

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Temperature Controls

Description

The Dayton models 4PU45, 4PU46 and 4PU47 are low voltage thermostats designed to control heating and/or cooling applications with low voltage controls. The 50 - 90°F temperature range make these ideal comfort control thermostats. For use with self powered 250-750 millivolt generating systems and electric, gas or oil systems equipped with 24 Vac controls.



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Specifications

Model 4PU45- SPST heat only for use on single transformer systems.

Model 4PU46- SPST cool only with fan and system switch for use on single transformer systems.

Model 4PU47- DPST heat/cool with fan and system switch for use on single or dual transformer systems.

Electrical Ratings

Model 4PU45

| | | |
|---------------------|---------------|-----------|
| Voltage | 24-30 | 250-750mv |
| Amperage | 0.1 A - 1.0 A | None |
| Heat anticipator | Adjustable | None |
| Cooling anticipator | None | None |

Model 4PU46

| | | |
|---------------------|---------------|-----------|
| Voltage | 24-30 | 250-750mv |
| Amperage | 0.1 A - 1.0 A | N/A |
| Heat anticipator | N/A | N/A |
| Cooling anticipator | Fixed | N/A |

Model 4PU47

| | | |
|---------------------|---------------|-----------|
| Voltage | 24-30 | 250-750mv |
| Amperage | 0.1 A - 1.0 A | None |
| Heat anticipator | Adjustable | None |
| Cooling anticipator | Fixed | None |

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Selecting Thermostat Location

For accurate temperature control and comfort, selecting the proper location is very important. If this is a new installation, the guidelines listed herein should be followed. When replacing an existing thermostat, install the new thermostat in the same location unless these instructions suggest otherwise.

1. Locate the thermostat on an inside wall of a frequently occupied area (i.e.: family room) about 4-5 feet above the floor.
2. Do not install the thermostat near unusual sources of 'heat', such as direct sunlight, near a radiator, duct vent, lamp, or fireplace.
3. Do not install the thermostat where there are unusual sources of 'cooling', such as near doors, windows, stairways, or duct vents.
4. Do not install the thermostat where air circulation is poor, such as in corners, alcoves, or behind a door.

General Safety Information

1. Make certain that the rating of the thermostat conform to the power sources voltage and to the load(s) amperage being controlled. Loads exceeding the rating of the thermostat should be handled with a suitably rated relay or motor starter.
2. Disconnect all power before installing or servicing this product. If the power disconnect is out of sight, lock it in the open position and tag it to prevent unexpected energization of power. Failure to do so could result in fatal electrical shock.

⚠ WARNING Do not depend upon the thermostat as the sole means of disconnecting power when installing or servicing the product it is controlling. Always disconnect power at the main circuit breaker as described above. Failure to do so may result in fatal electric shock.

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Dayton® Temperature Controls

ENGLISH

Installing New Thermostat

1. Shut off electricity to your heating system by removing the associated fuse or turning off the circuit breaker.
2. Hold the thermostat in one hand. Carefully remove the cover from the thermostat base by pulling up gently.
3. Position thermostat base on wall and carefully feed wires through openings. The thermostat can be mounted in either the vertical or horizontal position. If it is to be mounted in the horizontal position, the adjustment lever must be on the right hand side. If it is to be mounted in the vertical position, the adjustment lever must be on the bottom.
4. After you have finished locating the thermostat, mark the placement of the two mounting holes. Set the thermostat base aside.
5. If you are mounting the thermostat on plaster board or another soft material, use plastic anchors. Use a 3/16" drill to make two holes where the mounting holes have been marked. Insert the anchors into the holes.
6. Feed the wires back through the base, then mount with the supplied screws.
7. Connect wires to their associated marked terminals. (See chart if system and thermostat wires do not match).
8. Check all wires to be sure that adjacent wires are not touching.
9. Replace cover onto base by snapping it into place.
10. Make sure the system switch is in the off position until you are ready to check your wiring.

Wiring Chart

| Old Thermostat | New Label | Description |
|--------------------|-----------|---------------------------------------|
| M, 4, RH, R5, or S | RH, or R | Transformer Hot for Heat* |
| V, or RC | RC, or R | Transformer Hot for Cool* |
| H, W, or 4 | W | Heating Control (valve, relay, etc.) |
| Y, or Y6 | Y | Cooling Control (valve, relay, etc.) |
| F, or G | G | Fan Control (see internal fan option) |

*For separate RH and RC wires, you must remove the factory installed Jumper marked J2.

Internal Fan Option (4PU47 Only)

For gas or oil heating systems, place the J1 jumper on the G/O pins to allow natural system delay in the fan operation during the heating cycle heat mode.

If the heating system requires the fan to come on immediately with the heat (i.e.: electric heating systems), then place the J1 jumper on the E pins.

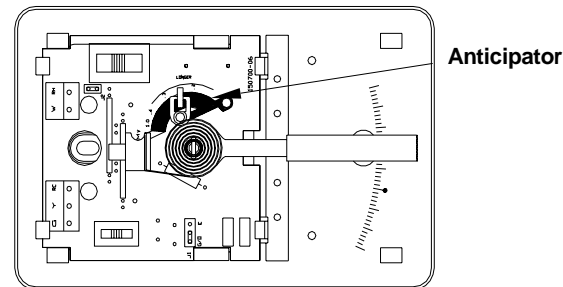
G/O- Fan turned on by the heating system.

E- Fan turned on by thermostat in the heat mode.

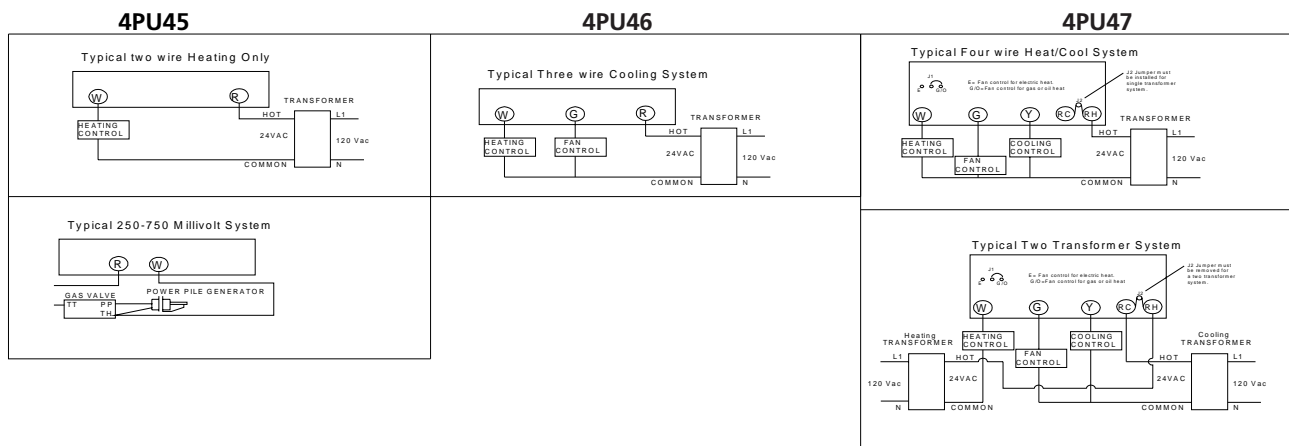
Setting the Heat Anticipator (4PU45 & 4PU47)

To help provide accurate control of furnace heat cycles, you must adjust the anticipator setting on the thermostat to match the current rating of the system control device. For millivolt applications the anticipator setting must be placed over the MV. The control device amp draw can be found in the furnace

owners manual. You can also find the information on the control device. This is located behind the furnace cover. If the current rating is still unavailable, connect an amp meter to the R and W terminals and run the furnace. The reading can then be used as the anticipator setting.

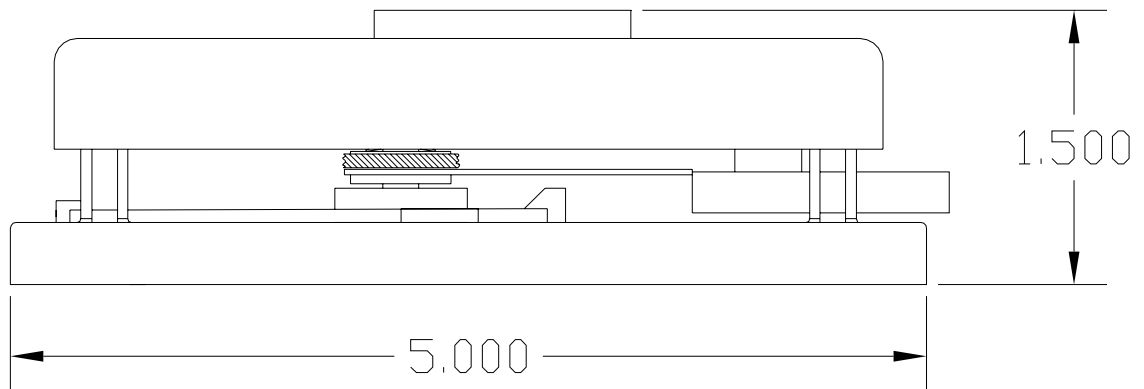


WIRING DIAGRAMS

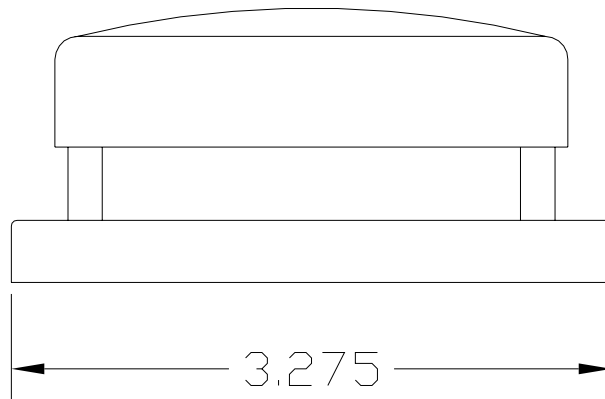


Dayton® Temperature Controls

Dimensions



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Dayton® Temperature Controls

DAYTON ONE-YEAR LIMITED WARRANTY. Dayton Temperature Controls, Models covered in this manual, are warranted by Dayton Electric Mfg. Co. (Dayton) to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton designates, shipping cost prepaid, will be, as the exclusive remedy, repaired or replaced at Dayton's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.

LIMITATION OF LIABILITY. To the extent allowable under applicable law, Dayton's liability for consequential and incidental damages is expressly disclaimed. Dayton's liability in all events is limited to and shall not exceed the purchase price paid.

WARRANTY DISCLAIMER. Dayton has made a diligent effort to provide product information and illustrate the products in this literature accurately; however, such illustrations are sole purpose of product identification, and does not express or imply a warranty that products are MERCHANTABLE, or FIT FOR A PARTICULAR PURPOSE, or that the product will necessarily conform to the illustrations or descriptions. Except as provided below, no warranty or affirmation of fact, expressed or implied, other than as stated in the "LIMITED WARRANTY" above is made or authorized by Dayton.

PRODUCT SUITABILITY. Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Dayton attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, review the product applications, and all applicable national and local codes and regulations, and be sure that the product installation and use will comply with them.

Certain aspects of disclaimers are not applicable to consumer products; e.g., (a) some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you; (b) also, some jurisdictions do not allow a limitation on how long an implied warranty lasts, consequently the above limitation may not apply to you; and (c) by law, during the period of this Limited Warranty, any implied warranties of implied merchantability or fitness for a particular purpose applicable to consumer products purchased by consumers, may not be excluded or otherwise disclaimed.

PROMPT DISPOSITION. Dayton will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first call or write dealer from whom it was originally purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Dayton at address below, giving dealers name, address, date, and number of dealer's invoice, and describing the nature of the defect. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.

Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St. Niles, Illinois 60714 U.S.A.