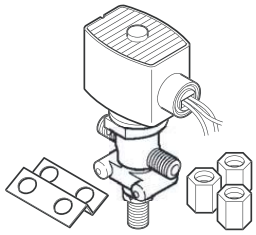
AL-190 Series

Solenoid Air Valve General Instructions

APPLICATION

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



SPECIFICATIONS

Power Input: 9.1 Watts (energized).
Available Voltages: See Table-1.
Electrical Connections: 18" (457 mm) leads on the coil. Coil leads are red; ground lead is green. Threaded hole for 1/2" conduit connector. Accepts 1/2" EMT fittings.
Maximum Inlet Air Pressure: 30 psig (345 kPa). Clean, dry, oil free air required (reference EN-123.
Air Connections: For 1/4" compression fittings. Three (3) compression fittings (PKG-1141) for 1/4" plastic tubing supplied with each valve.
N.O. Normally open, Port 3
N.C., Normally closed, Port 2.
COM, Common, Port 1.
Flow Capacity: 0.59 scfm (236 ml/s) at 15 psig (103 kPa) supply with 1 psig (6.9 kPa) drop.
Ambient Temperature Limits:
Shipping, -40 to 150°F (-40 to 65°C).
Operating, 32 to 130°F (0 to 54°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 Model Chart and Replacement Parts for Solenoid Air Valves.

Part Number	Voltage (AC 60 Hz) +10/-15%	Replacement Part Numbers
		Schneider Electric
AL-190	24	PNR-326-24
AL-191	120	PNR-326-120

TYPICAL APPLICATION

When the supply fan is started, Electric Pneumatic (EP) Solenoid Air Valve E.P.-1 is energized, connecting N.C. and common ports. Main Air (20 Psig) is supplied to P.E.-1, starting Humidifier Fan; to Room Humidistat H-1, placing normally-closed Steam Humidifier Valve under control; to positioners of outside, Return and Relief Damper temperature controller, and to Remote Exhaust Damper Motor M-4, opening the normally-closed Exhaust Damper fully.

When the supply fan is stopped, E.P.-1 is de-energized, connecting the Common and N.O. ports, exhausting main air from control devices. P.E.-1 stops the Humidifier Fan; the normally-closed Humidifier Valve closes; the Outside Air and Relief Damper close; the Return Damper opens and the Exhaust Damper closes.

INSTALLATION

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)
- Installer must be a qualified, experienced technician

Caution: Disconnect all power supplies (line power) before installation.

- 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

1. Fasten to wall, duct or cabinet subpanel with two #8 sheet metal screws or equivalent, using mounting bracket supplied with unit.
2. Valve should be mounted vertically with solenoid at top and port 1 at bottom.
3. Rotate the solenoid enclosure to the most convenient wiring position.
4. wiring position.

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.

Replace the solenoid with a functional unit if solenoid is powered and Ports1 and 2 are not connected.

MAINTENANCE

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

FIELD REPAIR

Operating coils may be replaced. See Table 1. Power must be disconnected during coil service.

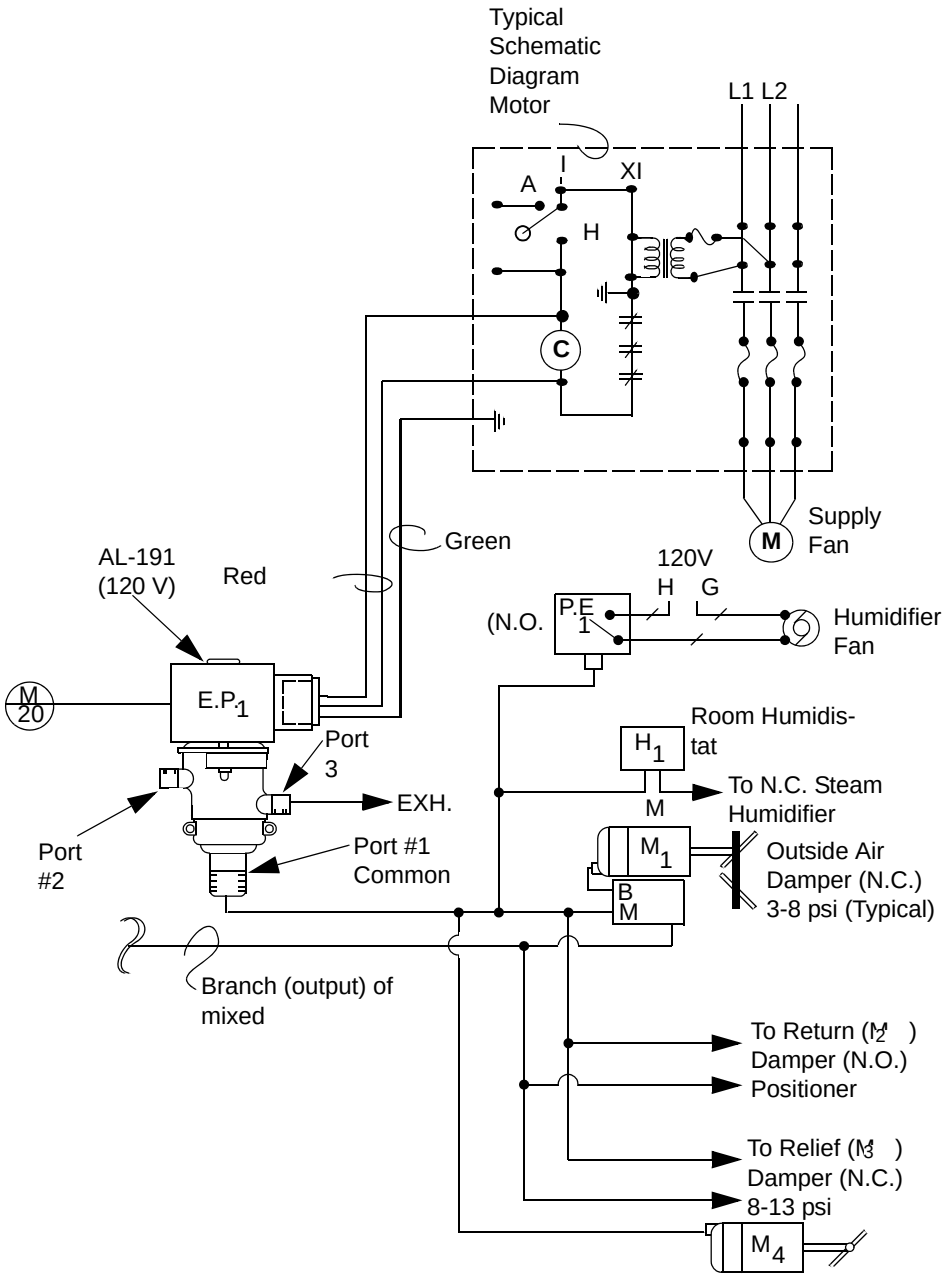
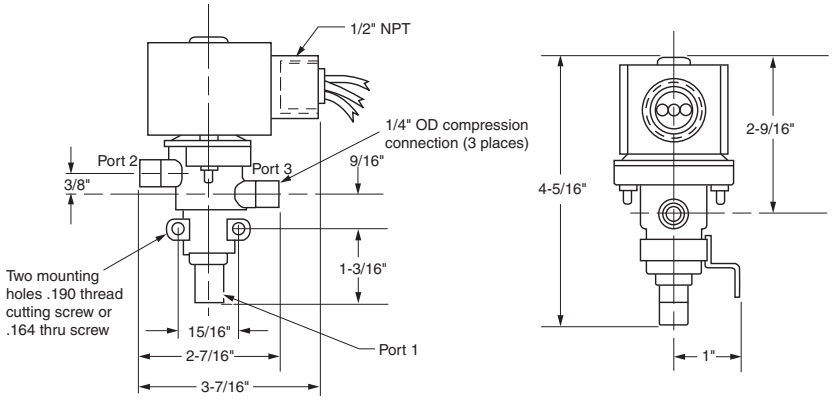


Figure-1 Typical Application Wiring Diagram.

DIMENSIONAL DATA



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