

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 Series Stainless Steel		
Plunger Tube & Tube Head	430F Series Stainless Steel		
Springs	302 Series 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





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

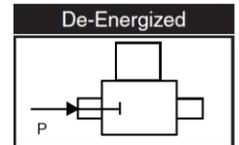
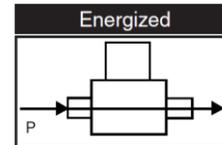
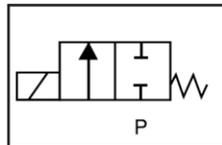
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Normally Closed Valve Specifications (Closed when de-energized)

Pipe Size (NPT)	Orifice Size (mm)	Flow Factor (Cv)	Operating Pressure Differential (PSI)			Part Number ^① (Shown with 120 VAC DIN Coil and FKM Seals)		
			Min.	Maximum		Stainless Steel	Brass	Nylon ^②
				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

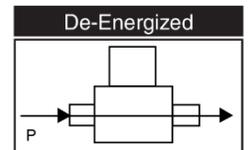
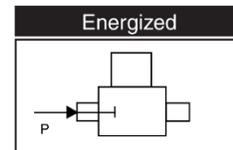
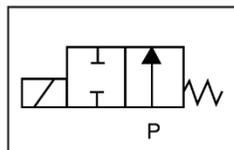
- ① See part number selection guide for additional voltages and variations.
- ② Nylon valves limited to 180°F (82°C) maximum fluid temperature.
- 3. MRP = 5X MOPD



Normally Open Valve Specifications (Open when de-energized)

Pipe Size (NPT)	Orifice Size (mm)	Flow Factor (Cv)	Operating Pressure Differential (PSI)			Part Number ^① (Shown with 120 VAC Lead Wire Coil and FKM Seals)		
			Min.	Maximum		Stainless Steel	Brass	Nylon ^②
				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



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

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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
SC31	1	Y	H	02	V	EA	A1

① **Valve Series**

SC31	Subminiature Direct Acting (Plastic)
SC91	Subminiature Direct Acting (Metal)

② **Operating Mode**

1	2-Way Normally Closed (NC)
2	2-Way Normally Open (NO)

③ **Coil Type**

G	18" Lead Wires
Y	DIN (Form B – 11mm)

④ **Coil Class**

H	H Class Coil
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⑤ **Voltage**

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

⑥ **Seal Material**

A	FFKM
C	EPDM
N	Nitrile
T	PTFE (SC911 Valves Only)
V	FKM

⑦ **Body Material/Pipe Size**

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

⑧ **Orifice Size**

A1	1.0 mm
A2	1.2 mm
A3	1.6 mm
A4	2.0 mm
A5	2.4 mm
A6	3.0 mm

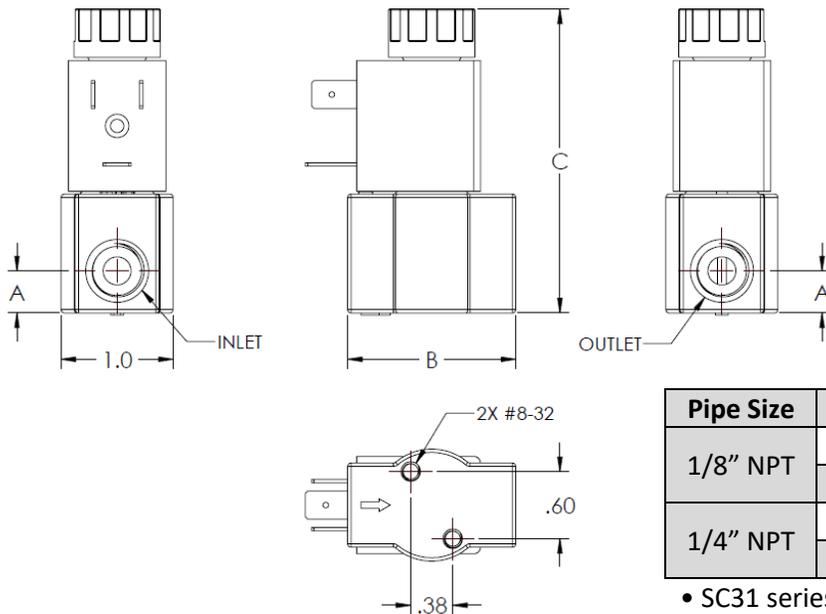
⑨ **Optional Suffix**

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

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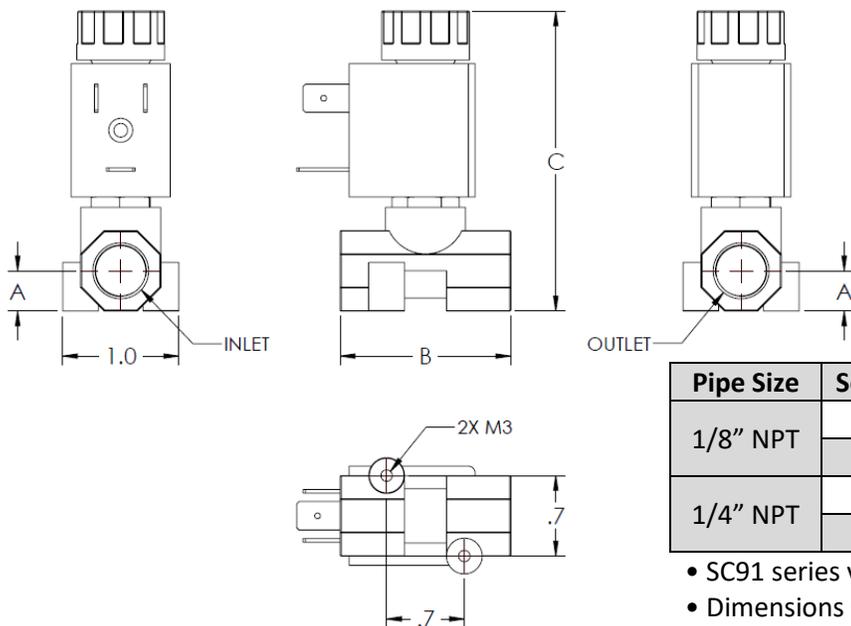
Drawing 1 SC31 Series



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.