SC-600 Manual
RESISTIVE RELATIVE HUMIDITY SENSOR

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SF-SLS-562 (A)

SC-600 SENSOR PRECAUTIONS

Condensation, Fog, Mist or Liquid Water:
The polymer coating on the sensor used on the SC-600 allows it to be exposed to condensation with recovery after the sensor dries out. The dry out period may take several minutes; however, there will not be a permanent shift in the impedance. Air movement facilitates faster dry out. Immersion in water or any other liquid is not recommended.

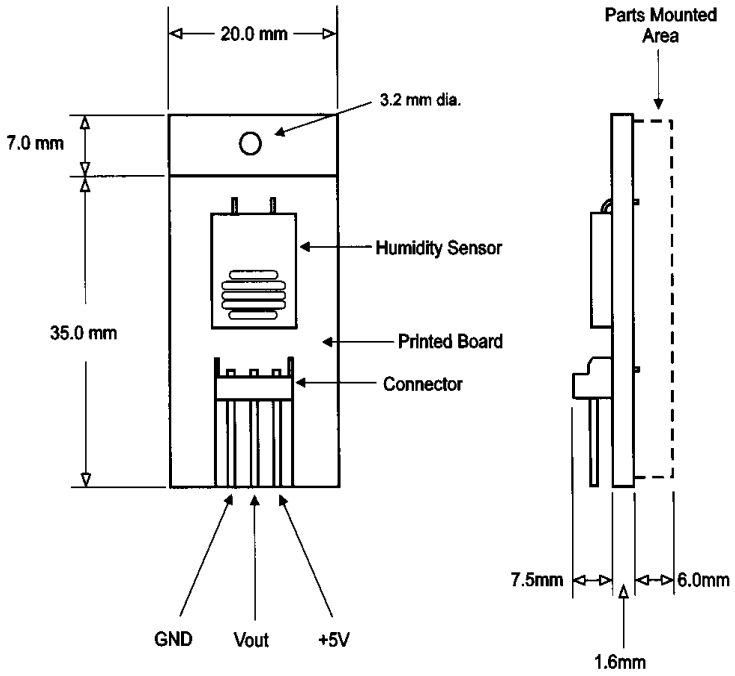
Temperature Limits:
The operating temperature limit for the SC-600 is 32°F to +122°F.

Chemical Vapors:
Alcohols and other polar compounds typically cause a temporary shift. Reactive chemicals such as sulfides, halogens, mercury vapor, acids and ketones should be avoided. Hydrocarbons or oil mist tend to condense as a varnish which slows the response time of the sensor.

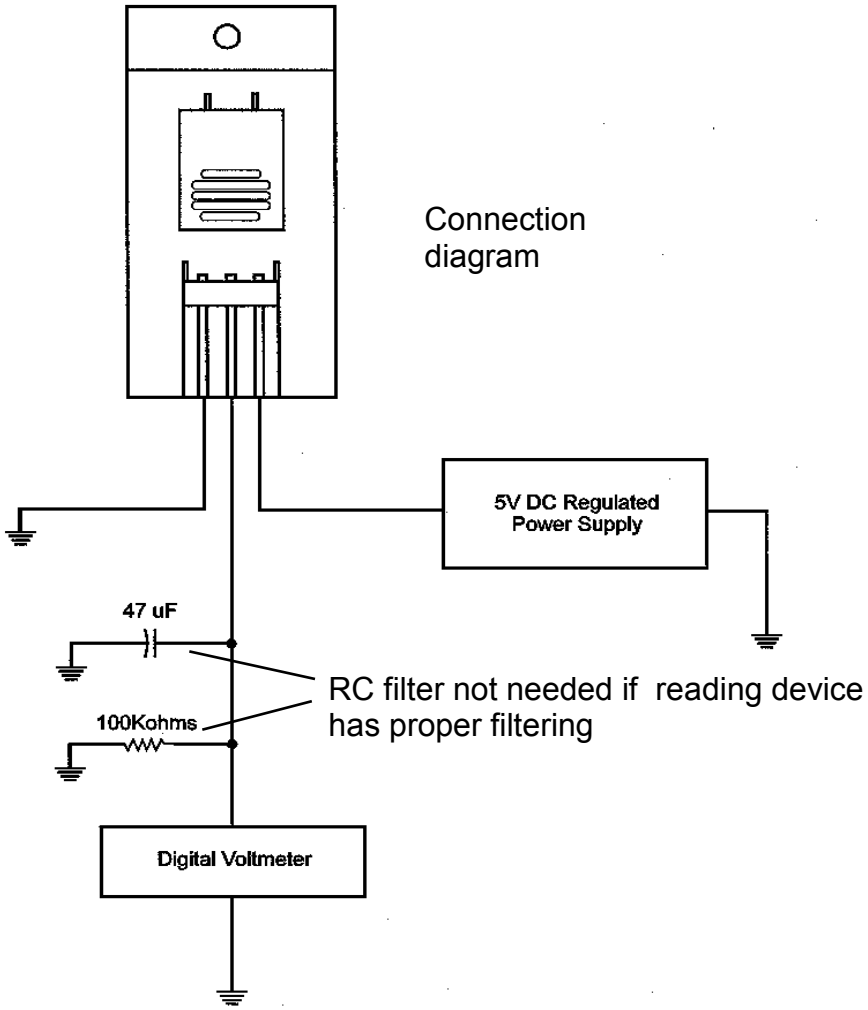
Physical Contaminants:
When used in environments with dust and oil mist, a filter must be utilized. High absolute vacuum should be avoided.

SPECIFCATIONS

Range	20- 90% RH
Set Point Accuracy	± 2 %RH
Output Signal	1- 3 Vdc
Operating Temperature	32 to +122 ºF
Response Time	15 Seconds for 63% Step Change
Hysteresis	< 0.2%
Long-Term Drift	< 2% RH/5 Years
Sensor Excitation	150 mV @ 440 Hz
Power	5 Vdc, (Regulated), current < 1.5 mA max.
Output Filter	100 KΩ /47μF RC filter
Dimensions	20 x 42 x 17mm



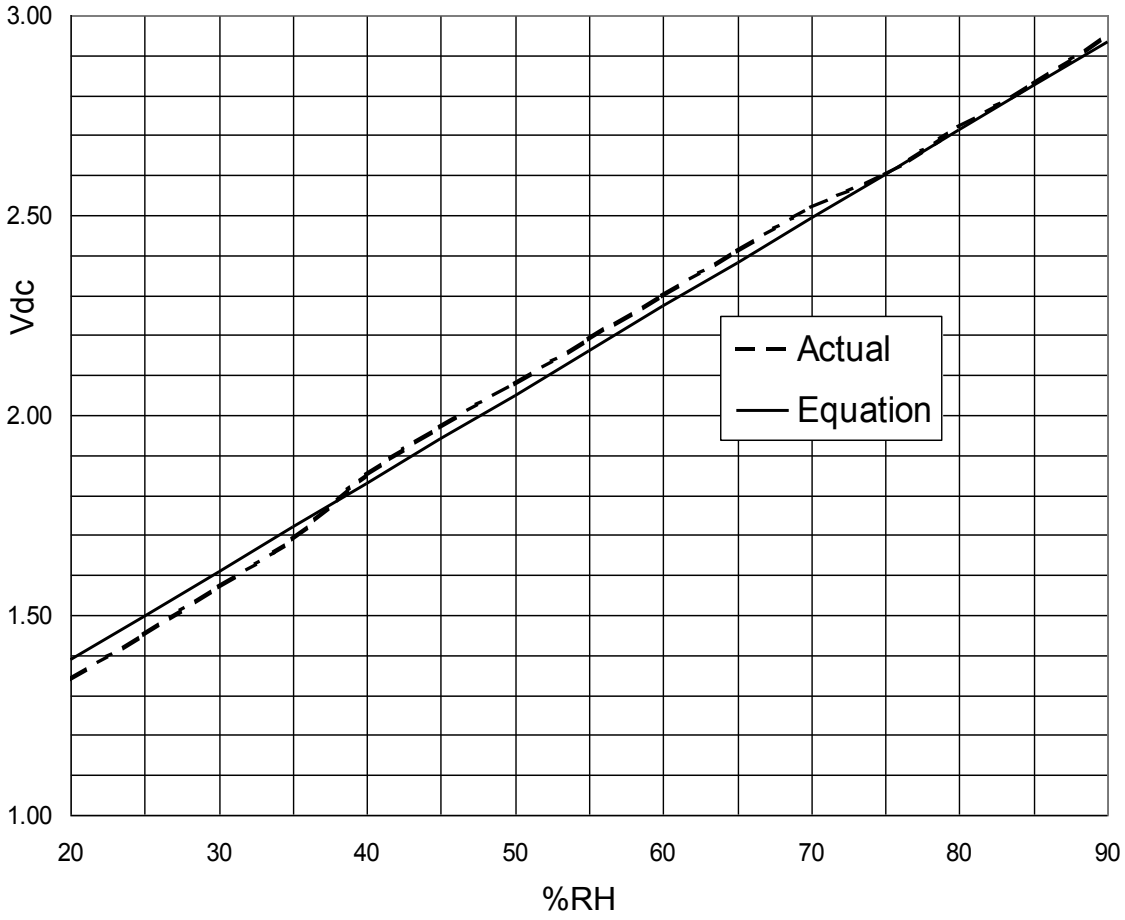
Dimensional drawing



Connection diagram

RC filter not needed if reading device has proper filtering

Vdc vs %RH @ 25°C (77°F)



Output Equations

Vdc = (.0221 x %RH) + 0.945

If the temperature is not 25°C (77°F) the temperature compensation equation should be included to correct the %RH value before calculating the Voltage Output Equation.

%RH = 45.25 V –42.76

If the temperature is not 25°C (77°F) the temperature compensation equation should be performed on the answer to the %RH Output Equation.

Temperature Compensation

The average coefficient for temperature compensation of the UPS-600 sensor works out to
-0.7% RH/ °C (-0.4% RH/ °F).
The correction factor is computed with the expression:

C = -0.7(T-25)

C = the correction factor in percent to be algebraically added.
T = the temperature in °C.

C = -0.4(T-77)

C = the correction factor in percent to be algebraically added.
T = the temperature in °F.

WARRANTY

Not withstanding any provision of any agreement the following warranty is exclusive.

Ohmic Instruments warrants each instrument it manufactures to be free from defects in material and workmanship under normal use and service for the period of 1-year from date of purchase. This warranty extends only to the original purchaser. This warranty shall not apply to fuses or any product or parts which have been subjected to misuse, neglect, accident, or abnormal conditions of operation.

In the event of failure of a product covered by this warranty, Ohmic Instruments. will repair and recalibrate an instrument returned within 1 year of the original purchase, provided the warrantor's examination discloses to its satisfaction that the product was defective. The warrantor may, at its option, replace the product in lieu of repair. With regard to any instrument returned within 1 year of the original purchase, said repairs or replacement will be made without charge. If the failure has been caused by misuse, neglect, accident, or abnormal conditions of operations, repairs will be billed at a nominal cost. In such case, an estimate will be submitted before work is started, if requested.

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If any failure occurs, the following steps should be taken:

1. Notify Ohmic Instruments. giving full details of the difficulty, and include the model, type, and serial numbers (where applicable). On receipt of this information, service data, or shipping instructions will be forwarded to you.
2. On receipt of shipping instructions, forward the instrument, transportation prepaid. Repairs will be made and the instrument returned, transportation prepaid.

SHIPPING TO MANUFACTURER FOR REPAIR OR ADJUSTMENT

All shipments of Ohmic Instruments products should be made via United Parcel Service or "Best Way" prepaid. The instrument should be shipped in the original packing carton, or if it is not available, use any suitable container that is rigid and of adequate size. If a substitute container is used, the instrument should be wrapped in packing material and surrounded with at least four inches of excelsior or similar shock absorbing material.

CLAIM FOR DAMAGE IN SHIPMENT TO ORIGINAL PURCHASER

The instrument should be thoroughly inspected immediately upon delivery to purchaser. All material in the shipping container should be

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