Code No. LIT-1922495
Issued October 27, 2011

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 Restricter, ordered separately.

Accessories

Code Number	Description
R-3710	0.007 in. Restricter (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

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

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).