

## HT10 Series Humidity/Temp Outside Air

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 HT10 Series is designed to be mounted on the building exterior to provide outside air RH measurement. The HT10 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, gasketed lid and field replaceable elements make the initial installation and future service a breeze.

### APPLICATIONS

- Replaceable element is ideal for difficult environments such as coastal areas or process control such as poultry farms
- 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
- Design is ideal for greenhouse applications



*Rugged Enclosure*



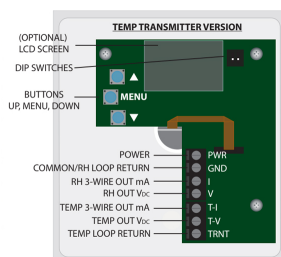
*LCD with adjustable offsets menu*



*State of the art measurement and calibration*



*HT ribbon element for harsh environments*



*Options with temp transmitter version*



*Buy American Act Certified*

## 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.
- Replace a sensor without disturbing conduit
- 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. Multi-point calibration certification options. Consult factory.
- Industry leading 7-year warranty/ 2-year replaceable element warranty

## ORDERING

HT10-			U	
Accuracy	Temperature	Output	Display (LCD)	
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			
	M= NTC			

\* Order B=transmitter to display temperature reading; thermistor and RTD options will not display temperature on LCD

### Replacement Sensors Part # Examples:

HTO - **2A** 2%, Xmtr or No Temp, HT10 & AQ20

HTO - **2C** 2%, 100Pt RTD, HT10 & AQ20

HTO - **2D** 2%, 1000Pt RTD, HT10 & AQ20

HTO - **2E** 2%, 10K Type 2, HT10 & AQ20

HTO - **2F** 2%, 10K Type 3, HT10 & AQ20

HTO - **2K** 2%, 20K, HT10 & AQ20

HTO - **NA** 2% NIST, Xmtr or No Temp, HT10 & AQ20

HTO - **ND** 2% NIST, 1000Pt RTD, HT10 & AQ20

HTO - **3A** 3%, No Temp or Transmitter, HT10 & AQ20

HTO - **3C** 3%, 100Pt RTD, HT10 & AQ20

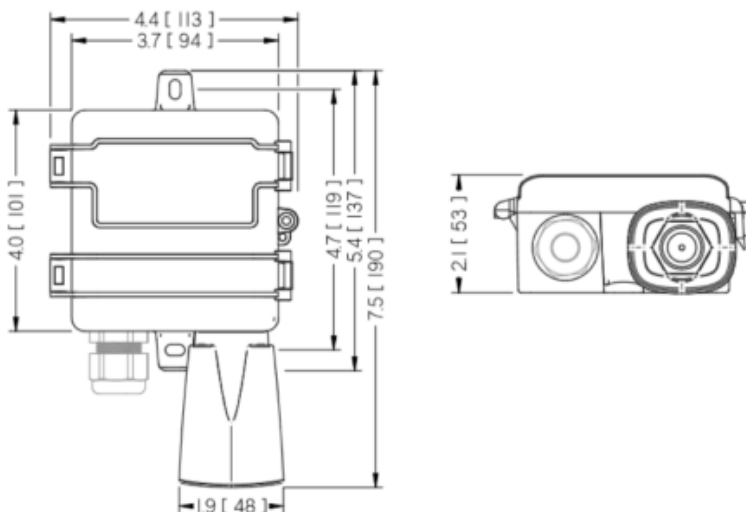
HTO - **3D** 3%, 1000Pt RTD, HT10 & AQ20


HTO - **3E** 2%, 10K Type 2, HT10 & AQ20

HTO - **3F** 3%, 10K Type 3, HT10 & AQ20

HTO - **3K** 3%, 20K, HT10 & AQ20

## 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	AC Supply/DC Supply	24VAC, 100mA max./ 12-30VDC, 50mA max
Outputs	RH and Temperature)	3-wire 0-5/10V(4) or 2-wire 4-20mA
Output scaling	RH	0-100% RH
	Temperature	32-122°F (0-50oC) or -40-140°F (-40-60oC)
Thermistor/RTD	Optional	See ordering table
Media filter		Sintered stainless steel
Relative Humidity	Accuracy	2% models, $\pm 2\%$ over 0 to 100% RH Range; $\pm 1.5\%$ typ 3% models, $\pm 3\%$ over 0 to 100% RH Range; $\pm 2\%$ typ
	Resolution	0.01%RH
	Hysteresis	$\pm 0.8\%$ 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
	Normal Operating conditions (3)	41 to 140°F (5°C to 60°C) @ 20% to 80% RH
Temperature	Accuracy	2% models, $< \pm 0.25^\circ \text{C}$ ; $0.1^\circ \text{C}$ typ @ $25^\circ \text{C}$ 3% models, $< \pm 0.3^\circ \text{C}$ ; $0.25^\circ \text{C}$ typ @ $25^\circ \text{C}$
	Resolution	$0.01^\circ \text{C}$
	Repeatability	$0.08^\circ \text{C}$
	Response time(2)	2s
	Output update rate	0.5s
	Operating range	-40 to 140oF (-40° to 60° C)
Enclosure	Materials	ABS/Polycarbonate
	Unit Temp Rating	-40 to 158oF (-40 to 70oF)
	Enclosure Rating	Nema 1; Add drain holes to enclosure bottom to achieve Nema 3R rating
	Dimensions	4.0"h x 4.4"w x 2.1"d (+2.8" solar shield)
Agency	Compliance	CE, RoHS

(1) One side of transformer,, secondary is connected to signal common. Dedicated transformer is recommended.

(2) Time for reaching 63% of reading at  $25^\circ \text{C}$  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 ouput.

*\* 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.*