

SV321 & SV421

2-Way Normally Closed and Normally Open
Pilot Operated Solenoid Valves



Valcor General Purpose Series



DESCRIPTION

These 2-way piloted diaphragm solenoid valves are available in normally closed and normally open operating modes. They range from 3/8" to 2" port sizes, with orifice sizes of 1/2" to 1 1/2" and pressures to 250 psi. Available in both brass and stainless constructions with optional seal materials, these sturdy valves are designed to handle a wide ranges of gases and fluids. For special applications, contact your Valcor customer service representative.

APPLICATION

The SV321 & SV421 series are suitable for a broad range of industrial applications.

Typical applications include:

- Commercial water filtration and utilities systems
- Hot water / steam systems
- Process control and production piping
- General on-off control of water, oil, and gas
- Gas and liquid distribution systems
- Economical choice for OEM applications.

FEATURES

- Minimum operating pressures required
- Wide selection of construction materials allow for use on a variety of fluids
- AC and DC solenoid coils in a wide range of standard voltages
- NEMA4 as standard coil enclosure, NEMA7 Explosion proof and others available
- Pressure rating up to 250 psi



SV321 & SV421 SPECIFICATIONS

Construction

Operating Mode	Normally Closed: Open when energized, closed when de-energized Normally Open: Closed when energized, open when de-energized
Port Size (in.)	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2
Orifice Size (in.)	1/2, 5/8, 3/4, 1, 1 1/4, 1 1/2
Temperature Ratings	Ambient Temp -40°F to 150°F max. with class F coil 175°F max. with class H coil Fluid Temp. See specifications on next page.
Mounting Position	Mounts in any position (Best position is solenoid upright and vertical)
Agency Listings	UL listed, CSA approved by order
Options	Manual override, mounting bracket

Valve Parts in Contact With Fluid

Body	Brass, 316 stainless steel
Seals	Viton, Buna N, PTFE, ethylene propylene
Internal Metal Parts	304 and 430F stainless steel

Electrical


Standard Voltages	AC 24V 60Hz AC 110V 50Hz, AC 120V 60Hz AC 220V 50Hz, AC 240V 60Hz DC 12V, DC 24V
Voltage Tolerance	+10% to -15% of applicable voltage
Standard Coil Housing	Standard: Watertight NEMA 4 Options: Conduit, grommet, DIN, explosion proof NEMA 7, open frame, junction box
Coil	Class F and H
Lead Length	24 inches

Coil Data

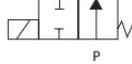
Model		SV321		SV421			
Frequency		50	60	50	60	50	60
Power (VA)	Inrush	26	22	35	30	56	51
	Holding	14	11	19	14	23	16
Power Consumption	AC	8		9		11	
	DC	9, 10					

SV321 & SV421 SPECIFICATIONS

Specifications for SV321 Normally Closed

Port Size	Orifice Size (ins.)	C _v	Min PSI	Operating Pressure Differential								Max Fluid Temp °F	Model Number		
				Max Pressure (PSI)									Normally Closed		
				Air/Gas		Water		Lt. Oil		Steam					Brass
AC	DC	AC	DC	AC	DC	AC	DC	AC	DC						
Normally Closed 	3/8	1/2	3.3	1	250	150	250	150	250	150	-	-	230	SV321GF02K4CG1	---
		1/2	3.3	1	-	-	-	-	-	-	100	100	338	SV321GH02T4CG1	---
	1/2	1/2	3.3	10	-	-	-	-	-	-	150	150	386	SV321GH02T2CG1	---
		5/8	3.3	4	200	150	150	100	150	100	-	-	180	SV321GF02N5CG4	SV321GF02L7CG4*
		1/2	3.3	1	250	150	250	150	250	150	-	-	230	SV321GF02K4DG1	---
		1/2	3.3	1	-	-	-	-	-	-	100	100	338	SV321GH02T4DG1	---
	3/4	1/2	3.8	10	-	-	-	-	-	-	150	150	388	SV321GH02T2DG1	---
		5/8	4.1	4	200	150	150	100	150	100	-	-	180	SV321GF02N5DG4	SV321GF02L7DG4*
		3/4	8.1	1	250	150	250	150	250	150	-	-	230	SV321GF02K4EG5	---
		3/4	6.1	-	-	-	-	-	-	-	100	100	338	SV321GH02T4EG5	---
	1	3/4	7.0	10	-	-	-	-	-	-	150	150	386	SV321GH02T2EG5	---
		3/4	5.5	4	200	150	150	100	150	100	-	-	180	SV321GF02N5EG5	SV321GF02L7EG5*
1		13.0	10	250	150	250	150	250	150	-	-	200	SV321GF02N1FG9	---	
1		13.0	10	-	-	-	-	-	-	150	150	386	SV321GH02T2FG9	---	
1 1/4	1	13.0	5	200	150	150	150	100	100	-	-	180	SV321GF02N5FG9	SV321GF02L7FG9*	
	1	13.0	5	-	-	-	-	-	-	50	50	295	SV321GF02C5FG9	SV321GF02E7FG9	
	1 1/2	22.0	10	250	150	250	150	250	150	-	-	200	SV321GF02N1GJ5	---	
	1 1/2	22.0	10	-	-	-	-	-	-	150	150	386	SV321GH02T2GJ5	---	
1 1/2	1 1/4	19	5	200	150	150	150	85	85	-	-	180	SV321GF02N5GJ2	SV321GF02L7GJ2*	
	1 1/4	19	5	-	-	-	-	-	-	50	50	295	SV321GF02C5GJ2	SV321GF02E7GJ2	
	1 1/2	28	10	250	150	250	150	250	150	-	-	200	SV321GF02N1HJ5	---	
	1 1/2	28	10	-	-	-	-	-	-	150	150	388	SV321GH02T2HJ5	---	
2	1 1/4	25	5	200	150	150	150	85	85	-	-	180	SV321GF02N5HJ2	SV321GF02L7HJ2*	
	1 1/4	25	5	-	-	-	-	-	-	50	50	295	SV321GF02C5HJ2	SV321GF02E7HJ2	
	1 1/2	29.0	10	250	150	250	150	250	150	-	-	200	SV321GF02N1JJ5	---	
	1 1/2	29.0	10	-	-	-	-	-	-	150	150	386	SV321GH02T2JJ5	---	
2	1 1/4	28.0	5	200	150	150	150	85	85	-	-	180	SV321GF02N5JJ2	SV321GF02L7JJ2*	
	1 1/4	28.0	5	-	-	-	-	-	-	50	50	295	SV321GF02C5JJ2	SV321GF02E7JJ2	

Specifications for SV421 Normally Open

Port Size	Orifice Size (ins.)	C _v	Min PSI	Operating Pressure Differential								Max Fluid Temp °F	Model Number		
				Max Pressure (PSI)									Normally Open		
				Air/Gas		Water		Lt. Oil		Steam					Brass
AC	DC	AC	DC	AC	DC	AC	DC	AC	DC						
Normally Open 	3/8	1/2	3.3	1	150	140	150	140	150	140	-	-	230	SV421GF02K4CG1	---
		1/2	3.3	1	-	-	-	-	-	-	100	100	338	SV421GH02T4CG1	---
	1/2	5/8	3.3	3	150	140	200	125	200	125	-	-	180	SV421GF02N5CG4	SV421GF02L7CG4*
		1/2	3.3	1	150	140	150	140	150	140	-	-	230	SV421GF02K4DG1	---
		1/2	3.3	1	-	-	-	-	-	-	100	100	338	SV421GH02T4DG1	---
		5/8	4.1	3	200	140	200	125	200	125	-	-	180	SV421GF02N5DG4	SV421GF02L7DG4*
	3/4	3/4	6.1	1	150	140	150	140	150	140	-	-	230	SV421GF02K4EG5	---
		3/4	8.1	1	-	-	-	-	-	-	100	100	338	SV421GH02T4EG5	---
		3/4	5.5	3	200	140	200	125	200	125	-	-	180	SV421GF02N5EG5	SV421GF02L7EG5*
		1	13.0	10	200	140	200	140	200	140	-	-	200	SV421GF02N1FG9	---
	1 1/4	1	13.0	10	-	-	-	-	-	-	100	100	338	SV421GH02T2FG9	---
		1	13.0	5	200	140	150	140	100	100	-	-	180	SV421GF02N5FG9	SV421GF02L7FG9*
1		13.0	5	-	-	-	-	-	-	50	50	295	SV421GF02C5FG9	SV421GF02E7FG9	
1 1/2		22.0	10	200	140	200	140	200	140	-	-	200	SV421GF02N1HJ5	---	
1 1/2	1 1/2	22.0	10	-	-	-	-	-	-	100	100	338	SV421GH02T2HJ5	---	
	1 1/4	19.0	5	200	140	140	140	85	85	-	-	180	SV421GF02N5HJ2	SV421GF02L7GJ2*	
	1 1/4	19.0	5	-	-	-	-	-	-	50	50	295	SV421GF02C5GJ2	SV421GF02E7GJ2	
	1 1/2	28.0	10	200	140	200	140	200	140	-	-	200	SV421GF02N1HJ5	---	
2	1 1/2	28.0	10	-	-	-	-	-	-	100	100	388	SV421GH02T2HJ5	---	
	1 1/4	25.0	5	200	140	140	140	85	85	-	-	180	SV421GF02N5HJ2	SV421GF02L7HJ2*	
	1 1/4	25.0	5	-	-	-	-	-	-	50	50	295	SV421GF02C5HJ2	SV421GF02E7HJ2	
	1 1/2	29.0	10	200	140	200	140	200	140	-	-	200	SV421GF02N1JJ5	---	
2	1 1/2	29.0	10	-	-	-	-	-	-	100	100	338	SV421GH02T2JJ5	---	
	1 1/4	28.0	5	200	140	140	140	85	85	-	-	180	SV421GF02N5JJ2	SV421GF02L7JJ2*	
	1 1/4	28.0	5	-	-	-	-	-	-	50	50	295	SV421GF02C5JJ2	SV421GF02E7JJ2	

*Maximum Fluid Temperature is 230°F

SV321 & SV421 SPECIFICATIONS

Part Number Configurator

Example Part Number: SV321GH02N5CG4

S	V	3	2	1	G	H	0	2	N	5	C	G	4	
Numbers 1 thru 5					6	7	8-9		10-11		12	13-14		15

Series	Operating Mode	Housing	Coil Insulation	Applicable Voltage	Material (Seal, Body)	Pipe Connection NPT (in.)	Orifice Size (in.)	Option
SV321	Normally Closed	A Conduit	F Class F	02 120V/60Hz 110V/50Hz	K4 Viton, Forged Brass w/ SS Trim	C 3/8	G1 1/2	K Mounting Bracket M Manual Override
		P Open Frame	H Class H	04 220V/60Hz 220V/50Hz				
		B Grommet		01 24V/60Hz	K2 Viton, Brass w/ SS Trim	E 3/4	G1 1/2 G5 3/4	
		X Explosion Proof NEMA 7 Junction Box		15 12V DC 16 24V DC	T2 PTFE, Brass w/ SS Trim			
SV421	Normally Open	S Watertight NEMA4			N1 Buna N, 316 SS	G 1 1/4	J5 1 1/2	
		G DIN			T1 PTFE/EPR 316 SS	H 1 1/2 J 2		
		Y DIN			N5* Buna N., Brass	C 3/8	G4 5/8	
					V5* Viton, Brass	D 1/2		
					C5* EPR, Brass	E 3/4	G5 3/4	
					J7* Buna N, 316 SS	F 1	G9 1 J2 1 1/4	
					E7* Santoprene/EPDM 316 SS	G 1 1/4 H 1 1/2 J 2		
					F7*^ Santoprene EPDM 316 SS	C 3/8 D 1/2 E 3/4 F 1		
					CP EPR/Nylon			
					NP Nitrile/Nylon			
			VP FKM/Nylon					
			* Compact Version ^ ANSI-61 Compliant					

SV321 & SV421 SPECIFICATIONS

External Dimensions

High Performance Bodies

Port Connection NPT (in.)	A	B		C	D	Weight (lbs)
		Normally Closed	Normally Open			
3/8 • 1/2 T2/K2	3.20	4.29	4.54	0.57	2.18	2.5
3/8 • 1/2 T4/K4	3.18	4.15	4.40	0.58	2.18	2.5
3/4 T2/K2	3.82	4.65	4.90	0.69	2.72	3.3
3/4 T4/K4	3.84	4.49	4.74	0.72	2.71	3.3
1	5.40	4.93	4.93	0.86	4.74	6.4
1 1/4 • 1 1/2	6.27	5.79	6.04	1.18	5.35	10.5
2	6.29	6.59	6.84	1.55	5.35	13.5

Compact Bodies

Port Connection NPT (in.)	A	B		C	D	Weight (lbs)
		Normally Closed	Normally Open			
3/8 • 1/2	2.76	4.06	4.39	0.56	2.23	2.5
3/4	2.76	4.27	4.60	0.65	2.23	3.3
1	3.70	4.74	5.02	0.84	3.70	6.4
1 1/4 • 1 1/2	4.35	5.43	5.71	1.07	3.70	10.5
2	5.58	6.03	6.31	1.47	3.68	13.5

Plastic Bodies

Port Connection NPT (in.)	A	B		C	D	Weight (lbs)
		Normally Closed	Normally Open			
3/8 • 1/2	2.76	3.64	3.93	0.56	2.35	0.85
3/4	2.76	3.85	4.60	0.65	2.30	0.9
1	3.58	5.09	5.29	0.90	3.34	1.7

