

### Applications

- Energy Management
- Climate Control
- Warehouses
- Greenhouses
- Clean Rooms
- Museums
- Food Storage
- Textiles
- Paper
- Food Processing



### GENERAL DESCRIPTION

The Model HTW Relative Humidity Transmitter continuously measures the relative humidity in a room and provides a 4 to 20 mA current output directly proportional to 0 to 100% relative humidity.

The HTW is a true two-wire device, receiving its power and providing its output over the same pair of wires. This transmitter only requires 6 volts DC for internal operation and can easily transmit its output signal across thousands of feet of twisted wire.

Under normal operating conditions of 0 to 50°C and 0 to 70% RH, the HTW will maintain a stable  $\pm 3\%$  output for up to a year without recalibration. For accu-

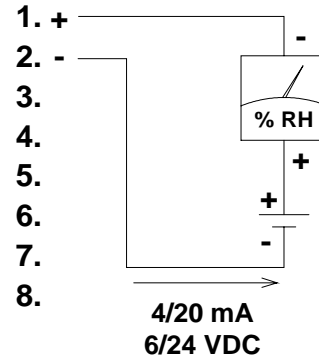
racies of  $\pm 6\%$  the calibration period can be extended out to five years. Under more demanding operating conditions with airborne chemicals, high temperature or humidity, more frequent calibrations would be required.

The HTW is housed in an attractive low profile plastic enclosure designed for wall mounting. To install the HTW, remove the rear mounting plate from the transmitter and screw it to the wall. Then connect the signal wires to the terminal block attached to the front side of the back plate. After the back plate has been installed, simply snap the transmitter into place up against the backplate.

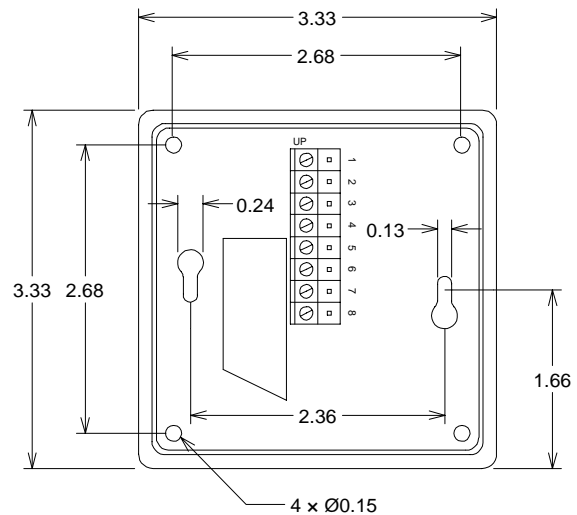
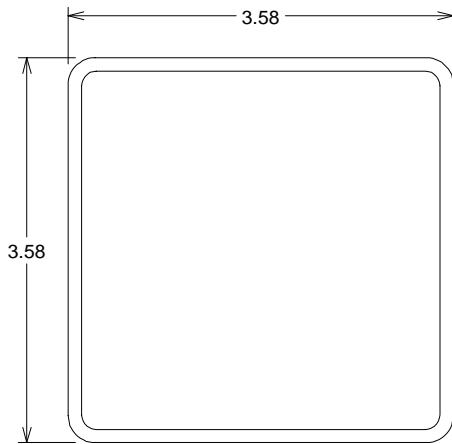
## SPECIFICATIONS HTW

### Humidity Transmitter:

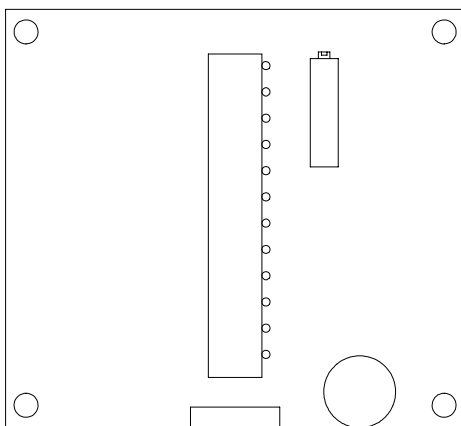
Measuring Range	0 to 100% RH
Working Range	5 to 95% RH
Output	4 to 20mA
Accuracy @ 23°C (73°F)	±3% RH from 10-90% RH
Response Time	10 sec. Typical (90% of the change)
Stability	±1% RH, 1 Year Typical, Depending on Environmental Conditions)
Power Supply	6 to 35 VDC, <b>See Note</b>
Supply Influence	±0.01% RH per V typical
Temperature Drift	±0.03% RH per °C Typical
Operating Temperature	-30 to 60°C (-20 to 140°F)



FIELD WIRING



GENERAL DIMENSIONS



HTW Circuit Board

### CALIBRATION PROCEDURE

Place unit into Humidity chamber set to a known value, for example 50% RH. Adjust POT for correct output.



#### NOTE

Because relative humidity varies with ambient temperature, a more accurate measurement can be achieved if less power is dissipated inside of the transmitter. To prevent heating the air around the sensor use a low voltage power supply or connect an external resistor in series with the loop to dissipate the excess power.

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