Maxseal Solenoid Operated Valves

ICO4S
1/4" 5/2
PBMR

Typical Applications

- 1/4" 5/2 PUSH BUTTON MANUAL RESET
- Actuator Control
- Oil & Gas Applications
- Turbine Fuel Control

Model: ICO4S 1/4" 5/2 Uni Direct Acting Solenoid Valve

- Low Pressure, High Flow
- Max Inlet Pressure 20 bar (290 psi)
- Reliable and long life, ideal for a one time installation
- Control of pneumatic or hydraulic operated equipment
Thompson Valves Ltd. - Solenoid Operated Valves

### Standard Features
- Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°C/60°C)
- 1/4” Balanced Poppet Valve
- 1/4” NPT
- M20 x 1.5 Conduit Thread
- Liquid & Gases
- Recommended Spares Kits
- Cv = 0.8 USgpm for 1 psi \( \Delta p \)
- Kg = 11.5 l/min for 1 bar \( \Delta p \)
- Temperature Ratings
- Valve Size
- Process Connections
- Conduit Connection
- Weight
- 7.5 Kg

### Solenoid Materials of Construction
- Solenoid Pot - Stainless Steel - BFC 316
- Top Cover - Stainless Steel - BFC 316
- Valve Body & Trim Materials - 316 Stainless Steel
- O-Rings Seats & Seals - High Nitrile (NBR)
- Coil Insulation - Class H

### Maximum Inlet Pressure
- 20 Bar (290 PSI)

### Flow Rates
- C\(v\) = 0.8 USgpm for 1 psi \( \Delta p \)
- K\(g\) = 11.5 l/min for 1 bar \( \Delta p \)

### Temperature Ratings
- Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°C/60°C)

### Valve Size
- 1/4” Balanced Poppet Valve

### Process Connections
- 1/4” NPT

### Conduit Connection
- M20 x 1.5 Conduit Thread

### Media
- Liquid & Gases

### Weight
- 7.5 Kg

### Recommended Spares Kits
- Soft Spares (O-rings, Springs etc)
- Standard & Extreme Service Y125A010000-SS
- Spare Coil Assembly
- Standard 24V DC (4.5 Watts) Y125P0101B0
- Other Variations See Valve Data Sheet

### Options
- Valve Body & Trim Materials
  - Aluminium Bronze - Sea Water Applications
  - Titanium - Extreme Service Applications
- Process Connections
  - Thread - 1/4” BSPP
- Conduit Connection
  - 1/2” NPT
- Product lead time
  - Y125PA1H1BS - 1 WEEK (SUBJECT TO QUANTITIES)
  - Other Variations - Please call for possible delivery dates
## Technical Specification

### Pressures
- **Test (Proof) Pressure**: 30 bar (435 PSI)
- **Maximum Inlet Pressure**: 20 Bar (290 PSI)

### ATEX Classification
- **Complies with ATEX Directive 94/9/EC**

### ATEX Certificate
- **SIRA 00ATEX1147**

### Certification
- **II 2G**
- **IEEx**
  - IECEx BAS 04.0019
  - EExd IIC T6 (T_a = -60°C to + 48°C) or
  - EExd IIC T4 (T_a = -60°C to + 90°C)

### IECEx
- **IECEEEx**
  - EExd IIC T6 (T_a = -60°C to + 48°C) or
  - EExd IIC T4 (T_a = -60°C to + 90°C)

### GOST ‘K’
- **GOST ‘R’**
  - EExd IIC T6 (T_a = -60°C to + 48°C)
  - EExd IIC T6 (T_a = -60°C to + 90°C)

### Safety Integrity Level
- **Suitable for SIL 3 Application in Simplex Mode**
- **Suitable for SIL 4 Application in Duplex Mode**

### Ingress Protection
- **IP66/X8, NEMA 4X**

### Voltage Surge Protection
- **Surge Suppression Diodes**

### Coil Insulation
- **Class H**

### Performance
- **Pull-in Voltage**: 87.5% of Nominal
- **Response Times**
  - Pull-In: <150ms
  - Drop-Out: <80ms

### Electromagnetic Compability (EMC)
- **EN50081-2/82-1**

### Valve Symbol

![Valve Symbol](image-url)
### Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Operating Pressure</th>
<th>Port Config.</th>
<th>Operation</th>
<th>Process Connection</th>
<th>Seat/Seal Materials</th>
<th>Conduit Connection</th>
<th>Voltage</th>
<th>Body/Trim Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>2</td>
<td>5</td>
<td>P</td>
<td>A1</td>
<td>H</td>
<td>1</td>
<td>B</td>
<td>S</td>
</tr>
<tr>
<td>ICO4S</td>
<td>0-20 Barg (290 psi)</td>
<td>5/2</td>
<td>UNIVERSAL</td>
<td>PUSH BUTTON</td>
<td>MANUAL RESET</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/4&quot; NPT</td>
<td>High Nitrile</td>
<td>M20 x 1.5</td>
<td></td>
<td>316 SS / 316 SS</td>
</tr>
<tr>
<td></td>
<td>1/4&quot; BSPP</td>
<td></td>
<td>V</td>
<td>Viton®</td>
<td></td>
<td>1/2&quot; NPT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Ordering Example

<table>
<thead>
<tr>
<th>Y1</th>
<th>2</th>
<th>5</th>
<th>P</th>
<th>A1</th>
<th>V</th>
<th>1</th>
<th>J</th>
<th>S</th>
</tr>
</thead>
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<tr>
<td>ICO4S</td>
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</tbody>
</table>

### Power Consumption (At Nominal)

<table>
<thead>
<tr>
<th></th>
<th>DC Standard</th>
<th>AC Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>24V DC</td>
<td>15.1 W</td>
<td>25V AC</td>
</tr>
<tr>
<td>50V DC</td>
<td>16.5 W</td>
<td>110V AC</td>
</tr>
<tr>
<td>110V DC</td>
<td>15.6 W</td>
<td>240V AC</td>
</tr>
<tr>
<td>125V DC</td>
<td>15.1 W</td>
<td>17.9 W</td>
</tr>
</tbody>
</table>

### Profile and Dimensions mm

1. **Valve is energised**
   - Valve does not move.
   - Flow occurs between ports 'B' & 'C'
   - ports 'D' & 'E'
   - Push button is pushed upwards
   - Valve 'changes over'
   - Flow occurs between ports 'A' & 'B'
   - ports 'C' & 'D'

2. **Valve is de-energised**
   - Valve resets
   - Flow occurs between ports 'B' & 'C'
   - ports 'D' & 'E'
   - Push button is pushed upwards
   - Valve does not move.
   - Flow occurs between ports 'B' & 'C'
   - ports 'D' & 'E'

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