

AO-P Transducer

Product Description

The AO-P Transducer is designed to receive an electronic signal and send a pneumatic output.

It can be used with the following:

- Any device that provides a 0 to 10 Vdc or 4 to 20 mA output
 - With 0 to 10 Vdc input, output is 0 to 20 psig.
 - With 4 to 20 mA input, output is 3 to 15 psig.
- Pneumatic end devices, such as valves and damper actuators.

Product Numbers

545-208 Remote-mount with Shroud

545-113 Panel-mount

Required Tools

- Wire strippers
- 1/8-inch flat-blade screwdriver
- 1/4-inch nut driver

Expected Installation Time

20 minutes

Prerequisites

- Select a suitable location for mounting the transducer.
- Install field wiring, conduit and 1/4-inch pneumatic tubing run to the AO-P Transducer location.
- All wiring must be Class 2 and comply with National Electric Code (NEC) and local regulations.

NOTE: To eliminate oscillation in the line, a minimum of 30 inches (762 mm) of 1/4-inch tubing is required between the AO-P return (R) port and the controlled device.

Installation

The transducer is not position-sensitive; it may be mounted in any necessary orientation.

Mounting the Transducer

1. For the remote-mount transducer, remove the shroud from the mounting bracket by squeezing the shroud and lifting it straight off.
2. Mount the bracket to a wall, cabinet, etc. using the self-tapping screws provided. Anchors may be required for concrete and cinder block wall mounting.
3. Do one of the following:
 - For remote-mount installation: Attach the conduit to the mounting bracket with a coupling (not provided). Feed the field wiring through the conduit to the transducer.
 - For panel-mount installation: Run the field wiring to the transducer and provide strain relief.

Connecting the Point Wiring

1. Using the wire nuts provided, connect the field wiring to the transducer wiring. See Table 1, Figure 1, and Figure 2.
2. Cap unused wires with the provided wire nuts.

Table 1. AO-P Transducer Wiring Connections.

Wire Color	Connection
Red (HK)	24 Vac
Black (N)	Neutral
Yellow (+)	0 to 10 Vdc or 4 to 20 mA (Signal +)
White (F)	0 to 5 Vdc (Feedback +)
Gray (I-)	Signal/Feedback Negative (-)
Orange (A) *	DO (Dry Contact)
Orange (B) *	DO (Dry Contact)

*The AO-P Transducer provides for an optional DO status point that reports the position of the Hand/Auto switch. Together, the two orange wires make up this DO. The status is reported as follows:

Open Contact = Auto Mode
 Closed Contact = Hand Mode

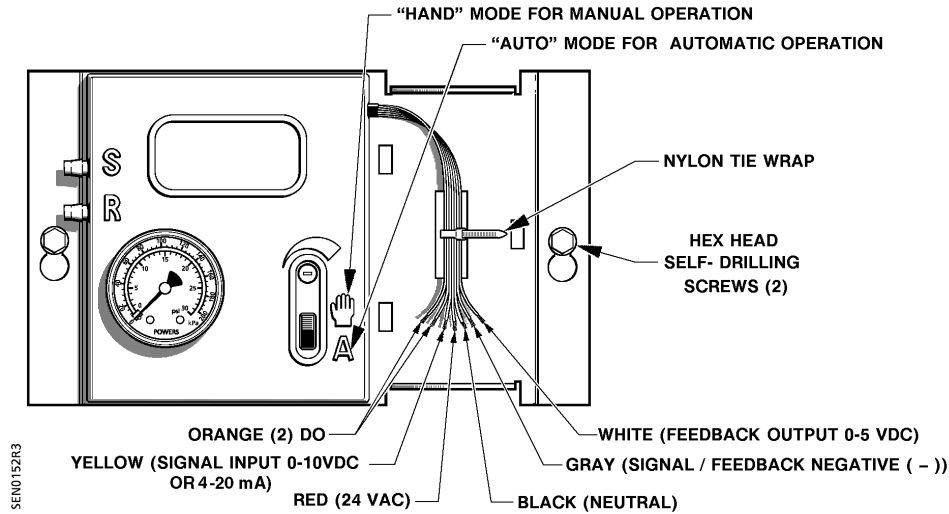


Figure 1. Remote-mount AO-P Transducer Wiring.

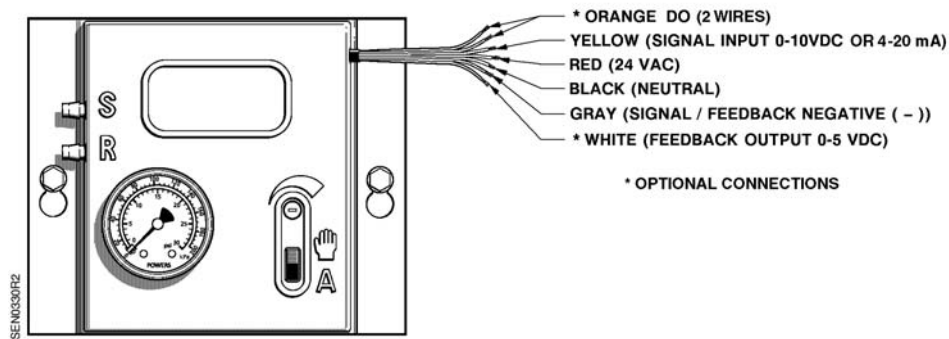


Figure 2. Panel-mount AO-P Transducer Wiring.

- For remote-mount installations, provide strain relief by securing the wiring to the mounting bracket with the tie-wrap provided and reinstall the shroud. See Figure 1.

NOTE: To eliminate oscillation in the line, a minimum of 30 inches (762 mm) of 1/4-inch tubing is required between the AO-P return (R) port and the controlled device.

- Run one 1/4-inch air line from the return (R) port on the AO-P transducer to the end device.
- Provide 20 to 30 psig (138 to 207 kPa) of dry, filtered, compressed air to the supply (S) port of the transducer.

Allow 5 psig (34.5 kPa) supply above the maximum output value.

The installation is now complete.

Input Signal Selection

The AO-P Transducer is designed to accept either a 0 to 10 Vdc or 4 to 20 mA input signal, with a factory setting of 0 to 10 Vdc. To select a 4 to 20 mA input signal, turn the unit over and jumper the middle and right column pins (Figure 3).

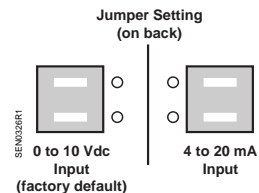


Figure 3. Jumper Configuration for Input Signal Selection.

Hand/Auto Mode Operation

The AO-P Transducer is equipped with a Hand/Auto switch for manual control or set-up of the end device.

NOTE: The transducer's rated accuracy is $\pm 1/4$ psi (1.7 kPa) at room temperature. The gauge on the transducer is accurate to ± 1 psi (6.9 kPa).

- To switch to hand mode, use a screwdriver to turn the recessed pot to manually obtain the desired output pressure.
- To return to automatic operation, place the switch in auto (A) mode.

Dimensions

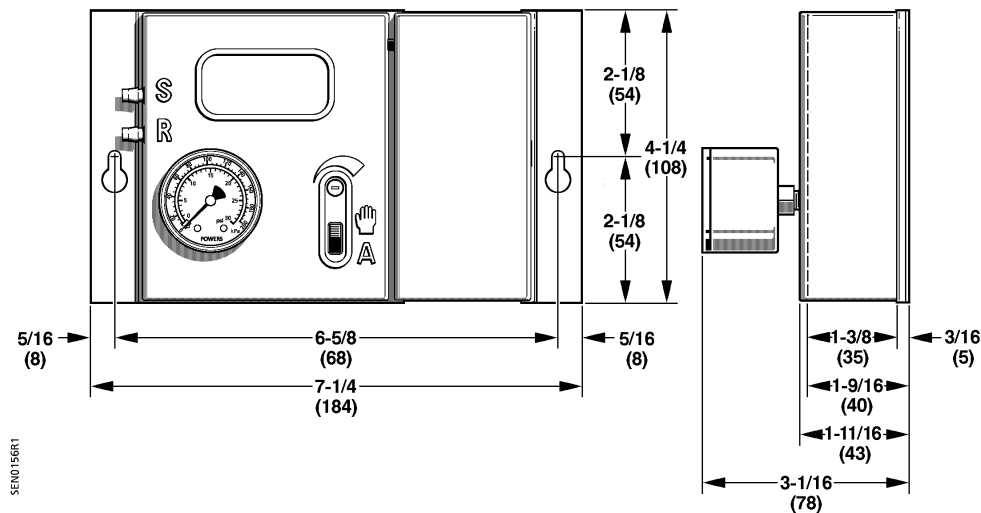


Figure 4. Remote-mount Dimensions in Inches (Millimeters).

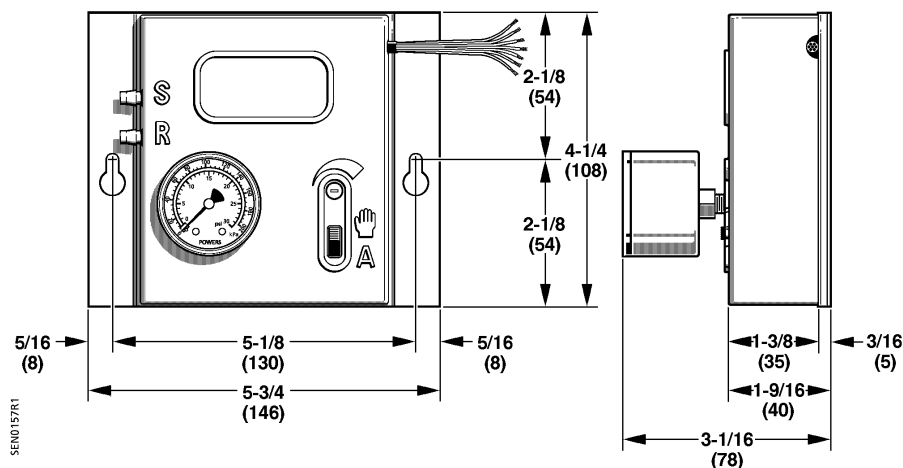


Figure 5. Panel-mount Dimensions in Inches (Millimeters).

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