Maxseal Solenoid Operated Valves

ICO3S
1/2\" 3/2

Typical Applications
- 1/2\" 3/2 Automatic
- Pushbutton manual override
- Pushbutton manual reset
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

Thompson Valves Ltd

Description
- Model ICO3S 1/2\" 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
### Thompson Valves Ltd - Maxseal Solenoid Operated Valves

#### Standard Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solenoid Materials of Construction</td>
<td>Solenoid Pot - Stainless Steel - BFC 316, Top Cover - Stainless Steel - BFC 316, Valve Body &amp; Trim Materials - 316 Stainless Steel, O-Rings &amp; Seals - Nitrile (NBR), 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 = 2.1 USgpm for 1 psi Δp, KV = 30.24 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>1/2” Poppet Valve</td>
</tr>
<tr>
<td>Process Connections</td>
<td>1/2” 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>3 kg</td>
</tr>
</tbody>
</table>

#### Recommended Spares Kits

<table>
<thead>
<tr>
<th>Kit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Spares (O-rings, Springs, etc.)</td>
<td>Standard Y013A03H000-SS, Low Temperature valves See Valve Data Sheet</td>
</tr>
<tr>
<td>Spare Coil Assembly</td>
<td>Standard 24V DC (7.8 Watts) Y01300301B0, Other Variations See Valve Data Sheet</td>
</tr>
</tbody>
</table>

#### Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</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 1/2” BSPP</td>
</tr>
<tr>
<td>Conduit Connection</td>
<td>1/2” 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>Y013A03H1BS - 3 weeks (subject to quantities), 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**: 18 bar (261 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 60521:1992, NEMA 4X

### Voltage Surge Protection

- Surge Suppression Diodes

### Coil Insulation

- Class H

### Performance

- **Pull-In Voltage**: 87.5% of Nominal
- **Response Times**
  - Pull-In <95 ms
  - Drop-Out <60 ms

### Electromagnetic Compatibility (EMC)

- EN50081-1 EN50082-1 EN61000-4 parts 2,4,5

### Valve Symbol

**ENERGISED**

- INLET - ‘A’
- EXHAUST - ‘C’
- INLET - ‘A’
- EXHAUST - ‘C’

**DE-ENERGISED**

- ‘B’ - OUTLET

**VALVE SYMBOL FOR**

- ENERGISE TO OPEN (DE-ENERGISED TO CLOSE)
- (NORMALLY CLOSED)

**ENERGISED**

- EXHAUST - ‘A’
- INLET - ‘C’
- EXHAUST - ‘A’
- INLET - ‘C’

**DE-ENERGISED**

- ‘B’ - OUTLET

**VALVE SYMBOL FOR**

- ENERGISE TO CLOSE (DE-ENERGISED TO OPEN)
- (NORMALLY OPEN)
Thompson Valves Ltd - Maxseal Solenoid Operated Valves

**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>A</td>
<td>A3</td>
<td>H</td>
<td>1</td>
<td>B</td>
<td>S</td>
</tr>
<tr>
<td>Y0 IC03S Ex d</td>
<td>0-12 barg (174 psi)</td>
<td>32 UNIVERSAL</td>
<td>A = AUTO</td>
<td>H Nitrile</td>
<td>1 M20 x 1.5</td>
<td>B 24V DC</td>
<td>S</td>
<td>316 SS / 316 SS</td>
</tr>
<tr>
<td>YZ IC03S Ex mbe</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNI</td>
<td>P = PBMR</td>
<td>V Viton®</td>
<td>2 1/2&quot; NPT</td>
<td>E 125V DC</td>
<td>S</td>
<td>316 SS / 316 SS</td>
</tr>
</tbody>
</table>

**Ordering Example**

<table>
<thead>
<tr>
<th>YZ</th>
<th>1</th>
<th>3</th>
<th>A</th>
<th>E3</th>
<th>V</th>
<th>2</th>
<th>E</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC03S Ex mbe</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNI</td>
<td>AUTO</td>
<td>1/2&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)**

<table>
<thead>
<tr>
<th>DC Standard</th>
<th>AC Standard</th>
<th>Extreme Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>24V DC</td>
<td>Please Call for Information</td>
<td>Please Call for Information</td>
</tr>
<tr>
<td>125V DC</td>
<td>Please Call for Information</td>
<td></td>
</tr>
</tbody>
</table>

**Profile and Dimensions mm**

1. **Valve is energised**
   - Valve "changes over" Flow occurs between ports "A" & "B"

2. **Valve is de-energised**
   - Valve "resets" Flow occurs between ports "C" & "B"