



2-Way • Normally Closed & Normally Open • 1/8" & 1/4" NPT

# SC31 & SC91 Series Solenoid Valves

Subminiature Direct Acting • Stainless Steel, Brass & Nylon

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## Construction

Wetted Components			
Body	316 SS	Brass	Nylon
Operator Tube	303 Stainless Steel		
Plunger & Tube Head	IJ117		
Springs	304 Stainless Steel		
Shading Ring	Copper		
Seals	FKM (Std.), Nitrile, EPDM, FFKM, PTFE		

## Coil Enclosures

- G Coil - 18" Lead Wires (IP65)
- Y Coil – DIN Form B – 11mm (IP65)
- See Engineering Guide for additional coil enclosures

## Electrical

Series/Mode	Power Consumption	
	DC (watts)	AC (volt-amps)
SC311	4	6.5
SC312	4	6.5
SC911	4	6.5
SC912	4	6.5

- All Coils Rated for 100% Duty Cycle
- Voltage Tolerance: ±10% from nominal



## Ambient Temperature (Nominal)

- 32°F to 140°F (0°C to 60°C)

## Fluid Temperature by Seal Material

- FKM: -20°F to 230°F (-29°C to 110°C)
- Nitrile: -40°F to 180°F (-40°C to 82°C)
- EPDM: -70°F to 295°F (-57°C to 146°C)
- FFKM: -67°F to 366°F (-55°C to 186°C)
- PTFE: -320°F to 366°F (-196°C to 186°C)

\*Nylon body valves limited to 180°F (82°C) max.

## Approvals\*\*

- cURus (MH17997)
- CE Certified

\*\*Not available for all variations





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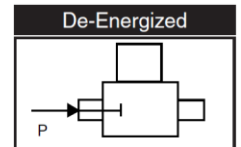
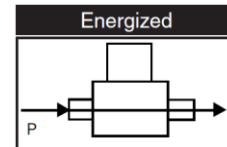
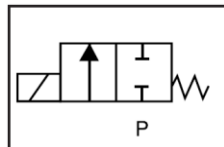
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## Normally Closed Valve Specifications (Closed when de-energized)

Pipe Size (NPT)	Orifice Size (mm)	Flow Factor (Cv)	Operating Pressure Differential (PSI)			Part Number <sup>①</sup> (Shown with 120 VAC DIN Coil and FKM Seals)		
			Min.	Maximum		Stainless Steel	Brass	Nylon <sup>②</sup>
				Air/Gas & Liquid				
				AC	DC			
1/8	1.0	0.035	0	580	580	SC911YH02VFAA1	SC911YH02VEAA1	SC311YH02VIAA1
	1.2	0.046	0	580	360	SC911YH02VFAA2	SC911YH02VEAA2	SC311YH02VIAA2
	1.6	0.084	0	435	160	SC911YH02VFAA3	SC911YH02VEAA3	SC311YH02VIAA3
	2.0	0.112	0	261	116	SC911YH02VFAA4	SC911YH02VEAA4	SC311YH02VIAA4
	2.4	0.140	0	203	87	SC911YH02VFAA5	SC911YH02VEAA5	SC311YH02VIAA5
	3.0	0.280	0	116	36	SC911YH02VFAA6	SC911YH02VEAA6	SC311YH02VIAA6
1/4	1.0	0.035	0	580	580	SC911YH02VFBA1	SC911YH02VEBA1	SC311YH02VIBA1
	1.2	0.046	0	580	360	SC911YH02VFBA2	SC911YH02VEBA2	SC311YH02VIBA2
	1.6	0.084	0	435	160	SC911YH02VFBA3	SC911YH02VEBA3	SC311YH02VIBA3
	2.0	0.112	0	261	116	SC911YH02VFBA4	SC911YH02VEBA4	SC311YH02VIBA4
	2.4	0.140	0	203	87	SC911YH02VFBA5	SC911YH02VEBA5	SC311YH02VIBA5
	3.0	0.28	0	116	36	SC911YH02VFBA6	SC911YH02VEBA6	SC311YH02VIBA6

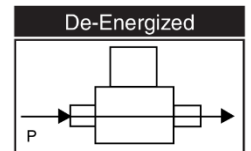
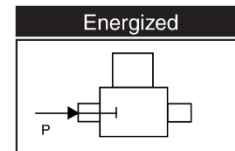
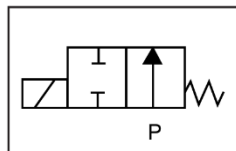
- ① See part number selection guide for additional voltages and variations.
- ② Nylon valves limited to 180°F (82°C) maximum fluid temperature.
- 3. MRP = 5X MOPD



## Normally Open Valve Specifications (Open when de-energized)

Pipe Size (NPT)	Orifice Size (mm)	Flow Factor (Cv)	Operating Pressure Differential (PSI)			Part Number <sup>①</sup> (Shown with 120 VAC Lead Wire Coil and FKM Seals)		
			Min.	Maximum		Stainless Steel	Brass	Nylon <sup>②</sup>
				Air/Gas & Liquid				
				AC	DC			
1/8	1.2	0.046	0	203	203	SC912YH02VFAA2	SC912YH02VEAA2	SC312YH02VIAA2
	1.6	0.084	0	145	145	SC912YH02VFAA3	SC912YH02VEAA3	SC312YH02VIAA3
	2.0	0.112	0	95	95	SC912YH02VFAA4	SC912YH02VEAA4	SC312YH02VIAA4
	2.4	0.140	0	55	55	SC912YH02VFAA5	SC912YH02VEAA5	SC312YH02VIAA5
1/4	1.2	0.046	0	203	203	SC912YH02VFBA2	SC912YH02VEBA2	SC312YH02VIBA2
	1.6	0.084	0	145	145	SC912YH02VFBA3	SC912YH02VEBA3	SC312YH02VIBA3
	2.0	0.112	0	95	95	SC912YH02VFBA4	SC912YH02VEBA4	SC312YH02VIBA4
	2.4	0.140	0	55	55	SC912YH02VFBA5	SC912YH02VEBA5	SC312YH02VIBA5

- ① See part number selection guide for additional voltages and variations.
- ② Nylon valves limited to 180°F (82°C) maximum fluid temperature.
- 3. MRP = 5X MOPD



800-828-0484

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

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## SC31 & SC91 Series Part Number Selection

Valve Series	Operating Mode	Coil Housing	Coil Class	Voltage	Seal Material	Body Material/ Pipe Size	Orifice Size
①	②	③	④	⑤	⑥	⑦	⑧
<b>SC31</b>	<b>1</b>	<b>Y</b>	<b>H</b>	<b>02</b>	<b>V</b>	<b>EA</b>	<b>A1</b>

① **Valve Series**

<b>SC31</b>	Subminiature Direct Acting (Plastic)
<b>SC91</b>	Subminiature Direct Acting (Metal)

② **Operating Mode**

<b>1</b>	2-Way Normally Closed (NC)
<b>2</b>	2-Way Normally Open (NO)

③ **Coil Type**

<b>G</b>	18" Lead Wires
<b>Y</b>	DIN (Form B – 11mm)

④ **Coil Class**

<b>H</b>	H Class Coil
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⑤ **Voltage**

<b>02</b>	120 VAC, 60 Hz; 110 VAC, 50 Hz
<b>03</b>	208 VAC, 60 Hz
<b>04</b>	240 VAC, 60 Hz; 220 VAC, 50 Hz
<b>24</b>	24 VAC, 50/60 Hz
<b>15</b>	12 VDC
<b>16</b>	24 VDC

⑥ **Seal Material**

<b>A</b>	FFKM
<b>C</b>	EPDM
<b>N</b>	Nitrile
<b>T</b>	PTFE (SC911 Valves Only)
<b>V</b>	FKM

⑦ **Body Material/Pipe Size**

<b>EA</b>	Brass, 1/8" NPT
<b>EB</b>	Brass, 1/4" NPT
<b>FA</b>	316 Stainless Steel, 1/8" NPT
<b>FB</b>	316 Stainless Steel, 1/4" NPT
<b>IA</b>	Nylon, 1/8" NPT
<b>IB</b>	Nylon, 1/4" NPT

⑧ **Orifice Size**

<b>A1</b>	1.0 mm
<b>A2</b>	1.2 mm
<b>A3</b>	1.6 mm
<b>A4</b>	2.0 mm
<b>A5</b>	2.4 mm
<b>A6</b>	3.0 mm

⑨ **Optional Suffix**

<b>(blank)</b>	No Option
<b>N</b>	Cleaned for Oxygen Service
<b>P</b>	Nickel Plated Plunger & Tube

800-828-0484

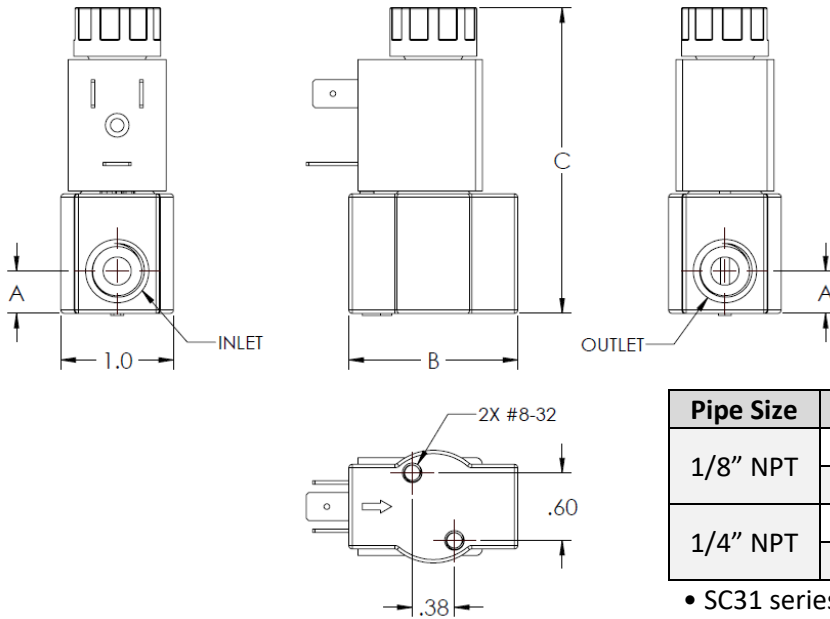
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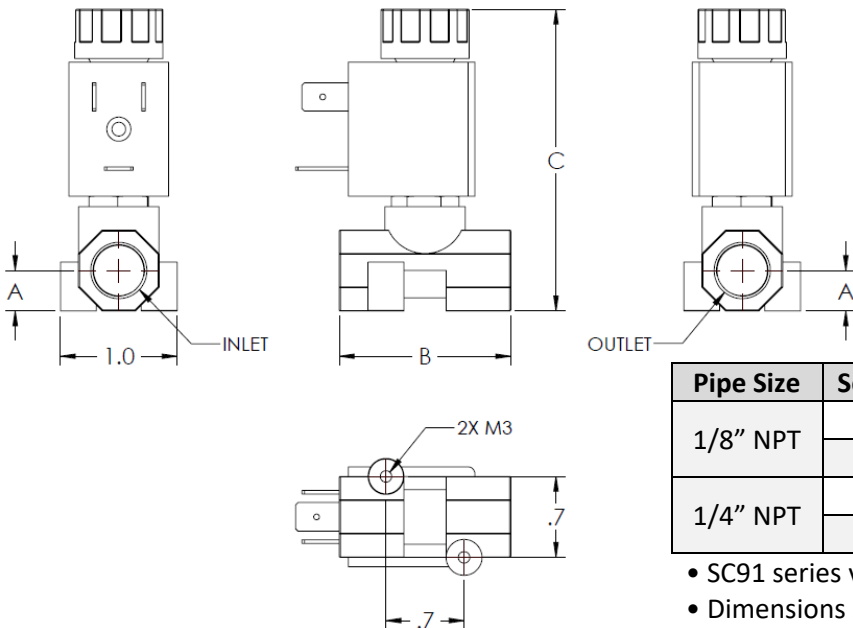
## Drawing 1 SC31 Series



Pipe Size	Series/Mode	A	B	C	Weight
1/8" NPT	SC311	0.37	1.50	2.66	0.38 lb
	SC312	0.37	1.50	2.75	0.38 lb
1/4" NPT	SC311	0.37	1.50	2.66	0.38 lb
	SC312	0.37	1.50	2.75	0.38 lb

- SC31 series valves can be mounted in any position.
- Dimensions shown in inches.
- Drawing not to scale.

## Drawing 2 SC91 Series



Pipe Size	Series/Mode	A	B	C	Weight
1/8" NPT	SC911	0.32	1.10	2.61	0.42 lb
	SC912	0.32	1.10	2.70	0.42 lb
1/4" NPT	SC911	0.36	1.50	2.66	0.42 lb
	SC912	0.36	1.50	2.75	0.42 lb

- SC91 series valves can be mounted in any position.
- Dimensions shown in inches.
- Drawing not to scale.