

SV

Solenoid Valve&Valve Terminal



Integrated valve terminal



Standard valve terminal



Valve slice(top ported)



Valve slice(side/bottom ported)

Product Features

- Integrated valve terminal , integrated wiring ;Adopt 25 pins D-sub connector .
- Centralized air inlet and exhaust, available for top ported ,side ported and bottom ported , compact structure.
- Patent design: the pilots of double control valve are on same side; Wiring and piping are on same side.
- 5/2 ways,5/3 ways,5/4 ways(2pcs 3/2 ways) can be integrated on same valve terminal.
- 0.8W per coil.

How to Order?

SV Integrated valve terminal

Series No.	Body Size	Piping Type	Valve quantity for different port	Voltage	Pilot Type	Manual Button	Wiring Type	Manifold Port	Mounting	Thread Type
S: Standard SN:Energy-saving	V: Top ported VM: Side ported VB: Bottom ported	□ □ □ □	Qty (Max.24 links for single control Max.12 links for double control)	E4: DC24V	Blank: Internal pilot WB: External pilot ①	Blank: Press & Rotate Lock H: Without Lock	Blank: Double control wiring (max.12 links) S: Single control wiring (max.24 links) (Note:Mix wiring is available to customize)	Blank: Without accessories D: With DIN rail clip and 1M guide rail DO: With DIN rail clip, no guide rail DIN guide rail packed separately)		Blank: G

Code	Function	Remark
S	5/2 single	assembly sequence, 1st link start from U side
D	5/2 double	
C	5/3 center closed	
P	5/3 center pressure	
E	5/3 center exhaust	
Y ①	2pcs 3/2 (N.C.)	
H ①	2pcs 3/2 (N.O.)	
U ①	2pcs 3/2 (N.O./N.C.)	
YK ①	2pcs 3/2 (N.C.) spring return	
HK ①	2pcs 3/2 (N.O.) spring return	
UK ①	2pcs 3/2 (N.O./N.C.) spring return	
B	blind plate	
TA	port 1 air supply pressure separate	
TG	port 3/5 air exhaust pressure separate	
TL	port 1/3/5 air supply & exhaust pressure separate	
N	air supply & exhaust module	

No.	Code	Port size	Remark
1 Series	M5	M5: M5 port	assembly sequence, 1st link start from U side
	C4	φ 4 one-touch fitting(ZPOC04-M7C)	
	M7	M7: M7 port	
2 Series	C6	φ 6 one-touch fitting(ZPOC06-M7C)	
	O6	1/8 port	
	C4	φ 4 one-touch fitting(ZPOC04-O1G)	
	C6	φ 6 one-touch fitting(ZPOC06-O1G)	
C8	φ 8 one-touch fitting(ZPOC08-O1G)		

Code	Port entry	1Series	2Series	Remark
Blank	Both side without silencer, fitting, plug	-	-	1) plugs are mounted on the opposite of the selected ports; 2) only U,U1 is available for bottom ported 3) No need this code if order manifold only
U	U side with silencer, PC fitting			
N	Station N with silencer, PC fitting			
UN	Both side with silencer, PC fitting			
UL	U side with silencer, PL fitting			
NL	Station N with silencer, PL fitting			
UNL	Both side with silencer, PL fitting			
U1	U side with silencer, POC fitting			
N1	Station N with silencer, POC fitting			
UN1	Both side with silencer, POC fitting			

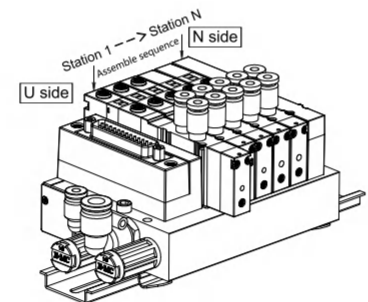
Note: ①Y/H/U is not available for external pilot due to the air return.
YK/HK/UK is available for external pilot due to the spring return.

Order Example:

1. Same valve: S series standard valve, 1 series body, top ported, 6 links 5/2 double controled SV5212, port size M5, DC24V, G thread, internal pilot, double control wiring, both side without silencer, fitting, pug, the ERP code is S1V-6D-M5E4

2. Mix different valve: S series standard valve, 1 series body, top ported, see right picture : station 1 is 5/3 center closed SV5312C, station 2 is 5/2 double control SV5212, station 3 is 2pcs 3/2 (N.O.)spring return SV5412HK ,station 4 & station 5 are 5/2 single SV5211, station 6 is blind plate,station 1 & 2 with φ 6 one-touch fitting ZPOC06-M7C, station 3-5 with with φ 4 one-touch fitting ZPOC04-M7C, DC24V,G thread, external pilot, double control wiring, U-sub side with silencer, φ 8 PL fitting, with DIN rail clip and 1M guide rail, the ERP code is S1V-CDHK2SB-2C63C4AE4-WB-UL-D

3. Mix different valve with pressure separate: S series standard valve, 1 series body, top ported, see right picture : station 1 is 5/3 center closed SV5312C, port 1 air supply pressure separate between station 1 and station 2,station 2 is 5/2 double control SV5212, station 3 is air supply & exhaust module ,station 4 is 2pcs 3/2 (N.O.) SV5412H port 1 air supply pressure separate between station 4 and station 5,station 5 is 5/2 single SV5211, station 6 is blind plate,working port is M7 , DC24V, internal pilot, double control wiring,both sides without silencer, fittings ,plugs, G thread, the ERP code is S1V-CTADNHTASB-M7E4



SV Series Solenoid Valve & Valve Terminal



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SV

Valve slice

Series No.	Piping Type	Ports	Positions	Body Size	Controls	Original Status	Port Size	Voltage	Pilot Type	Manual Button	Wiring	Thread Type
S: Standard SN: Energy-saving	V: Piping on valve VM: Piping on manifold (VM series should work with manifold)	5: 5 ports	1: 1 series 2: 2 series	1: 1 series 2: 2 series	1: Single control 2: Double control	(Note: Available for V type only)	M5: M5 M7: M7 06: 1/8"	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock	Blank: None	Blank: G P: PT T: NPT	
			2: 2 position 3: 3 position 4: Dual 3/2 valves		C: 3 position 5 port (center close) P: 3 position 5 port (center pressure) E: 3 position 5 port (center exhaust) ① Y: Dual 3/2 valves (N.C.) ① H: Dual 3/2 valves (N.O.) ① U: Dual 3/2 valves (N.C./N.O.) ① YK: Dual 3/2 valves (N.C.) spring return ① HK: Dual 3/2 valves (N.O.) spring return ① UK: Dual 3/2 valves (N.C./N.O.) spring return			Blank: Internal pilot WB: External pilot ②	Blank: 0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring (Note: Available for V type only)			

Note: ① Y/H/U is not available for external pilot due to the air return. YK/HK/UK is available for external pilot due to the spring return (not available for standard valve group either separate use).

② All external pilot operated single valve are intended for use in multi-pin intergrated valve or valve terminal only, and cannot be used in ordinary manifold valve or alone.

Order Example:

S series standard type, piping on valve, 2 station 5 port, 1 series valve body, single control, M5 port, DC24V, internal pilot, 0.3 meter wiring. the ERP code is :SV5211-M5E4-0.3M.

SV standard valve terminal

Series No.	5/2 way	Body Size	Qty	Valve quantity for different port	Voltage	Manual Button	Manifold Port	Wiring	Thread Type
SV: Standard SN: Energy-saving	52	1: 1 series 2: 2 series	Qty	Valve quantity for different port	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock		Blank: Without wiring 0.3M: 0.3M wiring 0.6M: 0.6M wiring 1M: 1M wiring	Blank: G

Code	Function	Remark
S	5/2 single	assembly sequence, 1st link start from U side
D	5/2 double	
C	5/3 center closed	
P	5/3 center pressure	
E	5/3 center exhaust	
Y	2pcs 3/2 (N.C.)	
H	2pcs 3/2 (N.O.)	
U	2pcs 3/2 (N.O./N.C.)	
YK	2pcs 3/2 (N.C.) spring return	
HK	2pcs 3/2 (N.O.) spring return	
UK	2pcs 3/2 (N.O./N.C.) spring return	
B	blind plate	

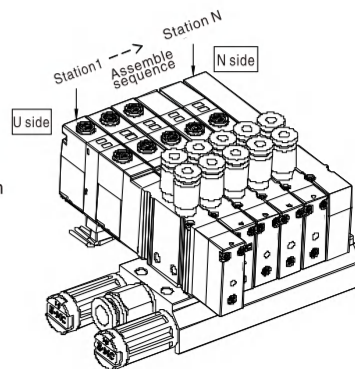
No.	Code	Port size	Remark
1Series	M5	M5: M5 port	assembly sequence, 1st link start from U side
	C4	φ4 one-touch fitting(ZPOC04-M5C)	
	M7	M7: M7 port	
C6	φ6 one-touch fitting(ZPOC06-M7C)		
2Series	06	1/8 port	
	C4	φ4 one-touch fitting(ZPOC04-01G)	
	C6	φ6 one-touch fitting(ZPOC06-01G)	
	C8	φ8 one-touch fitting(ZPOC08-01G)	

Code	Port entry	1Series	2Series	Remark
Blank	Both side without silencer, fitting, plug	-	-	1) plugs are mounted on the opposite of the selected ports;
U	U side with silencer, φ8 PC fitting			
N	Station N with silencer, φ8 PC fitting			
UN	Both side with silencer, φ8 PC fitting			
UL	U side with silencer, φ8 PL fitting	φ8	φ10	2) only U,U1,UL is available for bottom ported
NL	Station N with silencer, φ8 PL fitting			
UNL	Both side with silencer, φ8 PL fitting			
U1	U side with silencer, φ10 POC fitting			
N1	Station N with silencer, φ10 POC fitting	φ10	φ12	
UN1	Both side with silencer, φ10 POC fitting			

Order Example:

1. Same valve: SV series valve block, 1 series body, 6 links 5/2 double controlled SV5212, port size M5, DC24V, G thread, both side without silencer, fitting, plug, the ERP code is SV521-6D-M5E4

2. Mix different valve: SV series valve block, 1 series body, see right picture : station 1 is 5/3 center closed SV5312C, station 2 is 5/2 double control SV5212, station 3 is 2pcs 3/2 (N.O.) SV5412H, station 4 & station 5 are 5/2 single SV5211, station 6 is blind plate. All working ports with ZPOC04-M5C fittings the ERP code is SV521-CDH2SB-C4E4-U



How to Order?

Manifold	SV	52	1	—	N	F	—	Thread Type
SV series	1: 1 series valve body 2: 2 series valve body	2 position 5 port	1: 1 station 2: 2 stations 3: 3 stations 24: 24 stations		F: Manifold			Blank: G P: PT T: NPT

Connector	Connector Type	Cable Core	Cable Length	Code	Injection Molding
D25: D-sub connector 25 pins		1M: 1m cable 2M: 2m cable 3M: 3m cable (Note: please contact EMC for customized length)		Blank: standard cable TL: Flexible drag chain cable (Flexible cable only 25 cores optional)	A
		25: 25 cores (24 coils or less)			
		15S: 15 cores (14 stations for single control or less)			
		15D: 15 cores (7 stations for double control or less)			
		08S: 8 cores (7 stations for single control or less)			

Wiring	Wiring Series	Category	Wiring Length
SV5211: Single control SV5212: Double control	P01: plug-in cable	0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring (Note: Please contact EMC to customize wiring)	

Blind plate	Series NO.	Blind Plate Type	Category	2 Position 5 Port	Valve Size
S: Standard V: Top port VM: Side port VY: Common type		BP		52	1:1 series 2:2 series

Air supply & exhaust module

Series No.	Piping Type	Category	5/2 way	Body Size	—	□	—	Thread Type
S: Standard	V: Top ported VM: Side ported	NP	52	1: 1 series 2: 2 series				Blank: G

No.	Code	Port size	Remark
1 Series	M5	M5: M5 port	when fittings required, the silencer will be mounted together
	C4	φ 4 one-touch fitting(ZPOC04-M5C)	
	M7	M7: M7 port	
2 Series	C6	φ 6 one-touch fitting(ZPOC06-M7C)	
	O6	1/8 port	
	C8	φ 8 one-touch fitting(ZPOC08-01G)	

Explain of pressure separate

Diagram of pressure separate	Explain of pressure separate
	<p>different options for pressure separate</p> <p>TA: port 1 air supply pressure separate </p> <p>TG: port 3/5 air exhaust pressure separate </p> <p>TL: port 1/3/5 air supply & exhaust pressure separate </p>
	<p>1. 1pc Air supply & exhaust module requests 1 station 2. Use air supply & exhaust module to control the third or more different pressure and exhaust. 3. External pilot port 14 is not available for pressure separate.</p>

SV Series Solenoid Valve&Valve Terminal



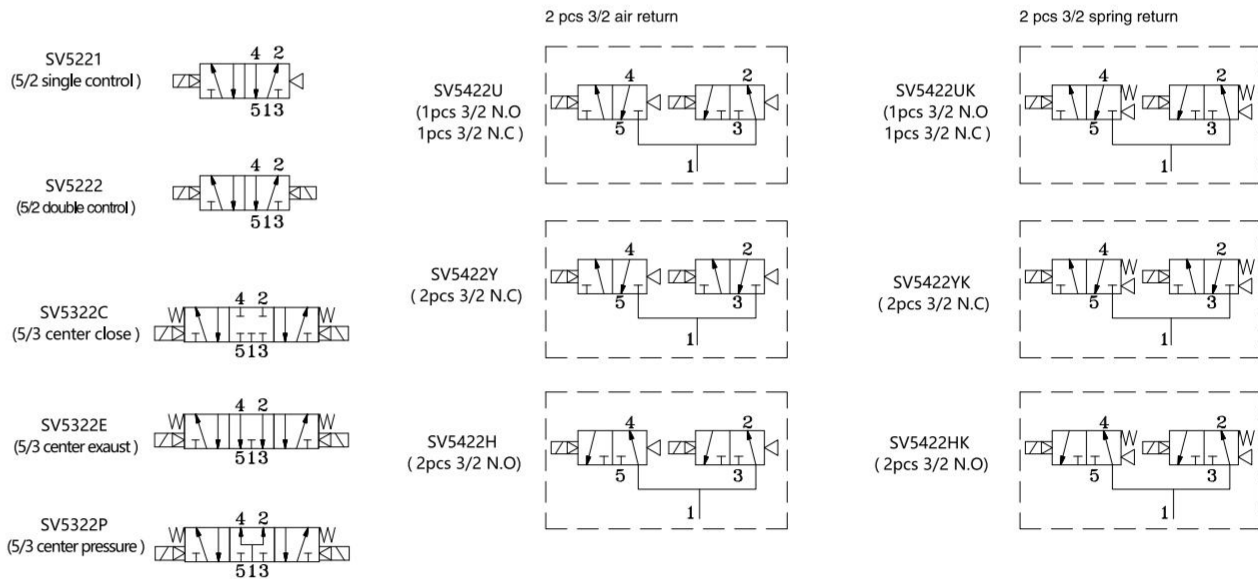
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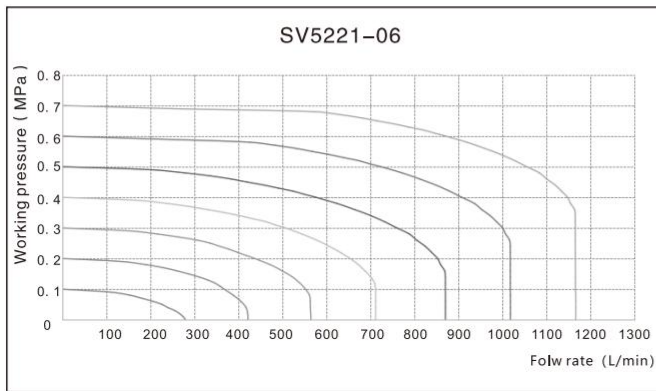
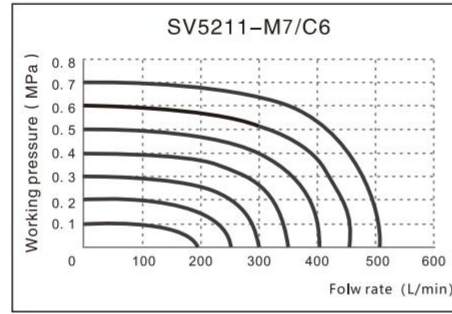
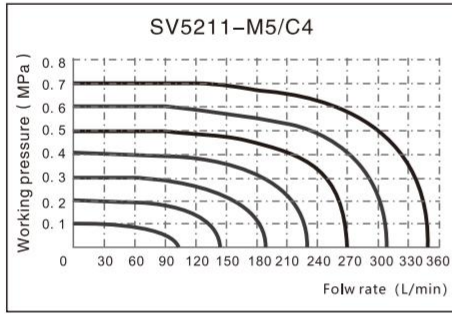
Specifications

Model	SV5211 SVM5211	SV5212 SVM5212	SV5412Y/U/H SVM5412Y/U/H	SV5412YK/UK/HK SVM5412YK/UK/HK	SV5312C/E/P SVM5312C/E/P	SV5221 SVM5221	SV5222 SVM5222	SV5422Y/U/H SVM5422Y/U/H	SV5422YK/UK/HK SVM5422YK/UK/HK	SV5322C/E/P SVM5322C/E/P	
Sectional Area (mm)	M5/C4: 5(CV=0.28) M7/C6: 7(CV=0.39)		M5/C4: 4.6(CV=0.26) M7/C6: 6.5(CV=0.36)			16.2 (CV=0.9)		14.5 (CV=0.8)			
Positions	2 position 5 port		dual 3/2 valves			3 position 5 port		2 position 5 port		dual 3/2 valves	3 position 5 port
Working Pressure (MPa)	0.15~0.8			0.2~0.8			0.15~0.8		0.2~0.8		
Pilot pressure (external pilot type)(MPa)	0.25~0.8		0.25~0.8 (Exceed working pressure 0.1 Mpa at least)			0.25~0.8		0.25~0.8 (Exceed working pressure 0.1 Mpa at least)		0.25~0.8	
Port Size	M5/M7 (Not available for VM series)						G1/8				
Working Medium	Clean air(After 40µm filtration)										
Pilot Exhaust Type	Internal pilot type / External pilot type										
Reset Type	air return , air return+spring return										
Lubrication	No required										
Proof Pressure (Mpa)	1.2										
Working Temperature (°C)	-20~70 (No freezing)										
Working Voltage	DC24V										
Voltage Range	± 10%										
Power Consumption	Standard: 0.8W, energy-saving: 0.35W										
Insulation Class	F Class										
Protective Class	IP40 Dust Proof										
Max.acting Frequency	5/2: 5 cycles/s; 5/3: 3 cycles/s										
Activate Time(0.5MPa)	15ms or less						20ms or less				
Weight (g)	55.5	64.5	65	65	68	88	97	98.5	98.5	104	

Symbol



Flow Chart



SV Series Solenoid Valve & Valve Terminal



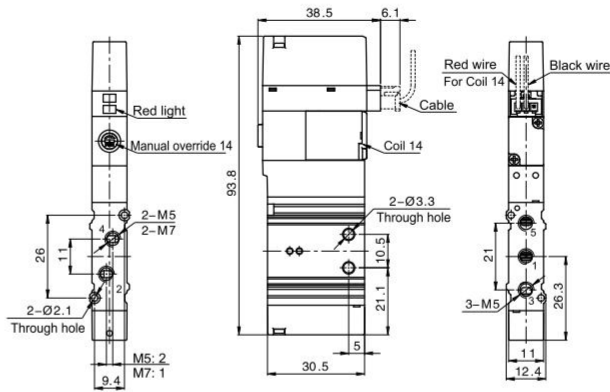
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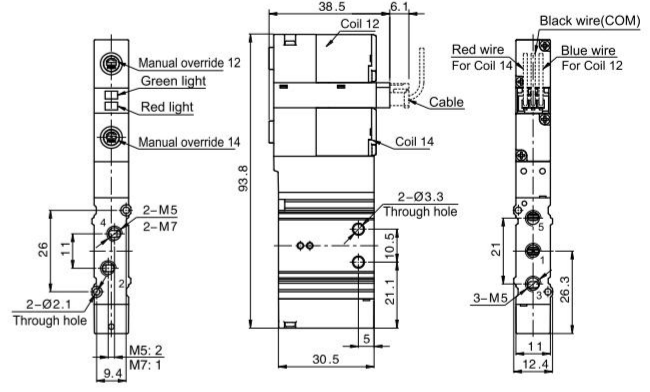
Main Dimension

Solenoid valve

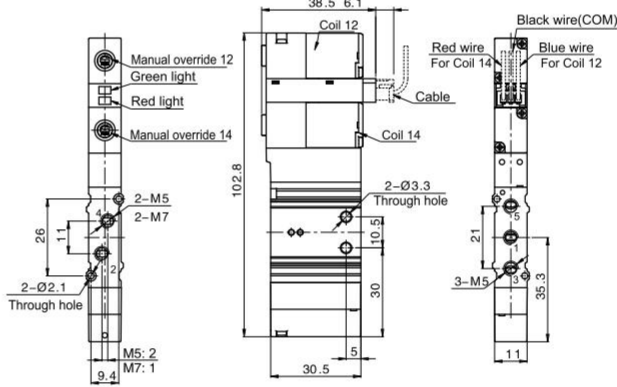
SV5211



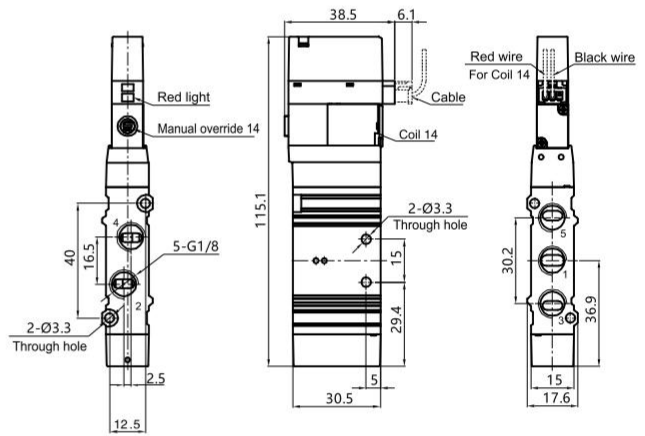
SV5212/SV5412



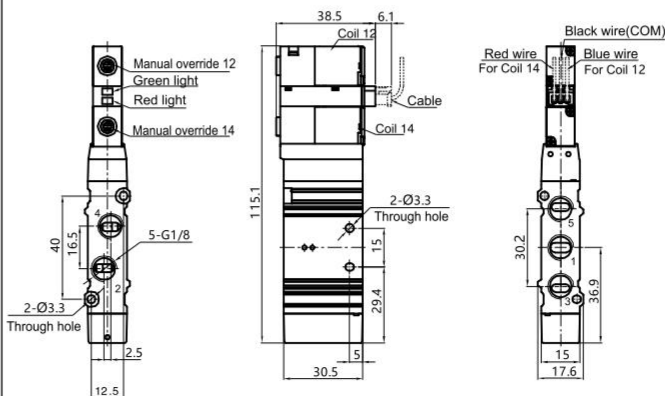
SV5312



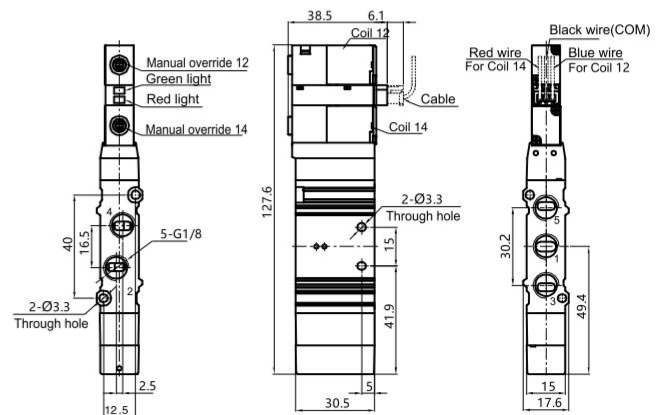
SV5221



SV5222/SV5422

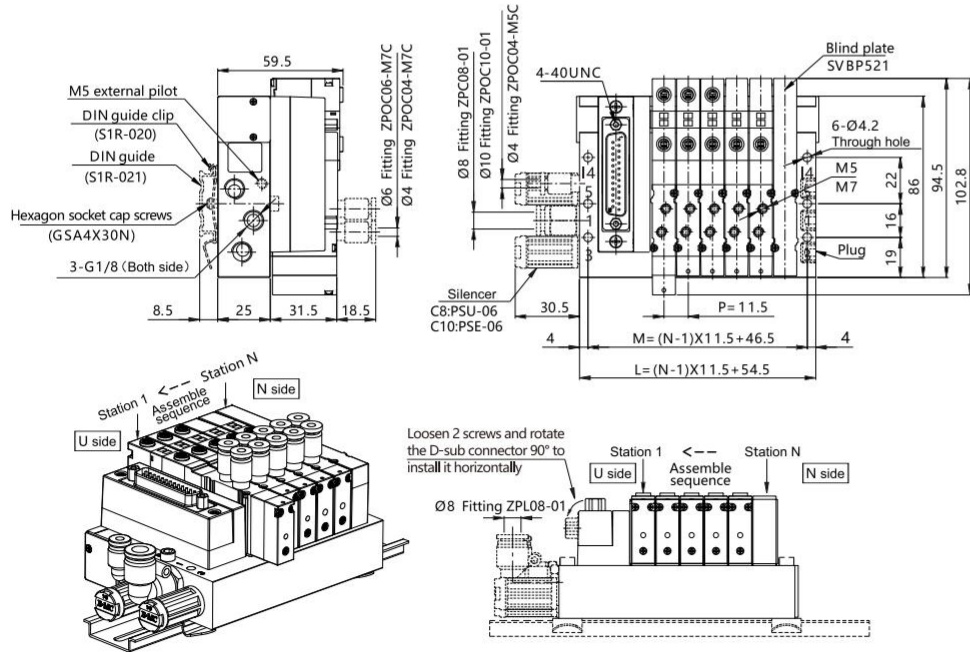


SV5322



Main Dimension

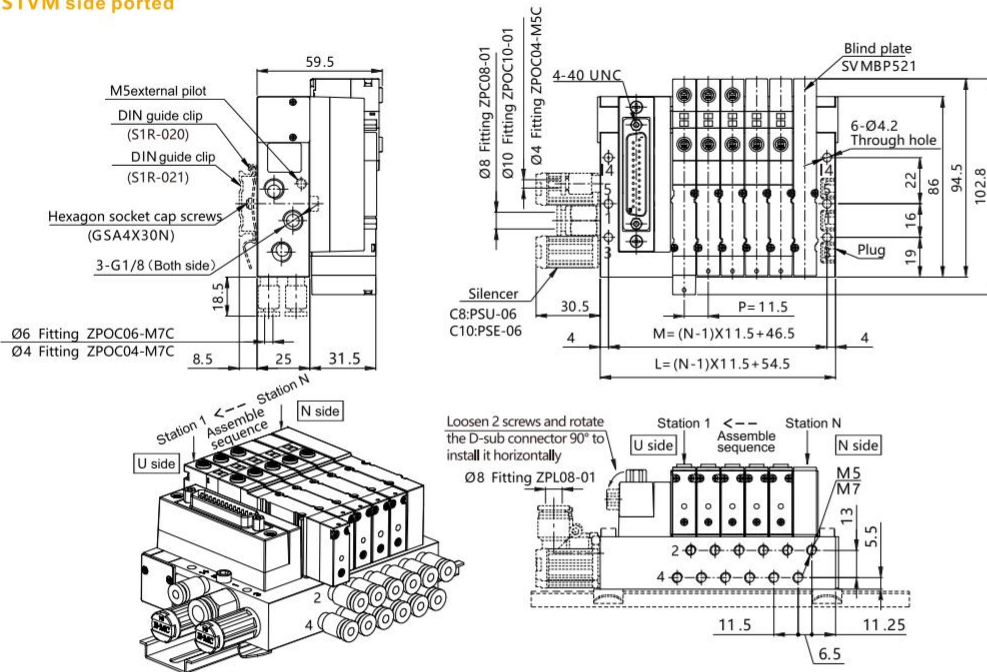
S1V Valve terminal



Note: N means valve link

Sign	Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L		66	77.5	89	100.5	112	123.5	135	146.5	158	169.5	181	192.5	204	215.5	227	238.5	250	261.5	273	284.5	296	307.5	319
M		58	69.5	81	92.5	104	115.5	127	138.5	150	161.5	173	184.5	196	207.6	219	230.5	242	253.5	265	276.5	288	299.5	311

S1VM side ported



Note: N means valve link

Sign	Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L		66	77.5	89	100.5	112	123.5	135	146.5	158	169.5	181	192.5	204	215.5	227	238.5	250	261.5	273	284.5	296	307.5	319
M		58	69.5	81	92.5	104	115.5	127	138.5	150	161.5	173	184.5	196	207.6	219	230.5	242	253.5	265	276.5	288	299.5	311

SV Series Solenoid Valve & Valve Terminal



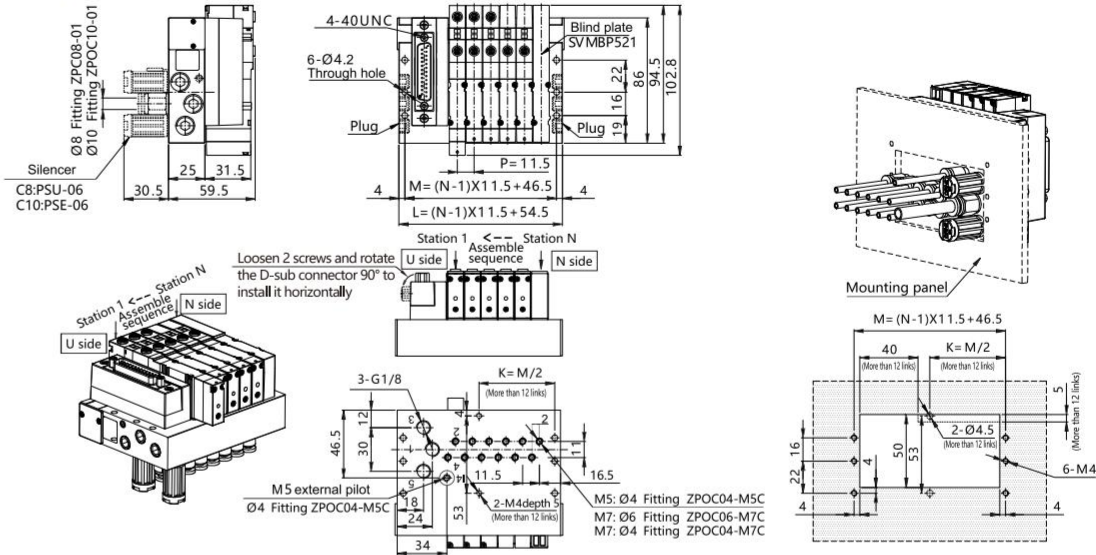
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SV

Main Dimension

SV Valve terminal

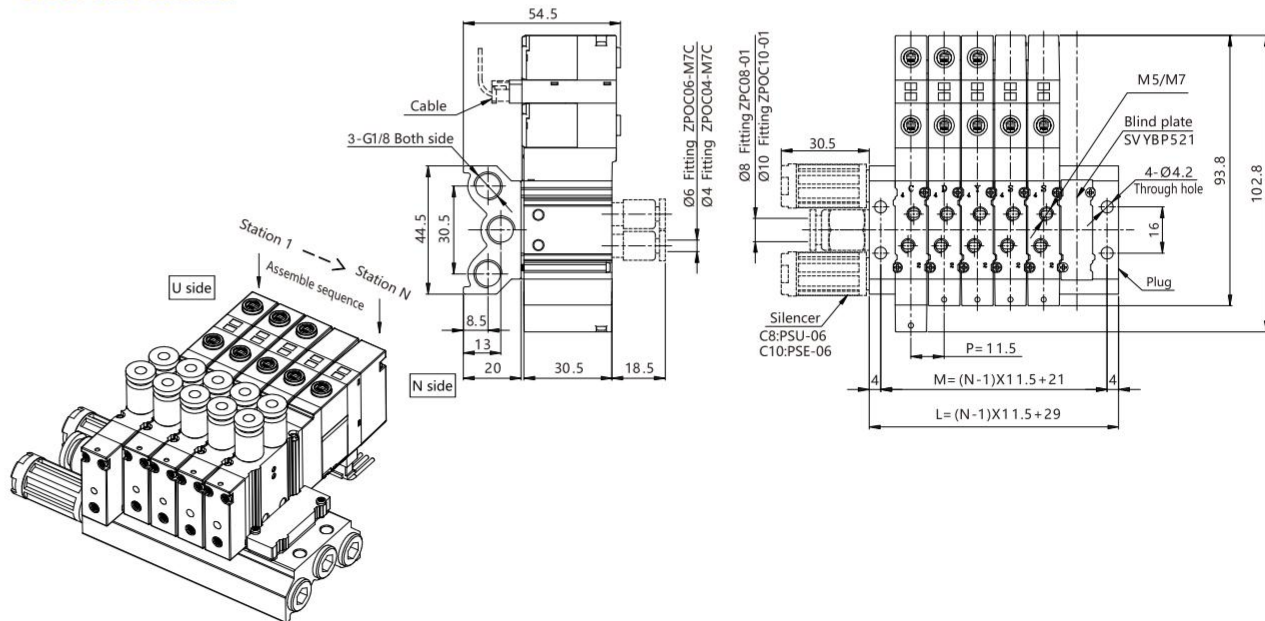
S1VB bottom ported



Sign	Model	2	3	4	5	6	7	8	9	10	11	12	13
L		66	77.5	89	100.5	112	123.5	135	146.5	158	169.5	181	192.5
M		58	69.5	81	92.5	104	115.5	127	138.5	150	161.5	173	184.5
Sign	Model	14	15	16	17	18	19	20	21	22	23	24	
L		204	215.5	227	238.5	250	261.5	273	284.5	296	307.5	319	
M		196	207.6	219	230.5	242	253.5	265	276.5	288	299.5	311	
K		98	103.75	109.5	115.25	121	126.75	132.5	138.25	144	149.75	155.5	

Note: N means valve link

SV521 Valve terminal



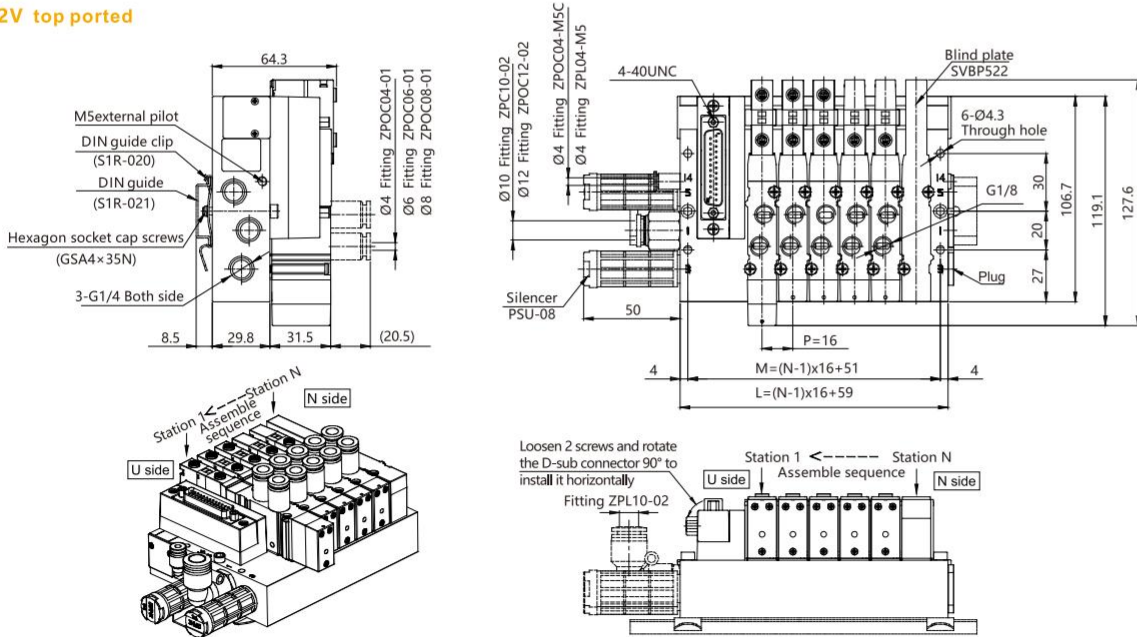
Note: N means valve link

Sign	Model	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L		29	40.5	52	63.5	75	86.5	98	109.5	121	132.5	144	155.5	167	178.5	190	201.5	213	224.5	236	247.5	259	270.5	282	293.5
M		21	32.5	44	55.5	67	78.5	90	101.5	113	124.5	136	147.5	159	170.5	182	193.5	205	216.5	228	239.5	251	262.5	274	285.5

Main Dimension

S2V Valve terminal

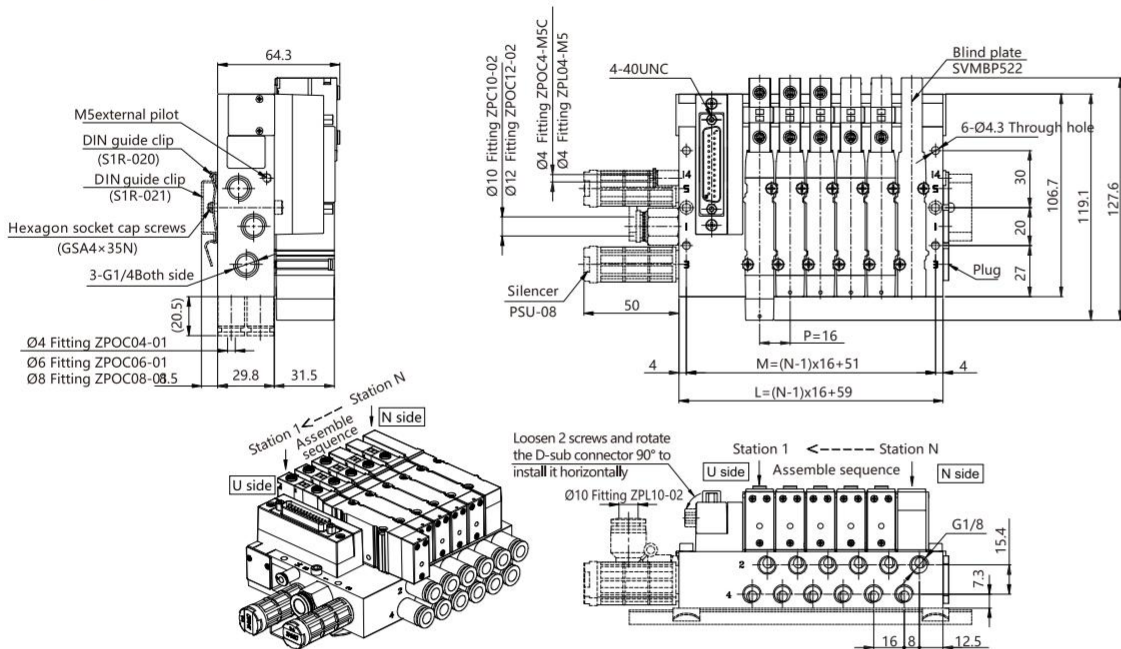
S2V top ported



Note: N means valve link

Sign	Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L		75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331	347	363	379	395	411	427
M		67	83	99	115	131	147	163	179	195	211	227	243	259	275	291	307	323	339	355	371	387	403	419

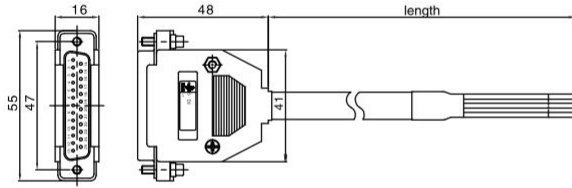
S2VM side ported



Note: N means valve link

Sign	Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L		75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331	347	363	379	395	411	427
M		67	83	99	115	131	147	163	179	195	211	227	243	259	275	291	307	323	339	355	371	387	403	419

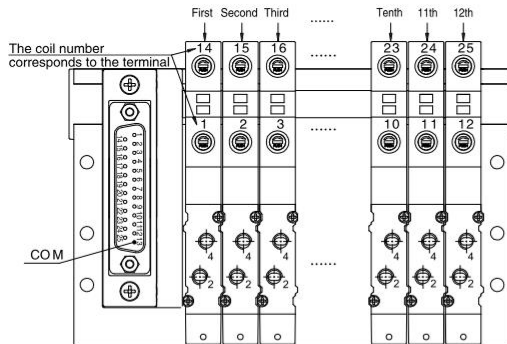
Connector & Cable



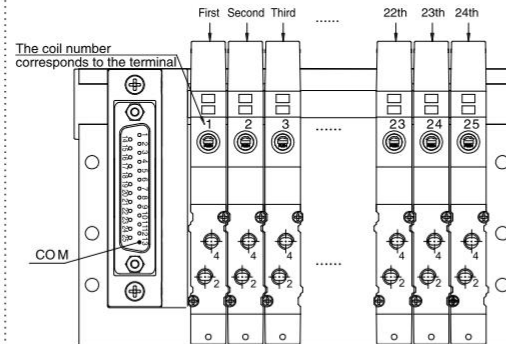
Connector Cable	PIN number	PIN number & Wire Color			
		Wire Color			
		D25-25	D25-15D	D25-15S	D25-08S
1	Red and Black	Red and Black	Red and Black	Red and Black	Red
2	Red and White	Red	Red	Red	Yellow
3	Red	Orange and Black	Orange and Black	Orange and Black	Blue
4	Orange and Black	Orange	Orange	Orange	Orange
5	Orange and White	Yellow and Black	Yellow and Black	Yellow and Black	Purple
6	Orange	Yellow	Yellow	Yellow	Brown
7	Yellow and Black	Pink	Pink	Pink	Green
8	Yellow	---	---	Light Green	---
9	Pink and Black	---	---	Purple	---
10	Pink	---	---	White	---
11	Blue and White	---	---	Brown	---
12	Blue	---	---	Grey	---
13 (COM)	Black	Black	Black	Black	Black
14	Green	---	Blue	Blue	---
15	Purple and White	---	Green	Green	---
16	Purple	---	Light Green	---	---
17	Brown and White	---	Purple	---	---
18	Brown	---	White	---	---
19	Green and Black	---	Brown	---	---
20	Dark Grey	---	Grey	---	---
21	Grey	---	---	---	---
22	White and Black	---	---	---	---
23	White	---	---	---	---
24	Green and White	---	---	---	---
25	Light Green	---	---	---	---

Valve Terminal Inner Wiring Diagram

Double control wiring
max.12 links



Single control wiring
max.24 links



Installation & Usage Attention

1. Do not drop the solenoid valve when it takes out from the box to avoid the damage;
2. Do not hit by external force during installation and adjustment;
3. Do not disassemble when using, once disassembled and reassembled, it may not meet the default setting and leads poor performance;
4. The torque required for relevant parts be showed on right picture.

