



## Features

- Temperature Input : RTD, mA, Volt
- %rH Input : mA, Volt
- PID or On-Off Control for Temperature & rH
- Compressor Control Output with Time Delay
- Programmable Alarm for Temperature & rH
- Low Water Level Input & Door Open Input
- Optional Serial Communication Port
- Universal supply voltage (90 to 270 VAC)
- 24 VDC Available on Request

## Display Specification

Digits	: Dual 4 Digits 7 Segment LED Display
LED Indication	: DH - Dry Heater Output Status WH - Wet Heater Output Status CP - Compressor Output Status TA - Temperature Alarm Status HA - Humidity Alarm Status WL - Water Level Error Condition AT1 - Temperature Tuning AT2 - %rH Tuning

Height	Model	Humi-Temp
PV (White)		0.80"
SV (Green)		0.56"

## Input Specification

Temperature Input	: RTD - Pt-100 0-20 mA, 4-20 mA, 0-1 VDC, 0-10 VDC
Humidity Input	: 0-20 mA, 4-20 mA, 0-1 VDC 0-3.3 VDC, 0-5 VDC, 0-10 VDC, RH-20, RH-35
Resolution	: 1°C, 0.1°C, 0.01°C, 0.001°C
Accuracy	: 0.3% FS
Temperature Unit	: °C
Sampling Rate	: 250msec

## Output Specification

Dry Heater Output	: Relay / SSR Drive (Factory Set)
Wet Heater Output	: Relay / SSR Drive (Factory Set)
Compressor Output	: Relay / SSR Drive (Factory Set)
Alarm Output	: SSR Drive
Water Fill Output	: Relay
Relay	: 5A @ 250VAC / 30VDC
SSR Drive	: 12 VDC @ 30mA

## Functional Specification

Control Action	: PID Control / ON-OFF
Control Logic	: Heat / Cool
Proportional Band	: 0.5 to 99.9°C
Integral Time	: 0 to 3600 sec
Derivative Time	: 0 to 300 sec
Cycle Time	: 1.0 to 100.0 sec
Output Power Limit	: 0 to 100%
Compressor Delay	: 0 to 500 sec
Compressor Function	: Auto / On / Off
Alarm Modes	: Low / High / Deviation / Band
Digital Input1	: Water Level
Digital Input2	: Door, Alarm Acknowledge
Serial Communication	: RS-485 / Half Duplex
Protocol	: Modbus RTU
Excitation Voltage	: 5V / 10V / 12V / 24V (Jumper Selectable)

## Auxiliary Supply Specification

Supply Voltage	: 90 - 270 VAC (24 VDC Available on Request)
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## Environmental Specification

Temperature	: Operating - 0 to 50°C
Storage	: -20° to 75°C
Humidity	: 95% RH (Non-condensing)

## General Description

Model	Humi-Temp
Weight (Gms)	300

## Certification

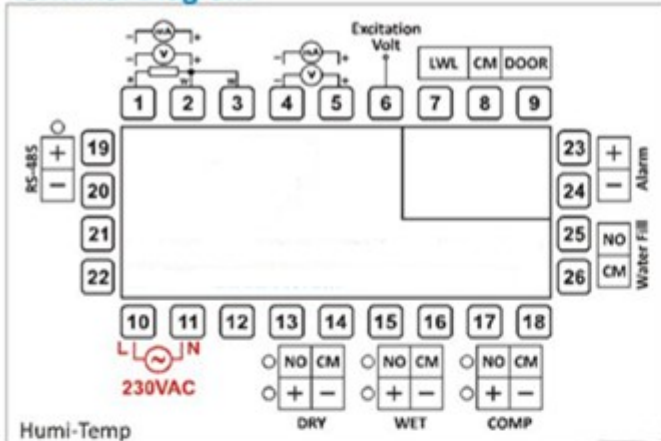
None



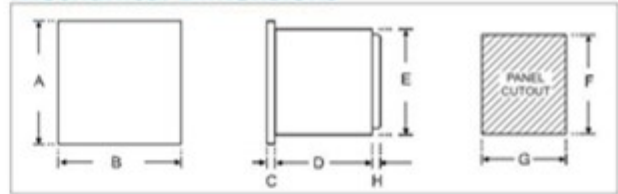
## Application Specific

## Humi-Temp

### Terminal Diagram



### Mechanical Dimensions



Dim Model	A	B	C	D	E	F	G	H
Humi-Temp	96	96	10	65	89	92	92	9

### Order Code : Humi-Temp

Size	OP1 - Dry	OP2 - Wet	OP3 - Comp	OP4 - Alarm	OP5 - LWL	Communication	Excitation	Supply
9 (96X96X65)	0 (None)	0 (None)	0 (None)	0 (None)	0 (None)	0 (None)	05 (05 VDC)	A (90 ~ 270 VAC)
	1 (Relay)	1 (Relay)	1 (Relay)	2 (SSR)	1 (Relay)	B (RS-485)	10 (10 VDC)	D - 24 VDC
	2 (SSR)	2 (SSR)	2 (SSR)		2 (SSR)		12 (12 VDC)	
							24 (24 VDC)	

### Example : Humi-Temp-111-21B-24A

Size	OP1 - Dry	OP2 - Wet	OP3 - Comp	OP4 - Alarm	OP5 - LWL	Communication	Excitation	Supply
9	1	1	1	2	1	B	24	A
9 (96X96X65)	1 (Relay)	1 (Relay)	1 (Relay)	2 (SSR)	1 (Relay)	B (RS-485)	24 (24 VDC)	A (90 ~ 270 VAC)

### Temperature Input

Sensor Input	Range	Resolution	Accuracy
Pt-100(RTD)	-100 ~ 450 °C	1°C	± 1°C
Pt-100(RTD.1)	-99.9 ~ 450.0 °C	0.1°C	± 0.3°C
0 ~ 20 mA	-1999 to 9999	1 / 0.1 / 0.01 / 0.001 °C	± 0.1 % of Full Scale
4 ~ 20 mA	-1999 to 9999	1 / 0.1 / 0.01 / 0.001 °C	
0 ~ 1 VDC	-1999 to 9999	1 / 0.1 / 0.01 / 0.001 °C	
0 ~ 10 VDC	-1999 to 9999	1 / 0.1 / 0.01 / 0.001 °C	

### Humidity Input

Sensor Input	Range	Resolution	Accuracy
0 ~ 20 mA	-1999 to 9999	1 / 0.1 / 0.01 / 0.001	± 0.1 % of Full Scale
4 ~ 20 mA	-1999 to 9999	1 / 0.1 / 0.01 / 0.001	
0 ~ 1 VDC	-1999 to 9999	1 / 0.1 / 0.01 / 0.001	
0 ~ 3.3 VDC	-1999 to 9999	1 / 0.1 / 0.01 / 0.001	
0 ~ 5 VDC	-1999 to 9999	1 / 0.1 / 0.01 / 0.001	
0 ~ 10 VDC	-1999 to 9999	1 / 0.1 / 0.01 / 0.001	
RH-20	0.0 to 100.0	1 / 0.1 / 0.01 / 0.001	
RH-35	0.0 to 100.0	1 / 0.1 / 0.01 / 0.001	



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EMPOWERING PROCESS MANAGEMENT



**HUMIDITY CONTROLLER MODEL cum APPLICATION SELECTION GUIDE**

Model	Temperature Input	Humidity Input	Digital Input	Display	Size
RHTC-44 HUMI - TEMP	RTD : Pt-100 (0.1 °C) Voltage : 0-1 & 0-10 VDC Current : 4-20 & 0-20 mA	RTD : Pt-100 (0.1 °C) Voltage : 0-1 / 0-3.3 VDC Voltage : 0-5 / 0-10 VDC Current : 0-20 / 4-20 mA Non Linear Sensor : RH-30 / 35	LOW WATER LEVEL	4-Digit Dual Row	48 x 48 x 87 mm 96 x 96 x 65 mm

MODEL CODE	RHTC - 44	2	X	X	-	-	X	-	0	5	X
	HUMI - TEMP	X	X	X	X	X	X	X	X	X	X

DRY HEATER OUTPUT *	NONE	0									
	RELAY	1									
	SSR	2									

WET HEATER OUTPUT	NONE		0								
	RELAY		1								
	SSR		2								

COMPRESSOR OUTPUT *	NONE			0							
	RELAY			1							
	SSR			2							

ALARM OUTPUT	NONE				0						
	BUZZER				2						

WATER FILL OUTPUT	NONE					0					
	RELAY					1					

COMMUNICATION	NONE						0				
	RS-485 MODBUS						B				

DIGITAL INPUT	LOW WATER LEVEL							0			
	LWL + DOOR OPEN							Y			

EXCITATION §	5 VDC							0	5		
	10 VDC							1	0		
	12 VDC							1	2		
	24 VDC							2	4		

POWER	90 to 270 VAC									A	
	24 VDC									D	

Ordering Example: HUMI-TEMP-22221-B0-05A

MODEL	DRY HEATER OUTPUT	WET HEATER OUTPUT	COMPRESSOR OUTPUT	ALARM OUTPUT	WATER FILL OUTPUT	COMM.	DIGITAL INPUT	EXCITATION	POWER
HUMI-TEMP	2	2	2	2	1	B	0	05	A
96 x 96 x 65	SSR	SSR	SSR	BUZZER	RELAY	RS-485 MODBUS	LOW WATER LEVEL	5 VDC	90 to 270 VAC



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