Installation Guide

Mounting

The controller can be mounted in any position, but avoid locations subject to excessive vibration. For manual reset models, position the controller to permit convenient access to the reset button.

1. Loosen the front screw and remove the cover.
2. Using the two 3/8" mounting keyholes, mount the case flush against the duct work or any flat surface.
3. Install the sensing capillary in a horizontal serpentine fashion across the downstream side of a water coil.
4. Using HMO-4523 capillary clips (ordered separately), support the sensing capillary at sufficient points to prevent damage from vibration and/or air movement.

⚠ CAUTION

Do not kink or apply excessive force to the capillary element.

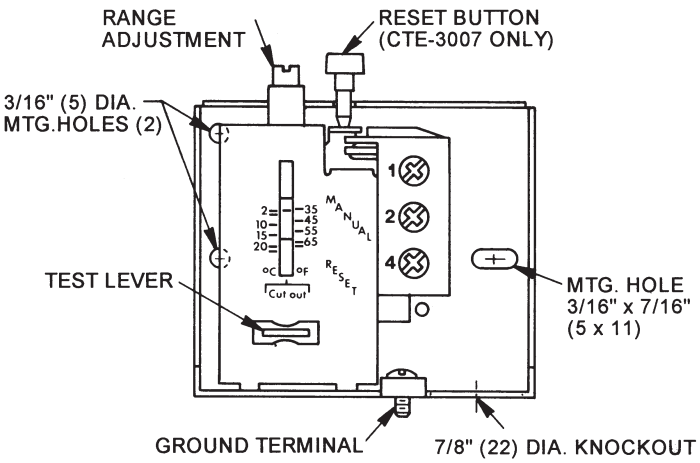
5. Make the appropriate connections to the terminal blocks. (See the Wiring section.)

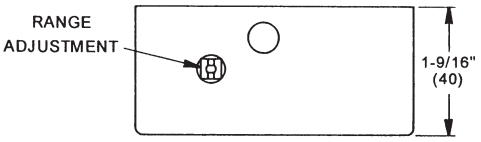
Wiring

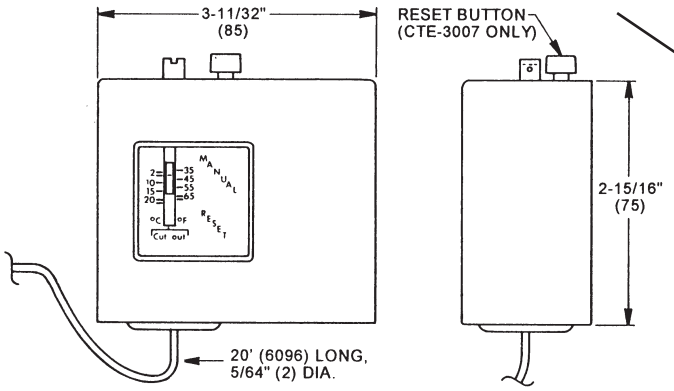
An opening for installing a connector for 1/2" conduit is provided in the bottom of the case.

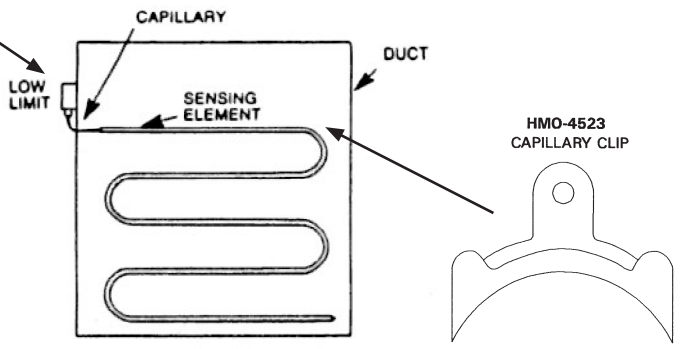
All wiring should comply with national and local electrical codes. Using 10 to 14 AWG solid copper wire is recommended.

Strip wire ends 3/8", insert the wire ends under the cup washers on the switch block, and securely retighten terminal screws. **Wire terminals according to the Actuation and Reset section on the next page.**







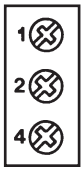


INSTALL CAPILLARY IN HORIZONTAL PATTERN ONLY

Actuation and Reset

Terminal 1 is the "common" terminal, 4 is NC (above setpoint), and 2 is NO. When the sensed temperature falls below setpoint, connection "1–4" opens and connection "1–2" closes (see diagram below). The switch latches in this position until the sensed temperature rises 5° F (3° C) above setpoint and the controller is reset either (depending on the model) automatically or manually by depressing the reset button located in the top of the controller case.

The controller cannot be manually reset until the sensed temperature is at least 5° F (3° C) above setpoint.



Common

Normally Open (Closes on Low Temp.)

Normally Closed (Opens on Low Temp.)

Setpoint Adjustment

The setpoint is the temperature at which connection "1–4" opens as the unit senses a fall in temperature. To adjust the setpoint:

- Turn the range adjustment screw CW to decrease the setpoint.
- Turn the range adjustment screw CCW to increase the setpoint.

Testing

A manual test lever located under the cover (below the indicator) allows the unit to be manually actuated (with a screwdriver) during system tests.

Accessories

HMO-4523	Capillary Clip (ordering about 5 clips per unit is recommended)

Maintenance

No routine maintenance is required. Each component is designed for dependable, long-term reliability, and performance. Careful installation will also ensure long-term reliability and performance.

Specifications

Range	35 to 68° F (1.7 to 20° C)
Differential	4.5° F fixed (2.5° C)
Switch Action	SPDT, snap-acting
Element	3/32" (2.4 mm) diameter, 20-foot (607 cm) length, vapor-filled, tin-plated copper capillary, max. temperature 300° F (149° C)
Electrical Ratings	
Inductive	24 FLA (Full Load Amperes) @ 120/240 VAC 144 LRA (Locked Rotor Amperes) @ 120/240 VAC 2 HP @ 120 VAC, 3 HP @ 240 VAC
Pilot Duty	720 VA max. @ 120 to 600 VAC, 144 VA max. @ 24 VAC
Approvals	CUL US Listed, CE Compliant, RoHs compliant
Weight	1.0 lbs. (0.45 kg)
Materials	Plated steel case, plastic cover
Mounting	Surface mount with capillary installed in horizontal serpentine pattern
Temperature Limits	
Operating	–60 to 160° F (–51 to 71° C)
Shipping	–60 to 160° F (–51 to 71° C)

NOTE: See the CTE-3006/3007 Data Sheet (717-035-24) for more information.

Important Notices

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