



Normally Closed, Normally Open, Diverting & Universal • 1/8" & 1/4" NPT
3-Way S30, S31 & S33 Series Solenoid Valves
 Direct Acting • Stainless Steel & Brass

Table of Contents

- Page 1 – General Overview
- Pages 2-5 – Valve Specifications
- Pages 6-7 – Part Number Selection
- Pages 8-9 – Drawings

Construction

Wetted Components		
Body	303 SS	Brass
Operator Tube	303 Series Stainless Steel	
Plunger & Tube Head	430FR Series Stainless Steel	
Springs	302 Series Stainless Steel	
Shading Ring	Copper	
Seals	Nitrile, EPDM, FKM (Std.)	

Coil Enclosures

- G Coil - 1/2" NPT Conduit Hub with 24" Lead Wires (NEMA 4/4X, IP65)
- Y Coil – DIN 18mm Form A (NEMA 4, IP65)
- See Engineering Guide for additional coil enclosures

Electrical

Series (3-Way)	Body Code	Wattage		Inrush (VA)		Holding (VA)	
		DC	AC	50 Hz	60 Hz	50 Hz	60 Hz
				Based on 120 VAC			
S30	-	10	10	46	46	23	20
S31	-	9	8	36	36	17	16
S33	3 & 7	9	8	36	36	14	13
S33	4 & 8	10	10	46	46	19	18

- 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

- Nitrile: -40°F to 180°F (-40°C to 82°C)
- EPDM: -70°F to 295°F (-57°C to 146°C)
- FKM: -20°F to 230°F (-29°C to 110°C)

Approvals*

- UL Listed (MH17608)
- UL Recognized (MH17997)
- CSA Certified (069111_0_000)
- CE Certified

*Not available for all variations



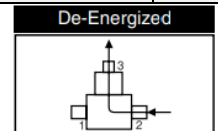
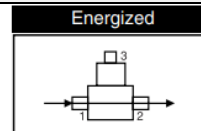
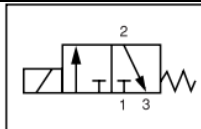


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Normally Closed Valve Specifications (Closed when de-energized)

Pipe Size (NPT)	Orifice Size (in)		Flow Factor (Cv)		Maximum Operating Pressure Differential (PSI)		Power Consumption (watts)		Part Number ^① (Shown with 120 VAC Lead Wire Coil and FKM Seals)		Drawing Ref.
	Main	Top	Main	Top	Air/Gas, Liquid & Light Oil		AC	DC	Stainless Steel	Brass	
					AC	DC					
1/8	3/64	1/16	0.05	0.10	220	220	10	10	S303GH02V2AV1	S303GH02V8AV1	1
					170	170	8	9	S313GH02V2AV1	S313GH02V8AV1	1
	1/16	1/16	0.10	0.10	200	160	10	10	S333GH02V8AC5	S333GH02V4AC5	2
					160	100	8	9	S333GH02V7AC5	S333GH02V3AC5	2
					150	150	10	10	S303GH02V2AC5	S303GH02V8AC5	1
					120	120	8	9	S313GH02V2AC5	S313GH02V8AC5	1
	3/32	3/32	0.20	0.20	200	160	10	10	S333GH02V8AC9	S333GH02V4AC9	2
					160	100	8	9	S333GH02V7AC9	S333GH02V3AC9	2
					100	100	10	10	S303GH02V2AC9	S303GH02V8AC9	1
					65	65	8	9	S313GH02V2AC9	S313GH02V8AC9	1
	1/8	1/8	0.30	0.30	84	60	10	10	S333GH02V8AD5	S333GH02V4AD5	2
					50	30	8	9	S333GH02V7AD5	S333GH02V3AD5	2
	1/8	3/32	0.30	0.20	75	75	10	10	S303GH02V2AV3	S303GH02V8AV3	1
					40	40	8	9	S313GH02V2AV3	S313GH02V8AV3	1
1/4	3/64	1/16	0.05	0.10	220	220	10	10	S303GH02V3BV1	S303GH02V8BV1	1
					170	170	8	9	S313GH02V3BV1	S313GH02V8BV1	1
	1/16	1/16	0.10	0.10	200	160	10	10	S333GH02V8BC5	S333GH02V4BC5	2
					160	100	8	9	S333GH02V7BC5	S333GH02V3BC5	2
					150	150	10	10	S303GH02V3BC5	S303GH02V8BC5	1
					120	120	8	9	S313GH02V3BC5	S313GH02V8BC5	1
	3/32	3/32	0.20	0.20	200	160	10	10	S333GH02V8BC9	S333GH02V4BC9	2
					160	100	8	9	S333GH02V7BC9	S333GH02V3BC9	2
					100	100	10	10	S303GH02V3BC9	S303GH02V8BC9	1
					65	65	8	9	S313GH02V3BC9	S313GH02V8BC9	1
	1/8	1/8	0.30	0.30	84	60	10	10	S333GH02V8BD5	S333GH02V4BD5	2
					50	30	8	9	S333GH02V7BD5	S333GH02V3BD5	2
	1/8	3/32	0.30	0.20	75	75	10	10	S303GH02V3BV3	S303GH02V8BV3	1
					40	40	8	9	S313GH02V3BV3	S313GH02V8BV3	1
5/32	3/32	0.40	0.20	50	50	10	10	S303GH02V3BV7	S303GH02V8BV7	1	
				25	25	8	9	S313GH02V3BV7	S313GH02V8BV7	1	
11/64	11/64	0.40	0.40	45	24	10	10	S333GH02V8BD8	S333GH02V4BD8	2	
3/16	3/32	0.50	0.20	30	30	10	10	S303GH02V3BV9	S303GH02V8BV9	1	
1/4	3/32	0.83	0.20	15	15	15	15	S303GH02V3BW1	S303GH02V8BW1	1	

① See part number selection guide for additional voltages and variations.



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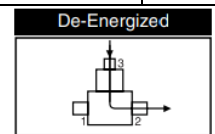
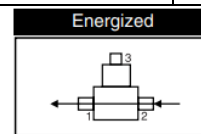
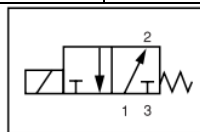


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Normally Open Valve Specifications (Open when de-energized)

Pipe Size (NPT)	Orifice Size (in)		Flow Factor (Cv)		Maximum Operating Pressure Differential (PSI)		Power Consumption (watts)		Part Number ^① (Shown with 120 VAC Lead Wire Coil and FKM Seals)		Drawing Ref.
	Main	Top	Main	Top	Air/Gas, Liquid & Light Oil		AC	DC	Stainless Steel	Brass	
					AC	DC					
1/8	3/64	3/64	0.05	0.05	150	150	8	9	S314GH02V2AC3	S314GH02V8AC3	1
	3/64	1/16	0.05	0.10	150	120	10	10	S304GH02V2AV1	S304GH02V8AV1	1
	1/16	1/16	0.10	0.10	200	160	10	10	S334GH02V8AD5	S334GH02V4AC5	2
					160	100	8	9	S334GH02V7AD5	S334GH02V3AC5	2
	3/32	1/16	0.20	0.10	125	120	10	10	S304GH02V2AC5	S304GH02V8AC5	1
					80	80	8	9	S314GH02V2AW7	S314GH02V8AW7	1
	3/32	3/32	0.20	0.20	150	114	10	10	S334GH02V8AC9	S334GH02V4AC9	2
					100	50	8	9	S334GH02V7AC9	S334GH02V3AC9	2
					75	25	10	10	S304GH02V2AC9	S304GH02V8AC9	1
					45	45	8	9	S314GH02V2AC9	S314GH02V8AC9	1
	1/8	1/8	0.30	0.30	84	60	10	10	S334GH02V8AD5	S334GH02V4AD5	2
					50	30	8	9	S334GH02V7AD5	S334GH02V3AD5	2
1/4	3/64	3/64	0.05	0.05	150	150	8	9	S314GH02V3BC3	S314GH02V8BC3	1
	3/64	1/16	0.05	0.10	150	120	10	10	S304GH02V3BV1	S304GH02V8BV1	1
	1/16	1/16	0.10	0.10	200	160	10	10	S334GH02V8BD5	S334GH02V4BC5	2
					160	100	8	9	S334GH02V7BD5	S334GH02V3BC5	2
	3/32	1/16	0.20	0.10	125	120	10	10	S304GH02V3BC5	S304GH02V8BC5	1
					80	80	8	9	S314GH02V3BW7	S314GH02V8BW7	1
	3/32	3/32	0.20	0.20	150	114	10	10	S334GH02V8BC9	S334GH02V4BC9	2
					100	50	8	9	S334GH02V7BC9	S334GH02V3BC9	2
					75	25	10	10	S304GH02V3BC9	S304GH02V8BC9	1
					45	45	8	9	S314GH02V3BC9	S314GH02V8BC9	1
	5/32	3/32	0.40	0.20	75	20	10	10	S304GH02V3BV7	S304GH02V8BV7	1
					30	15	8	9	S314GH02V3BV7	S314GH02V8BV7	1
1/8	1/8	0.30	0.30	84	60	10	10	S334GH02V8BD5	S334GH02V4BD5	2	
				50	30	8	9	S334GH02V7BD5	S334GH02V3BD5	2	
11/64	11/64	0.40	0.40	45	24	10	10	S334GH02V8BD8	S334GH02V4BD8	2	

① See part number selection guide for additional voltages and variations.



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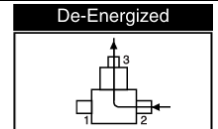
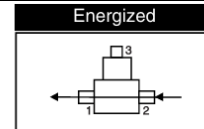
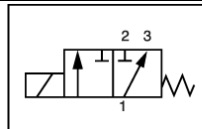


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Diverting Valve Specifications (Flow redirected when energized)

Pipe Size (NPT)	Orifice Size (in)		Flow Factor (Cv)		Maximum Operating Pressure Differential (PSI)		Power Consumption (watts)		Part Number ^① (Shown with 120 VAC Lead Wire Coil and FKM Seals)		Drawing Ref.
	Main	Top	Main	Top	Air/Gas, Liquid & Light Oil		AC	DC	Stainless Steel	Brass	
					AC	DC					
1/8	3/64	3/64	0.05	0.05	200	200	8	9	S315GH02V2AC3	S315GH02V8AC3	1
	3/64	1/16	0.05	0.10	220	220	10	10	S305GH02V2AV1	S305GH02V8AV1	1
					175	175	8	9	S315GH02V2AV1	S315GH02V8AV1	1
	1/16	1/16	0.10	0.10	180	180	10	10	S305GH02V2AC5	S305GH02V8AC5	1
					150	150	8	9	S315GH02V2AC5	S315GH02V8AC5	1
	3/32	3/64	0.20	0.05	140	140	8	9	S315GH02V2AW3	S315GH02V8AW3	1
	3/32	3/32	0.20	0.20	125	125	10	10	S305GH02V2AC9	S305GH02V8AC9	1
					130	130	8	9	S315GH02V2AC9	S315GH02V8AC9	1
					100	100	10	10	S305GH02V2AV3	S305GH02V8AV3	1
					90	90	8	9	S315GH02V2AV3	S315GH02V8AV3	1
1/4	3/64	3/64	0.05	0.05	200	200	8	9	S315GH02V2BC3	S315GH02V8BC3	1
	3/64	1/16	0.05	0.10	220	220	10	10	S305GH02V3BV1	S305GH02V8BV1	1
					175	175	8	9	S315GH02V3BV1	S315GH02V8BV1	1
	1/16	1/16	0.10	0.10	180	180	10	10	S305GH02V3BC5	S305GH02V8BC5	1
	3/32	3/32	0.20	0.20	125	125	10	10	S305GH02V3BC9	S305GH02V8BC9	1
					130	130	8	9	S315GH02V3BC9	S315GH02V8BC9	1
	1/8	3/32	0.30	0.20	100	100	10	10	S305GH02V3BV3	S305GH02V8BV3	1
					90	90	8	9	S315GH02V3BV3	S315GH02V8BV3	1
	5/32	3/32	0.40	0.20	75	75	10	10	S305GH02V3BV7	S305GH02V8BV7	1
					70	70	8	9	S315GH02V3BV7	S315GH02V8BV7	1
3/16	3/32	0.50	0.20	60	60	10	10	S305GH02V3BV9	S305GH02V8BV9	1	
1/4	3/32	0.83	0.20	20	20	20	20	S305GH02V3BW1	S305GH02V8BW1	1	

① See part number selection guide for additional voltages and variations.



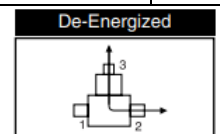
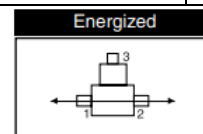
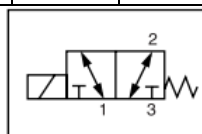


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Universal Valve Specifications (Pressure at any port)

Pipe Size (NPT)	Orifice Size (in)		Flow Factor (Cv)		Maximum Operating Pressure Differential (PSI)		Power Consumption (watts)		Part Number ^① (Shown with 120 VAC Lead Wire Coil and FKM Seals)		Drawing Ref.
	Main	Top	Main	Top	Air/Gas, Liquid & Light Oil		AC	DC	Stainless Steel	Brass	
					AC	DC					
1/8	3/64	3/64	0.05	0.05	150	150	8	9	S316GH02V2AC3	S316GH02V8AC3	1
	3/64	1/16	0.05	0.10	150	120	10	10	S306GH02V2AV1	S306GH02V8AV1	1
					80	80	8	9	S316GH02V2AV1	S316GH02V8AV1	1
	1/16	1/16	0.10	0.10	100	80	10	10	S336GH02V8AC5	S336GH02V4AC5	2
					90	80	8	9	S336GH02V7AC5	S336GH02V3AC5	2
					120	100	10	10	S306GH02V2AC5	S306GH02V8AC5	1
					80	40	8	9	S316GH02V2AC5	S316GH02V8AC5	1
	3/32	3/32	0.20	0.20	60	50	10	10	S336GH02V8AC9	S336GH02V4AC9	2
					55	40	8	9	S336GH02V7AC9	S336GH02V3AC9	2
					75	25	10	10	S306GH02V2AC9	S306GH02V8AC9	1
	3/32	3/64	0.20	0.05	60	60	8	9	S316GH02V2AW3	S316GH02V8AW3	1
	1/8	3/32	0.30	0.20	75	20	10	10	S306GH02V2AV3	S306GH02V8AV3	1
					45	5	8	9	S316GH02V2AV3	S316GH02V8AV3	1
	1/4	3/64	3/64	0.05	0.05	150	150	8	9	S316GH02V3BC3	S316GH02V8BC3
3/64		1/16	0.05	0.10	150	120	10	10	S306GH02V3BV1	S306GH02V8BV1	1
					80	80	8	9	S316GH02V3BV1	S316GH02V8BV1	1
1/16		1/16	0.10	0.10	120	100	10	10	S306GH02V3BC5	S306GH02V8BC5	1
					80	40	8	9	S316GH02V3BC5	S316GH02V8BC5	1
3/32		3/32	0.20	0.20	75	25	10	10	S306GH02V3BC9	S306GH02V8BC9	1
3/32		3/64	0.20	0.05	60	60	8	9	S316GH02V3BW3	S316GH02V8BW3	1
1/8		1/8	0.30	0.30	34	30	10	10	S336GH02V8BD5	S336GH02V4BD5	2
					25	20	8	9	S336GH02V7BD5	S336GH02V3BD5	2
1/8		3/32	0.30	0.20	75	20	10	10	S306GH02V3BV3	S306GH02V8BV3	1
					45	5	8	9	S316GH02V3BV3	S316GH02V8BV3	1
5/32		3/32	0.40	0.20	60	20	10	10	S306GH02V3BV7	S306GH02V8BV7	1
11/64	11/64	0.40	0.40	22	11	10	10	S336GH02V8BD8	S336GH02V4BD8	2	
3/16	3/32	0.50	0.20	30	20	10	10	S306GH02V3BV9	S306GH02V8BV9	1	

① See part number selection guide for additional voltages and variations.



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S30 & S31 3-Way 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
S30	3	G	H	02	V	2A	C3

① **Valve Series**

S30	Direct Acting (10W AC or DC coil)
S31	Direct Acting (8W DC or 9W AC coil)

② **Operating Mode**

3	3-Way Normally Closed (NC)
4	3-Way Normally Open (NO)
5	3-Way Diverting
6	3-Way Universal

③ **Coil Type**

G	1/2" NPT Conduit with 24" Lead Wires
Y	DIN (Form A)

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**

C	EPDM
N	Nitrile
V	FKM

⑦ **Body Material/Pipe Size**

8A	Brass, 1/8" NPT
8B	Brass, 1/4" NPT
2A	303 Stainless Steel, 1/8" NPT
3B	303 Stainless Steel, 1/4" NPT

⑧ **Orifice Size (Main X Top)**

C3	3/64" X 3/64"
V1	3/64" X 1/16"
C5	1/16" X 1/16"
W3	3/32" X 3/64"
C9	3/32" X 3/32"
W7	3/32" X 1/16"
V3	1/8" X 3/32"
V7	5/32" X 3/32"
V9	3/16" X 3/32"

⑨ **Optional Suffix**

(blank)	No Option
C	CE Declaration
E	CSA Certification
N	Cleaned for Oxygen Service
P	Nickel Plated Plunger & Tube



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S33 3-Way 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
S33	3	G	H	02	V	8A	C5

① Valve Series

S33	Direct Acting
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② Operating Mode

3	3-Way Normally Closed (NC)
4	3-Way Normally Open (NO)
5	3-Way Diverting
6	3-Way Universal

③ Coil Type

G	1/2" NPT Conduit with 24" Lead Wires
Y	DIN (Form A)

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

C	EPDM
N	Nitrile
V	FKM

⑦ Body Material/Pipe Size

3A	*Brass, 1/8" NPT
4A	**Brass, 1/8" NPT
7A	*303 Stainless Steel, 1/8" NPT
8A	**303 Stainless Steel, 1/8" NPT
3B	*Brass, 1/4" NPT
4B	**Brass, 1/4" NPT
7B	*303 Stainless Steel, 1/4" NPT
8B	**303 Stainless Steel, 1/4" NPT

⑧ Orifice Size (Main X Top)

C5	1/16" X 1/16"
C9	3/32" X 3/32"
D5	1/8" X 1/8"
D8	***11/64" X 11/64"

⑨ Optional Suffix

(blank)	No Option
C	CE Declaration
D	Mounting Bracket
E	CSA Certification
M	Manual Override (NC Valves Only)
N	Cleaned for Oxygen Service
P	Nickel Plated Plunger & Tube

*Uses 8W DC or 9W AC coil

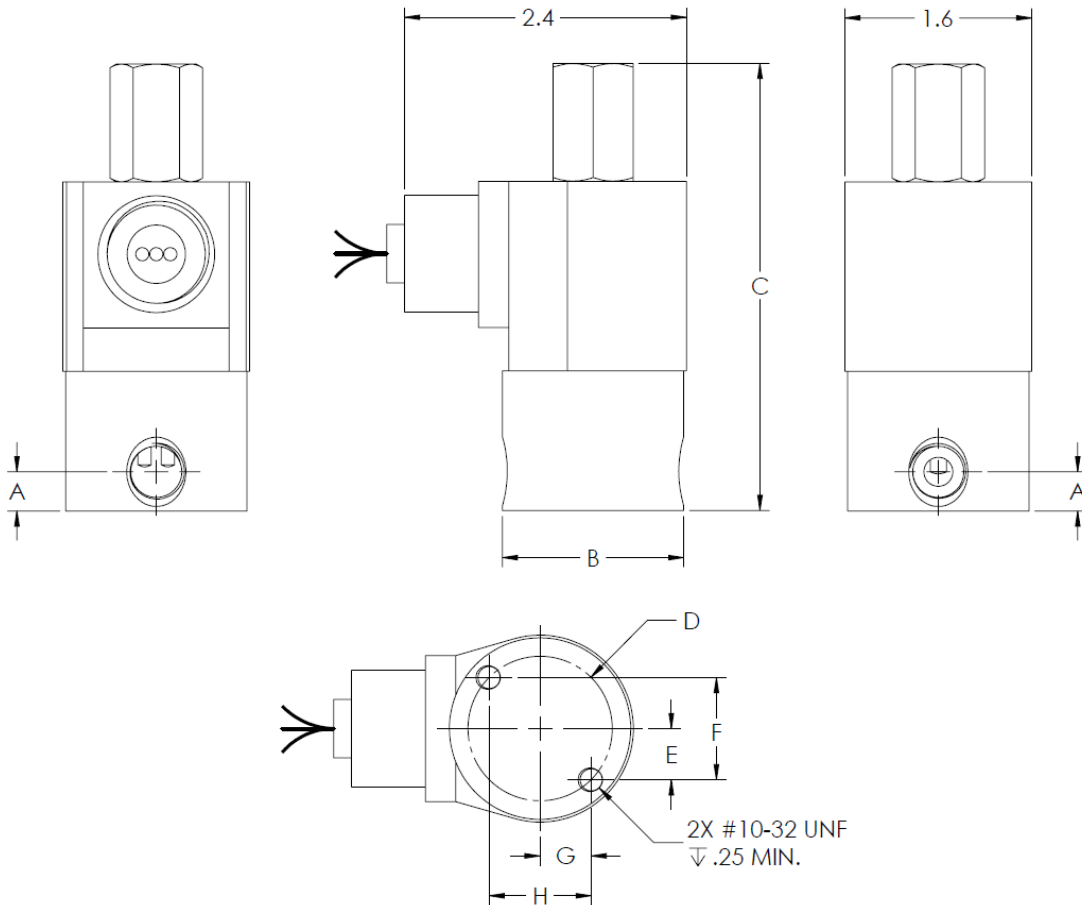
**Uses 10W AC or DC coil

***4 and 8 bodies only



Normally Closed, Normally Open, Diverting & Universal • 1/8" & 1/4" NPT
3-Way S30, S31 & S33 Series Solenoid Valves
 Direct Acting • Stainless Steel & Brass

Drawing 1
S30 & S31 Series



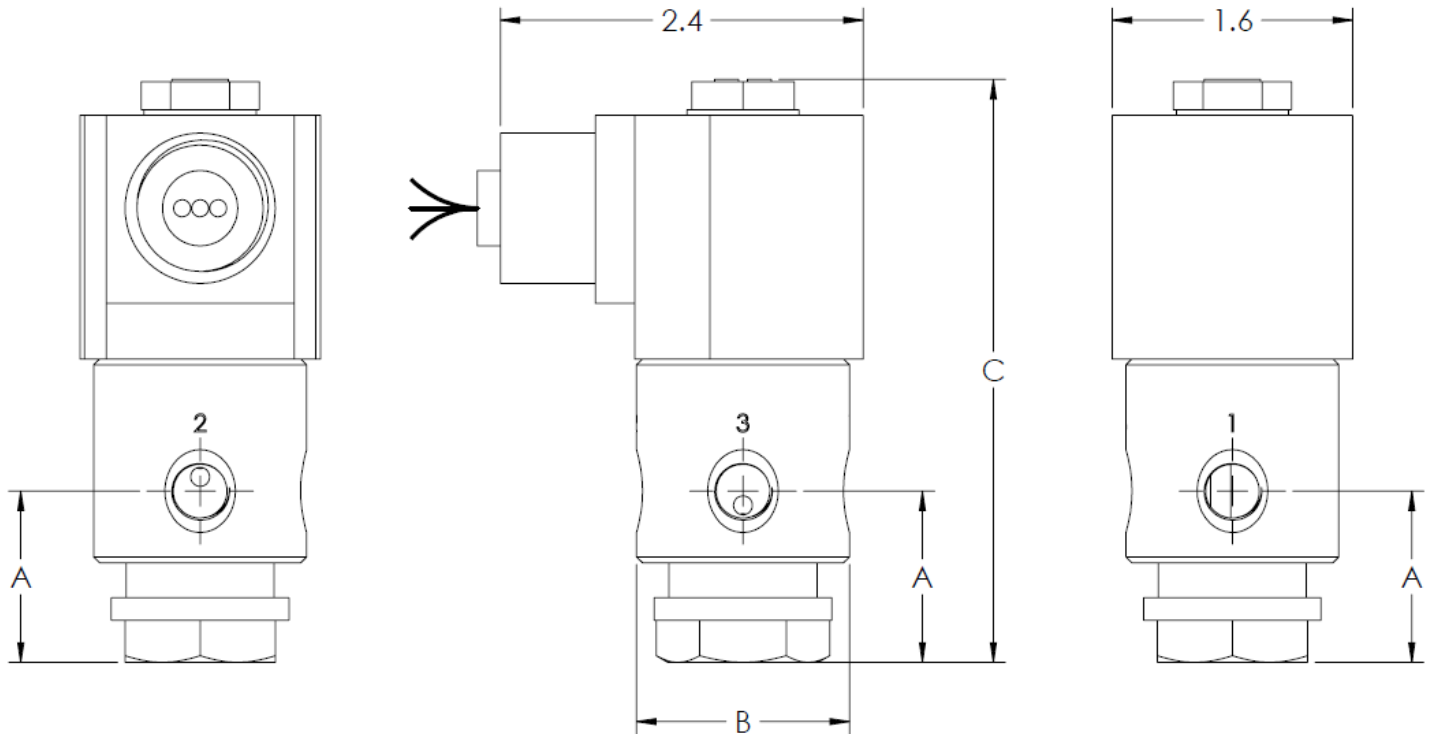
Pipe Size	Series	A	B	C	D	E	F	G	H	Weight
1/8" NPT	S30 3-Way	0.27	∅1.18	3.83	∅0.91	0.34	0.69	0.30	0.59	1.2 lb
	S31 3-Way	0.27	∅1.18	3.50	∅0.91	0.34	0.69	0.30	0.59	1.2 lb
1/4" NPT	S30 3-Way	0.34	∅1.55	3.83	∅1.23	0.44	0.88	0.44	0.88	1.2 lb
	S31 3-Way	0.34	∅1.55	3.50	∅1.23	0.44	0.88	0.44	0.88	1.2 lb

- S30 & S31 3-way series valves can be mounted in any position.
- Dimensions shown in inches.
- Drawing not to scale.



Normally Closed, Normally Open, Diverting & Universal • 1/8" & 1/4" NPT
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Drawing 2
S33 3-Way Series



Pipe Size	Series	Body Code	A	B	C	Weight
1/8" NPT	S33 3-Way	3 & 7	1.14	∅1.42	3.62	1.1 lb
		4 & 8	1.14	∅1.42	3.89	1.1 lb
1/4" NPT	S33 3-Way	3 & 7	1.14	∅1.42	3.62	1.1 lb
		4 & 8	1.14	∅1.42	3.89	1.1 lb

- S33 3-way series valves can be mounted in any position.
- Dimensions shown in inches.
- Drawing not to scale.