



Commercial and Industrial
Range and Water Heater
Elements

THERM-COIL MANUFACTURING CO.

P.O. Box 326, 580 Plummer School Road, West Newton, PA 15089-0326

Telephone:
West Newton...(724) 872-5007 Ordering Dept...1-800-872-5007
FAX....1-800-872-2015



Open Wire Coils
Special Heating Elements
and Controls

D1 Model Thermostat Installation Instructions

CAUTIONS - PLEASE READ BEFORE INSTALLATION!

- ANY DISASSEMBLY OF THE THERMOSTAT VOIDS WARRANTY.
- **Verify that the D1 thermostat you have purchased is being used appropriately for air or immersion use - see the MATERIALS LIST below for your thermostat model and what medium it may be used in.** Please consult your supplier if you have any questions about your application.
- Confirm thermostats are correct and as required before any attempted installation. Thermostats that have been installed or mounted are considered used and can not be returned. Please consult your supplier if you have any questions about your application.
- All installation wiring should be performed by a qualified electrician.
- Type D1 thermostat controls are to be used as temperature controls, because they do not fail-safe, an approved temperature and/or pressure safety control must be used for safe operation.
- Where the consequences of failure may be severe, back-up controls are essential, and users should ensure the installation of adequate back-up controls and safety devices with their electric heating equipment.
- These controls are not for use in hazardous environments as described in the National Electric Code. Failure to comply can result in fire or explosion.

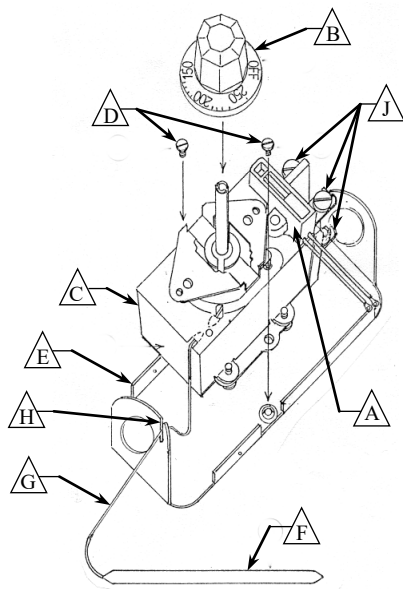
ASSEMBLY INSTRUCTIONS

WARNING: Hazard of electrical shock. Disconnect all power before wiring or servicing this control.

1. The standard Pilot Light (A) is for use with 120-277V, and must be changed for 480V operation.
2. Remove thermostat knob (B) and terminal enclosure cover (not depicted).
3. Note insulation paper placement, then remove old thermostat (C) by removing screws (D) from enclosure base (E).
4. **WARNING: Replace all electrical insulation paper to prevent grounding of terminals to base.**
5. Attach the new thermostat (C) to base with screws (D).
6. Insert capillary bulb (F) of thermostat (C) into protective well of the heater (see NOTE below) and route the capillary tubing (G) through the slot (H) at the bottom of the enclosure base. The excess loops of the capillary tubing can be placed between the thermostat (C) and the inside of the enclosure base (E), but make sure that the tubing does not touch the thermostat terminals (J).

NOTE:

- a. Be careful not to bend or deform the sensing bulb, for this will alter control calibration. If recalibration is necessary after installation, please contact Therm-Coil Mfg. Co. for calibration instructions.
 - b. Do **not** kink the capillary tube. This will constrict fluid flow and can destroy control function or broaden temperature differential.
 - c. Any deformations of bulb or capillary tubing that result in leakage of fluid renders the control inoperative.
7. For wiring specifications, instructions, and diagrams, see Page 2.
 8. Inspect the heater for loose terminals and electrical clearances; correct as necessary.
 9. Replace enclosure cover and thermostat knob (B).

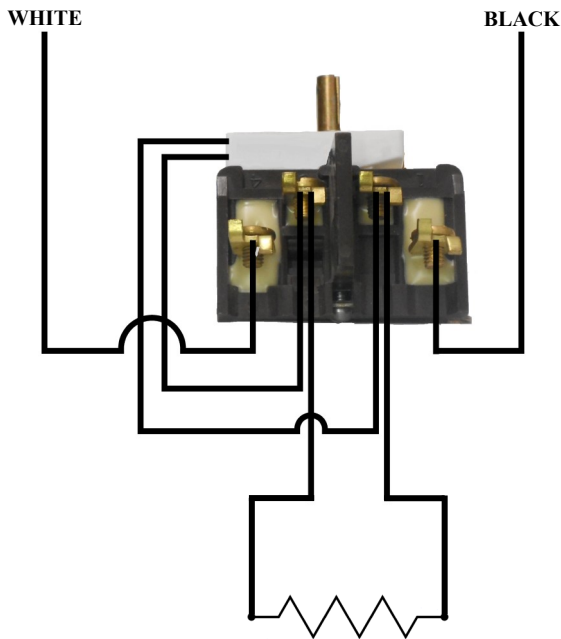


MATERIALS LIST

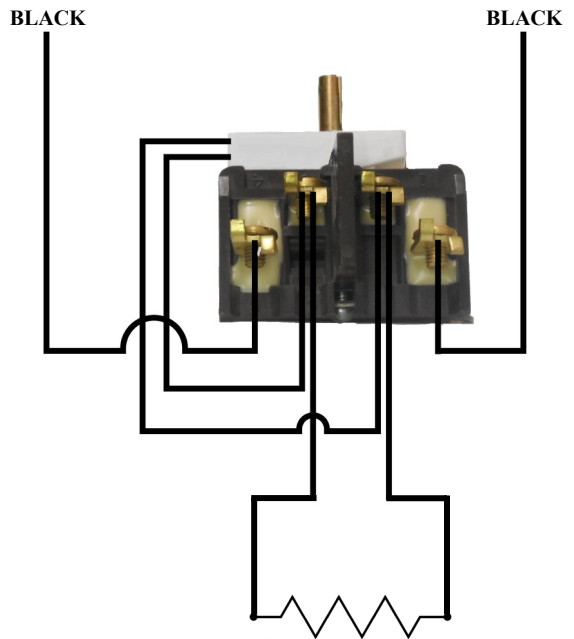
DIAGRAM LETTER	PART NAME	PART DESCRIPTOR
A	Pilot Light	120-277V (DWG. No. 337P-1003-001) [STANDARD]
		480V (DWG. No. 337P-1003-002)
B	Thermostat Knob	60°-250°F (DWG. No. 337T-1048-007)
		200°-550°F (DWG. No. 337T-1048-008)
C	Thermostat	D1-1071-K (Immersion Use Only)
		D1-2544-K (Immersion Use Only)
		D1-2574-K (Immersion Use Only)
		D1-2573-K (Air & Immersion Use)
		D1-2571-K (Immersion Use Only)
		D1-5575-K (Immersion Use Only)
		D1-5572-K (Air Use Only)
		D1-7051-K (Air Use Only)
D	#8-32 Fillister Screw	D1-7071-K (Immersion Use Only)
		Used To Mount Thermostat To Enclosure

WIRING DIAGRAMS

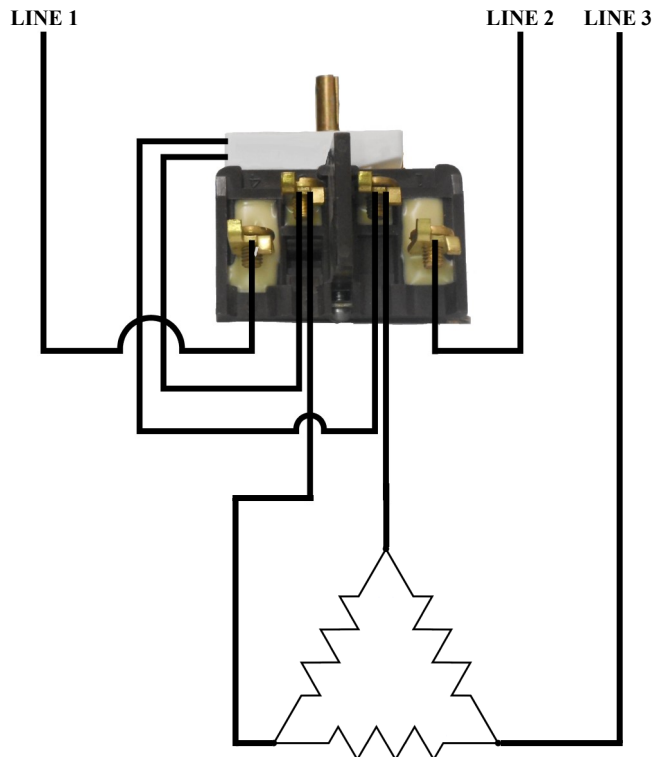
**SINGLE PHASE 120V
(5 AMPS MINIMUM REQUIRED*)**



**SINGLE PHASE 208V-480V
(5 AMPS MINIMUM REQUIRED*)**



**THREE PHASE WHEN LOAD DOES NOT EXCEED RATING
OF THERMOSTAT (5 AMPS MINIMUM REQUIRED*)**



WIRING & THERMOSTAT SPECIFICATIONS

CAUTION: Hazard of electrical shock. Disconnect all power before servicing this control.

! ATTENTION !: The model D1 thermostat is DPST, and is for A.C. operation only. The D1 thermostat is direct acting: contacts open on temperature rise only. The D1 thermostat will NOT work for cooling applications. The D1 thermostat is NOT rated for D.C. operation.

* **NOTE:** 5 AMPS Minimum Load Required. When below 5 AMPS, the thermostat will not be able to maintain desired temperature reliably or at all, and may fluctuate wildly in differential.

NON-INDUCTIVE RATING		
Resistive Load Per Pole	120V-277V	30 AMPS MAX.
Total Resistive Load	480V	21 AMPS MAX.

WARNING: IF LOAD AMPERAGE OR VOLTAGE RATING EXCEEDS SWITCH RATING, A CONTACTOR MUST BE USED.

WIRING

1. All installation wiring should be performed by a qualified electrician.
2. Electric wiring must be installed in accordance with National Electric Code and with applicable local codes.
3. Disconnect all power before servicing or wiring this control.
4. Make all electrical connections using properly insulated copper conductors only.
5. All electrical connections should be made with generous loops of wire; approximately 6" per lead.
6. Connect wires according to appropriate wiring diagram and replace the cover before reconnecting power.