V11 Series
Three-Way Solenoid Air Valve

Technical Bulletin

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Overview

V11 Series Three-Way Solenoid Air Valves are for use in applications where the operation of a pneumatically operated device is dependent upon an electrical circuit. The valves directly supply air to the pneumatic device when the coil is energized or de-energized, depending on the supply and exhaust air connections.
All V11 Series valves are designed for use only as operating devices. Where system closure, improper flow, or loss of pressure due to valve failure can result in personal injury and/or loss of property, it is recommended that additional devices be added to indicate proper system operation, (for example, blade position indication on the damper blades in smoke damper applications).

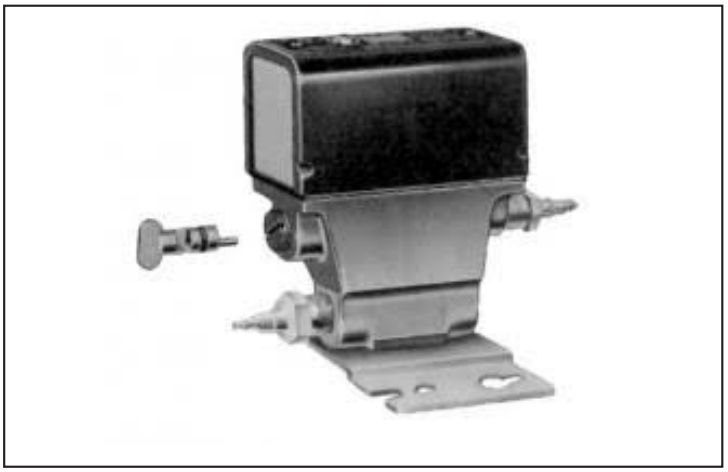


Figure 1: V11 Series Three-Way Solenoid Valve with optional manual opener key shown in the correct position for insertion

Application

In a typical application, supply air is connected to the normally closed port and the control device is connected to the common port. When the solenoid is energized, a magnetic field activates a plunger-type valve stem and supply air is directed to the control device. When the solenoid is de-energized, the supply air connection is closed and the normally open port exhausts air from the control device. Reverse action may be obtained by connecting the supply air to the normally open port, using the normally closed port for exhaust.

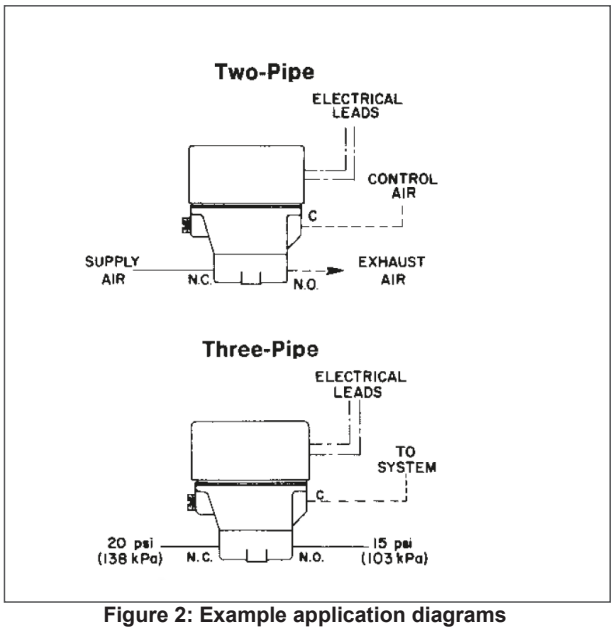


Figure 2: Example application diagrams

Wiring

⚠ WARNING

CAUTION: Risk of Electric Shock
Disconnect the power supply before making electrical connections to avoid electric shock.
MISE EN GARDE : Risque de décharge électrique
Débrancher l'alimentation avant de réaliser tout raccordement électrique afin d'éviter tout risque de décharge électrique.

All wiring must conform to the National Electrical Code and local regulations.

Make wiring connections to the 18 in. wire leads from the coil. The wire is brought through a 7/8 in. diameter conduit opening in the end of the case. All splices should be made utilizing approved solderless connectors or by soldering and then taping the connections.

Installation

IMPORTANT: Contaminants including water in the air supply may affect valve operation. It is recommended that a filtering device be added at the air supply or within the pneumatic system to avoid damage to system components.

This air valve may be mounted in any position. It can be supported by the piping, when used, or conduit to which it is attached. When tubing is used, the bracket supplied on the valve may be used for adequate support. Tubing connections are made to the barbed connectors.

Check the voltage shown on the valve data plate against the voltage of the power source to see that the right unit is being installed.

Checkout procedure

Before leaving the installation, observe at least three complete operating cycles to be sure that all components are functioning correctly.

Valves with manual openers can be checked as follows:

1. Remove the access plug.
2. Insert the manual opener key. The pin must be at the bottom. See Figure. 1.
3. Turn the key clockwise one half turn.

This will open the normally closed line and close the normally open line. After the system has been checked, remove the key and replace the plug.

Repairs and replacements

Field repairs must not be made except for coil replacement. The replacement coil is supplied with a cover and nameplate. For a replacement air valve or replacement coil, contact the nearest Johnson Controls wholesaler.

Replacement coll part numbers

Part number	Voltage
AVC10A-600R	110/120 V, 50/60 Hz
AVC10A-601R	24 V, 50/60 Hz
AVC10A-602R	208 V, 50/60 Hz
AVC10A-603R	220/240 V, 50/60 Hz
AVC10A-609R	24 VDC
AVC10A-610R	277 V, 50/60 Hz
AVC10A-611R	440/480 V, 50/60 Hz
AVC10A-612R	550/600 V, 50/60 Hz

Note: These units should only be used in applications which are within the limitations and provisions of the applicable American National and/or UL standards.

Power and temperature ratings

Product number	V11HAA-100	V11HAA-115	V11HBA-100	V11HCA-100	V11HDA-100	V11HFA-100	V11HGA-100(G)
Power	110/220 V, 50/60 Hz		220/240 V, 50/60 Hz	208 V, 50/60 Hz	440/480 V, 50/60 Hz	277 V, 50/60 Hz	24 V, 50/60 Hz
Temperature rating	60 C max			60 C max @ 60 Hz 55 C max @ 50 Hz	60 C max	60 C max @ 60 Hz 55 C max @ 50 Hz	

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Patents

Patents: https://jcipat.com

Contact information

Contact your local branch office: www.johnsoncontrols.com/locations

Contact Johnson Controls: www.johnsoncontrols.com/contact-us

Single point of contact

APAC	Europe	NA/SA
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