Maxseal Solenoid Operated Valves

ICO4S 1/2" 3/2 PBMR

Model: ICO4S 1/2" 3/2 PBMR Direct Acting Solenoid Valve

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

Description
- 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

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Standard Features
- 1/2" Balanced Poppet Valve
- 1/2" NPT
- M20 x 1.5 Conduit Thread
- Liquid & Gases
- 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
- 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)

Valve Size
- 1/2" Balanced Poppet Valve

Conduit Connection
- M20 x 1.5 Conduit Thread

Media
- Low Temperature valves See Valve Data Sheet
- High Temperature Options
- Please Call for Dimensions

Weight
- 7.5 Kg

Recommended Spares Kits
- Standard (Viton® & High Nitrile) Y123A030000-SS
- Low Temperature valves See Valve Data Sheet
- Standard 24V DC (4.5 Watts) Y123P0301B0
- Other Variations See Valve Data Sheet

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)
- Please Call for Dimensions

Process Connections
- Thread - 1/2" BSPP

Conduit Connection
- 1/2" NPT

Product lead time
- Y123PA3H1BS - 2 WEEKS (SUBJECT TO QUANTITY)
- Other Variations - Please call for possible delivery dates
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**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
- EExd IIC T6 (Tₐ = -40°C to + 60°C) or
- EExd IIC T4 (Tₐ = -40°C to + 90°C)

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

**GOST ‘K’**
- EExd IIC T6 (Tₐ = -40°C to + 60°C)

**GOST ‘R’**
- EExd IIC T6 (Tₐ = -40°C to + 60°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**

- **ENGERISED**
  - INLET - 'A'
  - EXHAUST - 'C'
  - OUTLET - 'B'

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

**Valve Symbol for**
- **ENERGISE TO OPEN**
- **(DE-ENERGISED TO CLOSE)**
  - **(NORMALLY CLOSED)**

**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 Connection</th>
<th>Seat/Seal Materials</th>
<th>Conduit Connection</th>
<th>Voltage</th>
<th>Body/Trim Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICO4S</td>
<td>0-20 Barg (290 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>2</td>
<td>P</td>
<td>A3</td>
<td>H</td>
<td>1</td>
<td>1/2&quot;</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PUSH-BUTTON MANUAL RESET</td>
<td>1/2&quot; NPT</td>
<td>High Nitrile</td>
<td>M20x1.5</td>
<td>1/2&quot; NPT</td>
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<td>E3</td>
<td>Viton®</td>
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Power Consumption (At Nominal)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>DC Standard</th>
<th>AC Standard</th>
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<tbody>
<tr>
<td>18 / 33V DC (24V DC)</td>
<td>7.7 W</td>
<td>25V AC</td>
</tr>
<tr>
<td>24V DC</td>
<td>4.5 W</td>
<td>110V AC</td>
</tr>
<tr>
<td>50V DC</td>
<td>5.5 W</td>
<td>240V AC</td>
</tr>
<tr>
<td>110V DC</td>
<td>8.0 W</td>
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</tr>
<tr>
<td>125V DC</td>
<td>10.4 W</td>
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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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