

INSTALLATION INSTRUCTIONS

HW Series, Wall Mount RH and RH/T Transmitters



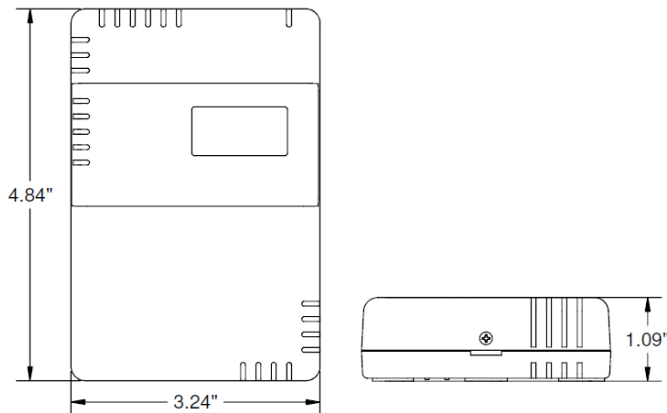
IMPORTANT WARNINGS

- Only qualified trade installers should install this product
- This product is not intended for life-safety applications
- Do not install in hazardous or classified locations
- The installer is responsible for all applicable codes
- De-energize power supply prior to installation or service

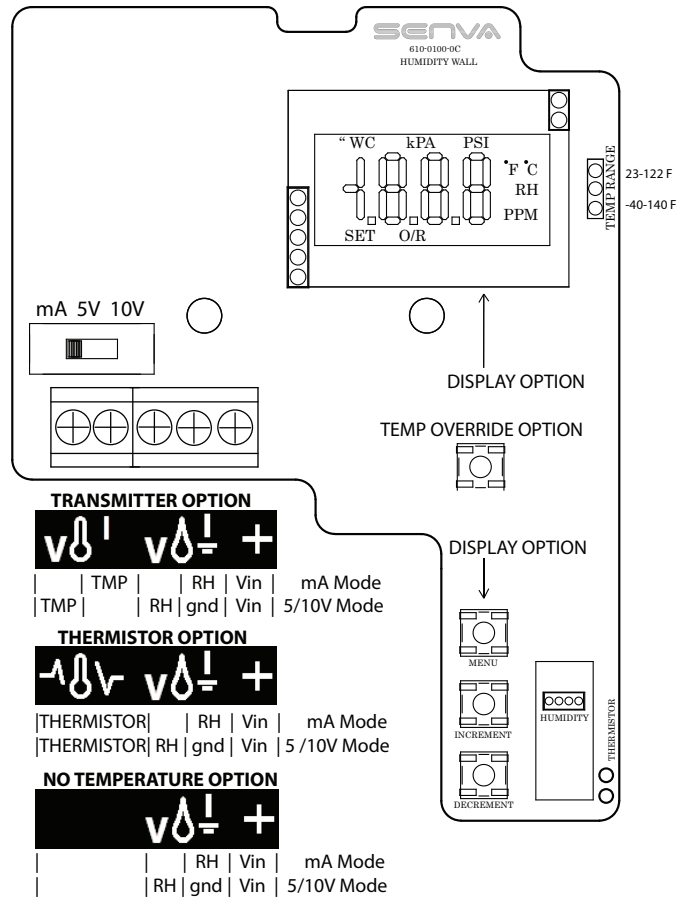
INSTALLATION

1. IMPORTANT! Locate the device in an area away from ventilation sources and heat generating equipment and appliances. The device should be mounted at light switch height in a vertical orientation.
2. Install backplate to wall or j-box using screws provided.
3. Select output type using "OUTPUT SELECT" switch. For RH and Temp transmitters. (Not applicable for thermistors.)
4. Wire sensor as indicated for 3-wire 0-10v/0-5v operation or 2-wire 4-20mA operation (See Wiring Section.)
5. Select temperature output range using "TEMP SELECT" jumper. Temperature transmitter models only. Not applicable to thermistors.

DIMENSIONS



WIRING



SETUP

In normal operation with display option, display toggles between RH% and Temp.

Press MENU button to select parameter to set:

Temp units	°F or °C
RH offset*	-5 to 5% RH in 0.1% RH increments
Temp offset	-5 to 5° in 0.1° increments

Press INC or DEC to change value of selected parameter. Press MENU button to move to next parameter. Settings are saved automatically.

Setup features do not apply to thermistor or non-display option devices.

* See Calibration Section before making any adjustments.

PRODUCT APPLICATION LIMITATION:

Senva products are not designed for life or safety applications. Senva products are not intended for use in critical applications such as nuclear facilities, human implantable device or life support. Senva is not liable, in whole or in part, for any claims or damages arising from such uses.

ORDERING

HW - -

Accuracy

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

Override

A = None
 B = Override

Options

= Standard Version
 VAL = Value, No Display / Menu Buttons

SPECIFICATIONS

Power supply	3-wire voltage mode (0-5v/10v) 2-wire current mode (4-20mA)	12-30vdc/24vac ⁽¹⁾ , 15mA max. 12-30vdc, 30mA max.
Outputs	RH and Temperature (option)	3-wire 0-5v/10v ⁽⁴⁾ or 2-wire 4-20mA
	RH	0-100%RH
Output scaling	Temperature (jumper selectable)	32-122°F (0-50°C) or -40-140 °F (-50-50°C)
Thermistor/RTD options		See ordering table
	Accuracy	+/-3% over 20 to 75% range
	Resolution	0.05%RH
	Hysteresis	+/-1%RH
	Non-linearity	Factory linearized <1%RH
	Temperature coefficient	Fully compensated by on-board sensor
Relative Humidity	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 to 60°C @ RH >90% -20 to 70°C @ RH = 50%
	Accuracy, (-20 to 70°C range)	<+/-2°C; 0.5°C typ@25°C
	Resolution	0.01°C
Temperature (Transmitter)	Repeatability	+/-0.1°C
	Response time ⁽²⁾	30s
	Output update rate	2s
	Operating range	-40 to 70°C

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

(2) Time for reaching 63% of reading at 25oC and 1 m/s airflow.

(3) Long term exposures to conditions outside normal range or 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.

TROUBLESHOOTING

Symptom	Solution
No output	Check wiring. Ensure power supply meets requirements.
Temp or RH reading error	Verify control panel software is configured for correct output scaling.
	Verify accuracy of test instrument. Observe installation and calibration guidelines
	Verify unit is located out of direct sunlight.
	Perform calibration only if necessary.
Sensor damage, contamination, or long-term drift	Replace sensor element. Consult factory for ordering information.

CALIBRATION

Senva RH sensors are factory calibrated to NIST traceable standards. No field calibration is necessary or recommended. However, to facilitate compliance with job requirements and commissioning procedures, provisions for field calibration are provided:

1. Locate calibration instrument and sensor in close proximity to each other in a controlled environment free of drafts, people, and equipment to reduce influence on RH and temperature.
2. Compare reading of sensor to calibration instrument, and note difference.
3. Refer to SETUP section to change RH offset as needed. Set RH offset to zero to restore factory calibration.

NOTE: In case of damage, contamination, or long-term drift, sensor element may be replaced. Consult factory for ordering information and instructions.