DAIKIN

Installation and Maintenance Manual   IM 1199-2

Space and Space/Relative Humidity Sensors

Part Numbers:

910143408 and 910191961

Unit Models:

DPS/MPS/RAH/RPS/SWP

Table of Contents

Introduction

The space temperature sensor and temperature/relative humidity sensor are designed to work with the MicroTech® unit controller and have a 10k thermistor used to measure the space conditions.

This devices are not traditional 7-day programmable thermostats. The sensors can be used on either constant volume (CAV) or variable air volume (VAV) applications.
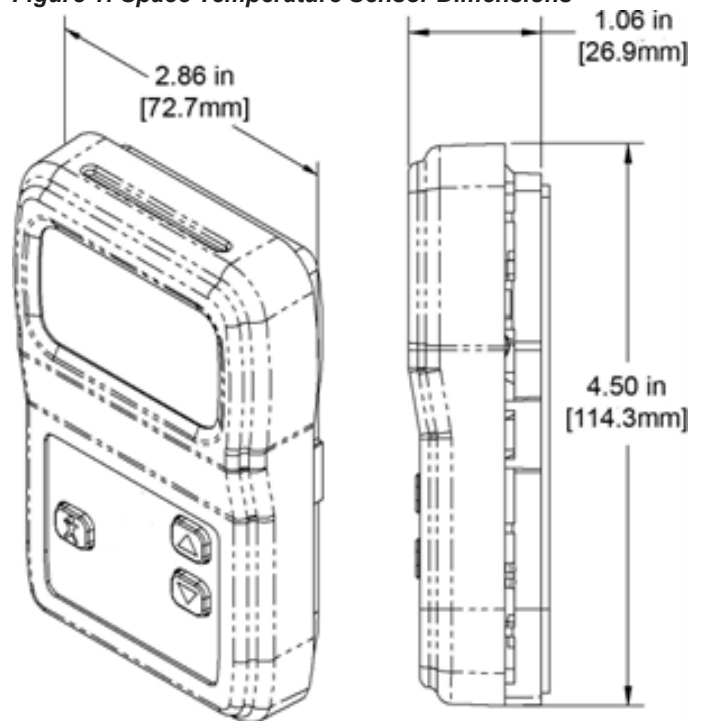
On CAV systems they act as the control device for the heating and cooling operations for occupied and unoccupied time periods.

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

The sensors feature a large format LCD display that senses the space temperature or relative humidity. 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
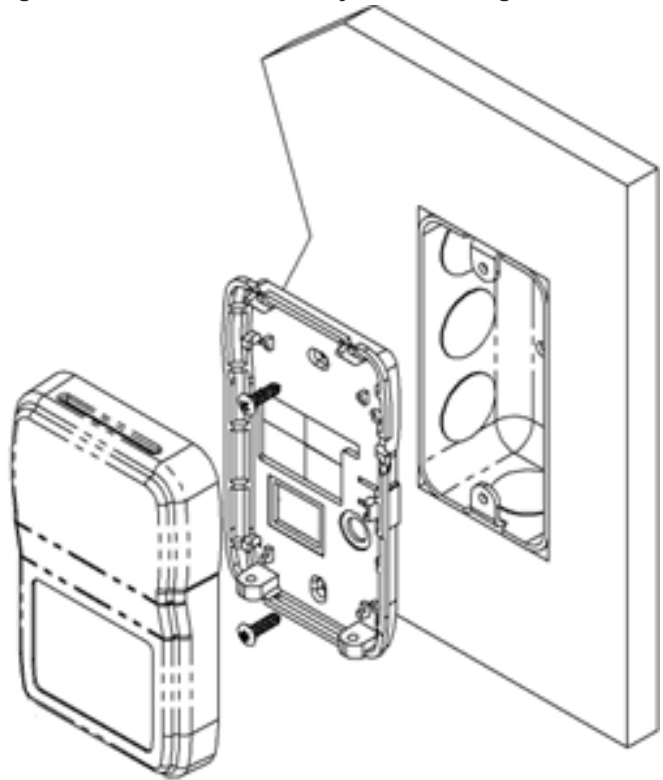
Installation

Mounting

Junction Box

1. Pull the wire through the wall and out of the junction box, leaving about six inches of wire 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 plate 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 of wire 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

NOTE: There are cover lockdown screws on the bottom edge of the cover. Use a 1/16" hex key to tighten.

Termination for 910143408

Space Sensor

| ⚠ CAUTION |
|---|
| Miswiring field-installed accessories or sensors can damage the controller. Do not deviate from the prescribed wiring directions in this document. |

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.

DPS 003-015, MPS, RAH, RPS, and SWP Wiring

Table 1: DPS 003-015, MPS, RAH, RPS, and SWP Terminal Locations

DPS 003-015, MPS, RAH, RPS, and SWP Terminal Location	Sensor Terminal Location
132	SET1
120	SEN1
121	GND
101	V+

Figure 3: Wiring Diagram

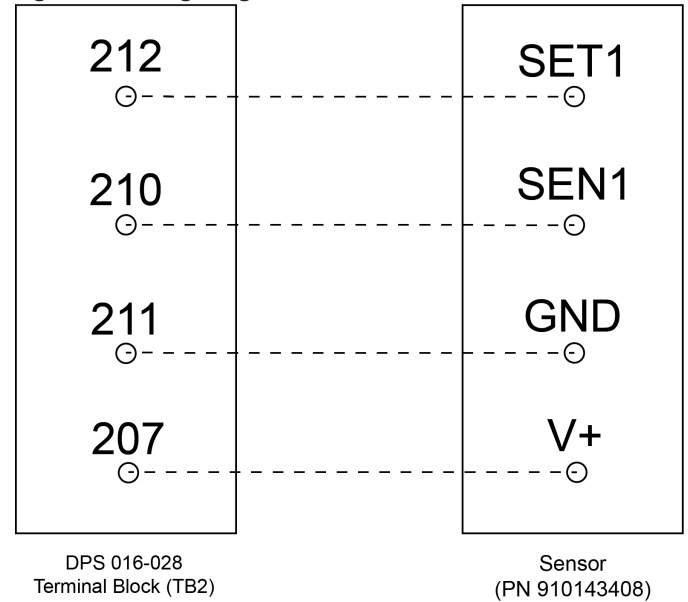DPS 016-028, MPS, RAH, RPS, and SWP
Terminal Block (TB2)

Sensor
(PN 910143408)
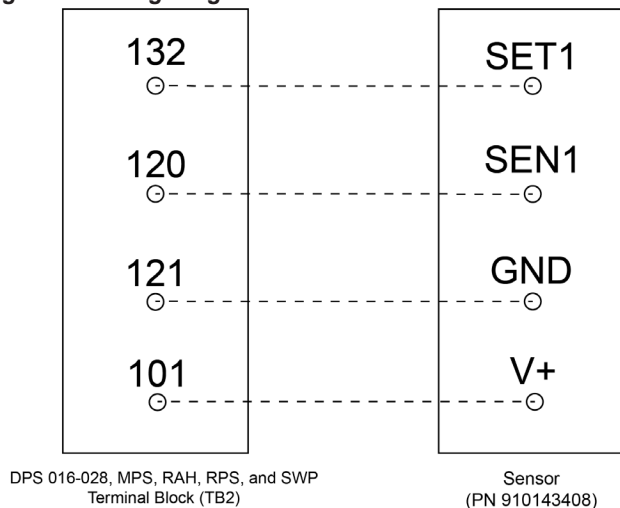
DPS 016-028 Wiring

Table 2: DPS 016-028 Terminal Locations

DPS 016-028 Terminal Block (TB2) Location	Sensor Terminal Location
212	SET1
210	SEN1
211	GND
207	V+

Figure 4: Wiring Diagram

DPS 016-028
Terminal Block (TB2)

Sensor
(PN 910143408)

Termination for 910191961

Relative Humidity with Temperature Sensor

⚠ CAUTION
Miswiring field-installed accessories or sensors can damage the controller. Do not deviate from the prescribed wiring directions in this document.

| *NOTICE* |
|---|
| Make sure that the CG jumper is installed on the sensor circuit board (located at J50). |

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.

DPS 003-015, MPS, RAH, RPS, and SWP Wiring

Table 3: DPS 003-015, MPS, RAH, RPS, and SWP Terminal Locations

DPS 003-015 Terminal Block (TB2) Location	Sensor Terminal Location
120	CH4+
126	CH2
132	CH3
121	GND
101	V+

Figure 5: Wiring Diagram
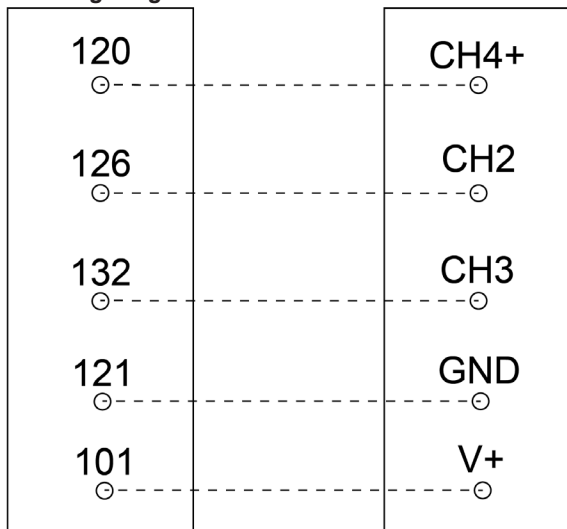
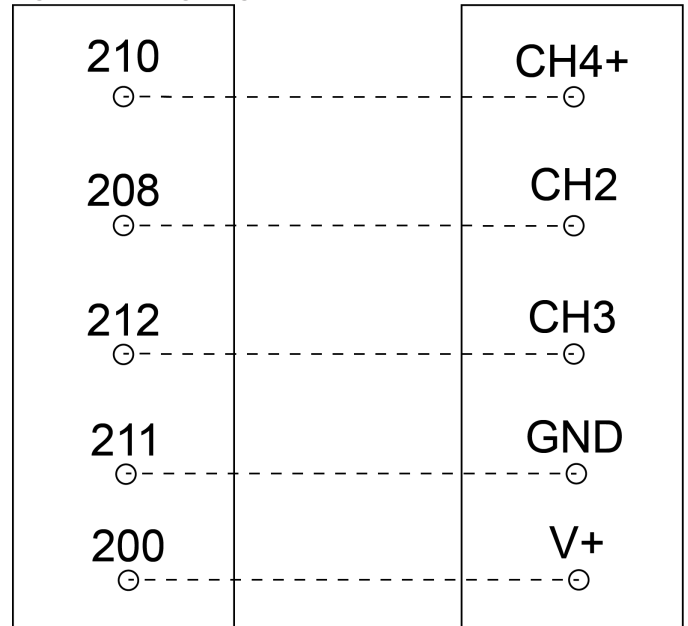DPS 016-028, MPS, RAH, RPS, and SWP Terminal Block (TB2)

Sensor (PN 910191961)

DPS 016-028 Wiring

Table 4: DPS 016-028 Terminal Locations

DPS 016-028 Terminal Block (TB2) Location	Sensor Terminal Location
210	CH4+
208	CH2
212	CH3
211	GND
200	V+

Figure 6: Wiring Diagram

DPS 016-028 Terminal Block (TB2)

Sensor (PN 910191961)

Front Panel Operation

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 7: Front Panel Display
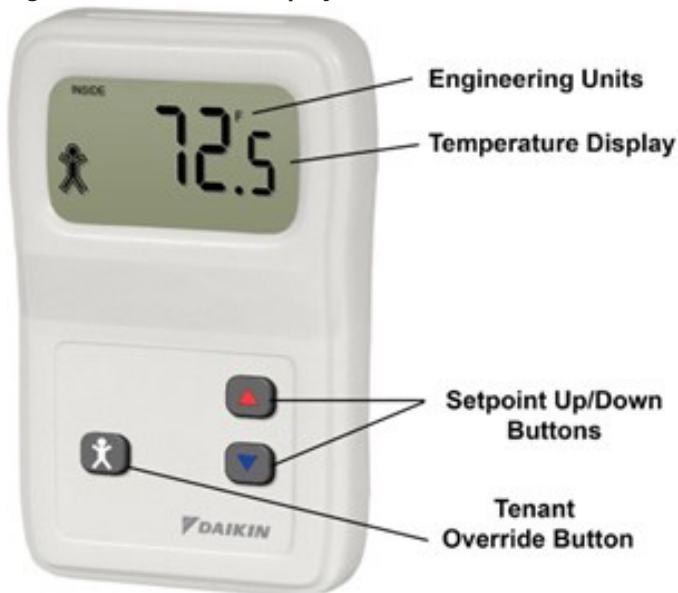
Specifications and Parts

Sensor Specs

Power:

15 to 28 VAC 924 VAC nominal)

Power Consumption:

17 VA maximum AC

Wiring:

See "Termination for 910143408" on page 4 and "Termination for 910191961" on page 5

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

Parts

Space Sensor Part Numbers:

910143408

910191961

DAIKIN

Daikin Applied Training and Development

Now that you have made an investment in modern, efficient Daikin Applied equipment, its care should be a high priority. For training information on all Daikin Applied HVAC products, please visit us at www. DaikinApplied.com and click on Training, or call 540-248-9646 and ask for the Training Department.

Warranty

All Daikin Applied equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied Representative for warranty details. To find your local Daikin Applied Representative, go to www.DaikinApplied.com.

Aftermarket Services

To find your local parts office, visit www.DaikinApplied.com or call 800-37PARTS (800-377-2787). To find your local service office, visit www.DaikinApplied.com or call 800-432-1342.

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