

Maxseal Solenoid Operated Valves



ICO2S
1/2" 2/2
AUTO



- Typical Applications
- 1/2" 2/2 AUTOMATIC
- Intrinsically Safe
- Pilot Assisted Control Valve
- Hazardous Area Applications

Thompson Valves Ltd

- Description
- Model ICO2S 1/2" 2/2 AUTO
- Pilot Assisted Solenoid Valve
- High Flow
- Max Inlet Pressure 20 bar (290 psi)
- Pilot Pressure 3-7 bar
- Reliable and long life, ideal for a one time installation
- A pilot assisted solenoid operated valve for the control of pneumatic or hydraulic operated equipment

Standard Features

<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"/> Pilot Pressure	<input type="checkbox"/> 3-7 bar
<input type="checkbox"/> Flow Rates	<input type="checkbox"/> $C_v = 4.2$ USgpm for 1 psi Δp
	<input type="checkbox"/> $K_v = 60.48$ l/min for 1 bar Δp
<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"/> 1/2" Balanced Poppet Valve
<input type="checkbox"/> Process Connections	<input type="checkbox"/> 1/2" NPT
<input type="checkbox"/> Conduit Connection	<input type="checkbox"/> M20 x 1.5 Conduit Thread
<input type="checkbox"/> Signal Connection	<input type="checkbox"/> 1/4" NPT
<input type="checkbox"/> Media	<input type="checkbox"/> Gas or Air
<input type="checkbox"/> Pilot Media	<input type="checkbox"/> Instrument Air
<input type="checkbox"/> Weight	<input type="checkbox"/> 6 kg

Recommended Spares Kits

<input type="checkbox"/> Soft Spares (O-rings, Springs, etc.)	<input type="checkbox"/> Y2H21A03S000000-SS
<input type="checkbox"/> Spare Coil Assembly	<input type="checkbox"/> Please call

Options

<input type="checkbox"/> Process Connections	<input type="checkbox"/> 1/2" BSPP
<input type="checkbox"/> Conduit Connection	<input type="checkbox"/> 1/2" NPT
<input type="checkbox"/> Signal Connections	<input type="checkbox"/> 1/4" BSPP
<input type="checkbox"/> Product Lead Time	<input type="checkbox"/> Y2H21AA3SA10300 - 4 weeks

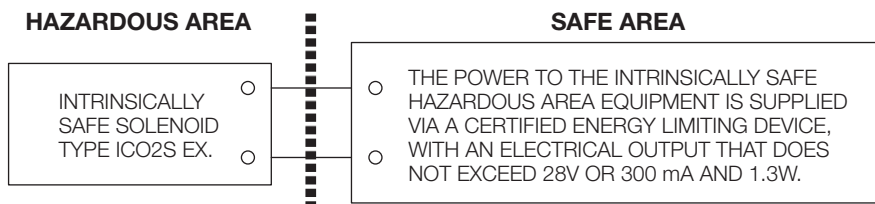
Other variations: Please call for possible delivery dates

Technical Specification

Pressures

Test (Proof) Pressure	<input type="checkbox"/> 30 bar (435 psi)
Maximum Inlet Pressure	<input type="checkbox"/> 20 bar (290 psi)
Pilot Test (Proof) Pressure	<input type="checkbox"/> 12 bar (174 psi)
Pilot Pressure	<input type="checkbox"/> 3-7 bar (43-102 psi)
ATEX Classification	<input type="checkbox"/> Complies with ATEX Directive 94/9/EC
ATEX Certificate	<input type="checkbox"/> SIRA 00ATEX2113
Certification 	<input type="checkbox"/> II 1G <input type="checkbox"/> Ex ia IIC T6 (T _a = -40°C to + 64°C)

Intrinsically Safe Circuit

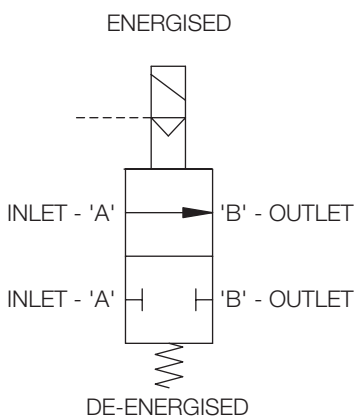


Ingress Protection	<input type="checkbox"/> IP66/X8 to BS EN 6052:1992, NEMA 4X
Voltage Surge Protection	<input type="checkbox"/> Surge Suppression Diodes
Coil Insulation	<input type="checkbox"/> Class H

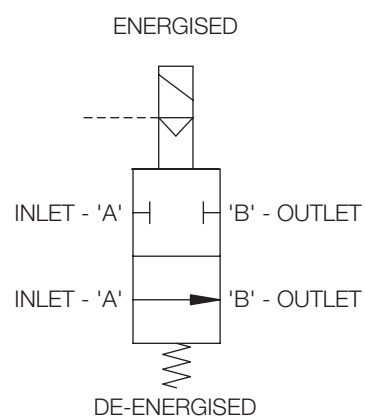
Performance

Pull-in Voltage	<input type="checkbox"/> 87.5% of Nominal
Response Times	<input type="checkbox"/> Pull-In <150 ms
	<input type="checkbox"/> Drop-Out <80 ms
Electromagnetic Compatibility (EMC)	<input type="checkbox"/> EN50081-1 EN50082-1 EN61000-4 parts 2,4,5

Valve Symbol



VALVE SYMBOL FOR
ENERGISE TO OPEN
(NORMALLY CLOSED)



VALVE SYMBOL FOR
ENERGISE TO CLOSE
(NORMALLY OPEN)

Ordering Information

Model	Seat/Seal Materials	Operating Pressure	Port Config.	Operation	Process Conn.	Protection / Coil Housing	Conduit / Sig. Conn.	Voltage/Signal	Body/Trim Materials	Options
Y2	H	2	1	A	A3	S	A	1	03	00
ICO2S	H High Nitrile	0-20 barg (290 psi)	1 ENG. to OPEN 2 ENG. to CLOSE	Automatic	A3 1/2" NPT	Ex ia IIC T6	A M20 ISO 1/4" NPT	24V DC / 3-7 barg	316SS / 316SS	None
							B M20 ISO 1/4" BSPP			
	D 1/2" NPT 1/4" NPT									
	E 1/2" NPT 1/4" BSPP									

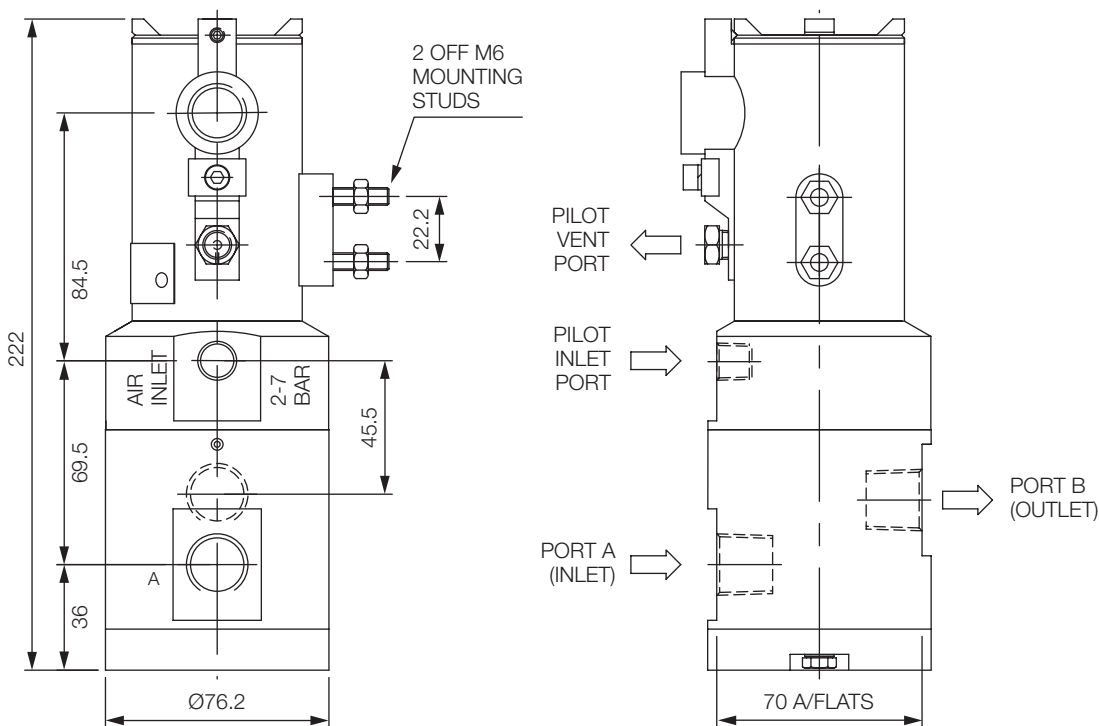
Ordering Example

Y2	V	2	2	A	E3	S	B	1	03	00
ICO2S	V Viton®	0-20 barg (290 psi)	2/2 EC	Auto	1/2" BSPP	Ex ia IIC T6	M20 ISO 1/4" BSPP	24V DC / 3-7 barg	316SS / 316SS	None

Power Consumption (At Nominal)

DC Standard	
24V DC	0.5W

Profile and Dimensions mm



2/2 ENERGISE TO OPEN

1. Valve is Energised & Pilot Pressure Applied
Valve 'changes over'
Flow occurs between ports 'A' & 'B'

2. Valve is De-Energised
Valve resets
No flow occurs between ports 'A' & 'B'

2/2 ENERGISE TO CLOSE

1. Valve is Energised & Pilot Pressure Applied
Valve 'changes over'
No flow occurs between ports 'A' & 'B'

2. Valve is De-Energised
Valve resets
Flow occurs between ports 'A' & 'B'

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