

**Keeping the World Flowing for Future Generations** 

# **07 Solenoid Valves**

**Pneumatic** 



**Direct-Acting and Indirect-Acting** 

# rotork®

# Reliability in critical flow control applications



### Reliable operation when it matters

Assured reliability for critical applications and environments.

Whether used infrequently or continuously, Rotork products will operate reliably and efficiently.

# Quality-driven global manufacturing

We offer products that have been designed with over 60 years of industry and application knowledge.

Our research and development ensures cutting edge products are available for multiple applications across multiple industries.

### Customer focused service and worldwide support

Rotork solve customer challenges and develop new solutions that are tailored to the needs of our clients.

We offer dedicated, expert service and support from initial inquiry, to product installation, to long-term after sales care.

# Low cost of ownership

Long-term reliability prolongs service life.

Rotork helps to reduce long-term cost of ownership and provides greater efficiency to process and plant.

### Solenoid Valves - Pneumatic

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# Comprehensive product range serving multiple industries

Rotork products offer improved efficiency, assured safety and environmental protection across sectors such as the Power, Oil & Gas, Water & Wastewater, HVAC, Marine, Mining, Pulp & Paper, Food & Beverage, Pharmaceutical and Chemical sectors.

# Market leaders and technical innovators

We have been the recognised market leader in flow control for over 60 years.

Our customers rely upon Rotork for innovative solutions to safely manage the flow of liquids, gases and powders.

## Global presence, local service

We are a global company with local support.

Manufacturing sites, service centres and sales offices throughout the world provide unrivalled customer services, fast delivery and ongoing, accessible support.

## Environmental Social and Governance is at the heart of our business

We have a range of policies in place that support our performance across environmental, social and governance topics. The majority of our policies are publicly available.

### **Overview**

### Pneumatic Direct-Acting and Indirect-Acting Solenoid Valves

### FP03P, FP06P, FP10P, FP12P, BXS, SPR and PPV

Manufactured from 316L stainless steel as standard with aluminium options available, our range of pneumatic solenoid valves are ideally suited for hazardous (classified) locations and corrosive atmospheres and can also be used in low pressure hydraulic applications. Ultra low power consumption, under 1.0 W continuous power ideal for solar applications up to 12.0 W.

- Suitable for air quality to ISO 8573.1 Class 4: dirt, water and oil
- High flow up to 11.2 Cv
- Versions available for up to 725 psi / 50 bar working pressure
- NAMUR interface available

### **Market Sectors**

- Wellhead controls and associated field instrumentation
- Shale gas
- Process choke valve actuation
- Process skids and modules
- HVAC, fire damper actuator and fire water deluge controls
- Gas compression and turbine controls
- Process valve actuator and pipeline Emergency Shut Down (ESD) valve actuator controls





Application Example

### One source ... one solution



- Outperforms all other solenoid valves in the industry
- Ultra low power consumption, under 1.0 W continuous power ideal for solar applications
- No.1 for global wellhead, process, choke, valve actuation, deluge and fire damper markets
- Low cost solution increase safety with no downtime and no leakage, without compromising on cost
- The operator is a flat plate armature, ensuring the valve will operate in all conditions

- Capability to offer an expedited delivery service
- Wide range of operating media covered 1/8" to 1" ports, 2/2, 3/2, 5/2, 5/3, 2 out of 3 voting and over 1.5 x 10<sup>9</sup> permutations every application covered
- Highest qualified safety factors in the industry – worldwide Ex Hazardous Area solenoid approvals: Ex emb, Ex d, Ex ia, Explosionproof and Safe Area use, SIL 3 third party certified options available
- World leading supplier of control valves for low and high temperature applications

### **Solenoid Valve** Features and Benefits

#### **Equipment Design and Build**

- Standard and slimline solenoid operator is free to rotate 360° allowing for an easy cable layout and ease of connection wiring. Solenoid operator internals rotate with the enclosure and prevent cables being pulled out of the terminal block
- Widest range of override options: auto reset, spring return manual override, stayput manual override, manual latch and manual reset
- Standard solenoid valve can be mounted in any orientation to simplify installation and also due to all the components having enhanced rotational capabilities
- · Coils fully encapsulated as standard
- A NAMUR interface is available on 5/2 port configuration valves. These types are supplied with multi-functional adaptor plates to permit valve orientation through 90° or conversion to a 3/2 configuration
- All internal wetted and body materials conforming to NACE MR-01-75 as standard on the FP03P, FP06P, FP10P and FP12P with options available on the BXS and SPR
- Suitable for air quality to ISO 8573.1 Class 4: dirt, water and oil
- Simple installation and operation single enclosure with integral override options
- · Low/high temperature options
- Ultra low power consumption, under 1.0 W continuous holding power, ideal for solar applications
- Compatible within our 'AXIS' valve actuator control modular systems

### **Commissioning and Maintenance**

- Tropicalised solenoid operator design 316L stainless steel enclosure with aluminium options also available; stainless steel or Remko B magnetic parts (dependant upon solenoid Ex series). Fully encapsulated coil
- Worldwide technical and field support
- Spacious solenoid enclosure for ease of wiring
- No special high temperature cable requirements
- No time penalty for heat dissipation before removing solenoid enclosure cover
- Simple maintenance Removable transient suppression diode on Ex d DC solenoid valve assemblies as standard and removable solenoid coil without removing valve from the tubing
- Compact design and space envelope







### **Solenoid Valve** Features and Benefits

#### **Safety and Environmental**

- Worldwide Ex hazardous area solenoid approvals:
   Ex emb, Ex d, Ex ia, explosionproof and safe area use
- SIL 3 capability: The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3 in accordance with IEC 61508. (For the FP03P, FP06P, FP10P, BXS and SPR)
- · Consistent high safety factors
- The 77 series Ex d solenoid enclosure has been designed with 'spigot' and 'threaded' type flamepath joints.
   The minimum spacing requirements for obstruction of 'flange' joints- regarding the installation of the solenoid enclosure and its proximity with other objects is not applicable (in accordance with IEC/BS EN 60079-14 Explosive atmospheres: Electrical installations design, selection and erection)
- Our safe area operator option is designed for continuous duty in conformity to the EN60730 safety standards.
   They are encapsulated in a self-extinguishing synthetic material and offer high mechanical protection and excellent thermal dissipation
- Force balanced valve design with high safety factors to de-energise at all pressures in Normally Open and Normally Closed configurations
- 100% computerised diagnostic testing to ensure each solenoid valve is proven along with confirmed safety factors
- Bifold has state of the art product qualification and production equipment including flow (Cv), environment (-60 to +180 °C), function and leakage testing and data logging
- The standard solenoid operator is a flat plate armature type which ensures the valve will operate in all conditions. Other solenoid valve types using core tube design solenoid operators risk corrosion and seizure of the armature within the core tube
- Tolerant to moist air in control lines
- · High tolerance to field misuse
- Products are manufactured, inspected, assembled and tested in our state of the art production facilities
- Large clearances, metal back up to seals and no knife edge sealing to prevent long term valve sticking











### **Product Spotlight**

### **Low Power Operator**

### FP06P-(10LP and 28LP)

- (10LP) 1.0 W holding power 3.5 W energise (less than 100 mS)
- (28LP) 2.8 W holding power 8.0 W energise (less than 100 mS)
- High flow, low holding power
- Low power consumption
- High cycle capability up to 1 million cycles

### **High Flow**

#### **SPR and PPV**

- Low power consumption
- · High flow capabilities
- Up to 1" NPT
- Operates down to -60 °C
- High cycle capability up to 1 million cycles (PPV)





### **Solenoid Valve Enclosure and Valve Body Options**



7x	74AT4, 77 and 78 Series	316L Stainless Steel Enclosure and Valve Body			
2x	24, 27 and	Aluminium Enclosure and 316L Stainless Steel Valve Body			
	28 Series	Aluminium Enclosure and Valve Body			
5x	58 Series	316L Stainless Steel Enclosure and Valve Body			
120	<b>130</b> 130 Series	PBT – Polybutylene Terephthalate (Reinforced Fiberglass 30%) Enclosure and 316L Stainless Steel Valve Body			
130		PBT – Polybutylene Terephthalate (Reinforced Fiberglass 30%) Enclosure and Aluminium Valve Body			
140	140 Series	Thermoplastic Resin Enclosure and 316L Stainless Steel Valve Body			
140 - 1	140 Series	Thermoplastic Resin Enclosure and Aluminium Valve Body			



1	Standard	Standard – 24 and 74AT4 Series (Ex emb), 27 and 77 Series (Ex d) and 77 Series (Explosion Proof)
2	Slimline	28, 58 and 78 Series (Ex ia)
3	Safe Area	130 Series (Safe Area) (BXS and SPR Only)
4	Hazardous Area	140 Series (Ex ia) (BXS and SPR Only)

### **Direct-Acting** Solenoid Valve Range

### FP03P

model



Configuration	2/2 and 3/2					
<b>Port Connections</b>	NPT and BSP - $\frac{1}{8}$ " and $\frac{1}{4}$ "					
Flow Rate	0.1 Cv					
Pressure	Up to 145 psi / 10 bar					
Power	1.5 W - 3.0 W 1.8 W - 3.6 W 370 Ohms (Ex d) (Ex emb) (Ex ia) / 32 I					
Mounting	Body Ported					
Cycle Testing	Up to 1,000,000 Cycles					

### FP06P

model









Configuration	2/2 and 3/2					
<b>Port Connections</b>	NPT and BSP - 1/4"					
Flow Rate	From 0.32 Cv, up to 1.2 Cv					
Pressure	Up to 232 psi / 16 bar					
Power	1.5 W - 6.5 W 1.8 W - 6.8 W 135 Ohms (Ex d) (Ex emb) (Ex ia) / 80 r					
Mounting	Body Ported NAMUR					
Cycle Testing	Up to 1,000,000 Cycles					

### FP10P

model





Configuration	2/2 and 3/2	2/2 and 3/2				
<b>Port Connections</b>	NPT and BSP - $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ "					
Flow Rate	From 0.4 Cv, up to 1.2 Cv					
Pressure	Up to 725 psi / 50 bar					
Power	1.5 W - 6.5 W (Ex d) 1.8 W - 6.8 W (Ex emb)					
Mounting	Body Ported					
Cycle Testing	Up to 1,000,000 Cycles					

FP12P

model



Configuration	2/2 and 3/2			
<b>Port Connections</b>	NPT and BSP - 1/2"			
Flow Rate	2.5 Cv			
Pressure	Up to 145 psi / 10 bar			
Power	6.5 W - 12.0 W (Ex d)			
Mounting	Body Ported			
Cycle Testing	Up to 50,000 Cycles			

### Indirect-Acting Solenoid Valve Range

### **BXS**

model



Configuration	2/2, 3/2, 5/2 an	2/2, 3/2, 5/2 and 5/3				
<b>Port Connections</b>	NPT and BSP - 1/4"					
Flow Rate	0.73 Cv					
Pressure	Up to 145 psi / 10 bar					
Power	0.8 W - 3.0 W (Ex emb) 260 Ohms - 45mA 370 Ohms - 32mA (Ex ia)					
Mounting	Body Ported NAMUR					
Cycle Testing	Up to 1,000,000 Cycles					

### **SPR** and **PPV**



Configuration	2/2, 3/2 and 5/2	2				
<b>Port Connections</b>	NPT and BSP - 1/4" up to 1"					
Flow Rate	From 2.0 Cv, up to 11.2 Cv					
Pressure	Up to 145 psi / 10 bar					
Power	0.8 W - 3.0 W (Ex d)	1.8 W (Ex emb)		260 Ohms - 45mA 370 Ohms - 32mA (Ex ia)		
Mounting	Body Ported					
Cycle Testing	Up to 20,000 Cycles (SPR)		Up (PP	to 1,000,000 Cycles V)		



### **Technical Specifications** Standard and Slimline

### **Solenoid Valve Information**

Model Codes	FP03P,	FP03P, FP06P, FP10P, FP12P, BXS and SPR							
Connections	½" up	½" up to 1" (NPT and BSP)							
Cv	0.1 up	0.1 up to 11.2							
Working Pressure	0 - 725	0 - 725 psi / 0 - 50 bar (Maximum)							
Enclosure Type	Standard Slimline					Safe Area	Hazardous Area		
<b>Enclosure Series</b>	24	74AT4	27	77	28	78	58	130	140
Solenoid Classification	Ex emb IIC Gb Ex d IIC Gb T3 / T4 T4 / T5 / T6				Ex ia IIC Gb T4 / T6	Ex ia IIC Ga T4 / T6	Ex ia IIC Ga T6	N/A	Ex ia IIC Ga T4 / T6
Ingress Protection	IP66, IP67 and 4X		IP66, IF and 4X		IP66, IP67 and 4X	IP66, IP67 and 4X	IP66	IP65	IP65
Maximum Leakage Rate	40 Pa/	40 Pa/S Maximum (Closed) Compressed Air							

### **Materials of Construction**

Enclosure and Valve Body	316L stainless steel as standard with aluminium options also available					
Internal Components	316L stainless steel	316L stainless steel				
Springs	302S26 and 316S42 stainless steel	as standard				
Fasteners	Metric A4 18/10 grade stainless steel; equivalent to 316L grade stainless steel					
O-ring Material	NBR - Nitrile (Standard) HNBR - Nitrile (Low Temperature) FKM - Fluoroelastomer FVMQ - Fluorosilicone FFKM - Perfluoroelastomer	Media Temperature Range -60 to +130 °C (Dependant on seal type. Alternative elastomer's available for extreme conditions and to suit media)  Ambient Temperature Range -60 to +90 °C (Dependant on Solenoid Classification)				
Operating Media	Filtered lubricated or unlubricated air, inert gas, sweet (natural) and sour gas options.  Water, water glycol mixtures and mineral oil (excluding IPV operated valves)					
Conformity	All internal wetted and body materials conforming to NACE MR-01-75 as standard on the FP06P, FP10P and FP12P with options available on the BXS and SPR SIL 3 capability: The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3 in accordance with IEC 61508. (For the FP03P, FP06P, FP10P, BXS and SPR)					

### **Electrical Characteristics**

Duty Cycle	100% continuously rated/energised				
Response Times	Pull in <100 ms, drop out <70ms				
Solenoid Insulation	Class H				
Volts	Pull-In volts 90% up to 110% nominal	Drop-out volts, typically 10 - 20% of nominal			
Coil Voltage DC (=)	12 VDC up to 240 VDC				
Coil Voltage AC 50 Hz and 60 Hz (~)	24 VAC up to 240 VAC				
Cable Entry	M20 x 1.5 and ½" NPT				

Bifold solenoid valves must be installed, operated and maintained in accordance with the relevant Bifold installation, operating and maintenance instructions, relevant installation rules, regulations and codes of practice.

### **Technical Specifications** Safe Area and Hazardous Area

#### **Safe Area Solenoid Valve Information**

**Enclosure Series** 

Compatible with Valve Model Codes

BXS and SPR

#### **Materials of Construction**

**Enclosure and Valve Body** 

PBT - Polybutylene Terephthalate (Reinforced Fiberglass 30%) enclosure and 316L stainless steel valve body

as standard with aluminium options also available

Tube

Stainless Steel AISI 304

Flange

Stainless Steel 1.4305 EN 10088 (AISI 303)

Plunger

Stainless Steel 1.4105 EN 10088 (AISI 430F) or equivalent

**Top Stop** 

Stainless Steel 1.4105 EN 10088 (AISI 430F)

**Springs** 

Stainless Steel AISI 302

Media Temperature Range -10 to +130 °C

**O-ring Material** 

FKM - Fluoroelastomer

**Ambient Temperature Range** 

-10 to +50 °C

#### **Electrical Characteristics**

**Duty Cycle** 

100%

**Coil Insulation** 

Class F 155 °C

Coil Voltage DC

24 VDC +10% / -5%

**Voltage Tolerance Electrical Connection** 

PG9 EN 175301-803 Form B

#### **Hazardous Area Solenoid Valve Information**

**Enclosure Series** 

140

Compatible with **Valve Model Codes** 

BXS and SPR

### **Materials of Construction**

**Enclosure and Valve Body** 

Thermoplastic Resin enclosure and 316L stainless steel valve body as standard with aluminium options also available

Tube

Brass

Flange

Brass

Plunger

Magnetic Steel

**Top Stop** 

Magnetic Steel

**O-ring Material** 

Media Temperature Range

-10 to +50 °C

FKM - Fluoroelastomer

**Ambient Temperature Range** 

-40 to +50 °C

### **Electrical Characteristics**

**Duty Cycle** 

100%

**Coil Insulation** 

Class F 155°C

Coil Voltage DC

28 V DC

Voltage Tolerance

± 10 %

**Electrical Connection** 

PG9 EN 175301-803 Form A

Impregnated coils for use in damp/humid environments are available on request, must be used with connector and gasket.

### **Technical Specifications** Enclosures

#### Certification

### 

(Please contact Rotork for available certification)

**Protection Class** (Ex emb) -24 and 74AT4 Series II 2 GD c Ex emb IIC Gb T3  $T_{amb}$  -25 to +55 °C (powers up to 3.0 W or below) II 2 GD c Ex emb IIC Gb T4 Tamb -25 to +50 °C (powers up to 4.0 W or below) II 2 GD c Ex emb IIC Gb T3 Tamb -25 to +45 °C (powers up to 4.5 W or below) II 2 GD c Ex emb IIC Gb T3 Tamb -25 to +40 °C (powers up to 6.8 W or below)

**Protection Class** (Ex d) -27 and 77 Series II 2 GD Ex db IIC Gb T6 (Tamb -60 to +40 °C) II 2 GD Ex db IIC Gb T5 (Tamb -60 to +55 °C) II 2 GD Ex db IIC Gb T4 (Tamb -60 to +90 °C)

**Protection Class** (Ex ia) -28, 58 and 78 Series 28 - II 2 GD Ex ia IIC Gb T6 (Tamb = -60 to +60 °C)II 2 GD Ex ia IIC Gb T4 ( $T_{amb} = -60 \text{ to } +95 \text{ }^{\circ}\text{C}$ )

58 - II I GD Ex ia IIC Ga T6 (Tamb = -60 to +60 °C)

78 - IIIGD Ex ia IIC Ga T6 (Tamb = -60 to +60 °C)II I GD Ex ia IIC Ga T4  $(T_{amb} = -60 \text{ to } +95 \text{ }^{\circ}\text{C})$ 

**Protection Class** (Ex ia) -140 Series

II 2 G Ex ia IIC Ga T6 (Tamb = -40 to +40 °C) II 2 G Ex ia IIC Ga T4 ( $T_{amb} = -40 \text{ to } +85 \text{ °C}$ )

Power

24 and 74AT4 (Ex emb) – up to 6.8 Watts

27 and 77 (Ex d) – up to 6.5 Watts 77 (Ex d) – (10LP)\* 1.0 W holding power 3.5 W Energise and (28LP)\* 2.8 W holding power 8.0 W Energise

28 and 78 (Ex ia) - 260 Ohms Safety Parameters: 28 and 78 Series

130 (Safe Area) - up to 3.0 Watt

Ui = 31 VDC, Ii = 210 mA, Pi = 1.5 W, Ci  $\approx$  0  $\mu$ F, Li  $\approx$  0mH Coil Resistance: 260 Ohm ± 5%

Minimum Current Required @ solenoid coil = 45 mA

58 (Ex ia) - 135 Ohms Safety Parameters: 58 Series

Ui = 35 VDC, Ii = 600 mA, Pi = 3 W, Ci  $\approx$  0  $\mu$ F, Li  $\approx$  0 mH Coil Resistance: 135 Ohm ± 5%

Minimum Current Required @ solenoid coil = 80 mA

140 (Ex ia) - 275 (Nominal) up to 375 (Warm) Ohms Safety Parameters: 140 Series

Ui = 28 VDC, Ii = 115 mA, Pi = 1.6 W, Ci  $\approx$  0  $\mu$ F, Li  $\approx$  0mH Coil Resistance: 275 Ohm (nominal)

Minimum Current Required @ solenoid coil = 37 mA

375 Ohm (warm)

**Terminal Block** (FP Operator)

Resistance ( $\Omega$ ) and

(Ex ia) - Safety

**Parameters** 

The type MK3 terminal block can accommodate solid conductors between the range of 0.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> and flexible conductors between the range of 0.5 mm<sup>2</sup> to 1.5 mm<sup>2</sup>

28 and 78 (Ex ia) - 370 Ohms

Coil Resistance : 370 Ohm ± 5%

Safety Parameters: 28 and 78 Series

Ui = 31 VDC, Ii = 210 mA, Pi = 1.5 W, Ci  $\approx$  0  $\mu$ F, Li  $\approx$  0mH

Minimum Current Required @ solenoid coil = 32 mA

Seal Repair Kit

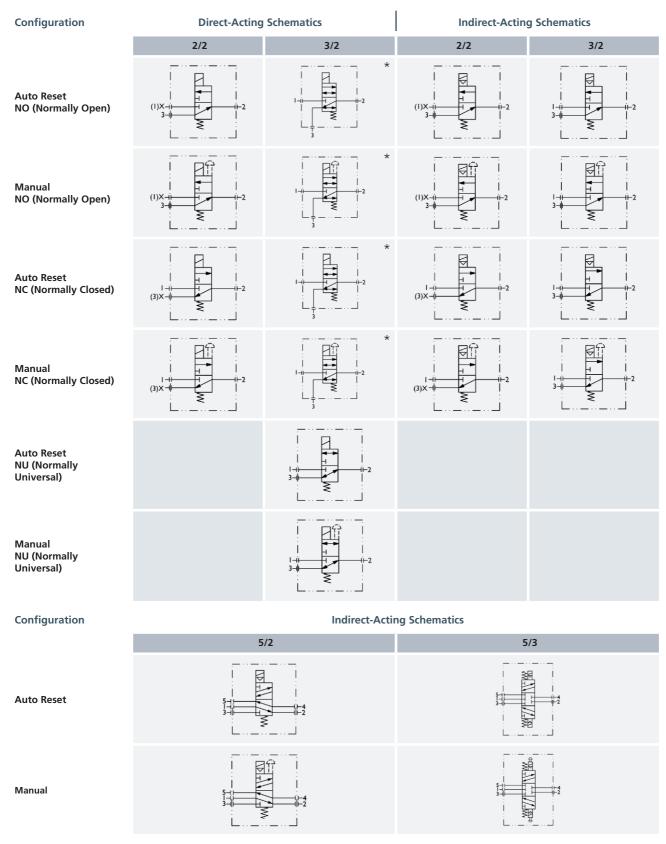
For solenoid operator specific SRK (Seal Repair Kits), please contact Rotork sales department

Coil Repair Kit

For solenoid operator specific CRK (Coil Repair Kits), please contact Rotork sales department

<sup>\*</sup> Low power

### **Direct-Acting and Indirect-Acting Schematics**

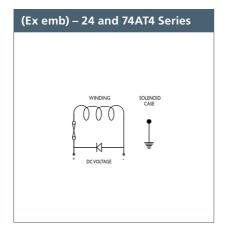


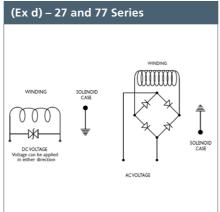
<sup>\*</sup> NAMUR Mounted

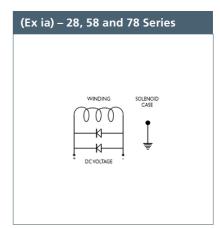
The manual operator feature attached to the valve schematics in this table defines the push button/spring return manual override option, other manual options are also available – please contact Rotork

### **Wiring Diagrams**

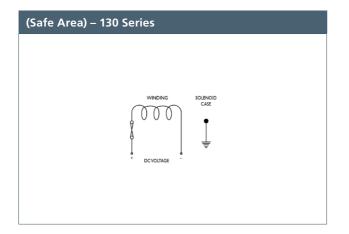
### **Standard and Slimline**



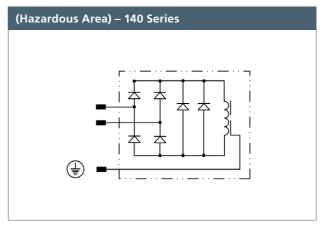




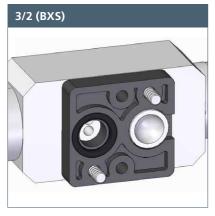
### Safe Area



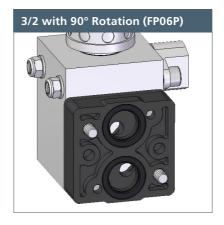
### **Hazardous Area**

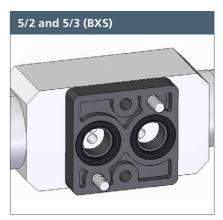


### 3/2 and 5/2 NAMUR Mounting Options



Supplied as Standard with NAMUR mounted valves

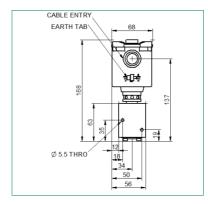




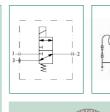
### **Configurable Datasheet**

The Bifold Product Configurator can be used to configure valves to your exact specifications and automatically create a bespoke datasheet, 2D dimensional drawing and 3D CAD / Step file in real time, ready to download. Simply choose the product you would like from the products list and configure each option to your exact specification. Then simply click 'Request Documents' to download the relevant documents. To configure your product online visit www.bifold.co.uk/Product-Configurator.aspx, follow the instructions detailed on the following page or contact Bifold for products not listed.

# **FP06P Datasheet** rotork



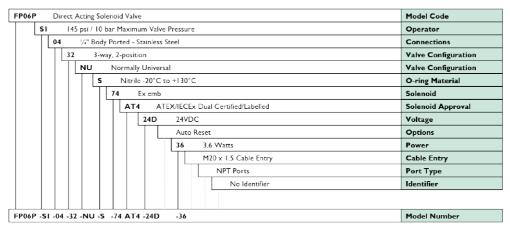








#### FP06P-SI-04-32-NU-S-74AT4-24D-36



### **Protection Class**

II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +55°C (powers up to 3.0W or below) II 2 GD c Ex emb IIC Gb T4 Tamb -25°C to +50°C (powers up to 4.0W or below) II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +45°C (powers up to 4.5W or below) II 2 GD c Ex emb IIC Gb T3 Tamb -25°C to +40°C (powers up to 6.8W or below)

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### **Product Configurator**



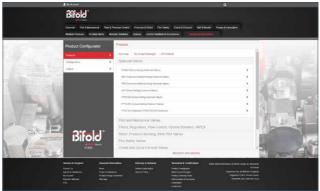
1. Visit www.bifold.co.uk/Index.aspx and go to the technical information tab or the technical and certification section of the footer and click the product configurator link.



2. Register or login to enter the product configurator.



**3.** Simply choose and click the product range you would like from the products list.



**4.** Choose and click the model code you would like to configure from the products list.



**5.** Configure the selected product to your required specification.



**6.** Once you have configured the products to your exact specifications, simply click 'request documents' which will automatically create a bespoke datasheet, 2D dimensional drawing and 3D CAD / Step file in real time, ready to download.

### **Site Services**

Rotork understands the value of prompt, punctual and superior site services. Rotork Site Services have specialist expertise, insight and experience in service support for mission-critical flow control and instrumentation solutions for oil and gas, water and wastewater, power, chemical process and industrial applications. We offer global frontline support backed by dedicated in- house experts.

Our service solutions increase plant efficiency and reduce maintenance costs, while workshop services return equipment to as-new condition. Our experience and understanding of the flow control industry means we have extensive insight and ideas of what we can do to provide significant value to our customers and their operations.

Rotork Site Services is comprised of two main areas; Lifetime Management and Site Services. Lifetime Management is the suite of services within Rotork Site Services which help you manage the risk associated with aging assets and includes our Reliability Services offering. Site Services comprises essential actuator service, repair, maintenance and upgrades.

Rotork has specialist expertise, insight and experience in flow control.

We provide insight into how we can deliver value to our customers.

Our service solutions increase plant efficiency and reduce maintenance costs.



### **Site Services**

#### **Lifetime Management**

The services available within Lifetime Management offer a complete solution to managing the risks associated with the life cycle of your equipment and their obsolescence (which compromise reliable performance and valuable uptime).

The aim of Lifetime Management is to provide you with constant support and minimum- to- no disruption to your production flow. It is a customisable service, offering designed to seamlessly maintain and improve your assets. We manage the inherent risks associated with advances in technology, component obsolescence and ageing equipment for you. We are committed to helping customers maximise the continuous, fault-free operation and working life of their actuators. Supporting the continuous and reliable operation of your plant allows for improved performance and increases in valuable uptime.

### **Lifetime Management covers:**

- Reliability Services
  - Basic Health Check
  - Standard Planned Maintenance
  - Premium Enhanced Maintenance
- Upgrade Services (Retrofit)
- Planned Shutdown Support
- Life Cycle Services
- Overhauls/Refurbishment
- Customised Spares Programme
- Intelligent Asset Management Reporting

#### **Site Services**

Rotork Site Services (RSS) provides the essential on-site actuator service, repair, maintenance and upgrades part of our service offering, plus the commissioning of new actuators and applications. It includes off-site work completed at a Rotork Support Centre including recertification, automation, testing and product selection.

Our decades of experience in the industrial actuation and flow control markets means that customers can rely on us to understand their problems and to deliver reliable, economic solutions. Rotork's talented and experienced engineers have an in-depth understanding of the problems that are faced in the field and they know how to fix them.

On sites where providing evidence of valid asset certification is a legal requirement, Rotork engineers can carry out the necessary OEM level inspections and provide the statutory paperwork to comply with regulations.

- Field Support
- Planned Shutdown Support
- Actuator Workshop Overhaul
- Valve Automation Services
  - On-site
  - Off-site
- Global Support









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As part of a process of on-going product development, Rotork reserves the right to amend and change specifications without prior notice. Published data may be subject to change. For the very latest version release, visit our website at www.rotork.com