SunStat® Command

Installation and Operation Manual

Model# 108001, 108002, 108003, 108004, 108005

Features:
- Floor temperature control with optional air sensing
- Touchscreen display with multiple color themes
- Thin profile with removable/replaceable beauty ring
- Easy to use programs and scheduling
- Home automation system tie-in
- Comprehensive help screens
- Three-Year warranty

SunTouch®

Please be aware local codes may require this control to be installed or connected by an electrician.

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Read this manual BEFORE using this equipment. Failure to read and follow all safety and operation information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this manual for future reference.

Important Safety Information

This is a safety-alert symbol. The safety-alert symbol means “CAUTION: Read this safety information.”

When you see this symbol, look for a cautionary signal word such as Caution or Warning. This symbol alerts you to potential hazards that could result in death or serious injury. Do not proceed with the installation.

This pictorial alerts you to electricity, electrocution, and shock hazards.

This symbol identifies hazards which, if not avoided, could result in death or serious injury.

This symbol identifies hazards which, if not avoided, could result in minor or moderate injury.

This symbol identifies practices, actions, or failures to act, which could result in property damage or damage to the equipment.

WARNING
To prevent the risk of personal injury and/or death, make sure power is not applied to the unit until it is fully installed and ready for final testing. All work must be done with power disconnected and/or the circuit being worked on.

Power Supply
For retrofit installations, cut down drywall and chip out the bottom plate to route wires to control.

SunStat Sensor Installation

- The SunStat sensor can be installed with or without electrical conduit depending on code requirements. Conduit is recommended for added protection against nails and screws.
- Do not place the sensor in the same fire as the power leads to avoid possible interference. Open a separate knock-out in the bottom of the thermostat box. Feed conduit (and conduct, if used through the knock-out) down through the cut-out in the bottom plate, and out into the floor where the heating cables will be installed.
- If the sensor wire needs to be secured to the wall, wait until after the wire and mount are complete and secure.
- Mount the sensor at least 1’ into the heated area, normally where the sensor will be attached to the floor. Be sure to place the sensor exactly between the two of the heating wires. Ensure the sensor wire does not cross over the heat cables.
- Do not locate the sensor outside the heating area or in a gap between heating wires that is wider than the rest of the floor. Do not place the sensor in front of a baseboard heater where it can impair the function of the heat cables. To make sure the sensor tip does not create a high spot in the floor, it may be necessary to chisel a channel into the floor and lay the sensor tip into the channel. Hot glue the tip into place.
- Do not cut the sensor wire or remove the black cable protector. Strip the wire ends to 1/8” long.

Floor Heating Mat or Cable Power Lead Installation

- The shielded power lead can be installed with or without electrical conduit (recommended for added protection against nails or screws), depending on code requirements.
- Remove the pin type cables from the power leads. If electrical conduit is not required by code, install a wire collar to secure the power leads where they enter the floor. Do not route conduit over the heat cables. For multiple power leads (multiple circuits), install a GFCI (ground-fault circuit interrupter) or AFCI (arc-fault circuit interrupter) type circuit breaker may be used, but is not necessary.

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Finishing Thermostat Installation

- Ensure all connections are secure. Carefully press the wires back into the electrical box. Do not use the control to push them.
- Use the included screws to attach the thermostat base to the back of the electrical box. Do not use any screws that are not electrician grade.
- When re-attaching the display front, line up the top edge with the base, then rotate the bottom towards the base. Ensure the pins are not bent when connecting.

See over for operation details.
**Troubleshooting Guide**

Any electrical troubleshooting work should be performed with the power removed from the circuit, unless otherwise noted.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating is displayed, but floors do not feel warm.</td>
<td>Set temperature is too low to feel warm to the touch.</td>
<td>Increase the temperature setting in small increments.</td>
</tr>
<tr>
<td>Heat is on before the scheduled time.</td>
<td>Incorrect or faulty wiring.</td>
<td>Check the floor temperature displayed on the screen. If this temperature does not increase while Heating is displayed, the sensor and power lead wiring need to be checked by a certified electrician.</td>
</tr>
<tr>
<td>The SmartStart feature is enabled.</td>
<td>Increased set temperature but ‘Heating’ is not displayed on the screen.</td>
<td>‘Max’ will display on the screen when you try to adjust a temperature that is limited. Adjust the Floor Max or Room Max settings if they are too low.</td>
</tr>
<tr>
<td>The thermostat is in off mode.</td>
<td>Display is not on.</td>
<td>‘Heating’ only displays when the sensed temperature is lower than the set temperature and heat is actively operating.</td>
</tr>
<tr>
<td>The settings are not readable by the thermostat.</td>
<td>Heat is on before the scheduled time.</td>
<td>Select ‘Load Defaults’ from the Toolbox menu.</td>
</tr>
<tr>
<td>Wiring or sensor are faulty.</td>
<td>Floor sensor error</td>
<td>Have a certified electrician check the wiring and sensor resistance. Replace the sensor if necessary.</td>
</tr>
<tr>
<td>Internal sensor error in thermostat</td>
<td>Room sensor error</td>
<td>Replace the product according to the warranty instructions.</td>
</tr>
</tbody>
</table>

**Limited 3 Year Warranty**

Watts Radiant warrants this control to be free from defect in material and workmanship for a period of 3 (three) years from the date of original purchase from authorized dealers. During this period, Watts Radiant will replace the product for the original cost of the product or Watts Radiant’s option, with charge, if the product is proven defective in normal use. Please return the control to your distributor to begin the warranty process.

This limited warranty does not cover shipping costs. Nor does it cover a product subjected to misuse or accidental damage. This warranty does not cover the cost of installation, diagnosis, repair or replacement, or any material costs or loss of use.

This limited warranty is void of all further warranties, obligations, or liabilities expressed or implied by the company. In no event shall Watts Radiant be liable for consequential or incidental damages resulting from installation of this product. Some states or provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

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**Time Menu**

Set the time and date. Select ‘Options’ to access other settings. Time format can be set to a 12- or 24-hr display. Automatic daylight savings time can be set to Off or On.

**Setup Menu**

- **Floor or Room Maximum**
  - Select floor and room maximum temperatures in the Setup menu. These maximum settings are used to protect temperature-sensitive flooring or prevent space overheating.
  - ‘Max’ displays on the screen when the thermostat is limiting the heat output in accordance with the Floor or Room Max setting.

- **Control**
  - The ‘Control’ setting determines whether the thermostat will operate to maintain a floor temperature, or the room temperature.

- **Away Settings**
  - In the Setup menu, the Floor Away or Room Away temperature can be selected, or set to Off (the default).
  - A home automation system can enable and disable the Away temperature settings.

**Display Menu**

- **By default, the thermostat includes one weekly program, a Saturday program and a Sunday program.**
- **Press ➔ to switch between programs.**
- **To edit the time or temperature for a wake, leave, return, or sleep event, touch the display time or temperature. Choose ‘Skip’ to not use an event.**
- **To divide the schedule by a different grouping of days, select ‘New Program’. You will be prompted to OK deleting the current set of programs.**
- **Select days to group together in the new programs.**
- **Every day of the week requires selection on it’s own within a group before exiting the setting programs.**

**Toolbox Menu**

- **Error**
  - If ‘error’ is currently an error, it will display as the first item.
- **Heat Hours**
  - Displays the heating duration by day or month.
- **Room Offset**
  - This feature can offset operation to account for over or under heating present at the sensor location.

**Software Version**

- Displays product software version.

**Load Defaults**

- Select ‘Yes’ to reload the factory default settings.