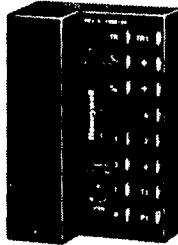


Honeywell

W7459A,B,C SOLID-STATE ECONOMIZER LOGIC MODULE



W7459

W7459 SOLID-STATE ECONOMIZER LOGIC MODULE IS USED WITH C7400 SOLID-STATE ENTHALPY SENSOR AND M7405, M7415 OR M8405 DEDICATED ECONOMIZER ACTUATOR TO PROPORTION OUTDOOR AND RETURN AIR DAMPERS FOR ECONOMIZER CONTROL IN COMMERCIAL HVAC EQUIPMENT.

W7459A W7459B W7459C

• Combines functions of solid-state enthalpy changeover control, minimum damper position potentiometer (W7459A,B) and compressor staging relays.

• Optional differential enthalpy control provides greater economizer savings than single enthalpy control by selecting the most economical air for cooling. Differential enthalpy control uses two sensor inputs; one in return air, one in outdoor air; the economizer control determines which air has lower enthalpy.

• Solid-state control package provides improved accuracy, reliability and stability.

• W7459A mounts on M7415 proportioning actuator and accepts input from discharge air temperature sensor, C7400 enthalpy sensors and optional remote minimum damper position potentiometer.

• W7459B mounts on M7405 proportioning actuator and accepts direct digital control signal from W7401/W7411 logic panel, C7400 enthalpy sensors and optional remote minimum position potentiometer.

• W7459C mounts on M8405A three-position actuator and accepts input from spst mixed or discharge air control and C7400 enthalpy sensors.

• Packages are designed to operate from the cooling space thermostat to provide a totally integrated control system.

• Housed in high-impact, glass-fiber reinforced plastic case that matches the lines of M7405, M7415, M8405 Dedicated Economizer Actuators.

• Quick-connect terminals.

• Enthalpy setpoint (A,B,C,D) located on W7459 economizer control is used to select combination of air temperature and humidity that is suitable for free cooling.

• W7459A,B models include built-in adjustable minimum damper position potentiometer that controls amount of outdoor air admitted to meet minimum ventilation requirements. Includes terminals for connection of optional remote minimum position potentiometer for remote damper control.

• LED on W7459 indicates that free cooling is available.

SPECIFICATIONS

ELECTRICAL RATINGS:

W7459/C7400
Input Voltage—24 Vac, 50/60 Hz.
Power Consumption—5.5 VA.
Relay Contact Ratings at 24 Vac—1.5A run, 3.5A inrush.

TEMPERATURE RATINGS:

Operating Ambient—-25°F to 125°F [-32°C to +52°C].
Humidity—5% to 95% RH.

APPROVAL BODY:

Underwriters Laboratories Inc.
Flammability Rating—UL94V-O.

ENTHALPY INPUT:

C7400A Solid-State Enthalpy Sensor can be mounted up to 200 ft. away; two-wire (18, 20, 22 AWG) connection.

DIMENSIONS: 4 in. x 2.8 in. x 1.3 in. [103 mm x 71 mm x 33 mm].
(Fig.1)

MINIMUM POSITION POTENTIOMETER:

Resistance—250 ohms.
Minimum Setting—0 to 100% of motor stroke.

ACCESSORIES:

1. 4074EJM 1.2k ohm checkout resistor.
2. C7400 Solid-State Enthalpy Sensor.
3. C7150B Discharge Air Temperature Sensor.
4. S963B1128 Remote Minimum Position Potentiometer to provide remote control of damper position.
5. T675 or T6031 Remote Bulb Control for low ambient lockout.
6. 4074EJQ Board for panel mounting W7459A.

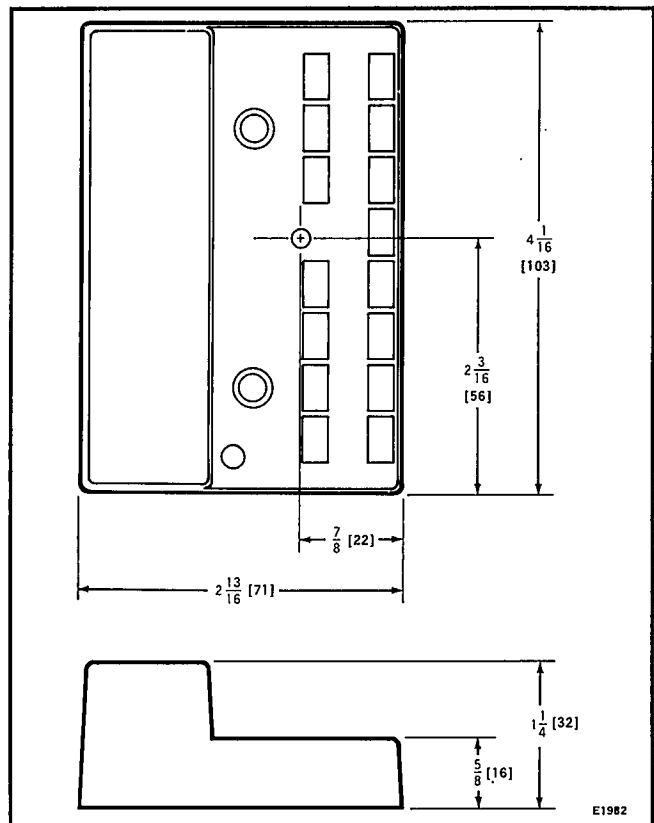


Fig. 1—W7459 DIMENSIONS IN in. [mm IN BRACKETS].

MODELS:

MODEL NUMBER	USE WITH ACTUATOR	DISCHARGE AIR TEMPERATURE INPUT	MINIMUM POSITION POTENTIOMETER ADJUSTMENT	TERMINALS FOR REMOTE MINIMUM DAMPER POSITION	OUTPUT RELAYS
W7459A	M7415	Thermistor sensor C7150B or C7046A	Yes	Yes	2 spdt
W7459B	M7405	Direct digital control W7401/W7411 logic panel	Yes	Yes	1 spdt
W7459C	M8405	Spst control	No Minimum position adjust is built into M8405 actuator	No	2 spdt

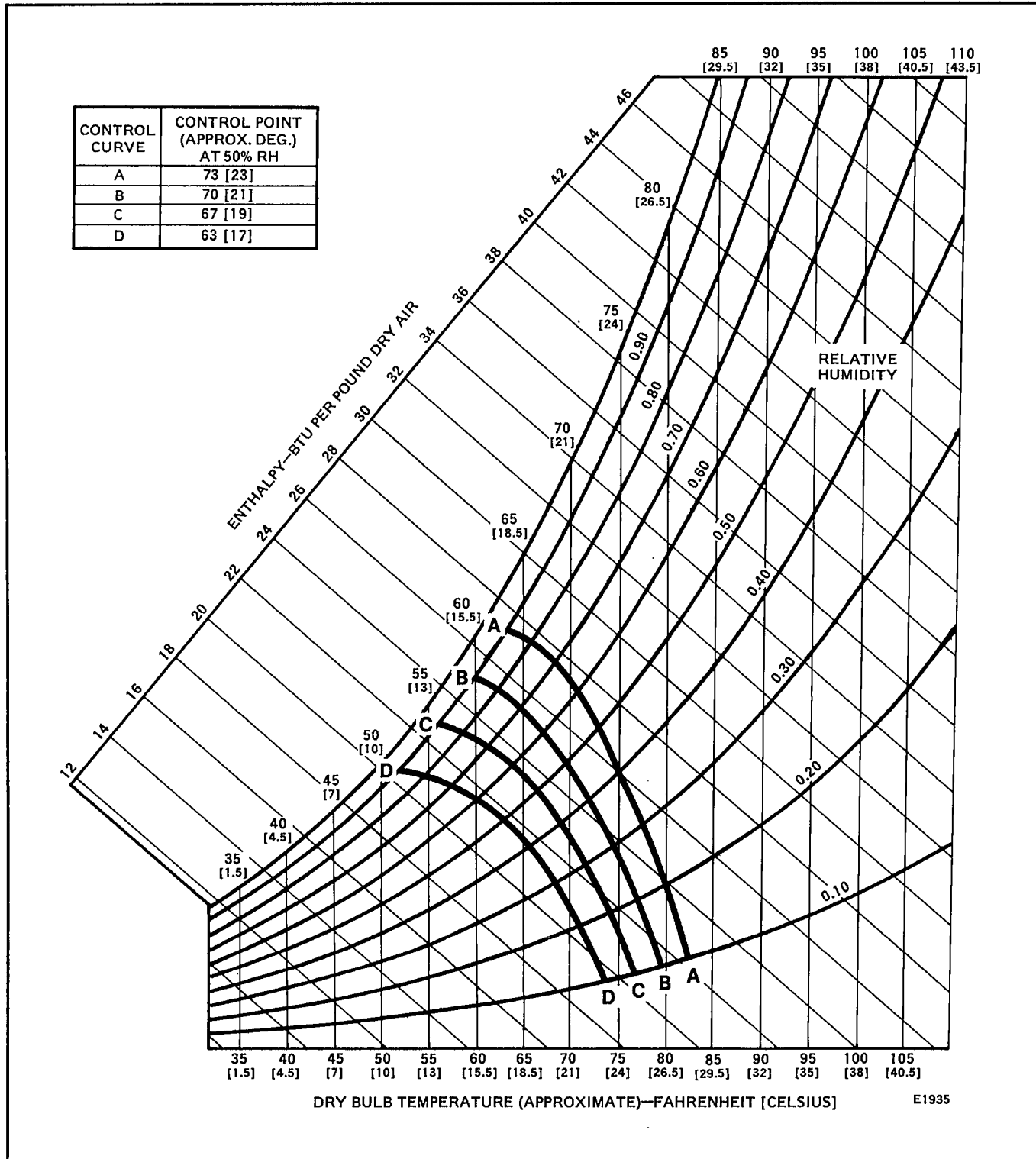


Fig. 2—W7459/C7400 PERFORMANCE CHARACTERISTICS FOR ENTHALPY CHANGEOVER SETTINGS A,B,C AND D.

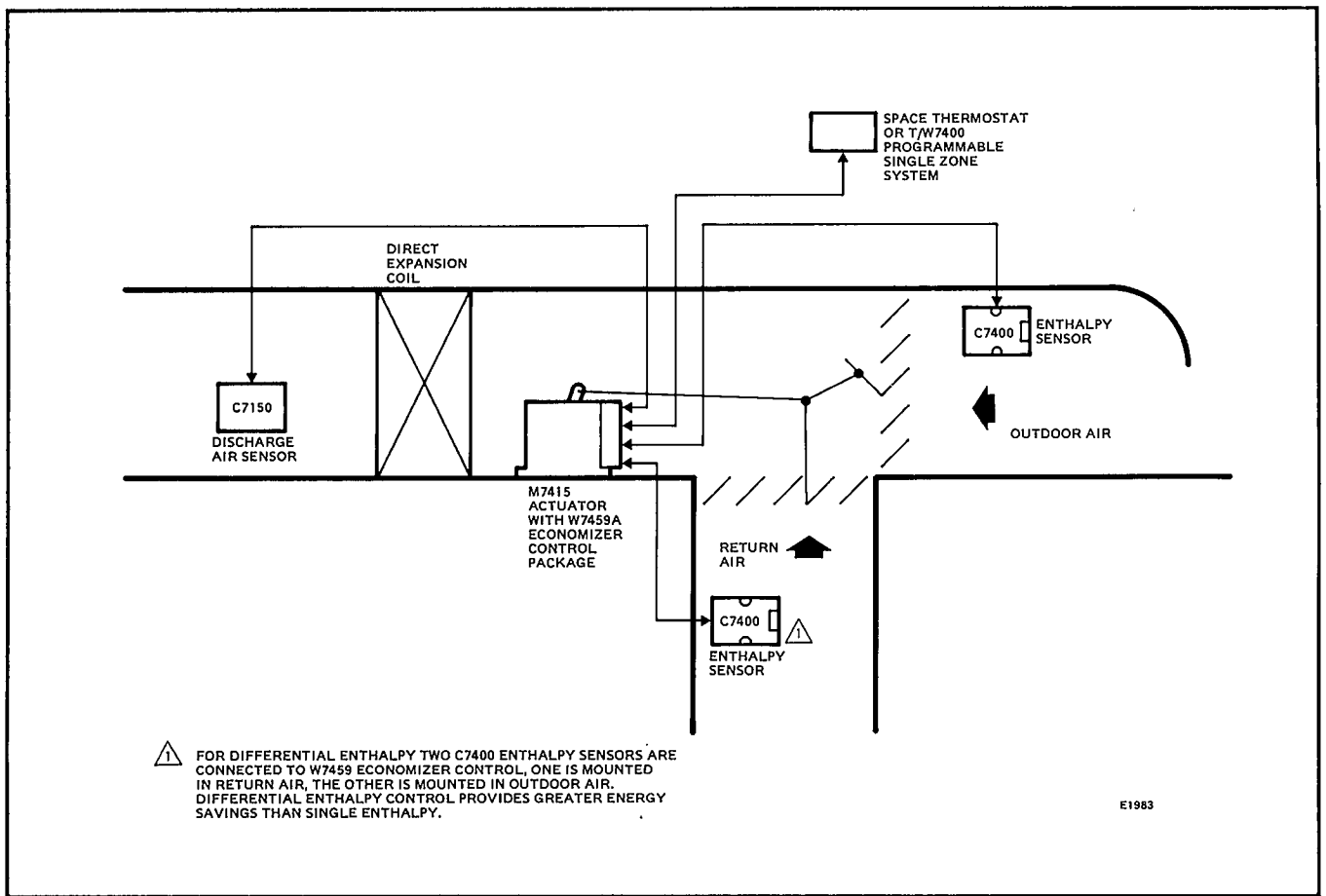


Fig. 3—LOCATION OF THE C7400 OUTDOOR AIR AND RETURN AIR SENSORS AND THE C7150 DISCHARGE AIR SENSOR IN AN ECONOMIZER SYSTEM.

