

Thermostats & Controls



Battery-powered or
24v-powered



24v Non-Digital



DualTemp Floor Sensor



DualTemp Thermostats — non-programmable heat-only thermostats sense air, floor, or both air and floor.

| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|---------------------------------------|-----|---------|----------|-----------|
| DualTemp, Air/Floor, Digital, 24V | 1 | P-3285 | 81009395 | 1 |
| DualTemp, Air/Floor, Digital, Battery | 1 | P-2377 | 81005259 | 1 |
| DualTemp, Air/Floor, Non-Digital, 24V | 1 | P-2395 | 81005258 | 1 |
| Floor Sensor, DualTemp, 10k | 1 | 500802 | 81000505 | 1 |

The Digital **DualTemp** is a heat-only thermostat with the ability to monitor (1) air temperature, (2) floor temperature (with optional sensor), or (3) a combination of air and floor temperatures (with optional sensor). In the air mode, set the desired air temperature with a minimum or maximum floor temperature. In floor mode, the DualTemp is set to maintain a desired floor temperature with a min/max floor temperature range. Simply select the proper internal settings to conform to the needs of the project. Order the floor sensor separately. Air and floor temperature are adjustable from 41° to 99°.

The Digital **DualTemp** also has a manual 7° temperature setback feature, and the ability to connect to Watts Radiant's Zone Valve/Actuator controller with the Master Timer. The Master Timer can control multiple thermostats and two set-back schedules within the home. When controlled by a Master Timer, a 7° F setback can be programmed.

The 24v **DualTemp** is a three-wire thermostat. It must be powered from the same external 24-VAC transformer that powers the relay coils. It can control a 5-VA 24-VAC actuator directly, or a pump through an external relay. The battery-powered DualTemp is powered by 2 AAA batteries, so only two thermostat wires are needed. It can control a 5-VA, 24-VAC actuator directly, or a pump through an external relay.

The Non Digital **DualTemp** adjusts the desired air temperature and the inside potentiometer adjusts the optional minimum or maximum floor temperature. The air temperature is adjustable from 41° to 86° F (5° to 30° C). The inside potentiometer is adjustable from 50° to 104° F (10° to 40° C).

Programmable Thermostat — fully programmable heat-only, battery-powered thermostat senses air.

| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|--|-----|---------|----------|-----------|
| Thermostat, Digital, Programmable, Air | 1 | P-2393 | 81005260 | 1 |

Our **Programmable Thermostat** is a heat-only, air-sensing-only thermostat. It features simple, intuitive daily programming using only five keys: up or down, right or left, and OK that can be locked to prevent unwanted accidental access. To make programming even easier, there are nine built-in programs and four user-changeable programs. There is also an easy-to-read LCD display showing time, temperature, and a bar graph showing current programming. There is also a manual override and vacation function to maintain temperature.

Three (AA) batteries are required for power. The two-wire thermostat can switch up to 8A, but an external relay should be used to turn on pumps and circulators. For maximum flexibility, this thermostat features both "NO" and "NC" contacts.

Please see HeatWeave section for line voltage thermostats.

Zone Valve/Actuator Controls

Master Valve/Actuator Controls

| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|--|-----|---------|----------|-----------|
| Valve/Actuator Control, Master, 4-zone | 1 | P-2329 | 81005192 | 2 |
| Valve/Actuator Control, Master, 6-zone | 1 | P-2331 | 81005190 | 2 |
| 60 VA Transformer | 1 | P-3231 | 81009509 | 2 |



Our **Master Valve/Actuator** Controls are intended to control Watts Radiant Electrothermal Actuators, or any 24-VAC actuator or valve that draws 5 VA or less. The number of actuators controlled depends on the separate 24-VAC external transformer (not included, order separately) powering the system. An external 40-VA 24-VAC transformer can control 12 actuators maximum. Up to 18 actuators maximum can be controlled with a 60-VA 24-VAC transformer. Order Slave Valve/Actuator Controls separate for additional zones.

Master Controls are fused and include two end switches, each rated at 8A. Actuators are switched by triacs, for quiet, safe, reliable electronic operation. Mounting is by DIN rail or surface mount to a wall. The 60 VA transformer is surface mount.

Slave Valve/Actuator Controls — connect to Master Controls to expand the number of zones.

4-zone Slave Valve/Actuator



| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|---------------------------------------|-----|---------|----------|-----------|
| Valve/Actuator Control, Slave, 4-zone | 1 | P-2330 | 81005246 | 2 |
| Valve/Actuator Control, Slave, 6-zone | 1 | P-2332 | 81005191 | 2 |

Valve/Actuator Slave Controls add extra zone capability to 4-zone or 6-zone Master Control Units. Like the Master Controls, they are intended to control Watts Radiant Electrothermal Actuators, or any 24-VAC actuator that draws 5 VA or less. The number of actuators controlled depends on the 24-VAC external transformer (not supplied) powering the system.

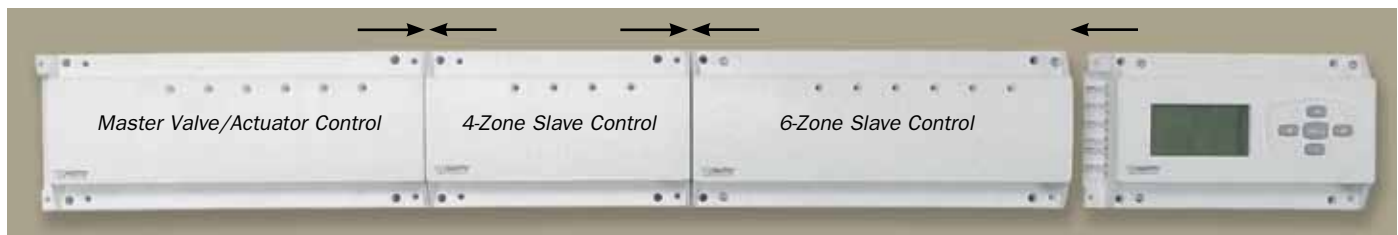
Up to two additional 4-zone or 6-zone Slave Controls can be added to a Master Control. No field wiring is required between — Masters and Slaves simply plug into each other (see below).

Each additional 40-VA 24-VAC transformer capacity can control an extra 12 actuators maximum; 18 actuators maximum with an additional 60-VA 24-VAC transformer. Actuators are switched by triacs, for safe, quiet, reliable electronic operation. Mounting is by DIN rail or surface mount to a wall.



6-zone Slave Valve/Actuator

“Plug-and-Play” Zone Valve/Actuator Controls



Master Valve/Actuator Control unit mated to 4-Zone and 6-Zone Slave Control units with an optional Timer.

Thermostat Timer Control — allows central thermostat setback temperature.



| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|-------------------------|-----|---------|----------|-----------|
| Master Thermostat Timer | 1 | P-2101 | 81005266 | 1 |

An optional **Master Thermostat Timer** is available for additional control of Watts Radiant non-programmable thermostats. It plugs into the end of either a Watts Radiant Master or optional Slave Zone Valve/Actuator Control. The Master Timer allows the user to initiate temperature “set-back” for selected zones using Watts Radiant non-programmable thermostats without having to manually setback each thermostat or install programmable thermostats in each zone. With one Timer, all selected zones are set back at the designated time(s). The setback is almost 4 °F (2 °C). The setback schedule is easily programmed, using one of the nine built-in programs or one program that a user can customize. The Timer also allows two different setback schedules — one schedule per zone. Zones may either be on an “A” schedule or a “B” schedule, allowing different setback schedules to be employed for different areas. The Timer either mounts to DIN rail or surface mounts to a wall.

Snow Melting Controls



Pole-mounted Snow Melting Detector — a simple and economical snow switch for remote mounting.

| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|--|-----|---------|----------|-----------|
| Snow Melt Detector, Pole-mount, LCD-1H | 1 | 983047 | 81000764 | 2 |

The **LCD-1H Automatic Snow Switch** saves energy by providing snow melting only during snow fall and for five hours after snowfall stops. Snow melting occurs at temperature below 38° F (3.3° C) during precipitation and for five hours after snow stops to complete melting and dry the pavement. The LCD-1H Snow Switch operates from 24 volts AC with maximum power consumption of 2.5 watts. A single, isolated, normally open relay contact with a 5-A rating is provided for control purposes. The LCD-1H Snow Switch mounts on 1/2" conduit in an elevated, unprotected, isolated location that is exposed to snow fall.

HSC-5 Slab-mounted Snow Melting Detector — a simple and economical snow switch for mounting a snow melt slab.



| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|--|-----|---------|----------|-----------|
| HSC-5 Slab-mounted Snow Melting Detector | 1 | 983046 | 81000763 | 15 |

This **HSC-5 Snow Melting Slab Detector** is pavement mounted and senses actual pavement conditions. Microprocessor control effectively eliminates ice bridging, eliminating the need for a separate temperature sensor. The HSC-5 starts snow/ice melting at temperatures below 38° F (3.3° C) when precipitation is present. When the moisture element has dried, the HSC-5 sensor continues to operate the systems for a fixed time of 6 hours. The HSC-5 provides a low-amperage output relay contact. The heavy-duty machined brass "socket" housing provides optimum protection and allows the sensor to be removed and replaced, if needed. The protective cover can be installed during the off-season or during sensor repair.



Snow Melting Plaque — Permanent plaque to indicate where a snow melting system has been installed.

| DESCRIPTION | QTY | MODEL # | ORDER # | WT. (lbs) |
|---------------------|-----|----------|----------|-----------|
| Snow Melting Plaque | 1 | 100123HW | 81012651 | 2 |