Series 3  
1/8" Ported Mechanically Operated Sensor Valves (Whisker Valve)

3-way/2-position and 5-way/2-position  
Ports 1/8" NPTF

In order to facilitate the use of limit switch valves in applications where very low actuating forces and high flow rates are required, the Series 3 valves are equipped with new mechanical devices designed for this purpose. The Series 3 valve is designed with a mechanical lever which when operated releases an internal pilot signal to atmosphere. Actuation forces are less than 50g (2N); (.5 lbf) and the sensitivity can be increased by adding a “whisker” or rod of dia. 3mm to the lever (cross-thread of M5 x .8 can be used to hold “whisker-rod” in place).

The functions available are as follows:
- 3-way/2-position normally closed or normally open (spring return)
- 5-way/2-position (spring return)

* These valves have an internal mechanical spring return and a pilot-pressure spool plunger that shifts upon actuation of the lever by depressurizing the spool plunger. Valve symbols shown are “at rest” next to the actuator symbol.

### TECHNICAL SPECIFICATIONS

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<th>Feature</th>
<th>Specification</th>
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<tr>
<td>Valve group</td>
<td>3-way/2-position, 5-way/2-position</td>
</tr>
<tr>
<td>Construction</td>
<td>Spool-Type (servo-controlled)</td>
</tr>
<tr>
<td>Mounting</td>
<td>Mounting holes in valve body</td>
</tr>
<tr>
<td>Materials</td>
<td>Anodized body, stainless steel spool, Buna-N seals</td>
</tr>
<tr>
<td>Threaded port sizes</td>
<td>1/8&quot; NPTF</td>
</tr>
<tr>
<td>Installation</td>
<td>In any position</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>32°F - 175°F, (dry air necessary down to .4°F)</td>
</tr>
<tr>
<td>Fluid</td>
<td>Filtered air (25 micro or less recommended)</td>
</tr>
<tr>
<td>Lubricant</td>
<td>Not required; otherwise, oil compatible with Buna-N, (3°-10° E) (ISO VG 32 grade; 32 centistrokes)</td>
</tr>
</tbody>
</table>

### PNEUMATIC DATA

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Operating pressure</td>
<td>4-10 bar (58-145 psi)</td>
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<tr>
<td>Nominal pressure</td>
<td>6 bar, (87 psi)</td>
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</table>
| Nominal flow             | "Qn Series 3: 1/8" = 700 Nl/min. (24.7 SCFM)  
                           | Cv rating 1/8" = .73                       |
| Nominal diameter         | 1/8" = 5 mm                               |
| Fluid                    | Filtered air                              |

* Qn = determined with supply pressure of 6 bar and with Dp = 1 bar  
**Dimensions are in millimeters
CODING OF MINIVALVES

3 3 8-D15-9A5 TF

SERIES 3

FUNCTIONS (WAY/POSITION)
3 = 3/2 way normally closed
4 = 3/2 way normally open
5 = 5/2 way

PORTS
6 = 1/8"

ACTUATION
9A5 = lever sensor, spring return

PILOT-FUNCTION
D15 = pressure drop/air-spring return

* These valves have an internal mechanical spring return and a pilot-pressure spool plunger that shifts upon actuation of the lever by depressurizing the spool plunger. Valve symbols shown are “at rest” next to the actuator symbol.

Valves Mod. 338-D15-9A5TF  \( Cv = 0.73 \)

Operating pressure
4 - 10 bar, 58-145 psi

Acuation force =
0.5 lb at 6 bar (2N)

* The function of the valve is indicated by the symbol when operating between 4 and 10 bar.

Valves Mod. 348-D15-9A5TF  \( Cv = 0.73 \)

Operating pressure
4 - 10 bar, 58-145 psi

Acuation force =
0.5 lb at 6 bar (2N)

* The function of the valve is indicated by the symbol when operating between 4 and 10 bar.

Valves Mod. 358-D15-9A5TF  \( Cv = 0.73 \)

Operating pressure
4 - 10 bar, 58-145 psi

Acuation force =
0.5 lb at 6 bar (2N)

* The function of the valve is indicated by the symbol when operating between 4 and 10 bar.

* All “whisker-rod” holes in lever have M5 x 0.8 cross-drilled tap hole for securing rod.