



Keeping the World Flowing  
for Future Generations



## RSV01 Normally Closed

Solenoid Valve Range

A comprehensive solenoid valve range of zero pressure differential valves with optimised flow rates, covering the majority of performance needs for a wide variety of operating conditions.

The steel coupling of the diaphragm enables opening of the valve without any pressure differential. A minimum differential pressure then supports the complete opening of the diaphragm and full flow.

The steel coupling improves the life of the valve and compatibility with different media and temperatures.

There are no changes to the standard construction when used with vacuum applications; this is an added benefit when compared with other zero pressure valves.

### Key features

- Available in increased optional pressure ranges by mounting a different coil option
- Offered in brass and stainless steel
- Suitable for vacuum applications as standard
- Mean Time Between Failure (MTBF) tested in a vertical position
- Optional WRAS approval for drinking water applications available for brass and EPDM configurations
- Normally open option also available



The RSV01 joins Rotork's extensive solenoid valve range



A rotork® Brand

# RSV01 Series, General Purpose – 2/2 Normally Closed

Specifications	
Function (single acting)	<p>Flow direction underseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Tube Flange	Stainless Steel 1.4305 EN 10088 (AISI 303)
Tube	Stainless Steel AISI 304
Plunger	Stainless Steel 1.4106 EN 10088 (AISI 430F)
Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F)
Springs	Stainless Steel AISI 302
Seal Material (Std)	NBR
Connection Type (Std)	G parallel thread (ISO 228-1)
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (≐)	12 V , 24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to EN 175301 - 803 - A (ex DIN 43650)
Standard Coil Insulation	Class F 155 °C
High Power Coil Insulation	Class H 180 °C
Power Rating (Standard)	AC 18 VA (holding) AC 36 VA (inrush) DC 14 W
Power Rating <sup>1</sup> (High Power)	DC 22 W

<sup>1</sup> Only for 7221 coil.

These two way shut-off valves are suitable for the control of gaseous and liquid media and are compatible with max viscosity and materials.



- Robust construction for industrial applications
- Zero pressure rated
- AC and DC versions
- Diaphragm operation
- Fully ported orifices for high flow
- Suitable for vacuum up to -950 mbar
- Response time 50 to 500 ms
- Tested in accordance with EN 12266-1
- Meets all relevant EC directives (LVD, PED, Art. 4.3)

Pipe Size	Cv (gpm)	Kv (m <sup>3</sup> /h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	1.8	1.5	0 - 16	-	16	NBR FKM EPDM <sup>2</sup>	RSV01BG20A0WB- RSV01BG20A0WV- RSV01BG20A0WE-
⅜"	3.9	3.3				NBR FKM EPDM <sup>2</sup>	RSV01CG20A0WB- RSV01CG20A0WV- RSV01CG20A0WE-
½"	4.9	4.2				NBR FKM EPDM <sup>2</sup>	RSV01DG20A0WB- RSV01DG20A0WV- RSV01DG20A0WE-
¾"	6.3	5.4			20	NBR FKM EPDM <sup>2</sup>	RSV01EG20A0XB- RSV01EG20A0XV- RSV01EG20A0XE-
1"	8.7	7.4	NBR FKM EPDM <sup>2</sup>	RSV01FG20A0XB- RSV01FG20A0XV- RSV01FG20A0XE-			
¼"	1.8	1.5	-	0 - 12 <sup>1</sup>	16	NBR FKM EPDM <sup>2</sup>	RSV01BG20C0WB- RSV01BG20C0WV- RSV01BG20C0WE-
⅜"	3.9	3.3				NBR FKM EPDM <sup>2</sup>	RSV01CG20C0WB- RSV01CG20C0WV- RSV01CG20C0WE-
½"	4.9	4.2				NBR FKM EPDM <sup>2</sup>	RSV01DG20C0WB- RSV01DG20C0WV- RSV01DG20C0WE-
¾"	6.3	5.4			20	NBR FKM EPDM <sup>2</sup>	RSV01EG20C0XB- RSV01EG20C0XV- RSV01EG20C0XE-
1"	8.7	7.4	NBR FKM EPDM <sup>2</sup>	RSV01FG20C0XB- RSV01FG20C0XV- RSV01FG20C0XE-			

<sup>1</sup> 0-14 bar with 7221 coil (22W).

<sup>2</sup> EPDM with WRAS approval can be ordered replacing the seal material ref 'E' in the coding with 'Y', example p/n RSV01FG20A0XY00W.

## Options available

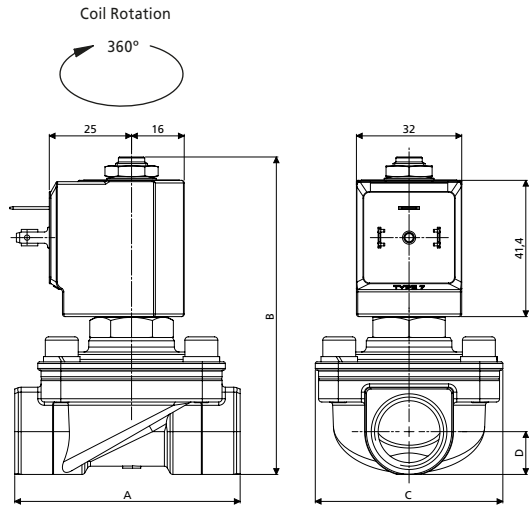
Exd and Exm Solenoid Enclosure	
Exd T6 (IP67)	See separate datasheet
Exd T4 (IP67)	
Exm T5 (IP65)	

Main Valve Body Options (see coding chart)	
Stainless Steel body (AISI 316L)	
NPT threads (minimum batch may be required)	

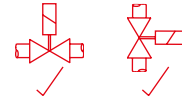
Seal Material <sup>3</sup> and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
NBR (-10 °C to +90 °C)	Water, oil, air	-10 °C	+50 °C
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C
EPDM (WRAS approved up to 1") -10 °C to +85 °C	Water, hot water	-10 °C	+50 °C
EPDM (-10 °C to +120 °C)	Water, hot water	-10 °C	+50 °C

<sup>3</sup> See corrosion reference guide and sealing solutions for material compatibility.

# RSV01 Series, General Purpose – 2/2 Normally Closed



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
	Dimensions (mm)				
1/4"	68.5	96.5	57	13	0.5
3/8"	68.5	96.5	57	13	0.5
1/2"	68.5	96.5	57	13	0.5
3/4"	81.5	110.5	57	20	0.8
1"	81.5	110.5	57	20	0.7

## Solenoid enclosures

### 7--0 Type Coil - Insulation class F

External material: PBT (reinforced glass fibre 30%)  
 Electrical connection: DIN EN 175301-803 form A  
 Winding insulation: Class F (E155)  
 Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted\*



### Type 600 011- Plug

Rated Voltage (max.): 250 VAC / 300 VDC  
 Nominal current: 10A (rated) / 16A (max)  
 Wire cross-section: 1.5 mm<sup>2</sup> max  
 Cable entry: PG9 (6 to 8 mm)  
 Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket  
 Insulation class: Group C - VDE 0110  
 Housing colour: Black  
 UL approved, file No: E205538



### 7221 Type Coil - Insulation class H

External material: PPS (glass fibre and mineral filled)  
 Electrical connection: DIN EN 175301-803 form A  
 Winding insulation: Class H (E180)  
 Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted\*

\* Plug and gasket not supplied as standard, must be ordered separately.

## Coding chart

### Main valve assembly

Valve Series	Size	Process Connection	Function	Operation	Valve Material	Orifice	Seal Material	Valve Options	Material Options	Approvals
RSV01	B 1/4" C 3/8" D 1/2" E 3/4" F 1"	G GAS ISO 228-1 N NPT	20 2/2 Way	A AC NC C DC NC R <sup>1</sup> N/O AC & DC	0 Brass 5 AISI 316L stainless	W <sup>2</sup> 16 X <sup>3</sup> 20	B NBR E EPDM Y EPDM (WRAS) V FKM	0 None	K Nickel Plating 0 None A <sup>4</sup> Silver Shading Ring	0 CE WF <sup>6</sup> WRAS
RSV01	•	•	20	•	•	•	•	0	•	•

### Coil options<sup>6</sup>

Voltage / Power Class F		Electrical Connection
7	w/o coil -	0 DIN, no plug fitted
7700	230 V / 50 Hz 240 V / 60 Hz	A DIN weatherproof IP65 / NEMA 4X with plug 600 011-
7200	24 V / 50/60 Hz	
7400	110 V / 50 Hz 120 V / 60 Hz	
7100	12V / 50/60 Hz	
7600	200 V / 50 Hz 220 V / 60 Hz	
7300	48 V / 50/60 Hz	
7250	24 VDC	
7150	12 VDC	
Class H, High Power		
7221	24 VDC	

Notes: 1. See separate datasheet. 2. 3/8" & 1/2" only. 3. 3/4" & 1" only. 4. Silver ring is standard for stainless steel body version. 5. For brass valves only. 6. For use with UL approved coils contact Sales Department.

### Product coding example:

RSV01 C G 20 A 0 W B 0 K 0 7700 0 = 3/8" BSP G, 2/2, AC NC, brass body, 16 mm orifice, NBR seals, nickel plating, DIN coil, 230 V 50 Hz, without plug.

### Overview of available features and options

Function	2/2 Normally Closed	✓
	Optional 2/2 Normally Open	✓
Body Material	Brass	✓
	Optional Stainless 316L	✓
Flange Tube	Stainless 303	✓
Plunger	Stainless 430F	✓
Springs	Stainless 302	✓
Seal Materials	NBR (-10 °C to +90 °C)	✓
	Optional FKM (-10 °C to +130 °C)	✓
	Optional EPDM (-10 °C to +120 °C)	✓
	Optional EPDM WRAS (-10 °C to +85 °C)	✓
Connection	G parallel thread (ISO 228-1)	✓
	Optional NPT	✓
Shading Ring Material	Copper	✓
	Optional Silver	✓
Voltages	DC 12, 24, 110	✓
	AC 50 Hz 24, 110, 230	✓
	AC 60 Hz 24, 120, 240	✓

Voltage Tolerance	+10% to -15% (AC), +10% to -5% (DC)	✓
Duty Cycle	100% ED	✓
Protection	IP65 (with DIN plug & gasket fitted)	✓
Electrical Connection	DIN 43650	✓
Coil Insulation	Class F	✓
Power Rating	18 VA (holding)	✓
	36 VA (inrush)	✓
	14W DC	✓
Explosionproof Options	22W DC	✓
	Exd T6 & Exd T4	✓
Response Time	Exm T5	✓
	50 - 500 mS	✓
Approvals	PED compliance	✓
	CE	✓
	ATEX (optional)	✓
	WRAS (optional)	✓
Mounting Orientation	Horizontal (coil uppermost)	✓
	Vertical	✓

A full listing of the Rotork sales and service network is available on our website.

[www.rotork.com](http://www.rotork.com)

Corporate Headquarters  
Rotork plc

tel +44 (0)1225 733200  
email [mail@rotork.com](mailto:mail@rotork.com)



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