

**GS UNDERFLOOR  
HEATING**

## 10K Temperature Sensor | Flush Mount Style



This Flush Mount temperature sensor can be screwed directly into the drywall and painted over to become almost invisible to the occupant. The sensor is a 10K sensor and can be used with many popular brands of thermostat manufacturers.

The sensor is compatible with the following sensor modules:

Ai32: 32 Analog Input Module

And most other I/O devices in the I/O Devices category.

Thermistor Accuracy: +/- 0.2C

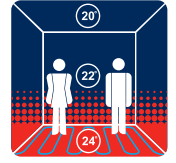
Thermistor Range: -70C to 150C

Sensor Type: 10K Thermistor

The chart below shows the lookup values for GS-UFH's Standard 10K Sensors. The standard table is compatible with most thermostat manufacturers. A more detailed table is available upon request.

The columns for Volts & 10-bit values are valid when used with standard Modules. When used with input modules that have a different power sourcing arrangement or a different A/D resolution, adjust the values appropriately.

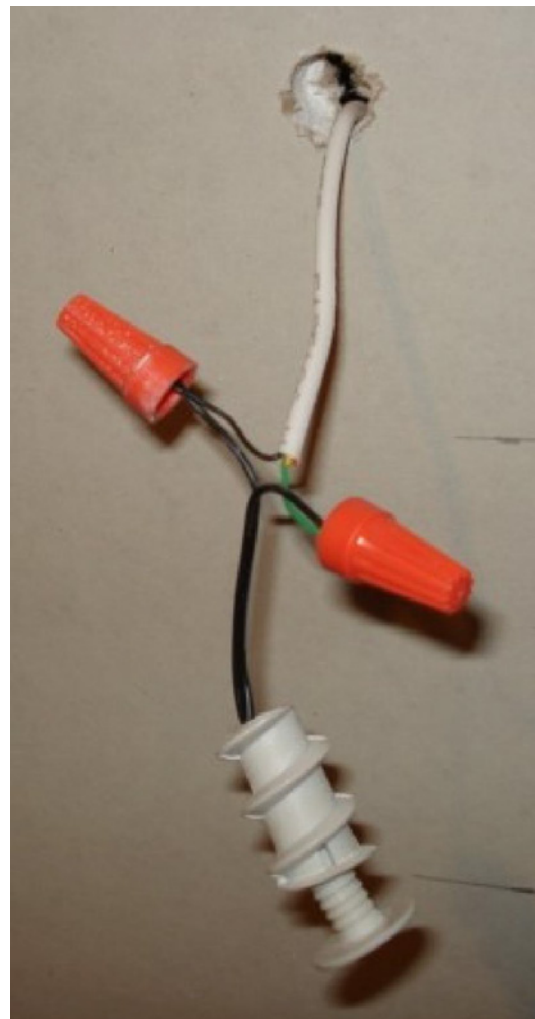
DegC		DegF		OHMS	Volts	10-bit Val
-50	-58	667828	4.926	1009		
-40	-40	335,671	4.855	994		
-30	-22	176,683	4.732	969		
-20	-4	96,974	4.533	928		
-10	14	55,298	4.234	867		
0	32	32,650	3.828	784		
10	50	19,903	3.328	682		
20	68	12,493	2.777	569		
25	77	10,000	2.500	512		
30	86	8,056	2.231	457		
40	104	5,324	1.737	356		
50	122	3,601	1.324	271		
60	140	2,487	0.996	204		
70	158	1,751	0.745	153		
80	176	1,256	0.558	114		
90	194	916	0.420	86		
100	212	679	0.318	65		
110	230	510	0.243	50		
120	248	389	0.187	38		
130	266	300	0.146	30		
140	284	234	0.114	23		
150	302	185	0.091	19		

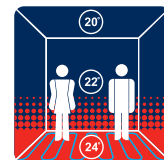


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## Installation Procedure for the Flush Mount sensor.

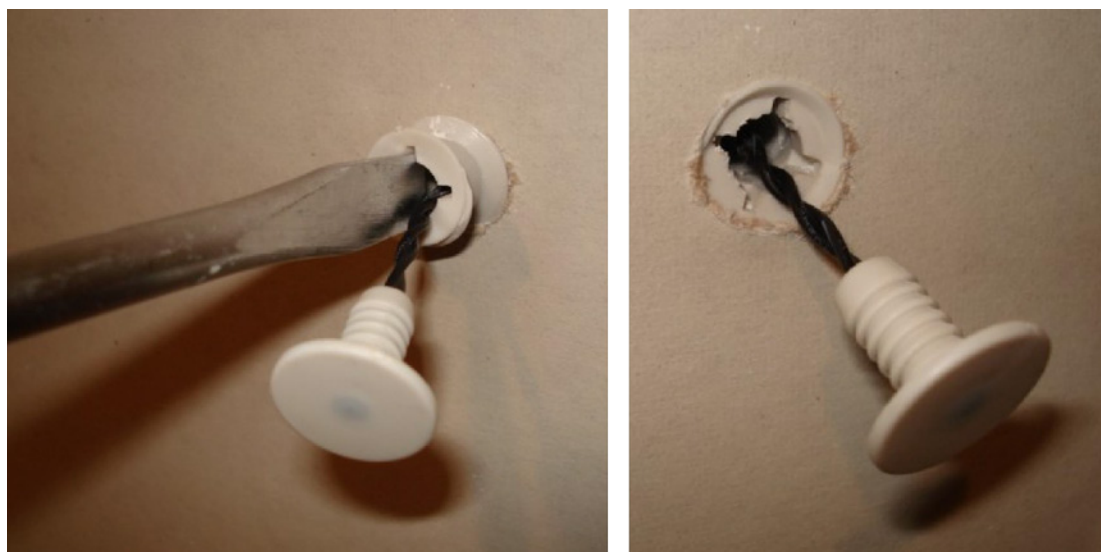
- 1) The 2 pieces of the sensor are shown in the picture to the right. The 2 pieces are:
  - a. The sensor body with the connected wire
  - b. The threaded outer case of the sensor
- 2) Drill a ½" hole into the Drywall where the sensor is to be located.
- 3) Fish the cable that will be connected to the sensor from behind the drywall and out through the ½" hole so that 6" – 12" of the cable is hanging through the hole.
- 4) Feed the Sensor wire through the center of the threaded outer case of the sensor & connect it to the cable that is hanging through the hole in the wall as shown in the picture to the right.
- 5) Carefully feed the wires and wire-nuts through the ½" hole and into the wall. Use your hands to lightly start screwing the threaded outer case into the hole in the wall as shown below.





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- 6) Use a large straight edged screw driver to screw the threaded outer case of the sensor the rest of the way into the  $\frac{1}{2}$ " hole in the drywall. Be careful not to pinch the wire while you are screwing in the case. Screw the case into the wall until the front surface of the case is inserted just past the surface of the drywall. See below.



- 7) Use your thumb to carefully push the sensor body into the threaded outer case until the face of the sensor body is flat against the drywall.

