

T6031E-H,J,K Thermostats

PRODUCT DATA



T6031G,H,J,K

T6031E,F

T6031 Thermostats control heating or cooling systems, or act as changeover thermostats.

- T6031E,F models are unit thermostats.
- T6031G,H,J, are changeover thermostats.
- T6031K models are refrigeration thermostats for use in freezers, chillers, and display cases.
- Models with case mount through holes in the back of the case.
- Models without case mount with front or back mounting brackets.
- Enclosed switches resist the effects of dust and moisture.
- Setpoint adjusts with knob or screw on front of thermostat.



SPECIFICATIONS

Models:

T6031E,F,G,H,J,K. See Table 1 and description that follows.

Table 1. Model numbers and description.

| Model Number | Control Range | | Max. Element Temperature | | Differential | | Type of Mounting | Capillary Length | | Bulb Size | |
|--------------|-----------------------|-----------|--------------------------|----|--------------|----|------------------|------------------|-----|-----------------|---------|
| | °F | °C | °F | °C | °F | °C | | ft | m | in. | mm |
| T6031E | 55 to 90 ^a | 13 to 32 | 150 | 66 | 1-1/2 | 1 | enclosed | 5-1/2 | 1.7 | 5/16 x 11-11/16 | 8 X 297 |
| T6031F | 55 to 90 ^a | 13 to 32 | 150 | 66 | 1-1/2 | 1 | front | 5-1/2 | 1.7 | 5/16 x 11-11/16 | 8 X 297 |
| T6031G | 0 to 90 | -18 to 32 | 155 | 68 | 2 | — | back | 6-1/4 | 1.9 | 3/8 x 3 | 10 X 76 |
| T6031 H | 0 to 95 | -18 to 35 | 150 | 66 | 3 | 2 | back | 2 | 0.6 | 3/8 x 3-1/2 | 10 X 89 |
| T6031J | 55 to 85 | 13 to 29 | 205 | 96 | 5 | 3 | enclosed | 5-1/2 | 1.7 | 3/8 x 3 | 10 x 76 |
| T6031K | 15 to 75 | -9 to 24 | 155 | 68 | 5 | 3 | enclosed | 5-1/2 | 1.7 | 3/8 x 3 | 10 x 76 |
| | -20 to 50 | -29 to 10 | | | 2 | 1 | | | | | |

^a Knob marked warmer-cooler.

Models (also refer to Table 1):

- T6031E Unit Thermostat: 1 light duty spdt switch; with base and cover.
- T6031F,G Unit Thermostat: 1 light duty spdt switch; without case.
- T6031G,H Changeover Thermostat: 1 standard spdt switch; without case.
- T6031J Changeover Thermostat: 1 standard spdt switch; with case and cover.
- T6031K Refrigeration Thermostat: 1 standard spdt switch; with case and cover.

Terminals:

8/32 binder-head screws and cup-washers.

Electrical Ratings (A):

| Switches— Refer to Model Used | 120 Vac | | 240 Vac | |
|-------------------------------------|-----------|--------------|-----------|--------------|
| | Full Load | Locked Rotor | Full Load | Locked Rotor |
| Light Duty | 3.2 | 19.2 | 1.6 | 9.6 |
| Standard | 8.0 | 48.0 | 5.1 | 30.6 |

T6031H,J,K: 0.25A at 1/4V to 12 Vdc inductive load.

ORDERING INFORMATION

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

1. Model number
2. Scale range.
3. Mounting bracket on models without case.
4. Optional specifications, if desired.
5. Accessories, if desired.

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

(In Canada—Honeywell Limited/Honeywell Limitee, 740 Ellesmere Road, Scarborough, Ontario M1P2V9)
International sales and service offices in all principal cities of the world.

Mounting Means:

T6031E,J,K: holes in back of case.
 T6031F,G,H: front or back mounting.

Dimensions:

Case: see Fig.1 and 2.
 Models without case, including brackets: see Fig. 3 and 4.

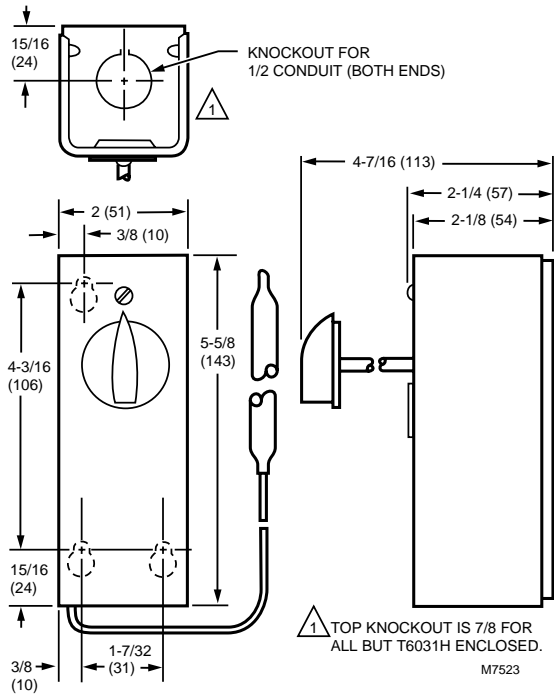


Fig. 1. T6031 mounting dimensions in in. (mm).

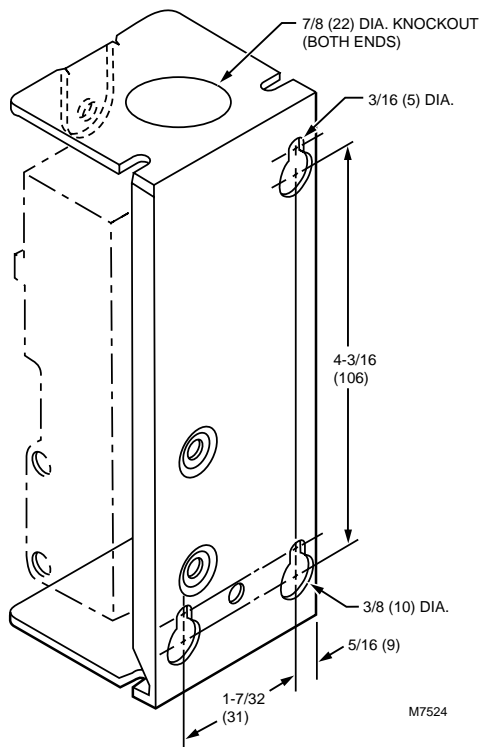


Fig. 2. Case mounting holes in in. (mm).

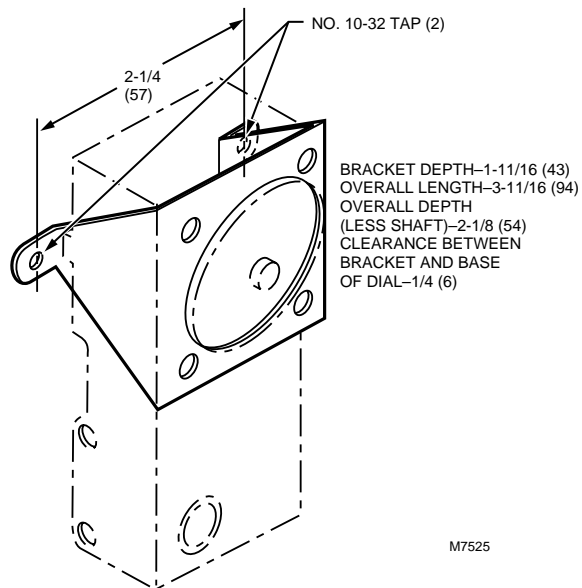


Fig. 3. Front mounting bracket in in. (mm).

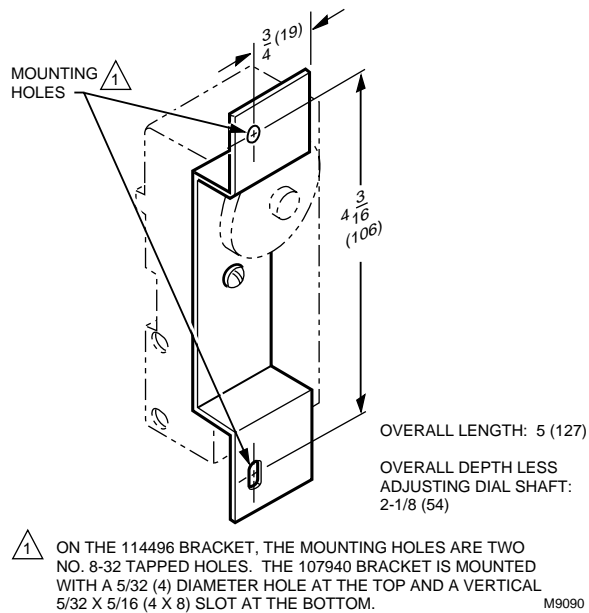


Fig. 4. Back mounting bracket in in. (mm).

Finish:
 Gray.

Underwriters Laboratories Inc. listed:
 T6031F-H: File E4436, Vol. 4, Guide XAPX2;
 T6031E,J: File E4436, Vol. 4, Guide XAPX;
 T6031K: File SA481, Vol. 1, Guide SDFY.

Accessories:
 105900 Mounting Clamp for mounting element to a pipe; for
 T60031G,H,J Changeover Thermostats.

Compression fittings:

| Bulb Size | Brass | Mild Steel | Stainless Steel |
|-----------------------------|-------|------------|-----------------|
| Up to 1/2 in. (127 mm) dia. | 7617M | 7617Y | 7617BE |

Waste nuts: for 1/2 in. NPT opening; 7617BF for 3/4 in. NPT opening.

Immersion well assemblies:

| Bulb Size | Copper | | Stainless Steel | |
|---|-------------|-------------|-----------------|-------------|
| | 1/2 in. NPT | 3/4 in. NPT | 1/2 in. NPT | 3/4 in. NPT |
| 3/8 x 3 in. (9 5 x 76.2 mm) (1-1/2 in. [38.1] insulation) | 121371A | 121371B | 121371E | 121371F |
| (3 in. [76.2 mm] insulation) | 121371L | 121371M | — | — |

For additional information on accessory parts, refer to the TRADELINE® Catalog.

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage product or cause a hazardous condition.
2. Check ratings given in instructions and on product to make sure 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.

CAUTION

Disconnect power supply before beginning installation to prevent electrical shock and equipment damage.

Location and Mounting

T6031 Thermostats mount either vertically or horizontally on a wall or panel. The remote bulb can be located as far from controller as capillary tubing allows. The bulb should be located where it senses the average temperature of the medium to be controlled.

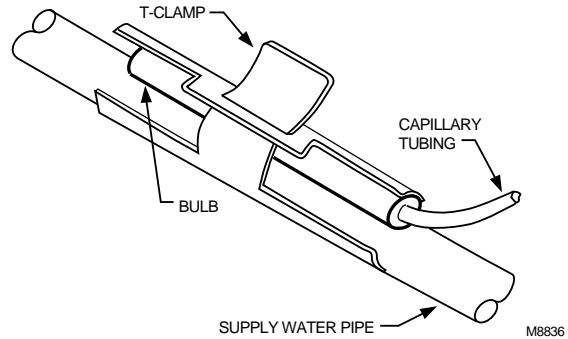


Fig. 5. Bulb strapped to supply water pipe with 105900 T-clamp.

Mounting Sensing Elements

T6031E,G,H models—install bulb in return airflow.
T6031G,H,J models—install bulb in water supply where water of average temperatures circulates around it. The bulb may be strapped to a water pipe using a 105900 Clamp (see Fig. 5) or as follows:

1. Secure controller bulb to pipe with duct hanger wire or metal hose clamps (Fig 6. top).



CAUTION

Do not over tighten clamps to point of distorting sensor bulb. Over tightening clamps will cause a significant shift in bulb calibration

(Steps 2 and 3 are optional and are to be used when large fluctuations in the ambient temperature occur near the pipe)

2. Cover bulb and pipe with foam rubber insulation extending at least 6 in. (152 mm) beyond both ends of bulb (Fig. 6, bottom).
3. Secure foam rubber with duct tape. DO NOT ALLOW DUCT TAPE TO CONTACT PIPE.

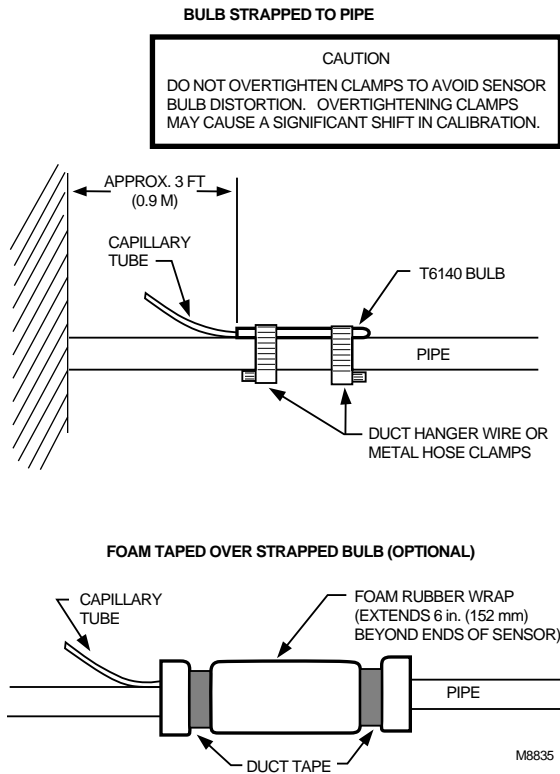


Fig. 6. Strap-on mounting of T6031 bulb on a boiler discharge pipe.

Mounting Controller

Models With Case

1. Loosen the captive mounting screw above the dial on the face of the thermostat and remove cover (On models with adjustment knob, remove knob first by loosening the setscrew.)
2. Fasten case to wall or panel through mounting holes in the back of case with furnished screws. (See Fig.1 and 2.)
3. Run tubing through the most convenient of the four corner notches in case. Do not bend tubing so sharply that flow is restricted. Leave excess tubing coiled near the thermostat.
4. Make wiring connections according to instructions in the WIRING section.
5. Replace cover, careful not to not pinch tubing. Tighten cover mounting screw.

Models Without Case

Front or back mounting brackets are available. See Fig. 3 and 4 for mounting information and dimensions.

WIRING

Disconnect power supply before connecting wiring to prevent electrical shock and equipment damage. All wiring must comply with local codes and ordinances.

When wiring, refer to wiring diagrams furnished with system equipment and to Fig. 7 through 11.

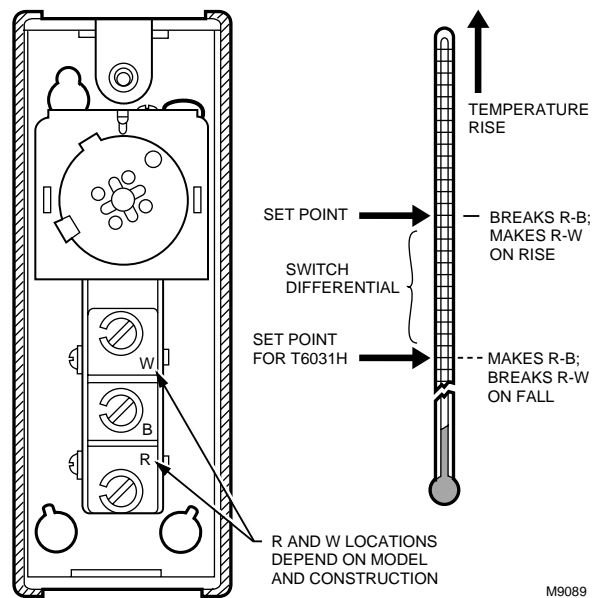


Fig. 7. T6031 switch terminal arrangement and switching.

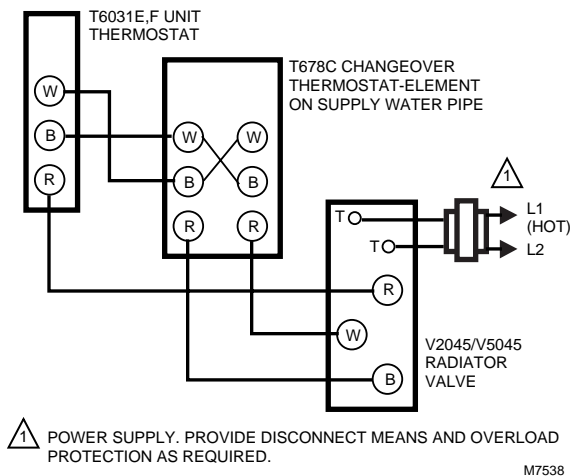


Fig. 8. Typical hookup for T6031E,F with T678C changeover thermostat controlling V2045/V5045 Valve on both heating and cooling cycles.

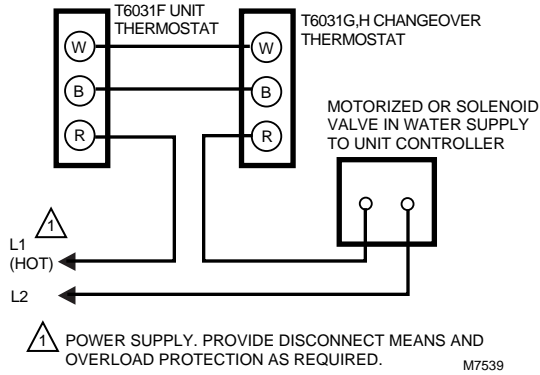


Fig. 9. Typical hookup for T6031F with T6031G,H changeover thermostat controlling N.O. Valve on both heating and cooling cycles.

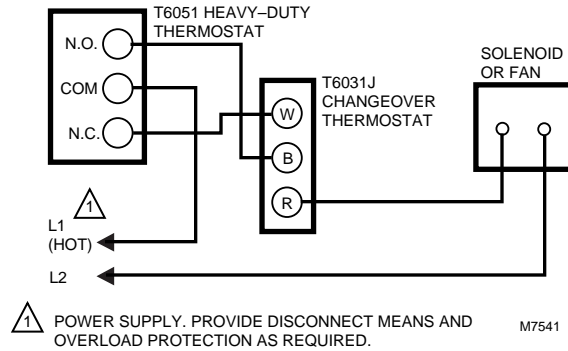


Fig. 11. Typical hookup for T6031J changeover thermostat used with T6051 line voltage thermostat to control N.O. valve or fan on both heating and cooling cycles.

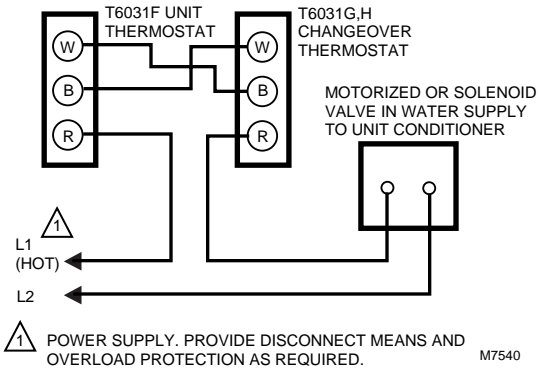


Fig. 10. Typical hookup for T6031F unit thermostat with T6031G,H changeover thermostat controlling motorized or solenoid valve on both heating and cooling cycles.

OPERATION AND CHECKOUT

After the T6031 is installed and wired into the system, check controller action by raising the temperature set point about 10°F (5.6°C) above room temperature. Heating equipment should stop or cooling equipment should begin operation, depending on the application. Lower setpoint below room temperature. Heating equipment should begin operation or cooling equipment should stop, depending on application.

For questions about installation, operation, or checkout of this equipment, contact your distributor or local Honeywell representative.

Honeywell

Home and Building Control

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