

# Maxseal Solenoid Operated Valves



ICO2S  
1/4" 2/2  
AUTO



- Typical Applications
- 1/4" 2/2 AUTOMATIC
- Intrinsically Safe
- Pilot Assisted Control Valve
- Hazardous Area Applications

## Thompson Valves Ltd

- Description
- Model ICO2S 1/4" 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"/> $C_v = 0.8$ USgpm for 1 psi $\Delta p$
	<input type="checkbox"/> $K_v = 11.52$ 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"/> 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"/> 3 kg

**Recommended Spares Kits**

<input type="checkbox"/> Soft Spares (O-rings, Springs, etc.)	<input type="checkbox"/> Y2H21A01S000000-SS
<input type="checkbox"/> Spare Coil Assembly	<input type="checkbox"/> Please call


**Options**

<input type="checkbox"/> Process Connections	<input type="checkbox"/> 1/4" 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"/> Y2H21AA1SA10300 - 4 weeks

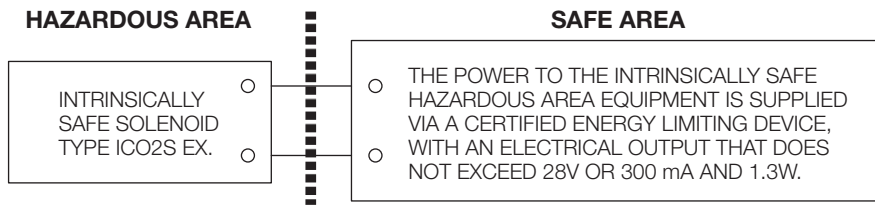
Other variations: Please call for possible delivery dates

**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 <sub>a</sub> = -40°C to + 64°C)

**Intrinsically Safe Circuit**

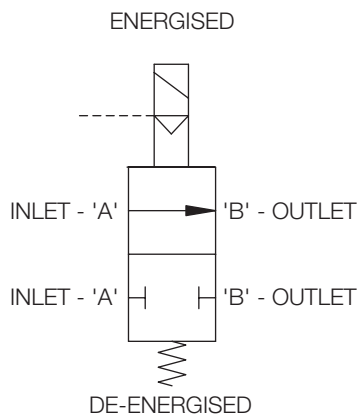


Ingress Protection	<input type="checkbox"/> IP66/X8 to BS EN 6052:1992, NEMA 4X
Voltage Surge Protection	<input type="checkbox"/> Surge Suppression Diodes
Coil Insulation	<input type="checkbox"/> Class H

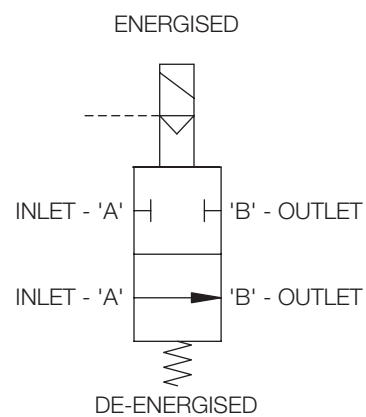
**Performance**

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	A1	S	A	1	03	00
ICO2S	H High Nitrile	0-20 barg (290 psi)	1 ENG. to OPEN 2 ENG. to CLOSE	Automatic	A1 1/4" 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			
	V Viton®				D 1/2" NPT 1/4" NPT					
					E 1/2" NPT 1/4" BSPP					

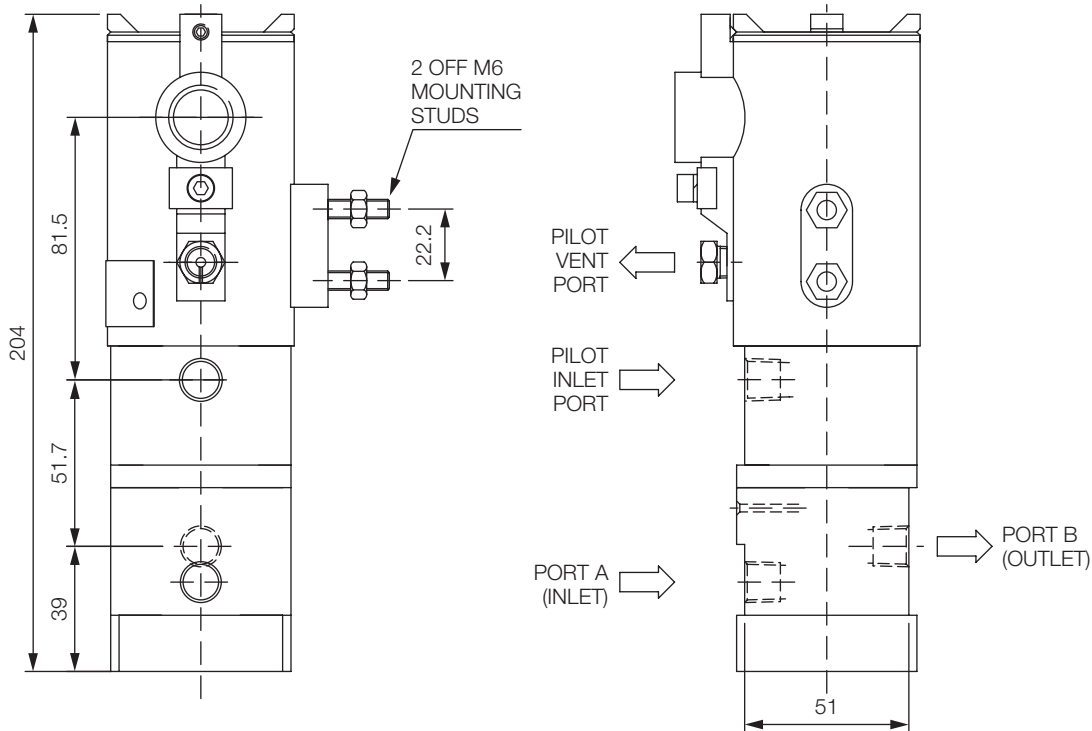
**Ordering Example**

Y2	V	2	2	A	E1	S	B	1	03	00
ICO2S	V Viton®	0-20 barg (290 psi)	2/2 EC	Auto	1/4" 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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