

## T4800A Precision Electronic Electric Heating Thermostat

### PRODUCT DATA



### FEATURES

- CSA Certified and Performance Certified, Underwriters Laboratories Inc. Listed. Conforms to NEMA standard DC3 for thermostat accuracy.
- Rugged, molded thermoplastic mounting base with captive mounting screws.
- Energy efficient and economical.
- Patented electronic switch requires no leveling.
- High sensitivity, solid-state temperature sensing element.
- Nonpolarized leadwire connections.
- Adjustment range is 40° to 80°F (5° to 25°C).
- Premier White® finish.
- One-piece decorative cover.
- Red LED status indication.
- Suitable for noninductive rated fan-forced heaters, radiant cable or convectors.

### GENERAL

The T4800A Electric Heating Thermostat provides precise, accurate line voltage control of resistance-rated heating equipment. A patented Cool Switch™ design activates the heating circuit on temperature fall and results in longer life for the thermostat.

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## SPECIFICATIONS

### IMPORTANT

The Specifications given in this publication do not include normal manufacturing tolerances. Therefore, this unit may not exactly match the listed specifications. Also, this product is tested and calibrated under closely controlled conditions, and some minor differences in performance can be expected if those conditions are changed. For exact engineering specifications, contact your Honeywell sales representative.

### TRADELINE® Models

TRADELINE® models are selected and packaged to provide ease of stocking and handling and also maximum replacement value. TRADELINE® model specifications are as follows:

#### Model:

T4800A makes heating circuit on temperature fall. Single pole, single throw. (See Fig. 2.) Range: 40° to 80°F (5° to 25°C).

#### Type of Switching:

Cool Switch Triac/relay combination.

#### Wiring Connections:

6 in. (150 mm) stranded copper leadwires, suitable for connecting to aluminum wiring when approved special service CO/ALR solderless connectors are used.

#### Electrical Rating:

Noninductive (resistive) rating:  
2.7A minimum (750W @ 240V; 560W @ 208V) to  
16A maximum (3800W @ 240V; 3300W @ 208V)

#### Performance Certification:

16A at 208 or 240 Vac.

#### Performance Specifications:

Precision:  $\pm 1^\circ\text{F}$  (0.5°C) differential with thermistor time constant of 10 seconds.

Accuracy:  $1^\circ\text{F}$  (0.5°C) droop average for range of loads. Conforms to NEMA DC3 standard applied to low voltage thermostats.

#### Setpoint Adjustment:

Control knob on front of thermostat.

#### Sensing Element:

Electronic thermistor.

#### Dimensions:

See Fig. 1.

#### Red LED Indicator:

Lights as heat comes on.

#### Mounting Means:

Mount directly on vertical 2 x 4 inch outlet box, or on 4 x 4 inch outlet box with ring adapter (ordered separately).

#### Approvals:

CSA certified: LR1322.

Underwriters Laboratories Inc. Listed: File No. E47434, Guide No. XAPX.

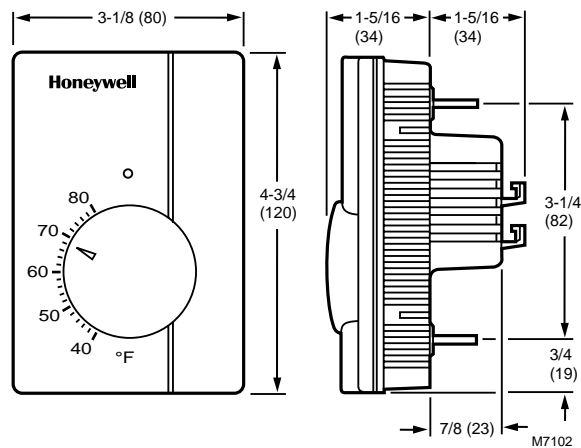


Fig. 1. Nominal dimensions in in. (mm).

## ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number or specify

1. Model number
2. Voltage.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Home and Building Control Sales Office (check white pages of your phone directory).
2. Home and Building Control Customer Logistics  
Honeywell Inc., 1885 Douglas Drive North  
Minneapolis, Minnesota 55422-4386 (612) 951-1000

In Canada—Honeywell Limited/Honeywell Limitée, 155 Gordon Baker Road, North York, Ontario M2H 2C9.

International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.



## RECYCLING NOTICE

If this control is replacing a control that contains mercury in a sealed tube, do *not* place your old control in the trash.

Contact your local waste management authority for instructions regarding recycling and the proper disposal of your old control.

If you have any questions, call Honeywell Inc. at 1-800-468-1502.

## INSTALLATION

### When Installing this Product...

1. Read these instructions carefully. Failure to follow these instructions could damage the product or cause a hazardous condition.
2. Check the ratings on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.



## WARNING

**HIGH VOLTAGE CONTROL.  
ELECTRICAL SHOCK HAZARD.**

Follow local codes and ordinances when installing this thermostat. Improper handling may cause serious injury or death.



## CAUTION

1. Disconnect power supply to prevent electrical shock or equipment damage.
2. If connecting with aluminum conductors, use CO/ALR solderless wire connectors to avoid fire hazard.

### Location

Install a vertical outlet box, which is used to mount the thermostat on, about 5 ft (1.5m) above the floor in an area with good air circulation at room temperature.

- Do not install the thermostat where it may be affected by:
- drafts or dead spots behind doors, in corners or under cabinets.
  - hot air from convectors.
  - radiant heat from sun or appliances.
  - concealed pipes and chimneys.
  - unheated (uncooled) areas such as an outside wall behind the thermostat.

### Wiring and Mounting



## CAUTION

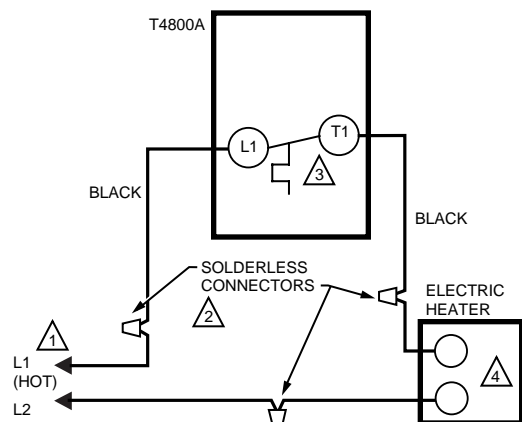
1. Handle the thermostat with care to avoid damage.
2. Use a separate limit control in the heating appliance.
3. Do not short 208 or 240 volt supply wires with thermostat. This will damage the T4800 and void the warranty.

### Replacement Applications

1. Disconnect power to the thermostat to prevent electrical shock or equipment damage. All wiring must comply with local electrical codes and ordinances.
2. Remove the old thermostat from the wall, taking care not to damage the wiring insulation.
3. Check the old wire insulation for cracks, nicks or fraying. Apply approved electrical tape to insulate wires or replace wires as necessary.
4. Carefully remove thermostat cover by gently lifting at top edge with a flathead screwdriver. Using wire connectors approved for No. 12 wires, make line voltage connections directly to leadwires on thermostat. See Fig. 2 for typical wiring connections. Be sure all wiring connections are tight.
5. Prebend and push solid wires into the outlet box.
6. Secure the thermostat on the outlet box by tightening the two mounting screws. (Rotate control knob to more easily access lower mounting screw.)
7. Snap thermostat cover in place.

### New Applications

1. Disconnect power to the thermostat to prevent electrical shock or equipment damage. All wiring must comply with local electrical codes and ordinances.
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1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
2. USE SPECIAL SERVICE CO/ALR SOLDERLESS CONNECTORS WHEN CONNECTING ALUMINUM CONDUCTORS OR A FIRE HAZARD MAY RESULT.
3. BREAKS HEATING CIRCUIT ON A TEMPERATURE RISE.
4. USE A SEPARATE LIMIT CONTROL IN THE HEATING APPLIANCE.

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Fig. 2. Typical wiring connections for T4800A.

## SETTING AND CHECKOUT

### **IMPORTANT**

*Make sure that all wiring connections are secure before beginning checkout.*

After the thermostat has been installed and powered up, simulate normal operation as follows:

- ① Turn control knob all the way clockwise . LED should light and electric heater should start to warm up.
- ② Turn knob all the way counterclockwise . LED should go off, the power circuit should be broken and electric heater should start to cool.

NOTE: The T4800 has a load-responsive time delay to reduce equipment wear, which makes the mechanical switching differential appear wider, the faster the knob is rotated. This time delay does not affect the thermal operation of the T4800.

- ③ Allow thermostat to operate for several hours to determine appropriate temperature setting. Adjust the setting as necessary, moving the knob only one or two degrees at a time. The precise temperature control of the T4800 allows the user to select a lower temperature setting, which saves energy while maintaining comfort.

## OPERATION

The T4800 Thermostat provides precise temperature control with minimum droop of resistance-rated electric baseboard heating equipment. The T4800 controls room temperature within 1°F (0.5°C) for average baseboard heater loads.

Electric heat thermostats are often affected by the heat generated in the control. Temperature control points may vary or droop 2° to 4°F (1° to 3°C) depending on the load demand. Temperature settings are adjusted to offset this. The T4800 provides precise control with minimum droop. This allows better control of room temperatures from day to night and season to season while saving energy.

The development of this technology was assisted by the electric power industry of the United States under the sponsorship of EPRI, the Electric Power Research Institute.

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