

## Laboratory Analog Output-Pneumatic (AO-P) Module

### Product Description

The Laboratory Analog Output-Pneumatic (AO-P) Module is the electro-pneumatic interface between the Fume Hood Controller and the Pneumatic Damper Actuator. The AO-P module applies specific air pressure to the pneumatic actuator to move the damper to its proper position.

### Product Numbers

546-00090

### Required Tools

- Medium duty drill
- Small socket set
- Small flat-blade screwdriver
- Medium flat-blade screwdriver
- Drill set

### Prerequisites

- Placement of supply line and actuator with 1/4-inch (6 mm) tubing
- Fume Hood Controller is installed
- Optional, for conduit or metal enclosure installations only

### Expected Installation Time

15 minutes

### Instructions

The Analog Output-Pneumatic (AO-P) Module Installation Instructions consist of the following four sections:

1. Mounting
2. Pneumatic Piping
3. General Wiring
4. Metal Enclosure Applications

**NOTE:** If your installation requires conduit, then proceed directly to Section 4.

### Section 1: Mounting

**NOTE:** Mount the AO-P module adjacent to the pneumatic damper actuator.

1. Place the snap track for the AO-P module in the desired mounting position.
2. Using both of the self-taping screws, electric drill, and the 1/4-inch nut driver bit, mount the snap track onto the mounting surface. See Figure 1.
3. Tighten the screws to ensure that the snap track will not vibrate.
4. Snap the AO-P module into the snap track and verify that the module is securely fastened.

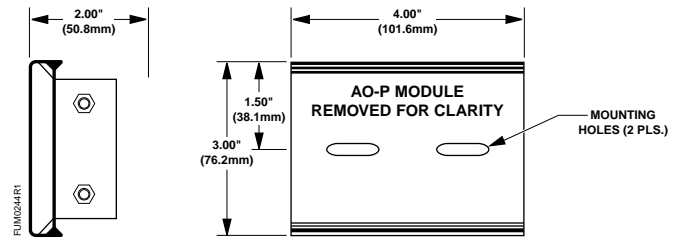


Figure 1. AO-P Module Mounting Holes and Dimensions.

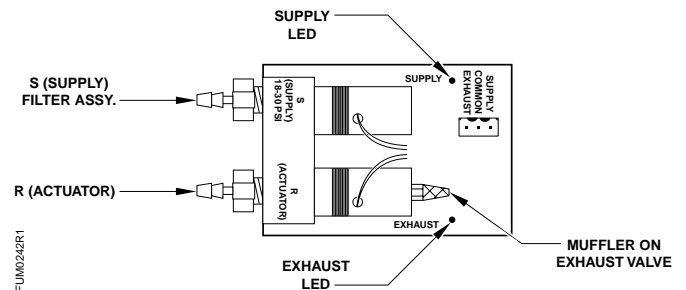


Figure 2. AO-P Module Layout.

## Section 2: Pneumatic Piping

1. Remove the filter and tubing assembly from the box and push the end with the tubing onto the S (Supply) fitting of the AO-P module.
2. Using 1/4-inch O.D. tubing, connect the 18 to 30 PSI air supply to the filter inlet that was just installed on the AO-P module. See Figure 3.
3. Using 1/4-inch O.D. tubing, connect the pneumatic damper actuator to the R (Actuator) fitting on the AO-P module. See Figure 3.

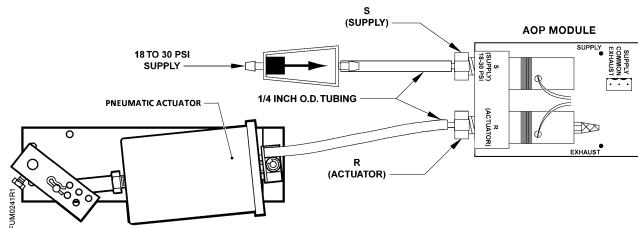


Figure 3. AO-P Module Piping Connections.

## Section 3: General Wiring

Using 3 conductor 20 AWG cable, connect the wire from the AO-P module to the Fume Hood Controller Board terminal block labeled TB3. Screw the wires into the provided terminal block to secure the wires. See Figure 4.

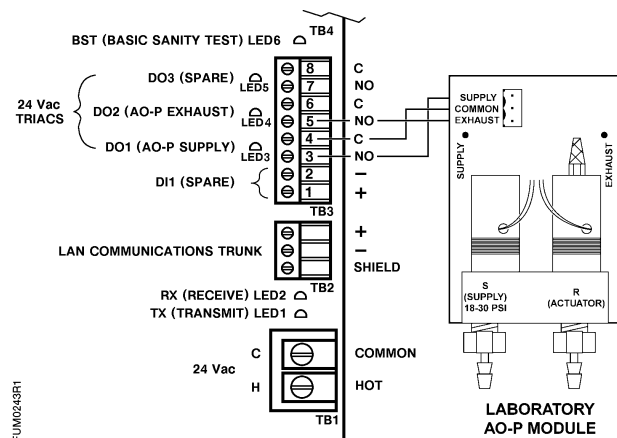


Figure 4. AO-P Wiring.

## Section 4: Conduit Wiring or Metal Enclosure Applications

1. Mount the snap track to the holes provided in the base of enclosure 544-294 (PXP Transducer Enclosure this part is ordered separately). To accomplish this step, remove the cover. Remove the existing snap track and bend the small tabs in the base of the enclosure down. Install the provided snap track with the AO-P Module.
2. Mount the enclosure in its final location using the dimensions below. Snap the AO-P into the snap track.
3. See *Section 2: Pneumatic Piping instructions*, and mount the pneumatic piping. The holes in the side of the enclosure will line up with the fittings on the AO-P Module.
4. See *Section 3: General Wiring instructions*, and wire the connections. See Figure 4 and Figure 5. If the installation requires conduit, then mount a standard 1/2-inch conduit fitting to the enclosure and secure the conduit to the fitting.

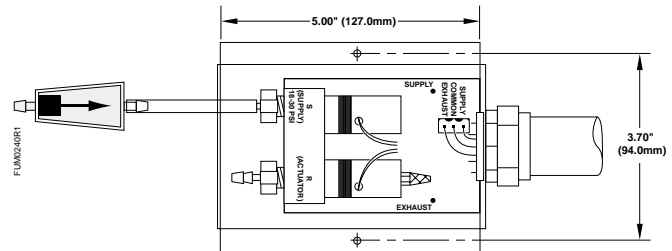


Figure 5. Conduit Wiring.

5. Replace the cover to the enclosure and tighten the two screws down.

The installation is now complete.

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