Maxseal Solenoid Operated Valves

ICO4S
1/4" 3/2
PBMR

Thompson Valves Ltd

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
- 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	ICO4S 1/4" 3/2 PBMR	
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	C_V = 0.8 USgpm for 1 psi Δp	
	K_V = 11.5 l/min for 1 bar Δp	
Temperature Ratings	Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°C/60°C)	
Valve Size	1/4" Balanced Poppet Valve	
Process Connections	1/4" NPT	
Conduit Connection	M20 x 1.5 Conduit Thread	
Media	Liquid & Gases	
Weight	5.5 Kg	

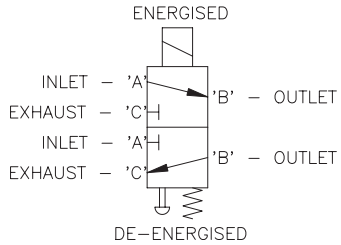
Recommended Spares Kits		
Soft Spares (O-rings, Springs etc)	Standard & Extreme Service	Y123A010000-SS
	Low Temperature valves	See Valve Data Sheet
Spare Coil Assembly	Standard 24V DC (4.5 Watts)	Y123A0101B0
	Other Variations	See Valve Data Sheet

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 - 1/4" BSPP
Conduit Connection	1/2" NPT
Extreme Service	Increased Power Consumption
Product lead time	Y123PA1H1BS - 1 WEEK (SUBJECT TO QUANTITIES)
	Other Variations - Please call for possible delivery dates

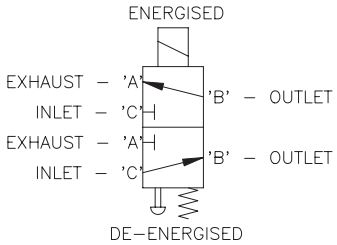
Technical Specification

Pressures	
Test (Proof) Pressure	30 bar (435 PSI)
Maximum Inlet Pressure	20 Bar (290 PSI)
Maximum inlet pressure when used in 'Universal Operation'	15 bar (218 PSI)
ATEX Clasification	Complies with ATEX Directive 94/9/EC
ATEX Certificate	SIRA 00ATEX1147
Certification	II 2G
	EExd IIC T6 (T_a= -60°C to + 48°C) or
	EExd IIC T4 (T_a= -60°C to + 90°C)
IECEx	IECEx BAS 04.0019
	EExd IIC T6 (T_a = -40ºC to + 60ºC) or
	EExd IIC T4 (T_a = -40ºC to + 90ºC)
GOST 'K'	EExd IIC T6 (T_a = -40ºC to + 60ºC)
GOST 'R'	EExd IIC T6 (T_a = -40ºC to + 60ºC)
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



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

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Ordering Information

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

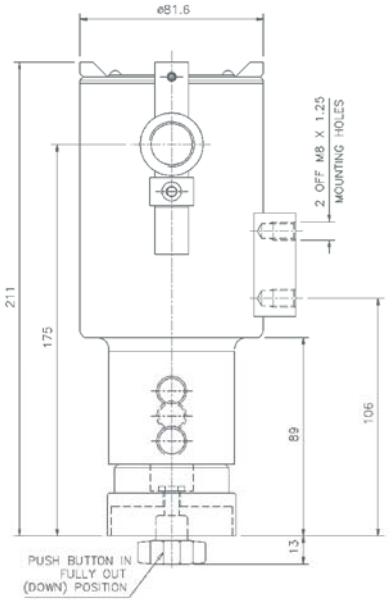
Ordering Example

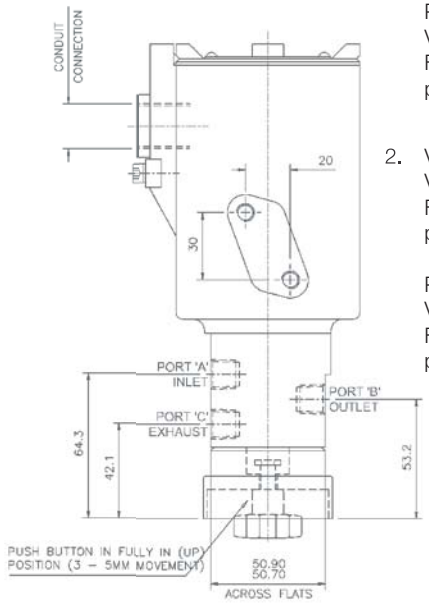
Y1	2	3	P	A1	V	2	A	S
ICO4S	0-20 Barg (290 psi)	3/2 UNI	PBMR	1/4" NPT	VITON®	1/2” NPT	18/33V DC	316 SS / 316 SS

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





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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