

V-9011 Three-Way Solenoid Air Valve UL Recognized

The V-9011 Three-Way Solenoid Air Valve allows a DSC-8500 Binary Output (BO) point to provide two-position control of pneumatic damper and valve actuators. A shunt diode is imbedded in the coil to suppress turn-off transients.

Operation

A Maintained Binary Output (BO-MAN) point in the DSC-8500 supplies either 0 or 12 VDC to the V-9011 for two position operation of the valve. The V-9011 features a barbed fitting at each of the three valve ports. The actuator is piped to the Cylinder port (CYL stamped on the body). The CYL port is the common port of the V-9011. Supply air is piped to either the N.O. (Normally Open) or N.C. (Normally Closed) port, depending on the fail-safe position desired for the actuator (see Table 1). The unused fitting is left uncapped to act as the exhaust port.

Mounting

The V-9011 is designed for panel mounting in either of two ways. It can be snapped into an HMA-107 Hardware Mounting Assembly where up to four V-9011s can be mounted, or it can be mounted directly to the panel using two No. 8 sheet metal screws (field supplied).

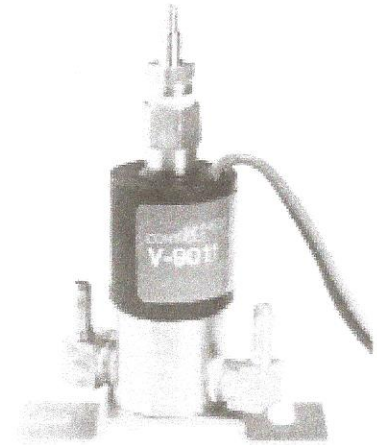
Wiring

The V-9011 has two 18 in. (457 mm) 18 AWG stranded pigtail leads, one red and one black. Because of the internal shunt diode used for transient suppression, it must be wired for proper signal polarity, red lead positive and black lead negative.

Wiring connections should be made with wire nuts or other approved connectors as required. All wiring must be in accordance with applicable electrical code requirements.

Repair Information

Field repairs must not be made. For a replacement V-9011, contact the nearest Johnson Controls branch office.



**Fig. 1: V-9011
Three-Way Solenoid
Air Valve**

EPRI Edgemont Precision Rebuilders Inc
800-356-3774

Specifications

Product	V-9011-1 Three-Way Solenoid Air Valve	
Operating (ON) Voltage	12 VDC Nominal, 15 VDC Maximum, 11 VDC Minimum	
Drop-Out (OFF) Voltage	0.5 VDC Maximum	
Current Draw	170 Milliamperes Maximum at 70°F (21°C) and 12 VDC	
Lead Wires	18 in. (457 mm), 18 AWG Stranded Pigtails One Red, One Black	
Supply Pressure	25 PSIG (175 kPa) Maximum Air Supply Must Be Clean, Dry, and Oil Free	
Leakage	1 SCIM (.27 mL/s) Maximum at 20 PSIG (140 kPa)	
Output Capacity	500 SCIM (137 mL/s) Minimum at 20 PSI (140 kPa) Differential	
Air Connections	N.C. and CYL Ports	Barbed Fittings for 1/4 in. O.D. Poly tubing
	N.O. Port	Barbed Fitting for 5/32 or 1/4 in. O.D. Poly tubing
Overall Dimensions	3-3/4 x 2-3/4 x 1-7/16 in. (95 x 70 x 37 mm)	
Ambient Operating Temperature Limits	40 to 120°F (4 to 49°C)	
Ambient Storage Temperature Limits	- 40 to 160°F (- 40 to 71°C)	
Humidity	5 to 95% Noncondensing 85°F (29°C) Dew Point Maximum	
Vibration	Moderate	
Shipping Weight	.75 lb (.34 kg)	

The performance specifications are nominal and conform to acceptable industry standards. For application 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.

Application and Drawing Identification

E/PV-1



Table 1: Single Solenoid Operation

Binary Signal	Air Supply	
	At N.O. Fitting	At N.C. Fitting
0 VDC	Actuator Extended	Actuator Retracted
12 VDC	Actuator Retracted	Actuator Extended

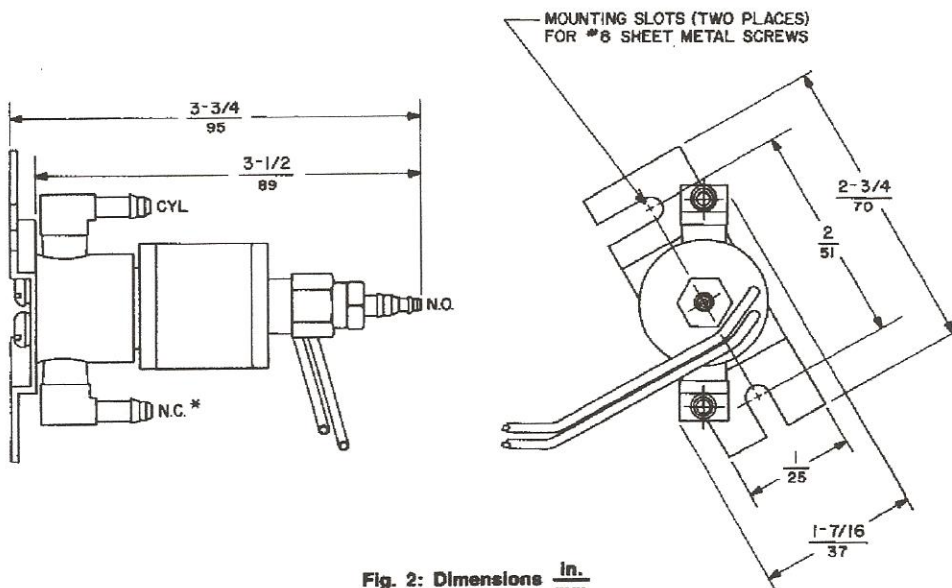


Fig. 2: Dimensions $\frac{\text{in.}}{\text{mm}}$

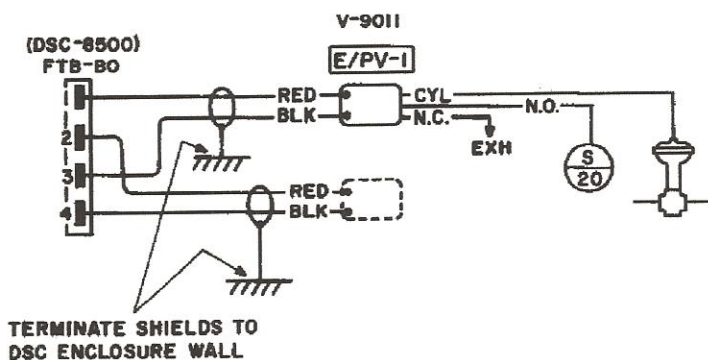


Fig. 3: V-9011 Wiring Diagram

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V-9011

Three-Way Solenoid Air Valve

Description

The V-9011 Three-Way Solenoid Air Valve allows a DSC-8500 Binary Output (BO) point to provide two-position control of pneumatic damper and valve actuators.

Refer to *V-9011 Three-Way Solenoid Air Valve UL Recognized Product Bulletin (LIT-7171570)* for important product information.

Applications

V-9011 air valves are designed for used with a DSC-8500 Binary Output point to provide two-position control of pneumatic damper and valve actuators.

Selection Chart

Code Number	Description
V-9011-1	Three-Way Solenoid Air Valve

Technical Specifications

V-9011 Three-Way Solenoid Air Valve	
Operating (ON) Voltage	12 VDC Nominal, 15 VDC Maximum, 11 VDC Minimum
Drop-Out (OFF) Voltage	0.5 VDC Maximum
Current Draw	170 mA Maximum at 70°F (21°C) and 12 VDC
Lead Wires	18 in. (457 mm), 18 AWG Stranded Pigtails: One Red, One Black
Supply Pressure	25 psig (175 kPa) Maximum; Air Supply Must Be Clean, Dry, and Oil Free
Leakage	1 scim (0.27 mL/s) Maximum at 20 psig (140 kPa)
Output Capacity	500 scim (137 mL/s) Minimum at 20 psi (140 kPa) Differential
Air Connections	N.C. and CYL Ports ¹
	N.O. Port
Vibration	Moderate
Ambient Operating Temperature Limits	40 to 120°F (4 to 49°C)
Ambient Storage Temperature Limits	-40 to 160°F (-40 to 71°C)
Humidity	5 to 95% Non-Condensing, 85°F (29°C) Dew Point Maximum
Overall Dimensions (H x W x D)	3-3/4 in. x 2-3/4 in. x 1-7/16 in. (95 mm x 70 mm x 37 mm)

1. The Actuator is piped to the cylinder port (cylinder is stamped on the body). The cylinder port is the common port of the V-9011.

Features

- shunt diode embedded in the coil suppresses turn-off transients
- supply air is piped to either the N.O. or N.C. port, depending on the fail-safe position desired for the actuator
- mounts directly to a panel using sheet metal screws or can be snapped into 2.75 in. Snaptrack

Repair Information

If the V-9011 Three-Way Solenoid Air Valve fails to operate within its specifications, replace the unit. For a replacement valve, contact the nearest Johnson Controls® representative.



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