Maxseal Solenoid Operated Valves

ICO3S
1/4" 3/2
PBMO

Thompson Valves Ltd

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

**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 one time installation
- ATEX, CSA, GOST K & R and IECEx
**Thompson Valves Ltd - Maxseal Solenoid Operated Valves**

### Standard Features

- **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 - Nitrile (NBR)
  - Coil Insulation - Class H

- **Maximum Inlet Pressure**
  - 12 bar (174 psi)

- **Flow Rates**
  - CV = 0.6 USgpm for 1 psi Δp
  - KV = 8.64 l/min for 1 bar Δp

- **Temperature Ratings**
  - Media (Min/Max -20°C/90°C) - Ambient (Min/Max -50°C/60°C)

- **Valve Size**
  - 1/4" Poppet Valve

- **Process Connections**
  - 1/4" NPT

- **Conduit Connection**
  - M20 x 1.5 Conduit Thread

- **Media**
  - Liquid & Gases

- **Weight**
  - 2.5 kg

### Recommended Spares Kits

- **Soft Spares (O-rings, Springs, etc.)**
  - Standard Y013C01H000-SS
  - Low Temperature valves See Valve Data Sheet

- **Spare Coil Assembly**
  - Standard 24V DC (3.0W) Y01300101B0
  - Other Variations See Valve Data Sheet

### Options

- **Valve Body & Trim Materials**
  - Please call for details

- **Low Temperature Options**
  - Please call for details

- **High Temperature Options**
  - Please call for details

- **Process Connections**
  - Thread 1/4" BSPP

- **Conduit Connection**
  - 1/2" NPT

- **Extreme Service**
  - Increased Power Consumption - Please call for details

- **Product Lead Time**
  - Y013CA1H1BS - 1 week (subject to quantities)
  - Other variations: Please call for possible delivery dates
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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)

IECEEx Certificate
- Ex d IIC T6 (T_A = -60°C to +50°C)

IECEEx
- 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/IX 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

**ENERGISED**
- INLET - 'A'
- EXHAUST - 'C'
- DE-ENERGISED

**ENERGISED**
- INLET - 'A'
- EXHAUST - 'C'
- VALVE SYMBOL FOR ENERGISE TO OPEN (DE-ENERGISED TO CLOSE) (NORMALLY CLOSED)

**ENDE-ENERGISED**
- INLET - 'A'
- EXHAUST - 'C'
- VALVE SYMBOL FOR ENERGISE TO CLOSE (DE-ENERGISED TO OPEN) (NORMALLY OPEN)
## 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>C</td>
<td>A1</td>
<td>H</td>
<td>1</td>
<td>B</td>
<td>S</td>
</tr>
<tr>
<td>Y0 IC03SS Ex d</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>PBMO</td>
<td>1/4” NPT</td>
<td>H Nitrile</td>
<td>1 M20 x 1.5</td>
<td>B 24V DC</td>
<td>316 SS / 316 SS</td>
</tr>
<tr>
<td>YZ IC03SS Ex mbe</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>PBMO</td>
<td>1/4” BSPP</td>
<td>V Viton®</td>
<td>2 1/2” NPT</td>
<td>E 125V DC</td>
<td>316 SS / 316 SS</td>
</tr>
</tbody>
</table>

## Ordering Example

<table>
<thead>
<tr>
<th>Y0</th>
<th>1</th>
<th>3</th>
<th>C</th>
<th>A1</th>
<th>V</th>
<th>2</th>
<th>E</th>
<th>S</th>
</tr>
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<tr>
<td>IC03SS Ex mbe</td>
<td>0-12 barg (174 psi)</td>
<td>3/2 UNI</td>
<td>PBMO</td>
<td>1/4” NPT</td>
<td>Viton®</td>
<td>1/2” NPT</td>
<td>125V DC</td>
<td>316 SS / 316 SS</td>
</tr>
</tbody>
</table>

## Power Consumption (At Nominal)

<table>
<thead>
<tr>
<th></th>
<th>DC Standard</th>
<th>AC Standard</th>
<th>Extreme Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>24V DC</td>
<td>3.0W</td>
<td>Please Call for Information</td>
<td>Please Call for Information</td>
</tr>
<tr>
<td>125V DC</td>
<td>3.0W</td>
<td></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’
   - Push-button can be pressed when valve is de-energised and the valve will change over until the Push-button is released.

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