Installation, Operation & Application Guide

Package Contents/Tools Required


To Remove Thermostat

ELECTRICAL SHOCK HAZARD – Turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position before removing the existing thermostat.

To Install Thermostat

1. Shunt with 3/16” bit, hammer, screwdriver.

Important Safety Information

WARNING! Always turn off the power at the main supply before installing, cleaning, servicing or removing the thermostat.

• This thermostat is for 24VAC applications only; do not use it over voltage or 24VAC/DC.
• Do not short across terminals of gas valve or system control to test operation: this will damage your system and void your warranty.
• All wiring must conform to local and national electrical and building codes.

Wiring Diagram

Two-Stage Heat/Two-Stage Cool, 7-Day Programmable (part No. 668750301)

MicroTech III Unit Control Board

Low Voltage Terminal Strip (Circuit 1)

24 VAC Common

Fan On

Cool 1

Cool 2

Heat 1

Heat 2

Alarm Output

24 VAC A

Thermostat Terminals

C – 24 VAC VAC/0

W1 – 24 VAC VAC/0

Y2 – 24 VAC VAC/0

G – Fan

Note: Includes thermostat and Wall Plate.

Terminal Designator Descriptions

G – 24 VAC VAC/0

W1 – 24 VAC VAC/0

Y2 – 24 VAC VAC/0

Heat 1

Heat 2

G

Fan

Cooling

Heating

Configuration Mode

The configuration mode is used to set the SC3801 to match your heating/cooling system. The SC3801 functions with pump, condensing, gas, or electric heating systems. The configuration menu is for automatically setting the SC3801 to match your system. The button to edit the selected configuration item will be highlighted. The button to select will be displayed.

Configuration Mode Settings

The list of configuration settings are as follows:

1. Heat Pump – Set the “Heat Pump” mode to “ON” or “OFF”.

2. Fan Off Delay – (0-240 seconds) – Set the delay time in minutes for the auxiliary heat to be locked out after a call for heat.

3. Maximum Heat Setpoint (45°F to 90°F) (7°C to 32°C) – Set the maximum heat set temperature selected in Step 17.

4. Auxiliary Delay (ON) – (0-30 minutes) – For heat pump systems only. Set the delay time in minutes for the auxiliary heat to be locked out after a call for heat.

5. Status indicator (0, 1, 2) – Choose when status indicator LED (green, red, and orange) are satisfied simultaneously.

6. Maximum run cycles allowed per hour (d, 2-6). – This will allow you to the maximum run cycles allowed per hour.

7. Fan Off Delay – (0-240 seconds) – Time fan is delayed turning off after call for heat. For no delay, set to 0.

8. Heat Pump Delay – (0-30 minutes) – For heat pump systems only. Set the delay time in minutes for the auxiliary heat to be locked out after a call for heat.

9. Auxiliary Delay (ON) – (0-30 minutes) – For heat pump systems only. Set the delay time in minutes for the auxiliary heat to be locked out after a call for heat.

12. Fan On Delay – (0-240 seconds) – Time fan is delayed turning off at start of cold cycle. For no delay, set to 0.

13. Status indicator (0, 1, 2) – Choose when status indicator LED (green, red, and orange) are satisfied simultaneously.

14. Auxiliary Delay (ON) – (0-30 minutes) – For heat pump systems only. Set the delay time in minutes for the auxiliary heat to be locked out after a call for heat.

15. Maximum heat set temperature (70°F to 90°F) (21°C to 32°C) – This will allow you to maximum heat set temperature.

16. Lockout (OFF to ON): COOL-HEAT – Set the number of seconds during which the thermostat is incorrect or not operating. COOL-HEAT indicates lockout adjustment of the set temperature and the existing thermostat. If the lockout temperature is selected in Step 1, then the minimum cool set temperature selected in Step 1.

17. Fan Off Delay – (0-240 seconds) – Time fan is delayed turning off after call for heat.

18. Maximum run cycles allowed per hour (d, 2-6). – This will allow you to the maximum run cycles allowed per hour.

19. Room Temperature Offset (0°F to 9°F) (0°C to 5°C) – Adjust to calibrate displayed room temperature to match actual room temperature.

Testing the Thermostat

Once the thermostat is installed, it should be thoroughly tested.

COOL Test

1. Press the mode button until cold mode is displayed.

2. Adjust set temperature so it is 5 degrees below room temperature.

3. Heat thermostat to 95°F (35°C).

4. Adjust the set temperature 2 degrees above the room temperature and the AC will not come on within a few seconds.

Note: There is a four minute time delay to protect the compressor with any defrost. If the thermostat times out, press the Cool button four times.

Heat Test

1. Press the mode button until heat mode is displayed.

2. Adjust the set temperature so it is 5 degrees above the room temperature.

3. Heat thermostat to 90°F (32°C).

4. Adjust the set temperature 2 degrees below the room temperature and the heat will turn off. There may be a fan delay on your system.
**Mode of Operation**

The Daikin Programmable Thermostat is an auto-changing, fan stage heat, two stage cool thermostat.

- **Setting the Time and Day of the Week**
  
  The time and day of the week must be set for your program schedule to operate correctly.
  
  1. Verify thermostat is in non-programmable mode (use the 3 button to exit prog mode).
  2. Press and release “Control” until OFF mode displays.

**Operating Modes**

- **Programming**
  
  **Program Overview**
  
  The Daikin Programmable Thermostat has four periods (MORN, DAY, EVE, NITE) that are customizable for each day of the week. Each period will have a start time, heat temperature, cool temperature and programmable fan. The thermostat monitors the day and time, and maintains the specific conditions you have chosen for each period in your program.

  1. Verify thermostat is in non-programmable mode (use the 3 button to exit prog mode).
  2. Press and release “Control” until OFF mode displays.
  3. Press the “4” button for 2 seconds.
  4. The sun button blinks.
  5. The display shows “Day 1”.
  6. Press the “4” button twice.
  7. Press the “4” button to change the day you want to program (MORN, DAY, EVE, NITE).
  8. Press the “4” button to advance to the next screen.

**Cool Mode**

- In this mode, the thermostat controls the heating system.

**Heat Mode**

- In this mode, the thermostat controls the cooling system.

**Cool and Heat Mode**

- The thermostat controls the heating and cooling systems, automatically changing over from one to the other as required.

**Program Mode**

- In this mode, the program function is on, and the thermostat will automatically be controlled by the program setup. Program mode can function with Heat mode, Cool mode, Heat and Cool mode or OFF mode (for Programmable fan option only).

- Press the “4” button to enter and exit program mode.

- Press the “4” button to enter and exit program mode.

**Simulation Programming**

- Simplest® programming is a convenient method of programming the thermostat. Once the entire Monday (Day 1) schedule is set, Simplest® programming will copy the Monday schedule to every day of the week.

- After the complete Monday schedule is set (see Programming), you are at the Day 2 screen.

  1. Press the “4” button once to enter Day 2.
  2. Press the “4” button to enter and exit program mode.

**Program Mode Hold**

- The program schedule can be overridden by changing the set temperature (UP or DOWN). After 2 hours, the thermostat will automatically return to the program schedule.

  1. Press the “2” button to advance to the next screen.

**Setting up for Simplest Programming**

- Simplest® programming is a convenient method of programming the thermostat. Once the entire Monday (Day 1) schedule is set, Simplest® programming will copy the Monday schedule to every day of the week.

- After the complete Monday schedule is set (see Programming), you are at the Day 2 screen.

  1. Press the “4” button once to enter Day 2.
  2. Press the “4” button to enter and exit program mode.

**Lockout Feature**

- The Daikin Programmable Thermostat has a lockout feature as the mode cannot be changed and the settings cannot be adjusted. Select the appropriate lockout from Configuration Mode Settings. Step 16 of this guide.

- To activate the LOC feature:
  1. Press the “4” button to enter and exit program mode.
  2. Press and release “Control” until OFF mode displays.

Note: Press the “4” button for 2 seconds to lock values in memory or press the “4” button once to enter program mode.

**Factory Preprogramming**

- Use the following personal program schedule to record your settings:

**Personal Program Schedule**

**Troubleshooting**

- **Symptom**
  
  - Check for 24 VAC/VDC at thermostat, display a blinks when 24 VAC/VDC is not present.

- **Remedy**
  
  - Every wire is correct: check electric heat setup configuration (see “Configuration Mode”).

- **Symptom**
  
  - Program schedule does not follow proper order or one of the frequencies.

- **Remedy**
  
  - Check “OK” button while programming in setting to check settings in configuration (see “Configuration Mode”).

- **Symptom**
  
  - Room temperature is incorrect.

- **Remedy**
  
  - Check wall hole in plugged with putty or insulation, check wall wiring to return sensor to correct temperature.

- **Symptom**
  
  - Program schedule is not followed.

- **Remedy**
  
  - Check configuration mode settings.

**Residential Services**

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