

## C7400A Solid State Enthalpy Sensor

### SPECIFICATION DATA



### APPLICATION

The C7400A Solid State Enthalpy Sensor is used with the W7459 Solid State Economizer Control Package. It permits the use of outdoor air as the first stage of cooling in heating, ventilating and air conditioning (HVAC) systems.

### SPECIFICATIONS

**Model:**  
C7400A Solid State Enthalpy Sensor.

**Output Signal:**  
4 to 20 mA current signal increases from 4 mA to 20 mA as enthalpy decreases.

**Operating Ambient Temperature Range:**  
-25°F to +125°F (-32°C to +52°C).

**Shipping Temperature Range:**  
-40°F to +150°F (-40°C to +66°C).

**Maximum Power Consumption:**  
0.45 VA.

**Supply Voltage:**  
18-24 Vdc.

**Electrical Connections:**  
Two 1/4 in. (6 mm) quick connect terminals.

### FEATURES

- Senses and combines temperature and humidity of outdoor air.
- Long lasting solid state thermistor sensing element is accurate and stable over time.
- As enthalpy of outdoor air increases, the outdoor air damper closes to a preset minimum position.
- As enthalpy of outdoor air becomes low, the outdoor air damper opens to reduce the cooling load in the building.
- Maximum economizer savings is achieved when two C7400A Solid State Enthalpy Sensors are connected to one W7459 Solid State Economizer Control for differential enthalpy changeover control.
- Compact size and lightweight construction. Allows easy mounting in HVAC rooftop unit.
- Sensor is enclosed in a rugged, corrosion-resistant glass-fiber reinforced plastic duct-mount case.
- Provides a 4 to 20 mA output signal to W7459 Solid State Economizer Control; setpoint is located on solid state economizer control.

**Approvals:**  
Underwriters Laboratories Inc. Flammability Rating: UL94-5V.

**Dimensions:**  
See Fig. 1

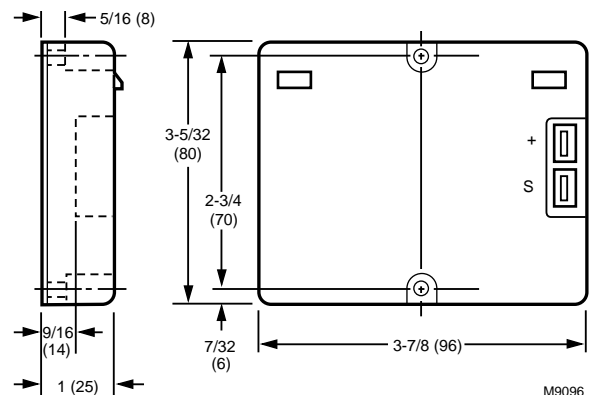
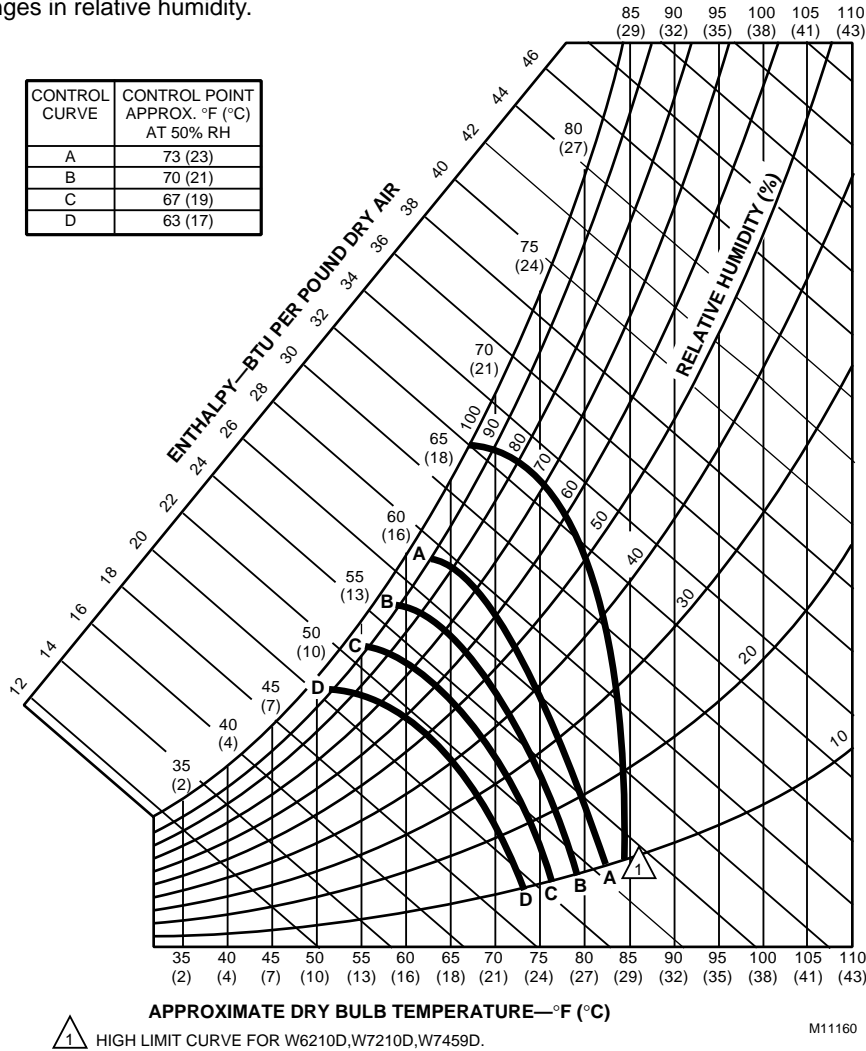


Fig. 1. Approximate dimensions of C7400A Solid State Enthalpy Sensor in in. (mm).



**C7400/W7459 Performance Curves:**  
See Fig. 2.

NOTE: Curves illustrate reset in temperature control point due to changes in relative humidity.



**Fig. 2. Partial psychrometric chart with single C7400 Solid State Enthalpy Sensor and W7459 Solid State Economizer Control performance curves.**

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