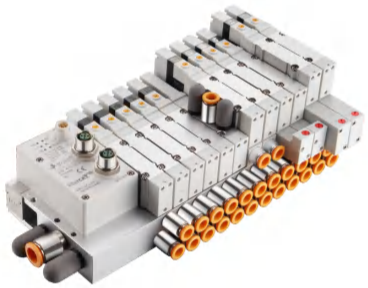
S2VM/ES2VM

Stacking Module Valve Terminal

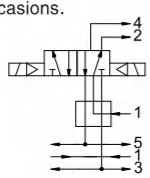


Product Features

- Individual air supply stacking module: When the same valve terminal is used for different press –ures, it can independently supply air to the solenoid valve without occupying the valve position.
- Individual air exhaust stacking module: When using centralized exhaust on the same valve ter –minal, the exhaust between the valves affects each other, causing the actuator to malfunction. Especially when using a 3 position center exhaust valve and a single acting cylinder, an individual air exhaust stacking module can be used without occupying the valve position.
- Air supply shutoff stacking module(With residual pressure release):On the same valve terminal, it is not necessary to shut off the main valve terminal air source. The air supply to the designated solenoid valve can be separately shut off while residual pressure is discharged. It can achieve separate maintenance and replacement of solenoid valves or cylinders with air plug in and out together.
- Double check stacking module(With residual pressure release): Equipped with a 5/3 center ex –haust valve on the same valve terminal, the cylinder can stop for a long period of time in the middle, and equipped with a 5/2 valve can prevent the cylinder from falling, thereby improving the safety performance of the valve terminal.

Application Occasions

Ⅰ: Individual air supply stacking module
1.Application occasions:
(1)Using different pressures on the same valve terminal as air supply ports with different pressures;
(2)Applicable to single control/double control/3 position solenoid valves;
(3)Applicable to internal pilot and external pilot occasions.
2.Circuit Diagram:2 position double control valve

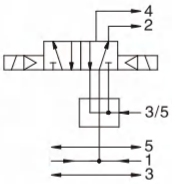


Individual air supply stacking module

Manifold

Ⅱ: Individual air exhaust stacking module
1.Application occasions:
(1)When the exhaust of a valve affects other valves on the same valve terminal, an individual air exhaust stacking module can be added at this valve position;
(2)Applicable to single control/double control/3 position solenoid valves;
(3)Applicable to internal pilot and external pilot occasions.

2.Circuit Diagram:
2 position double control valve

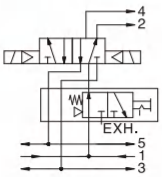


Individual air exhaust stacking module

Manifold

Ⅲ: Air supply shutoff stacking module(With residual pressure release)
1.Application occasions:
(1)It is used to shut off the supply air to valves individually which can be used by hot plugging with air pressure, and the solenoid valve can be replaced without stopping the machine.
(2)Applicable to single control/double control/3 position center exhaust, center pressure solenoid valves;
(3)When it is equipped with a center closed valve, residual pressure cannot be released, so use in combination with a 3 port valve, which can be connected to the 2, 4 piping port.
(4)Only for internal pilot specifications, as the external pilot air cannot be shut off.
2.Manual override operation instructions:
(1)Push the lever down in the PUSH position with slotted screwdriver until it stops, then turn the lever 90° clockwise. (PUSH → LOCK)
(2)Unlock the manual override, turn the lever counterclockwise. (LOCK → PUSH)

3.Circuit Diagram:
2 position double control valve



Air supply shutoff stacking module
(With residual pressure release)

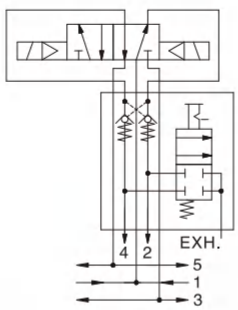
Manifold

Ⅳ: Double check stacking module(With residual pressure release)
1.Application occasions:
(1)It is used to hold the intermediate position of the cylinder for a long period of time by using a 3 position center exhaust valve. It can not be combined with 3 position center closed, center pressure and 2pcs 3/2 solenoid valves;
(2)It can be used for drop prevention at the cylinder stroke end when equipped with a 2 position single/double valve.
(3)Applicable to internal pilot and external pilot occasions.

2.Specifications:

Max. Operating Pressure	0.8MPa
Min. Operating Pressure	0.2MPa
Max. Acting Frequency	3 Cycles/s

3.Circuit Diagram:
2 position double control valve

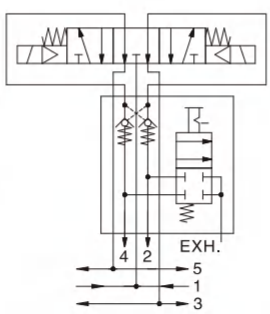


Double check stacking module
(With residual pressure release)

Manifold

Drop prevention: Equipped with
2 position double control valve

3 position center exhaust valve



Double check stacking module
(With residual pressure release)

Manifold

Intermediate stop:Equipped with
3 position center exhaust valve

How to Order?

SVM series stack module

Series Code	Type	Component Code	5/2	Body Size
S	VM	MP: Individual intake stack module Ø 6 ① MPF: Individual intake stack module Ø 4 ① MPL: Individual intake stack module Ø 8 ① XP: Individual exhaust stack module VP: Air intake cut-off stack module (with residual pressure release) WP: Mid position check stack module (with residual pressure release)	52	2 : 2 Series②

Order Example:

Individual intake stack module Ø6,

ERP code SVMMP522.

Note:

① There are three options for connecting the separate intake stack module, Ø6/Ø4/Ø8。

② The stack module is only suitable for the 2 series, plate valve island.

S2VM+stack module

Series No. | Body Size | Piping Type — □ □ — □ □ | Voltage — Pilot Type — Wiring Type — Manifold Port — Mounting — Thread Type

- Series No.: S : Standard; SN: Energy-saving
- Body Size: 2 : 2 Series
- Piping Type: Vm: Side ported; Qty (Max.24 links for single control Max.12 links for single control)
- Valve quantity for different port
- Voltage: E4: DC24V
- Pilot Type: Blank: Internal pilot; WB: External pilot ①
- Wiring Type: Blank: Double control wiring (Max.12 links); S: Single control wiring (Max.24 links); Note: Mix wiring is available to customize
- Manifold Port: Blank: Without accessories; D: With DIN rail clip and 1M guide rail; D0: With DIN rail clip, no guide rail DIN guide rail packed separately)
- Mounting
- Thread Type: Blank: G; P: PT; T: NPT

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.0.)	
U ①	2pcs 3/2 (N.O./N.C.)	
YK ①	2pcs 3/2 (N.C.)spring return	
HK ①	2pcs 3/2 (N.0.) spring return	
UK ①	2pcs 3/2 (N.0./N.C.) spring return	
B	blind plate	
N ②	airsupply& exhaust module	
TA ③	port 1 airsupply pressure separate	Added after the corresponding valve position code
TG ③	port3'5 airexhaust pressure separate	
TL ③	port 1/3/5 airsupply& exhaust pressure separate	
M ④	Individual intake stack module Ø6	
MF ④	Individual intake stack module Ø4	
ML ④	Individual intake stack module Ø8	
X	Individual exhaust stack module	
V ⑤	Air intake cut-off stack module (with residual pressure release)	
W ⑥	Mid position check stack module (with residual pressure release)	

No.	Code	Port Size	Remark
2 Series	06	1/8 Port	assembly sequence. 1st link start from U side
	C4	Ø4 one-touch fitting (ZP0C04-01G)	
	C6	Ø6 one-touch fitting (ZP0C06-01G)	
	C8	Ø8 one-touch fitting (ZP0C08-01G)	

Code	Port entry	2 Series	Remark
Blank	Both side without silencer, fitting,plug	–	1)plugs are mounted on the opposite of the selacied ports; 2) only U,u1 is available forbottom ported; 3) No need this code if order manifold only.
U	U side with silencer, PC fitting	Ø10	
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	Ø12	
N1	Station N with silencer, POC fitting		
UN1	Both side with silencer, POC fitting		

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 retum.;

② When the intake connection of the intake and exhaust module is C4/C6/C8, the exhaust port is equipped with a muffler by default. When the connection is 1/8, the exhaust port is not equipped with a muffler by default;;

③ The pressure zoning characteristics are the same as the SV series;;

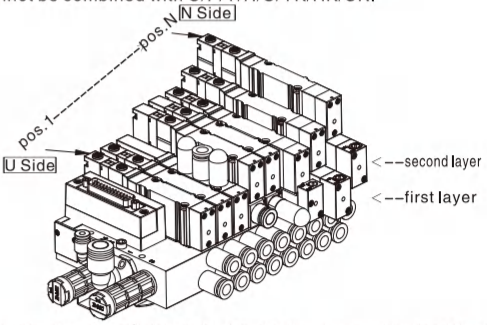
④ There are three options for connecting the individual intake stack module: 06/04/08;

⑤ The intake cut-off module cannot cut off the external pilot air, so it cannot be used in external pilot situations;;

⑥ The mid position check stack module cannot be used for 5/3 center close,5/3 center pressure, and 2x3/2, that is, W cannot be combined with C/P/Y/H/U/YK/HK/UK.

Basic principles of ordering code:

When two or more adjacent valve positions have the same function, use the same number of valve positions to represent the total number of valve positions. For example, if the first to fourth valve positions are dual electronic control solenoid valves and all four valve positions contain separate intake stacking modules, the code is DMDMDMDM, simplified as 4DM. This principle applies to all valve groups or valve island ordering codes.



Order Example:

1、When using the same specification valve and stacking module on the same layer: S series standard type, 2 series, side ported, 8-position 5/2 way dual electric control solenoid valve SVM5222, the first to sixth valve positions are equipped with separate intake stacking module 06 air pipe, working port 06 air pipe fitting, working voltage DC24V, internal filot type, wiring method is dual electric control wiring, the intake and exhaust ports are on both sides without muffler, fitting, plug, G thread. The ERP code is S2VM-6DM2D-C6E4

2、When using different specifications of valves and stacking modules on one layer: S series standard type, 2 series, side ported, the first to fourth valve positions are all 5/2 way dual electric control solenoid valves SVM5222, the fifth to seventh valve positions are all 5/3 way center exhaust solenoid valves SVM5322E, the eighth valve position is a blind plate, the first and second valve positions are equipped with separate intake stacking modules 06 air pipes, the third and fourth valve positions are equipped with separate exhaust stacking modules, the fifth valve position is equipped with intake check stacking modules, the sixth and seventh valve positions are equipped with center check stacking modules, the working port 06 air pipe joint, the working voltage is DC24V internal pilot type, the wiring method is dual electric control wiring, and the intake and exhaust ports are on both sides without mufflers, fittings, or plugs. G thread. The ERP code is S2VM-2DM2DXEV2EWB-C6E4.

3、When mixing two layers of different stacked modules with valves of different specifications: S series standard type, 2 series, side ported,The first and second valve positions are both 5/2 way dual electronic control solenoid valves SVM5222, the third valve position is the intake and exhaust module, the fourth and fifth valve positions are both 5/2 way single electronic control solenoid valves SVM5221, the sixth, seventh, and eighth valve positions are all 5/3 way center exhaust solenoid valves SVM5322E, the fourth valve position is equipped with a separate intake stack module 06 air supply, the fifth valve position is equipped with a separate exhaust stack module, the sixth valve position is equipped with an intake cutoff stack module, the seventh valve position is equipped with a mid position check stack module, and the eighth valve position is equipped with a separate intake stack module 06 air pipe on the first layer and a mid position check stack module on the second layer, with a working port ϕ8 air pipe fitting, working voltage of DC24V, internal pilot type, wiring method is dual electric control wiring, U-side installation of muffler, PL connector, installation of DIN rail buckle and 1-meter DIN rail, G-thread. The ERP code is S2VM-2DNSMSXEVEMW-C8E4-UL-D(as shown in the above figure).

How to Order?

ES2VM+ Fieldbus Valve Teminal

Series No. Body Size Piping Type. Communication Protocol — Qty Valve quantity fordifferent port — Voltag — Pilot Type — Wiring Type — Manifold Port — Mounting — Threac

- Series No.: ES: Fieldbus valveterminal; ESN:Energy savingfieldbus valveterminal
- Body Size: 2: 2 Series
- Piping Type.: VM: Side ported
- Communication Protocol: see table
- Qty: see table
- Valve quantity fordifferent port: see table
- Voltag: E4: DC24V
- Pilot Type: Blank: Interal pilot; WB: External pilot①
- Wiring Type: Blank: Double control wiring (max.24 links); S: Single control wiring (max.24 links); (Note:Mix wiring is available to customize)
- Manifold Port: see table
- Mounting: Blank: Without accessories; D: With DIN rail clip and 1M guide rail; D0: With DIN rail clip, no guide rail; DIN guide rail packed separately (if order with guide rail, the guide rail will be packed separately)
- Threac: Blank:G; P:PT; T:NPT

Protocols type	Communication Protocol	Output	Max Valve Quatity	
			Single control	Double control
EC32	EtherCAT	32	24	16
EC48		48	—	24
PN32	PROFINET	32	24	16
PN48		48	—	24
EP32	EtherNet/IP	32	24	16
EP48		48	—	24
CC32	CC-Link	32	24	16
CC48		48	—	24
DN32	DeviceNet	32	24	16
LK16	IO-Link	16	16	8
LK32		32	24	16
LK48		48	—	24
DB44	D-SUB44	42	②	

Code	Funiction	Remark
S	5/2 single	assembly sequence, 1st linkstart 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.0.)	
U ①	2pcs 3/2 (N.O.IN.C.)	
YK①	2pcs 3/2 (N.C.) spring return	
HK①	2pcs 3/2 (N.0.) spring return	
UK①	2pcs 3/2 (N.0./N.C.) spring return	
B	blind plate	
N ③	air supply & exhaust moudle	
TA④	port 1 air supply pressure separate	Added after the corresponding valve position code
TG④	port 3/5 alrexhaust pressure separate	
TL④	port 1/3/5 airsupply& exrausl pressure separae	
M ⑤	Individual intake stack module Ø6	
MF⑤	Individual intake stack module Ø4	
ML⑤	Individual intake stack module Ø8	
X	Individual exhaust stack module	
V ⑥	Air intake cut-off stack module (with residual pressure release)	
W ⑦	Mid position check stack module (with residual pressure release)	

Code	Port entry silencer、fitting	2 Series	Remark
Blank	Both side without silencer, fitting,plug	–	1)plugs are mounted on the opposite of the selacied ports; 2) only U,u1 is available forbottom ported; 3) No need this code if order manifold only.
U	U side with silencer, PC fitting	Ø10	
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	Ø12	
N1	Station N with silencer, POC fitting		
UN1	Both side with silencer, POC fitting		

No.	Code	Port size	Remark
2 Series	06	1/8 port	assembly sequence. 1st linkstart from U side
	C4	Ø4 one-touch fitting (ZPOC04-01)	
	C6	Ø6 one-touch fitting (ZPOC06-01)	
	C8	Ø8 one-touch fitting (ZPOC08-01)	

Basic principles of ordering code:

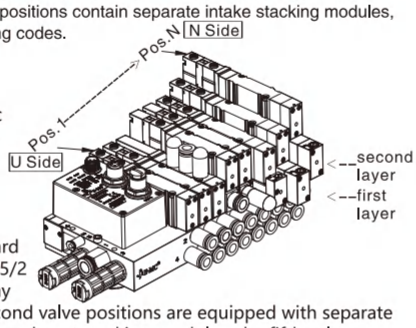
1、① Y/H/U is not available for external pilot due to the air return.
YK/HK/UK is available for external pilot due to the spring return.;
2、ESV-LK16 can control 16 coils maximum,suitable for 2 to 8 pcs double control valves, or 2 to 16 pcs single control valves;
3、ESV can control 32 coils maximum,suitable for 2 to 16 pcs doublecontrol valves, or 2 to 24 pcs single control valves;
4、ESV-LK/EC48 can control 48 coils maximum,when the coils is more than 32 suitable for 17 to 24 pcs double control valves only;
5、②ESV-DB44 is multi-pins valve termianl, can control 42 coils maximun and 24 valvestations maximum, suitable for 13 to 18 pcs double control valves, when the coils ismore than 36, station 19 to 24 can be single control valves only;
6、③When the intake connection of the intake and exhaust module is C4/C6/C8, the exhaust port is equipped with a muffler by default. When the connection is 1/8, the exhaust port is not equipped with a muffler by default;
7、④The pressure zoning characteristics are the same as the SV series;
8、⑤There are three options for connecting the individual intake stack module: 06/04/08;
9、⑥The intake cut-off module cannot cut off the external pilot air, so it cannot be used in external pilot situations;
10、⑦The mid position check stack module cannot be used for 5/3 center close,5/3 center pressure, and 2x3/2, that is, W cannot be combined with C/P/Y/H/U/YK/HK/UK.

Basic principles of ordering code:

When two or more adjacent valve positions have the same function, use the same number of valve positions to represent the total number of valve positions. For example, if the first to fourth valve positions are dual electronic control solenoid valves and all four valve positions contain separate intake stacking modules, the code is DMDMDMDM, simplified as 4DM. This principle applies to all valve groups or valve island ordering codes.

Order Example:

1□When using the same specification valve and stacking module on the same layer: ES series standard type, 2 series, side ported, PROFINET field bus, 32 outputs, 8-position 5/2 way dual electric control solenoid valve SVM5222, the first to sixth valve positions are equipped with separate intake stacking module 06 air pipe, working port 06 air pipe fitting, working voltage DC24V, internal filot type, wiring method is dual electric control wiring, the intake and exhaust ports are on both sides without muffler, fitting, plug, G thread. The ERP code is ES2VM-PN32-6DM2D-C6E4.

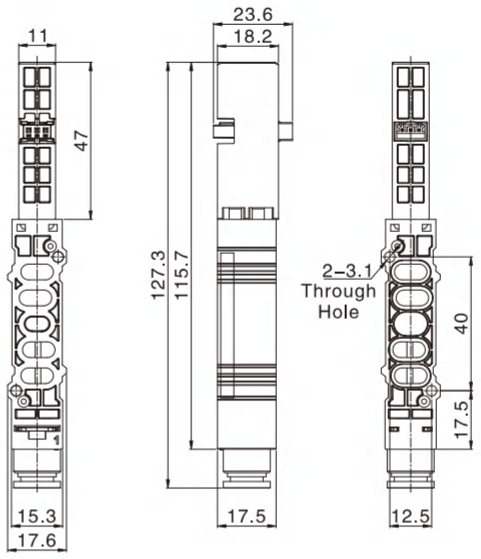


2□When using different specifications of valves and stacking modules on one layer: ES series standard type, 2 series, side ported, PROFINET field bus, 32 outputs, the first to fourth valve positions are all 5/2 way dual electric control solenoid valves SVM5222, the fifth to seventh valve positions are all 5/3 way center exhaust solenoid valves SVM5322E, the eighth valve position is a blind plate, the first and second valve positions are equipped with separate intake stacking modules 06 air pipes, the third and fourth valve positions are equipped with separate exhaust stacking modules, the fifth valve position is equipped with intake check stacking modules, the sixth and seventh valve positions are equipped with center check stacking modules, the working port 06 air pipe joint, the working voltage is DC24V internal pilot type, the wiring method is dual electric control wiring, and the intake and exhaust ports are on both sides without mufflers, fittings, or plugs. G thread. The ERP code is ES2VM-PN32-2DM2DXEV2EWB-C6E4.

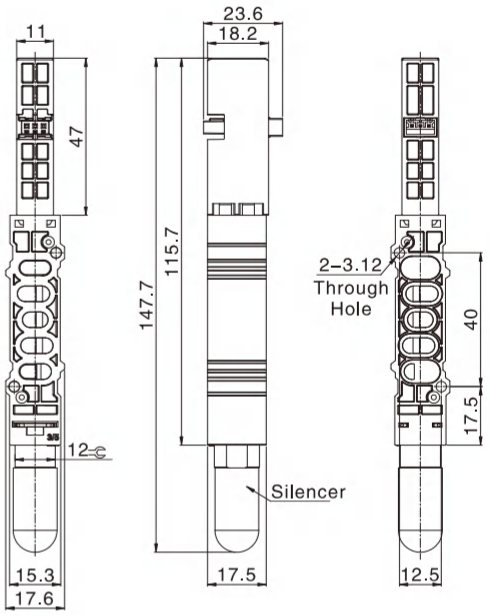
3□When mixing two layers of different stacked modules with valves of different specifications: ES series standard type, 2 series, side ported, PROFINET field bus, 32 outputs,The first and second valve positions are both 5/2 way dual electronic control solenoid valves SVM5222, the third valve position is the intake and exhaust module, the fourth and fifth valve positions are both 5/2 way single electronic control solenoid valves SVM5221, the sixth, seventh, and eighth valve positions are all 5/3 way center exhaust solenoid valves SVM5322E, the fourth valve position is equipped with a separate intake stack module 06 air supply, the fifth valve position is equipped with a separate exhaust stack module, the sixth valve position is equipped with an intake cutoff stack module, the seventh valve position is equipped with a mid position check stack module, and the eighth valve position is equipped with a separate intake stack module 06 air pipe on the first layer and a mid position check stack module on the second layer, with a working port φ8 air pipe fitting, working voltage of DC24V, internal pilot type, wiring method is dual electric control wiring, U-side installation of muffler, PC connector, installation of DIN rail buckle and 1-meter DIN rail, G-thread. The ERP code is ES2VM-PN32-2DNSMSXEVEMW-C8E4-U-D (as shown in the above figure).

Main Dimension

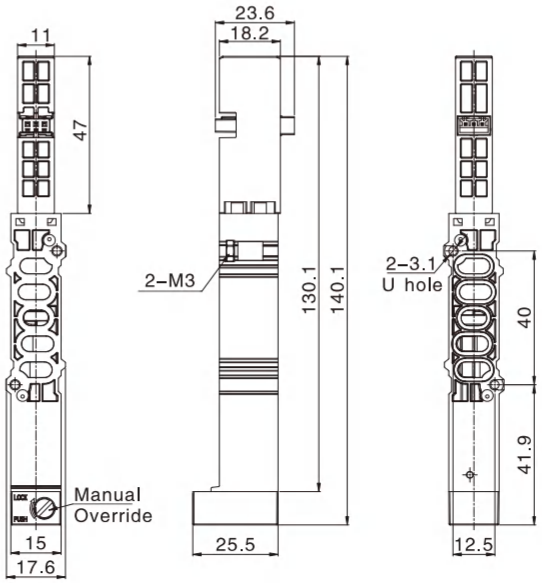
SVMMP522



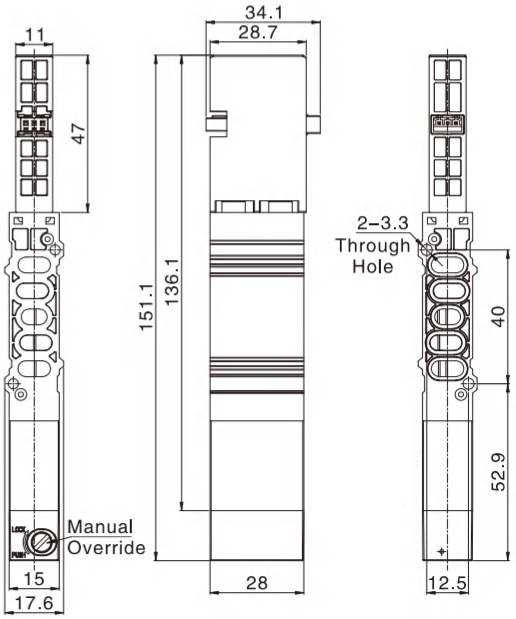
SVMXP522



SVMVP522

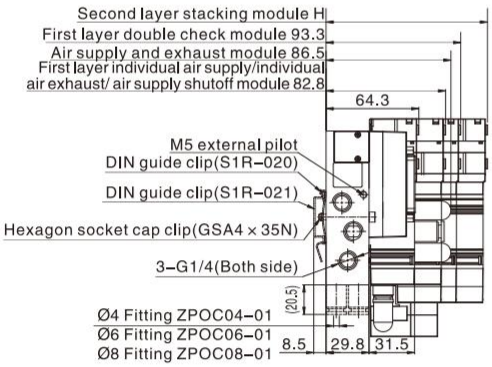


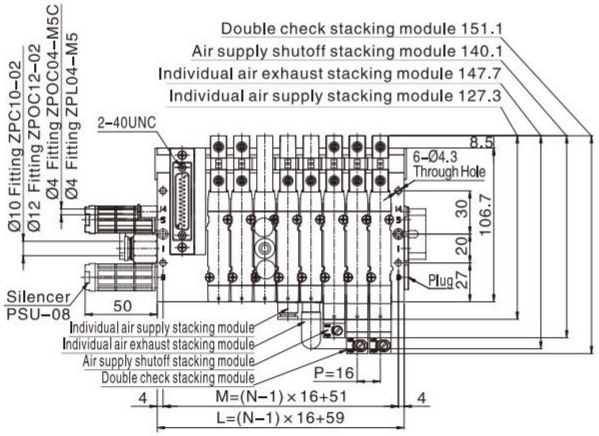
SVMWP522

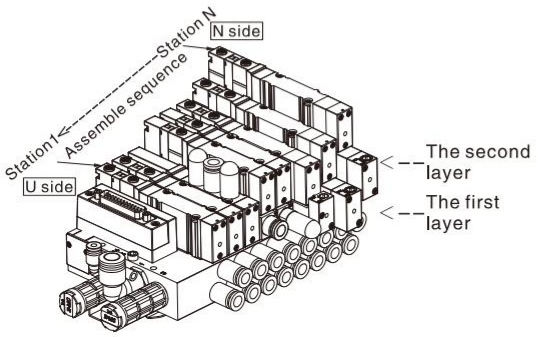


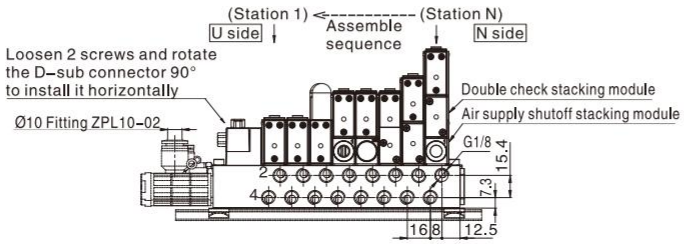
Main Dimension

S2VM Side Ported Valve Terminal + Stacking Module Dimension Drawings









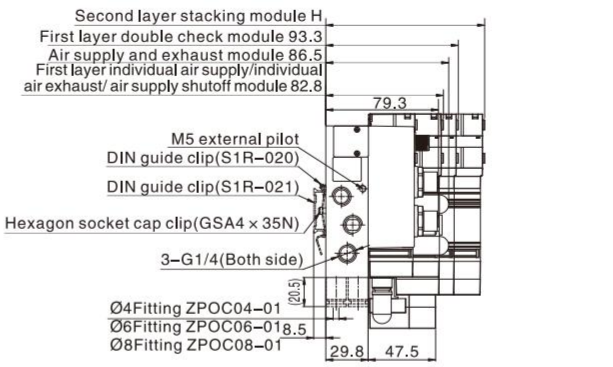
Sign \ Model	Individual air supply&exhaust stacking module + Air supply shutoff stacking module	Individual air supply&exhaust stacking module + Double check stacking module	Individual air supply&exhaust stacking module + Individual air exhaust stacking module	Double check valve + Air supply shutoff stacking module
H	101.3	111.8	101.3	111.8

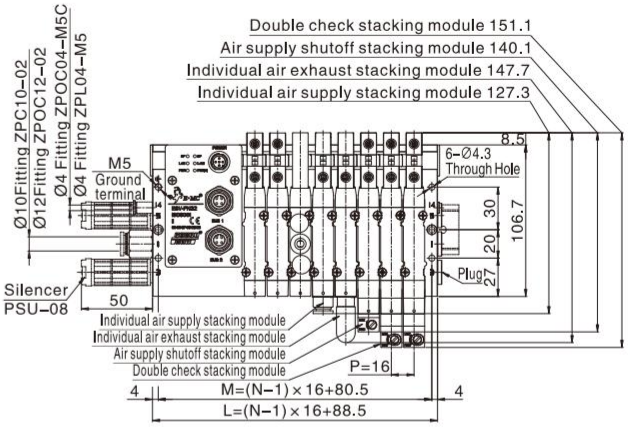
Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331	347	363	379	395	411	427
M	67	83	99	115	131	147	163	179	195	211	227	243	259	275	291	307	323	339	355	371	387	403	419

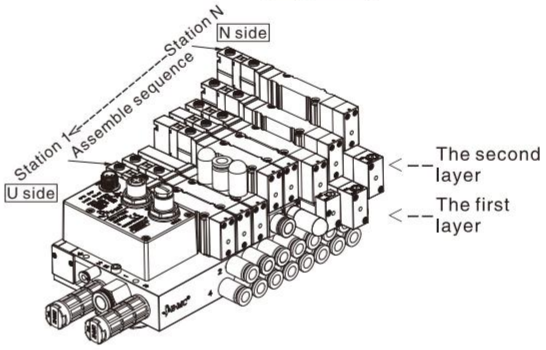
Note:N means valve link.

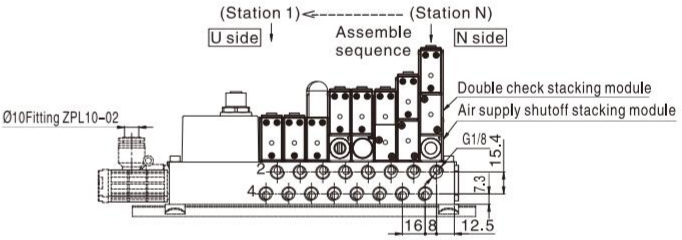
Main Dimension

ES2VM Side Ported Valve Terminal + Stacking Module Dimension Drawings





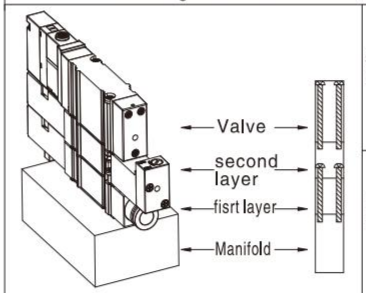
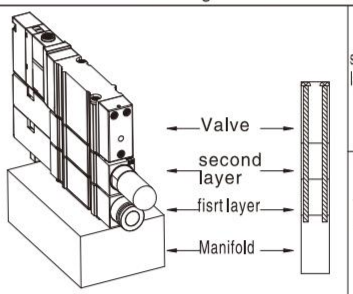
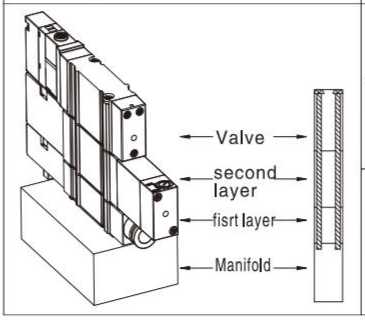
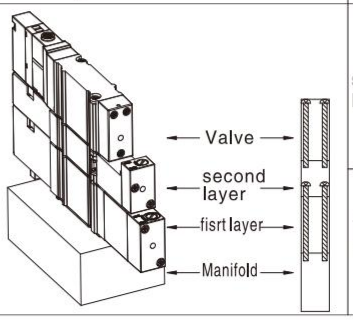




Sign \ Model	Individual air supply&exhaust stacking module + Air supply shutoff stacking module	Individual air supply&exhaust stacking module + Double check stacking module	Individual air supply&exhaust stacking module + Individual air exhaust stacking module	Double check valve + Air supply shutoff stacking module
H	101.3	111.8	101.3	111.8

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	104.5	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	280.5	296.5	312.5	328.5	344.5	360.5	376.5	392.5	408.5	424.5	440.5	456.5
M	96.5	112.5	128.5	144.5	160.5	176.5	192.5	208.5	224.5	240.5	256.5	272.5	288.5	304.5	320.5	336.5	352.5	368.5	384.5	400.5	416.5	432.5	448.5

Note: N indicates the number of valve positions.

Stacking module combination			Unicorn head screws	Stacking module combination			Screws
	second layer	Air intake cut-off stack module (with residual pressure release)	M3X33 (2)		second layer	Individual intake/ exhaust stack module	M3X70 (2)
	fisrt layer	Individual intake/ exhaust stack module	M3X28 (2 No. 1 slots)		fisrt layer	Individual intake/ exhaust stack module	
	second layer	Mid position check stack module (with residual pressure release)	M3X80 (2)		second layer	Air intake cut-off stack module (with residual pressure release)	M3X33 (2)
	fisrt layer	Individual intake/ exhaust stack module			fisrt layer	Mid position check stack module (with residual pressure release)	M3X38.5 (2 No. 1 slots)