**PREPARATION and OPERATION**

Prior to connecting gas/liquid flow lines inspect all parts of the piping system including ferrules and fittings for dust or other contaminants. Be sure to observe the direction of flow as indicated by the arrow on the front of the valve when connecting the fluid flow system to be monitored.

Insert tubing into the compression fittings until the ends of the properly sized tubing home flush against the shoulders of the fittings. Compression fittings are to be tightened according to the manufacturer’s instructions to one and one quarter turns. Avoid over tightening.

Once installed inline with the gas or liquid to be controlled, apply a variable DC power source at the two solenoid wires to proportionally open and close the solenoid valve (there is no polarity). The valve is set to begin opening at approximately 5 VDC. They can also serve as “on off” valves (valves are not guaranteed for absolute closure). Optional PSV-D DRIVER MODULE is available when use of a 0 to 5 VDC or 4 to 20 mA reference control signal is desired. Contact your distributor or Aalborg for more information.

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>ORIFICE SIZE</th>
<th>Cv</th>
<th>*maximum flow [ml / min]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[inch]</td>
<td>[mm]</td>
<td>Air</td>
</tr>
<tr>
<td>PSV-1</td>
<td>0.020</td>
<td>0.51</td>
<td>0.009</td>
</tr>
<tr>
<td>PSV-2</td>
<td>0.040</td>
<td>1.02</td>
<td>0.033</td>
</tr>
<tr>
<td>PSV-3</td>
<td>0.055</td>
<td>1.40</td>
<td>0.055</td>
</tr>
<tr>
<td>PSV-4</td>
<td>0.063</td>
<td>1.60</td>
<td>0.068</td>
</tr>
<tr>
<td>PSV-5</td>
<td>0.125</td>
<td>3.18</td>
<td>0.240</td>
</tr>
</tbody>
</table>

* based on 10 psig [690 mbar] differential pressure.

**SPECIFICATIONS**

- **POWER INPUT:** 0 to 30 VDC.
- **MAXIMUM CURRENT REQUIRED:** 400 mA.
- **ELECTRICAL CONNECTION:** Male spade connectors.
- **TYPE OF OPERATION:** Normally closed (nc).
- **CONNECTIONS:** 1/4 inch compression fittings, optional 1/8 inch for sizes 1, 2, 3 and 3/8 inch.
- **DIMENSIONS:** 3.55 inch (90.2mm) high x 3.25 inch (82.6mm) long (with fittings) x 1.00 inch (25.4mm) deep.
- **WETTED MATERIALS:** Types: 316 and 416 stainless steel, VITON® O-rings; BUNA-N®, EPR or KALREZ® O-rings are optional.
- **MAXIMUM PRESSURE:** 1000 psig (6896 kPa).
- **MAXIMUM DIFFERENTIAL PRESSURE:** 50 psid (345 kPa).
- **MAXIMUM INTERNAL LEAK:** 0.5% FS.
- **LEAK INTEGRITY:** 1 X 10⁻⁹ scc / sec Helium.
- **FLUID TEMPERATURE:** 14°F to 122°F (-10°C to 50°C).
- **MAXIMUM TEMPERATURE (TYPICAL):** 174°F (79°C) inside, 130°F (54°C) outside surface at 24 VDC.
- **ENVIRONMENTAL (PER IEC 664):** Installation level II; pollution degree II.

PSV Proportionating Solenoid Valves are uniquely designed to respond to variable power inputs (0-30 VDC) to regulate flow of liquids and/or gases proportionately. For added safety PSV valves are normally closed (NC) when de-energized.
MAINTENANCE

The solenoid valve consists of 316 and 416 stainless steel, and VITON® (or optional BUNA-N®, EPR or KALREZ®) O-rings and seals. No regular maintenance is required except for periodic cleaning. Various corrosive gases or liquids may demand more frequent replacement of O-rings and seals inside the valve. Be sure to use an elastomer material, appropriate for your specific application. Contact your distributor or Aalborg® for optional sealing materials available.

Set the PSV for maximum flow, and attempt to flush through in both directions with a clean, filtered, and neutral gas such as nitrogen. [Another option for fully opening the valve is to remove the plastic cap on top of the valve, and turn the set screw counterclockwise until it stops]. If blockage is not alleviated, return the unit to your distributor or Aalborg® for servicing.

Aalborg® reserves the right to change designs and dimensions at its sole discretion at any time without notice. For certified dimensions please contact Aalborg®.