

Maxseal Solenoid Operated Valves



ICO4S
1/4" 3/2
A-L-L



Typical Applications

- 1/4" 3/2 AUTO LATCHING LEVER
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

Thompson Valves Ltd

Description

- Model: ICO4S 1/4" 3/2 Uni 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 1/4" 3/2 A-L-L
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"/> $C_v = 0.8$ USgpm for 1 psi Δp
	<input type="checkbox"/> $K_v = 11.5$ 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"/> 1/4" Balanced Poppet Valve
Process Connections	<input type="checkbox"/> 1/4" NPT
Conduit Connection	<input type="checkbox"/> M20 x 1.5 Conduit Thread
Media	<input type="checkbox"/> Liquid & Gases
Weight	<input type="checkbox"/> 5.5 Kg

Recommended Spares Kits		
Soft Spares (O-rings, Springs etc)	<input type="checkbox"/> Standard & Extreme Service	Y123A010000-SS
	<input type="checkbox"/> Low Temperature valves	See Valve Data Sheet
Spare Coil Assembly	<input type="checkbox"/> Standard 24V DC (4.5 Watts)	Y123A0101B0
	<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 - 1/4" BSPP
Conduit Connection	<input type="checkbox"/> 1/2" NPT
Extreme Service	<input type="checkbox"/> Increased Power Consumption
Product lead time	<input type="checkbox"/> Y123BA1H1BS - 1 WEEK (SUBJECT TO QUANTITIES)
	<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)
Maximum inlet pressure when used in 'Universal Operation'	<input type="checkbox"/> 15 bar (218 PSI)

ATEX Classification	<input type="checkbox"/> Complies with ATEX Directive 94/9/EC
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ATEX Certificate	<input type="checkbox"/> SIRA 00ATEX1147
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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)
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GOST 'R'	<input type="checkbox"/> EExd IIC T6 (T _a = -40°C to + 60°C)
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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
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Voltage Surge Protection	<input type="checkbox"/> Surge Suppression Diodes
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Coil Insulation	<input type="checkbox"/> Class H
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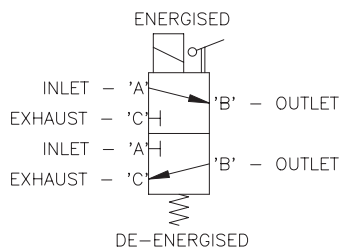
Performance

Pull-in Voltage	<input type="checkbox"/> 87.5% of Nominal
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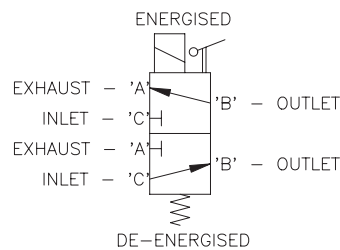
Response Times	<input type="checkbox"/> Pull-In <150ms
	<input type="checkbox"/> Drop-Out <80ms

Electromagnetic Compability (EMC)	<input type="checkbox"/> EN50081-2/82-1
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Valve Symbol



VALVE SYMBOL FOR
ENERGISE TO OPEN
(DE-ENERGISED TO CLOSE)
(NORMALLY CLOSED)
20 BAR MAX WORKING PRESSURE
STANDARD OPERATION



VALVE SYMBOL FOR
ENERGISE TO CLOSE
(DE-ENERGISED TO OPEN)
(NORMALLY OPEN)
15 BAR MAX WORKING PRESSURE
UNIVERSAL OPERATION

Extreme Service valves can be offered with 20 Bar (290 psi) for use in the Universal Operation

Ordering Information

Model	Operating Pressure	Port Config.	Operation	Process Connection	Seat/Seal Materials	Conduit Connection	Voltage	Body/Trim Materials
Y1	2	3	B	A1	H	1	B	S
ICO4S	0-20 Barg (290 psi)	3/2 UNIVERSAL	AUTOMATIC LATCHING LEVER	A1	H	1	A 18/33V DC	S
				1/4" NPT	High Nitrile	M20x1.5	B 24V DC	316 SS / 316 SS
				E1	V	2	C 50V DC	M
				1/4" BSPP	Viton®	1/2" NPT	G 25V AC	Alu Brnz / Alu Brnz
							J 110V AC	3
							M 240V AC	Titanium / Titanium
			R 115V DC					

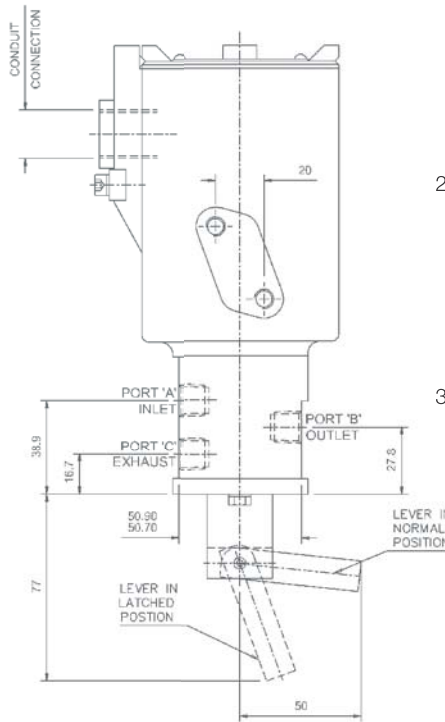
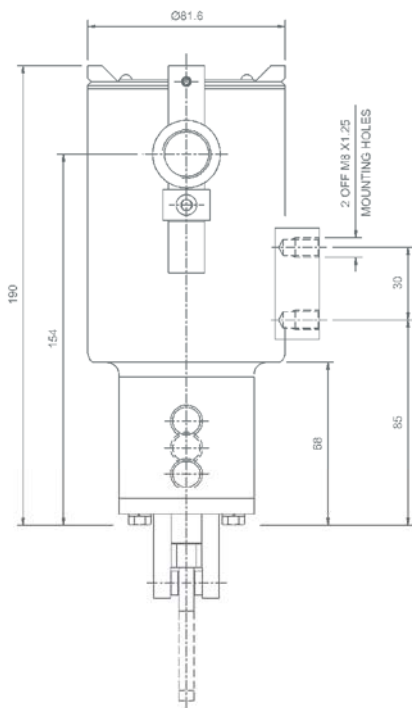
Ordering Example

Y1	2	3	B	A1	V	1	J	3
ICO4S	0-20 Barg (290 psi)	3/2 UNI	A-L-L	1/4" NPT	VITON®	M20 x 1.5	110V AC	Titanium / Titanium

Power Consumption (At Nominal)

DC Standard		AC Standard		Extreme Service	
18 / 33V DC (24V DC)	7.7 W	25V AC	6.5 W	24V DC	9.6 W
24V DC	4.5 W	110V AC	6.5 W	Others Available	
50V DC	5.5 W	240V AC	6.2 W		
115V DC (110V DC)	8.0 W				
115V DC (125V DC)	10.4 W				

Profile and Dimensions mm



- Valve is energised
Valve 'changes over'

Flow occurs between
ports 'A' & 'B'

Lever moves to 'latched'
position
- Valve is de-energised
Valve stays in position
as lever prevents valve
from 'changing over'

Flow occurs between
ports 'A' & 'B'
- Lever is moved to
normal' position
Valve 'changes over'

Flow occurs between
ports 'B' & 'C'

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