SIEMENS

Installation Instructions
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Differential Pressure Monitor

Product Description

The Differential Pressure Monitor (DPM) (Figure 1) monitors and displays the differential pressure between a room and an adjacent space. The DPM also provides visual and audible alarms during abnormal conditions. This kit contains:

- Differential Pressure Monitor with mounting plate
- Three removable terminal blocks (wire connectors)
- Four 5/8-inch slotted pan-head screws
- Two 3/8-inch tamper-resistant screws
- Two keys (w/p.n. 547-005 and 547-006)

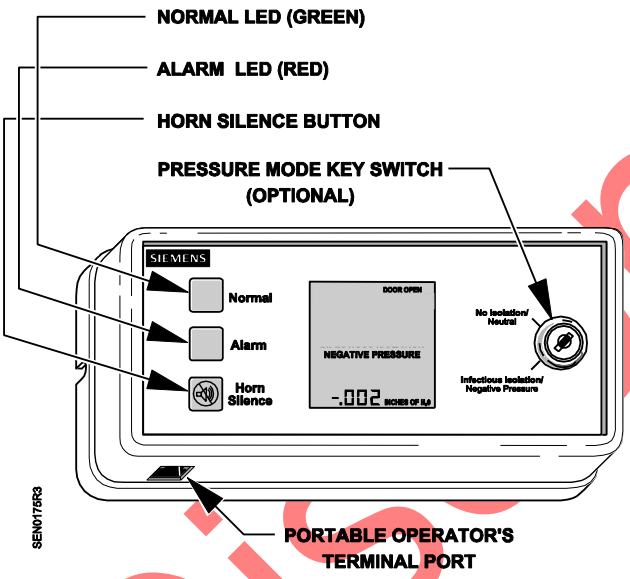

Figure 1. Differential Pressure Monitor.

Product Numbers

547-002 (without keyswitch)

547-005 (with keyswitch, negative pressurization)
547-006 (with keyswitch, positive pressurization)

Required Tools

- Small flat-blade screwdriver
- Medium flat-blade screwdriver
- 5/64-inch Allen-key wrench
- Wire strippers
- Volt-ohm meter

Expected Installation Time

26 to 30 minutes

Prerequisites

- Electrical box and plaster ring in place
- 24 Vac power cable in place
- Remote Pressure Transmitter(s) in place (to prevent DPM from alarming when powered up)

If using a Room Pressurization Controller (RPC):

- Pressure mode signal cable from the RPC to the DPM in place

If DPM is to be connected to the System 600 via a FLN:

- Local Area Network (FLN) cable from the S600 field panel or FLN device to the DPM in place

If using an external alarm or analog output:

- External alarm or analog output (4-20 mA signal) cable in place

If using anteroom applications (Application 702 or 704):

- Constant Volume (CV) Controller pressure mode signal cable in place

Discontinued

Placement and Smoke Control System Requirements

For placement and smoke control system requirements, see the *Equipment Controllers* section of the *APOGEE Automation Technical Reference Manual* (125-3015) and the *Smoke Control Application and Engineering Manual* (125-1806).

If the Differential Pressure Monitor will perform any smoke control function, it must receive power from a part number 535-104 transformer.

Ratings

- Power input: 24 Vac, 50/60 Hz, 5.0 VA
- External alarm contacts: 0.5A 24V
- Door switch: 0.5A 24V
- RPT signal: standard RS485
- CV controller pressure mode input: 0.5A 24V
- RPC pressure mode switch: 0.5A 24V

Instructions

1. Verify that the electrical box, onto which the DPM will be mounted, is grounded.
2. Orient the mounting plate with the word “TOP” at the top and then attach it to the plaster ring of the electrical box with the four slotted pan-head screws (Figure 2).

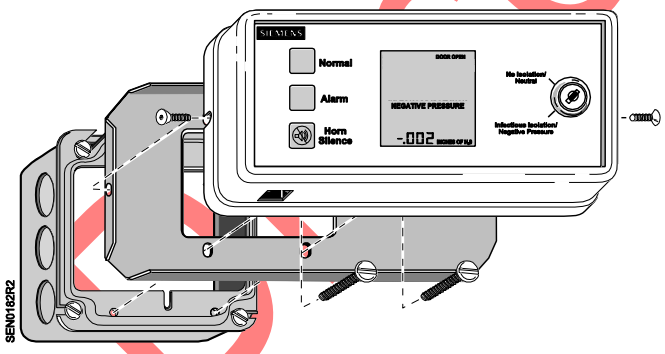

Figure 2. Exploded View of Installation.

3. Pull all wires to be terminated through the opening in the mounting plate.
4. If using a field panel or FLN device, connect the FLN trunk cable to pins 1(+, Hot), 2(–, Common) and 3(shield) of the 3-pin terminal block, and then plug it into the receptacle on the DPM circuit board (Figure 3).

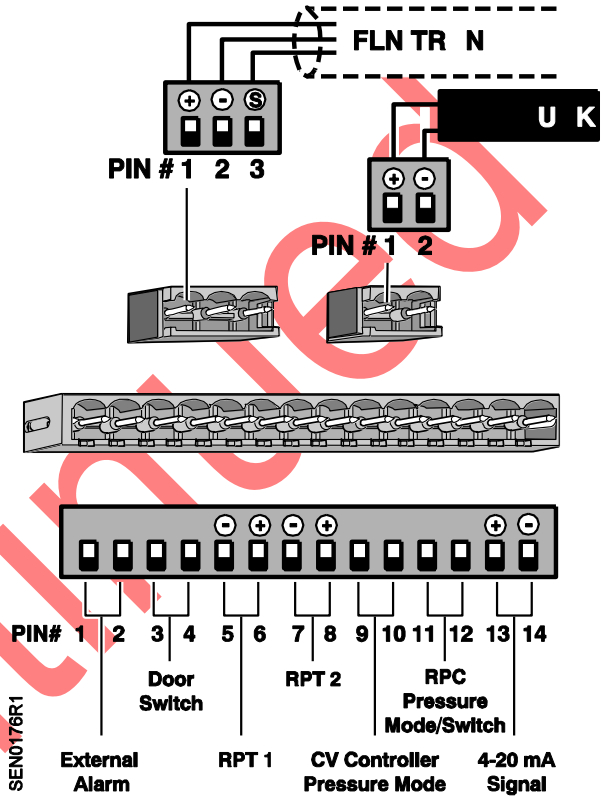

Figure 3. Wiring Connections.

5. If using an external alarm, connect the external alarm wires to terminals 1 and 2 of the 14-pin terminal block.
6. If using a door switch, install it and connect the door switch cable to terminals 3 and 4 of the 14-pin terminal block. (See the door switch installation instructions.)
7. Connect the pressure signal (RPT1) cable to terminals 5(–) and 6(+) of the 14-pin terminal block.

Discontinued

8. If using two RPTs (Application 702 or 704):
   a. Connect the pressure signal (RPT2) cable from the anteroom to terminals 7(–) and 8(+) of the 14-pin terminal block.
   b. Connect the pressure mode signal cable from the CV Controller to terminals 9 and 10 of the 14-pin terminal block.
9. If using an RPC, connect the pressure mode signal cable from the RPC to terminals 11 and 12 of the 14-pin terminal block.
10. If using an external device to monitor the DPM's 4-20 mA pressure signal, connect the device's input wires to pins 13(+) and 14(–) of the 14-pin terminal block.
11. Connect the power cable to pins 1(+) and 2(–) of the 2-pin terminal block, and then plug it into the power receptacle on the DPM circuit board (See Figure 3).
12. Plug the 14-pin terminal block into the receptacle on the DPM circuit board (See Figure 3).
13. Place the DPM onto the mounting plate, being careful not to pinch the wiring.
14. Secure the DPM to the mounting plate on the left and right sides with the two tamper-resistant screws.

This completes the installation procedure. See the *APOGEE Automation Start-Up Procedures Manual* (125-3014) for DPM/RPT calibration instructions.

The installation is now complete.

Discontinued

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