



Installation and Maintenance Manual

IM 1199-1

Group: Applied Air

Part Number: IM1199-1

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Space Sensor

DPS/MPS/RAH/RPS/SWP



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Introduction

The space temperature sensor is designed to work with the MicroTech® unit controller and is a 10k thermistor used to measure the space conditions.

This device is not a traditional 7-day programmable thermostat. The sensor can be used on either constant volume (CAV) or variable air volume (VAV) applications.

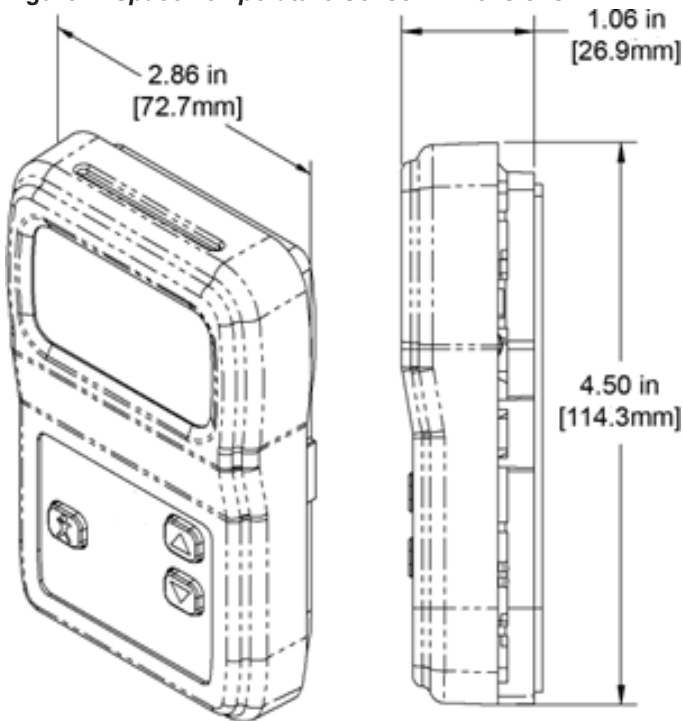
On CAV systems it acts as the control device for the heating and cooling operations for occupied and unoccupied time periods.

On VAV systems it is not traditionally used as the control device but used for the unoccupied heating and cooling space sensor.

The sensor features a large format LCD display that senses the space temperature and displays the space temperature. It also has the setpoint adjust keys to increase or decrease the setpoint. When the adjustment keys are first pressed, the display will show the current reading for the setpoint. Further pressing of these keys will change the setpoint value.

The sensor also has a tenant override button. Pressing this will initiate the tenant override sequence at the MicroTech unit controller.

Figure 1: Space Temperature Sensor Dimensions



Installation

Mounting

Junction Box

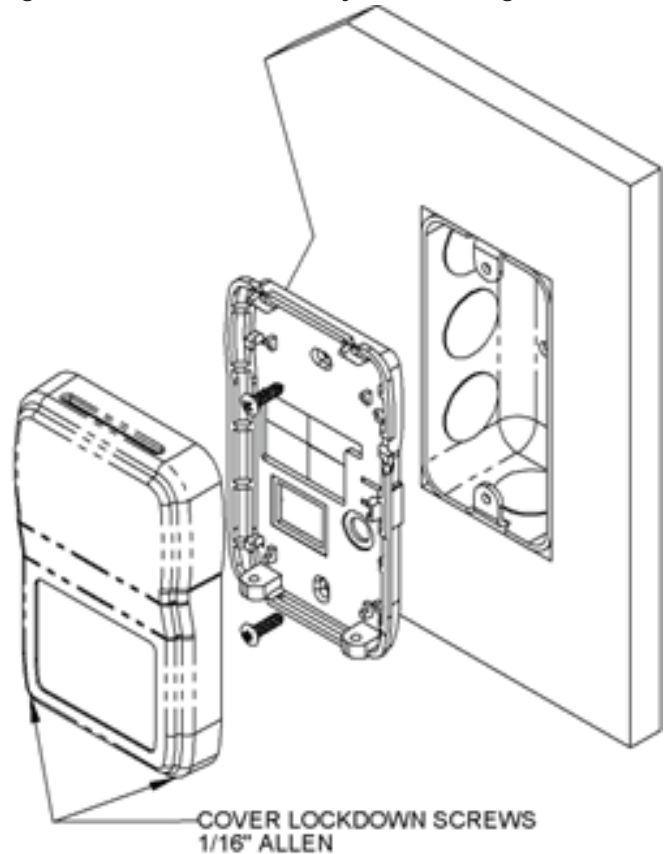
1. Pull the wire through the wall and out of the junction box, leaving about six inches free.
2. Pull the wire through the hole in the base plate.
3. Secure the base to the box using the #6-32 x 1/2 inch mounting screw provided.
4. Terminate the unit according to the guidelines in the Termination section of this manual.
5. Attach cover by latching it to the top of the base, rotating the cover down and snapping it into place.

Drywall Mounting

1. Place the base plat against the wall where you want to mount the sensor.
2. Using a pencil, mark out the two mounting holes and the area where the wires will come through the wall.
3. Drill two 3/16" holes in the center of each marked mounting hole. Insert a drywall anchor into each hole.
4. Drill one 1/2" hole in the middle of the marked wiring area.
5. Pull the wire through the wall and out of the 1/2" hole, leaving about six inches free.
6. Pull the wire through the hole in the base plate.
7. Secure the base to the drywall anchors using the #6 x 1 inch mounting screws provided.
8. Terminate the unit according to the guidelines in the Termination section below.
9. Attach cover by latching it to the top of the base, rotating the cover down and snapping it into place.
10. Secure the cover by backing out the lock-down screws using a 1/16" Allen wrench until they are flush with the bottom of the cover (Figure 2).

NOTE: In a wall-mount application, the mixing of room air and air from within the wall cavity can lead to erroneous readings, condensation, and premature failure of the sensor. To prevent this condition, plug the conduit hole with insulation in the junction box.

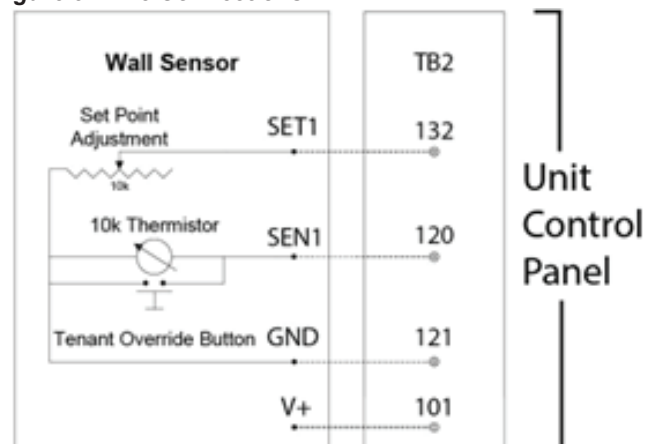
Figure 2: Junction Box and Drywall Mounting



Termination

The field supplied wire is recommended to be a twisted pair of at least 22 AWG and sealant filled connectors for all wire connections. Large gauge wire may be required for long runs. All wiring must comply with the National Electrical Code (NEC) and local codes. DO NOT run the wiring in the same conduit as the AC power wiring. Power wiring in the same conduit will result in inaccurate temperature readings along with signal levels. Install the lugs below the bus bar to assure anti-rotation.

Figure 3: Wire Connections



Front Panel

The display is standard for all sensors. The functional keys on the display include the setpoint adjustment buttons and the tenant override button, as well as a numerical display to view changes.

Setpoint Buttons

When pressed, the setpoint will display for three to four seconds. When pressed again, the setpoint will change in one degree increments. It will only change within the setpoint range that was ordered.

Tenant Override Button

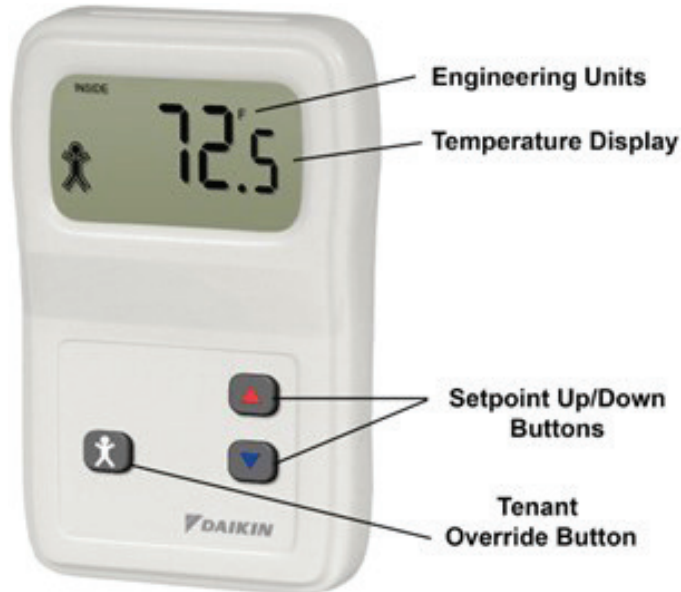
When the override button is pressed for 3-5 seconds the tenant override function will be initiated per the MicroTech unit controller. The amount of time that the unit will come out of the unoccupied mode and operate in the tenant override mode is adjustable at the unit controller.

Numerical Display

The default display shows current temperature. When the up/down buttons are pushed, then the display will show and adjust the current setpoint and hold the display for 3 to 4 seconds.

The unit can also be set up to display setpoint only or for setpoint lockout.

Figure 4: Front Panel Display



Specifications and Parts

Parts

Space Sensor Part Number: 910143408

Sensor Specs

Power:

15 to 28 VAC 924 VAC nominal)

Power Consumption:

.17 VA maximum AC

Wiring:

See [“Termination” on page 4.](#)

Display:

LCD - 3.5 digits @ 0.6 inch H

Temperature display units - 0.1° (F/C) increments

Setpoints in 0.5° steps

Button Options:

Setpoint Up/Down buttons

Tenant Override button

Environmental Ambient:

Temperature - 32 to 122°F (0 to 50°C)

Humidity - 0 to 95% RH non-condensing

Material:

ABS plastic, UL94V-0



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