Humidity and Temperature Controller BM-RHTC002

1, Introduction

BM-RHTC002 series Humidity and Temperature Controller used high-efficiency MCU as a control model, and they used CMOS humidity and temperature sensor to detect the industry environment. And the data from the sensor could be showed on the display. Customer can setup the upper limit and the lower limit of RH & T. And the controller can make the humidity and temperature up and down with the heater, cooler or humidifier, dehumidifier.

Fig.1

2, Specification

Measurement range(Probe)		Temperature	0～99.9℃
		Humidity	0～99.9％RH
Operating range of controller		Temperature	-20～60℃
		Humidity	0～95％RH
Accuracy		Temperature	±0.5℃(10~40℃), ±2℃(in other Temperature range)
		Humidity	± 3％RH
LED Display		Numeral Display for Humidity and Temperature	
Output		4 Relays output	
The Relay's Capacity		220VAC, 5A (resistive, passive)	
Power supply		220V AC±15%（50HZ）	
		≤2.5W	
Reliability		Accord with IEC834—1	
Size(mm)		Probe	Φ19×140
		Controller	72×72×110, 66x66 (hole size)
Installation	Controller	Panel, Pedestal or Mounting rails	
	Probe	Hang up or insert the pipe	

3, Technical Peculiarity

- High-powered MCU as a control model
- Watchdog to keep the system work well
- Zero point set up
- Transmitting in digital with CRC Calculation
- Power down protection set up
- Error alarm
- RS485 output can be ordered
- Over load protection
- Accord with IEC61000-4-2(GB/T17626.2), IEC61000-4-4(GB/T17626.4), IEC61000-4-5(GB/T17626.5), IEC61000-4-8(GB/T17626.8), IEC61000-4-11(GB/T17626.11)

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4, Electrical Connection

Please connect the sensing probe with the controller correctly, like the Fig 2. You must connect port 6 and 7 with 220V power.

You can get 4 relays output as following:

Port		N.O	COM	N.C
Output	Humidity ceiling alarm output (RHH)	4	3	15
	Humidity threshold alarm output (RHL)	20	19	18
	Temperature ceiling alarm output (TH)	14	12	13
	Temperature threshold alarm output (TL)	2	1	16

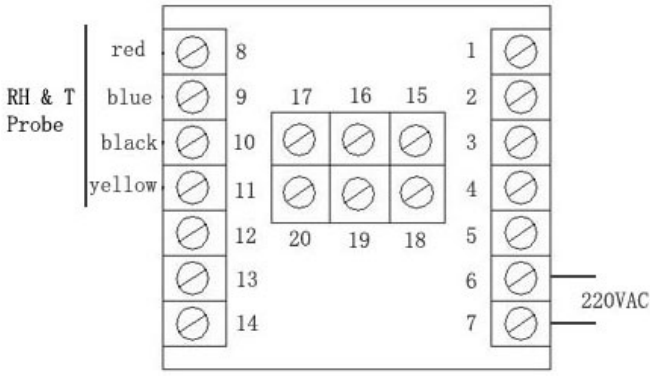

Fig.2

About Probe (Show in the Fig 3)

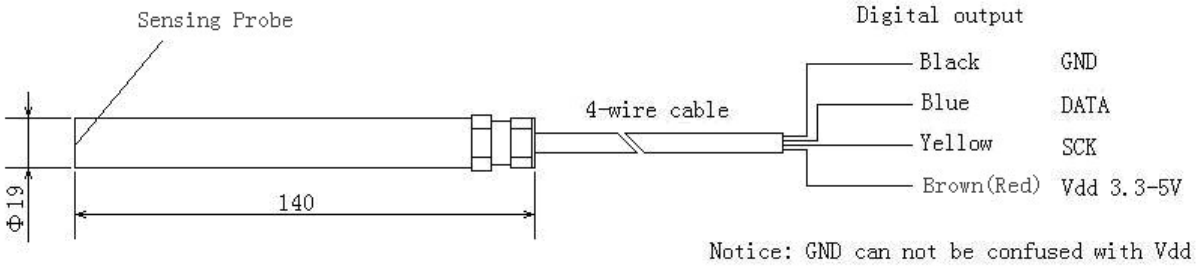

Fig.3

5, Set the controlled parameters

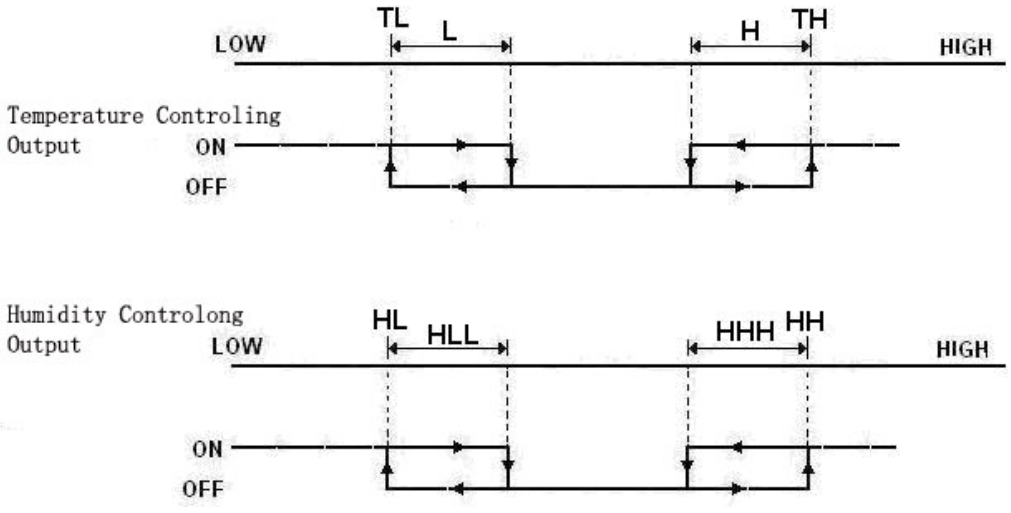

Fig.4

TL: Temperature threshold value setting

L: Temperature threshold backlash value setting (0 ~ 9.9 ℃)

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TH: Temperature ceiling value setting
H: Temperature ceiling backlash value setting (0 ~ 9.9 ℃)
HL: Humidity threshold value setting
HLL: Humidity threshold backlash value setting (0 ~ 9.9% RH)
HH: Humidity ceiling value setting
HHH: Humidity ceiling backlash value setting (0 ~ 9.9% RH)

5.1 Means of the button

SET：Shift、Enter ; ▶：Move; ▲：Number increase

5.2 Parameter Setting Up

1) Boot-strap password

Introduction: When enter the Setting up state, customer will input the password, then the Setting up list showed. Parameter name is “P”， original code is “1234” (the factory Password is 2020), which can be reset by customer.

Method: Press SET, display “P”, then press ▶ , get into “password state”, display“0000”，clue to input the password，press ▲ to input 0～9, press ▶ to carry. When finishing password inputting, press SET . If the password wrong, Display showed “Err” and back to “password state”.

2) Password setting up

Introduction: When enter the Setting up state, customer can reset the password. Parameter name is “Pn”.

Method: Press SET, display “Pn”, then press ▶, display “0000”. Press ▲ to carry，and there will be a number glint, press ▶ to input 0～9, press SET to carry.

3) Temperature threshold value set up

Introduction: When enter the setting up state, customer can set up the temperature threshold value. Parameter name is “TL”.

Method:

a, Enter the setting up state

b, Press SET, Shift the letter to “TL”, Press ▶, the display will show the original threshold value. And then customer can reset a new value. So press ▲ to carry, and there will be a number glint, press ▶ to input 0～9. After that, Press SET to shift into next parameter or wait for back to operating state.

4) Temperature threshold backlash value set up

Shift the parameter into “L”, press ▶, the display will show the original backlash value. And then customer can reset a new value. So press ▲ to carry, and there will be a number glint, press ▶ to input 0～9. After that,

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Press SET to shift into next parameter or wait for back to operating state.

5) Temperature ceiling value set up

Shift the parameter into “TH” in the setting up state, press ▶, the display will show the original ceiling value. And then customer can reset a new value. So press ▲ to carry, and there will be a number glint, press ▶ to input 0～9. After that, Press SET to shift into next parameter or wait for back to operating state.

6) Temperature ceiling backlash value set up

Shift the parameter into “H”, press ▶, the display will show the original backlash value. And then customer can reset a new value. So press ▲ to carry, and there will be a number glint, press ▶ to input 0～9. After that, Press SET to shift into next parameter or wait for back to operating state.

7) And you can reset the other parameters just like before.

6, Important Notices

1) Connect the sensing probe to the controller must be correct, or will damage the instruments and sensor.
2) Do not supply the power before connect the sensor.
3) When entering the setting up state, password is needed.
4) When finish setting up controller need not to restart or reset.
5) Threshold value can not be zero.

7, After-sales service

1) Do not dismantling the shell of instrumentation and sensor, the resulting damage would not be held responsible
2) Caution: because of technical improvements arising from the parameters, such as wiring changes to product specification, whichever is incidental to product specification, without notice.

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