

Honeywell

THE MICROPROCESSOR-BASED W7100F DISCHARGE AIR OR WATER CONTROLLER MAINTAINS AN AVERAGE DISCHARGE AIR OR WATER TEMPERATURE IN SCREW COMPRESSOR VARIABLE AIR VOLUME (VAV) OR CHILLER COOLING SYSTEMS BY MODULATING AN ECONOMIZER, SEQUENCING COMPRESSOR STAGES, AND MODULATING SCREW COMPRESSOR CAPACITY.

Provides 4 stages cooling plus load/unload contacts.

Staging capacity of the W7100F may be extended using a W7101A Satellite Sequencer.

Uses W7101 for heat staging.

Advanced microprocessor control algorithms minimize droop.

Provision for systems without an economizer.

Adjustable control band from 0 F to 10 F [0 C to 5.5 C].

Adjustable setpoint from 40 F to 90 F [4 C to 32 C] on discharge air; 10 F to 60 F [-12 C to 16 C] on discharge water.

Adjustable reset of setpoint within range of 5 F to 20 F [3 C to 11 C] upward on cooling, 20 F to 80 F [11 C to 44 C] upward on heating. Reset signal can be from space sensor or outdoor air sensor.

Platinum resistance element provides highly accurate and stable temperature sensing [C7100 for air, C7170 for water].

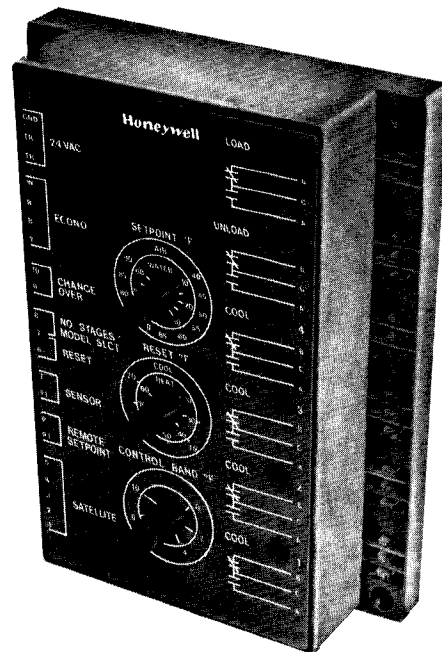
LED's show which stages of heating or cooling are on and the status of the load/unload commands.

Selectable number of stages and differentiation between air and water controller by use of resistor input.

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DISCHARGE AIR OR WATER TEMPERATURE CONTROL



W7100F

SPECIFICATIONS

W7100F MODEL FEATURES:

- Economizer output
- 4-stage cool
- Load/unload outputs
- W7101 satellite expansion to 2 heat/8 cool or 4 heat/6 cool
- Discharge air or water controller model select

ELECTRICAL RATINGS:

Input Voltage and Frequency (terminals TR-TR) — 20 to 30 Vac at 60 Hz (20 to 26.4 Vac at 50 Hz).
 Power Consumption — 12 VA at 24 Vac and 50 to 60 Hz.

ON/OFF STAGES (COOL 1 THROUGH 4)

| CONTACT | VOLTAGE (V) | INRUSH (VA) | RUNNING (VA) |
|---------|-------------|-------------|--------------|
| N.O. | 24 | 240 | 60 |
| N.C. | 24 | 75 | 30 |
| N.O. | 120/240 | 750 | 75 |
| N.C. | 120/240 | 240 | 40 |

SWITCHING (ON/OFF STAGES):

Spdt relays.

WIRING TERMINALS:

1/4 in. quick-connect.

INPUT SIGNAL:

Sensor — positive temperature coefficient of 4.8 ohms/degree F [2.6 ohms/degree C]; resistance of 3484 ohms at 77 F [25 C], (see Fig. 2).

NUMBER OF STAGES/MODEL SELECT:

Resistor value (across terminals 7 and 8) to determine number of ON/OFF stages and discharge air or water model select (see Table 1).

TEMPERATURE RATINGS:

Ambient: Minus 40 F to plus 150 F [minus 40 C to plus 66 C].
 Shipping: Minus 30 F to plus 150 F [minus 34 C to plus 66 C].

HUMIDITY RATING:

5 to 90 percent RH noncondensing.

MOUNTING:

Four mounting holes in base, use No. 8 screws (screws not provided).

DIMENSIONS:

See Fig. 1.

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COMPONENT RECOGNIZED:

Approval Pending.

ADDITIONAL SYSTEM COMPONENTS:

Discharge Air Averaging Sensor — C7100A1015 senses average discharge air (DA) Temperature, provides input to W7100F sensor terminals T and T1.

Discharge Water Sensor — C7170A1010 senses discharge water temperature, provides input to W7100F sensor terminals T and T1.

Transformer (required) — Provides 24 Vac power for all components of the W7100F control system. (Size transformer to match system load.)

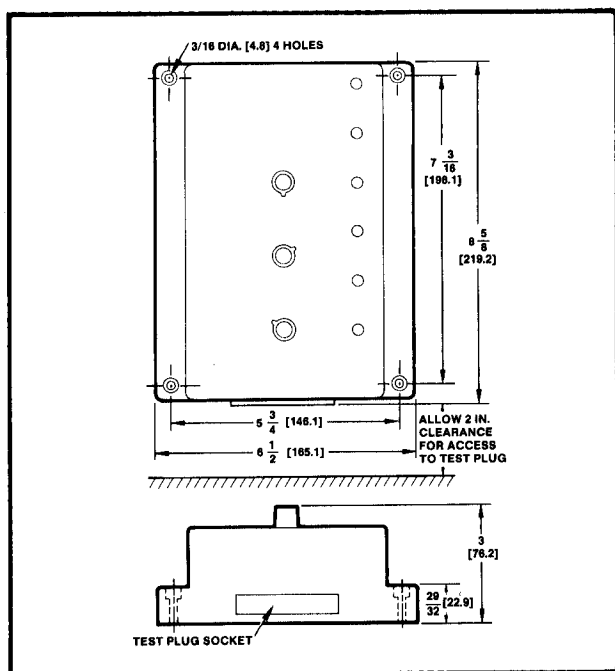


FIG. 1—W7100 DISCHARGE AIR OR WATER CONTROLLER MOUNTING DIMENSIONS IN in. (mm IN BRACKETS).

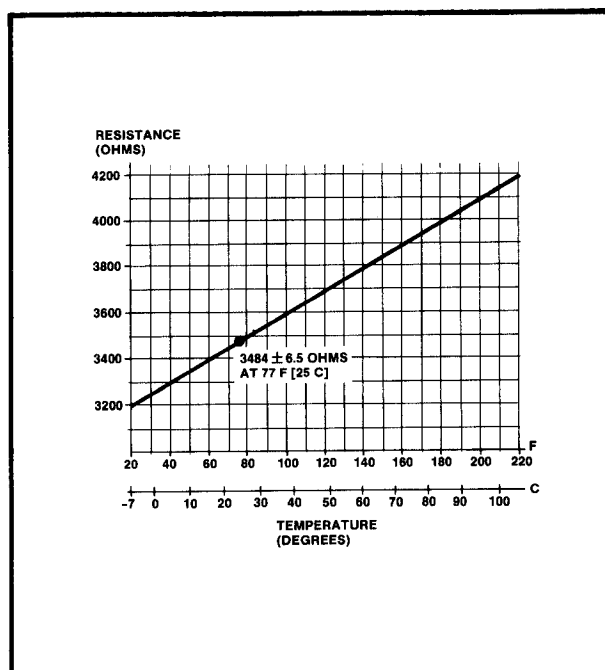


FIG. 2—VARIATION OF C7100/C7170 SENSOR RESISTANCE AS COMPARED TO TEMPERATURE.