



# **U-8256P-ACCU3**

## **Temperature & humidity program controller Instruction Manual**

**DRAFT**

## For Safety Using

Thank you for purchasing our U-8226 cooling and heating shock Controller. For proper and effective use of full functions of this instrument, please read and understand this instruction manual well before use.

To ensure safety in handling the instrument, please be sure to observe the following warnings/cautions as well as the precautions in this manual.	
 <b>Warning</b>	
General	To prevent an electric shock, be sure to disconnect this instrument from the main power supply when wiring it.
Protective grounding	(1)To prevent an electric shock, be sure to provide protective grounding before providing power supply to this instrument. (2)Do not cut off the protective grounding conductor or disconnect protective grounding.
Power supply	Check that the power supply voltage of this instrument matches that of the supply source. Rated power voltage range : 100-240VAC Rated power frequency : 50/60Hz
Environment	Do not operate this instrument in atmosphere containing inflammable, explosive or corrosive gas, or in environments where water or steam may be splashed on the product.
Input/output wiring	To prevent electric shock, be sure to provide wiring after turning off the power.
 <b>caution</b>	
Input/output wiring	Do not use the open terminals for other purposes such as relay.
Inside of instrument	Do not disassemble the inside of the main unit.

***[caution]***

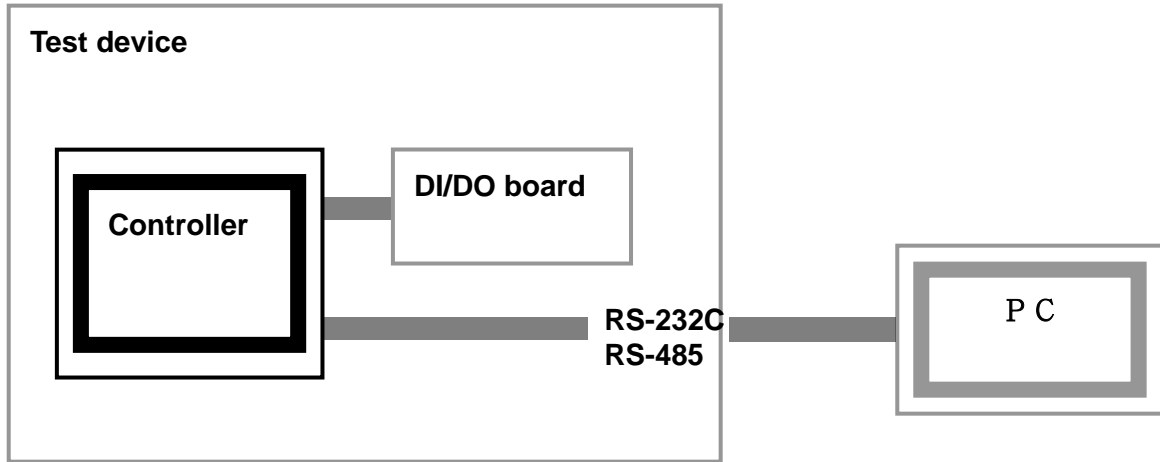
Instruction manual	<p>(1) Please deliver this instruction manual to the final user.</p> <p>(2) Be sure to read this instruction manual before handling the instrument.</p> <p>(3) If you find any questions, errors or omissions, please inform our sales representative.</p> <p>(4) When you have read this instruction manual, store it safely near the instrument.</p> <p>(5) If it is lost, stained or damaged by accident, please inform our dealer where you purchased the instrument or our sales representative.</p> <p>(6) It is forbidden to reprint or copy all or part of this instruction manual without permission.</p>
Installation	<p>(1) Please be sure to attach to a panel so that the operator who operates it cannot touch the back of this instrument.</p> <p>(2) Please attach to the point distant from what burns easily. Please do not install what burns especially easily under an instrument base.</p> <p>(3) When installing this instrument, put on a protective gear such as safety shoes, helmet, etc. for your safety.</p> <p>(4) Do not put your foot on the installed instrument or get on it, because it is dangerous.</p>
Maintenance	<p>(1) It is prohibited to remove or disassemble the unit, printed circuit board, etc. by anyone except our serviceman or persons with our approval.</p> <p>(2) When protection against dust and waterproofing performance are not needed, and when not making shakiness between an inner unit and a case into a problem, there is no problem on the performance even if it removes packing between an inner unit and a case.</p>
Disposal	To dispose of this instrument, consign to the special agent as an industrial waste.
Cleaning	<p>(1) Clean the surface of this instrument with a dry cloth.</p> <p>(2) Do not use organic solvents.</p> <p>(3) Cleaning the instrument after turning off the power.</p>
Revisions	This instruction manual may be revised without prior notice.

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# 1. Installation

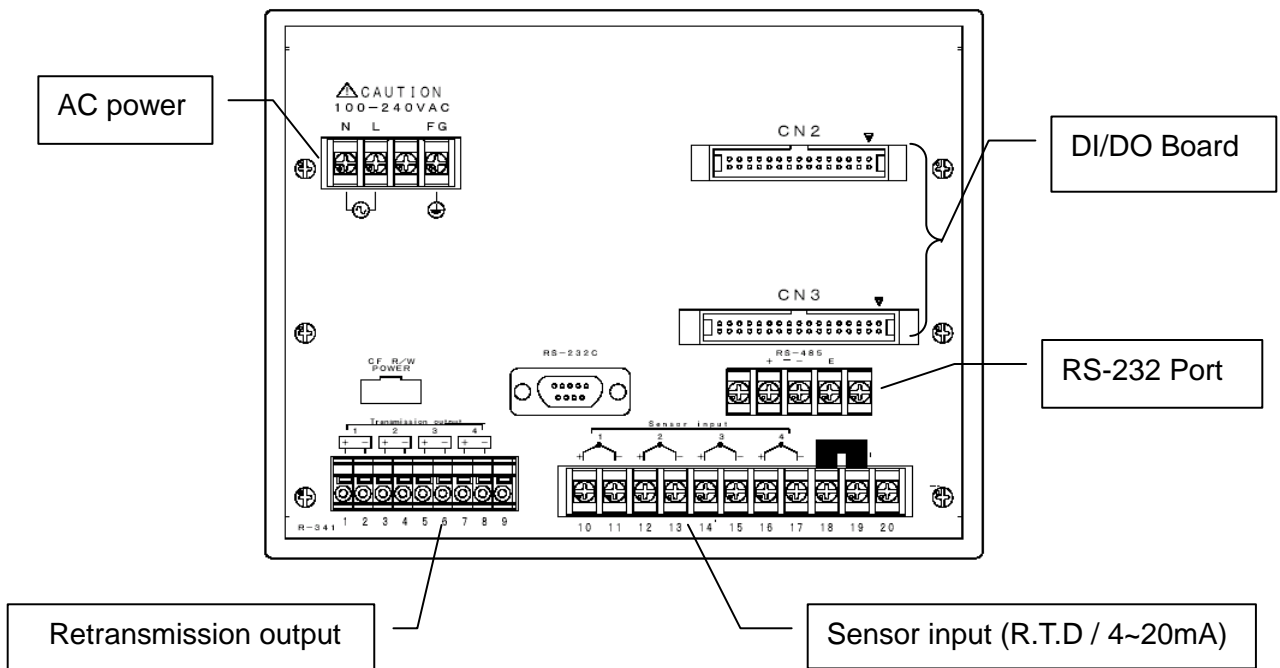
## 1.1 System diagram



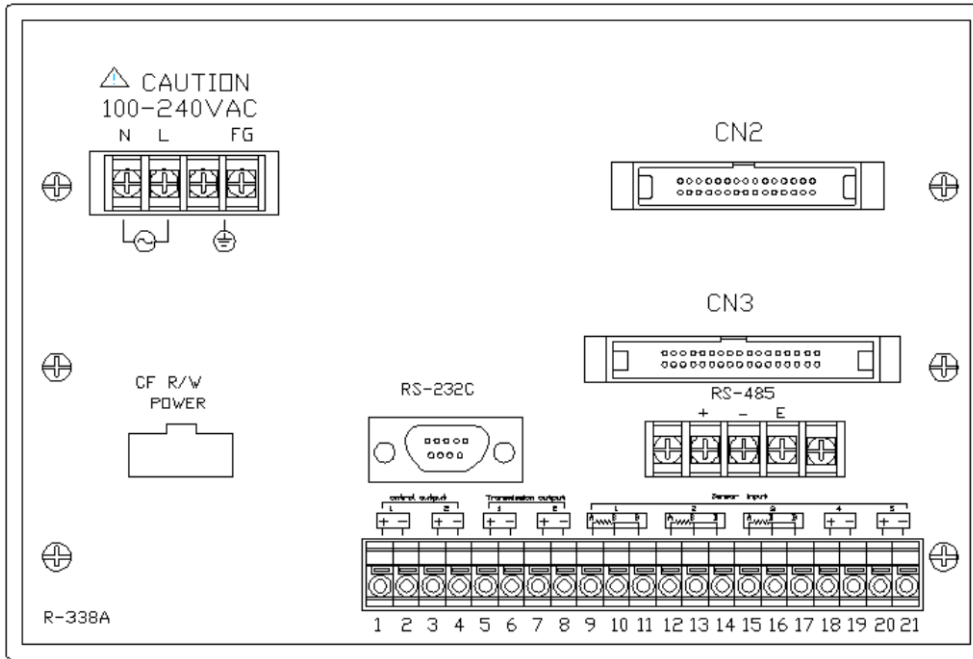
Controller body connect to DI/DO board.

Com port connect to PC.

## 1.2 Wiring



### 1.3 Terminal connection chart



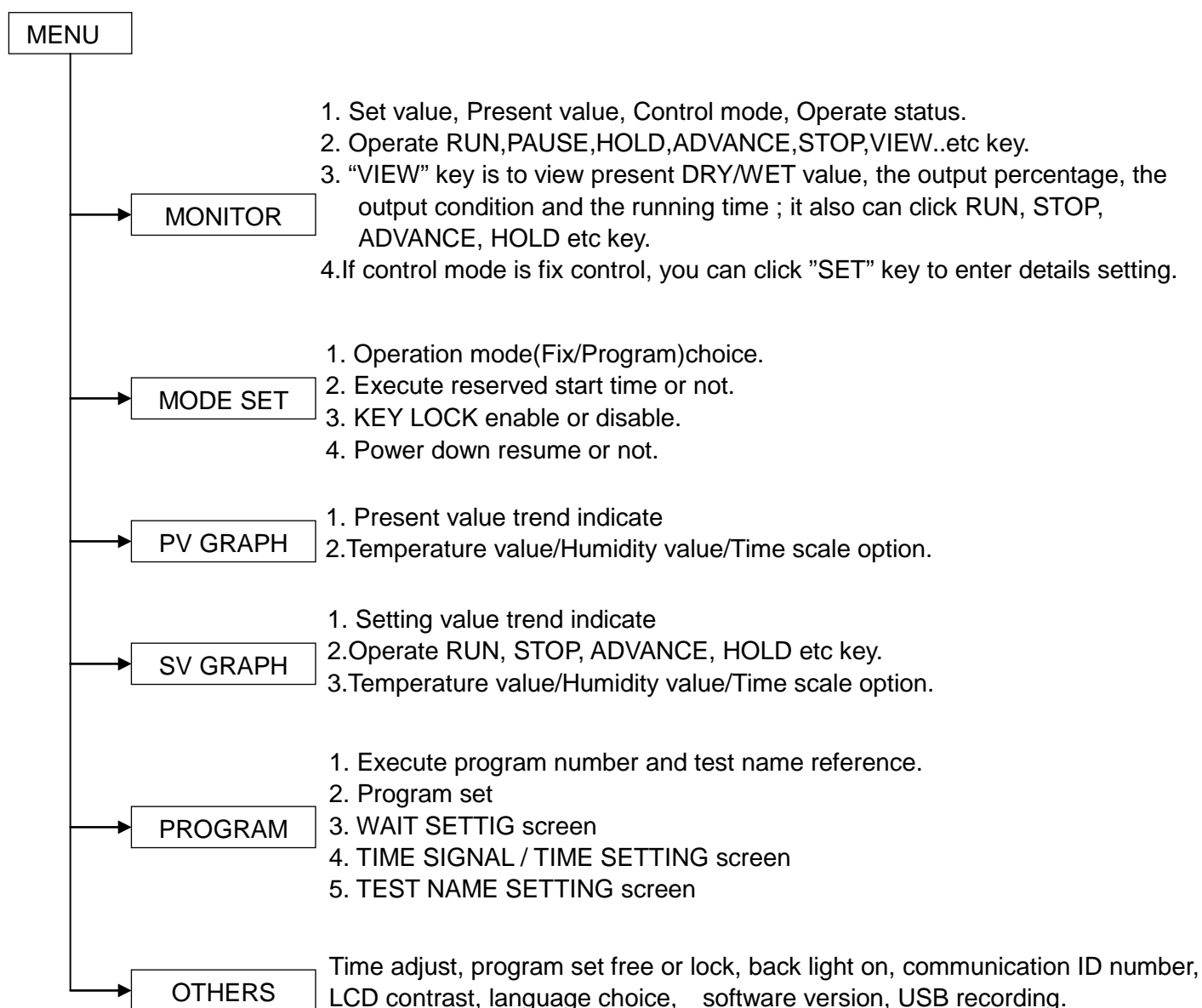
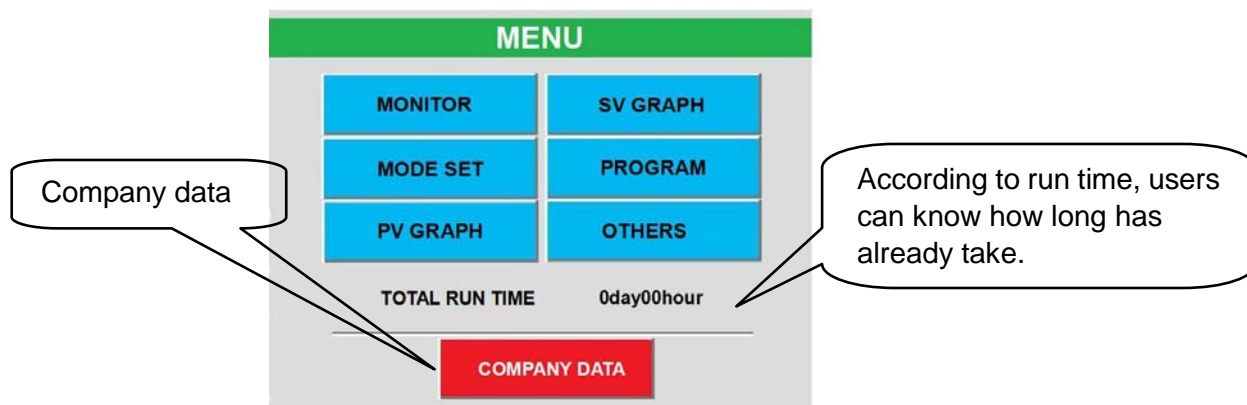
Number	CN2
	COM
1	RUN/STOP
2	TROUBLE1
3	TROUBLE2
4	TROUBLE3
5	TROUBLE4
6	TROUBLE5
7	TROUBLE6
8	TROUBLE7
9	TROUBLE8
10	TROUBLE9
11	TROUBLE10
12	NC
	COM
13	NC
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	

Number	CN3
	COM
1	T1
2	T2
3	T3
4	T4
5	T5
6	T6
7	T7
8	T8
9	T9/UP
10	T10/DOWN
11	H1
12	H2
13	TS1
14	TS2
15	TS3
16	T-ALARM
17	TROUBLE
18	H.RUN
19	RUN
20	END
21	EXHAUST
22	NC
23	T.CONT
24	H.CONT

Number		Back side of product
1	+	Temperature output DC 4~20mA
2	-	
3	+	Humidity output DC 4~20mA
4	-	
5	+	Temperature output DC -1~2V
6	-	
7	+	Humidity output DC 0~1V
8	-	
9	A	Pt100(DRY)
10	B	
11	B	
12	A	Pt100(WET)
13	B	
14	B	
15		NC
16		NC
17		NC
18	+	Temperature input DC 4~20mA
19	-	
20	+	Humidity input DC 4~20mA
21	-	

## 2. Menu Overview

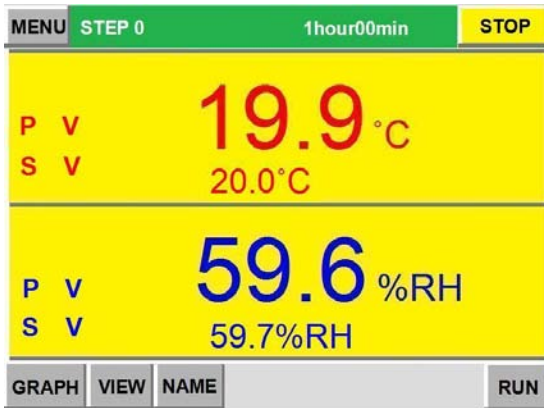
The menu provides all basic operation and setting, It is convenient to choose any function that you need.



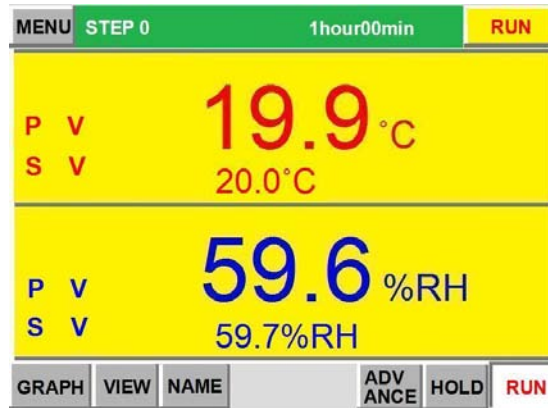
### 3. MONITOR screen

When user has already setup program, the monitor screen provide users to (RUN),(STOP),(ADVANCE), (PAUSE),(HOLD) the programs. The Monitor screen can operate two kinds of control, one is a program control, the others is a fix control. MONTITOR screen also can see the present output percent ratio and others details.

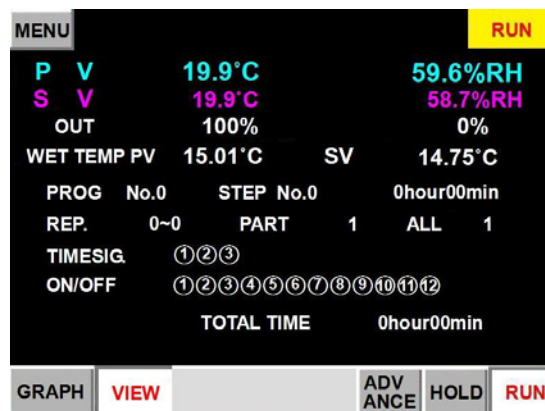
#### 3.1 Control mode ( Program control )



Program- Stop



Program- Run

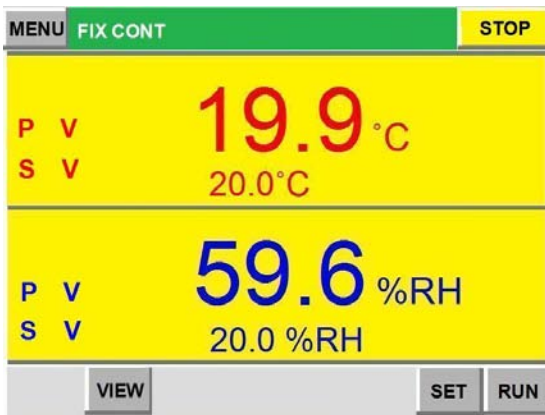


Output screen- Program control

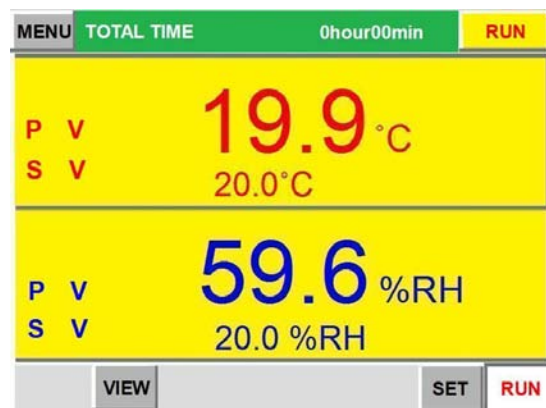
- 3.1.1 In the right-upper corner “RUN” or “STOP” key means present controller condition.
- 3.1.2 In the left-upper corner “MENU” key, it will back to the MENU screen.
- 3.1.3 In the right-lower corner “HOLD” can temporarily the test running.
- 3.1.4 “VIEW” key may view present DRY/WET value, the output percentage, the output condition and the operating time ; it also can push RUN, STOP, ADVANCE, HOLD etc key.
- 3.1.5 “NAME” can cut TEST NAME/SEGEMENT TIME INFO according to the picture underneath (above picture news demonstration row automatic cut over demonstration).
- 3.1.6 Using “ADVANCE” key, it can jump to next step, (If you have already setup wait function, you must push this button twice.)
- 3.1.7 Button under “HOLD” key can stop the test.
- 3.1.8 Buttton under “RUN” key can run the test , click this key again, it will make the test stop.



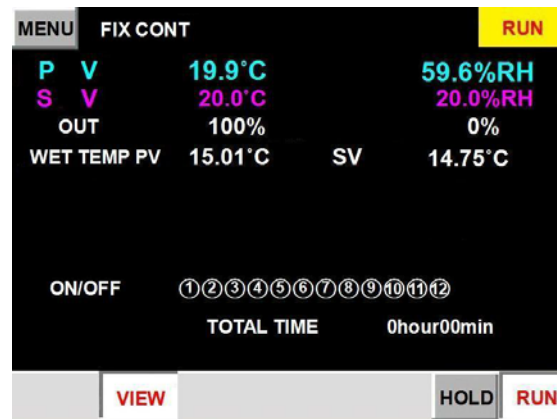
### 3.2 Control mode ( Fix control)



FIX-In Stopping



FIX-In running



Output screen-Fix control

3.2.1 In the right-upper corner "RUN" key present the controller`s condition.

3.2.2 In the left-upper corner "MENU" key can return to the MENU screen.

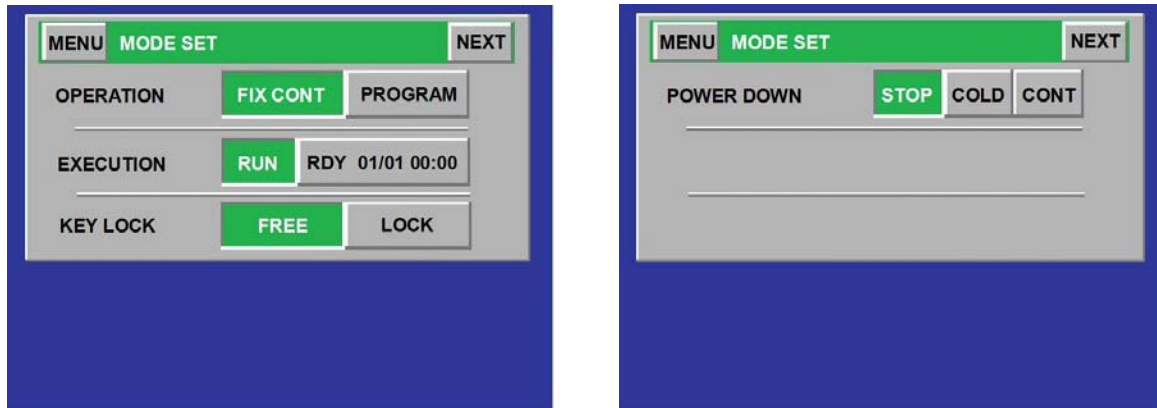
3.2.3 "VIEW" key can monitor present DRY/WET value, the output percentage, the output condition and the running time ; it also can push RUN, STOP, ADVANCE, HOLD etc key.

3.2.4 "SET" key can setup temperature/humidity value, slope, the continuous running, the operating time, wait function, ON/OFF function in the Fix control.

3.2.5 Button under "RUN" key can run the test, push this key again can stop the controller.

## 4. MODE SET Screen

MODE SET screen can use some functions, such as operation mode-fix or program, execute reserved time, key lock function, and Power down( Black out resume).



“NEXT” key can change page ( 2 pages).

“MENU” key can return to MENU screen

### 4.1 Operation mode(Fix control / Program control)choice

You can select the controller mode.( Fix control or Program control.

### 4.2 Execute reserved start time or not

There are two execute modes (FIX / Program) in reserved setting.

RUN: Normal setting, without reserved start time.

Ready: Reserved start time, Month/Day/Hour/Minute.

### 4.3 KEY LOCK enable or disable

FREE: The controller can operate.

LOCK:The controller can not operate(RNN key disappear in MONITOR screen).

### 4.4 Power down( Black out resume) or not

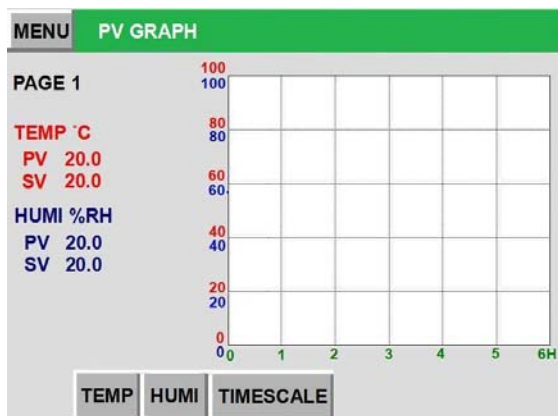
When the test is running, some unknown factors cause the controller power off, after restarting, there are three situations can be selected.

STOP: When you turn on the power, appear RST button, then push it. The program is stop.

COLD: When you turn on the power, the system give up normal process, return back to the first step.

CONT: When you turn on the power, a controller continue the present step.

## 5. PV GRAPH screen



5.1 In the left-upper corner “MENU” key, it will back to the MENU screen.

5.2 Button down “TEMP” key can setup temperature range from -100°C to 200°C.

5.3 Button down “HUMI” key can setup humidity range from 0% to 100%.

5.4 Button down “TIMESCALE” key can setup time scale range, After click the key, the time scale will changed .  
( 0-3hours/0-6hours/0-12hours/0-24hours/0-48hours/0-96hours/0-8days ) .

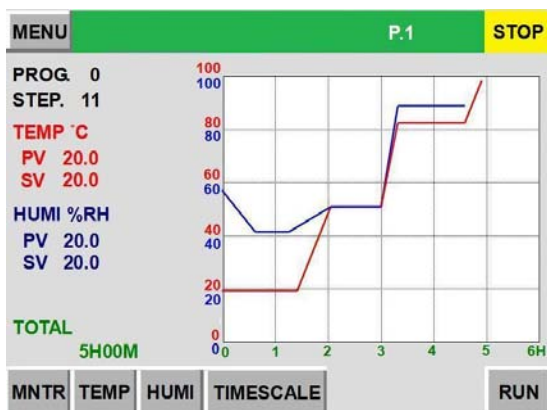
5.5 The present temperature trend will fill the screen.

5.6 The present humidity trend will fill the screen.

5.7 If the curve out of page, you can push “NEXT” key or ”BACK” key.

5.8 When the controller stop the test, SV GRAPH will disappear.

## 6. SV GRAPH screen



6.1 In the left-upper corner “MENU” key can return to the MENU screen.

6.2 Button down “TEMP” key can setup temperature range from -100°C to 200°C.

6.3 Button down “HUMI” key can setup humidity range from 0% to 100%.

6.4 Button down “TIMESCALE” key can setup time scale range, After click the key, the time scale will changed .  
( 0-3hours/0-6hours/0-12hours/0-24hours/0-48hours/0-96hours/0-8days ) .

6.5 The present temperature trend will fill the screen.

6.6 The present humidity trend will fill the screen

6.6 If the curve out of page, you can click “NEXT” key or ”BACK” key to see other part.

6.7 When the controller stop the test, SV GRAPH will disappear.

6.8 Button under “MNTR” key can back to the MONITOR screen.

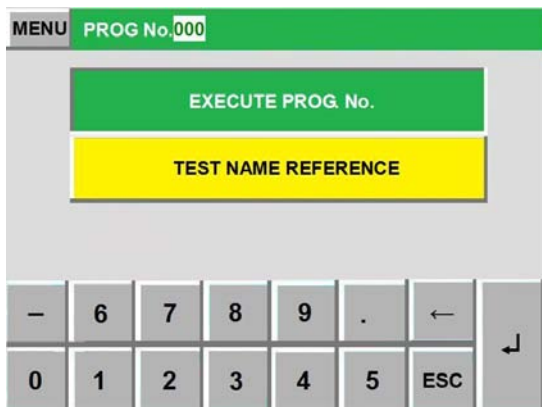
6.9 Button under “RUN” key can run the test, click the key can stop the controller.

## 7. Program screen

In the left-upper corner “MENU” key can return to the MENU screen.



### 7.1 Execute program number and test name reference



MENU	TEST NAME REFERENCE	NEXT	BACK
PROG No000	PROG No005		
PROG No001	PROG No006		
PROG No002	PROG No007		
PROG No003	PROG No008		
PROG No004	PROG No009		

7.1.1 Insert the program number to carry out.

7.1.2 After enter “TEST NAME REFERENCE” screen, you can see all test names in this screen, then you can select the program that you want to execute.

## 7.2 Program set

You can setup the program, such as temperature value, humidity value, operate time , wait function and time signal. After setting, it will present the following picture.

MENU	PROG.SET				PROG No.000	BACK
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL	
0	000.0	000.0	00H00M	--	0	0
1	000.0	000.0	00H00M	--	0	0
SLCT		REPEAT			LOCK	

※ If “LOCK” key vanishing, the program setup function has locked. Please contact yours supplier.

You can setup maximum 140 programs (NO.000~NO.139).  
Each program can setup maximum 1400 sections (NO.0000~NO.1399).

**Setup setup 1:** After the right bottom “LOCK” key, the picture switching is as follows, presses down “SET” key to start to establish the program.

MENU	PROG.SET				PROG No.000	BACK
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL	
0	000.0	000.0	00H00M	--	0	0
1	000.0	000.0	00H00M	--	0	0
SLCT	DEL	COPY	REPEAT		SET	

MENU	STEP SET			PROG No.000	2STEP
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0
1	000.0	000.0	00H00M	--	0
BLOCK DEL		BLOCK COPY		STEP.	
ADD	INS	TOP	END	↑	↓
			ESC	↵	

↑ Clicking “SET” key to establish the program.  
 ↑ Clicking “REPEAT SET” key can enter “REPEAT SET” option.  
 ↑ Clicking “COPY” key can duplicate other programs.  
 ↑ Clicking “DEL” key can delete the program content.  
 ↑ Clicking “SLCT” key can select the program number which want to establish.

MENU REPEAT SET		PROG No.000		BACK
ALL REP.	EXE. TIME	002TIME		
PART REP. (0000~0011)	1 001TIME 0001~0003	2 002TIME 0002~0003		
	3 010TIME 0003~0005	4 002TIME 0006~0008	5 001TIME 0000~0000	

REPEAT SET screen

MENU PROG.SET		PROG No.000			
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0 0 0
1	000.0	000.0	00H00M	--	0 0 0

Where do you copy it?  
PROG No.000

COPY screen

MENU PROG.SET		PROG No.000			
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0 0 0
1	000.0	000.0	00H00M	--	0 0 0

Program remove?

YES NO

SLCT DEL COPY REPEAT SET

DEL screen

MENU PROG.SELECT		PROG No.000			
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0 0 0
1	000.0	000.0	00H00M	--	0 0 0

Select program screen screen

**Setup setp 2:** Determines the program number, you can establish the program content. In order you can establish temperature, humidity, operate time, temp wait, humi wait, time signal(3 groups).

**Setup setp 3:** Setup the temperature value. Through keyboard, you can insert the value.

MENU STEP SET		PROG No.000			2STEP
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0 0 0
1	000.0	000.0	00H00M	--	0 0 0

SET ZONE  
-99.9~200.0°C

**Setup setp 4:** Setup the humidity value. Through keyboard, you can input the value.

MENU	STEP SET	PROG No.000		2STEP	
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0 0 0
1	000.0	000.0	00H00M	--	0 0 0

SET ZONE						
000.0~100%RH						

-	6	7	8	9	.	←	↵
0	1	2	3	4	5	ESC	

- ※ If the temperature is below 0°C or above 100°C, the humidity value will not allow be setup. It directly jump to " TIME" Position.
- ※ If the humidity value set 0, In "MONITOR"screen its humidity value position will vanish (humidity not control).

**Setup setp 5:** Setup the operate time .

MENU	STEP SET	PROG No.000		2STEP	
STEP.	TMEP	HUMI	TIME	WAIT	SIGNAL
0	000.0	000.0	00H00M	--	0 0 0
1	000.0	000.0	00H00M	--	0 0 0

SET ZONE						
0H00M~99H59M						

-	6	7	8	9	.	←	↵
0	1	2	3	4	5	ESC	

- ※ If you setup time (time were already not 0), the test would follow the slope control. After running, temperature/humidity set value will depend on the time which different from increasing progressively or decreasing progressively.

**Setup setp 6:** Setup wait function for temperature or humidity.



※ If you want to use Wait function, please enter to the “WAIT SET” screen.

※ 「-」 indicates disable, 「T」 indicates temperature wait function, 「H」 indicates humidity wait function.

**Setup setp 7:** Setup Time signal 1/Time signal 2/Time signal 3.



※ You can setup time signal number 0~9 through entering “TIME SIGNAL TIME SET” screen.

※ There are ten numbers (0~9) for TS 1/TS 2/TS 3.

※ You can change number via cursor to up or down.

**Setup setp 7: Setup REPEAT SET**

EXAMPLE for repeat set

IF a program set 8 sections(0→1→2→3→4→5→6→7→8).

	Part response			Program flow
Case1	Number	1	2	0→1→2→3→4
	Start	2	3	2→3→4→5
	End	4	5	3→4→5→6→7→8
	Times	2	2	
Case2	Number	1	2	0→1→2→3→4
	Start	3	2	2→3→4→5
	End	5	4	3→4→5→6→7→8
	Times	2	2	

The program will select the small END number to execute.



	Part response			Program flow
Case3	Number	1	2	0→1→2→3 2→3→4→5→6 5→6→7→8
	Start	2	5	
	End	3	6	
	Times	2	2	
Case4	Number	1	2	0→1→2→3 2→3→4→5→6 5→6→7→8
	Start	5	2	
	End	6	3	
	Times	2	2	

### 7.3 WAIT SET screen



Password screen



Wait set screen

Wait function for temperature and humidity, this setting range will from  $\pm 0.0$  to 9.9.

#### Wait function:

If test condition(temp/humi/time) can not achieve, you can set wait function.

## 7.4 TIME SIGNAL TIME SET screen

There are ten terms(0~9) in “Time signal time set” screen, Number 0 is “ALL TIME OFF”, Number 1 is “ALL TIME ON”. You can’t change Number 0 and 1, but you can scheme Number 2~9.

※ **ON DELAY** : Execute delay time, relay will be open.

Example: Time signal number is 2, ON DELAY is 1 hour.

If the program spends two hours, the first hour will close the relay and the second hour will be open.

※ **CUT ON/OFF** : Set CUT function open(on),then you can setup cut time.

Example: Time signal number is 2, ON DELAY is 1 hour.

If the program spends two hours, the first hour will close the relay, the middle 30 minutes will be open, and the remain 30 minutes will be closed.

**Setup step 1:** Clicking “TIME SIGNAL TIME SET” key can show time signal screen1.

MENU	TIME SIGNAL TIME SET			BACK
No.	ON DELAY	CUT ON/OFF	CUT TIME	
0	<	ALL TIME OFF	>	
1	<	ALL TIME ON	>	
2	00hour00min	CUT OFF		
3	00hour00min	CUT OFF		
4	00hour00min	CUT OFF		
5	00hour00min	CUT OFF		
6	00hour00min	CUT OFF		
7	00hour00min	CUT OFF		
8	00hour00min	CUT OFF		
9	00hour00min	CUT OFF		

SET

Time signal screen 1

MENU	TIME SIGNAL TIME SET			BACK
No.	ON DELAY	CUT ON/OFF	CUT TIME	
2	00hour00min	CUT OFF		
3	00hour00min	CUT OFF		
4	00hour00min	CUT OFF		
5	00hour00min	CUT OFF		
6	00hour00min	CUT OFF		
7	00hour00min	CUT OFF		
8	00hour00min	CUT OFF		
9	00hour00min	CUT OFF		

↑ ↓ ESC ↵

Time signal screen 2

**Setup step 2:** Clicking “SET” key, starts to establish the time signal time set.

**Setup step 3:** Setup “ON DELAY TIME” and “CUT TIME” value via number key and “↵ ” key.

MENU	TIME SIGNAL TIME SET			BACK
No.	ON DELAY	CUT ON/OFF	CUT TIME	
2	00hour00min	CUT OFF		
3	00hour00min	CUT OFF		
4	00hour00min	CUT OFF		
5	00hour00min	CUT OFF		

- 6 7 8 9 . ← ↵

0 1 2 3 4 5 ESC

Time signal screen 3

MENU	TIME SIGNAL TIME SET			BACK
No.	ON DELAY	CUT ON/OFF	CUT TIME	
2	00hour00min	CUT OFF		
3	00hour00min	CUT OFF		
4	00hour00min	CUT OFF		
5	00hour00min	CUT OFF		

← ↵

CUT OFF CUT ON ESC ↵

Time signal screen 4

**Setup step 4:** Setup complete, pressing down “ESC” key to exit screen.

## 7.5 TEST NAME SET screen

TEST NAME SET screen has 2 pages(20 programs) including “TEST NAME SET” screen 1 to provide you to change test name and “TEST NAME SET” screen 2.

MENU TEST NAME SET		NEXT	BACK
PROG No000	PROG No005		
PROG No001	PROG No006		
PROG No002	PROG No007		
PROG No003	PROG No008		
PROG No004	PROG No009		

TEST NAME SET screen 1

MENU	Temperature test	PROG No.000
<input type="button" value="NAME CHANGE"/> <input type="button" value="OBJECT CHANGE"/>		
<input type="button" value="BACK"/>		

TEST NAME SET screen 2

Clicking the program number in the screen 1 then entering screen 2.

**TEST NAME CHANGE:** You can change test name if you need. As screen 4,we create test name in temperature test(screen 4).

**OBJECT CHANGE:** You can select test name “temperature test” for other programs (screen 3).

MENU	TEST NAME SET	BACK
No.000	TEMPERATURE TEST	
SPCE	←	→
	INS	DEL
	QUIT	OK
▲	Half	▲
▲	!"#\$%&'()*+,-./0123456789;<=>?	▲
▼	@ABCDEFGHIJKLMNPQRSTUVWXYZ [¥]^_	▼
▼	' abcdefghijklmnopqrstuvwxyz{ }~	▼
		↵
		←
		→

TEST NAME SET screen 4

MENU	Temperature test	PROG No.000
<input type="button" value="NAME CHANGE"/> <input type="button" value="OBJECT CHANGE"/>		
-	6	7
	8	9
	.	←
0	1	2
	3	4
	5	ESC
		↵

TEST NAME SET screen 3

## 8.OTHERS screen

This screen provide some functions, such as time adjust, program Lock, back Light on, , communication ID number, LCD contrast, language change, firmware version, and USB record.



### 8.1 Time adjust

Adjust system clock, YY/MM/DD/HH/MM. Suggest adjust this function when the system is STOP.

### 8.2 Program set free or lock

**FREE:** You can setup the programs.

**LOCK:** You can't setup the programs. (Operation lock)

### 8.3 Back Light on

Back light setting can protect your LCD screen(Standby range:0~99minutes)

**Always** means the light always open.

### 8.4 Communication ID number

You can define different machine ID for communication, ID range:1~247.

### 8.5 LCD contrast

Adjust LCD contrast to the best display,16 level.

### 8.6 Language change

Change language between Chinese and English.

### 8.7 Version

This screen provides product type, software version, character version.

### 8.8 Usb record

USB record appeared when you have already setup in initial setting.