# Maxseal Solenoid Operated Valves

## ICO2S 1/4" 3/2 PBMR

## Thompson Valves Ltd

### Typical Applications

- 1/4" 3/2 PUSH BUTTON MANUAL RESET
- Intrinsically Safe
- Pilot Assisted Control Valve
- Hazardous Area Applications

### Description

- Model: ICO2S 1/4" 3/2 PBMR
- 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

# Thompson Valves Ltd - **Maxseal** Solenoid Operated Valves

## Standard Features

| | |
|---|---|
| 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) |
| Pilot Pressure | 3-7 bar |
| Flow Rates | $C_V$ = 0.8 USgpm for 1 psi Δp |
| | $K_V$ = 11.52 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 |
| Signal Connection | 1/4" NPT |
| Media | Gas or Air |
| Pilot Media | Instrument Air |
| Weight | 4.5 kg |

## Recommended Spares Kits

| | |
|---|---|
| Soft Spares (O-rings, Springs, etc.) | Y2H23P01S000000-SS |
| Spare Coil Assembly | Please call |

## Options

| | |
|---|---|
| Process Connections | 1/4" BSPP |
| Conduit Connection | 1/2" NPT |
| Signal Connections | 1/4" BSPP |
| Product Lead Time | Y2H23PA1SA10300 - 4 weeks |
| | Other variations: Please call for possible delivery dates |

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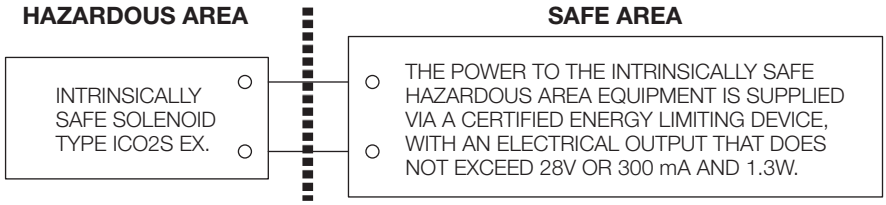
## Technical Specification

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

Intrinsically Safe Circuit

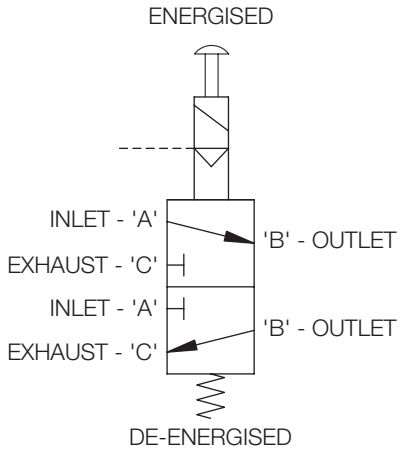



| | |
|---|---|
| Ingress Protection | IP66/X8 to BS EN 6052:1992, NEMA 4X |
| Voltage Surge Protection | Surge Suppression Diodes |
| Coil Insulation | Class H |

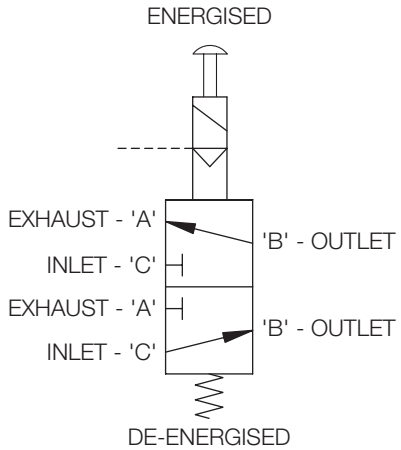
## Performance

| | |
|---|---|
| Pull-in Voltage | 87.5% of Nominal |
| Response Times | Pull-In <150 ms |
| | Drop-Out <80 ms |
| Electromagnetic Compatibility (EMC) | EN50081-1 EN50082-1 EN61000-4 parts 2,4,5 |

## Valve Symbol




VALVE SYMBOL FOR
ENERGISE TO OPEN
(DE-ENERGISED TO CLOSE)
(NORMALLY CLOSED)




VALVE SYMBOL FOR
ENERGISE TO CLOSE
(DE-ENERGISED TO OPEN)
(NORMALLY OPEN)

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## 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 | 3 | P | A1 | S | A | 1 | 03 | 00 |
| ICO2S | H<br>High Nitrile<br><br>V<br>Viton® | 0-20 barg<br>(290 psi) | 3/2 UNIVERSAL | PUSH BUTTON<br>MANUAL RESET | A1<br>1/4" NPT<br><br>E1<br>1/4" BSPP | Ex ia IIC<br>T6 | A M20 ISO 1/4" NPT<br>B M20 ISO 1/4" BSPP<br>D 1/2" NPT 1/4" NPT<br>E 1/2" NPT 1/4" BSPP | 24V DC / 3-7 barg | 316SS / 316SS | None |

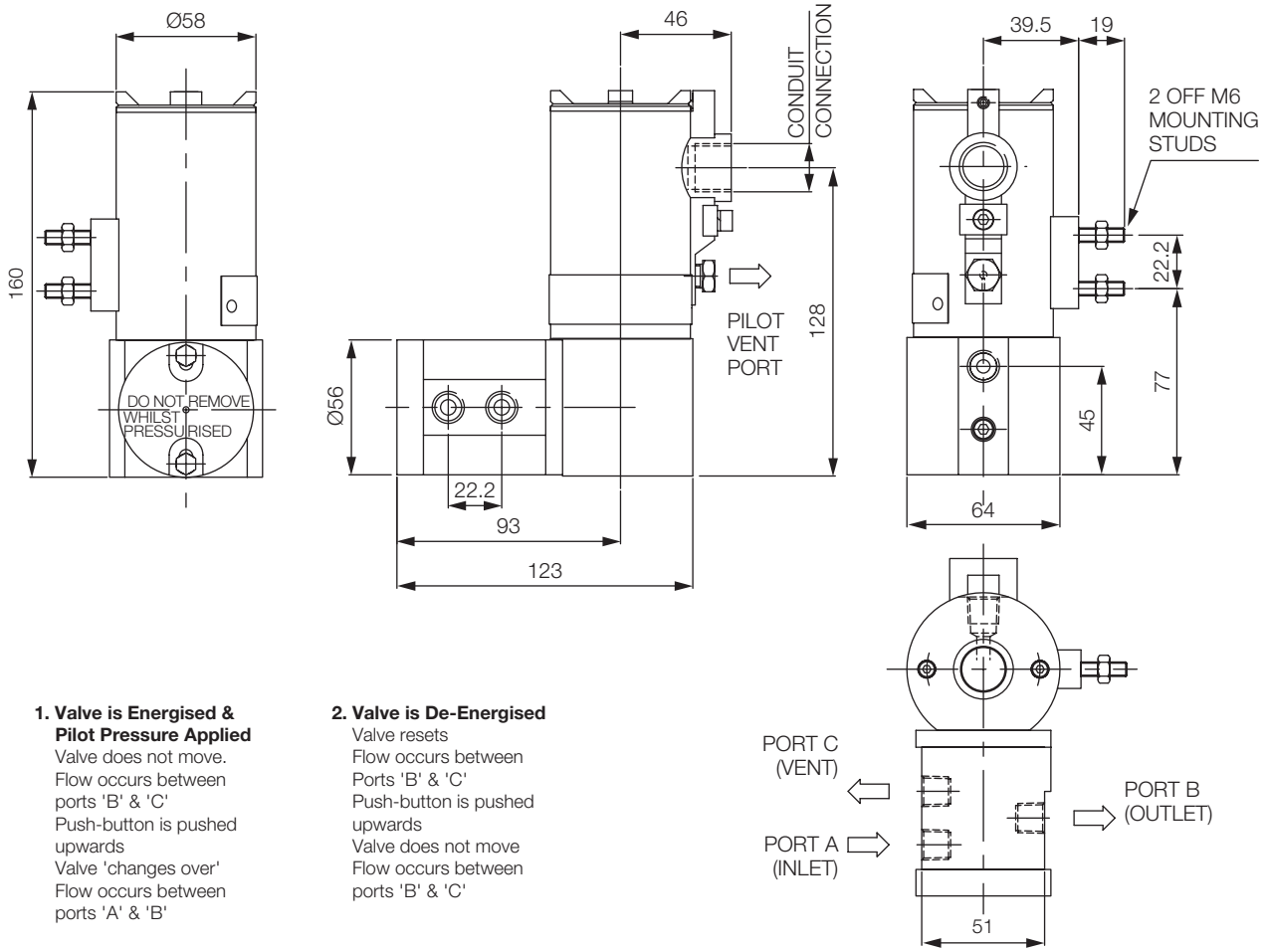
## Ordering Example

| Y2 | V | 2 | 3 | P | E1 | S | B | 1 | 03 | 00 |
|---|---|---|---|---|---|---|---|---|---|---|
| ICO2S | V<br>Viton® | 0-20 barg<br>(290 psi) | 3/2<br>UNI | PBMR | 1/4"<br>BSPP | Ex ia IIC<br>T6 | M20 ISO<br>1/4" BSPP | 24V DC /<br>3-7 barg | 316SS /<br>316SS | None |

## Power Consumption (At Nominal)

| DC Standard | |
|---|---|
| 24V DC | 0.5W |

## Profile and Dimensions mm




**1. Valve is Energised & Pilot Pressure Applied**
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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