

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 Duct series is designed for use in energy management systems in buildings. They combine excellent stability with reliable operation, and LCD display for in-field calibration. Thermistor options accommodate any installation.

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. Certification options from 1-point, 2-point, and 8-point (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



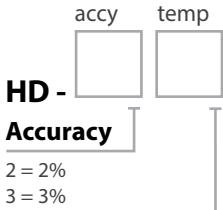
LCD with menu

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



NIST traceable

- Multi-point calibration certification options. Consult factory.

ORDERING

Accuracy

 2 = 2%
 3 = 3%

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

Replacement Sensor Elements

 HSD-2 = 2% accuracy
 HSD-3 = 3% accuracy

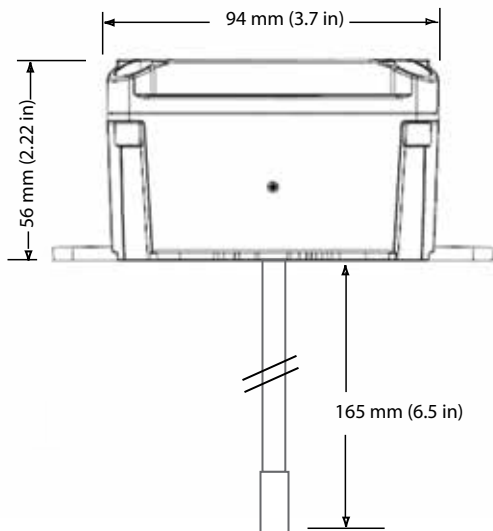
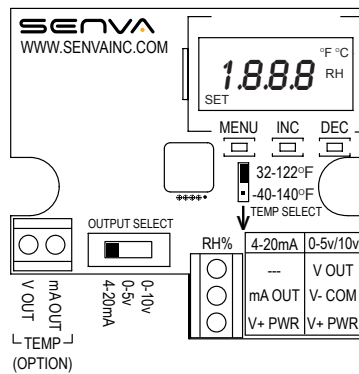
Consult factory for certification and point calibration options

(Write your selected Accuracy, Temperature, and Replacement Sensor Element numbers/ letters in the boxes above)

SPECIFICATIONS

Power Supply	0-5V or 0-10V operation 4-20 mA operation	12-30VDC/24VAC(1), 15mA max. 12-30VDC, 30mA max.
Outputs	RH% and Temperature	3-wire 0-5/10V (jumper) or 2-wire 4-20mA, selectable
Output scaling	RH%	0-100% RH
	Temperature	32-122° F or -40-140° F (jumper)
Thermistor Options	Yes, see ordering table	
Media filter	Sintered stainless steel	
Relative Humidity	Accuracy	2% models, +/-2% over 10 to 90%RH range 3% models, +/-3% over 20 to 80%RH range
	Resolution	0.05%RH
	Hysteresis	+/-1%RH
	Non-Linearity	factory linearized <1%RH
	Temperature coefficient	fully compensated by on-board temp sensor
	Response time (2)	30s
	Output update rate	2s
	Operating range	0 to 100%RH
	Long term drift	<0.5%RH per year
	Operating conditions (3)	-20° C to 60° C @ RH>90% -20° C to 80° C @ RH=50%
Temperature	Accuracy (-20° C to 70° C range)	2% models, <+/-1° C; 0.5° C typ @ 25° C 3% models, <+/-2° C; 0.5° C typ @ 25° C
	Resolution	0.01° C
	Repeatability	+/-0.1° C
	Response time (2)	30s
	Output update rate	2s
Operating range	-40° C to 120° C	

- (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 exposure to conditions outside normal range at high humidity may temporarily offset the RH reading (+3%RH after 60 hours.)

DIMENSIONS

TYPICAL WIRING
RH/T DUAL TRANSMITTER

4-20mA wiring:

 mA OUT = 4-20mA output return
 V+ PWR = Loop supply excitation voltage

0-5v/0-10v wiring:

 V OUT = Voltage output, 0-5 or 10vdc
 V- COM = Ground/Common
 V+ PWR = Power supply excitation voltage