

HT1D Series Duct Humidity/Temperature

- 2% or 3% accuracy (NIST certification options)
- 0-5V/10V and 4-20mA RH/Temp (thermistors optional)
- LCD display with field calibration menu
- Field replaceable element



DESCRIPTION

The HD Series is designed with both the engineer and field technician in mind. The HD Series combines excellent stability with reliable operation in 2% or 3% RH accuracy options. Optional temperature transmitters, RTDs and thermistors add further flexibility when ordering. The standard LCD and field replaceable elements make the initial installation and future service a breeze.

APPLICATIONS

- HVAC room humidity and temperature measurement and control
- Replaceable element is ideal for difficult environments such as swimming pools

FEATURES

Versatile

- 2% or 3% RH versions with field replaceable sensor
- Switch selectable 5V/10V and 4-20mA RH/T transmitter outputs
- Thermistor outputs for temperature optional

Easy to maintain

- Field calibration. LCD and push-button menu allows easy adjustment of calibrated RH value as needed to maintain certification.
- Field replaceable sensor—without disturbing conduit

Superior RH sensing

- On-board temperature compensation for RH. Eliminates temperature coefficient errors and achieves an excellent measurement accuracy as well as high repeatability and offset stability.
- State of the art testing facilities. 8-point calibration certificate available (NIST traceability—consult factory)

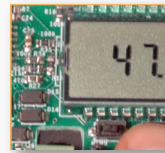
Quality

- Industry leading 7-year warranty/ 2-year replaceable element warranty



Field replaceable element

- Ideal for harsh environments
- Accurate dual RH/Temp IC sensing



LCD with menu

- Easier commissioning
- Re-scale to field metrics if required
- LCD cover provided



NIST traceable

- 8-point calibration certification options. Consult factory.

ORDERING

HT1D - U

Accuracy

- 2 = 2%
- 3 = 3%
- N = 2% NIST

Temperature

- A = None
- B = Transmitter
- C = 100Pt (385)
- D = 1000Pt (385)
- E = 10k type 2
- F = 10k type 3
- G = 10k type 3 w/11k shunt
- H = 3k
- I = 2k2
- J = 1k8
- K = 20k
- L = 100k

Output Type

- U = Universal (2-wire and 3-wire 4-20mA, 0-5V, 0-10V)

Display (LCD)

- D = Display
- X = None

SPECIFICATIONS

Power Supply	3-wire voltage mode (0-5/10V)	12-30VDC/24VAC ⁽¹⁾ , 15mA max.
	2-wire current mode (4-20mA)	12-30VDC, 30mA max.
Outputs	RH and Temperature (option)	3-wire 0-5/10V ⁽⁴⁾ or 3-wire or 2-wire 4-20mA (Selectable)
		RH 0-100% RH
Output scaling	Temperature	32-122° F (0-50°C) or -40-140° F (-40-60°C) (Selectable)
Thermistor/RTD	Optional	See ordering table
Media filter		PBT with water-vapor permeable membrane
Relative Humidity	Accuracy	2% models, ±2% over 0 to 100% RH Range; ±1.5% typ 3% models, ±3% over 0 to 100% RH Range; ±2% typ
	Resolution	0.01%RH
	Hysteresis	±0.8%RH
	Non-Linearity	factory linearized <1%RH
	Temperature coefficient	fully compensated by on-board sensor
	Response time ⁽²⁾	8s
	Output update rate	0.5s
	Operating range	0 to 100%RH (non-condensing)
	Long term drift	<0.25%RH per year
	Element Normal Operating conditions ⁽³⁾	41 to 140°F (5°C to 60°C) @ 20% to 80% RH
	Accuracy	2% models, <±0.25°C; 0.5°C typ @ 25°C 3% models, <±0.3°C; 0.25°C typ @ 25°C
	Resolution	0.01 °C
Temperature	Repeatability	0.04 °C
	Response time (2)	2s
	Output update rate	0.5s
Element Operating range	-40 to 140°F (-40° C to 60° C)	
Enclosure	Materials	ABS/Polycarbonate
	Unit Temp Rating	-40 to 158°F (-40 to 70°F)
	Dimensions	4.0"h x 4.4"w x 2.1"d (+6.8" probe)



- (1) One side of transformer, secondary is connected to signal common. Dedicated transformer is recommended.
- (2) Time for reaching 63% of reading at 25° C and 1 m/s airflow.
- (3) Long term exposures to conditions outside normal range at high humidity may temporarily offset the RH reading (+3%RH after 60 hours.)
- (4) 15-30VDC/24VAC power supply voltage required for 10 volt output.

DIMENSIONS

