

# Maxseal Solenoid Operated Valves



ICO3S  
1/2" 3/2



## Typical Applications

- 1/2" 3/2 Automatic
- Pushbutton manual override
- Pushbutton manual reset
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

## Thompson Valves Ltd

### Description

- Model ICO3S 1/2" 3/2 UNI
- Direct Acting Solenoid Valve
- High Flow
- Max Inlet Pressure 12 bar (174 psi)
- A direct acting solenoid operated valve for the control of pneumatic or hydraulic operated equipment
- Reliable and long life, ideal for a one time installation
- ATEX, CSA, GOST K & R and IECEX

**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 & Seals - Nitrile (NBR)                           |
|   | <input type="checkbox"/> Coil Insulation - Class H                                 |
| <input type="checkbox"/> Maximum Inlet Pressure             | <input type="checkbox"/> 12 bar (174 psi)  |
| <input type="checkbox"/> Flow Rates                         | <input type="checkbox"/> $C_v = 2.1$ USgpm for 1 psi $\Delta p$                    |
|   | <input type="checkbox"/> $K_v = 30.24$ 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 -50°C/60°C) |
| <input type="checkbox"/> Valve Size                         | <input type="checkbox"/> 1/2" 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"/> Media                              | <input type="checkbox"/> Liquid & Gases  |
| <input type="checkbox"/> Weight                             | <input type="checkbox"/> 3 kg  |

**Recommended Spares Kits**


|   |  |                      |
|---|--|----------------------|
| <input type="checkbox"/> Soft Spares (O-rings, Springs, etc.) | <input type="checkbox"/> Standard                    | Y013A03H000-SS       |
|   | <input type="checkbox"/> Low Temperature valves      | See Valve Data Sheet |
| <input type="checkbox"/> Spare Coil Assembly                  | <input type="checkbox"/> Standard 24V DC (7.8 Watts) | Y01300301B0          |
|   | <input type="checkbox"/> Other Variations            | See Valve Data Sheet |

**Options**

|  |  |
|--|--|
| <input type="checkbox"/> Valve Body & Trim Materials | <input type="checkbox"/> Please call for details                                   |
| <input type="checkbox"/> Low Temperature Options     | <input type="checkbox"/> Please call for details                                   |
| <input type="checkbox"/> High Temperature Options    | <input type="checkbox"/> Please call for details                                   |
| <input type="checkbox"/> Process Connections         | <input type="checkbox"/> Thread 1/2" BSPP  |
| <input type="checkbox"/> Conduit Connection          | <input type="checkbox"/> 1/2" NPT  |
| <input type="checkbox"/> Extreme Service             | <input type="checkbox"/> Increased Power Consumption - Please call for details     |
| <input type="checkbox"/> Product Lead Time           | <input type="checkbox"/> Y013AA3H1BS - 3 weeks (subject to quantities)             |
|  | <input type="checkbox"/> Other variations: Please call for possible delivery dates |

**Technical Specification**

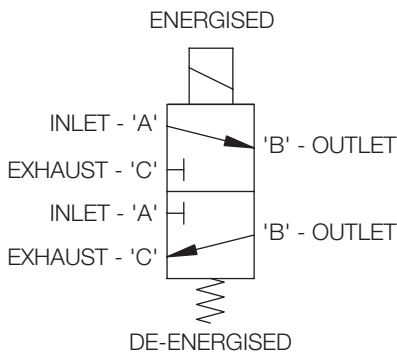
**Pressures**

|   |   |
|---|---|
| Test (Proof) Pressure   | <input type="checkbox"/> 18 bar (261 psi)   |
| Maximum Inlet Pressure  | <input type="checkbox"/> 12 bar (174 psi)   |
| ATEX Classification   | <input type="checkbox"/> Complies with ATEX Directive 94/9/EC   |
| ATEX Certificate  | <input type="checkbox"/> SIRA 00ATEX1156 and SIRA 05 ATEX 5284  |
| Certification  | <input type="checkbox"/> II 2GD<br><input type="checkbox"/> Ex d IIC T6 (T <sub>a</sub> = -60°C to + 50°C) or<br><input type="checkbox"/> Ex d IIC T4 (Max Ambient = + 90°C)<br><input type="checkbox"/> Ex mbe IIC T4 (T <sub>a</sub> = -60°C to + 80°C) |
| IECEX Certificate   | <input type="checkbox"/> IECEX SIR 05.0029 and IECEX SIR 05.0056  |
| IECEX   | <input type="checkbox"/> Ex d IIC T6 (T <sub>a</sub> = -60°C to + 50°C) or<br><input type="checkbox"/> Ex d IIC T4 (Max Ambient = + 90°C)   |
| GOST 'K'  | <input type="checkbox"/> Ex d IIC T6 (T <sub>a</sub> = -60°C to + 50°C)   |
| GOST 'R'  | <input type="checkbox"/> Ex d IIC T6 (T <sub>a</sub> = -60°C to + 50°C)   |
| Safety Integrity Level  | <input type="checkbox"/> SIL 3 or SIL 4 (SIL 4 in redundant configuration only)   |
| 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  |

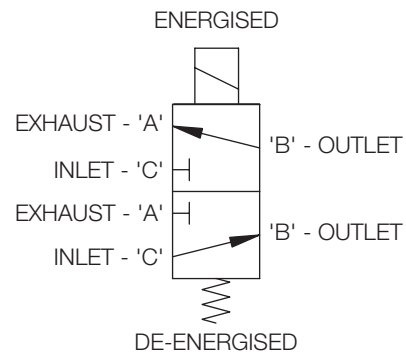
**Performance**

|                                     |   |
|-------------------------------------|---|
| Pull-In Voltage                     | <input type="checkbox"/> 87.5% of Nominal   |
| Response Times                      | <input type="checkbox"/> Pull-In <95 ms<br><input type="checkbox"/> Drop-Out <60 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  
(DE-ENERGISED TO CLOSE)  
(NORMALLY CLOSED)



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



**Ordering Information**

| Model                 | Operating Pressure     | Port Config.  | Operation                        | Process Conn.   | Seat/Seal Materials | Conduit Connection | Voltage   | Body/Trim Materials  |
|-----------------------|------------------------|---------------|----------------------------------|-----------------|---------------------|--------------------|-----------|----------------------|
| Y0                    | 1                      | 3             | A                                | A3              | H                   | 1                  | B         | S                    |
| Y0<br>IC03S<br>Ex d   | 0-12 barg<br>(174 psi) | 3/2 UNIVERSAL | A = AUTO<br>P = PBMR<br>C = PBMO | A3<br>1/2" NPT  | H<br>Nitrile        | 1 M20 x 1.5        | B 24V DC  | S 316 SS /<br>316 SS |
| YZ<br>IC03S<br>Ex mbe |                        |               |                                  | E3<br>1/2" BSPP | V<br>Viton®         | 2 1/2" NPT         | E 125V DC |                      |

**Ordering Example**

|                 |                        |            |      |              |        |          |         |                    |
|-----------------|------------------------|------------|------|--------------|--------|----------|---------|--------------------|
| YZ              | 1                      | 3          | A    | E3           | V      | 2        | E       | S                  |
| IC03S<br>Ex mbe | 0-12 barg<br>(174 psi) | 3/2<br>UNI | AUTO | 1/2"<br>BSPP | Viton® | 1/2" NPT | 125V DC | 316 SS /<br>316 SS |

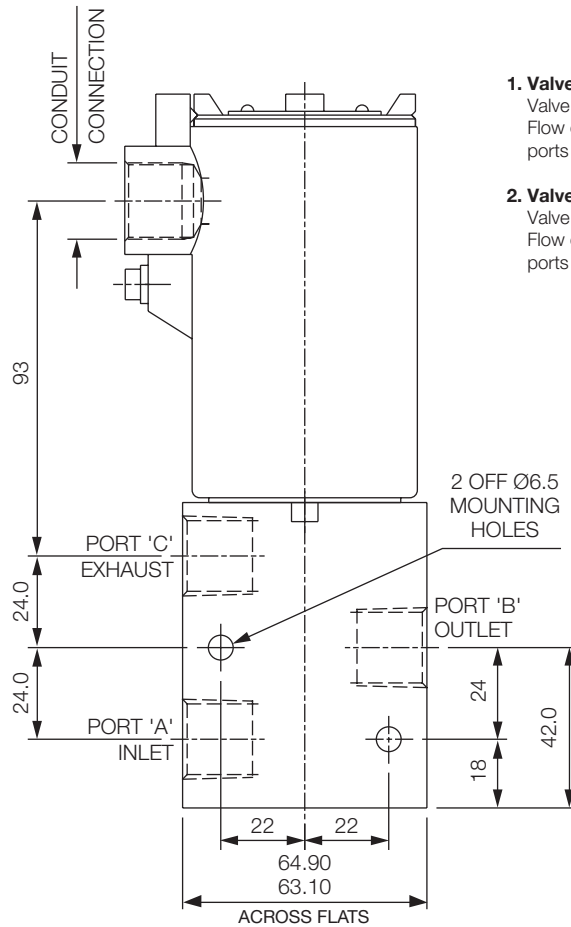
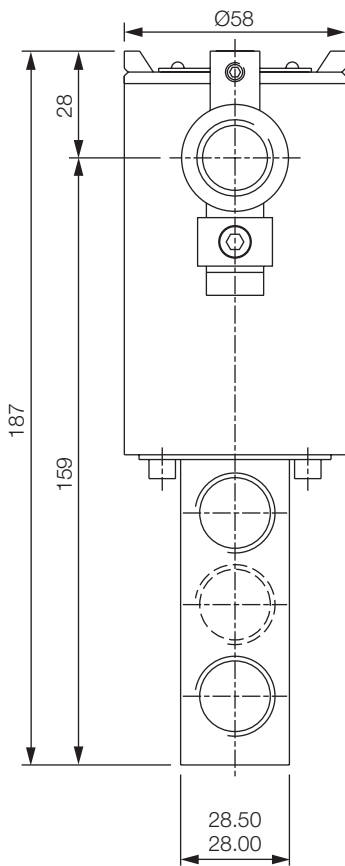
**Power Consumption (At Nominal)**

| DC Standard |      |
|-------------|------|
| 24V DC      | 7.8W |
| 125V DC     | 8.7W |

| AC Standard                 |
|-----------------------------|
| Please Call for Information |

| Extreme Service             |
|-----------------------------|
| Please Call for Information |

**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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