Maxseal Solenoid Operated Valves

ICO3S
1/4" 3/2 PBMR

Typical Applications
- 1/4" 3/2 PUSH BUTTON MANUAL RESET
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

Thompson Valves Ltd

Description
- Model ICO3S 1/4" 3/2 UNI
- Direct Acting Solenoid Valve
- High Flow
- Max Inlet Pressure 12 bar (174 psi)
- A direct acting solenoid operated valve for the control of pneumatic or hydraulic operated equipment
- Reliable and long life, ideal for a one time installation
- ATEX, CSA, GOST K & R and IECEx
### Standard Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solenoid Materials of Construction</td>
<td>- Solenoid Pot - Stainless Steel - BFC 316</td>
</tr>
<tr>
<td></td>
<td>- Top Cover - Stainless Steel - BFC 316</td>
</tr>
<tr>
<td></td>
<td>- Valve Body &amp; Trim Materials - 316 Stainless Steel</td>
</tr>
<tr>
<td></td>
<td>- O-Rings Seats &amp; Seals - Nitrile (NBR)</td>
</tr>
<tr>
<td></td>
<td>- Coil Insulation - Class H</td>
</tr>
<tr>
<td>Maximum Inlet Pressure</td>
<td>- 12 bar (174 psi)</td>
</tr>
<tr>
<td>Flow Rates</td>
<td>- Cv = 0.6 USgpm for 1 psi Δp</td>
</tr>
<tr>
<td></td>
<td>- Kv = 8.64 l/min for 1 bar Δp</td>
</tr>
<tr>
<td>Temperature Ratings</td>
<td>- Media (Min/Max -20°C/90°C) - Ambient (Min/Max -50°C/60°C)</td>
</tr>
<tr>
<td>Valve Size</td>
<td>- 1/4&quot; Poppet Valve</td>
</tr>
<tr>
<td>Process Connections</td>
<td>- 1/4&quot; NPT</td>
</tr>
<tr>
<td>Conduit Connection</td>
<td>- M20 x 1.5 Conduit Thread</td>
</tr>
<tr>
<td>Media</td>
<td>- Liquid &amp; Gases</td>
</tr>
<tr>
<td>Weight</td>
<td>- 2.5 kg</td>
</tr>
</tbody>
</table>

### Recommended Spares Kits

<table>
<thead>
<tr>
<th>Spares Kits</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Spares (O-rings, Springs, etc.)</td>
<td>- Standard</td>
</tr>
<tr>
<td></td>
<td>- Low Temperature valves</td>
</tr>
<tr>
<td></td>
<td>See Valve Data Sheet</td>
</tr>
<tr>
<td>Spare Coil Assembly</td>
<td>- Standard 24V DC (3.0W)</td>
</tr>
<tr>
<td></td>
<td>Y01300101B0</td>
</tr>
<tr>
<td></td>
<td>- Other Variations</td>
</tr>
<tr>
<td></td>
<td>See Valve Data Sheet</td>
</tr>
</tbody>
</table>

### Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve Body &amp; Trim Materials</td>
<td>- Please call for details</td>
</tr>
<tr>
<td>Low Temperature Options</td>
<td>- Please call for details</td>
</tr>
<tr>
<td>High Temperature Options</td>
<td>- Please call for details</td>
</tr>
<tr>
<td>Process Connections</td>
<td>- Thread 1/4&quot; BSPP</td>
</tr>
<tr>
<td>Conduit Connection</td>
<td>- 1/2&quot; NPT</td>
</tr>
<tr>
<td>Extreme Service</td>
<td>- Increased Power Consumption - Please call for details</td>
</tr>
<tr>
<td>Product Lead Time</td>
<td>- Y013PA1H1BS - 1 week (subject to quantities)</td>
</tr>
<tr>
<td></td>
<td>- Other variations: Please call for possible delivery dates</td>
</tr>
</tbody>
</table>
**Thompson Valves Ltd - Maxseal Solenoid Operated Valves**

### Technical Specification

**Pressures**
- Test (Proof) Pressure: 15 bar (218 psi)
- Maximum Inlet Pressure: 12 bar (174 psi)

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

**ATEX Certificate**
- SIRA 00ATEX1156 and SIRA 05 ATEX 5284

**Certification**
- II 2GD
  - Ex d IIC T6 (T_A = -60°C to +50°C) or
  - Ex d IIC T4 (Max Ambient = +90°C)
  - Ex mbe IIC T4 (T_A = -60°C to +80°C)

- IECEx Certificate
  - IECEx SIR 05.0029 and IECEx SIR 05.0056

- IECEx
  - Ex d IIC T6 (T_A = -60°C to +50°C) or
  - Ex d IIC T4 (Max Ambient = +90°C)

**GOST 'K'**
- Ex d IIC T6 (T_A = -60°C to +50°C)

**GOST 'R'**
- Ex d IIC T6 (T_A = -60°C to +50°C)

**Safety Integrity Level**
- SIL 3 or SIL 4 (SIL 4 in redundant configuration only)

**Ingress Protection**
- IP66/X8 to BS EN 6052:1992, NEMA 4X

**Voltage Surge Protection**
- Surge Suppression Diodes

**Coil Insulation**
- Class H

### Performance

**Pull-In Voltage**
- 87.5% of Nominal

**Response Times**
- Pull-In: <80 ms
- Drop-Out: <60 ms

**Electromagnetic Compatibility (EMC)**
- EN50081-1 EN50082-1 EN61000-4 parts 2,4,5

### Valve Symbol

**Valve Symbol**

**ENERGISED**

```
INLET - 'A'
EXHAUST - 'C'
```

**DE-ENERGISED**

```
INLET - 'A'
EXHAUST - 'C'
```

**VALVE SYMBOL FOR ENERGISE TO OPEN (DE-ENERGISED TO CLOSE) (NORMALLY CLOSED)**

**ENERGISED**

```
EXHAUST - 'A'
INLET - 'C'
```

**DE-ENERGISED**

```
EXHAUST - 'A'
INLET - 'C'
```

**VALVE SYMBOL FOR ENERGISE TO CLOSE (DE-ENERGISED TO OPEN) (NORMALLY OPEN)**
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Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Operating Pressure</th>
<th>Port Config.</th>
<th>Operation</th>
<th>Process Conn.</th>
<th>Seat/Seal Materials</th>
<th>Conduit Connection</th>
<th>Voltage</th>
<th>Body/Trim Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y0</td>
<td>1</td>
<td>3</td>
<td>P</td>
<td>A1</td>
<td>H</td>
<td>1</td>
<td>B</td>
<td>S</td>
</tr>
<tr>
<td>Y0 IC035</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>PBMR</td>
<td>A1 1/4&quot; NPT</td>
<td>H Nitrile</td>
<td></td>
<td>B</td>
<td>24V DC</td>
</tr>
<tr>
<td>YZ IC035</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>PBMR</td>
<td>E1 1/4&quot; BSPP</td>
<td>V Viton®</td>
<td></td>
<td>E</td>
<td>125V DC</td>
</tr>
</tbody>
</table>

Ordering Example

<table>
<thead>
<tr>
<th>Y0</th>
<th>1</th>
<th>3</th>
<th>P</th>
<th>E1</th>
<th>V</th>
<th>2</th>
<th>E</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC035</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>PBMR</td>
<td>1/4&quot; BSPP</td>
<td>Viton®</td>
<td>1/2&quot; NPT</td>
<td>125V DC</td>
<td>316 SS / 316 SS</td>
</tr>
</tbody>
</table>

Power Consumption (At Nominal)

- **DC Standard**
  - 24V DC: 3.0W
  - 125V DC: 3.0W

- **AC Standard**
  - Please Call for Information

- **Extreme Service**
  - Please Call for Information

Profile and Dimensions mm

1. **Valve is Energised**
   - Valve does not move
   - Flow occurs between ports "B" & "C"
   - Push Button is pushed upwards
   - Valve "changes over"
   - Flow occurs between ports "A" & "B"

2. **Valve is De-Energised**
   - Valve resets
   - Flow occurs between ports "B" & "C"
   - Push-button is pushed upwards
   - Valve does not move.
   - Flow occurs between Ports "B" & "C"

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