



Installation Instructions

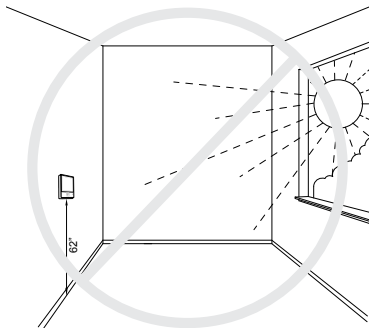
The UDG-4999 thermostat is an “all-in-one” programmable thermostat for electric in-floor heating control.

PRECAUTIONS

- Turn off the power to the heating system at the main power panel to avoid electrical shock.
- Install in compliance with the National and/or Local Electrical Code. The UDG-4999 thermostat is equipped with a ground fault circuit interrupter (GFCI, Class A), which requires that the line and load be isolated from each other for correct operation.
- The resistive load must not exceed 15A (1800 W at 120 VAC, 3120 W at 208 VAC, 3600 W at 240 VAC).

1. LOCATION

Locate the thermostat on the wall with free air circulation about 62” (1.6m) above the floor. Do not mount thermostat in direct sunlight. Refer to Detail 1.

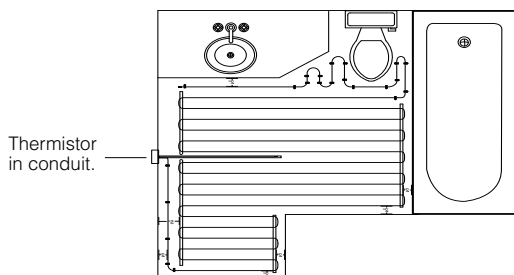


Detail 1. Do not mount thermostat in direct sunlight.

2. INSTALLING THE THERMISTOR IN THE FLOOR

The UDG-4999 thermistor is used for temperature regulation of in-floor heating systems. Install the thermistor in a piece of 1/2” thin walled metal conduit, and place between heating cable runs. Refer to Detail 2.

If required, the thermistor cable can be extended up to 328’ (100m).



Detail 2. Install thermistor between two cable runs.

UDG-4999 THERMOSTAT

3. THERMOSTAT CONNECTION

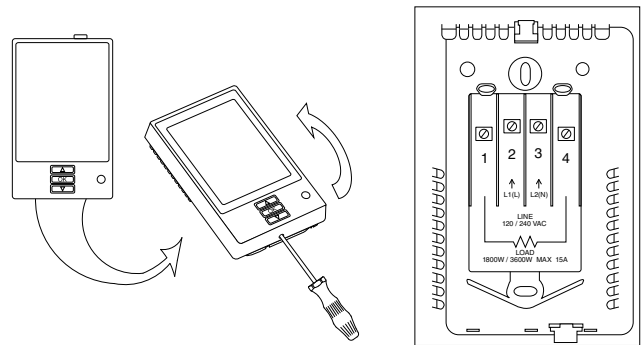
Incoming Power Wiring

Delivers power from the service panel (breaker panel or fuse box) to the UDG-4999 thermostat. Connect line voltage wiring to the terminals (marked L1 and L2).

Cold Lead Wiring

Delivers power from the UDG-4999 thermostat to the heating cable. Connect cold lead wiring to the load terminals (marked load and 15A).

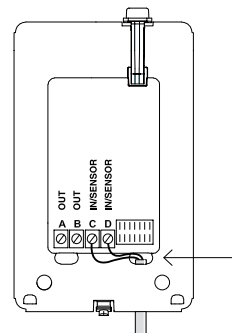
1. Remove cover (open lock with a Phillips head screwdriver).
2. Connect wiring according to the directions above and diagram on back of UDG-4999. Refer to Detail 3.



Detail 3. Remove cover and connect wiring.

4. THERMISTOR CONNECTION

Bring thermistor wire through the slot and connect to terminals marked “IN/SENSOR”, terminals C and D. Refer to Detail 4.



Detail 4. UDG-4999 thermistor connection.

5. MOUNTING THE THERMOSTAT

Mount the UDG-4999 in the junction box, located on the wall.

Carefully replace the front cover by first positioning its upper edge and then clicking it into place.

PROGRAMMING

The thermostat will automatically start up in the menu for setting time and day. Please refer to the User's Manual for further programming instructions.

GFCI TEST

GFCI test can only be performed while the thermostat is calling for heat.

1. Adjust the set-point temperature until the heating symbol (⌘) appears. Use the "UP" (Δ) button, to increase the heating demand and then press the "OK" button. Wait 10 seconds to allow the thermostat to adjust to the new set-point temperature.
2. Press the "TEST" button. The test is successful if the red light in the "TEST" button lights up and "GROUND FAULT" is shown on the display.
3. Press the "STANDBY/RESET" button to reset the GFCI. The red light should go out and the display returns to normal appearance. Press the "DOWN" (∇) button to return to the original temperature setting.

If the test fails, check the heating cable and thermostat.

The GFCI test should be performed monthly.

SENSOR FAULT LOCATION

If the thermistor is disconnected or short-circuited, the heating system is switched off. The thermistor can be checked according to the resistance table.

Sensor Resistance Table		
Temp. (°C)	Temp. (°F)	Value (ohm)
-10	-14	64000
0	32	38000
10	50	23300
20	68	14800
30	86	9700

ERROR CODES

E0: Internal error. The thermostat must be replaced.
E2: External sensor short-circuited or disconnected.

UL LISTED FOR THE US AND CANADA

According to the following standards:

GFCI: UL 943 4th ed.
CSA C22.2 No.144.1-06
Thermostat: UL 873
CSA C22.2 No. 24
UL file number: E157297

UDG-4999 SPECIFICATIONS

Supply: 120-240 VAC 50/60 Hz
Load: 15 amps max. (resistive load)
Power: Maximum 1,800 W, 120 VAC
Maximum 3,120 W, 208 VAC
Maximum 3,600 W, 240 VAC
GFCI: Class A (5 mA trip level)
Temp. Range: 41 to 104°F (5 to 40°C)
Ambient Range: 32 to 104°F (0 to 40°C)



Warning: UDG-4999 Thermostat must be installed by a qualified electrician. All assembly, installation, and test instructions must be followed. Improper installation can result in property damage, serious injury, or death due to electric shock. Please call Delta-Therm Corporation at 1-800-526-7887 with any installation or operating questions.