

Maxseal Solenoid Operated Valves



ICO4S
1/2" 3/2
JSMO



Typical Applications

- 1/2" 3/2 JACK SCREW MANUAL OVERRIDE
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

Thompson Valves Ltd

Description

- Model: ICO4S 1/2" 3/2 JSMO 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

| | |
|---|--|
| Standard Features | <input type="checkbox"/> ICO4S 1/2" 3/2 JSMO |
| Solenoid Materials of Construction | <input type="checkbox"/> Solenoid Pot - Stainless Steel - BFC 316 |
| | <input type="checkbox"/> Top Cover - Stainless Steel- BFC 316 |
| | <input type="checkbox"/> Valve Body & Trim Materials - 316 Stainless Steel |
| | <input type="checkbox"/> O-Rings Seats & Seals - High Nitrile (NBR) |
| | <input type="checkbox"/> Coil Insulation - Class H |
| Maximum Inlet Pressure | <input type="checkbox"/> 20 Bar (290 PSI) |
| Flow Rates | <input type="checkbox"/> $C_v = 4.2$ USgpm for 1 psi Δp |
| | <input type="checkbox"/> $K_v = 46$ l/min for 1 bar Δp |
| Temperature Ratings | <input type="checkbox"/> Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°C/60°C) |
| Valve Size | <input type="checkbox"/> 1/2" Balanced Poppet Valve |
| Process Connections | <input type="checkbox"/> 1/2" NPT |
| Conduit Connection | <input type="checkbox"/> M20 x 1.5 Conduit Thread |
| Media | <input type="checkbox"/> Liquid & Gases |
| Weight | <input type="checkbox"/> 7.5 Kg |

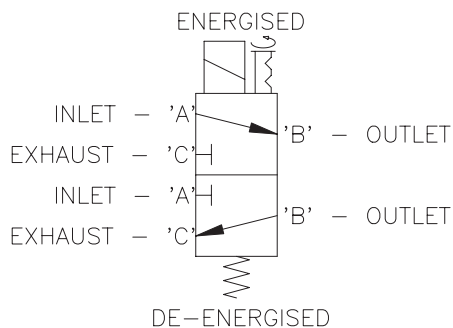
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| Recommended Spares Kits | |
| Soft Spares (O-rings, Springs etc) | <input type="checkbox"/> Standard (Viton® & High Nitrile) Y123A030000-SS |
| | <input type="checkbox"/> Low Temperature valves See Valve Data Sheet |
| Spare Coil Assembly | <input type="checkbox"/> Standard 24V DC (15.1 Watts) Y123A0301B0 |
| | <input type="checkbox"/> Other Variations See Valve Data Sheet |

| | |
|--|---|
| Options | |
| Valve Body & Trim Materials | <input type="checkbox"/> Aluminium Bronze - Sea Water Applications |
| | <input type="checkbox"/> Titanium - Extreme Service Applications |
| Low Temperature Options | <input type="checkbox"/> O-Rings - Low Nitrile/Fluorosilicone (Min Med/Amb -40°C/-40°C) |
| High Temperature Options | <input type="checkbox"/> High Temperature Spacer (Max Med/Amb 120°C/60°C) |
| | Please Call for Dimensions |
| Process Connections | <input type="checkbox"/> Thread - 1/2" BSPP |
| Conduit Connection | <input type="checkbox"/> 1/2" NPT |
| Product lead time | <input type="checkbox"/> Y123SA3H1BS - 2 WEEKS (SUBJECT TO QUANTITY) |
| | <input type="checkbox"/> Other Variations - Please call for possible delivery dates |

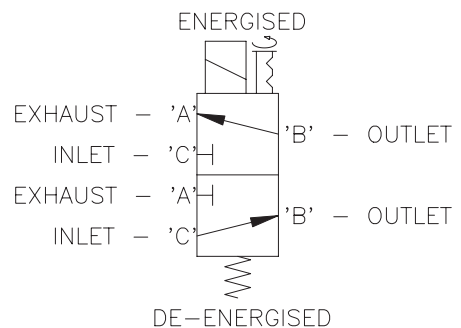
Technical Specification

| | |
|--|--|
| Pressures | |
| Test (Proof) Pressure | <input type="checkbox"/> 30 bar (435 PSI) |
| Maximum Inlet Pressure | <input type="checkbox"/> 20 Bar (290 PSI) |
| ATEX Classification | |
| ATEX Certificate | <input type="checkbox"/> Complies with ATEX Directive 94/9/EC |
| ATEX Certificate | <input type="checkbox"/> SIRA 00ATEX1147 |
| Certification | |
| | <input type="checkbox"/> II 2G |
| | <input type="checkbox"/> EExd IIC T6 (T _a = -60°C to + 48°C) or |
| | <input type="checkbox"/> EExd IIC T4 (T _a = -60°C to + 90°C) |
| IECEX | |
| | <input type="checkbox"/> IECEX BAS 04.0019 |
| | <input type="checkbox"/> EExd IIC T6 (T _a = -40°C to + 60°C) or |
| | <input type="checkbox"/> EExd IIC T4 (T _a = -40°C to + 90°C) |
| GOST 'K' | |
| | <input type="checkbox"/> EExd IIC T6 (T _a = -40°C to + 60°C) |
| GOST 'R' | |
| | <input type="checkbox"/> EExd IIC T6 (T _a = -40°C to + 60°C) |
| Safety Integrity Level | |
| | <input type="checkbox"/> Suitable for SIL 3 Application in Simplex Mode |
| | <input type="checkbox"/> Suitable for SIL 4 Application in Duplex Mode |
| Ingress Protection | |
| | <input type="checkbox"/> IP66/X8, NEMA 4X |
| Voltage Surge Protection | |
| | <input type="checkbox"/> Surge Suppression Diodes |
| Coil Insulation | |
| | <input type="checkbox"/> Class H |
| Performance | |
| Pull-in Voltage | <input type="checkbox"/> 87.5% of Nominal |
| Response Times | |
| | <input type="checkbox"/> Pull-In <150ms |
| | <input type="checkbox"/> Drop-Out <80ms |
| Electromagnetic Compability (EMC) | |
| | <input type="checkbox"/> EN50081-2/82-1 |

Valve Symbol



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

| Model | Operating Pressure | Port Config. | Operation | Process Connection | Seat/Seal Materials | Conduit Connection | Voltage | Body/Trim Materials |
|-------|------------------------|------------------|-------------------------------|--------------------|---------------------|--------------------|-------------|-----------------------------|
| Y1 | 2 | 3 | S | A3 | H | 1 | B | S |
| ICO4S | 0-20 Barg (290 psi) | 3/2 UNIVERSAL | JACK SCREW MANUAL OVERRIDE | A3 | H | 1 | A 18/33V DC | S 316 SS / 316 SS |
| | | | | 1/2" NPT | High Nitrile | M20x1.5 | B 24V DC | M Alu Brnz / Alu Brnz |
| | | | | E3 | V | 2 | C 50V DC | |
| | | | | 1/2" BSPP | Viton® | 1/2" NPT | D 110V DC | |
| | | | | | | | G 25V AC | 3 Titanium / Titanium |
| | | | | | | | J 110V AC | |
| | | | | | | | M 240V AC | |

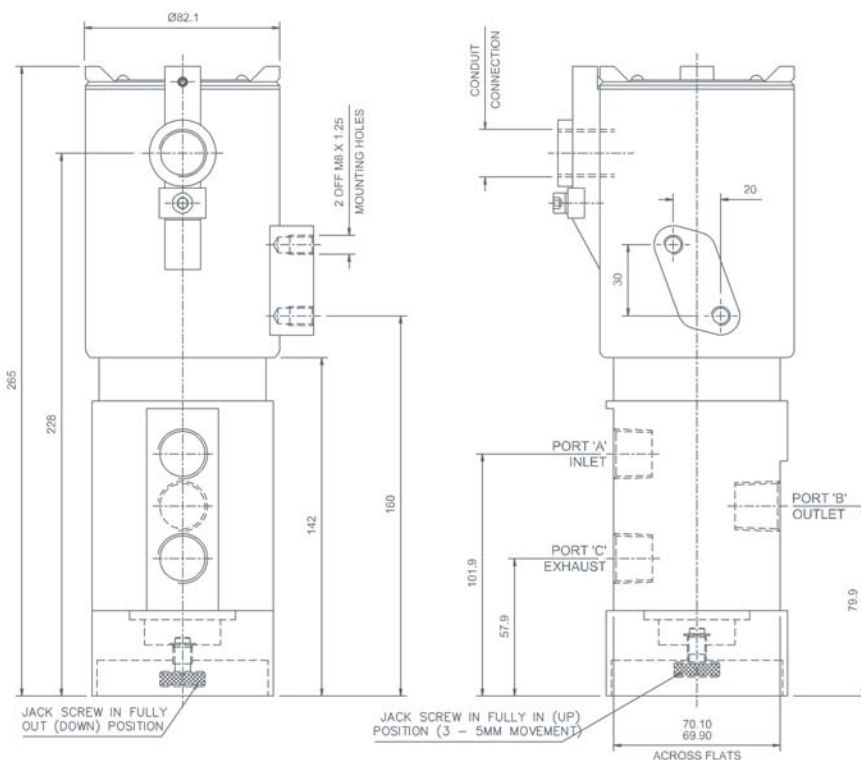
Ordering Example

| | | | | | | | | |
|-------|------------------------|---------|------|----------|--------------|----------|---------|------------------------|
| Y1 | 2 | 3 | S | A3 | H | 2 | M | 3 |
| ICO4S | 0-20 Barg (290 psi) | 3/2 UNI | JSMO | 1/2" NPT | High Nitrile | 1/2" NPT | 240V AC | Titanium / Titanium |

Power Consumption (At Nominal)

| DC Standard | | AC Standard | |
|----------------------|--------|-------------|--------|
| 18 / 33V DC (24V DC) | CALL | 25V AC | 13.3 W |
| 24V DC | 15.1 W | 110V AC | 14.2 W |
| 50V DC | 16.6 W | 240V AC | 17.9 W |
| 110V DC | 15.5 W | | |
| 125V DC | 15.1 W | | |

Profile and Dimensions mm



- Jack screw in fully out (down) position
Valve operates as an automatic
Valve is energised
Flow occurs between ports 'A' & 'B'
Valve is de-energised
Flow occurs between ports 'B' & 'C'
- Jack screw in fully in (up) position
Flow occurs between ports 'A' & 'B'

When the valve is energised or de-energised, the valve will 'change over' until the jack screw is returned to the fully out position

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