or continue operation
4	Reservation switch	OFF reservation does not start, ON appointment starts

1.6 file management picture



Figure 26

Click the "file management" button to enter the following picture to set up the manufacturer information

← Directory		Manufacturer information		19:33:55
Picture				
● Archives	Manufacturer			
	The phone			
	Fax			
	Network			
	Address			
	NO.			

Figure 27

1.7 alarm monitoring screen



Figure 28

Click the "alarm monitor" button to enter the picture below

← Directory		Alarm list		19:35:31
Picture	NO.	Alarm name	NO.	Alarm name
☒ Alarm list	0		10	
	1		11	
☐ Historical	2		12	
	3		13	
	4		14	
	5		15	
	6		16	
	7		17	
Remove	AL1		AL3	
	AL2		AL4	

Figure 29

Click the "history alarm" button to enter the picture below

Directory		Historical	19:36:06
Picture	OccurrenceTime	ResetTime	AlarmText
Alarm list	2017-11-01 19:24:45	2017-11-01 19:25:14	Constant va
	2017-11-01 19:24:41	2017-11-01 19:24:43	Constant va
	2017-11-01 19:24:19	2017-11-01 19:24:32	The program
	2017-11-01 19:23:07	2017-11-01 19:24:17	Program sta
Historical	2017-11-01 19:23:03	2017-11-01 19:23:06	The program
	2017-11-01 19:21:02	2017-11-01 19:21:04	The program
	2017-11-01 19:20:14	2017-11-01 19:20:15	Program sta
	2017-11-01 19:20:07	2017-11-01 19:20:07	Constant va
Historical Alarm	2017-11-01 19:19:56	2017-11-01 19:19:57	Constant va
	2017-11-01 19:17:51	2017-11-01 19:18:59	Constant va
	2017-11-01 19:17:04	2017-11-01 19:17:50	Constant va
	2017-11-01 19:15:30	2017-11-01 19:15:31	Constant va
Delete	2017-11-01 19:04:32	2017-11-01 19:04:33	Constant va
	2017-11-01 19:01:19	2017-11-01 19:01:21	Constant va
	2017-11-01 19:01:09	2017-11-01 19:01:10	Constant va

Figure 30

Number	Name	Instructions
1	DI alarm	Fault alarm record of external input
2	Historical alarm	Alarm history data
3	Alarm release	Manually release alarm signal
4	Delete start	Operator removes alarm history

1.8 curve display screen



Figure 31

Click the 'curve monitor' and enter the following picture



Figure 32

Number	Name	Instructions
1	Setting temperature SP	Current setting temperature display
2	Real time temperature PV	detection temperature
3	Setting humidity SV	Setting humidity display at present
4	Real time humidity PV	Current humidity display
5	superior limit	Upper limit of curve display
6	lower limit	Lower limit of curve display

Click the 'data export' button and enter the following picture

Directory		U disk		10:19:00																							
Picture ☐ Curve ☒ U disk	Data set	The file name	Storage interval		Delete																						
	1	123	60 S																								
		<table border="1"> <thead> <tr> <th></th> <th>Y</th> <th>M</th> <th>D</th> <th>H</th> <th>Min</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>Start</td> <td>2018</td> <td>2</td> <td>2</td> <td>10</td> <td>18</td> <td>0</td> </tr> <tr> <td>End</td> <td>2018</td> <td>2</td> <td>2</td> <td>10</td> <td>18</td> <td>0</td> </tr> </tbody> </table>					Y	M	D	H	Min	S	Start	2018	2	2	10	18	0	End	2018	2	2	10	18	0	U disk
		Y	M	D	H	Min	S																				
Start	2018	2	2	10	18	0																					
End	2018	2	2	10	18	0																					
Monitoring 0	<table border="1"> <tbody> <tr> <td>1: Execute successfully</td> <td>-3: Data derived</td> <td>102: Data does not exist</td> </tr> <tr> <td>-1: File address errors</td> <td>100: Disk was not found</td> <td>103: Statement is wrong</td> </tr> <tr> <td>-2: Time address wrong</td> <td>101: Failed to create</td> <td></td> </tr> </tbody> </table>					1: Execute successfully	-3: Data derived	102: Data does not exist	-1: File address errors	100: Disk was not found	103: Statement is wrong	-2: Time address wrong	101: Failed to create														
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-1: File address errors	100: Disk was not found	103: Statement is wrong																									
-2: Time address wrong	101: Failed to create																										

Figure 33

Export data process: insert the USB flash drive into the touch screen at the back of the USB - A port, in touch screen opens at "export data" screen shown , data set is defined as 1, file naming their own definition for example 123.The storage interval is the interval between which we view the data.Start time and end time to set the time according to the time period when you view the data.Then click the button 'data import U disk', and the status monitor is shown as' 1 'to be successful for exporting data.If the other data is displayed, the export data is not successful, and the prompt is reworked according to the following data definition.

Number	Name	Instructions
1	data form	Expressed in tabular form
2	file designation	Named export file
3	data set data set	Derived data set
4	Storage interval	The interval between data
5	DELETE	DELETE
6	starting time	Export data start time
7	terminal time	Export data cutoff time
8	Data import into U disk	Data import into U disk

1.9 program settings screen

This is the central screen for setting up the program running parameters



Figure 34

Click the program settings button and enter the following picture

NO.	Temp	Humi	Hours	Min	TS1	TS2	TS3	TWT
1	30.0	30.0	0	30	0	0	0	0
2	30.0	30.0	1	0	0	0	0	0
3	0.0	0.0	0	0	0	0	0	0
4	0.0	0.0	0	0	0	0	0	0

Number

Figure 35

Number	Name	Instructions
1	EDIT	Program edit screen
2	segment number	Display the current editing code
3	temperature	Temperature per set
4	humidity	Each set of humidity
5	time	An hour for each temperature and humidity
6	TS	Timing information setting
7	Program number	Current recipe number

Click 'program standby' button to enter the following picture

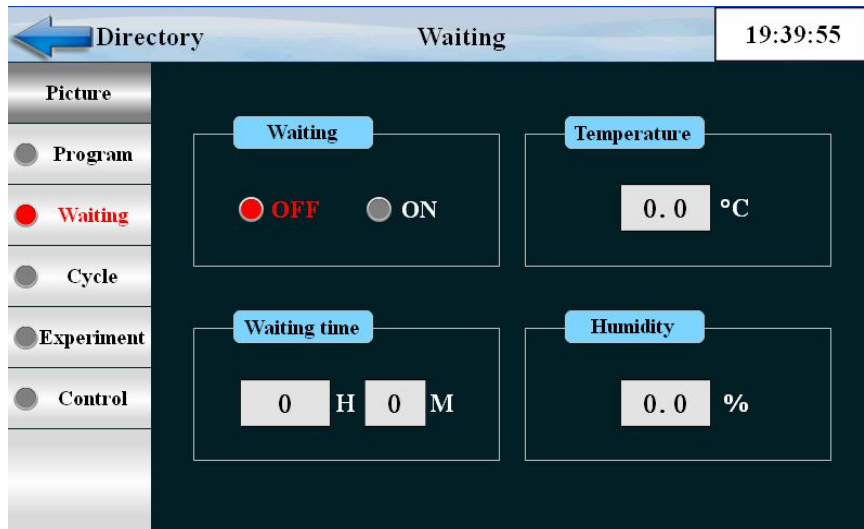


Figure 36

Number	Name	Instructions
1	Set the standby	Setting standby
2	stand-by time	Set standby time
3	temperature province	Temperature standby area
4	Humidity area	Humidity standby area

Click the "cycle edit" button to enter the following picture

Number	Large cycle	link
1	1	0

Save Upload

NO.	NO.1	NO.2	NO.3	NO.4
Start	1	1	1	1
End	1	1	1	1
Number	0	0	0	0

Figure 37

Number	Name	Instructions
1	Program number	Set the program number of the program to be recycled
2	repeat all	Set the number of cycles for the program to be infinite at 0
3	Start code	The program segment in the program has been set up to start the partial cycle operation
4	No end	The program segment has been set in the program to set the end of the end of the partial cycle operation. It is not circulating when it is less than 0
5	cycle index	In the program set, the number of cycles of the partial cycle operation is set, and the cycle is less than 0
6	parameter determination	Input the current parameters to the controller
7	Parameter upload	Upload the current parameters to the display
8	connect to	The number of programs should be run continuously after the current program is running

Click the "experiment title" button and enter the following picture

← Directory		Experiment		19:41:25	
Picture	NO.	Alarm name	NO.	Alarm name	
☐ Program	0		5		
☐ Waiting	1		6		
☐ Cycle	2		7		
☒ Experiment	3		8		
☐ Control	4		9		
Number		1	Back		Next

Figure 38

Click the "quick control settings" button to enter the picture below

← Directory		Control		19:41:50	
Picture	Name	OFF/H.M	ON/H.M	Name	OFF/H.M
☐ Program	0	TS OFF	TS OFF	4	0.00
☐ Waiting	1	TS ON	TS ON	5	0.00
☐ Cycle	2	0.00	0.00	6	0.00
☐ Experiment	3	0.00	0.00	7	0.00
☒ Control					

Figure 39

Number	Name	Instructions
1	Experimental title	Enter the settings experiment name screen
2	Message setting	Message timing control
3	Experimental title	Setting the title of the experiment

1.10 setting value setting



Figure 40

Click the "Settings" to enter the following picture

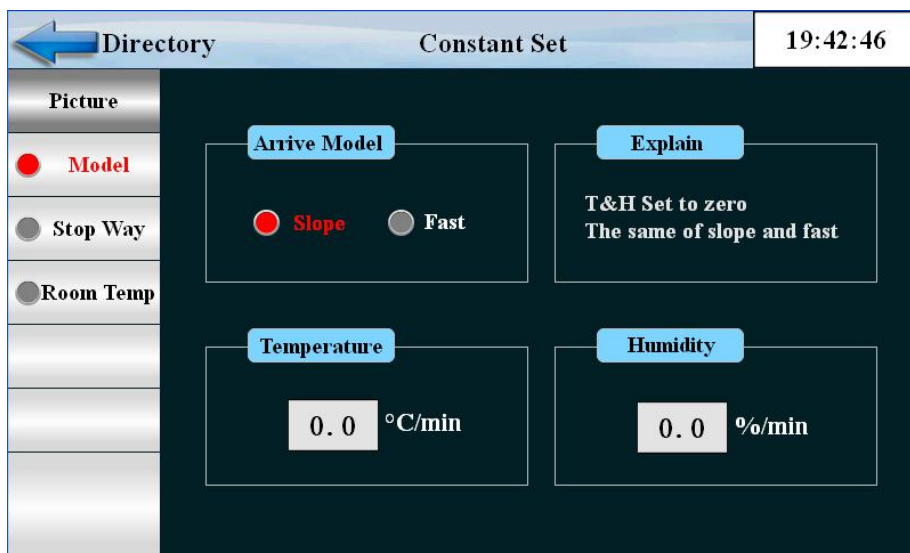


Figure 41

Number	Name	Instructions
1	control method	Slope control and fast control
2	Temperature slope	The temperature rises or falls at a certain slope
3	Humidity slope	Humidity rises or falls at a certain slope

Click the stop mode and enter the following picture

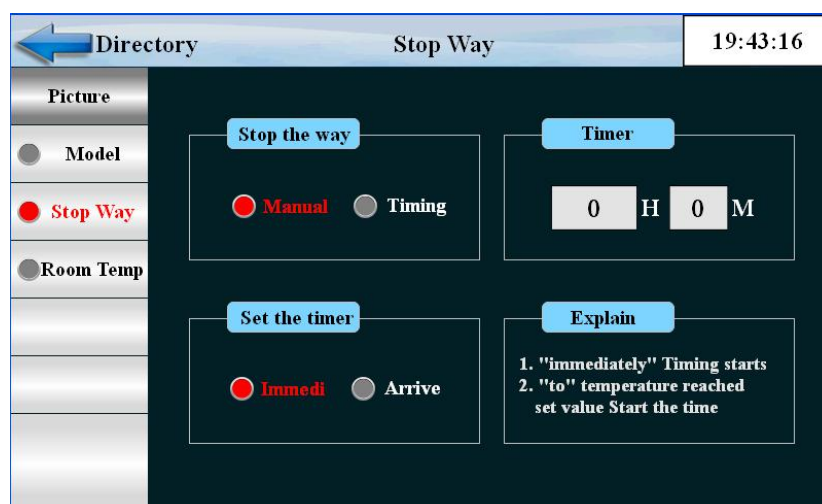


Figure 42

Number	Name	Instructions
1	stop mode	Manual stop and timing stop two ways
2	Timer	Set down time
3	timing pattern	There are two ways to start timing immediately and to set the temperature

Click the "back t ambient" button to enter the picture below

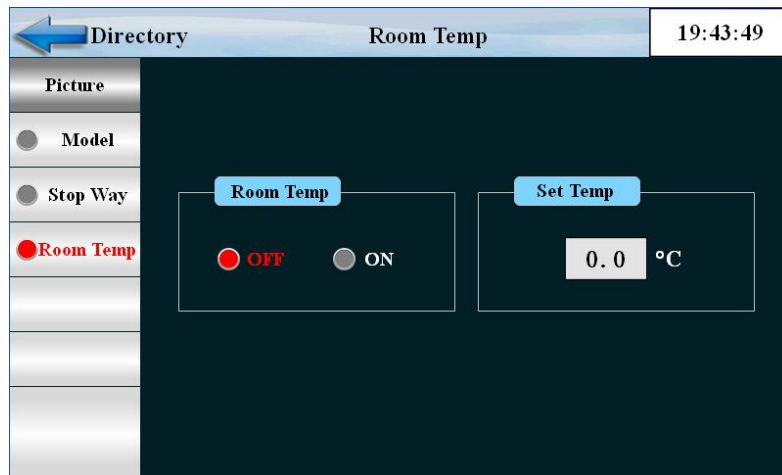


Figure 43

Number	Name	Instructions
1	Back to room temperature	Whether or not to return to normal temperature shutdown
2	Back to room temperature	Setting back to room temperature