



HT/HWS Series

Deluxe RH/T Transmitter with Thermostat/
Humidistat Functions

All HT/HWS Series institutional grade relative humidity/temperature (HT) transmitters are field-programmable and are designed to satisfy the demanding requirements of pharmaceutical labs, hospitals, science labs, and other exacting applications. Internal jumpers control access to a calibration offset feature which allows field adjustment of offsets to extend the calibration interval, and tampering can be prevented by setting a jumper to disable keypad program functions. 2% HT models are available with NIST calibration.

Analog Output Transmitter

Analog output models feature a keypad to make adjusting humidity and temperature setpoint values easy. They are unique in reporting the setpoint values back to a control system by means of 4-20mA, or 0-5V/0-10VDC (output selected by slide switch) signals. Dual outputs make it possible to control both humidity and temperature with one sensor.

Setpoint Relay Transmitter

The HT Series setpoint relay models measure both temperature and humidity in a single device, and offer thermostat or humidistat functionality. Two separate relays can be configured to control heat/cool in thermostat mode, or humidify/de-humidify in humidistat mode.

HWS models offer humidity/humidistat functionality, without temperature measurement/control.

Applications

- Hospitals and operating rooms, pharmaceutical labs
- Clean rooms
- Food processing plants
- Environmental testing facilities, and other institutional applications

Features

- Independent RH and T (HT relay), or analog setpoint outputs (HT analog), provide application flexibility
- LCD for local display of readings and setup values
- Offset function extends calibration intervals for both RH and T (HT models)
- Switch selectable 4-20mA or 0-10V analog outputs

Easy to maintain accuracy

- Eight-point calibration to 2% RH, traceable to NIST (HT & HWS with NIST option)
- Replaceable RH sensor element supports field calibration offset... saves time
- Semiconductor temperature sensor can be field calibrated

ORDERING INFORMATION

RH/T Combination Device

	(Accuracy)	(NIST)	(Setpoint)	(US)	(Temp Cal Certificate)	(Option)
HT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2 = 2% 3 = 3% 5 = 5%	N = NIST X = No (2% only)	A = Analog R = Relay	S = Standard	0 = None 1 = 1 point Cal Validation 2 = 2 point Cal Validation	B = 100R Platinum, RTD C = 1k Platinum, RTD D = 10k T2, Thermistor 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, Limitemp R = 10k US, Thermistor S = 10k 3A 221 T = 100k, Thermistor

Example:
HT 2 N R C 1 H

HT Series devices contain both humidity and temperature transmitter outputs. Optional RTDs and thermistors are available.

RH Only Device

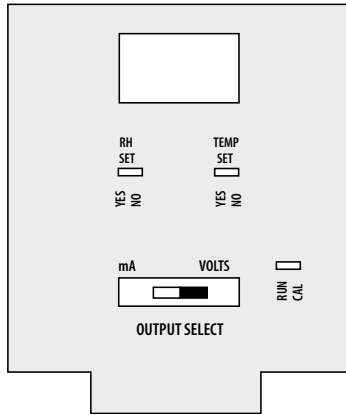
	(Accuracy)	(NIST)	(Setpoint)	(US)
HWS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2 = 2% 3 = 3% 5 = 5%	N = Nist X = No (2% only)	A = Analog R = Relay	S = Standard

Example:
HWS 2 N R S

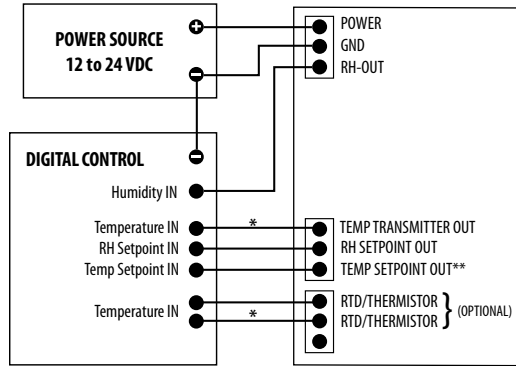
ACCESSORIES

Water guard and other accessories, see page 234

CONFIGURATION

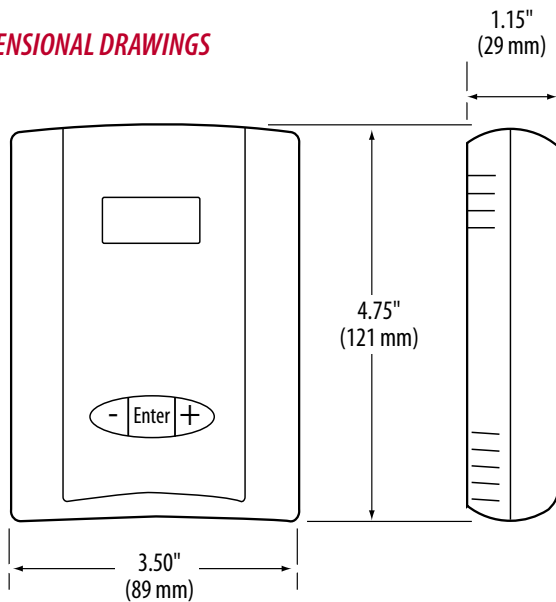


WIRING DIAGRAM



*Temperature output as ordered
**Transmitter models only

DIMENSIONAL DRAWINGS



SPECIFICATIONS

Power Supply****	12 to 24VDC/24VAC, 100mA max.
Outputs, Analog	Switch Selectable 4-20mA or 0-10V/0-5VDC (switch affects both outputs)
RH Sensor	Digitally profiled thin-film capacitive (32-bit mathematics) U.S. Patent 5,844,138
Accuracy**	+ -2%, + -3%, + -5% @10-80%RH@25°C; Multi-point calibration NIST traceable (2% only)
Reset Rate*	24 hours
Stability	+ -1% @ 20°C (68°F) annually, for two years
Hysteresis***	RH: 1.5% (typical), Temp: 1° to 10°F in 1°F increments
Operating Humidity Range	0-100% RH
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 + -10% in 0.1% increments; Temp: Adjustable + -10° in 0.1° increments
Setpoint Range***	RH: 10-80% RH in 1% increments; Temp: Minimum to Full Scale in 1° F increments

*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

***HT Models

****One side of transformer secondary is connected to signal common, so an isolation transformer or dedicated power supply may be required