

# HT1D Series Humidity Temp Duct

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 HT1D Series is designed with both the engineer and field technician in mind. The HT1D 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
- Facilitating compliance with ASHRAE 62.1 standard for air quality
- Indoor air comfort and control in HVAC systems
- Maintain healthy air quality, minimize mold and other contaminants
- Museums, hospitals & other critical environments
- Offices, conference rooms, & indoor public areas
- Industrial process control environments



HT ribbon element for harsh environments



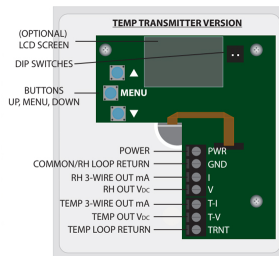
LCD with adjustable offsets menu



State of the art measurement and calibration



Probe provides active airflow readings



Options with temp transmitter version



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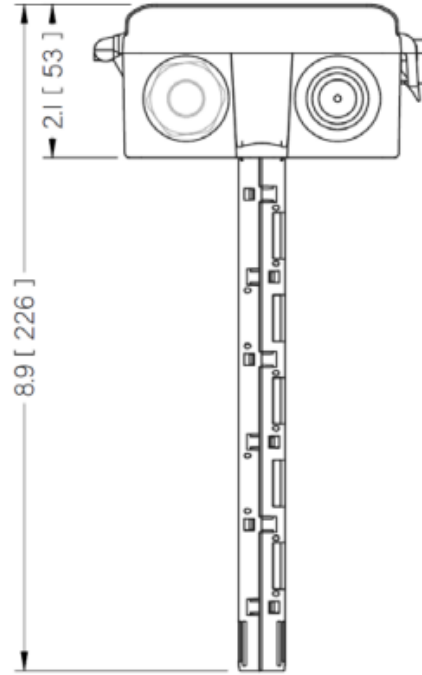
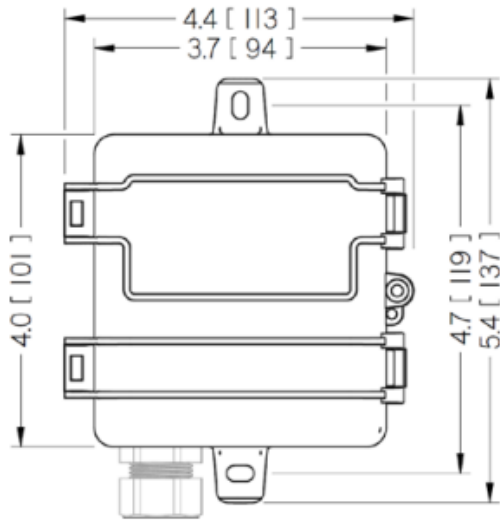
## FEATURES

- 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
- 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
- On-board temperature compensation for RH. Eliminates temperature coefficient errors and achieves excellent measurement accuracy, high repeatability, and offset stability.
- State-of-the-art testing facilities. Certification options: 8-point (NIST traceability—consult factory)
- Industry-leading 7-year warranty/ 2-year replaceable element warranty

## ORDERING

HT1D-	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Accuracy</b>	<b>Temperature</b>	<b>Output</b>	<b>Display (LCD)</b>	
2= 2%	A= None	U= Universal	X= None	
3= 3%	B= Transmitter	(4-20mA,	D=Display	
N= 2%/ with	C= 100PtRTD	0-5V,0-10V)		
NIST Cert.	D= 1000PtRTD	2 or 3-Wire		
	E= 10K Type 2	Connection		
	F= 10K Type 3			
	G= 10K W/ 11K			
	H= 3K			
	I = 2K2			
	J = 1K8			
	K = 20K			
	L= 100K			

DIMENSIONS



**Warning:** The datasheet is designed for reference only. Refer to installation instructions that accompany the product and heed all safety instructions. Product improvement is a continuing process at Senva. Changes may occur to products without prior notice.

SPECIFICATIONS		
Power Supply	0-5V or 0-10V operation 4-20 mA operation	12-30VDC/24VAC <sup>(1)</sup> , 15mA max. 12-30VDC, 30mA max.
Outputs	RH% and Temperature	3-wire 0-5/10V <sup>(4)</sup> (jumper) or 2-wire 4-20mA, selectable
Output scaling	RH% Temperature	0-100% RH 32-122°F (0-50°C) or -40-140°F (-40 to 60°C) (jumper)
Thermistor/RTD	Optional	See ordering table
Media filter		PBT with water-vapor permeable membrane
Relative Humidity	Accuracy	2% models, ±2% max 0 to 100%RH; ±1.5% typ 0 to 80% RH @25°C 3% models, ±3% max 0 to 100%RH; ±2% typ 0 to 100% RH @25°C
	Resolution	0.01%RH
	Hysteresis	±0.8%RH
	Non-Linearity	factory linearized <1%RH
	Temperature coefficient	fully compensated by on-board temp sensor
	Response time <sup>(2)</sup>	8s
	Output update rate	0.5s
	Operating range	0 to 100%RH (non-condensing)
	Long term drift	<0.25%RH per year
	Operating conditions <sup>(3)</sup>	41 to 140°F (5 to 60°C) @20 to 80% RH
Temperature	Accuracy	2% models, <±0.25°C; 0.1°C typ @ 25° C 3% models, <±0.3°C; 0.25° C typ @ 25° C
	Resolution	0.01° C
	Repeatability	0.4° C
	Response time <sup>(2)</sup>	8s
	Output update rate	0.5s
	Operating range	-40 to 140°F (-40 to 60°C)
Enclosure	Materials	ABS/Polycarbonate
	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.

\* Product improvement is a continual process at Senva and product features and specification may change without prior notice. Refer to instructions that accompany the product for installation and wiring.