HT SERIES

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LCD Wall Mount with Relay Setpoints
1% NIST, 2% NIST, 2%, 3%, 5%

CE

NOTICE

- **This product is not intended for life or safety applications.**
- **Do not install this product in hazardous or classified locations.**
- **Read and understand the instructions before installing this product.**
- **Turn off all power supplying equipment before working on it.**
- **The installer is responsible for conformance to all applicable codes.**

PRODUCT IDENTIFICATION

	Accuracy	NIST	Setpoint	Temp Cal Certificate	Option
HT	☐	☐	R	S	☐	☐

Accuracy	NIST	Setpoint	Temp Cal Certificate	Option
1 = 1%	N = NIST	= Relay	= CE	0 = None	B = 100R Platinum, RTD
2 = 2%	(1 & 2% only)			1 = 1 point Cal Validation	C = 1k Platinum, RTD
3 = 3%	X = No				D = 10k T2, Thermistor
5 = 5%	(2, 3, 5% only)			2 = 2 point Cal Validation	E = 2.2k, Thermistor
					F = 3k, Thermistor
					G = 10k CPC Thermistor
					H = 10k T3, Thermistor
					J = 10k Dale, Thermistor
					K = 10k w/11k with Shunt, Thermistor
					M = 20k NTC, Thermistor
					N = 1800 ohm TAC, Thermistor
					Q = 1uA/C, Linitemp
					R = 10k US, Thermistor
					S = 10k 3A 221
					T = 100k, Thermistor
					U = 20k "D", Thermistor

Installer's Specifications

Power Supply*	15 to 30VDC/24VAC, 100mA max.
Outputs	2 Form C (SPDT), 1A 30VDC, resistive, 30W max.
RH Sensor	Digitally profiled thin-film capacitive (32-bit mathematics)
	U.S. Patent 5,844,138
Accuracy at 25°C from 10-80% RH***	±2%, 3%, or 5% models
	±1% at 12-40% RH in mA output mode;
	±1% at 30% RH in voltage output mode
	(Multi-point calibration NIST traceable)
Reset Rate**	24 hours
Stability	±1% @ 20°C (68°F) annually, for two years
Hysteresis***	RH: 1.5% (typical), Temp: 1° to 5°C in 1°C increments
	(1° to 10°F in 1°F increments)
Linearity	Included in Accuracy spec.
Operating Humidity Range	0-100% RH (noncondensing)
Temperature Coefficient	±0.1%RH/°C above or below 25°C (typical)
Operating Temperature Range	10°-35°C (50°-95°F)
Temperature Accuracy	± 1.0°C (± 1.8°F)
Scaling	RH: 0-100% RH; Temp: 10°-35°C (50°-95°F) or 0°-50°C (32°-122°F) menu selectable
Calibration Offset***	RH: Adjustable ±9.9% in 0.1% increments;
	Temp: Adjustable ±5.0°C (9.9°F) in 0.1° increments
Setpoint Range***	RH: 10-80% RH in 1% increments;
	Temp: Minimum to Full Scale in 1° increments

* One side of transformer secondary is connected to signal common, so an isolation transformer or dedicated power supply may be required.
** Reset Rate is time required to recover to 50% RH after exposure to 90% RH for 24 hours.
**** Specified accuracy with 24VDC supplied power with rising humidity.*
To maintain CE compliance the connected power supply must have a CE mark supporting LV + CE directives.
RTD/Thermistors in wall packages are not compensated for internal heating of product.

QUICK INSTALL

1. Select a mounting location away from ventilation sources. The sensor should be mounted on a vertical wall, about 4 ½ feet above the floor.
2. Affix the backplate to the wall.
3. Wire the device. Refer to wiring diagram.
4. Install Cover.

DIMENSIONS

- Enter +

4.75"
(121 mm)

3.5"
(89 mm)

1.2"
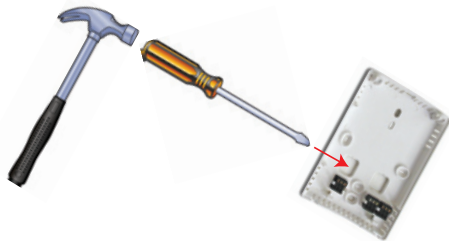(29 mm)
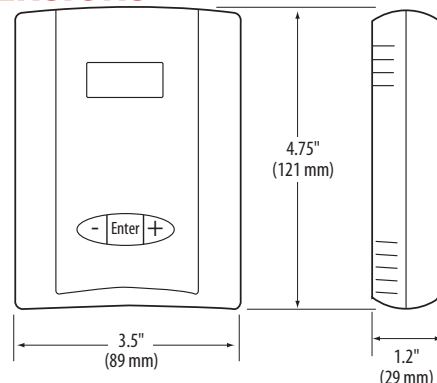
INSTALLATION

1. Remove the cover by pressing the tab at the top of the sensor while pulling outward from the top of the cover.

2. Remove the backplate by unfastening the sensor from the bottom of the backplate and pivoting the sensor outward.

3. Punch out openings in the backplate.

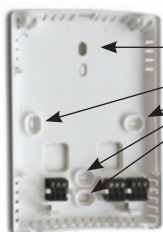4. Position the sensor vertically on the wall, 4 ½ feet above the floor.
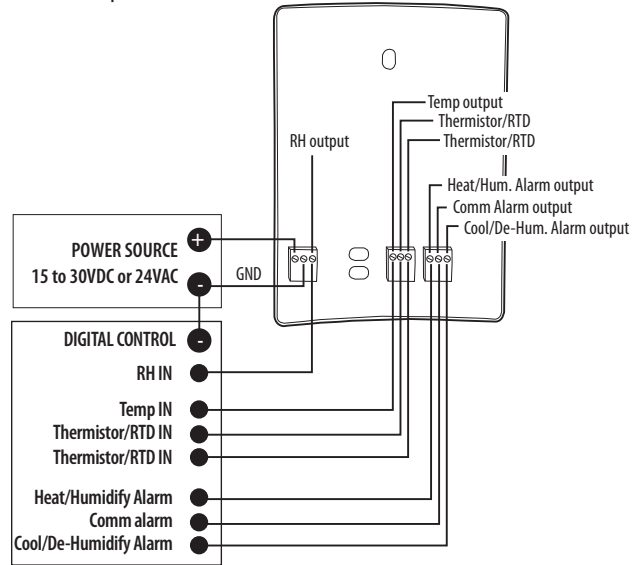

correct   *incorrect*

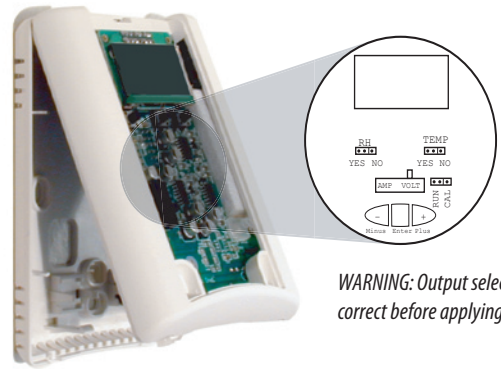5. Mount the backplate onto the wall using the screws provided.

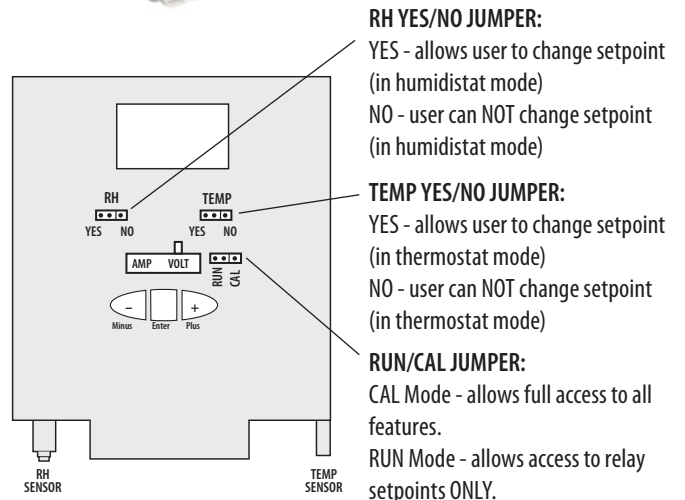*Five screwholes available; use a minimum of two for secure mounting.*

6. Wire the backplate.

Temp output
Thermistor/RTD
Thermistor/RTD
RH output
Heat/Hum. Alarm output
Comm Alarm output
Cool/De-Hum. Alarm output

POWER SOURCE +
15 to 30VDC or 24VAC – GND

DIGITAL CONTROL –
RH IN
Temp IN
Thermistor/RTD IN
Thermistor/RTD IN
Heat/Humidify Alarm
Comm alarm
Cool/De-Humidify Alarm

7. Install and configure the sensor.

RH   TEMP
YES NO   YES NO
AMP VOLT   RUN CAL
Minus Enter Plus

WARNING: Output select must be correct before applying power.

RH   TEMP
YES NO   YES NO
AMP VOLT   RUN CAL
Minus Enter Plus

RH SENSOR   TEMP SENSOR

RH YES/NO JUMPER:
YES - allows user to change setpoint (in humidistat mode)
NO - user can NOT change setpoint (in humidistat mode)

TEMP YES/NO JUMPER:
YES - allows user to change setpoint (in thermostat mode)
NO - user can NOT change setpoint (in thermostat mode)

RUN/CAL JUMPER:
CAL Mode - allows full access to all features.
RUN Mode - allows access to relay setpoints ONLY.
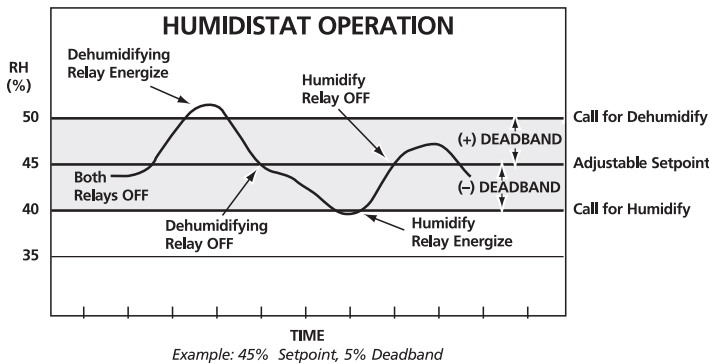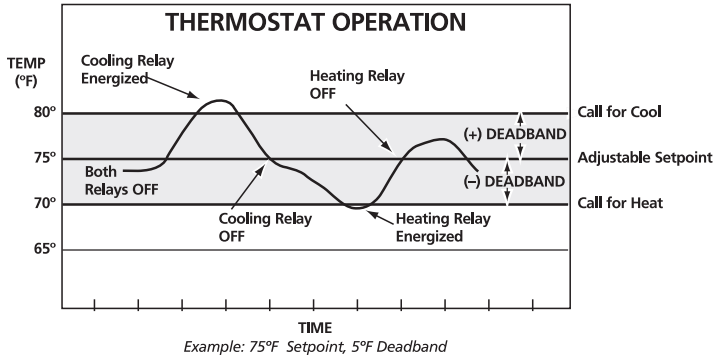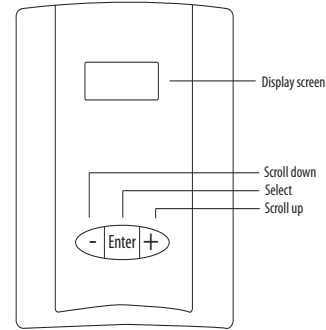
8. Install the cover and snap into place.

HT CALIBRATION INSTRUCTIONS

1. Temperature calibration allows for calibration offset of ±9.9° F, user discretion. RH and TEMP can be field calibrated by moving RUN/CAL jumper to CAL position.

2. Relative humidity allows for calibration offset of ±10% RH, user discretion.

THERMOSTAT OPERATION

Example: 75°F Setpoint, 5°F Deadband

HUMIDISTAT OPERATION

Example: 45% Setpoint, 5% Deadband

HT OPERATION INSTRUCTIONS

Normal Operation

NORMAL MODE

4	5	.	5		%	R	H
6	8	.	5			o	F

Temperature Selection

Use the (+) and (-) buttons to scroll to the Thermostat mode:

S	E	T	P	O	I	N	T
		7	0				F

press ± to change, press * to select;
setpoint in ˚C if Celsius units are selected

Humidity Selection

Use the (+) and (-) buttons to scroll to the Humidistat mode:

S	E	T	P	O	I	N	T
		4	5		%	R	H

press ± to change, press * to select

MENU

NORMAL MODE

4	5	.	5		%	R	H
6	8	.	5			°	F

↓

CONFIG/CAL MODE
(Enter by any keypress when
Run/Cal jumper is in CAL position)

↓

U	N	I	T	S			
*	°	F				°	C

press ± to change, press * to select

↓

	R	E	L	A	Y	S	
*	R	H					T

press ± to change, press * to select

S	E	T	P	O	I	N	T
		4	5		%	R	H

press ± to change, press * to select

- OR -

S	E	T	P	O	I	N	T
		7	0				F

press ± to change, press * to select;
setpoint in ˚C if Celsius units are selected

↓

D	E	A	D	B	A	N	D
		5		%	R	H	

press ± to change, press * to select

↓

D	E	A	D	B	A	N	D
			4				F

press ± to change, press * to select;
deadband in ˚C if Celsius units are selected

C	A	L		T			
+	0	.	0				F

press ± to change, press * to select;
setpoint in ˚C if Celsius units are selected

↓

C	A	L		R	H		
+	0	.	0				%

press ± to change, press * to select

↓

Output scaling
(does not affect LCD display)

T	E	M	P		S	E	T
+	5	0			+	9	5

press ± to change, press * to select;
options are 50-95˚F (10-35˚C) or 32-122˚F (0-50˚C)

↓

Only for switch in
Volts position

	O	U	T	P	U	T	
	0	-	1	0	V		

press ± to change, press * to select