

DM2500 Series

Flanged Ball Valves

SPECIFICATIONS

Available in stainless steel or carbon steel

- Body and ends are investment cast
- Self-adjusting stem packing
- Blow-out proof stem design
- 100% air tested under water at 100 psi
- Working pressure ANSI 150
- Temperature range: -250°F to +700°F
- ISO 5211 mounting pad
- End cap type: flanged end (ANSI 150)
- Flange dimension: face-to-face ANSI B16.10; flange connection ANSI B16.50
- Silicone free
- Oxygen cleaned option



Size	Breakaway Torque (in-lb)	Cv	Weight
1/2"	50	32	9
3/4"	75	54	10
1"	100	105	12
1-1/2"	185	275	18
2"	300	460	25
2-1/2"	450	780	36
3"	750	1330	50
4"	1100	2420	69
6"	3500	5400	189

ORDERING SCHEMATIC

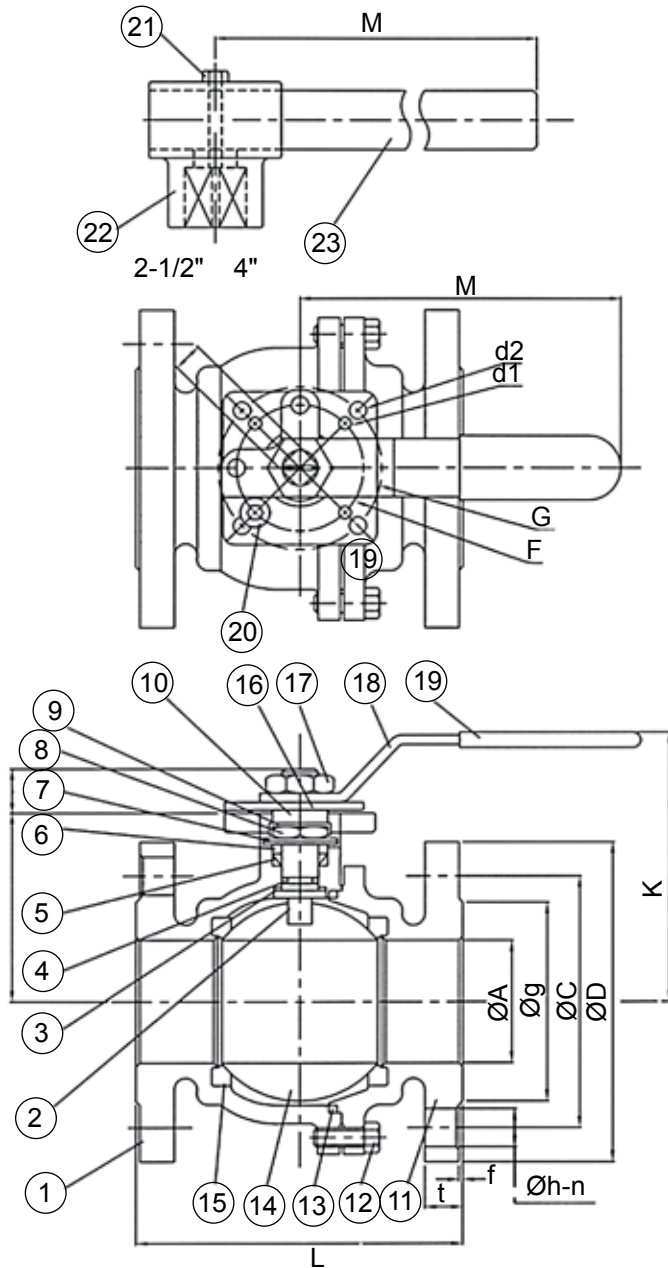
Option		Series	Body		Port		Packing		Seat		Ends	
EB	Ext. Bonnet	DM25	23	Carbon Steel	F	Full	C	Carbon/Teflon	U	UHMWPE	F1	Flanged 150
			33	Stainless Steel	R	Reduced	G	Graphite	P	PEEK	F3	Flanged 300
			44	Alloy 20			T	Teflon	TM	Super Teflon		
			77	Hastelloy					TC	Carbon Super Teflon		
			99	Duplex					M	Metal Seated		



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J Flow Controls, LLC
14 De Camp • Cincinnati, OH 45216
Phone: 513-731-2900 • Fax 513-731-6939
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DIMENSIONS (1/2" 4")



MATERIALS OF CONSTRUCTION

No.	Name of Part	Material Options	
		Stainless Steel	Carbon Steel
1	Body	CF8M/DIN 1.4408	WCB/DIN 1.0619
2	Stem	SS316	
3	Thrust Washer	Teflon	
4	O-Ring	Viton	
5	Stem Packing	Graphite	
6	Gland	SS304	
7	Disc Washer	SS01	
8	Stem Nut	SS304	
9	Nut Lock	SS04	
10	Washer	SS304	
11	Flange Cap	ASTM A351 Gr. CF8M	ASTM A216 Gr. WCB
12	Bolts	SS304	Carbon Steel
13	Gasket	Graphite	
14	Ball	SS316	
15	Ball Seats	Teflon	
16	Stopper	SS304	
17	Handle Nut	SS304	
18	Handle	SS304	
19	Handle Cover	Vinyl Plastisol	
20	Position Pin	SS304	
21	Set Bolt	SS304	
22	Lever Head	CF8	
23	Lever	Steel Pipe	

Size	A	B	E	L	H	K	M	F	G	d1	d2	D	Flange Dimensions (Class 150)					
													Bolt Hole			t	g	f
													c	h	n			
1/2"	0.59	1.89	0.43	4.25	0.35	3.15	5.12	1.42	1.65	0.24	0.24	3.50	2.38	0.63	0.16	0.45	1.38	0.06
3/4"	0.79	2.09	0.43	4.61	0.35	3.15	5.12	1.42	1.65	0.24	0.24	3.86	2.76	0.63	0.16	0.45	1.69	0.06
1"	0.98	2.32	0.55	5.00	0.43	3.54	6.50	1.65	1.97	0.24	0.28	4.25	3.13	0.63	0.16	0.45	2.01	0.06
1-1/4"	1.26	2.80	0.55	5.51	0.43	4.02	6.50	1.65	1.97	0.24	0.28	4.61	3.50	0.63	0.16	0.50	2.52	0.06
1-1/2"	1.42	2.99	0.71	6.50	0.55	4.33	8.07	1.97	2.76	0.28	0.36	5.00	3.88	0.63	0.16	0.56	2.87	0.06
2"	1.97	3.35	0.71	7.00	0.55	4.72	8.07	1.97	2.76	0.28	0.36	5.98	4.74	0.75	0.16	0.63	3.62	0.06
2-1/2"	2.56	3.68	0.91	7.48	0.67	5.51	11.8	2.76	4.02	0.36	0.45	7.01	5.50	0.75	0.16	0.70	4.13	0.06
3"	3.15	4.06	0.91	7.99	0.67	5.91	13.4	2.76	4.02	0.36	0.45	7.48	6.00	0.75	0.16	0.75	5.00	0.06
4"	3.94	5.20	0.98	9.02	0.87	7.09	16.5	4.02	4.92	0.45	0.53	9.02	7.50	0.75	0.31	0.94	5.00	0.06

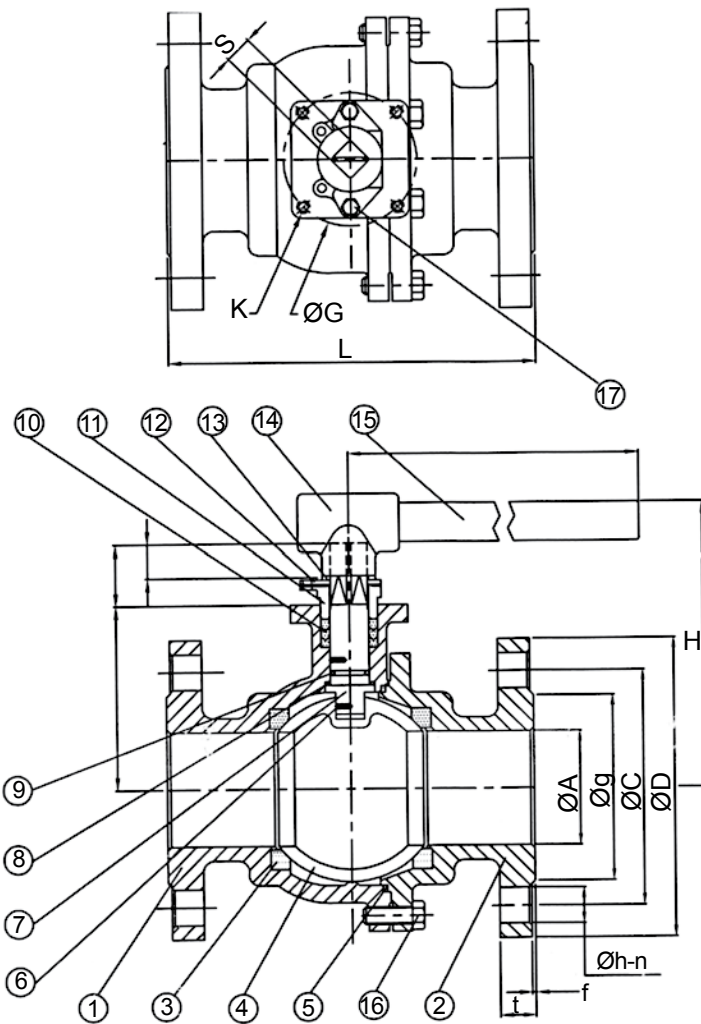
DIMENSIONS (5" 6")

MATERIALS OF CONSTRUCTION

No.	Name of Part	Standard	Options
1	Body	ASTM Gr. CF8M	A351 Gr.CF8/ A216 Gr. WCB
2	End Cap	ASTM Gr. CF8M	A351 Gr.CF8/ A216 Gr. WCB
3	Ball Seats	PTFE	PTFE/
4	Ball	SS316 or CF8M	SS304 or CF8/
5	Gasket	PTFE	/
6	Anti-Static Pin	SS316	/
7	Stem	SS316	SS304/
8	Thrust Washer	PTFE	/
9	O-Ring	Viton	/
10	Stem Packing	PTFE	/
11	Gland	CF8	/
12	Stopper	SS304	/
13	Stop Plate	SS304	/
14	Handle Head	FCD45	/
15	Handle Tube	Carbon Steel	/
16	Hex Bolts	SS04	/ Carbon Steel
17	Gland Bolt	SS304	/

OPTIONS

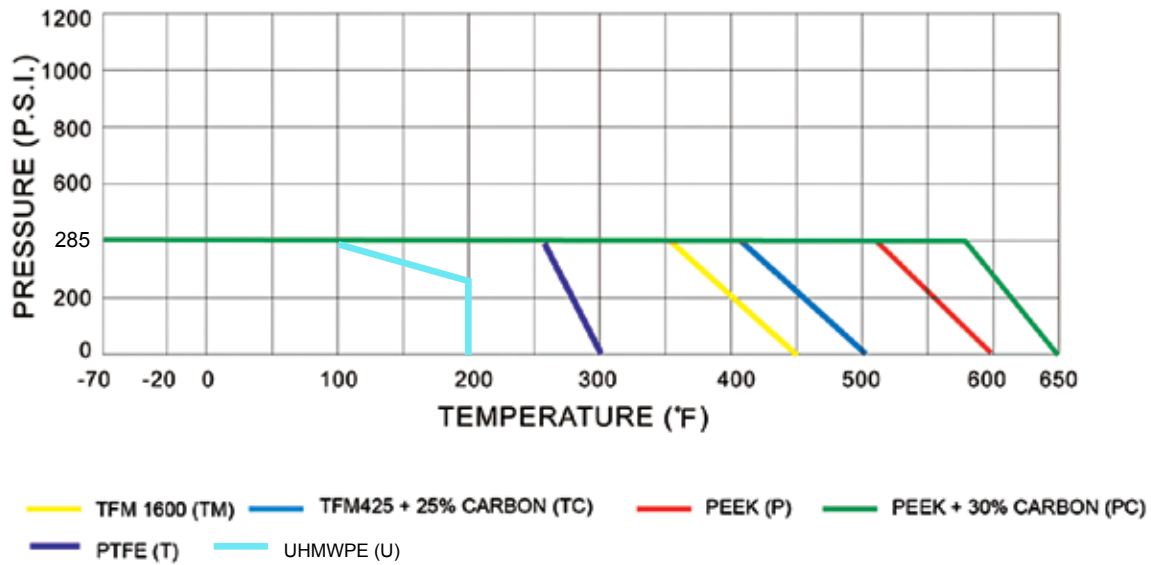
- Gear Operator
 - 5" - 6" (Solid ball)
 - 5" - 6" (Hollow ball)
- ANSI Class 150# Flanged End
- Working pressure - 285 psi
- Shell test: 450 psi
- Seat Test - 80 psi
- Temperature range: -250°F to +700°F



Size	A	B	E	F	G	H	M	L	K	S	ANSI 150 (Flange)						
											D	C	n	h	g	t	f
5"	125	150	58	34	125	265	700	356	M12	28	254	190.5	8	22	186	23.9	1.6
6"	150	170	58	34	125	265	850	394	M12	28	279	241.5	8	22	216	25.4	1.6

TEMPERATURE CHART

CHART 1 (ANSI 150/ 285 PSI)



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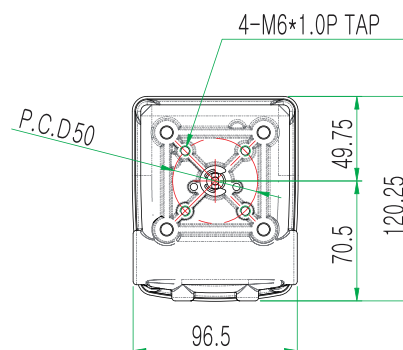
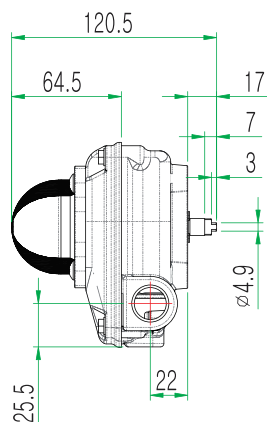
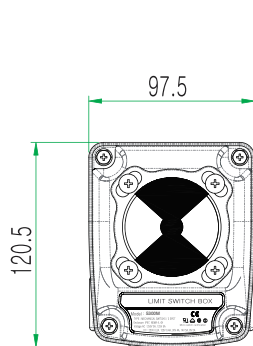
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Product Number: 5300 (specify your requirement)

Model	Switching Type	Connection Type	Bracket Type	Ambient Temp
5300	M Mechanical Type	1 NPT1/2	1 ST-1 (30*80,H20)	1 -20°C ~ 80°C
	P Proximity Type	3 PF1/2	2 ST-2 (30*80,H30)	2 -20°C ~ 120°C
		4 M20	3 ST-3 (30*130,H30)	
			4 ST-4 (30*130,H50)	



Item · Type	5300M	5300P
Switch Type	Mechanical Switch x 2	Proximity Sensor x 2
Switch Rating	AC:250V 3A, 125V 5A DC:250V 0.2A,125V 0.4A,30V 4A	12~24V DC (Operating voltage:10~30V DC)
Enclosure Protection	IP67	
Ambient Temp.	-20°C~80°C	
Conduit Entry	NPT1/2(PT1/2;PF1/2,M20,PG13.5)	
Terminal	8 Points	
Mouting Bracket	NAMUR VDI / VDE 3845, ISO 5211	
Material	Aluminum Diecasting	
Weight	880g (1.94lb)	

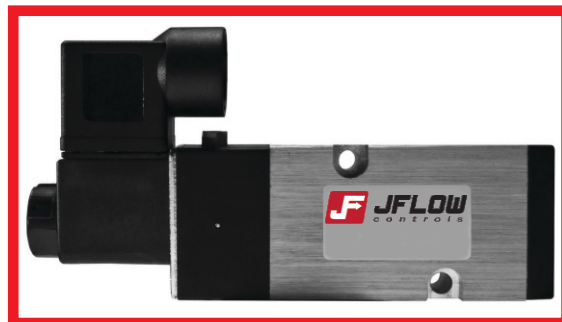


- Visual position indicator
- 6 contacts of terminal ports
- Compatibility with any rotary motion actuator <ISO5211>

- Easy adjustment of cam position
- Dual 1/2" conduit entries

SV61 Features

- Extruded aluminum body with NBR seal
- 120/60/1 coil with IP67 rating
- Manual override
- 1/4" NPT Exhaust port
- 1/2" NPT conduit connection
- Operating Temp: -40°F to 140°F
- Operating Pressure: 20 to 120 PSI



SV71 Features

- Extruded aluminum body with NBR seal
- Nass Magnetics I.S. Coil
- Manual override
- 1/4" NPT Exhaust port
- 1/2" NPT conduit connection
- Operating Temp: -4°F to 158°F
- Operating Pressure: 20 to 120 PSI



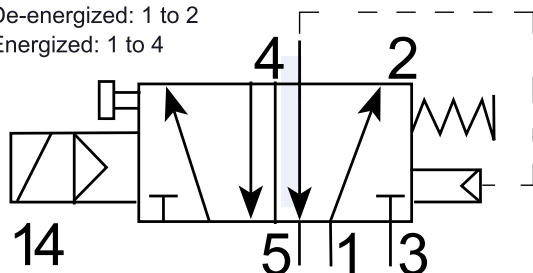
SV91 Features

- Extruded aluminum body with NBR seal
- Nass Magnetics Nema 7/9 Coil
- Manual override
- 1/4" NPT Exhaust port
- 1/2" NPT conduit connection
- Operating Temp: -4°F to 158°F
- Operating Pressure: 20 to 120 PSI



Pilot

De-energized: 1 to 2
Energized: 1 to 4

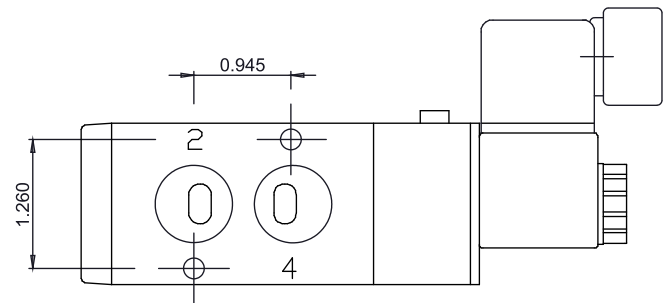
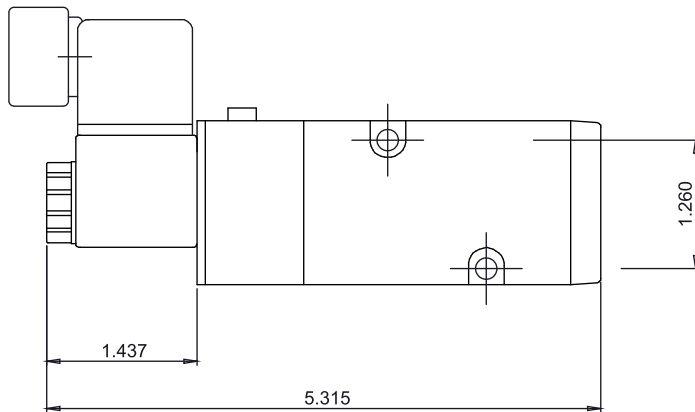
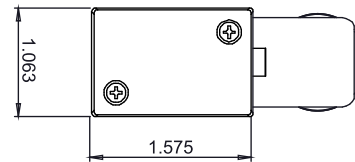
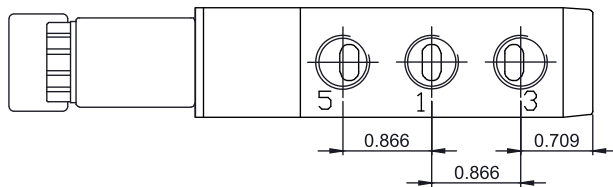


Ordering Schematic

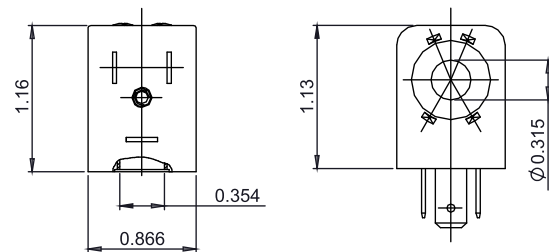
Series
NEMA 4/4X - SV61
I.S. - SV71
NEMA 7/9 - SV91

Voltage
24 VDC (only option for SV71)
120 VAC
240 VAC/120 VDC
24 VAC/12 VDC

SV61 Information



Coil

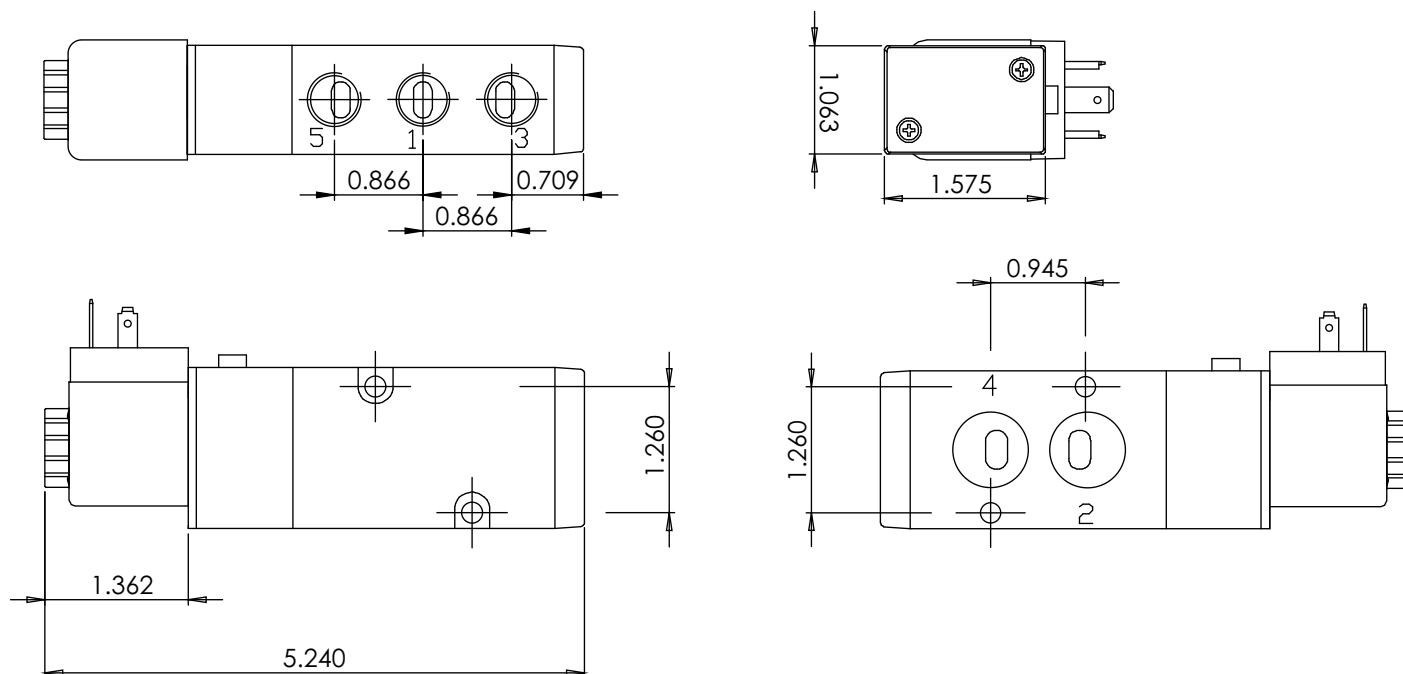


Technical Data

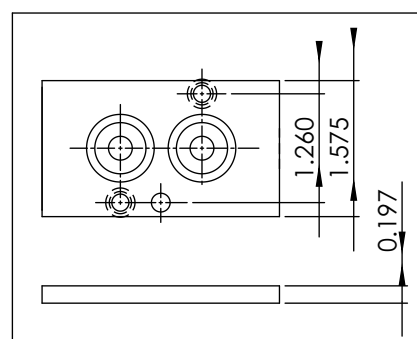
Standard voltages = 24 - 110 - 220V 50/60 Hz,
12 - 24V DC
Power input = 60 Hz inrush 9.4VA holding 6.9VA
Power input = DC 4.8W
Voltage tolerance = $\pm 10\%$
Coil insulation = class "F" (for nylon coil)
Duty cycle = 100%
Protection class = IP65

Air supply connection = 1/4" NPT
Operating pressure = min. 2 Bar (30 PSI) –
max. 8 Bar (120 PSI)
Din connector = 1/2" NPT
Flow factor = Cv 1.1
Max operating frequency = 600/1'
Room temperature limit = -4°F~158°F
Weight = 0.80 lb

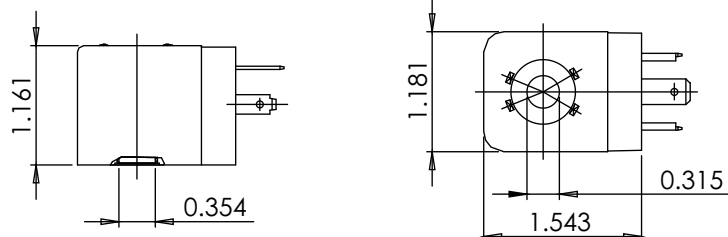
SV71 Information



Spacer Plate



Coil



Technical Data

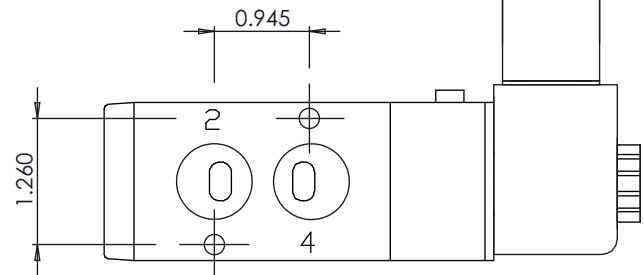
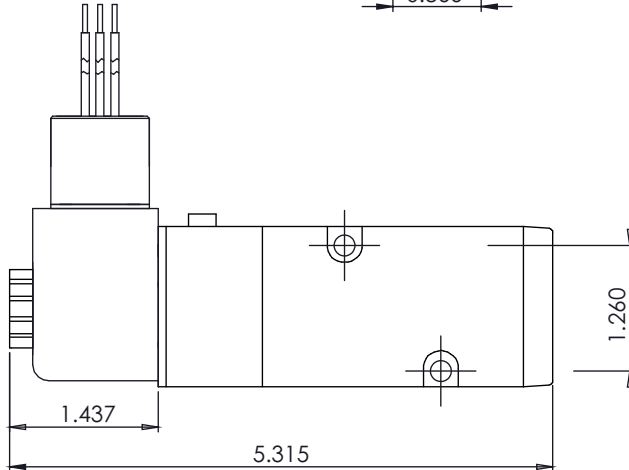
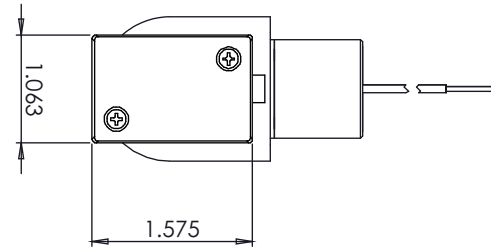
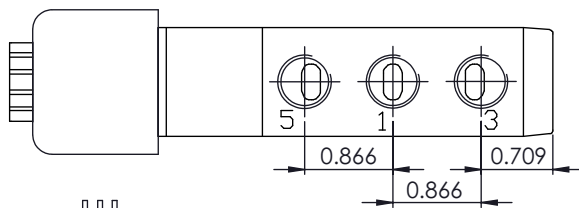
Standard voltage = 24V DC
Power input = DC 1.6W
Voltage tolerance = $\pm 10\%$
Coil insulation = class "F"
Duty cycle = 100%
Protection class = IP65
Intrinsically Safe Coil

Hazardous Location Class
Class I: Groups A, B, C and D
Class II: Groups E, F and G
Class III: Div. I

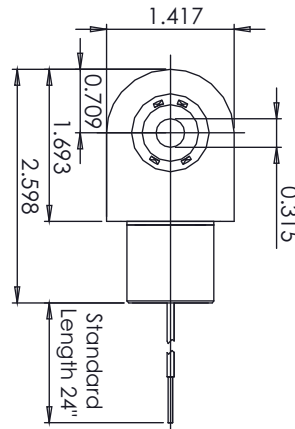
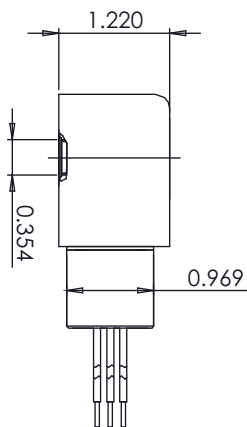
Air supply connection = 1/4" NPT
Operating pressure = min. 2 Bar (30 PSI) -
max. 8 Bar (115 PSI)
Din connector = Strain Relief
Flow factor = Cv 1.1
Max operating frequency = 600/1'
Room temperature limit = -4°F~122°F
Weight = 0.80 lb

V Max. = 28V DC
I Max. = 115 mA
Max. Valve Pressure = 115 PSI

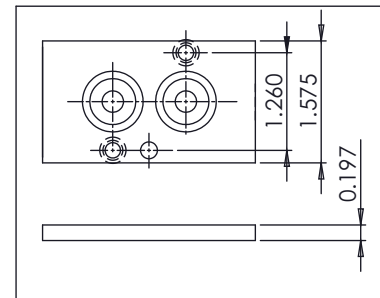
SV91 Information



Coil



Spacer Plate



Technical Data

Standard voltages = 24 - 110 - 220V 50/60 Hz,
12 - 24V DC

Power input = 60 Hz inrush 7.5VA holding 5VA

Power input = DC 6W

Voltage tolerance = $\pm 10\%$

Coil insulation = Class "H"

Duty cycle = 100%

Protection class = IP65

Air supply connection = 1/4" NPT

Operating pressure = Min. 2 Bar (30 PSI) –
Max. 8 Bar (120 PSI)

Conduit connection = 1/2" NPT

Flow factor = Cv 1.1

Max operating frequency = 600/1'

Room temperature limit = -4°F~140°F

Weight = 0.95 lb



Model	Switching Type	Connection Type *	Bracket Type	Option
5400 Aluminum	M Mechanical Type (2 x SPDT)	1 NPT3/4	1 ST-1 (30*80,H20)	0 NONE
5450 Stainless	P Proximity Type	2 PF3/4	2 ST-2 (30*80,H30)	1 +SPTM
	D Mechanical Type (2 x DPDT)	3 M20	3 ST-3 (30*130,H30)	
		4 NPT1/2	4 ST-4 (30*130,H50)	

* 5450 NPT3/4 ONLY

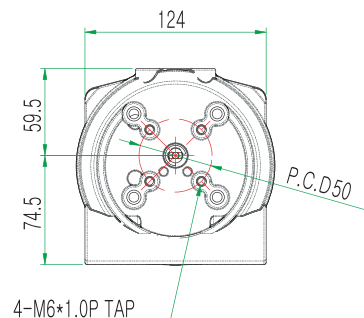
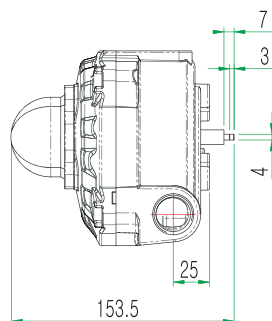
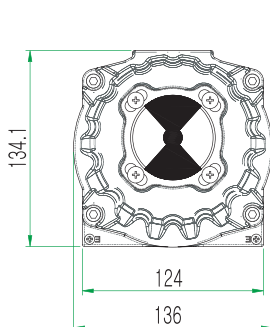


5400



5450

Item · Type	5400M 5450M	5400P 5450P	5400D 5450D
Switch Type	Mechanical Switch x 2	Proximity Sensor x 2	Mechanical Switch x 2
Switch Rating	AC:250V 3A, 125V 5A DC:250V 0.2A, 125V 0.4A, 30V 4A	12~24V DC (Autonics) (Operating Voltage:10~30V DC) P&F Type : 8V DC (Option)	AC: 125 or 250V 10A 480V 2A
Enclosure Protection	IP67		
Explosion Proof	Ex d IIC T6 NEMA 7/9		
Ambient Temp.	-20℃~60℃		
Conduit Entry	NPT3/4 (PF3/4, M20)		
Terminal	8 Points		
Mouting Bracket	NAMUR VDI / VDE 3845, ISO 5211		
Material	5400	Aluminum Diecasting	
	5450	Stainless Steel 316	
Weight	5400	1.5kg (3.3lb)	
	5450	3.5kg (7.7lb)	



- Visual position indicator
- 8 contacts of terminal ports.
- Compatibility with any rotary motion actuator <ISO5211>

- Easy adjustment of cam position
- Dual 1/2" conduit entries.