AL-150 Series

Solenoid Air Valve General Instructions

Application

For applications where an electrical circuit is used to control a pneumatically operated device. Used to direct supply air to a pneumatic device when the coil is energized or de-energized depending on the supply and exhaust air connects.

Features

- Brass body provides long life.
- High capacity of AL-150 series allows more devices to be used with fewer solenoid air valves.

Applicable Literature

- TAC Cross-Reference Guide, F-23638
- TAC Reference Manual , F-21683
- TAC Application Manual, F-21335
- EN-123 Air Quality Requirements for Pneumatic HVAC Control Systems F-22516

Specifications

Valve Inputs:

Power Input: 6.1 Watts (energized).
Available Voltages: See Table-1.
Electrical Connections: 18" (457 mm) leads on the coil. Threaded hole for 1/2" conduit.
Maximum Inlet Air Pressure: 40 psig (276 kPa). Clean, dry, oil free air is required (reference EN-123).
Air Connections: 1/8" NPT.
N.C., Normally closed, Port 2.
N.O., Normally open, Port 3.
COM, Common, Port 1.

Valve Outputs:

Flow Capacity: 1.15 scfm (580 ml/sec) @15 psig (138 kPa) supply with 1 psig (6.9 kPa) drop.

Environment: Ambient Temperature Limits

Shipping, -40 to 150°F (-40 to 65°C).
Operating, 32 to 125°F (0 to 52°C).
Supply Air, 40 to 130°F (4 to 54°C).
Humidity: 5 to 95% RH, non-condensing.
Location: NEMA Types 1, 2, 3, 3S, 4, and 4X .

Table 1:

Solenoid	Voltage (AC 60 Hz)
AL-150	24
AL-151	120

INSTALLATION

Inspection

Inspect the carton for damage. If damaged, notify the appropriate carrier immediately. Inspect the device for obvious damage. Return damaged products.

Requirements

- Job wiring diagrams
- Tools (not provided)
- Training: Installer must be a qualified, experienced technician

Caution:

- Disconnect the power supply (line power) before installation to prevent equipment damage.
- Make all connections in accordance with the wiring diagram and in accordance with national and local electrical codes. Use copper conductors only.
- Do not exceed ratings of the device(s).
- Avoid locations where excessive moisture, corrosive fumes, or vibration is present.

MOUNTING

Remote Mounting

NOTE

This method requires the use of the enclosure on the coil. An integral mounting plate is provided.

1. Fasten to wall or duct with two #8 sheet metal screws or equivalent.
2. Rotate the soleniod enclosure to position the wiring compartment, if necessary.

Inside Cabinet Mounting

1. Fasten to subpanel of cabinet with two #8 sheet metal screws.
2. Remove red cap.
3. Remove name plate by sliding out of coil.
4. Remove coil.
5. Install plunger tube through hole in electrical enclosure.
6. Re-install coil and coil hold down name plate snap red cap back on solenoid.

CAUTION

Do not over-tighten as this may cause distortion of plunger tube or damage coil.

CHECKOUT

Go No Go Test

1. Connect solenoid ports.
2. Apply air to Port #1, Ports #1 and #3 should be connected.
3. Apply power to the solenoid, Ports #1 and #2 should be connected.
4. If Ports #1 and #2 are not connected, check to see if the proper voltage is applied.
5. Replace the solenoid with a functional unit if solenoid is powered and Ports #1 and #2 are not connected.

MAINTENANCE

Regular maintenance of the total system is recommended to assure sustained optimum performance.

FIELD REPAIR

None. Replace with a functional solenoid.

DIMENSIONAL DATA

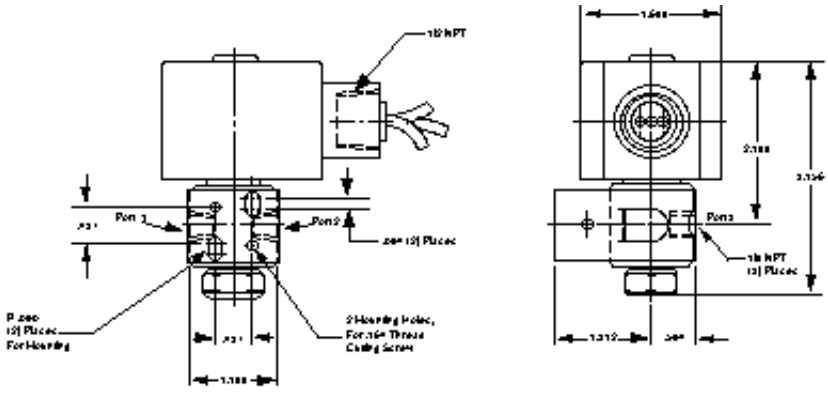

Figure-1 AL-150 Dimensional Drawing.

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