Maxseal Solenoid Operated Valves

**ICO4S**

1/2" 3/2

A-L-L

**Typical Applications**

- 1/2" 3/2 AUTOMATIC LATCHING LEVER
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

**Model:** ICO4S 1/2" 3/2 ALL 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**
# Maxseal Solenoid Operated Valves

### Standard Features

- **1/2” Balanced Poppet Valve**
- **1/2” NPT**
- **M20 x 1.5 Conduit Thread**

### Media

- Liquid & Gases

### Weight

- 7.5 Kg

### Recommended Spares Kits

- **Soft Spares (O-rings, Springs etc)**
  - Standard (Viton® & High Nitrile)
  - Low Temperature valves

- **Spare Coil Assembly**
  - Standard 24V DC (15.1 Watts)
  - Other Variations

### Options

- **Valve Body & Trim Materials**
  - Aluminium Bronze - Sea Water Applications
  - Titanium - Extreme Service Applications

- **Low Temperature Options**
  - O-Rings - Low Nitrile/Fluorosilicone (Min Med/Amb -40°C/-40°C)

- **High Temperature Options**
  - High Temperature Spacer (Max Med/Amb 120°C/60°C)

### Process Connections

- **Thread** - 1/2” BSPP

### Conduit Connection

- **1/2” NPT**

### Product lead time

- Y123BA3H1BS - 2 WEEKS (SUBJECT TO QUANTITY)
- Other Variations - Please call for possible delivery dates

### Additional Information

- **Cv** = 4.2 USgpm for 1 psi Δp
- **Kv** = 46 l/min for 1 bar Δp

### Temperature Ratings

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

### Flow Rates

- 20 Bar (290 PSI)

### 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
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

- **IECEEx**: EExd IIC T4 (Ta = -60°C to + 90°C) or EExd IIC T6 (Ta = -60°C to + 48°C)
- **IECEx BAS**: 04.0019
- **Suitable for SIL 3 Application in Simplex Mode**
- **Suitable for SIL 4 Application in Duplex Mode**

Safety Integrity Level

- **ATEX Classification**: IIC
- **ATEX Certificate**: SIRA 00ATEX1147

Ingress Protection

- **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)

- **IECEx**: EN50081-2/82-1

Valve Symbol

<table>
<thead>
<tr>
<th>Valve Symbol</th>
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</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Valve Symbol" /></td>
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</tr>
<tr>
<td><strong>ENERGISED</strong></td>
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</tr>
<tr>
<td><strong>INLET</strong> - 'A'</td>
<td><strong>INLET</strong> - 'A'</td>
</tr>
<tr>
<td><strong>EXHAUST</strong> - 'C'</td>
<td><strong>EXHAUST</strong> - 'C'</td>
</tr>
<tr>
<td><strong>OUTLET</strong> - 'B'</td>
<td><strong>OUTLET</strong> - 'B'</td>
</tr>
<tr>
<td><strong>DE-ENERGISED</strong></td>
<td><strong>DE-ENERGISED</strong></td>
</tr>
</tbody>
</table>

**Valve Symbol for**: Energise to Open (DE-ENERGISED to Close) (NORMALLY CLOSED)

**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 Connection</th>
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<td>A3</td>
<td>H</td>
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#### Automatic Latching Lever

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### Power Consumption (At Nominal)

<table>
<thead>
<tr>
<th>DC Standard</th>
<th>AC Standard</th>
</tr>
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<tbody>
<tr>
<td>18 / 33V DC (24V DC)</td>
<td>CALL 25V AC</td>
</tr>
<tr>
<td>24V DC</td>
<td>15.1 W</td>
</tr>
<tr>
<td>50V DC</td>
<td>16.6 W</td>
</tr>
<tr>
<td>110V DC</td>
<td>15.5 W</td>
</tr>
<tr>
<td>125V DC</td>
<td>15.1 W</td>
</tr>
</tbody>
</table>

### Profile and Dimensions mm

1. Valve is energised
   Valve 'changes over'
   Flow occurs between ports 'A' & 'B'
   Lever moves to 'latched' position.

2. Valve is de-energised
   Valve stays in position as lever prevents valve from 'changing over'
   Flow occurs between ports 'A' & 'B'

3. Lever is moved to 'normal' position
   Valve 'changes over'
   Flow occurs between ports 'B' & 'C'

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