HD 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 flexibilty when ordering. The standard LCD and field replaceable elements make the intitial 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

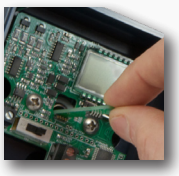
- Field calibration. LCD and push-button menu allows easy adjustment of calibrated RH value as needed to maintain certification.
- Field replaceable sensor—without disturbing conduit

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)

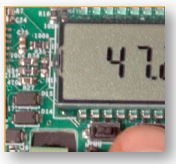
Quality

- 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

HD - [accy] [temp]

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 Elements numbers/ letters in the boxes above)

PROUDLY MADE IN USA

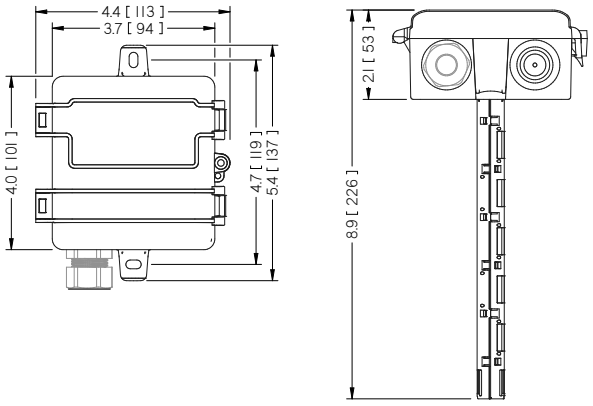
7 year limited warranty

SPECIFICATIONS

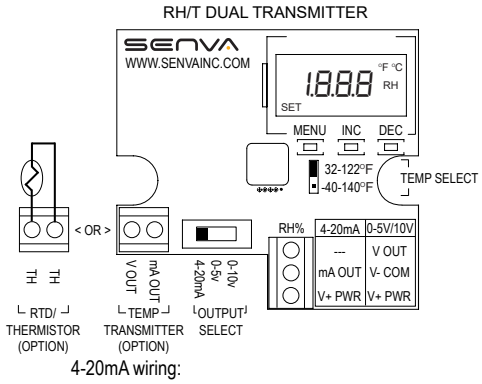
Power Supply	3-wire voltage mode (0-5/10V)	12-30VDC/24VAC (1), 15mA max.
	2-wire current mode (4-20mA)	12-30VDC, 30mA max.
Outputs	RH and Temperature (option)	3-wire 0-5/10V (4) or 2-wire 4-20mA
Output scaling	RH	0-100% RH
	Temperature (jumper)	32-122° F (0-50°C) or -40-140° F (-40-60°C)
Thermistor/RTD	Optional	See ordering table
Media filter		PBT with water-vapor permeable membrane
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 sensor
	Response time (2)	30s
	Output update rate	2s
	Operating range	0 to 100%RH (non-condensing)
	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
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.

DIMENSIONS



TYPICAL WIRING



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

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