

Installation and Maintenance Manual

IM 1311

Group: **WSHP**

Part Number: **910338997**

Date: **January 2021**

Duct Static Pressure Sensor



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Included Parts:

- Duct Pressure Sensor
- 3-pin Make Molex plug with (1 each) 12" Blue, White, Green wires

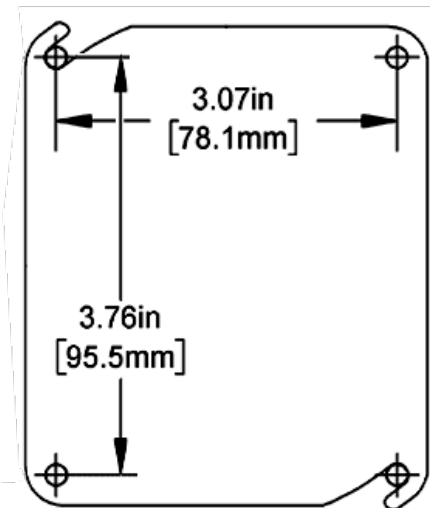
Additional Required Parts:

- (4) #10 x 3/4" self-tapping sheet metal screws
- 1/4" tubing (1/8" to 3/16" I.D.)
- Duct pressure tap
- Minimum 3-conductor shielded 22AWG wire

Installation

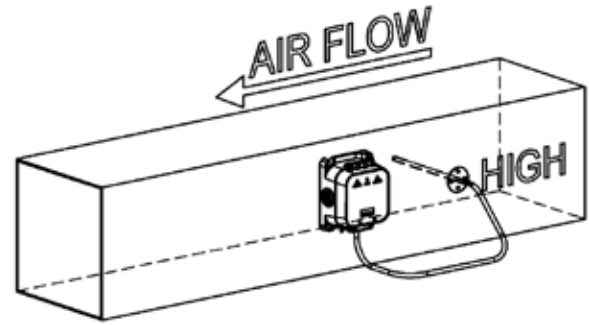
- All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run any of this device's wiring in the same conduit as other AC power wiring. Tests show that fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin representative.

Figure 1: Drill Holes Mounting Locations



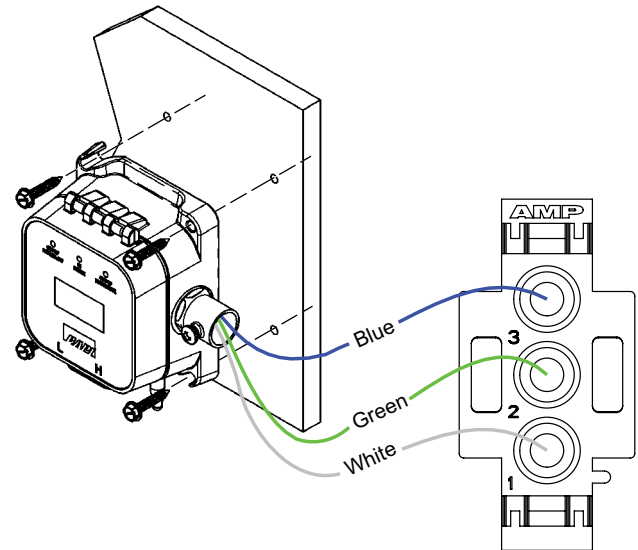
- Use the sensor as a template to locate and mark the mounting holes.
- Locate the field provided duct pressure tap near the end of a long duct to ensure that all terminal box take-offs along the run have adequate static pressure. The tap should be in a non-turbulent flow area of the duct. Keep it several duct diameters away from take-off points, bends, neckdowns, attenuators, vanes, or other irregularities that may create turbulent air flow.

Figure 2: Sensor Location In Supply Duct



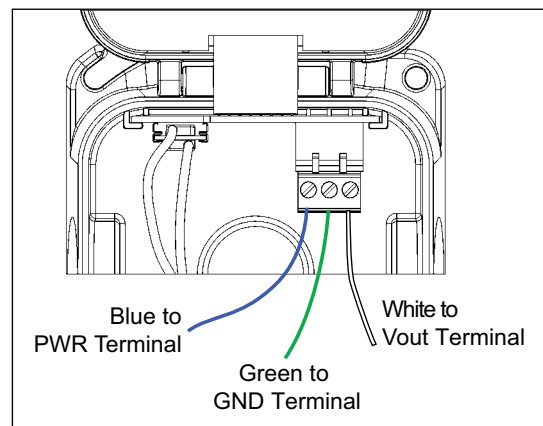
- Mount sensor on the supply duct near the location selected for the duct pressure. See [Figure 2](#).

Figure 3: Secure Sensor with Provided Screws



- Connect the blue, white and green wires to the sensor as follows: See [Figure 4](#).
 - ▶ White to Vout
 - ▶ Green to GND
 - ▶ Blue to PWR

Figure 4: Connect Wires to Sensor Terminals



- Run 3-conductor wire from the sensor location to the unit. Daikin Applied recommends using shielded 22AWG for all connections. Larger gauge wire may be required for runs of greater than 250'.
- Connect the field provided tube between the tap and the high pressure (H) port on the sensor.
- The sensor has internal setting options. For proper operation the setting must be as follows: Also refer to Figure 5.
 - ▶ **OUTPUTS** = 0-10 Volts
 - ▶ **RANGES** = 3.0"/1,000PA
 - ▶ **UNITS/RESPONSE**
 - #1: Direction = OFF = Unidirectional
 - #2: WC or Pascals = OFF=Inches
 - #3: Response Time = OFF=Slow

Figure 5: Sensor Operation Settings

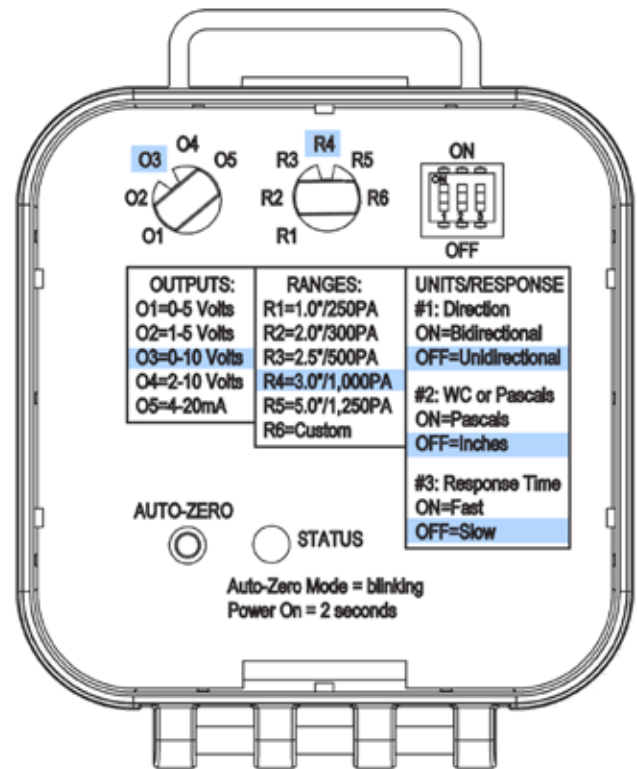
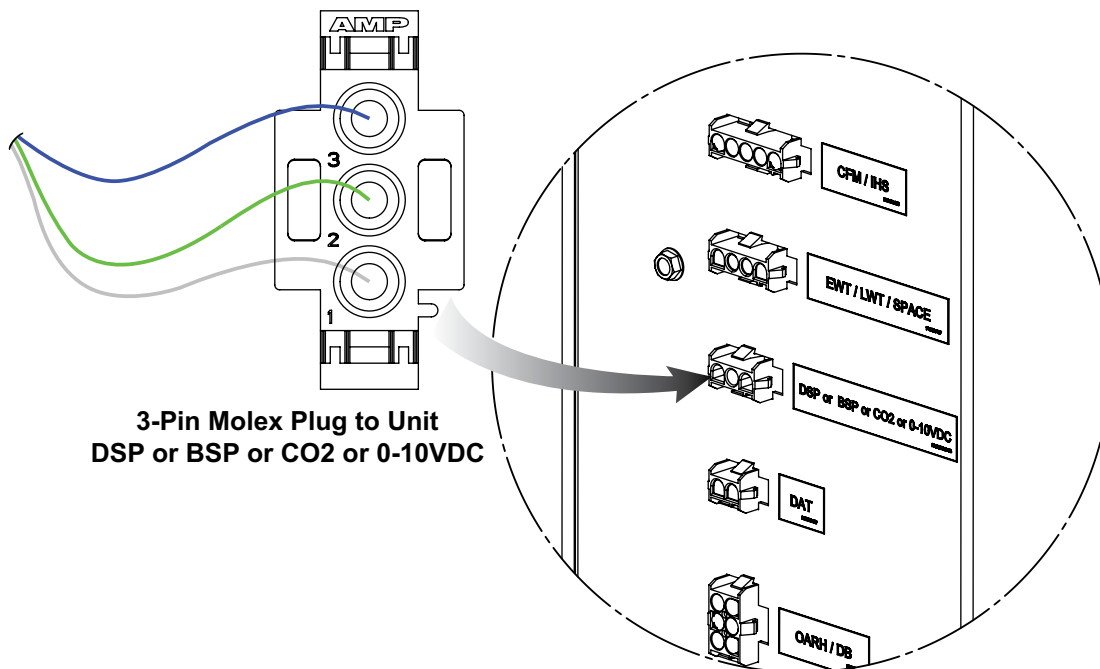


Figure 6: Plug 3-Pin Molex Plug to Unit Control Connection, (DSP or BSP or CO2 or 0-10VDC)



Programming:

To enable use of this sensor the following configuration points must be changed. Changes can be made through the local user interface or through the ServiceTools software for Microtech® Unit Controllers program on a connected PC. For information on how to use the ServiceTools software, refer to OM 732. The local user interface menu path is shown below.

- To enable Duct Static Pressure sensing go to Service > Serv_Analn > Serv_Analn_Config > CFgAnln16 and change the value from None to DSP. Then go to SET > Set-SensorInstall > FanRstSens and confirm that it is set to 'Inst'.
- To enable fan control based on Duct Static pressure go to Set > Set-Unit > FanCntMth and change the value from CONSTANT to DSP.
- The static pressure setpoint can be adjusted under Set > Set-Fan > DSPSetPt.

If using the ServiceTools software change the unit configuration as follows:

- To enable Duct Static Pressure sensing, go to the 'Configuration' menu and under the 'Inputs' drop down change 'Analog Input 16' to 'DSP'. Confirm that under the 'Sensor Installation' drop down, 'DSP/BSP/CO2/AI Reset' is 'Installed'.
- To enable fan control based on Duct Static pressure go to the 'Configuration' menu and under the 'Fan' dropdown set 'Fan Control Method' to 'DSP'.
- The static pressure setpoint go to the 'Setpoints' menu and under the 'Fan' dropdown adjust the 'Duct Static Press' value.

Click the Save button after making changes so they take effect. ServiceTools prompts you to save if you are switching to another screen without saving.

Refer to OM 1308 for additional information on duct static pressure control.



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