Maxseal Solenoid Operated Valves

ICO4S
1/4" 3/2
207B
PBMR

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

Description
- Model: ICO4S 1/4" 3/2 Uni Direct Acting Solenoid Valve
- High Pressure
- Max Inlet Pressure 207 bar (3000 psi)
- Reliable and long life, ideal for a one time installation
- Control of pneumatic or hydraulic operated equipment
### 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 Seals - High Nitrile (NBR)
  - Seats - Nylon 66
  - Coil Insulation - Class H

- **Maximum Inlet Pressure**
  - 207 Bar (3000 PSI)

- **Flow Rates**
  - \( C_v = 0.28 \) USgpm for 1 psi \( \Delta p \)
  - \( K_v = 4.03 \) l/min for 1 bar \( \Delta p \)

- **Temperature Ratings**
  - Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°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**
  - 5.5 Kg

### Recommended Spares Kits

- **Soft Spares (O-rings, Springs etc)**
  - Standard & Extreme Service - Y163A010000-SS
  - Low Temperature valves - See Valve Data Sheet

- **Spare Coil Assembly**
  - Standard 24V DC (4.5 Watts) - Y163P0101B0
  - Other Variations - See Valve Data Sheet

### Options

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

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

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

- **Product lead time**
  - Y163PA1J1BS - 1 WEEK (SUBJECT TO QUANTITIES)
  - Other Variations - Please call for possible delivery dates
Technical Specification

Pressures

Test (Proof) Pressure

Maximum Inlet Pressure

ATEX Classification

ATEX Certificate

Certification

IECEx

GOST ‘K’

GOST ‘R’

Safety Integrity Level

Ingress Protection

Voltage Surge Protection

Coil Insulation

Performance

Pull-in Voltage

Response Times

Electromagnetic Compatibility (EMC)

Valve Symbol

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**Technical Specification**

**Pressures**

- **Test (Proof) Pressure**: 310 bar (4500 PSI)
- **Maximum Inlet Pressure**: 207 Bar (3000 PSI)

**ATEX Classification**

- Complies with ATEX Directive 94/9/EC

**ATEX Certificate**

- SIRA 00ATEX1147

**Certification**

- II 2G

**IECEx**

- IECEx BAS 04.0019

**GOST ‘K’**

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

**GOST ‘R’**

- EEExd IIC T6 (Ta = -60°C to + 90°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
- Pull-In: <150ms
- Drop-Out: <80ms

**Electromagnetic Compatibility (EMC)**

- EN50081-2/82-1

**Valve Symbol**

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

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

**Valve Symbol for**

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

- **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>
<th>Seat/Seal Materials</th>
<th>Conduit Connection</th>
<th>Voltage</th>
<th>Body/Trim Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>6</td>
<td>3</td>
<td>P</td>
<td>A1</td>
<td>J</td>
<td>1</td>
<td>B</td>
<td>S</td>
</tr>
<tr>
<td>ICO4S</td>
<td>0-207 Barg (3000 psi)</td>
<td>3/2 UNIVERSAL</td>
<td>PUSHBUTTON MANUAL</td>
<td>A1 1/4&quot; NPT</td>
<td>K Nylon / High Nitrile</td>
<td>E1 1/4&quot; BSPP</td>
<td>J 1 M20x1.5</td>
<td>2 1/2&quot; NPT</td>
</tr>
</tbody>
</table>

Ordering Example

<table>
<thead>
<tr>
<th>Y1</th>
<th>6</th>
<th>3</th>
<th>P</th>
<th>A1</th>
<th>K</th>
<th>2</th>
<th>C</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICO4S</td>
<td>0-207 Barg (3000 psi)</td>
<td>3/2 UNI</td>
<td>PBMR</td>
<td>1/4&quot; NPT</td>
<td>Nylon / Viton®</td>
<td>1/2&quot; NPT</td>
<td>50V 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>
</tr>
</thead>
<tbody>
<tr>
<td>18 / 33V DC (24V DC)</td>
<td>25V AC</td>
</tr>
<tr>
<td>24V DC</td>
<td>110V AC</td>
</tr>
<tr>
<td>50V DC</td>
<td>240V AC</td>
</tr>
<tr>
<td>110V DC</td>
<td>9.5 W</td>
</tr>
<tr>
<td>125V DC</td>
<td>9.3 W</td>
</tr>
</tbody>
</table>

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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