

# Maxseal Solenoid Operated Valves



ICO4S  
1/4" 3/2  
AUTO



- Typical Applications
- 1/4" 3/2 AUTOMATIC
- 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

<input type="checkbox"/> Standard Features	<input type="checkbox"/> ICO4S 1/4" 3/2 Auto
<input type="checkbox"/> 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
<input type="checkbox"/> Maximum Inlet Pressure	<input type="checkbox"/> 20 Bar (290 PSI)
<input type="checkbox"/> Flow Rates	<input type="checkbox"/> $C_v = 0.8$ USgpm for 1 psi $\Delta p$ <input type="checkbox"/> $K_v = 11.5$ l/min for 1 bar $\Delta p$
<input type="checkbox"/> Temperature Ratings	<input type="checkbox"/> Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°C/60°C)
<input type="checkbox"/> Valve Size	<input type="checkbox"/> 1/4" Balanced Poppet Valve
<input type="checkbox"/> Process Connections	<input type="checkbox"/> 1/4" NPT
<input type="checkbox"/> Conduit Connection	<input type="checkbox"/> M20 x 1.5 Conduit Thread
<input type="checkbox"/> Media	<input type="checkbox"/> Liquid & Gases
<input type="checkbox"/> Weight	<input type="checkbox"/> 5.5 Kg

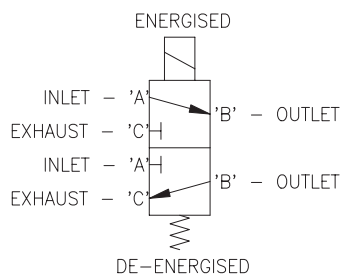
<input type="checkbox"/> Recommended Spares Kits	
<input type="checkbox"/> Soft Spares (O-rings, Springs etc)	<input type="checkbox"/> Standard & Extreme Service Y123A010000-SS <input type="checkbox"/> Low Temperature valves See Valve Data Sheet
<input type="checkbox"/> Spare Coil Assembly	<input type="checkbox"/> Standard 24V DC (4.5 Watts) Y123A0101B0 <input type="checkbox"/> Other Variations See Valve Data Sheet

<input type="checkbox"/> Options	
<input type="checkbox"/> Valve Body & Trim Materials	<input type="checkbox"/> Aluminium Bronze - Sea Water Applications <input type="checkbox"/> Titanium - Extreme Service Applications
<input type="checkbox"/> Low Temperature Options	<input type="checkbox"/> O-Rings - Low Nitrile/Fluorosilicone (Min Med/Amb -40°C/-40°C)
<input type="checkbox"/> High Temperature Options	<input type="checkbox"/> High Temperature Spacer (Max Med/Amb 120°C/60°C) Please Call for Dimensions
<input type="checkbox"/> Process Connections	<input type="checkbox"/> Thread - 1/4" BSPP
<input type="checkbox"/> Conduit Connection	<input type="checkbox"/> 1/2" NPT
<input type="checkbox"/> Extreme Service	<input type="checkbox"/> Increased Power Consumption
<input type="checkbox"/> Product lead time	<input type="checkbox"/> Y123AA1H1BS - 1 WEEK (SUBJECT TO QUANTITIES) <input type="checkbox"/> Other Variations - Please call for possible delivery dates

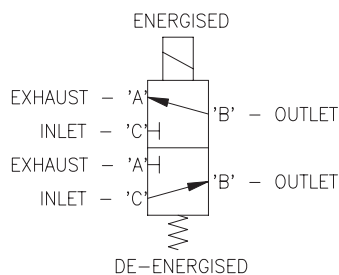
**Technical Specification**

<b>Pressures</b>	
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 Clasification	<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 <sub>a</sub> = -60°C to + 48°C) or <input type="checkbox"/> EExd IIC T4 (T <sub>a</sub> = -60°C to + 90°C)
	<input type="checkbox"/> IECEX BAS 04.0019 <input type="checkbox"/> EExd IIC T6 (T <sub>a</sub> = -40°C to + 60°C) or <input type="checkbox"/> EExd IIC T4 (T <sub>a</sub> = -40°C to + 90°C)
	<input type="checkbox"/> GOST 'K'
	<input type="checkbox"/> GOST 'R'
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
<b>Performance</b>	
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)  
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

**Ordering Information**

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

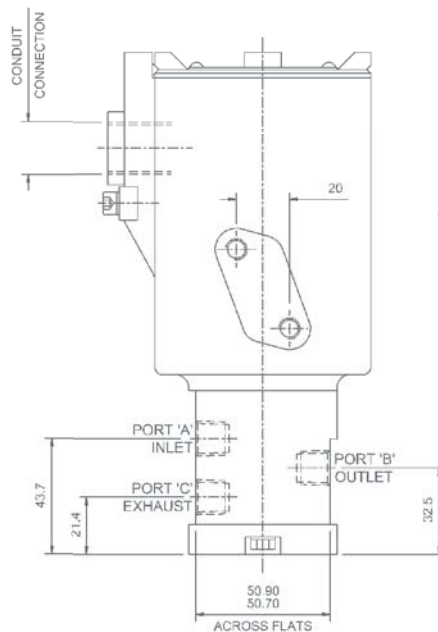
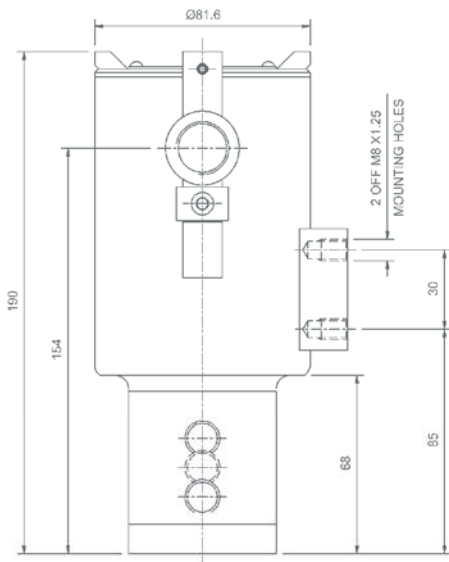
**Ordering Example**

Y1	2	3	A	E1	H	2	R	S
ICO4S	0-20 Barg (290 psi)	3/2 UNI	Auto	1/4" BSPP	High Nitrile	1/2" NPT	115V DC	316 SS / 316 SS

**Power Consumption (At Nominal)**

DC Standard		AC Standard		Extreme Service	
18 / 33V DC (24V DC)	7.5 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**



1. Valve is energised  
Valve 'changes over'  
  
Flow occurs between ports 'A' & 'B'
2. Valve is de-energised  
Valve resets  
  
Flow occurs between ports 'C' & 'B'

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