

EP-8000 Series

Electro-Pneumatic Transducer

Description

The EP-8000 Electro-Pneumatic Transducer converts a 0 to 10 VDC or 4 to 20 mA signal from an electric controller into a proportional pneumatic output pressure signal. Four models are available, which are grouped into two basic versions: low-volume output units (non-relay) and high-volume output units (relay).

Features

- hypodermic needle test point allows easy output pressure signal measurement
- barbed air connections for 5/32 or 1/4 in. O.D. polytubing
- compact, simple design for ease of installation on a wide range of mounting surfaces, including direct mounting on pneumatic valve actuators
- factory set, fully adjustable zero and span facilitates field calibration

Applications

- typically used with pneumatic valve or damper actuators
- sequencing can be provided through a Johnson Controls® V-9502 Valve Actuator Positioner or D-9502 Damper Actuator Positioner

Repair Information

If the EP-8000 Series Electro-Pneumatic Transducer fails to operate within its specifications, replace the unit. For a replacement transducer, contact the nearest Johnson Controls representative.

To Order

Specify the code number from the following selection chart.



EP-8000 Electro-Pneumatic Transducer

Selection Chart

Code Number	Output	Input	Input Range	Factory Output Range psig (kPa)
EP-8000-1 ¹	Low Volume (Non-Relay)	Voltage	0.5 to 9 VDC	1 to 18 (7 to 126)
EP-8000-2	High Volume (Relay)	Voltage	0.25 to 9.5 VDC	0.5 to 19 (3.5 to 133)
EP-8000-3 ¹	Low Volume (Non-Relay)	Current	4 to 20 mA DC	3 to 15 (21 to 105)
EP-8000-4	High Volume (Relay)	Current	4 to 20 mA DC	3 to 15 (21 to 105)

1. Low-volume models are one-pipe instruments requiring a 0.007 in. (0.017 mm) R-3710 Series Restrictor, ordered separately.

Accessories

Code Number	Description
R-3710	0.007 in. Restrictor (Required for Low-Volume Models)
EP-8000-101	Electro-Pneumatic Transducer Mounting Kit (For Mounting the EP-8000 to a Pneumatic Valve Actuator)
A-4000-137	In-line Filter (Required for All Models)
A-4000-1037	In-line Filter (Required for all Models; Package of Five)
JC-5361	Hypodermic Needle Test Probe Assembly
G-2010 Series	0 to 30 psig (0 to 210 kPa) Gauge

Specifications

EP-8000 Electro-Pneumatic Transducer (Part 1 of 2)		
Action	Proportional — Direct Acting	
Supply Pressure	18 to 25 psig (126 to 175 kPa); nominal 20 psig (140 kPa); air supply must be clean, dry, and oil-free.	
Supply Pressure Sensitivity	0.3 psig/psig (0.3 kPa/kPa)	
Adjustments	Voltage Models	20 VDC Maximum Input; Span Adjustable From 7.5 VDC to 15 VDC; Factory-Set at Approximately 10 VDC
	Current Models	30 mA DC Maximum Input; Span Adjustable From 10 to 20 mA DC; Factory-Set at Approximately 16 mA DC
	All Models	Output can be shifted ± 9 psig (± 63 kPa) using zero adjustment screw.
Linearity	5% Maximum of Output Span Between 3 to 15 psig (21 to 103 kPa)	
Hysteresis	0.5 psig (1.4 kPa) typical	
Temperature Coefficient	0.05 psig/°F (0.64 kPa/°C)	
Input Impedance	Voltage Models	1,000 Ohms Minimum
	Current Models	350 Ohms Maximum
Air Flow Capacity at 20 psig Supply	Low Volume Models	45 SCIM (12.3 mL/s) Maximum ¹
	High Volume Models	1600 SCIM (437 mL/s) Maximum

Electro-Pneumatic Transducer (Continued)

EP-8000 Electro-Pneumatic Transducer (Part 2 of 2)		
Air Consumption	Low Volume Models	45 SCIM (12.3 mL/s) Maximum ¹
	High Volume Models	45 SCIM (12.3 mL/s) Maximum
Electrical Connections	Two-Wire Terminal Block for 18 AWG Stranded Wire	
Air Connections	Barbed Fittings for 5/32 or 1/4 in. O.D. Polytubing	
Materials	Body	Polysulphone
	Case and Cover	Polycarbonate/ABS
	Enclosure Protection	IP 20 (IEC 60529)
	Air Connections	Brass
Ambient Operating Limits	Temperature	41 to 122°F (5 to 50°C)
	Humidity	10 to 90% RH, Non-condensing
Ambient Storage Temperature Limits	-4 to 140°F (-20 to 60°C)	
Mounting	Surface-Mounted or Installed on Pneumatic Valve or Damper Actuator Using Accessory Mounting Kit	
Shipping Weight	EP-8000-1 and -3	0.5 lb (227 g)
	EP-8000-2 and -4	0.6 lb (272 g)

1. This value is specified for dead-ended loads or with controlled devices/applications with a maximum air consumption of 10 SCIM (2.7 mL/s).

