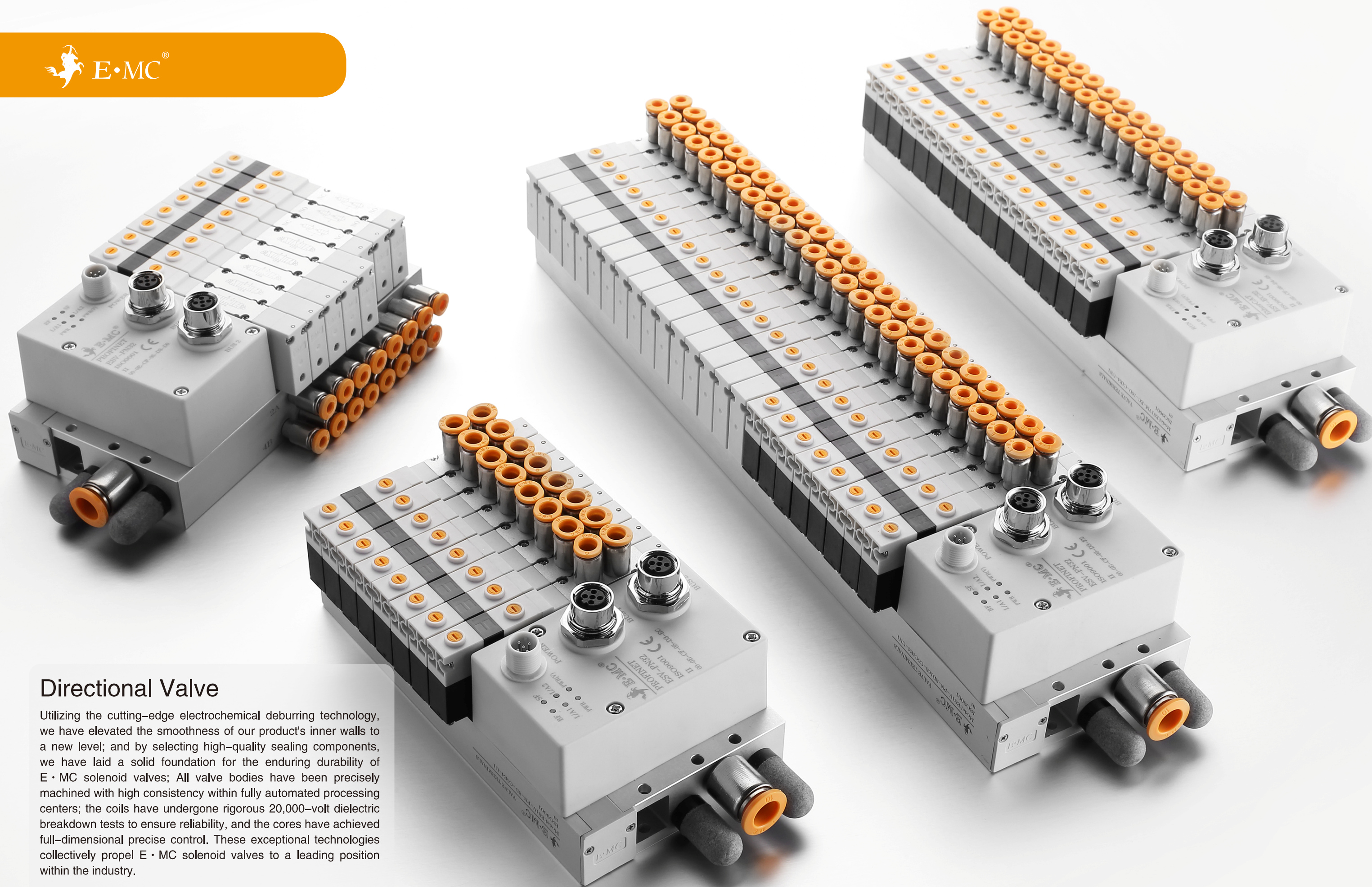




Directional Valve

Utilizing the cutting-edge electrochemical deburring technology, we have elevated the smoothness of our product's inner walls to a new level; and by selecting high-quality sealing components, we have laid a solid foundation for the enduring durability of E·MC solenoid valves; All valve bodies have been precisely machined with high consistency within fully automated processing centers; the coils have undergone rigorous 20,000-volt dielectric breakdown tests to ensure reliability, and the cores have achieved full-dimensional precise control. These exceptional technologies collectively propel E·MC solenoid valves to a leading position within the industry.

○ Precaution for Installation and Use

1. Please check whether the product is damaged during transport, and check the technical parameters (such as operating voltage, working pressure, working temperature, etc.) to confirm whether they satisfy the requirements before installation.

2. Please pay attention to the air flow direction during installation, P(1) is air inlet, A(2)/B(4) is working port, R(3)/S(5) is exhaust port, working medium must be filtered through 40um filter (higher filter precision is available).

3. Before installation, the pipeline should be completely cleaned (Propose to use air guns or empty the pipeline directly before connection) to remove pipeline dust, debris and oil, so that to avoid the influence of valve action (such as stuck, no response or response slowly, etc.), avoid noise from damaged spool and the working life reduction.

4. When using fitting with thread to connect the valve and tubing, not allowed the thread dust and sealing tape fragments into the valve body; When using the sealing tape, the thread end should be set aside 1 or 2 thread pitch non-winding sealing tape; When using liquid glue, should avoid excessive liquid glue going into the valve body

5. Try to avoid using the valve in vibration environment; if slight vibration, please make the vibration direction and spool action direction at right angle to avoid the influence of the spool.
7. Try to install the valve as close as possible to the cylinder, to avoid the influence of active time because of the long pipeline and air consumption increase.

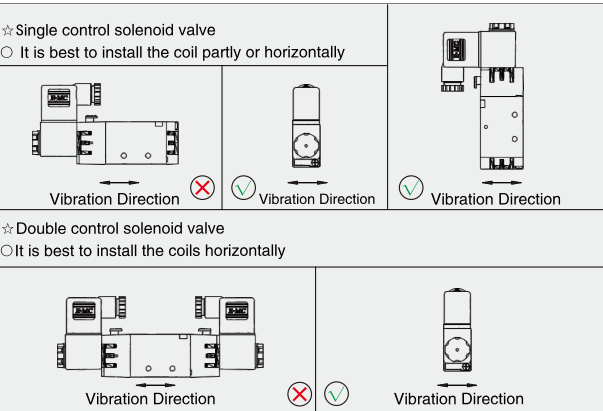
8. When manifold assembly used, please note back pressure phenomenon that caused by incompletely exhaust. Please note wrong action caused by the interaction between the valves. Especially when using the 3 positions, center exhaust valve and single acting cylinder, recommend to inlet and exhaust separately.

9. When using 3 positions center close or 3 positions center pressure valves, it is difficult to guarantee the cylinder stop exactly at any intermediate position, because air compressibility and reasonable leakage of valve and cylinder. If require to stay at the stop position for a long time, please take other methods (such as using induction check valve together).

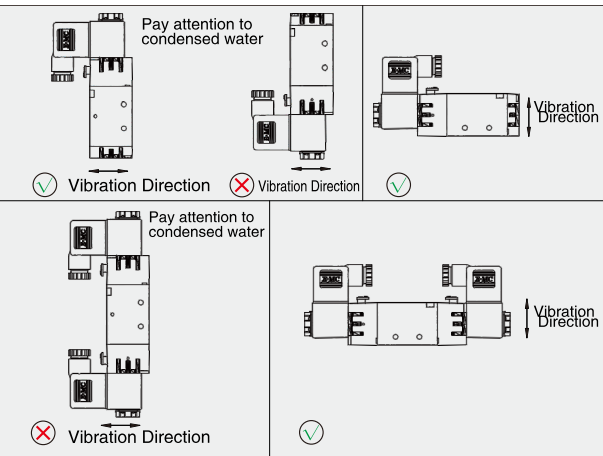
10. When using 3 positions center close valve, please consider the residual pressure release between the valve and cylinder, please set the residual pressure release function in the air circuit.

11. When using internal pilot type, please consider minimum operating pressure, not allowed to throttle at inlet, either exhaust emptied directly, to avoid wrong action caused by big air pressure reduction. If blowing environment, please use external pilot type.

12. Pilot valve, piston cavity, breathing hole and pilot valve exhaust port shall not block or restricted, and the filter need to do regular cleaning or replacement if necessary



6. In order to prevent condensate water, oil, etc flowing into the coil, it is better to make the coil upwards or adopt lateral installation.



○ Precaution for Installation and Use

1. Principle for energy saving:

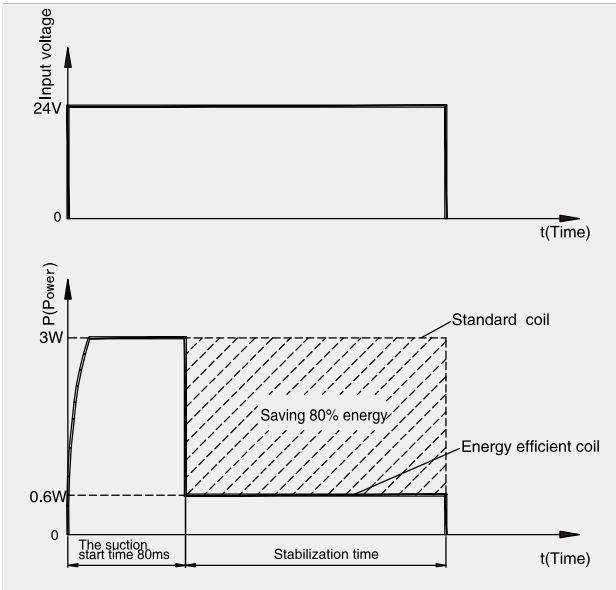
There are 2 stages for valve electrifying: actuation start moment and the stable process. For actuation start moment, it requires high voltage and large current to make sure the valve start normally (High power for the coil is required for this process), after the actuation start moment, it comes to the stable process, for this stage, it only requires low power to maintain stable. The energy saving low power consumption coil is developed according to this feature, it saves 80% energy during the stable stage through the internal energy saving chip, it reduce the coil heat, lower the temperature rising, prolong the life-span of the valve. It can be widely used for the occasions which requires long time coil electrify and low coil temperature rising. The below drawing show the voltage and the energy saving (take N2R251 valve DC24V coil as example).

4. When the coil is on stable keeping period, it can't be used in vibration and dust application because it is on energy saving and low power status. Air inlet of solenoid valve shall be fully filtered to avoid the impurity to reach the end face of pilot.

5. Working temperature: -20~80℃, the internal energy saving chip can not work in high temperature medium, like high temperature water/oil/gas and so on. If the working medium is high temperature, external energy saving conversion module is recommended, the important issue is to make sure environment temperature is not higher than 80℃.

6. Normal electric conversion components: mechanical switch; mechanical relay; solid-state relay; MOS tube; Thyristor tube. Please note below issues when using energy saving coil: om 0 to rated voltage in the proceed of solenoid valve energization.
- (1) Current for convert components should be 2-3 times higher than the Max. current when coils start and actuation.

(2) Max. leak current for convert components should be ≤40uA. The leak current of Normal convert components with protection is relatively big, like solid-state relay (we suggest choose it carefully). In addition, RC circuit protection can not be used, otherwise, directional valve can not revert normally.



2. Requirement for input power: range of the fluctuation of voltage-15%~+10%; the electric source output power shall be above 2-3 times than the power in actuation start moment
3. Actuation start moment of energy saving coil: The starting time is different for different specification and voltage of coil. The lower voltage, the longer time for starting time. Here is the standard voltage testing value of our current products:

Energy saving coil/Modules specification	Starting time
N1R (Internal 110 series)	50 ± 10ms
N2R/N3R/N4R (Internal 210series)	80 ± 20ms
ELP (Internal solenoid valve series)	250 ± 100ms
NF (External small power energy saving module)	50 ± 10ms
NF (External big power energy saving module)	100 ± 20ms

Note: The rise time shall be less than 5 ms when the voltage start from 0 to rated voltage in the proceed of solenoid valve energization.

S2VM/ES2VM

Stacking Module Valve Terminal

Product Features

- Individual air supply stacking module: When the same valve terminal is used for different pressures, 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 terminal, 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 exhaust 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.

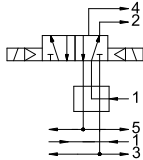
Application Occasions

I : Individual air supply stacking module

1.Application occasions:

- Using different pressures on the same valve terminal as air supply ports with different pressures;
- Applicable to single control/double control/3 position solenoid valves;
- Applicable to internal pilot and external pilot occasions.

2.Circuit Diagram:2 position double control valve



Individual air supply stacking module

Manifold

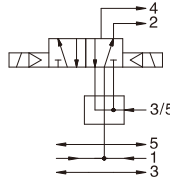
II : Individual air exhaust stacking module

1.Application occasions:

- 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;
- Applicable to single control/double control/3 position solenoid valves;
- 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:

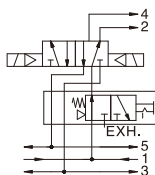
- It is used to shut off the supply air to valves individually which can be used by hot plugging with air pressure, and the solenoid valve can be replaced without stopping the machine.
- Applicable to single control/double control/3 position center exhaust, center pressure solenoid valves;
- When it 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.
- Only for internal pilot specifications, as the external pilot air cannot be shut off.

2.Manual override operation instructions:

- Push the lever down in the PUSH position with slotted screwdriver until it stops, then turn the lever 90° clockwise. (PUSH → LOCK)
- 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:

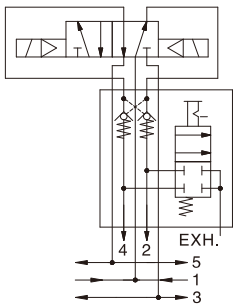
- It is used to hold the intermediate position of the cylinder for a long period of time by using a 3 position center exhaust valve. It can not be combined with 3 position center closed, center pressure and 2pcs 3/2 solenoid valves;
- It can be used for drop prevention at the cylinder stroke end when equipped with a 2 position single/double valve.
- 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:

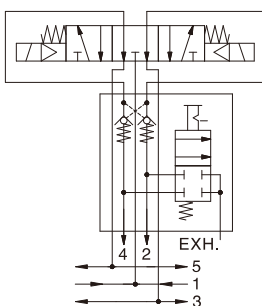
2 position double control valve



Double check stacking module
(With residual pressure release)

Manifold

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	Valve quantity for different port	Voltage	Pilot Type	Wiring Type	Manifold Port	Mounting	Thread Type
S : Standard SN: Energy-saving	2 : 2 Series	Qty (Max.24 links for single control Max.12 links for single control)	Blank: Internal pilot WB: External pilot ①	E4: DC24V	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 D0: With DIN rail clip, no guide rail DIN guide rail packed separately)			

Code	Function	Remark
S	5/2 single	
D	5/2 double	
C	5/3 center closed	
P	5/3 center pressure	
E	5/3 center exhaust	assembly sequence, 1st link start from U side
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	
N ②	airsupply& exhaust module	
TA ③	port 1 airs supply pressure separate	Added after the corresponding valve position code
TG ③	port 3'5 airexhaust pressure separate	
TL ③	port 1/3'5 airs supply& 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	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 selected ports; 2) only U, ut 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:

- 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.;
- 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.;
- The pressure zoning characteristics are the same as the SV series.;
- There are three options for connecting the individual intake stack module: 06/04/08.;
- The intake cut-off module cannot cut off the external pilot air, so it cannot be used in external pilot situations.;
- 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:

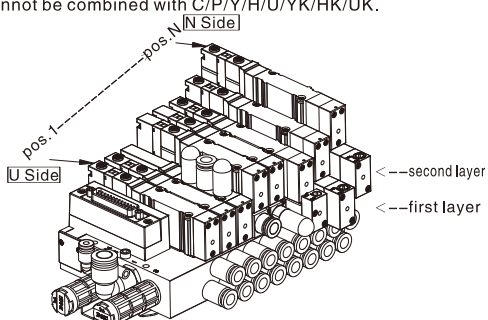
When two or more adjacent valve positions have the same function, use the same number of valve positions to represent the total number of valve positions. For example, if the first to fourth valve positions are dual electronic control solenoid valves and all four valve positions contain separate intake 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 pilot 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 Ø 8 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-2DNSMSXEVEWM-C8E4-UL-D(as shown in the above figure).



How to Order?

ES2VM+ Fieldbus Valve Terminal												
Series No. Body Size Piping Type. — Communication Protocol — □ □ □ □ □ Voltage — Pilot Type — Wiring Type — Manifold Port — Mounting — Threading												
2: 2 Series		VM: Side ported		Qty		Valve quantity for different port		E4: DC24V				
ES: Fieldbus valveterminal						Blank: Double control wiring (max.24 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 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)				
ESN: Energy saving fieldbus valveterminal						Blank: Internal pilot WB: External pilot ①		Blank: G P: PT T: NPT				
Protocols type	Communication Protocol	Output	Max Valve Quantity		Code	Function	Remark	Code	Port entry	2 Series	Remark	
			Single control	Double control	S	5/2 single	assembly sequence: 1st link start from U side	Blank	Both side without silencer, fitting, plug	—	1) plugs are mounted on the opposite of the selected ports; 2) only U or U1 is available for bottom ported; 3) No need this code if order manifold only.	
EC32	EtherCAT	32	24	16	D	5/2 double		U	U side with silencer, PC fitting	Ø10		
EC48		48	—	24	C	5/3 center closed		N	Station N with silencer, PC fitting			
PN32	PROFINET	32	24	16	P	5/3 center pressure		UN	Both side with silencer, PC fitting			
PN48		48	—	24	E	5/3 center exhaust		UL	U side with silencer, PL fitting			
EP32	EtherNet/IP	32	24	16	Y ①	2pcs 3/2 (N.C.)		NL	Station N with silencer, PL fitting			
EP48		48	—	24	H ①	2pcs 3/2 (N.O.)		UNL	Both side with silencer, PL fitting			
CC32	CC-Link	32	24	16	U ①	2pcs 3/2 (N.O./IN.C.)		U1	U side with silencer, POC fitting			
CC48		48	—	24	YK ①	2pcs 3/2 (N.C.) spring return		N1	Station N with silencer, POC fitting			
DN32	DeviceNet	32	24	16	HK ①	2pcs 3/2 (N.O.) spring return		UN1	Both side with silencer, POC fitting			
LK16		16	16	8	UK ①	2pcs 3/2 (N.O./N.C.) spring return						
LK32	IO-Link	32	24	16	B	blind plate						
LK48		48	—	24	N ③	air supply & exhaust module						
DB44	D-SUB44	42	②		TA ④	port 1 air supply pressure separate		No.	Code	Port size		Remark
					TG ④	port 3/5 air exhaust pressure separate		2	06	1/8 port		assembly sequence.
									C4	Ø4 one-touch fitting (ZPOC04-01)		

Basic principles of ordering code:

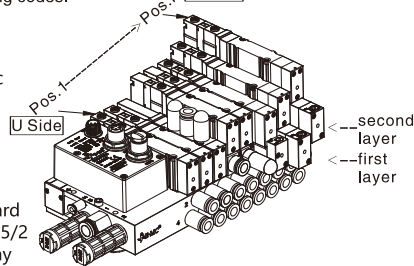
- ① Y/H/U is not available for external pilot due to the air return. YK/HK/UK is available for external pilot due to the spring return.;
- ESV-LK16 can control 16 coils maximum, suitable for 2 to 8 pcs double control valves, or 2 to 16 pcs single control valves;
- ESV can control 32 coils maximum, suitable for 2 to 16 pcs double control valves, or 2 to 24 pcs single control valves;
- 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;
- ② ESV-DB44 is multi-pins valve terminal, can control 42 coils maximum and 24 valve stations maximum, suitable for 13 to 18 pcs double control valves, when the coils is more than 36, station 19 to 24 can be single control valves only;
- ③ 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;
- ④ The pressure zoning characteristics are the same as the SV series;
- ⑤ There are three options for connecting the individual intake stack module: 06/04/08;
- ⑥ The intake cut-off module cannot cut off the external pilot air, so it cannot be used in external pilot situations;
- ⑦ 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.

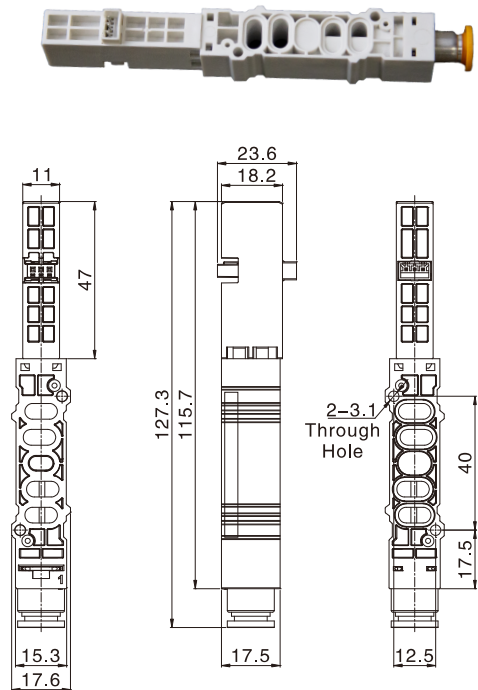
Order Example:

- ① When using the same specification valve and stacking module on the same layer: 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 pilot 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 08 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-PN32-2DNSMSXEVMW-C8E4-U-D (as shown in the above figure).

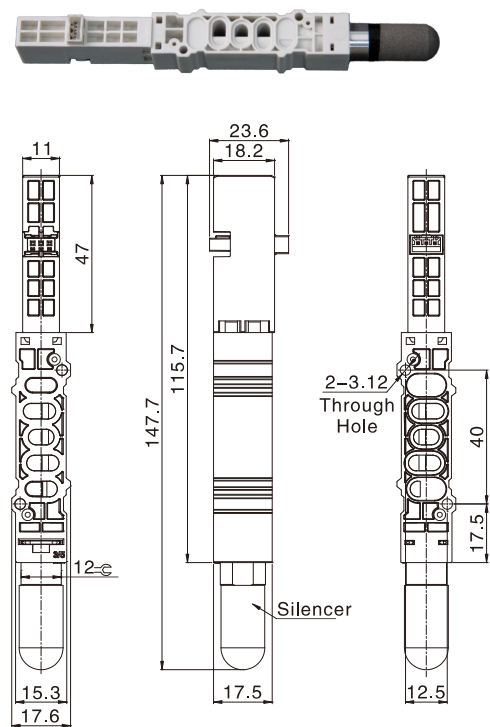


Main Dimension

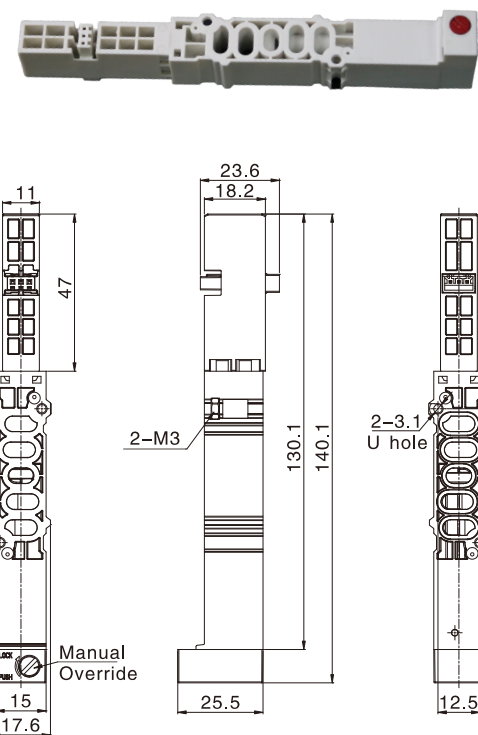
SVMMP522



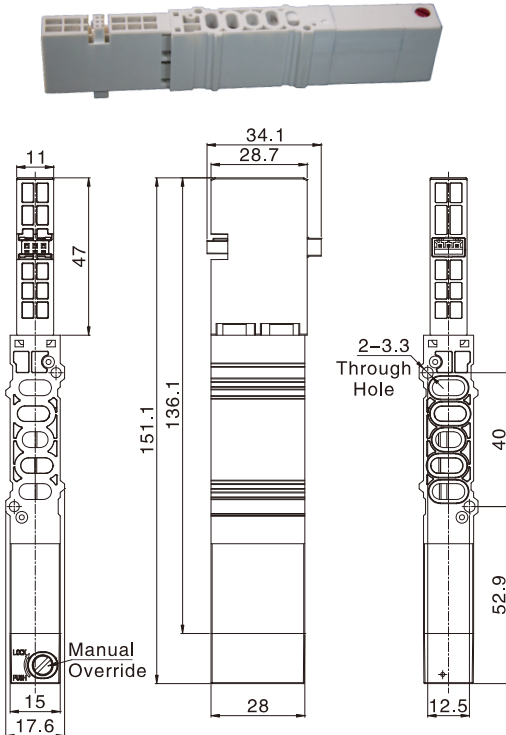
SVMXP522



SVMVP522

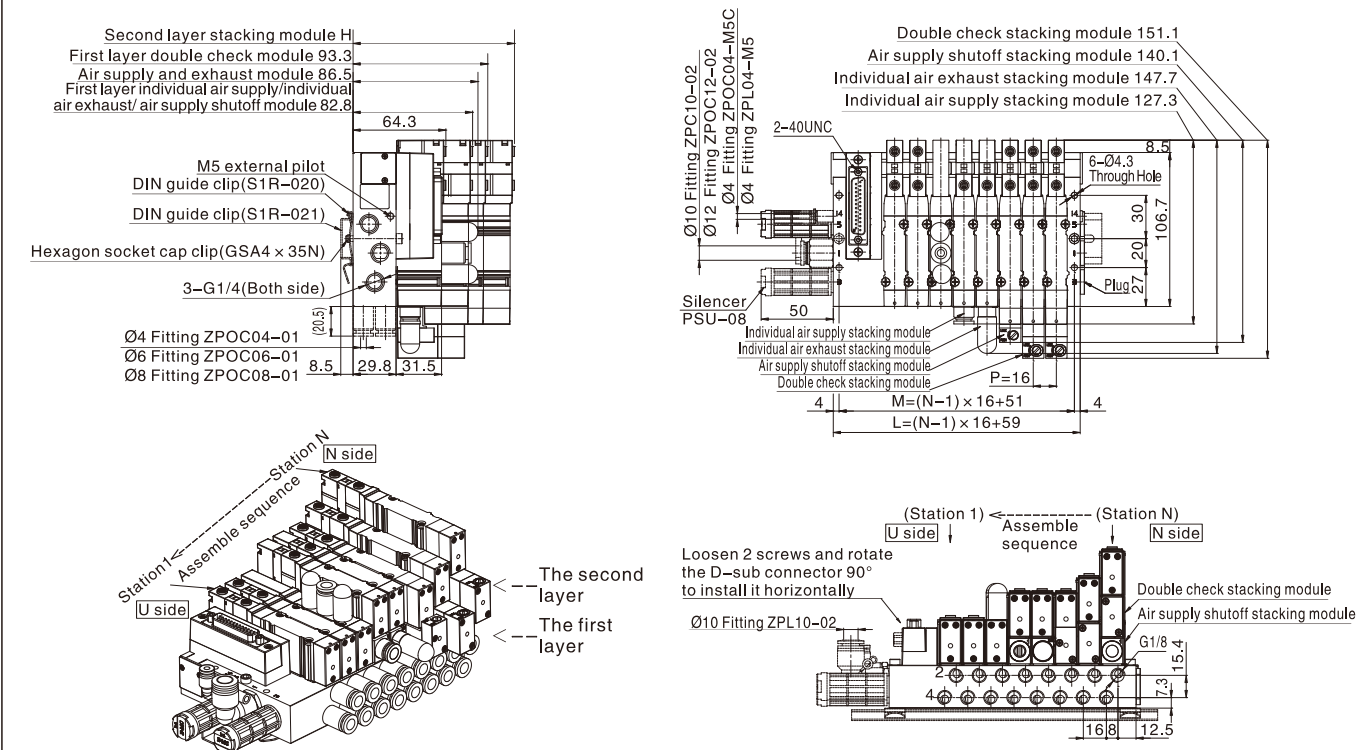


SVMWP522



Main Dimension

S2VM Side Ported Valve Terminal + Stacking Module Dimension Drawings

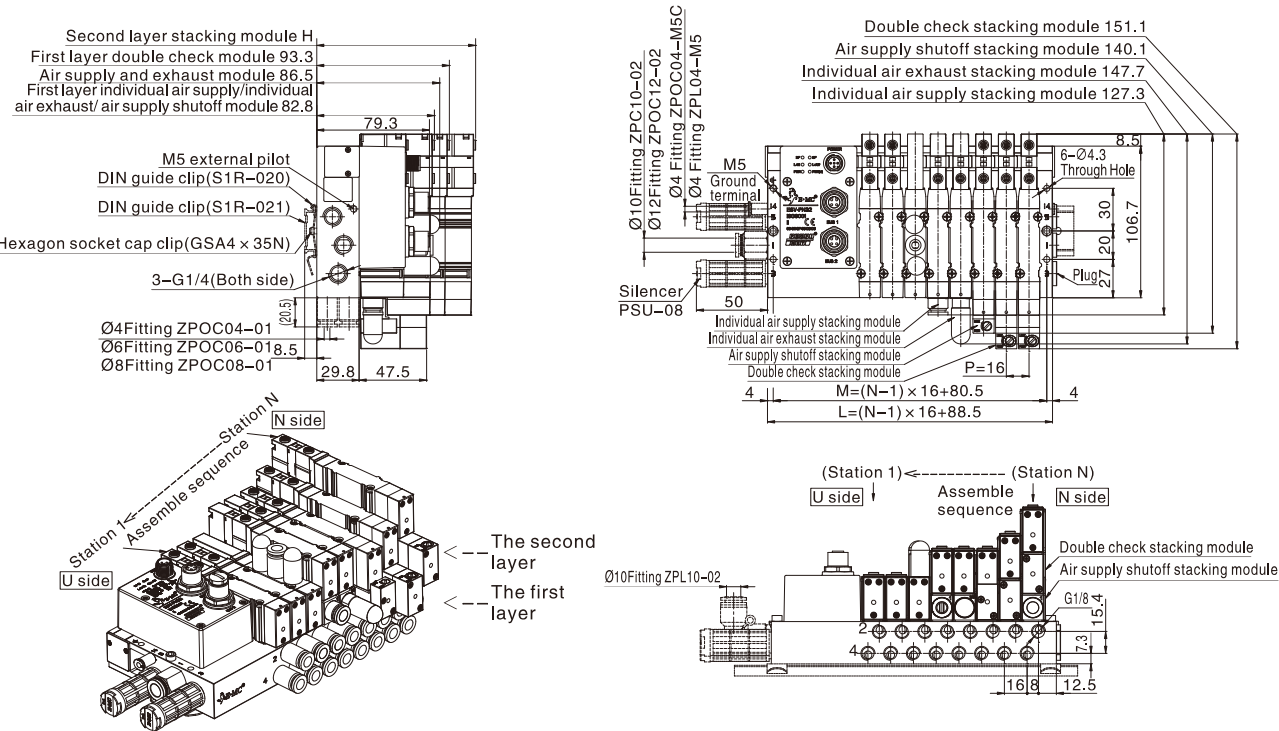


Model	Individual air supply&exhaust stacking module + Air supply shutoff stacking module	Individual air supply&exhaust stacking module + Double check stacking module	Individual air supply&exhaust stacking module + Individual air exhaust stacking module	Double check valve + Air supply shutoff stacking module
Sign				
H	101.3	111.8	101.3	111.8
L	75	91	107	123
M	67	83	99	115

Note:N means valve link.

Main Dimension

ES2VM Side Ported Valve Terminal + Stacking Module Dimension Drawings



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
Sign				
H	101.3	111.8	101.3	111.8

Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sign																							
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
 Valve second layer first layer Manifold	Air intake cut-off stack module (with residual pressure release) M3X33 (2) Individual intake/exhaust stack module M3X28 (2 No. 1 slots)	 Valve second layer first layer Manifold	Individual intake/exhaust stack module M3X70 (2) Individual intake/exhaust stack module M3X33 (2)
 Valve second layer first layer Manifold	Mid position check stack module (with residual pressure release) M3X80 (2) Individual intake/exhaust stack module M3X38.5 (2 No. 1 slots)	 Valve second layer first layer Manifold	Air intake cut-off stack module (with residual pressure release) M3X33 (2) Mid position check stack module (with residual pressure release) M3X38.5 (2 No. 1 slots)

SVT

Solenoid Valve(IP65)



Valve Slice



Air supply
& Exhaust module



Blind plate

Order Example

Valve slice

Series No.	Piping Type	Identification code	Ports	Positions	Body Size	Controls	Original Status	Port Size	Voltage	Pilot Type	Manual Button	Thread Type
S: Standard	V: Piping on valve VM: Piping on manifold (VM series should work with manifold)	T	5: 5 ports	1: 1 series 2: 2 series	1: Single control 2: Double control	M5: M5 M7: M7 06: 1/8"	(Note:Available for V type only)	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock	Blank: Internal pilot WB: External pilot ②		Blank: G P: PT T: NPT
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.												
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												

Order Example:

S series standard type, piping on valve, identification code T, 5/2 way, 1 series valve body, single control, M5 port ,Dc24V. internal pilot.the ERP code is :SVT5211-M5E4.

Air supply & exhaust module

Series No.	Piping Type	Identification code	Category	5/2 way	Body Size	Port size	Thread Type
S:Standard	V: Top ported VM: Side ported	T	NP	52	1: 1 series 2: 2 series	No. Code Port size Remark 1 Series M5 M5: M5 port C4 φ 4 one-touch fitting(ZPOC04-M5C) when fittings required, the silencer will be mounted together M7 M7: M7 port C6 φ 6 one-touch fitting(ZPOC06-M7C) 06 1/8 port 2 Series C6 φ 6 one-touch fitting(ZPOC06-01G) C8 φ 8 one-touch fitting(ZPOC08-01G)	Blank: G

Order Example:

S series standard type, top ported type, identification code T, category NP, 5/2 way, 2 series valve body size, φ 8 port, G thread, the ERP code is SVTNP522-C8.

Blind plate

Series No.	Blind Plate Type	Identification code	Category	2 Position 5 Port	Valve Size
S: Standard	V: Top port VM: Side port	T	BP	52	1:1 series 2:2 series

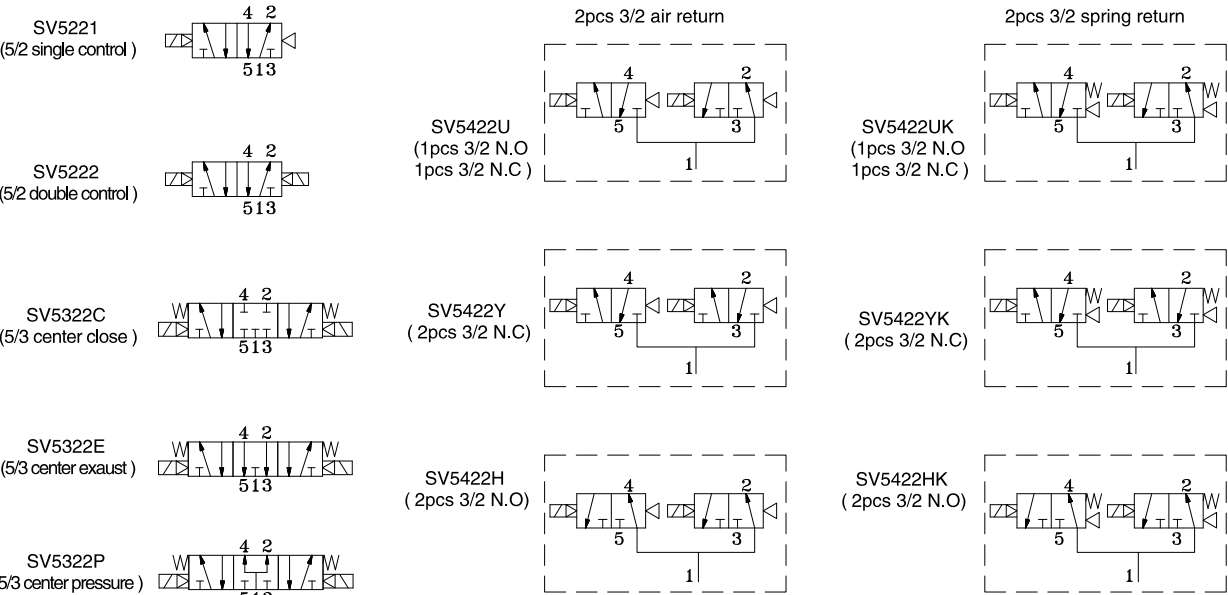
Order Example:

S series standard type, top ported type, identification code T, category BP, 5/2 way, 1 series valve body size, the ERP code is SVTBP521.

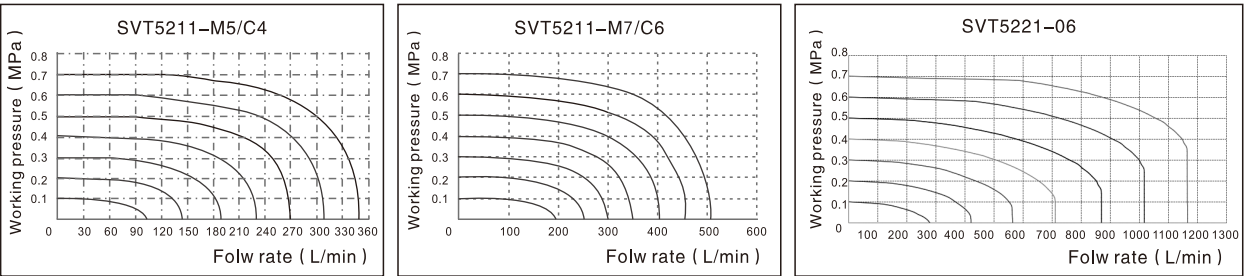
Specifications

Model	SVT5211	SVT5212	SVT5412Y/UH	SVT5412YK/UK/HK	SVT5312C/E/P	SVT5221	SVT5222	SVT5422Y/UH	SVT5422YK/UK/HK	SVT5322C/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				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 (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 40 μ m 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 (℃)	-20~70 (No freezing)									
Working Voltage	DC24V									
Voltage Range	± 10%									
Power Consumption	Standard □ 0.8W									
Insulation Class	F Class									
Protective Class	IP65									
Max.acting Frequency	5/2: 5 cycles/s; 5/3: 3 cycles/s									
Activate Time(0.5MPa)	15ms or less									
Weight (g)	55.5	64.5	65	65	68	88	97	98.5	98.5	104

Symbol



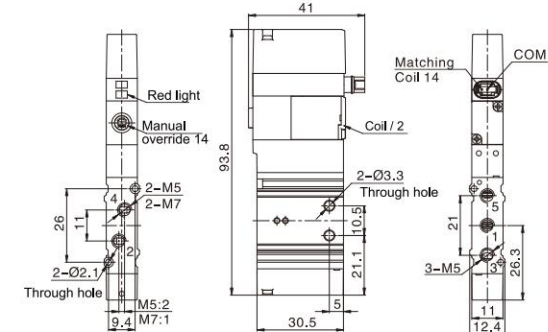
Flow Chart



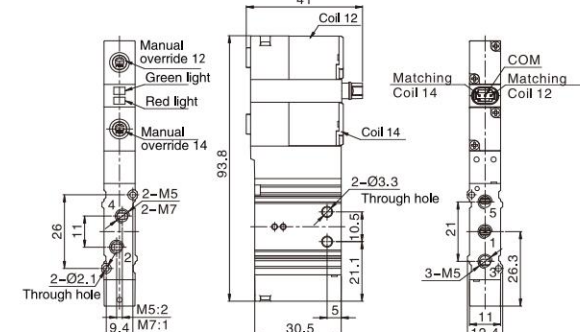
◎ Main Dimension

Solenoid Valve

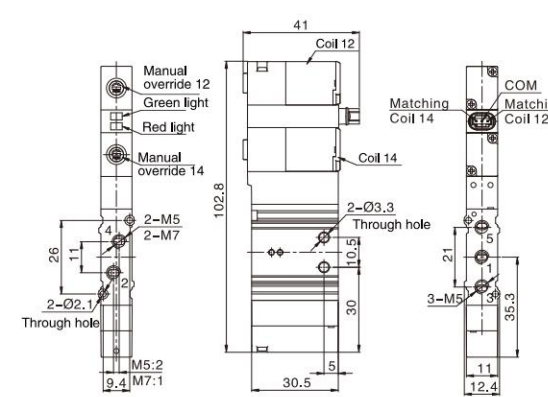
SVT5211



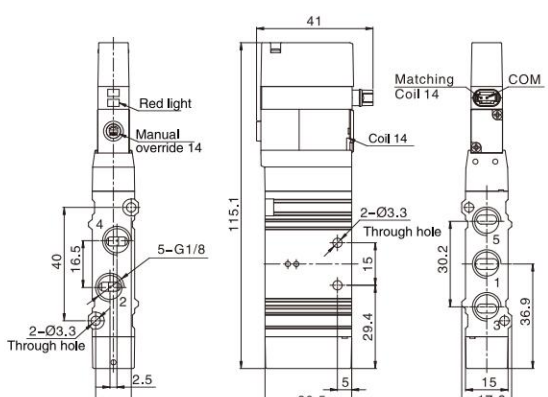
SVT5212/SVT5412



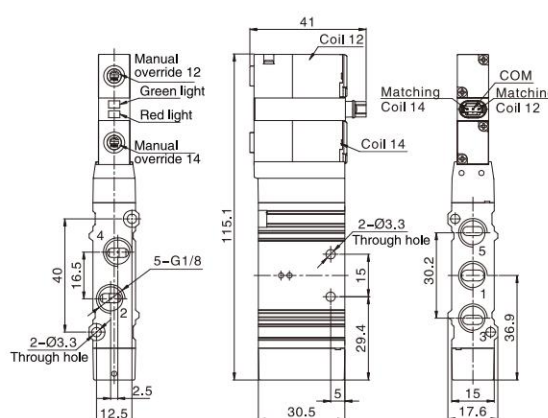
SVT5312



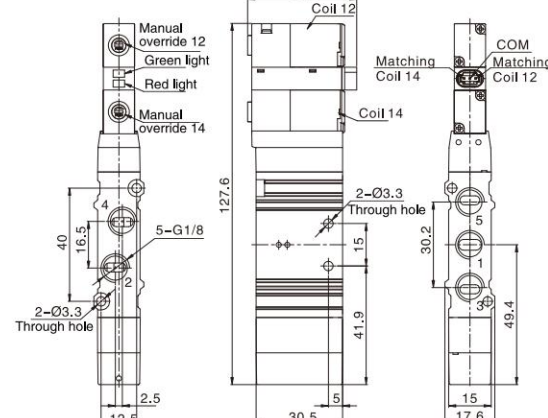
SVT5221



SVT5222/SVT5422



SVT5322



ESVT

Fieldbus Valve Terminal (IP65 Class)



◎ Product Features

- Compatible Protocols:CC-Link, EtherCAT、PROFINET、EtherNet/IP、Profibus-DP、CANopen.
- 32 output control 32 coil /16 dual control valve positions; 48 output control 48 coil/24 dual control valve positions.
- Equipped with two M12 BUS Interface, realize daisy-chain wiring communication, branch connector is not necessary.
- system diagnosis,communication error,working life count,short circuit protection, open circuit inspection, opposite connection protection , undervoltage and overvoltage diagnosis.
- Safe output can be set at any point in module parameter interface. For example, when the bus connection is interrupted, the valve could keep the last condition, or be forced to close or open.
- The shielded cable has strong anti-interference ability and the communication is stable and reliable.

◎ Product Features

- Compatible Protocols: I/O-Link,general-purpose 5-wire unshielded cables are used for connection I/O-Link master and exchange data with PLC.
- Support hot swap,data is stored in the I/O-LINK master,no need to reconfigure parameters to replace the valve island,The newly replaced is automatically identified and start to work at once,reduce equipment downtime, reduce maintenance costs, and improve production efficiency
- Diagnostic functions:system diagnosis,communication error,short circuit protection.
- Independent of fieldbus,possess strong industrial network compatibility,supply popular fieldbus and industry ethernet.
- Communication is completely digitally transmitted,reduce the accuracy loss of analog-to-digital conversion,possess strong anti-interference ability. Maximum transmission distance is 20 meters.

◎ How to Order?

ESV Fieldbus Valve Terminal

Series No. Body Size Piping Type Identification Communication Protocol Voltage Pilot Type Manual Button Wiring Type Manifold Port Mounting Thread Type

ES: Fieldbus valve terminal V: Top ported VM: Side ported VB: Bottom ported T Valve quantity for different port E4: DC24V Blank: Press & Rotate Lock H: Without Lock Blank: G

1: 1 series 2: 2 series Qty Blank: Internal pilot WB: External pilot① Blank: Double control wiring (max.24 links) 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)

Protocols type	Communication Protocol	Output	Max Valve Quantity
EC32	EtherCAT	32	16
EC48	EtherCAT	48	24
PN32	PROFINET	32	16
PN48	PROFINET	48	24
EP32	EtherNet/IP	32	16
EP48	EtherNet/IP	48	24
CC32	CC-Link	32	16
CC48	CC-Link	48	24
DP32	Profibus-DP	32	16
DP48	Profibus-DP	48	24
CP32	CANopen	32	16
CP48	CANopen	48	24
LK32	IO-Link	32	16
LK48	IO-Link	48	24
DB25	D-SUB25	24	12
DB44	D-SUB44	42	21

Series	Coding	Port size	Remark
1	M5	M5 port	assembly sequence, 1st link start from U side
	C4	Ø4 one-touch fitting(ZPOC04-M7C)	
	M7	M7 port	
2	C6	Ø6 one-touch fitting(ZPOC06-M7C)	assembly sequence, 1st link start from U side
	O6	1/8 port	
	C4	Ø4 one-touch fitting(ZPOC04-01G)	
	C6	Ø6 one-touch fitting(ZPOC06-01G)	
	C8	Ø8 one-touch fitting(ZPOC08-01G)	

Code	Function	Remark
S	5/2 single	The number of valve positions is first from the 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.)	
YK①	2pcs 3/2 (N.C.) spring return	
HK①	2pcs 3/2 (N.O.) spring return	
UK①	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	

Code	Exhaust air inlet	1 Series	2 Series	Remark
Blank	Muffler, Fitting Specification	-	-	1. Install a plug on the other side of the selected air inlet. 2. Bottom receiver type is available only for U-side and U1-side.
U	Both side without silencer, fitting, plug			
N	U side with silencer, PC fitting			
UN	Station N with silencer, PC fitting			
UL	Both side with silencer, PC fitting			
NL	U side with silencer, PL fitting			
UNL	Station N with silencer, PL fitting			
U1	Both side with silencer, PL fitting			
N1	U side with silencer, PL fitting			
UN1	Station N with silencer, POC fitting			

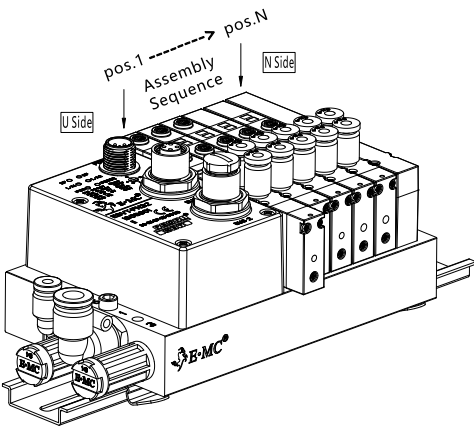
Note

1. 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.

2. Pressure separate is same as SV series .

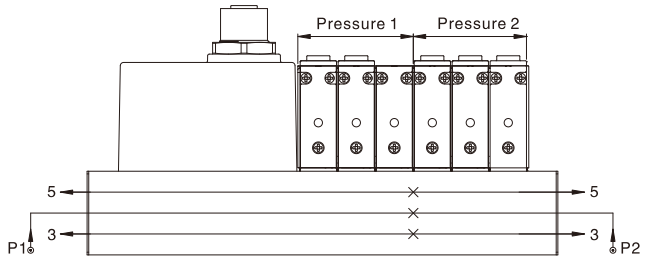
Order Example:

- 1、1. Same valve: ES Fieldbus Valve Terminal, 1 series body, top ported,Identification T, PROFINET,32 outputs, 6 links5/2 double controled SVT5212, port size M5, DC24V, G thread, internal pilot, double control wiring, both sidewithout silencer, fitting, plug, the ERP codeis ES1VT-PN32-6D-M5E4.
- 2、Mix different valves: ES series fieldbus terminal, 1 series body, top ported, PROFINET, 32 outputs see right picture : station 1 is 5/3 center closed SVT5312C, station 2 is 5/2 double control SVT5212, station 3 is 2X3/2 (N.O.) spring return SVT5412HK ,station 4 & station 5 are 5/2 single SVT5211,station 6 is blind plate. station 1 & 2 with 06 one-touch fitting ZPOC06-M7C, station 3-5 with with04 one-touch fitting ZPOC04-M7C,DC24V,G thread, external pilot, double control wiring, U-subside with silencer, 08 one-touch fitting EPL, with DIN rail clip and 1M guide rail.the ERP codeis ES1VT-PN32-CDHK2SB-2C63C4E4-WB-UL-D.
- 3、Mix diferent valve with pressure separate: ES series valve termina, 1 series body,top ported, PROFINET protocol,32 outputs,see right picture : station 1 is 5/3 center closed SVt5312C, port 1 air supply pressure separate between staion 1 and station 2,staion 2 is 5/2 double control SVT5212, station 3 is air supply & exhaust module ,staion 4 is 2X3/2 (N.O.) SVT5412H, port 1,3,5 air supply pressure separate between station 4 and staion 5, staion 5 is 5/2 single SVT5211, staion 6 is blind plate,working por is M7 , DC24v, internal pilot, double control wiring, both sides without silencer,fittings ,plugs, G thread, the ERP code is ES1Vt-PN32-CTADNHTLSB-M7E4.



Explain Of Pressure Separate

- 1、Create pressure zones by using pressure zone blocks at different positions between valve positions inside the inlet/exhaust ports of the manifold;
- 2、Pressure zones are applicable to 1 inlet and 3/5 exhaust ports;
- 3、Each pressure zone uses at least one gas source (or inlet and exhaust module).

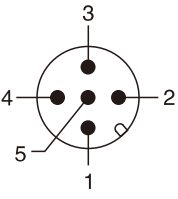
Diagram of pressure separate	Explain of pressure separate
	different options for pressure separate TA: port 1 air supply pressure separate TG: port 3/5 air exhaust pressure separate TL: port 1/3/5 air supply & exhaust pressure separate

ESVT-PN/EC/EP/DP/CC/CP Series

Specifications

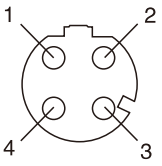
Model	ES1V(VM/VB)T-PN32/48 ES2V(VM/VB)T-PN32/48	ES1V(VM/VB)T-EC32/48 ES2V(VM/VB)T-EC32/48	ES1V(VM/VB)T-EP32/48 ES2V(VM/VB)T-EP32/48	ES1V(VM/VB)T-DP32/48 ES2V(VM/VB)T-DP32/48	ES1V(VM/VB)T-CC32/48 ES2V(VM/VB)T-CC32/48	ES1V(VM/VB)T-CP32/48 ES2V(VM/VB)T-CP32/48
Protocols	PROFINET	EtherCAT	EtherNet/IP	Profibus-DP	CC-Link	CANopen
Configuration files	GSDML file	XML file	EDS file	GSD file	CSP+file	EDS file
Outputs	32/48					
Baud rate	100Mbps					
Control power supply	Voltage DC24V(DC21.6 ~ 26.4V)					
Current consumption	120mA or less					
Output voltage(valve)	DC24V(DC22.8 ~ 26.4V)					
Power interface	M12, 5pin, A encode					
Bus Interface	2xM12 socket, 4 holes, D encode					
Diagnostic	system diagnosis,communication error,short circuit protection,open circuit inspection, opposite connection protection , undervoltage and overvoltage diagnosis					
Protection	IP65					
Storage temperature(°C)	-20 ~ 70°C					
Working temperature(°C)	-10 ~ 60°C					

Power interface



Pin	Type	Description
1	PS24	+24V Control voltage +24V
2	PL24	+24V Operating voltage of load valve
3	PS0	0V Control voltage 0V
4	PL0	0V Operating voltage of load valve
5	FE	Grounding

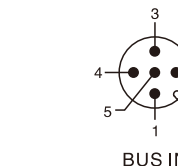
PN/EC/EP Bus Interface



Pin	Type	Description
1	TD+	Send data+
2	RD+	Receive data+
3	TD-	Send data-
4	RD-	Receive data-

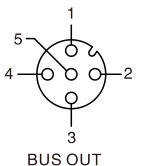
DN/CC/CP Bus Interface

CC



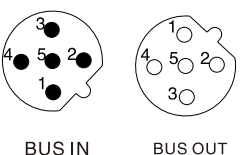
Pin	Type	Description
1	SLD	Blocking
2	DB	Data Exchange
3	DG	
4	DA	
5	Blank	Unused

CP



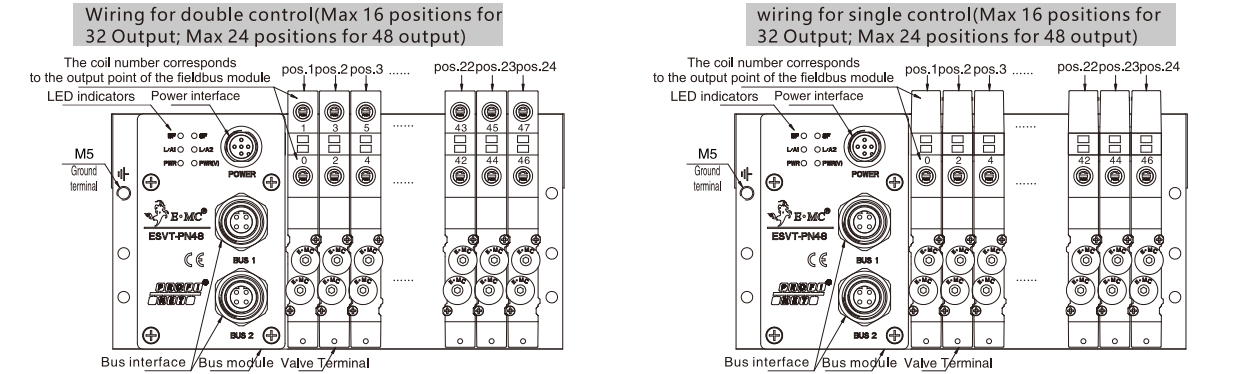
Pin	Type	Description
1	CAN_SHLDV+	CAN Shield(option)
2	CAN_V+	24V+
3	CAN_GND	CAN Groud Connection
4	CAN_H	High level signal
5	CAN_L	Low level signal

DP Bus Interface



Pin	BUS IN	BUS OUT	Description
1	-	VP(P5V)	Voltage +5V
2	Rxd / TxD-N	RxD/TxD-N	Data cable A
3	-	DGND(M5V)	Data ground
4	Rxd / TxD-P	RxD/TxD-P	Data cable B
5	FE	FE	Functional ground

Wiring diagram ESVT-PN/EC/EP/DP/CC/CP Series



Cable Ordering Code

PN/EC/EP/CC/CP/DP Power Cable (Unshielded)

M125  - PVC - 

M12 Female
5 cores

R: Straight-through type
RL: Rectangular type

2M: 2 meters
5M: 5 meters
(Other length could be customized)

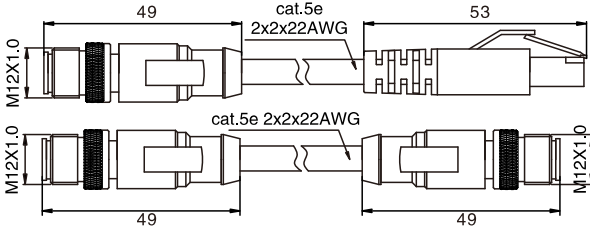
PN/EC/EP Bus cable (shielded)

ESV-EN -  - 

Ethernet
fieldbus wiring

M12RJ: M12 male connectors
M12M12: M12 male connectors

2M: 2 meters
5M: 5 meters
(Other length could be customized)



DN/CC/CP/DP bus cable (shielded)

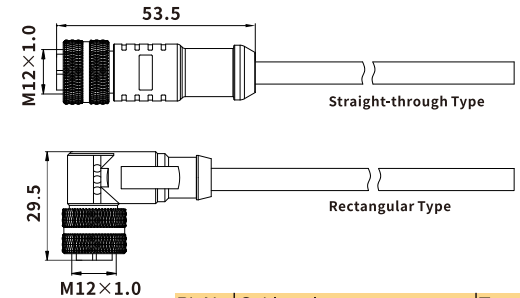
ESV - Protocol -  - 

DN: DeviceNet/CANopen
CC: CC-Link
DP: PROFIBUS DP

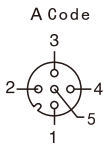
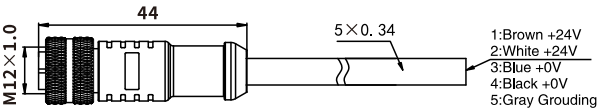
2M: 2 meters
5M: 5 meters
(Other length could be customized)

M12: M12 Female(Straight-through type)
M12L: M12 Female(Rectangular type)
M12F: M12 Male(Straight-through type)
M12FL: M12 Male(Rectangular type)
M12M12: M12 Male & Female(Straight-through type)
M12M12L: M12 Male & Female(Rectangular type)

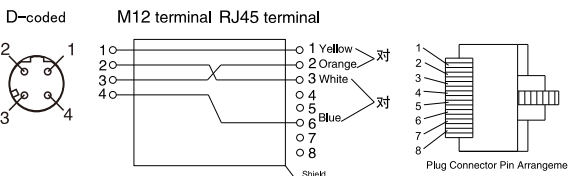
DN/CP Female Cable (Shielded)



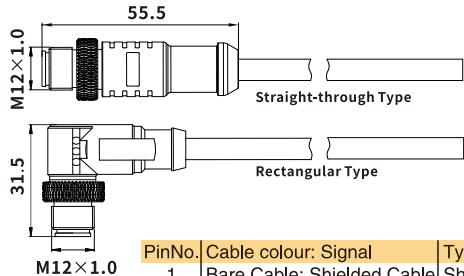
PinNo.	Cable colour	Type
1	Bare Cable : Shielded Cable	Shielded Cable
2	Red : V+(Power Cable)	A pair of twisted pairs
3	Black: V-(Power Cable)	A pair of twisted pairs
4	White: CAN_H(Date Cable)	A pair of twisted pairs
5	Blue : CAN_L(Date Cable)	A pair of twisted pairs



Wiring diagram (through cable)

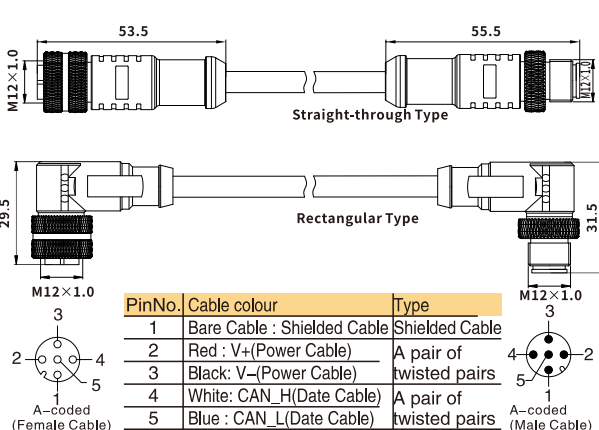


DN/CP Male cable(shielded)



PinNo.	Cable colour: Signal	Type
1	Bare Cable: Shielded Cable	Shielded Cable
2	Red : V+(Power Cable)	A pair of twisted pairs
3	Black: V-(Power Cable)	A pair of twisted pairs
4	White: CAN_H(Date Cable)	A pair of twisted pairs
5	Blue : CAN_L(Date Cable)	A pair of twisted pairs

DN/CP Male & Female Cable (Shielded)



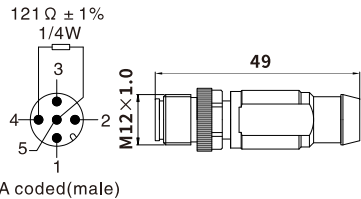
PinNo.	Cable colour	Type
1	Bare Cable : Shielded Cable	Shielded Cable
2	Red : V+(Power Cable)	A pair of twisted pairs
3	Black: V-(Power Cable)	A pair of twisted pairs
4	White: CAN_H(Date Cable)	A pair of twisted pairs
5	Blue : CAN_L(Date Cable)	A pair of twisted pairs

Cable Ordering Code

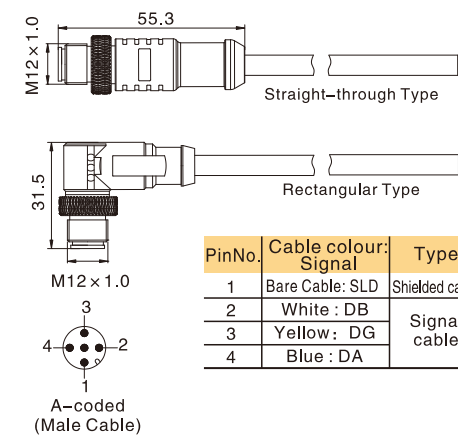
DeviceNet terminal resistance

Series - Communication Protocol - R

ESV DN: DeviceNet R: terminal resistance

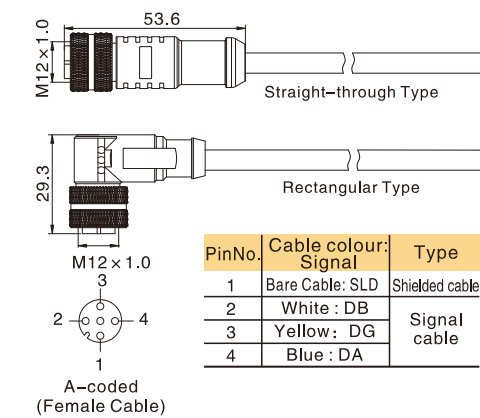


CC Male Cable (Shielded)



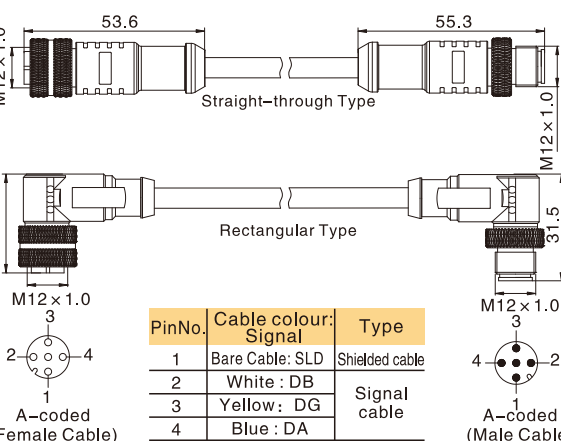
PinNo.	Cable colour: Signal	Type
1	Bare Cable: SLD	Shielded cable
2	White : DB	Signal cable
3	Yellow: DG	Signal cable
4	Blue : DA	Signal cable

CC Female Cable (Shielded)



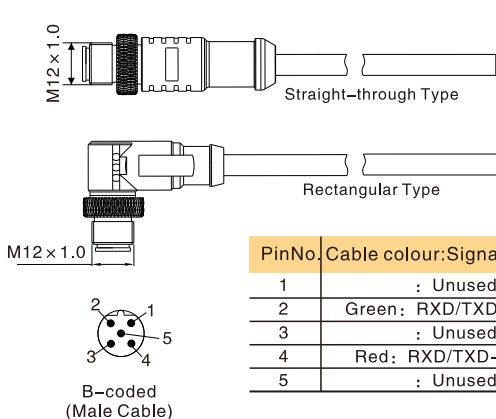
PinNo.	Cable colour: Signal	Type
1	Bare Cable: SLD	Shielded cable
2	White : DB	Signal cable
3	Yellow: DG	Signal cable
4	Blue : DA	Signal cable

CC Male & Female Cable (Shielded)



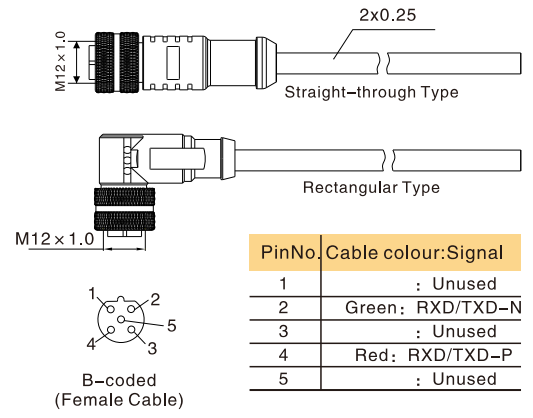
PinNo.	Cable colour: Signal	Type
1	Bare Cable: SLD	Shielded cable
2	White : DB	Signal cable
3	Yellow: DG	Signal cable
4	Blue : DA	Signal cable

DP Male Cable (Shielded)



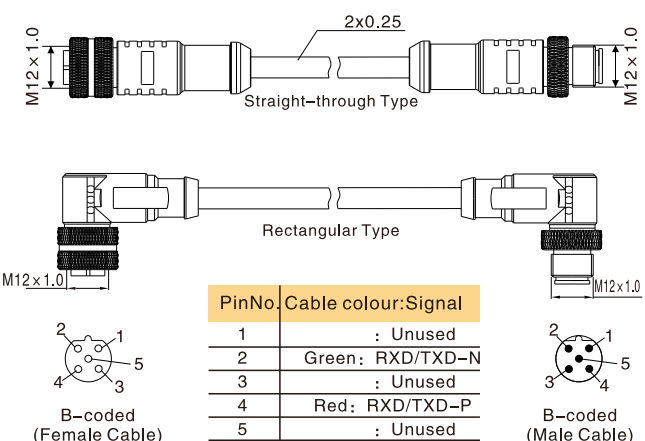
PinNo.	Cable colour:Signal
1	: Unused
2	Green: RXD/TXD-N
3	: Unused
4	Red: RXD/TXD-P
5	: Unused

DP Female Cable (Shielded)



PinNo.	Cable colour:Signal
1	: Unused
2	Green: RXD/TXD-N
3	: Unused
4	Red: RXD/TXD-P
5	: Unused

DP Male & Female Cable (Shielded)



PinNo.	Cable colour:Signal
1	: Unused
2	Green: RXD/TXD-N
3	: Unused
4	Red: RXD/TXD-P
5	: Unused

● Cable Ordering Code

5-Cores Connector(M12-A Code)

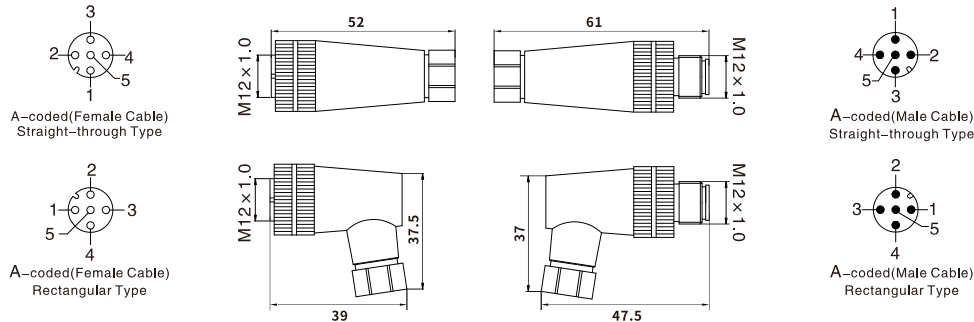
M125

5-Cores Connector
(M12-A Code)

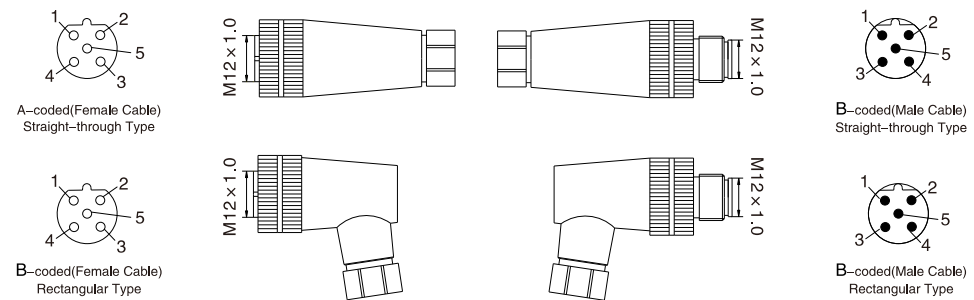
R:Rotating Female Head(Straight-through Type)
RL:Rotating Female Head(Rectangular Type)
RF:Rotating Male Head(Straight-through Type)
RFL:Rotating Male Head(Rectangular Type)

空白: A code
B: B code

M12-A Code



M12-B Code



● Status LED Indicator

PROFIBUS DP

BF ○ ○ SF
SD ○ ○ RD
PWR ○ ○ PWR(V)

Status Indicator	BF	SF	Meaning
Data Interaction Indicator	Off	Off	Normal internet communication
	Red Light On	Off	Unable to detect baud rate
	Red light flash	Off	Baud rate detected but not addressed by master
	Off	Red Light On	Internal error (no load voltage,voltage out of range)
	Red Light On	Red Light On	Address out of range
	Red light flash	Red Light On	DP master sending parameters do not match local parameters
	SD	RD	Meaning
	Off	Off	No data interaction
	Green Light On	Green Light On	Have data interaction
	PWR	PWR(V)	Meaning
Power Indicator	Off	Off	System without power supply
	Green Light On	Red light flash	Lload without power supply
	Red Light On	Green Light On	System voltage is higher than 26.4V
	Red light flash	Green Light On	System voltage is below 21.6V
	Green Light On	Red Light On	Load voltage is higher than 26.4V
	Green Light On	Red light flash	Load voltage is below 21.6V
	Green Light On	Green Light On	Normal module power supply

● Status LED Indicator

PROFINET

BF ○ ○ SF
L/A1 ○ ○ L/A2
PWR ○ ○ PWR(V)

Indicator	Status	Meaning
BF	Red light on	Communication not connected,IP address or device name are duplicated.
	Green light flash	Module is connecting with PN master station,no module address assigned
	Green light on	System is normal
SF	Green light on	System is normal
	Green light flash	short circuit,open-circuit,reverse polarity,count limited
L/A1	Yellow light on	BUS1 PROFINET internet connection
	Off	BUS1 no internet connection
	Yellow light flash	BUS1 internet communication is normal
L/A2	Yellow light on	BUS2 PROFINET internet connection
	Off	BUS2 no internet connection
	Yellow light flash	BUS2 internet communication is normal
PWR	Off	Module without power supply
	Green light on	Module with 24V power supply
	Red light on	Module overvoltage
PWR (V)	Green light flash	Module undervoltage
	Off	Load without power supply
	Green light on	Load with 24V power supply
	Red light on	Load overvoltage
	Green light flash	Load undervoltage

EtherNet/IP

NS ○ ○ MS
L/A1 ○ ○ L/A2
PWR ○ ○ PWR(V)

Indicator	Status	Meaning
NS	Off	No power supply or no module address assigned
	Red light flash	EtherNet/IP timeout
	Green light flash	EtherNet/IP no communication connection
MS	Green light on	System is normal
	Red light flash	short cirsuit,open-circuit,reverse polarity,count limited
L/A1	Yellow light on	BUS1 EtherNet/IP internet connection
	Off	BUS1 no internet connection
	Yellow light flash	BUS1internet communication is normal
L/A2	Yellow light on	BUS2 EtherNet/IP internet connection
	Off	BUS2 no internet connection
	Yellow light flash	BUS2 internet communication is normal
PWR	Off	Module without power supply
	Green light on	Module with 24V power supply
	Red light on	Module overvoltage
PWR (V)	Green light flash	Module undervoltage
	Off	Load without power supply
	Green light on	Load with 24V power supply
	Red light on	Load overvoltage
	Green light flash	Load undervoltage

EtherCAT

RUN ○ ○ ERR
L/A1 ○ ○ L/A2
PWR ○ ○ PWR(V)

Indicator	Status	Meaning
RUN	Off	Initial status
	Green light flash	Pre-operation or safe operation
	Green light flash	Normal working status
ERR	Off	Initialization normal
	Red light flash	Initialization fail
L/A IN	Green light on	BUS1 EtherCAT internet connection
	Off	BUS1 no internet connection
	Green light flash	BUS1 internet communication is normal
L/A OUT	Green light on	BUS2 EtherCAT internet connection
	Off	BUS2 no internet connection
	Green light flash	BUS2 internet communication is normal
PWR	Off	Module without power supply
	Green light on	Module without power supply
	Red light on	Module overvoltage
PWR (V)	Red light flash	Module undervoltage
	Off	Load without power supply
	Green light on	Load with 24V power supply
	Red light on	Load overvoltage
	Red light flash	Load undervoltage

CC-Link

RUN ○ ○ ERR
SD ○ ○ RD
PWR ○ ○ PWR(V)

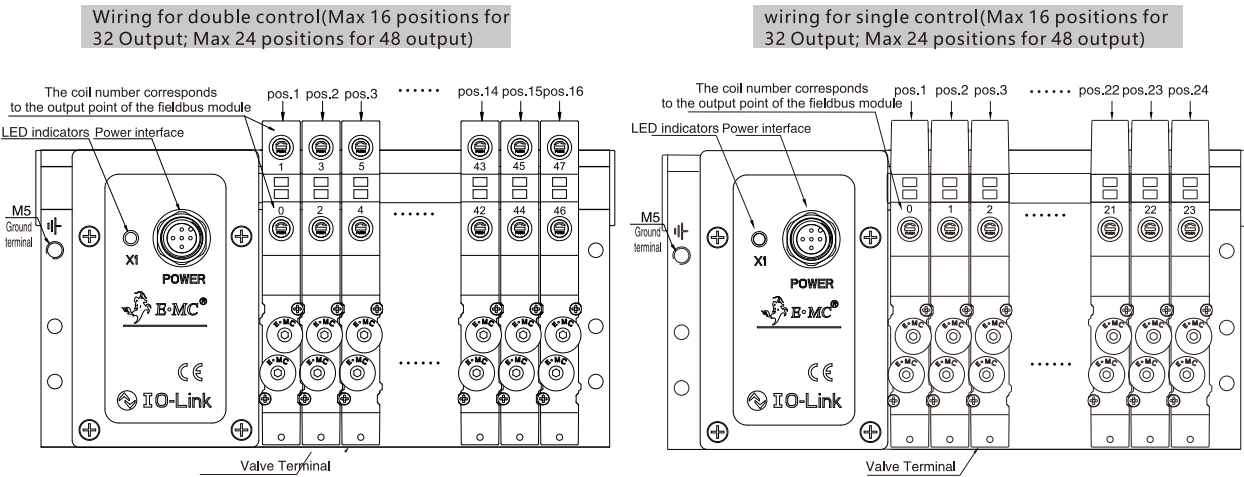
Indicator	Status	Meaning
RUN	Green light on	normal internet connection
	Off	no internet connection
ERR	Red light on	abnormal internet communication
	Red light flash	The station number setting and baud rate were changed in the communication
	Off	normal internet communication
SD	Green light on	normal data transmission
	Off	No data interaction or data sending exception
RD	Green light on	normal data reception
	Off	No data interaction or Data reception exception
PWR	Green light on	Module without power supply
	Off	Module without power supply
	Red light flash	Module undervoltage
PWR(V)	Red light on	Module overvoltage
	Off	Module with 24V power supply
	Green light on	Load with 24V power supply
	Off	Load without power supply
	Red light flash	Load undervoltage
	Red light on	Load overvoltage
	Off	Load undervoltage

CANopen

MS ○ ○ NS
IO ○ ○ SD
PWR ○ ○ PWR(V)

Indicator	Color	Status	Meaning
MS	Green	on	Normal module operation
		off	Abnormal module or Abnormal power
NS	Red	on	Bus not operating, not connected or stop, Node 0 or 127
		on	Communication failure
		off	Normal communication
IO	Green	on	Running mode
		Rapid Flash	Prerunning mode
		Slow Flash	Bus interruption attempt to reconnect or change nodes while running, baud rate
SD	Green	off	Bus not operating, not connected or stop
		Flash	Normal data transmission
PWR	Green	off	No data transmission
		on	Normal control power supply
		off	Abnormal control power supply
PWR(V)	Red	on	Control power overvoltage
		Flash	Control power undervoltage
		off	Normal control power supply
PWR(V)	Green	on	Normal load power supply
		off	Abnormal load power supply
		on	Load power supply overvoltage
PWR(V)	Red	SlowFlash	Load power supply undervoltage
		Rapid Flash	Load power supply reversed
		off	Auxiliary power supply is normal

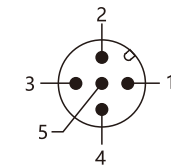
Wiring Diagram—ESV-LK Series



ESVT-LK Series

Power interface

M12, A encode, Class B



Pin	Type	Description
1	PS24	+24V Control voltage
2	PL24	+24V Operating voltage of load valve
3	PS0	0V Control voltage
4	C/Q	Data communication
5	PL0	0V Operating voltage of load valve

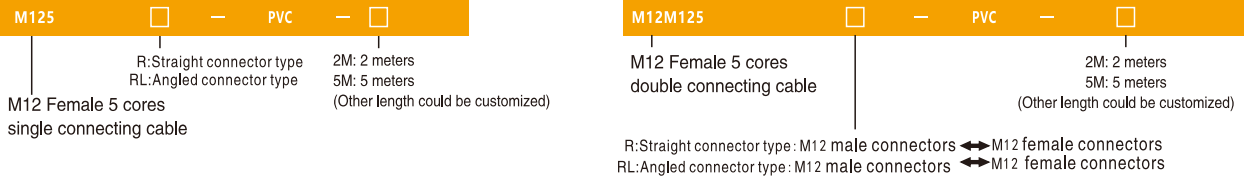
LED Indicators

Indicators	Status	Meaning
X1	LED Close	Abnormal power supply
	Green open	Normal power supply, no establish protocols
	Red open	Fault or abnormal load power supply
	Green flash	Normal working

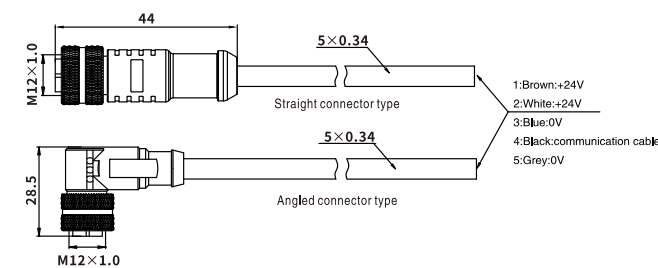
Specifications

Code	ES1V(VM/VB)T-LK32 ES2V(VM/VB)T-LK32	ES1V(VM/VB)T-LK48 ES2V(VM/VB)T-LK48
Output	32	48
Protocols	IO-Link	
Baud rate	COM2 (38.4kbps)	
Configuration files	IODD file	
Specification	V1.1	
Output voltage	Voltage	DC24V(DC21.6~26.4V)
	Current consumption	25mA below
Output type	DC24V(DC22.8 ~ 26.4V)	
Power interface	M12, 5pin, A encode	
Type	Class B	
Diagnostic	System diagnosis,communication error,short circuit protection	
Protection	IP65	
Storage temperature	-20 ~ 70℃	
Working temperature	-10~60℃	

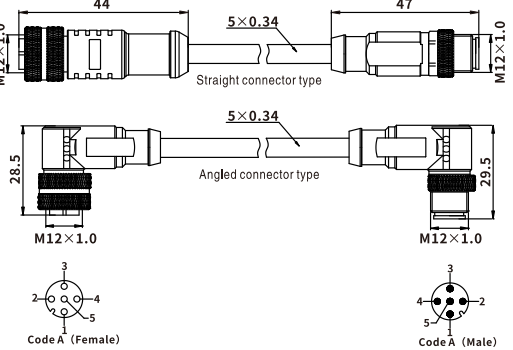
Cable Ordering Code



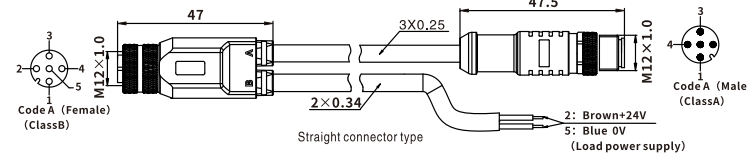
Single connecting cable(Class B)



Double connecting cable(Class B)



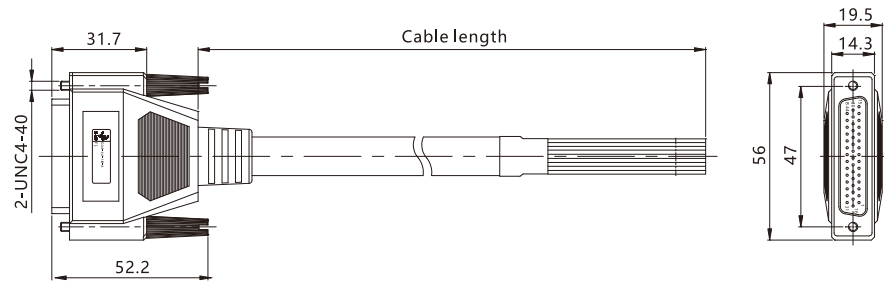
Y-type connecting cable(Class A&Class B)



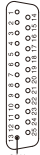
Precautions for Use

- Do not disassemble, modify(including replacing printed circuit boards) or repair without authorization, which may cause injury or failure.
- Do not operate the product exceeding the parameters(limited values), and do not use it for flammable or harmful liquids, which may cause fire, malfunction or damage to the product. Please verify the manual before using.
- Do not operate in an environment containing flammable and explosive gases, which may cause fire or explosion. This product is not designed of explosion-proof.
- If use this product in the interlock circuit:(1)Provide double interlocking systems, such as mechanical system;(2)Check the products regularly, avoid accidents by malfunctions.
- The following instructions must be followed during maintenance: (1)turn off the power;(2) stop providing air, remove the remaining pressure and make sure that there is no air supply before maintenance; otherwise, it may cause injury.
- After the maintenance is completed, check the functions properly. If the equipment does not work properly, please stop the operation. In case of unexpected failure, safety cannot be guaranteed.
- The product designed used for industries. Except under industrial environments, when used under enviroments such as: mixed commercial and residential areas, measures must be taken to prevent radio interference.
- The bus manifold and power cord must be functionally grounded to ensure the safety and anti-noise performance of the fieldbus system.
- IO-Link valve terminal provide the opetrating voltage through the B-type port,normally,please provide power separately when A-type port used .

Connector Cable



D25–25 wire color

PINs of connector cable diagram	PIN number & Wire color							
	PIN number	D25–25 wire color	PIN number	D25–25 wire color	PIN number	D25–25 wire color	PIN number	D25–25 wire color
	1	Purple	8	Black	15	red with 1 point	22	white with 2 points
	2	Orange	9	Purple with 1 point	16	green with 1 point	23	red with 2 points
	3	Pink	10	Orange with 1 point	17	black with 1 point	24	green with 2 points
	4	Grey	11	Pink with 1 point	18	purple with 2 points	25	black with 2 points
	5	white	12	Grey with 1 point	19	tsorange with 2 points		
	6	Red	13(COM)	Yellow	20	pink with 2 points		
	7	Green	14	white with 1 point	21	grey with 2 points		

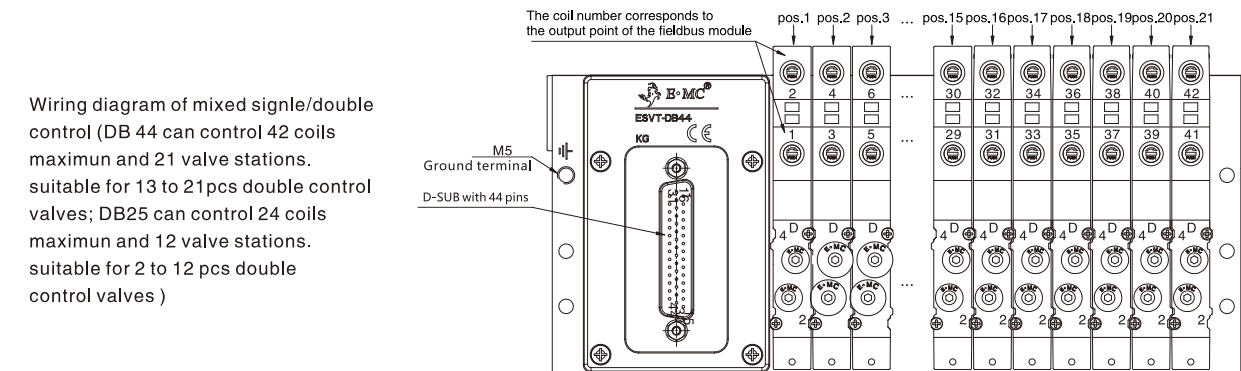
D44–44 wire color

PINs of connector cable diagram	PIN number & Wire color							
	PIN number	D44–44 wire color	PIN number	D44–44 wire color	PIN number	D44–44 wire color	PIN number	D44–44 wire color
	1	orange	12	purple with 1 point	23	blue with 2 points	34	white with 3 points
	2	orange with 1 point	13	purple with 2 points	24	blue with 3 points	35	white with 4 points
	3	orange with 2 points	14	purple with 3 points	25	blue with 4 points	36	grey
	4	orange with 3 points	15	purple with 4 points	26	brown	37	grey with 1 point
	5	orange with 4 points	16	black	27	brown with 1 point	38	grey with 2 points
	6	pink	17	black with 1 point	28	brown with 2 points	39	grey with 3 points
	7	pink with 1 point	18	black with 2 points	29	brown with 3 points	40	grey with 4 points
	8	pink with 2 points	19	black with 3 points	30	brown with 4 points	41	yellow
	9	pink with 3 points	20	black with 4 points	31	white	42	yellow with 1 point
	10	pink with 4 points	21	blue	32	white with 1 point	43	red (COM)
	11	purple	22	blue with 1 point	33	white with 2 points	44	green (COM)

D25/D44 Cable Ordering Code

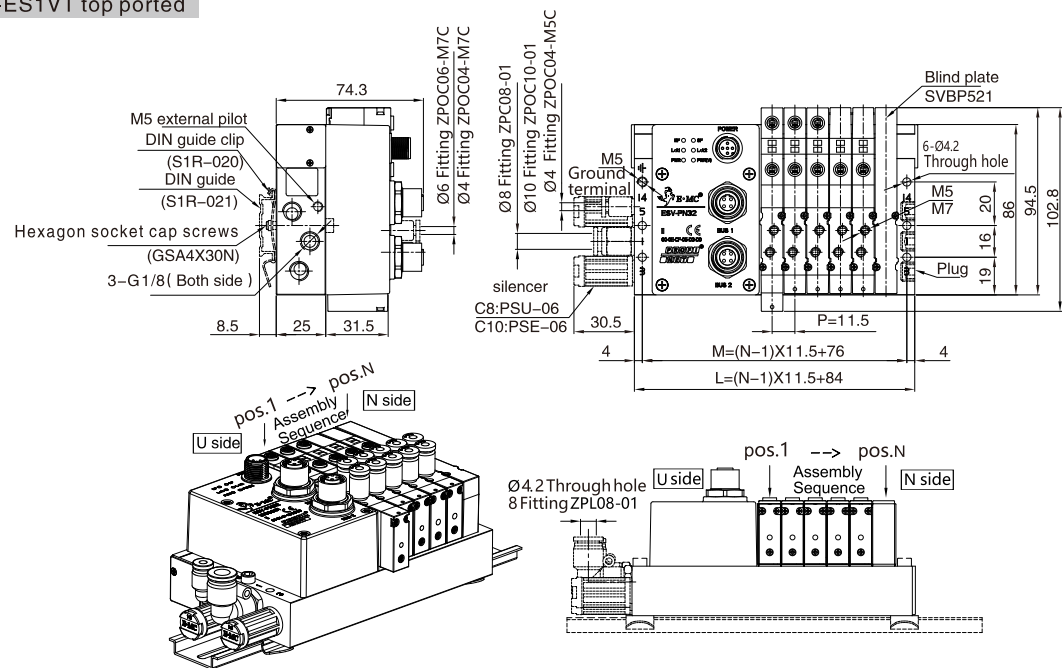
Connect Types	Wires In Cable	Cable Length	A
D25: D-Sub connector with 25 pins D44: D-Sub connector with 44 pins	25: 25 wires(24 coils or less) 44: 44 wires(42 coils or less)	1M: 1 meters 2M: 2 meters 3M: 3 meters (Other length could be customized)	

ESVT-DB44/DB25 Valve Terminal Inner Wiring Diagram



Main Dimension

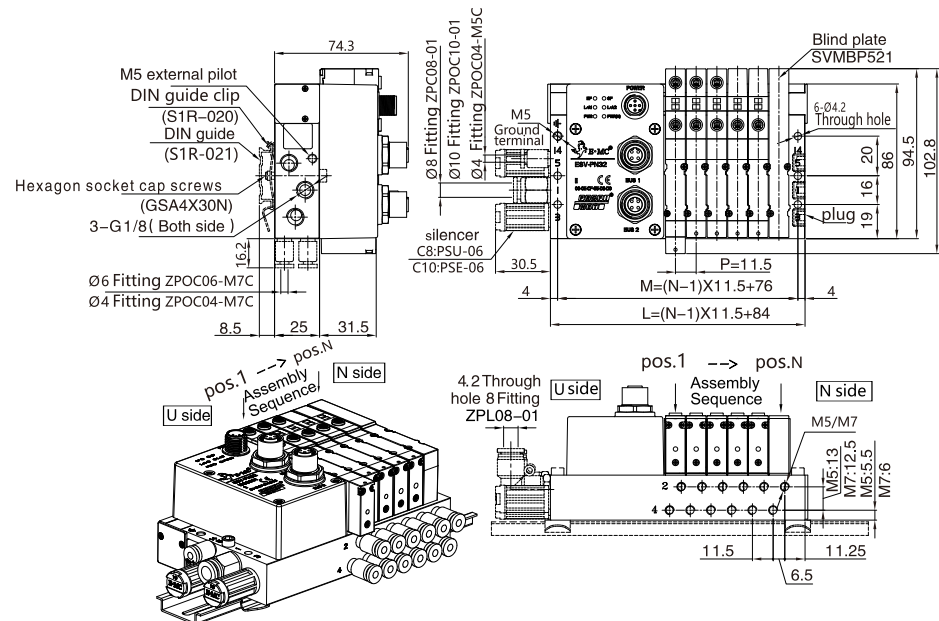
1 Series–ES1VT top ported



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		95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M		87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5

1 Series–ES1VMT side ported

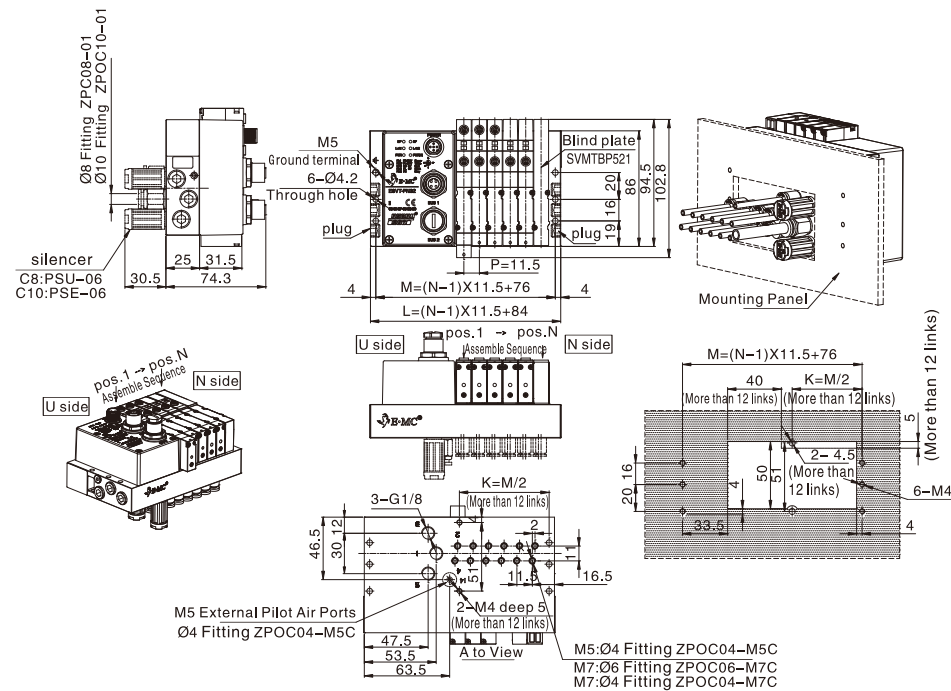


Note: N means valve link

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		95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M		87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5

© Main Dimension

1 Series-ES1VBT Botten Ported

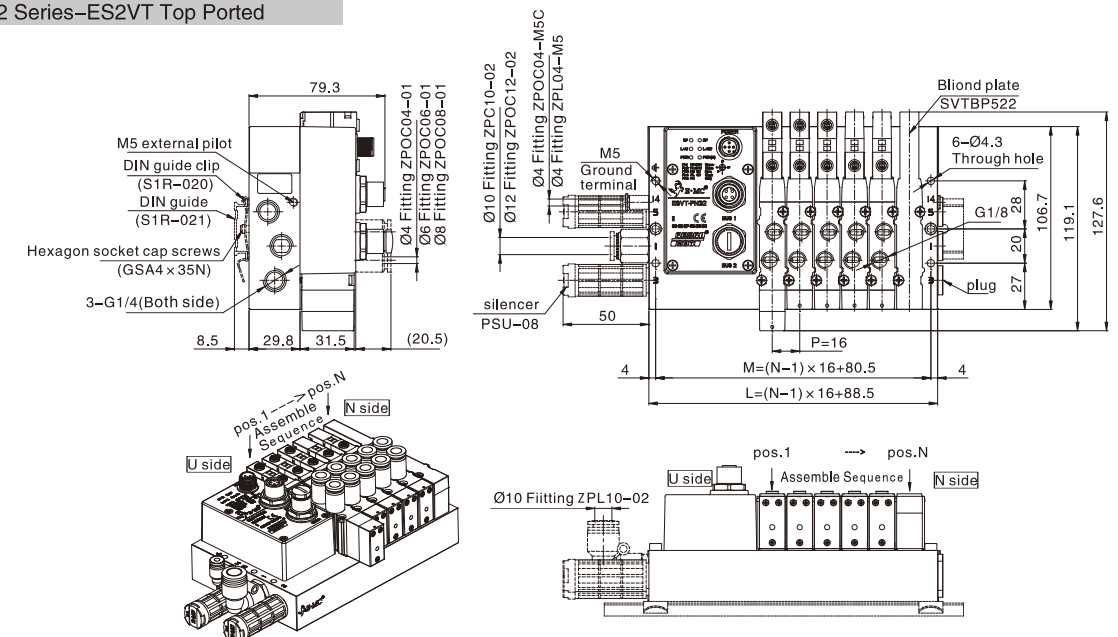


Note: N means valve link

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	95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M	87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5
K												107	112.75	118.5	124.25	130	135.75	141.5	147.25	153	158.75	164.5	170.25

◎ Main Dimension

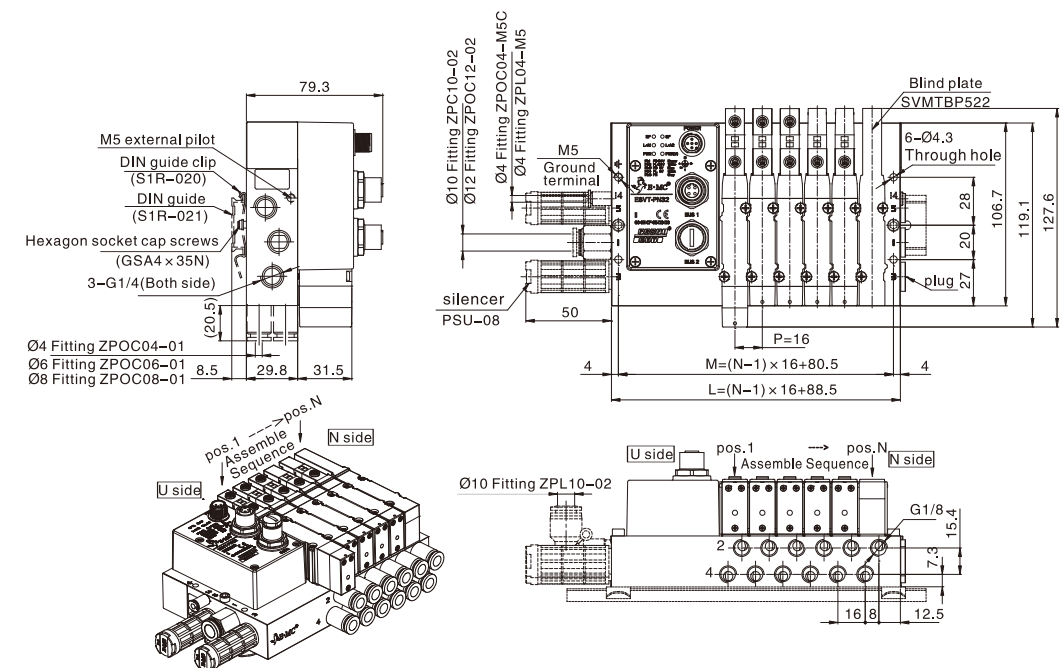
2 Series-ES2VT Top Ported



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	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	400.5	456.5
M	96.5	112.5	128.8	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

2 Series—ES2VMT Side Ported

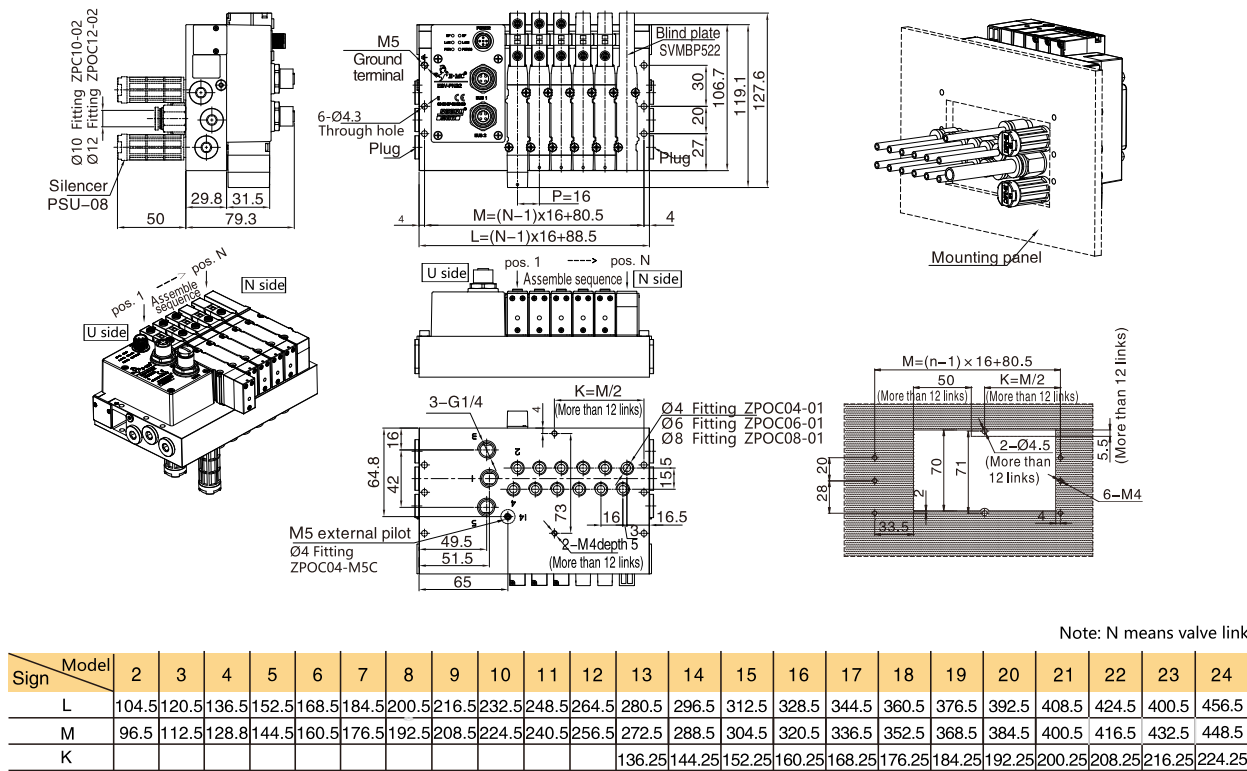


Note: N means valve link

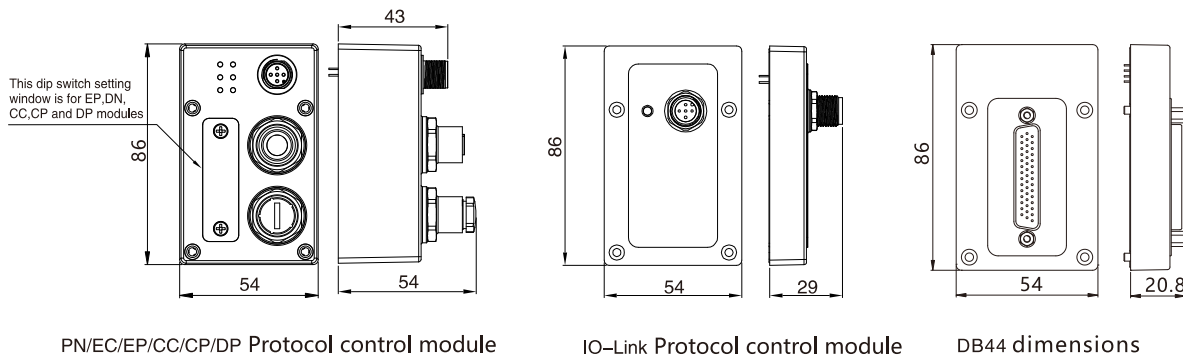
Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L	104.5	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	280.5	296.5	312.5	328.5	344.5	360.5	376.5	392.5	408.5	424.5	400.5	456.5
M	96.5	112.5	128.8	144.5	160.5	176.5	192.5	208.5	224.5	240.5	256.5	272.5	288.5	304.5	320.5	336.5	352.5	368.5	384.5	400.5	416.5	432.5	448.5

Main Dimension

2 Series-ES2VBT bottom ported



Dimensions of Control Module



Product Features

- Ip65
- Individual intake stack module: used on the same valve island in situations with different pressures, it can supply air to the solenoid valve separately without occupying the valve position.
- Individual exhaust stack module: When using centralized exhaust on the same valve island, the exhaust between valves can affect each other and cause actuator misoperation, especially when using three position relief valves and single acting cylinders. The individual exhaust stack module can be used without occupying the valve position.
- Intake cut-off stack module (with residual pressure release): It can independently cut off the gas supply to designated solenoid valves and discharge residual pressure on the same valve island without cutting off the main valve island gas source. It can achieve separate maintenance and replacement of solenoid valves or cylinders with gas insertion and removal. *Mid position check stack module (with residual pressure release): Equipped with a three position five way medium release valve on the same valve island, the cylinder can be stopped for a long time, and equipped with two position five way valves can prevent the cylinder from falling, thereby improving the safety performance of the valve island.

Application Scenarios

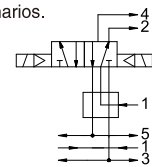
1: Individual intake stack module

1. Application scenarios:

- (1) Used as air supply ports for different pressures on the same valve island;
- (2) Suitable for single/dual/three position solenoid valves;
- (3) Suitable for both internal and external pilot scenarios.

2. Circuit diagram:

5/2 way dual electric control valves Individual intake stack module Manifold



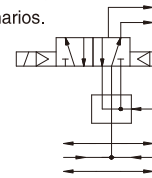
2: Individual exhaust stack module

1. Application scenarios:

- (1) When the exhaust of a valve affects other valves on the same valve island, a individual exhaust stack module can be added at this valve position;
- (2) Suitable for single/dual/three position solenoid valves;
- (3) Suitable for both internal and external pilot scenarios.

2. Circuit diagram:

5/2 way dual electric control valves Individual exhaust stack module Manifold



3: Intake cut-off stack module (with residual pressure release)

1. Application scenarios:

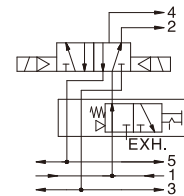
- (1) Used when cutting off the air supply to each valve separately, i.e. air pressure hot plugging, without stopping the machine to replace the solenoid valve;
- (2) Suitable for single/dual/three position center exhaust and center pressure solenoid valves;
- (3) Due to the inability to release residual pressure, when equipped with a center close valve, please use the port 2 and 4 piping in combination with a three-way valve, etc;
- (4) As the product cannot cut off the external pilot air source, it can only be used for internal pilot applications.

2. Manual button operation instructions:

- (1) Use a straight screwdriver to press the manual button to the bottom at the PUSH position, and then rotate it clockwise 90 ° to the LOCK position;
- (2) Unlock the manual button and rotate counterclockwise 90 ° to the PUSH position.

3. Circuit diagram:

5/2 way dual electric control valves Intake cut-off stack module (with residual pressure release) Manifold



4: Mid position check stack module (with residual pressure release)

1. Application scenarios:

- (1) When the cylinder needs to maintain the middle position for a long time, it should be used with a three position relief valve and cannot be combined with three position sealing type, medium pressure type, or two two position three-way solenoid valves;
- (2) Equipped with two position single and dual electric control valves, it can prevent the end of cylinder stroke from falling;
- (3) suitable for internal and external pilot applications.

2.Specifications:

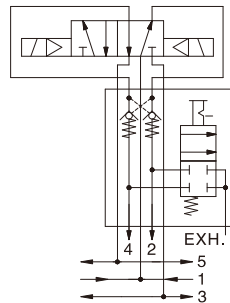
Maximum operating pressure	0.8MPa
Minimum operating pressure	0.2MPa
Maximum operating frequency	3 times per second

3.Circuit diagram:

5/2 way dual electric control valves

Mid position check stack module (with residual pressure release)

Manifold

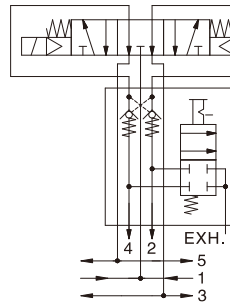


Prevent falling: equipped with 5/2 way dual electric control valves

5/3 way center exhaust

Mid position check stack module (with residual pressure release)

Manifold



Intermediate maintenance: equipped with a 5/3 center exhaust valve

How to order

SVMT series stack module

Series Code	Type	I.D. Code	Component Code	5/2	Body Size
S	VM	T	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

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.

Order Example: Individual intake stack module Ø6, ERP code SVMTMP522.

ES2VMT+Fieldbus Valve Terminal

Series No.	Body Size	Piping Type	I.D. Code	Communication Protocol	Qty	Valve quantity for different port	Voltage	Pilot Type	Manual Button	Wiring Type	Manifold Port	Mounting	Thread Type
2: 2 series	VM: Side ported						E4: DC24V		Blank: Press & Rotate Lock H: Without Lock				Blank: G P: PT T: NPT
ES: Fieldbus valve terminal													
Protocols type	Communication Protocol	Output	Max Valve Quantity										
EC32	EtherCAT	32	16										
EC48		48	24										
PN32	PROFINET	32	16										
PN48		48	24										
EP32	EtherNet/IP	32	16										
EP48		48	24										
CC32	CC-Link	32	16										
CC48		48	24										
DP32	Profibus-DP	32	16										
DP48		48	24										
CP32	CANopen	32	16										
CP48		48	24										
LK32	IO-Link	32	16										
LK48		48	24										
DB25	D-SUB25	24	12										
DB44	D-SUB44	42	21										
Code	Function	Remark											
S	5/2 single												
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												
N ②	air supply & exhaust module												
TA ③	port 1 air supply pressure separate												
TG ③	port 3/5 air exhaust pressure separate												
TL ③	port 1/3/5 air supply & 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)												

Note

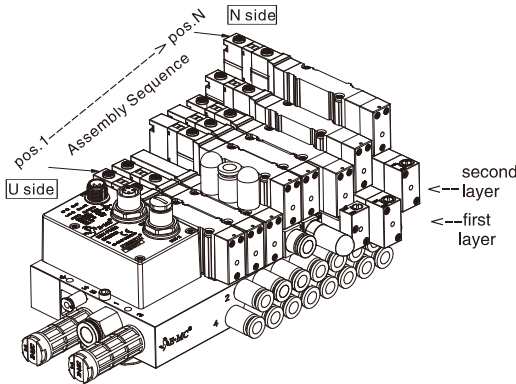
- ① Y/H/U is not available for external pilot due to the air return. YK/HK/UK is available for external pilot due to the spring return;
- ② When the intake connection of the intake and exhaust module is C4/C6/C8, the exhaust port is equipped with a muffler by default. When the connection is 1/8, the 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.

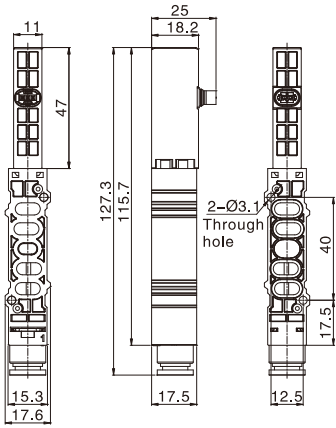
Order Example:

- 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 SVMT5222, 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 pilot 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 SVMT-6DM2D-C6E4.
- 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 SVMT5222, 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 SVMT-2DM2DXEV2EWB-C6E4.
- 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 SVMT5221, the sixth, seventh, and eighth valve positions are all 5/3 way center exhaust solenoid valves SVMT5322E, 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 ϕ 8 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 SVMT-2DNSMSXEVMW-C8E4-UL-D (as shown in the above figure).

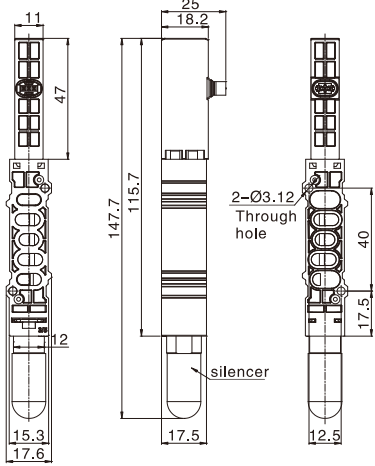


Main Dimension

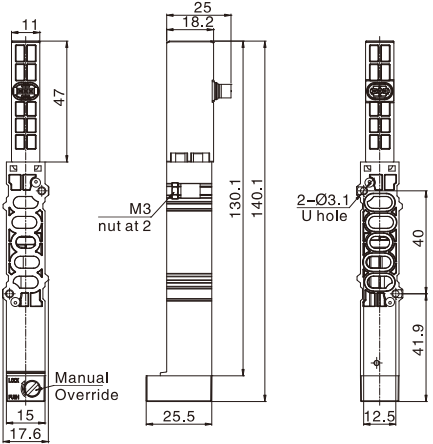
SVMTMP522



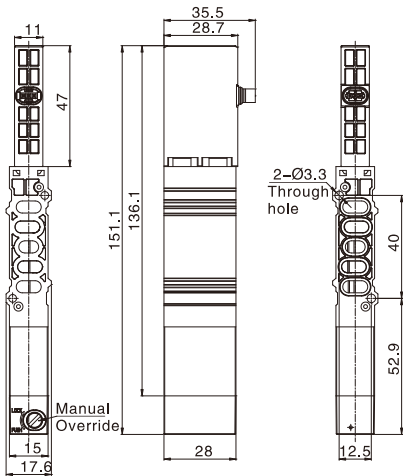
SVMTXP522



SVMTVP522

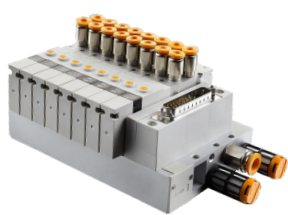


SVMTWP522

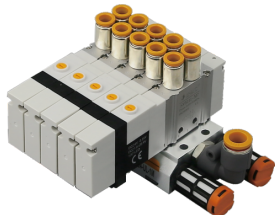


SV

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

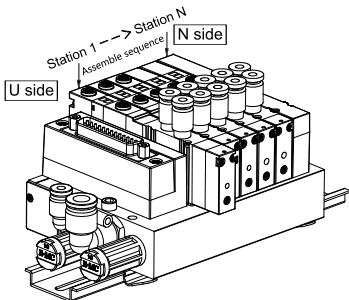
Series No.	Body Size	Piping Type	Voltage	Pilot Type	Manual Button	Wiring Type	Manifold Port	Mounting	Thread Type
S: Standard SN:Energy-saving	V: Top ported VM: Side ported VB: Bottom ported	1: 1 series 2: 2 series	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock	Blank: Internal pilot WB: External pilot ①	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	φ 8 φ 10	
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	φ 10 φ 12	
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:

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

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: Single control 2: Double control	(Note: Available for V type only)	M5: M5 M7: M7 O6: 1/8"	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock	Blank: Internal pilot WB: External pilot ②	Blank: None 0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring (Note: Available for V type only)	Blank: G P: PT T: NPT	

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 (not available for standard valve group either separate use).
②All 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				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

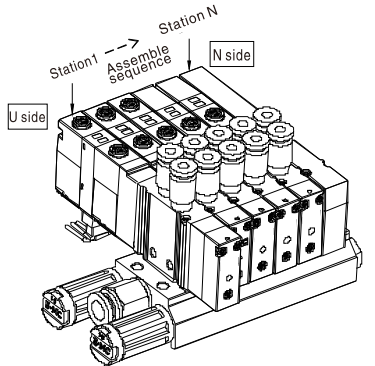
Code	Function	Remark
S	5/2 single	assembly sequence, 1st link start from U side
D	5/2 double	
C	5/3 center closed	
P	5/3 center pressure	
E	5/3 center exhaust	
Y	2pcs 3/2 (N.C.)	
H	2pcs 3/2 (N.O.)	
U	2pcs 3/2 (N.O./N.C.)	
YK	2pcs 3/2 (N.C.) spring return	
HK	2pcs 3/2 (N.O.) spring return	
UK	2pcs 3/2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

No.	Code	Port size	Remark
1 Series	M5	M5: M5 port	assembly sequence, 1st link start from U side
	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	
	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,UL is available for bottom ported
U	U side with silencer, φ 8 PC fitting	φ 8 φ 10	
N	Station N with silencer, φ 8 PC fitting		
UN	Both side with silencer, φ 8 PC fitting		
UL	U side with silencer, φ 8 PL fitting		
NL	Station N with silencer, φ 8 PL fitting		
UNL	Both side with silencer, φ 8 PL fitting		
U1	U side with silencer, φ 10 POC fitting	φ 10 φ 12	
N1	Station N with silencer, φ 10 POC fitting		
UN1	Both side with silencer, φ 10 POC fitting		

Order Example:

- 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
- 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	1: 1 station 2: 2 stations 3: 3 stations 24: 24 stations	F: Manifold	Blank: G P: PT T: NPT
2 position 5 port				

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)	
	06	1/8 port	
	C6	φ 6 one-touch fitting(ZPOC06-01G)	
	C8	φ 8 one-touch fitting(ZPOC08-01G)	

Explain of pressure separate

Diagram of pressure separate	Explain of pressure separate
	different options for pressure separate 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
	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.

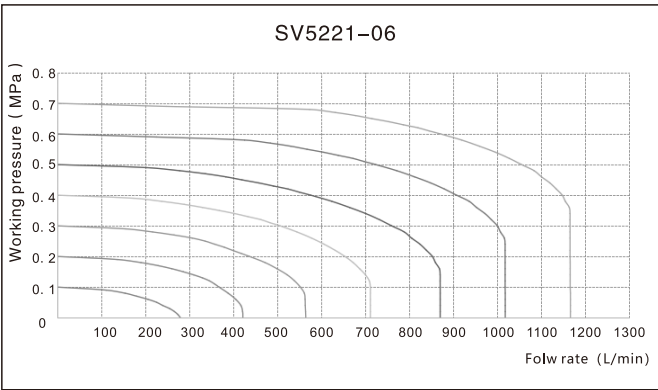
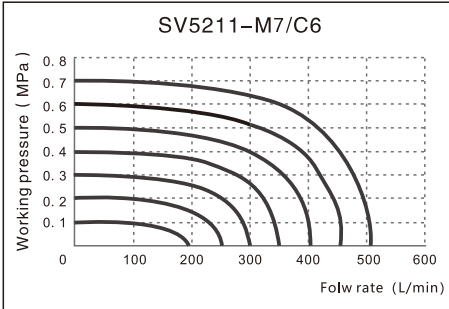
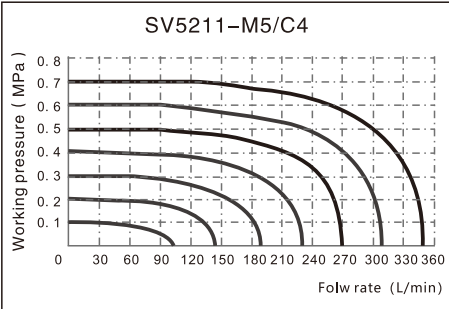
Specifications

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 (℃)	-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

SV5221 (5/2 single control)		SV5422U (1pcs 3/2 N.O 1pcs 3/2 N.C)		SV5422UK (1pcs 3/2 N.O 1pcs 3/2 N.C)	
SV5222 (5/2 double control)		SV5422Y (2pcs 3/2 N.C)		SV5422YK (2pcs 3/2 N.C)	
SV5322C (5/3 center close)		SV5422H (2pcs 3/2 N.O)		SV5422HK (2pcs 3/2 N.O)	
SV5322E (5/3 center exhaust)					
SV5322P (5/3 center pressure)					

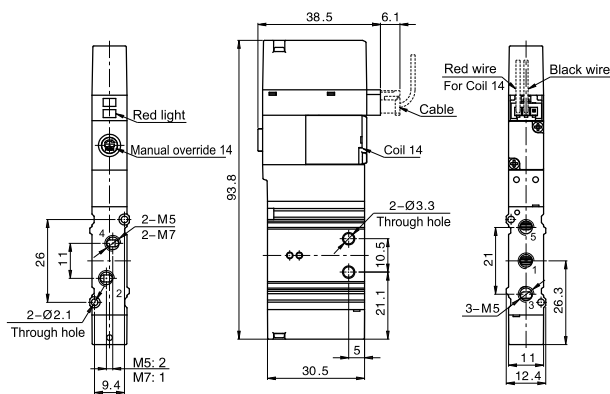
Flow Chart



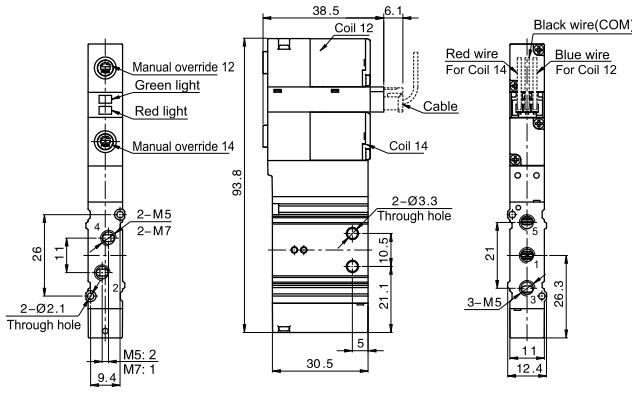
Main Dimension

Solenoid valve

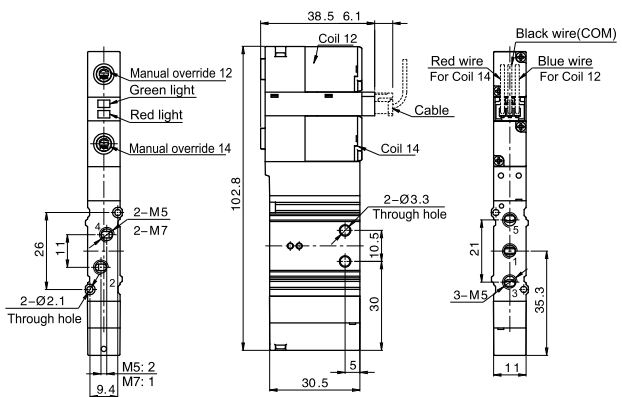
SV5211



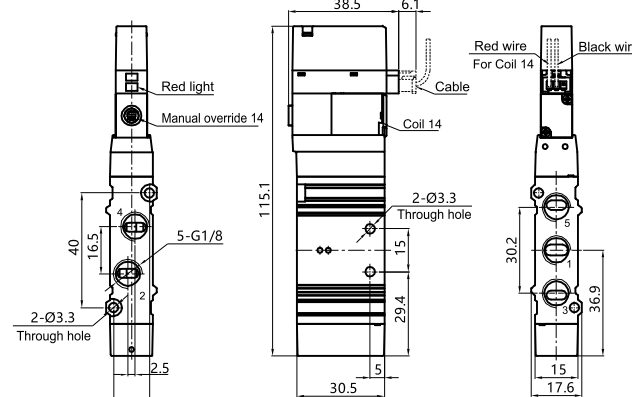
SV5212/SV5412



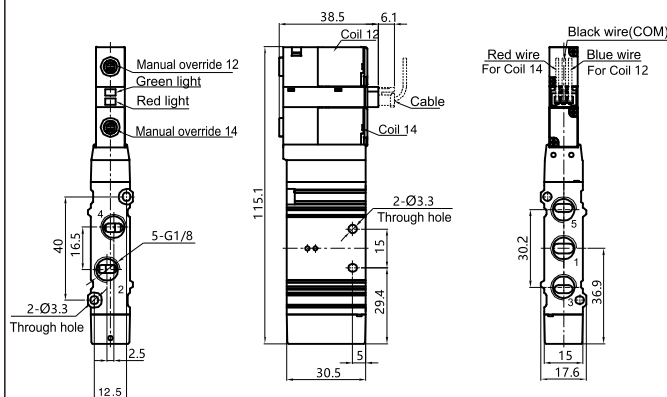
SV5312



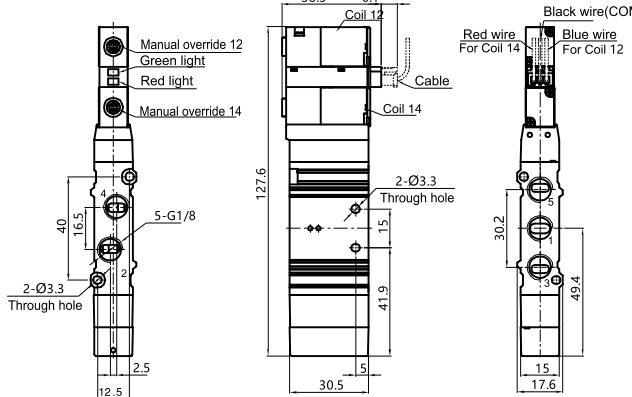
SV5221



SV5222/SV5422



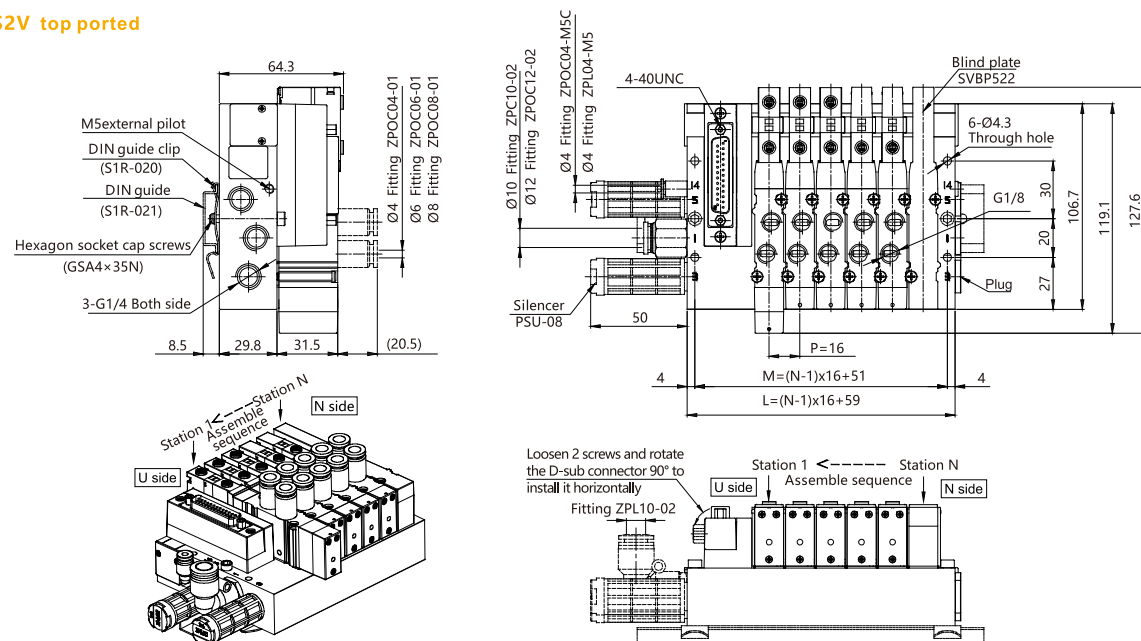
SV5322



© Main Dimension

S2V Valve terminal

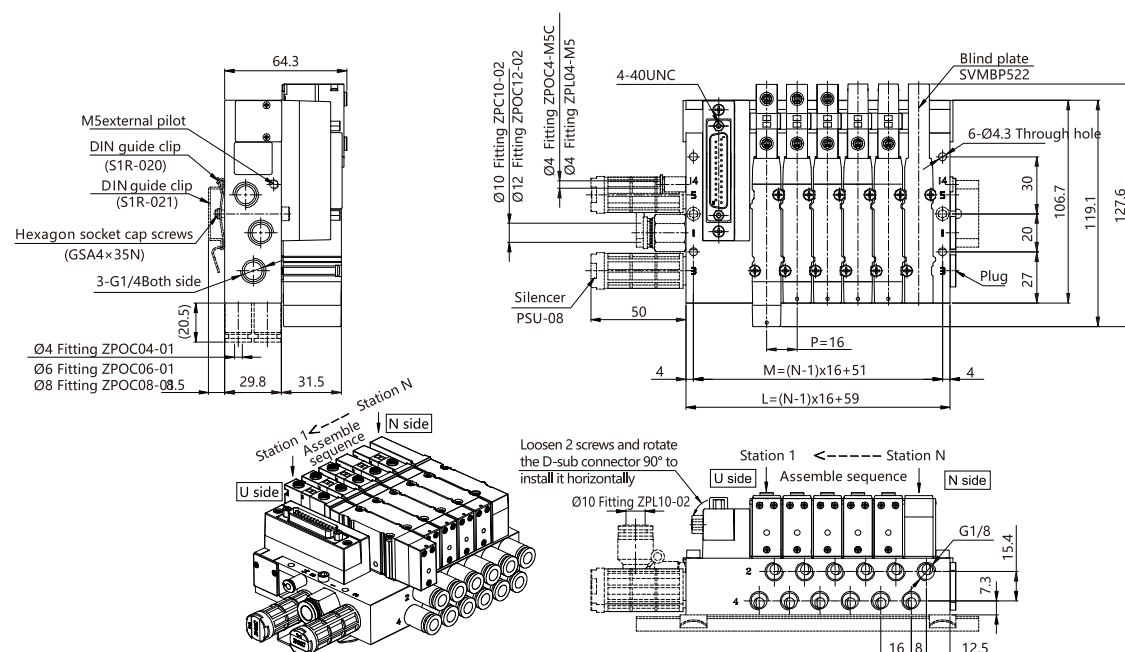
S2V top ported



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



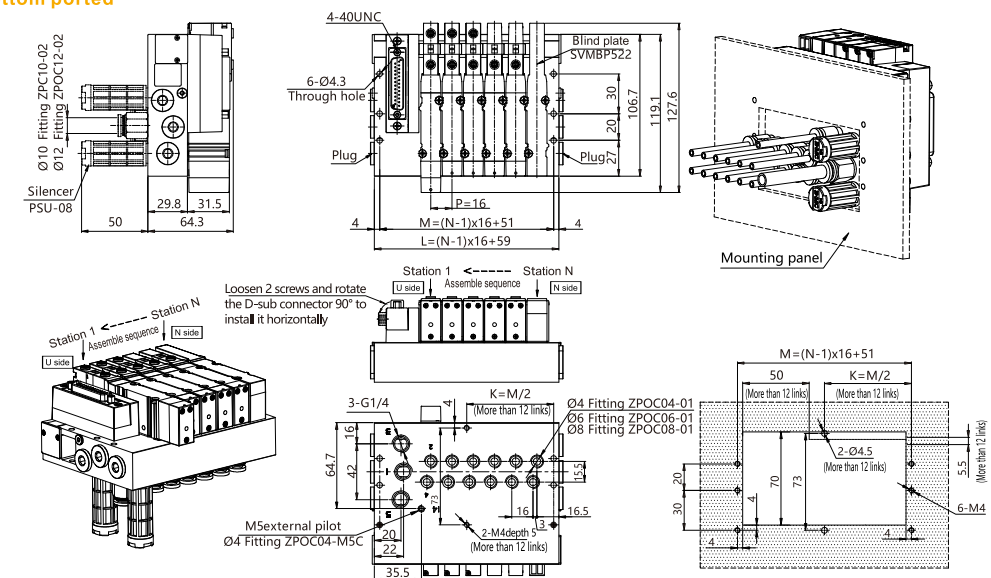
Note: N means valve link

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

○ Main Dimension

S2V Valve terminal

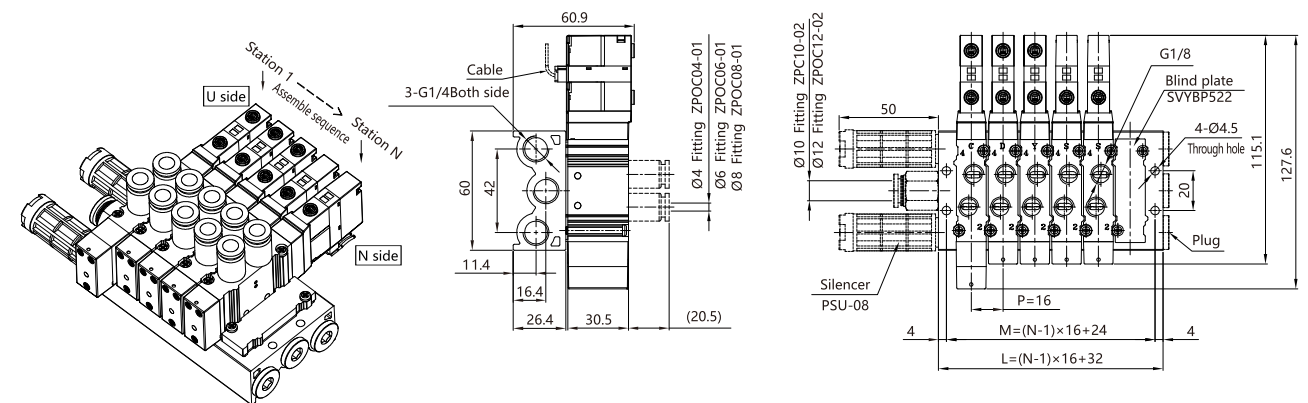
S1VB bottom ported



Sign	Model	2	3	4	5	6	7	8	9	10	11	12	
	L	75	91	107	123	139	155	171	187	203	219	235	
	M	67	83	99	115	131	147	163	179	195	211	227	
Sign	Model	13	14	15	16	17	18	19	20	21	22	23	24
	L	251	267	283	299	315	331	347	363	379	395	411	427
	M	243	259	275	291	307	323	339	355	371	387	403	419
	K	121.5	129.5	137.5	145.5	153.5	161.5	169.5	177.5	185.5	193.5	201.5	209.5

Note: N means valve link

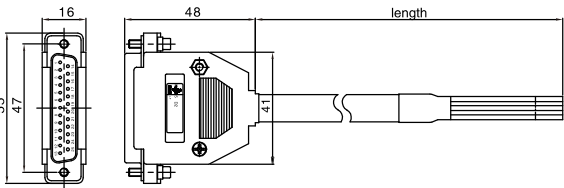
SV521 Valve terminal



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	48	64	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320	336	352	368	384
M	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328	344	360	376	392

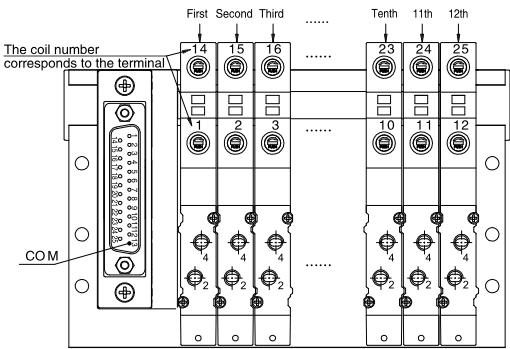
Connector & Cable



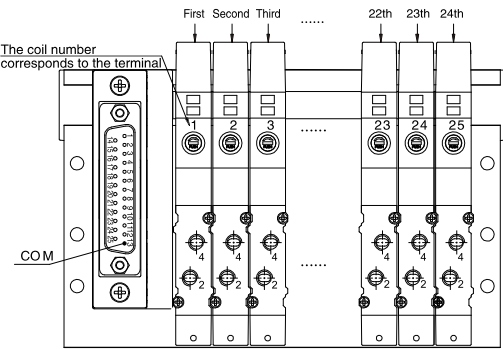
Connector Cable	PIN number & Wire Color			
	PIN number	Wire Color		
		D25-25	D25-15D	D25-15S
		D25-08S		
	1	Red and Black	Red and Black	Red and Black
	2	Red and White	Red	Red
	3	Red	Orange and Black	Orange and Black
	4	Orange and Black	Orange	Orange
	5	Orange and White	Yellow and Black	Yellow and Black
	6	Orange	Yellow	Yellow
	7	Yellow and Black	Pink	Pink
	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
	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

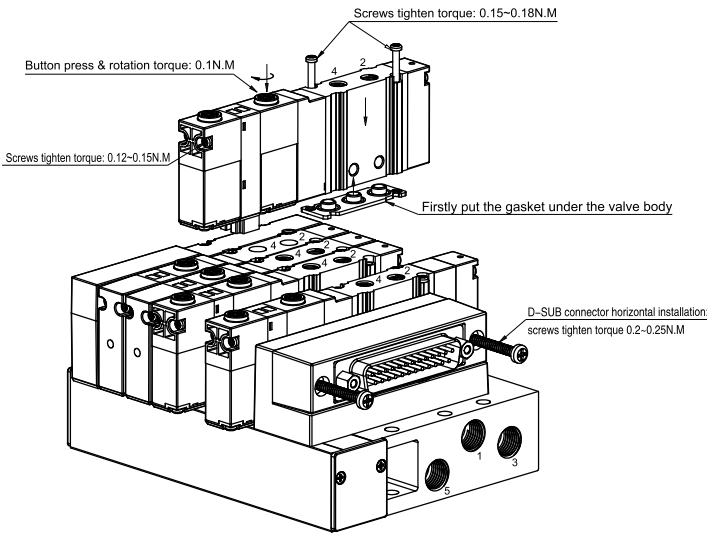


Single control wiring
max.24 links



Installation & Usage Attention

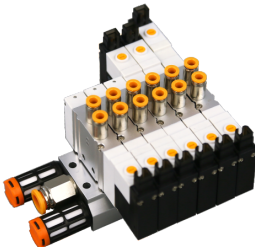
1. Do not drop the solenoid valve when it takes out from the box to avoid the damage;
2. Do not hit by external force during installation and adjustment;
3. Do not disassemble when using, once disassembled and reassembled, it may not meet the default setting and leads poor performance;
4. The torque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



SVY

Solenoid Valve&Valve Terminal

Graphic symbols: same as SV valve symbols



Product Features

- Centralized air inlet and exhaust, available for top ported.
- The connector upwards for quick and easy installation of wiring.
- 5/2 ways, 5/3 ways, 5/4 ways(2pcs 3/2ways)can be integrated on same valve terminal.
- 0.8W per coil.

How to Order?

Solenoid Valve

Series NO.	ID Code	Ports	Positions	Body Size	Controls	Original Status	Port Size	Voltage	Manual Button	Wiring	Thread Type
S: Standard	VY: Piping on valve	5:5 ports	2: 2 position 3: 3 position 4: 4 position dual 3-port valve	1:1 series 2:2 series 3:3 position 4: 4 position dual 3-port valve	1:Signal control 2:Double control		M5:M5 M7:M7 06:1/8" (Remarks: Plate valve No such option)	E4:DC24V	Blank: Press & Rotate Lock H: Without Lock		Blank:G
C: 3 position 5 port(center close) P: 3 position 5 port(center pressure) E: 3 position 5 port(center exhaust) Y: 4 position dual 3-port valve(N.C.) ① H: 4 position dual 3-port valve(N.O.) ① U: 4 position dual 3-port valve(N.C./N.O.) ① 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										Blank: None 0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring	

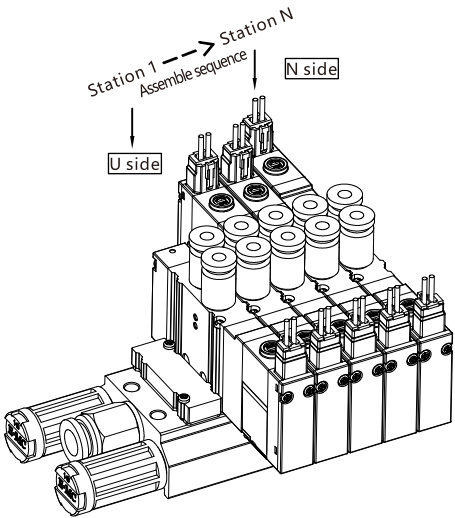
Order Example: S series standard type, piping on valve, 2 station 5 port, 1 series valve body, single control, M5 port, DC24V, 0.3 meter wiring.
The ERP code is :SVY5211-M5E4-0.3M..

SVY Valve Terminal

Series NO.	5/2 way	Body Size				Voltage	Manual Button	Inlet& Exhaust Port	Wiring	Thread Type	
SVY: SVY Series	52	1: 1 series 2: 2 series	Qty (Max.24 links for same valve type)			Valve qty (Applicable to different ports mixed, blank if same ports.	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock		Blank:G P:PT T:NPT	
									Blank: None 0.3m: 0.3m wiring 0.6m: 0.6m wiring 1m: 1m wiring		
Code	Function		Remark	Series	Code	Port size	Remark	Code	Port Entry	1Series	Remark
S	5/2 single		Assembly sequence, 1st link start from U side.	1series	M5	M5 fitting	Assembly sequence, 1st link start from U side	Blank	Both side without silencer, fitting plug	-	1.Plugs are mounted on the opposite side of the selected ports. 2.Only U, U1 side is available for bottom ported.
D	5/2 double				C4	4 one-touch fitting(ZPOC04-M5C)		U	U side with silencer, PC fitting		
C	3 position 5 port(center close)				M7	M7 fitting		N	Station N with silencer, PC fitting		
P	3 Position 5 port(center pressure)			C6	6 one-touch fitting(ZPOC06-M7C)	UN	Both side with silencer, PC fitting	φ 8			
E	3 position 5 port(center exhaust)					UL	U side with silencer, PL fitting				
Y①	4 position dual 3-port valve(N.C.)			06	1/8 port	NL	Station N with silencer, PL fitting				
H①	4 position dual 3-port valve(N.O.)			C4	4 one-touch fitting(ZPOC04-01G)	UNL	Both side with silencer, PL fitting				
U①	4 position dual 3-port valve(N.C./N.O.)			C6	6 one-touch fitting(ZPOC06-01G)	U1	U side with silencer, POC fitting	φ 10			
B	Blind plate			C8	8 one-touch fitting(ZPOC08-01G)	N1	Station N with silencer, POC fitting				
YK	2pcs 3/2 (N.C.) spring return					UN1	Both side with silencer, POC fitting				
HK	2pcs 3/2 (N.O.) spring return										
UK	2pcs 3/2 (N.O./N.C.) spring return										

Order Example:

- 1.Same valve: SVY series valve terminal, 1 series body, 6 links 5/2 single control SVY5211, port size M5, DC24V, G thread, both side without silencer, fitting, plug, the ERP code is SVY521-6S-M5E4.
- 2.Mix different valve: SVY series valve terminal, 1 series body, see right picture: station 1 is blind plate, station 2 & station 3 are 5/2 single control SVY5211, station 4 is 5/2 double control SVY5212, station 5 is 2pcs 3/2(N.O.) SVY5412H, station 6 is 5/3 SVY5312C. DC24V, U-sub side with silencer, ϕ 8 PC fitting, G thread. The ERP code is SVY521-B2SDHC-C4E4-U.



Specifications

Model	SVY5211	SVY5212	SVY5412Y/U/H	SVY5412YK/UK/HK	SVY5312C/E/P	SVY5221	SVY5222	SVY5422Y/U/H	SVY5422YK/UK/HK	SVY5322C/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	dual 3/2 valves	3 position 5 port	2 position 5 port		dual 3/2 valves	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	
Port Size	M5/M7					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(℃)	-20 ~ 70(No freezing)									
Working Voltage	DC24V									
Voltage Range	±10%									
Power Consumption	Standard type: 0.8W									
Insulation Class	F Class									
Protective Class	IP40 dust proof									
Max.Acting Frequency	5/2: 5Cycles/s; 5/3: 3Cycles/s									
Activate Time(0.5Mpa)	15ms or less(0.5Mpa)									

Order Example:

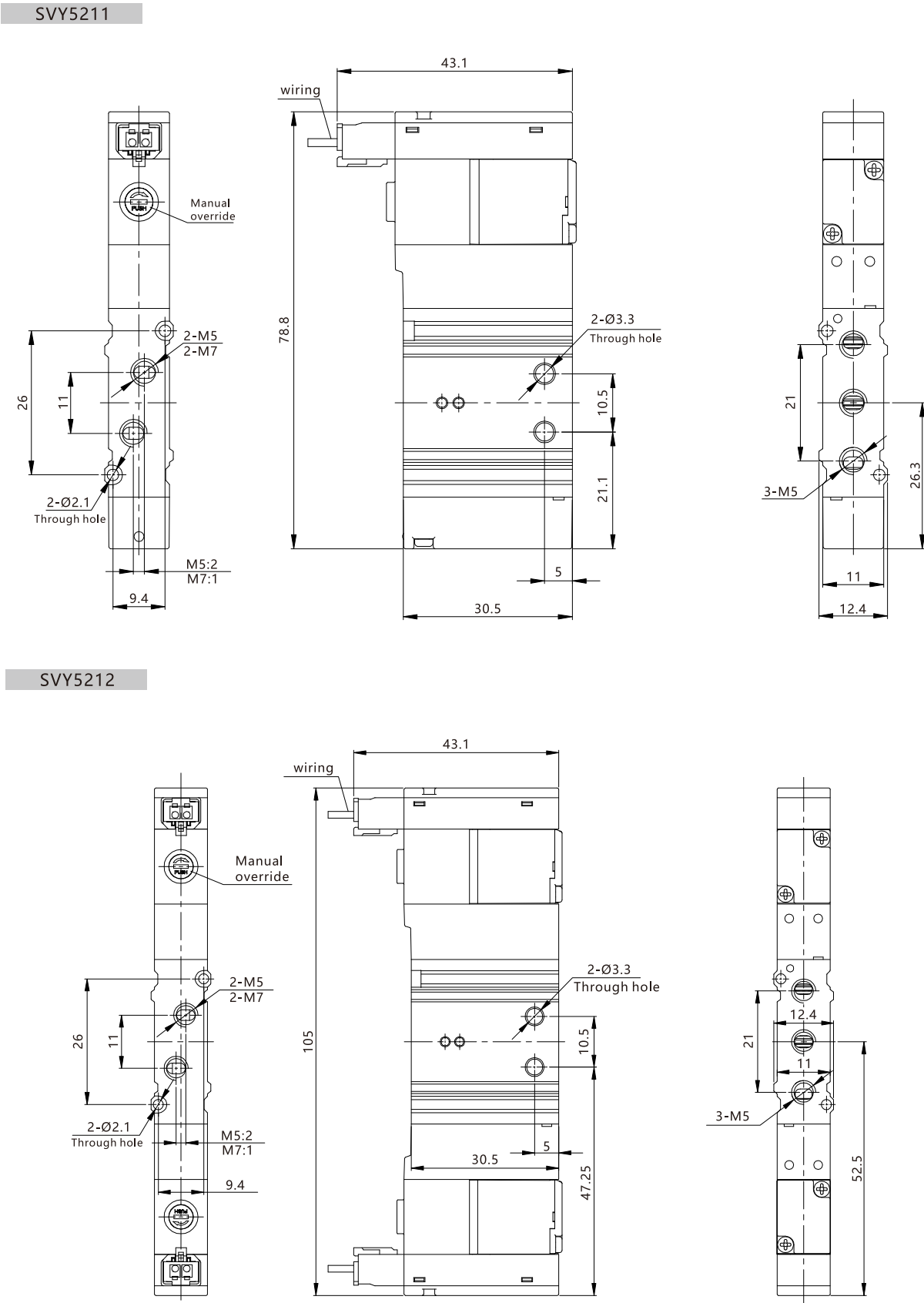
Wiring(Same as RV5221 Wiring)

Wiring Series	Accessory	Wiring Length
DBL	P01: wiring accessory	0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring (Note: Please contact E·MC for customized length)

Blind Plate

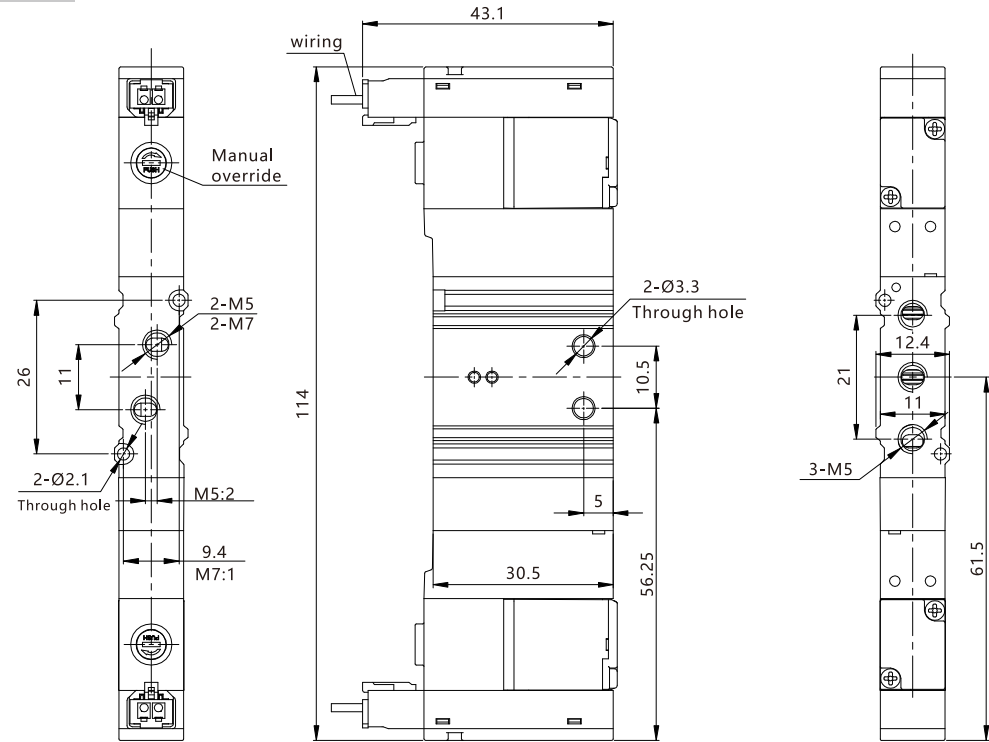
Series	Type	Accessory	5/2 way	Body Size
S:Standard	VY:Normal	BP	52	1:1 Series 2:2 Series

Main Dimension

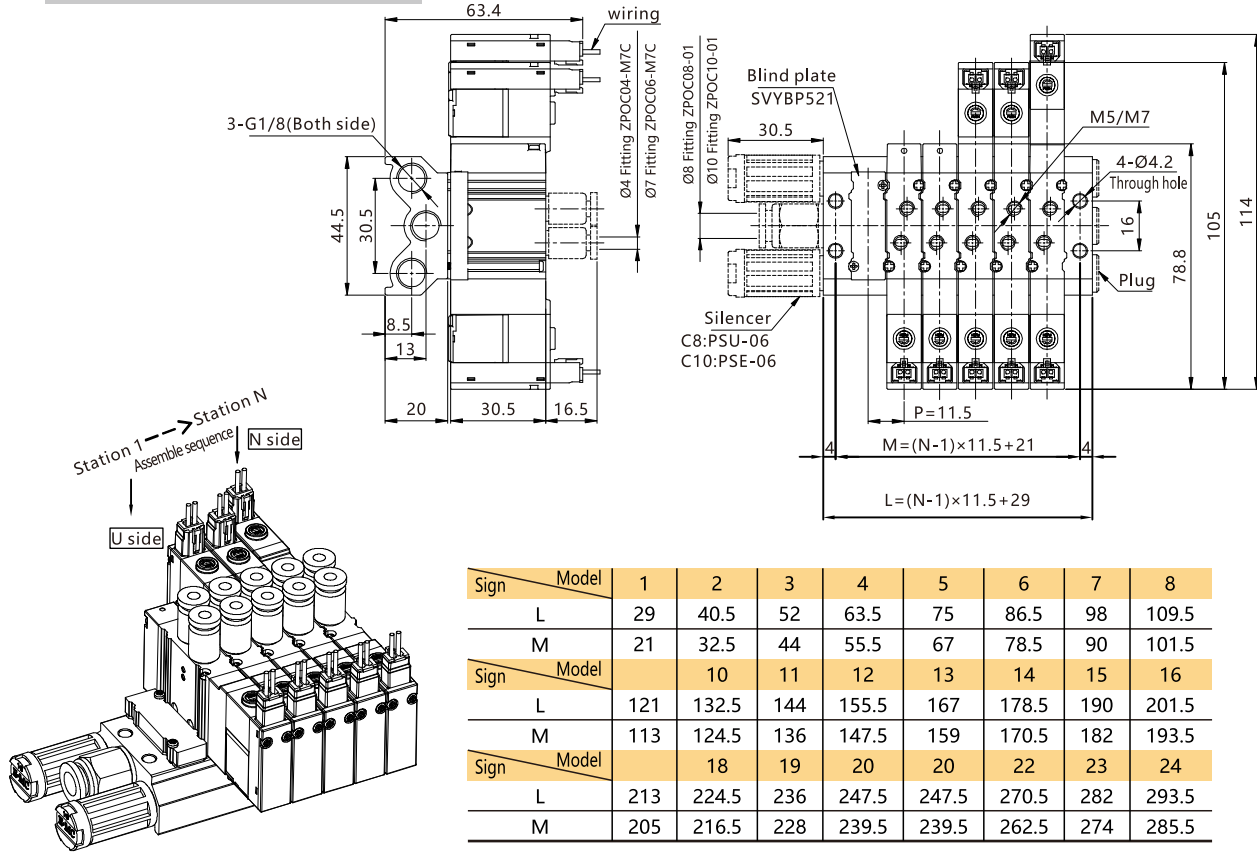


Main Dimension

SVY5312



SVY521 standard valve terminal

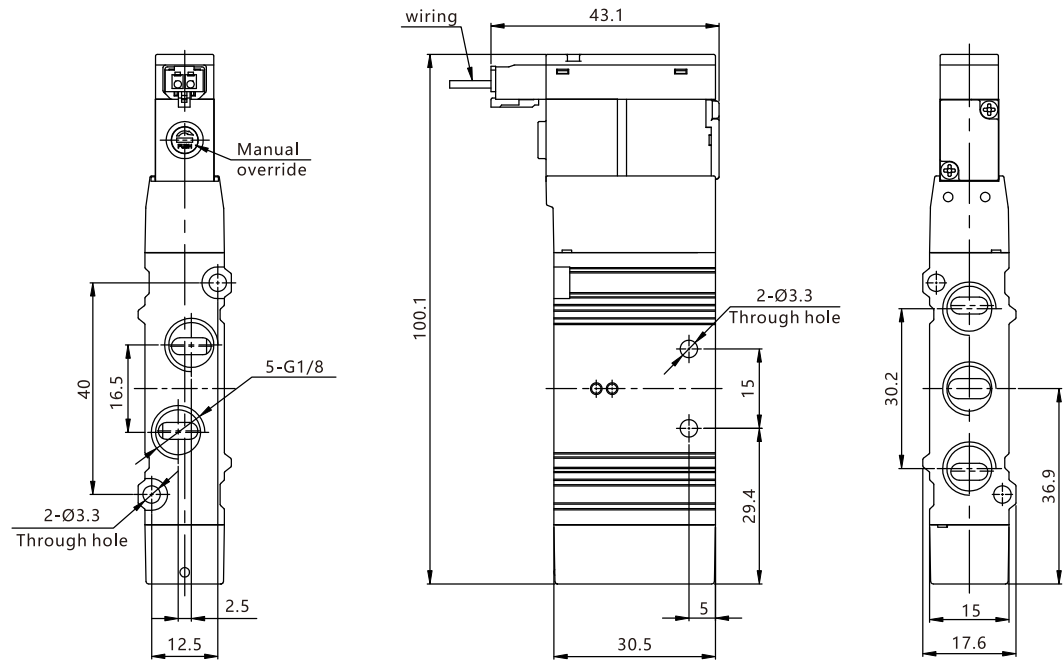


Sign	Model	1	2	3	4	5	6	7	8
L		29	40.5	52	63.5	75	86.5	98	109.5
M		21	32.5	44	55.5	67	78.5	90	101.5
Sign	Model	10	11	12	13	14	15	16	
L		121	132.5	144	155.5	167	178.5	190	201.5
M		113	124.5	136	147.5	159	170.5	182	193.5
Sign	Model	18	19	20	20	22	23	24	
L		213	224.5	236	247.5	247.5	270.5	282	293.5
M		205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

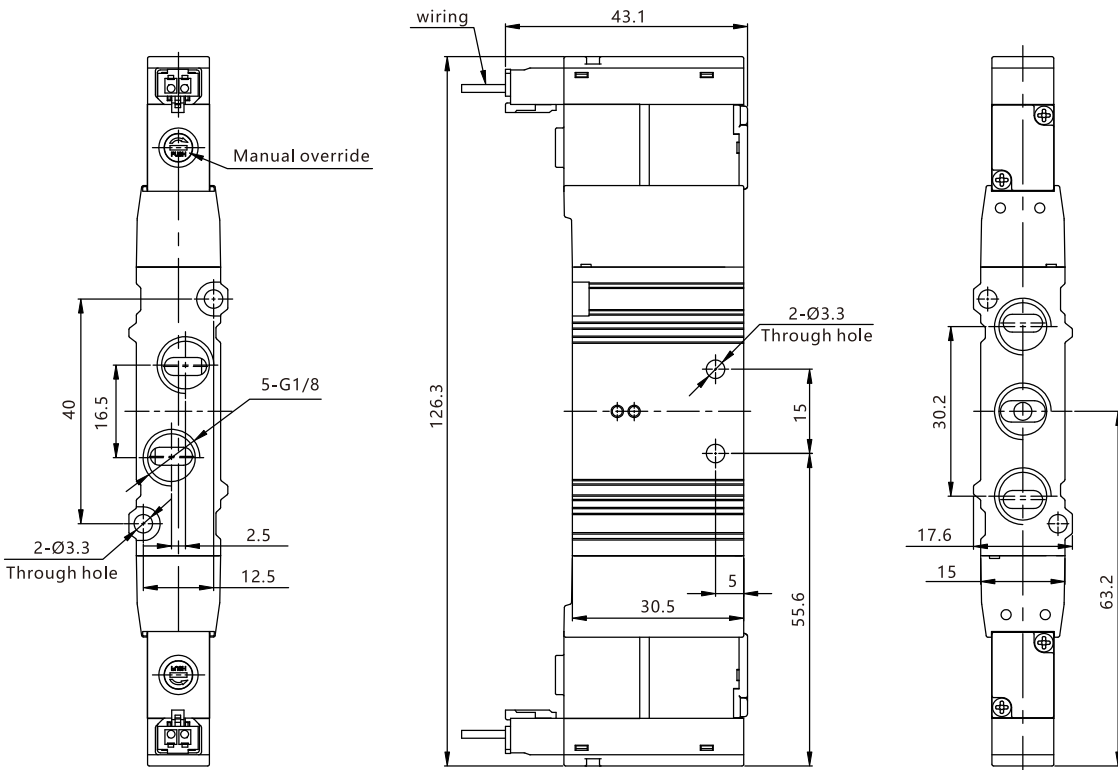
Note: N means valve link

Main Dimension

SVY5221

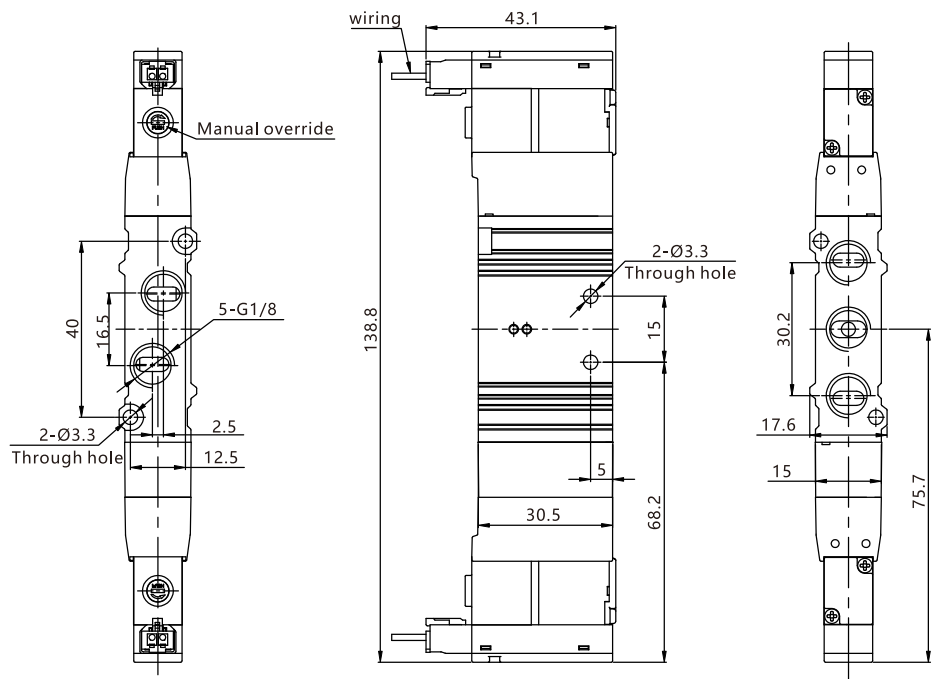


SVY5222/SV5422

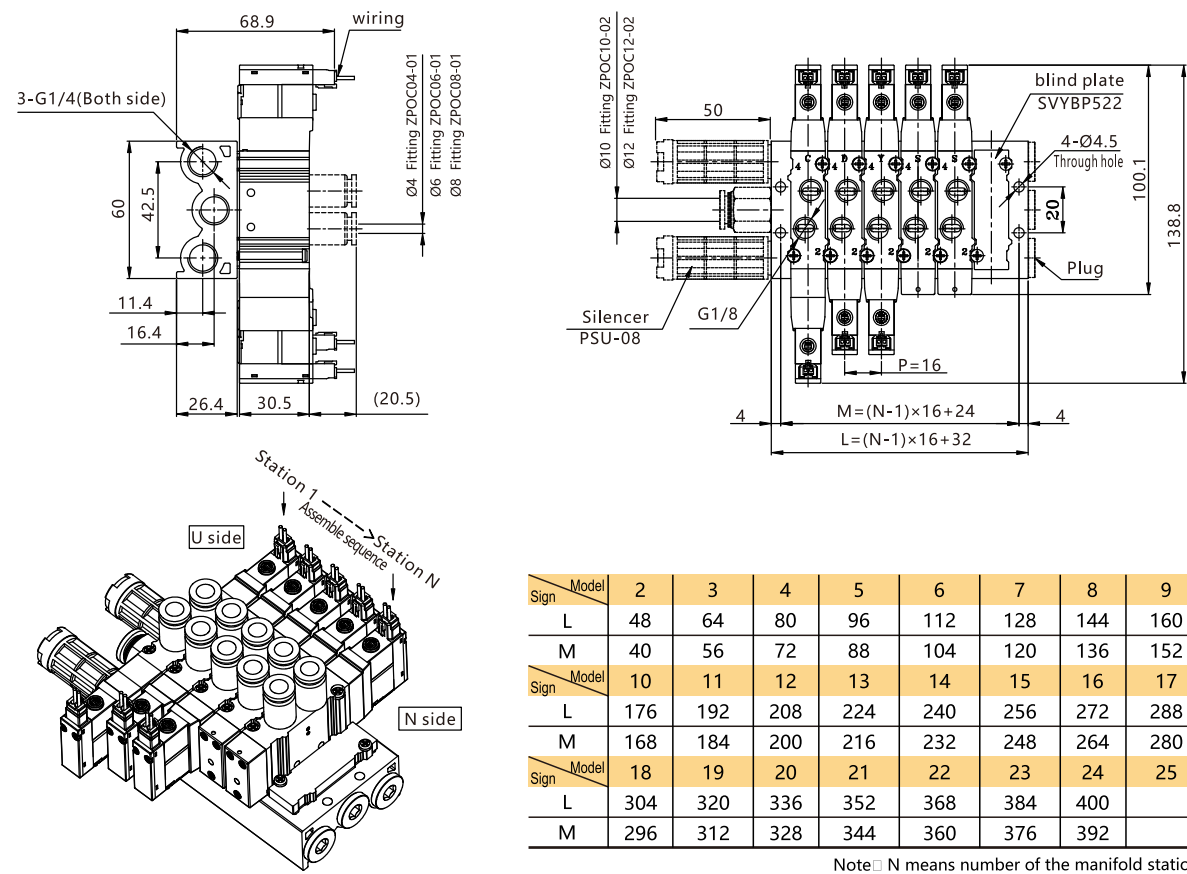


Main Dimension

SVY5322



SVY522 standard valve terminal



Sign	Model	2	3	4	5	6	7	8	9
L	48	64	80	96	112	128	144	160	
M	40	56	72	88	104	120	136	152	
Sign	Model	10	11	12	13	14	15	16	17
L	176	192	208	224	240	256	272	288	
M	168	184	200	216	232	248	264	280	
Sign	Model	18	19	20	21	22	23	24	25
L	304	320	336	352	368	384	400		
M	296	312	328	344	360	376	392		

Note N means number of the manifold stations

ESV

Solenoid Valve&Valve Terminal



Product Features

- Compatible Protocols:PROFINET、EtherCAT、EtherNet/IP、DeviceNet、CC-Link、CANopen and PROFIBUS DP.
- 32 output and 48 output optional.
- Equipped with two M12 BUS Interface, realize daisy-chain wiring communication, branch connector is not necessary.
- system diagnosis,communication error,working life count,short circuit protection, open circuit inspection, opposite connection protection , undervoltage and overvoltage diagnosis.
- Safe output can be set at any point in module parameter interface.
- For example, when the bus connection is interrupted, the valve could keep the last condition, or be forced to close or open.
- The shielded cable has strong anti-interference ability and the communication is stable and reliable.

How to Order?

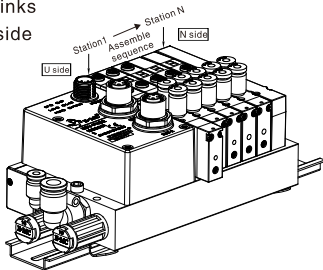
ES Fieldbus Valve Terminal

Series No. Body Size Piping Type Communication Protocol												Voltage		Pilot Type		Manual Button		Wiring Type		Manifold Port		Mounting		Thread Type							
ES: Fieldbus valve terminal ESN:Energy saving fieldbus valve terminal				V: Top ported VM: Side ported VB: Bottom ported				1: 1 series 2: 2 series				Valve quantity for different port				E4: DC24V				Blank: Press & Rotate Lock H: Without Lock				Blank: Without accessories ④ D: With DIN rail clip and 1M guide rail ④ DO: With DIN rail clip, no guide rail (If a DIN rail is selected, the DIN rail will be packaged separately.)				Blank: G			
Protocols type		Communication Protocol		Output		Max Valve Quantity		Qqty		Blank: Interl pilot ① WB: External pilot		Blank: Double control wiring (max.24 links) S: Single control wiring (max.24 links) (Note:Mix wiring is available to customize)																			
						Single control Double control																									
PN32		PROFINET		32		24 16																									
PN48				48		— 24																									
EP32		EtherNet/IP		32		24 16																									
EP48				48		— 24																									
EC32		EtherCAT		32		24 16																									
EC48				48		— 24																									
CC32		CC-Link		32		24 16																									
CC48				48		— 24																									
DN16		DeviceNet		16		16 8																									
DN32				32		24 16																									
CP32		CANopen		32		24 16																									
CP48				48		— 24																									
DP32		PROFIBUS DP		32		24 16																									
DP48				48		— 24																									
LK16		IO-Link		16		16 8																									
LK32				32		24 16																									
LK48				48		— 24																									
DB44		D-SUB44		42		②																									

- 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.
 - 16 output points module can control 16 coils maximum, suitable for 2 to 8 pcs double control valves, or 2 to 16 pcs single control valves.
 - 32 output points module can control 32 coils maximum, suitable for 2 to 16 pcs double control valves, or 2 to 24 pcs single control valves.
 - 48 output points module can control 48 coils maximum, when the coils is more than 32, suitable for 17 to 24 pcs double control valves only.
 - ② ESV-DB44 is multi-pins valve terminal, can control 42 coils maximum and 24 valve stations maximum, suitable for 13 to 18 pcs double control valves, when the coils is more than 36, station 19 to 24 can be single control valves only.
 - Pressure separate is same as SV series.
 - ③ When the inlet and exhaust module has an inlet connection of C4/C6/C8, a muffler is assembled at the exhaust port by default; When the connection is M7/1/8, no muffler is assembled at the exhaust port by default; For the manifold plate of VM/VB type, no connector is assembled at the corresponding valve position's port 2/4 by default.
 - This option is not available for the bottom connection type (VB).

Order Example:

- 1、Same valve: ES Fieldbus Valve Terminal, 1 series body, top ported, PROFINET,32 outputs, 6 links 5/2 double controlled, port size M5, DC24V, G thread, internal pilot, double control wiring, both side without silencer, fitting, plug, the ERP code is ES1V-PN32-6D-M5E4.
- 2、Mix different valves: ES series fieldbus system, 1 series body, top ported, PROFINET, 32 outputs, 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 Ø6 one-touch fitting ZPOC06-M7C, station 3-5 with with Ø4 one-touch fitting ZPOC04-M7C,DC24V,G thread, external pilot, double control wiring, U-sub side with silencer, Ø8 one-touch fitting EPL, with DIN rail clip and 1M guide rail, the ERP code is ES1V-PN32-CDHK2SB-2C63C4E4-WB-UL-D
- 3、Mix different valve with pressure separate: ES series valve terminal, 1 series body, top ported, PROFINET protocol,32 output points,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.) SV5412Hport 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 ES1V-PN32-CTADNHTASB-M7E4

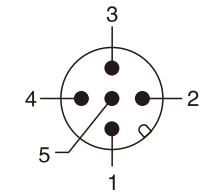


ESV-PN/EC/EP/DN/CC/CP/DP Series

Specifications

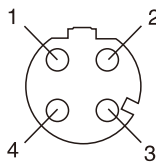
Model	ES1V(VM/VB)-PN32/48 ES2V(VM/VB)-PN32/48	ES1V(VM/VB)-EC32/48 ES2V(VM/VB)-EC32/48	ES1V(VM/VB)-EP32/48 ES2V(VM/VB)-EP32/48	ES1V(VM/VB)-DN16/32 ES2V(VM/VB)-DN16/32	ES1V(VM/VB)-CC32/48 ES2V(VM/VB)-CC32/48	ES1V(VM/VB)-CP32/48 ES2V(VM/VB)-CP32/48	ES1V(VM/VB)-DP32/48 ES2V(VM/VB)-DP32/48
Protocols	PROFINET	EtherCAT	EtherNet/IP	DeviceNet	CC-Link	CANopen	PROFIBUS DP
Configuration files	GSDML file	XML file	EDS file		CSP+file	EDS file	GSD file
Outputs	32/48			16/32	32/48		
Baud rate	100Mbps			125/250/500Kbps	156/625Kbps/2.5/5/10Mbps	10/20/50/125/250/500/800/1000Kbps	9.6/19.2/93.75/187.5/500Kbps /1.5/3/6/12Mbps self suit
Control voltage	Voltage			DC24V(DC21.6 ~ 26.4V)			
Current consumption	Below 120mA			Below 50mA			
Output voltage(valve)				DC24V(DC22.8 ~ 26.4V)			
Power interface	M12, 5pin, A encode						
Bus Interface	2xM12 socket, 4 holes, D encode			M12 pin +M12 socket, 5 holes, A encode			M12 pin +M12 socket, 5 holes, B encode
Diagnostic	system diagnosis,communication error,short circuit protection,open circuit inspection, opposite connection protection , undervoltage and overvoltage diagnosis						
Protection	IP40						
Storage temperature(℃)	-20 ~ 70℃						
Working temperature(℃)	-10 ~ 60℃						

Power interface



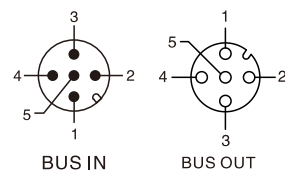
Pin No.	Type	Description
1	PS24	+24V Control voltage +24V
2	PL24	+24V Operating voltage of load valve
3	PS0	0V Control voltage 0V
4	PL0	0V Operating voltage of load valve
5	FE	Grounding

PN/EC/EP Bus Interface



Pin No.	Type	Description
1	TD+	Send data+
2	RD+	Receive data+
3	TD-	Send data-
4	RD-	Receive data-

DN/CC/CP Bus Interface



DN

Pin No.	Type	Description
1	DRAIN	Shield
2	V+	24V+
3	V-	24V-
4	CAN_H	High level signal
5	CAN_L	Low level signal

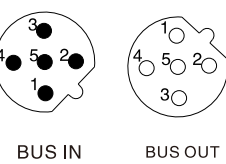
CP

Pin No.	Type	Description
1	CAN_SHLDV+	CAN Shield(option)
2	CAN_V+	24V+
3	CAN_GND	CAN Groud Connection
4	CAN_H	High level signal
5	CAN_L	Low level signal

CC

Pin No.	Type	Description
1	SLD	Blocking
2	DB	Data Exchange
3	DG	
4	DA	
5	Blank	Unused

DP Bus Interface

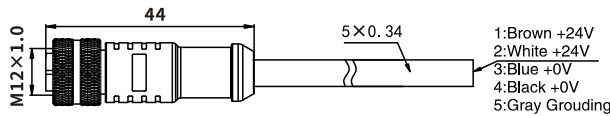


Pin No.	BUS IN	BUS OUT	Description
1	-	VP(P5V)	Voltage +5V
2	Rxd / TxD-N	RxD/TxD-N	Data cable A
3	-	DGND(M5V)	Data ground
4	Rxd / TxD-P	RxD/TxD-P	Data cable B
5	FE	FE	Functional ground

Cable Ordering encode

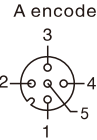
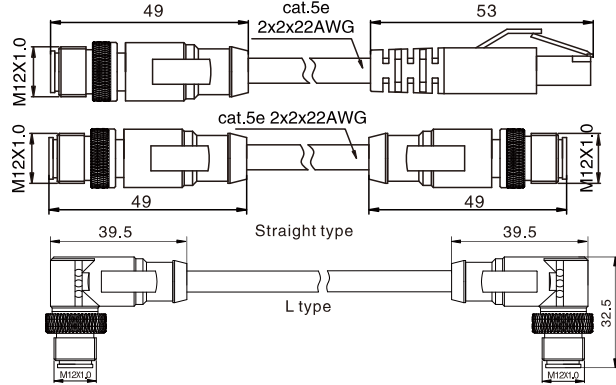
PN/EC/EP/DN/CC/CP/DP Power Cable (Unshielded)

M125	PVC
M12 Female 5 cores	R: Straight connector type RL: Angled connector type 2M:2 meters 5M:5 meters (Other length could be customized)

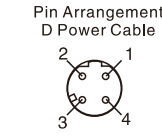
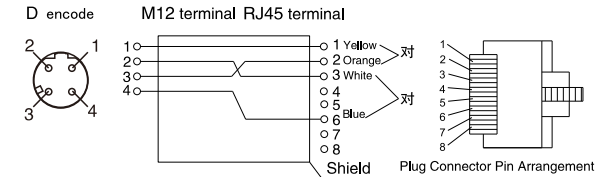


PN/EC/EP Bus cable (shielded)

ESV-EN	Identification code
Ethernet fieldbus wiring	M12RJ: M12 male connectors M12M12: M12 male connectors 2M: 2 meters 5M: 5 meters (Other length could be customized) Blank: Common cable TL: Flexible drag chain cable



Wiring diagram (through cable)

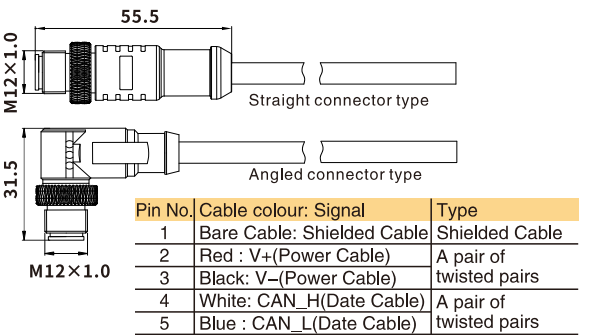


DN/CC/CP/DP Bus cable (shielded)

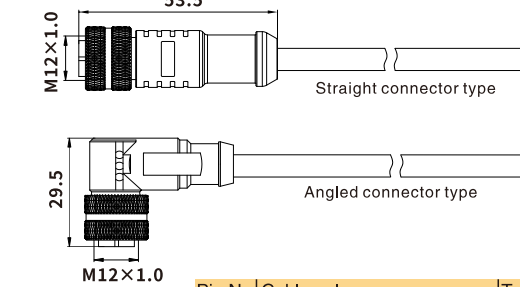
ESV	Protocol
DN: DeviceNet/CANopen CC: CC-Link DP: PROFIBUS DP	2M: 2 meters 5M: 5 meters (Other length could be customized)

M12: M12 Female(Straight connector type)
M12L: M12 Female(Angled connector type)
M12F: M12 Male(Straight connector type)
M12FL: M12 Male(Angled connector type)
M12M12: M12 Male & Female(Straight connector type)
M12M12L: M12 Male & Female(Angled connector type)

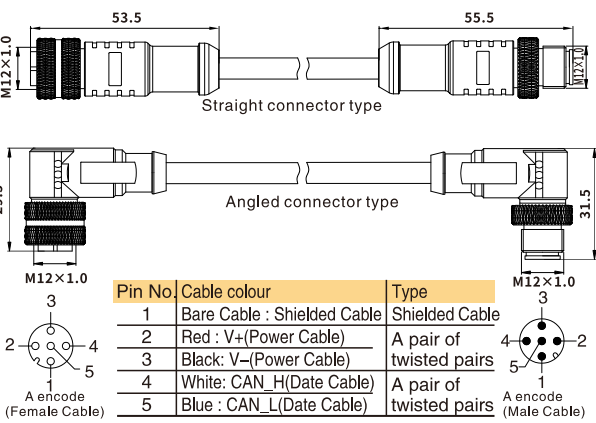
DN/CP Male Cable (Shielded)



DN/CP Female Cable (Shielded)



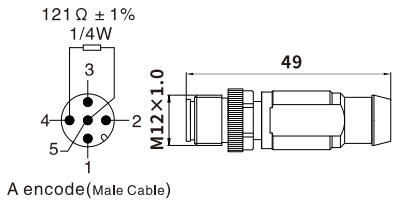
DN/CP Male & Female Cable (Shielded)



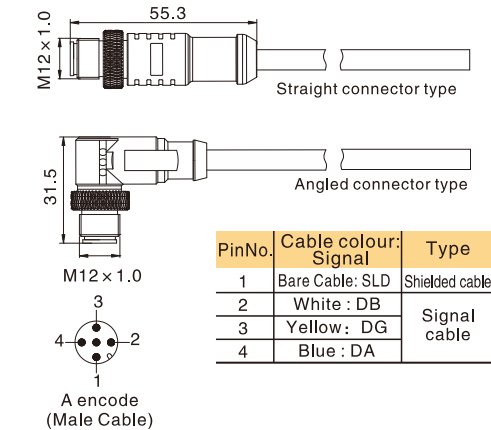
Cable Ordering encode

DeviceNet terminal resistance

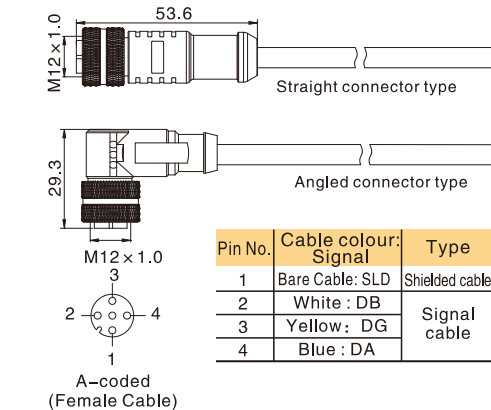
Series – Communication Protocol – R		
ESV	DN: DeviceNet	R: terminal resistance



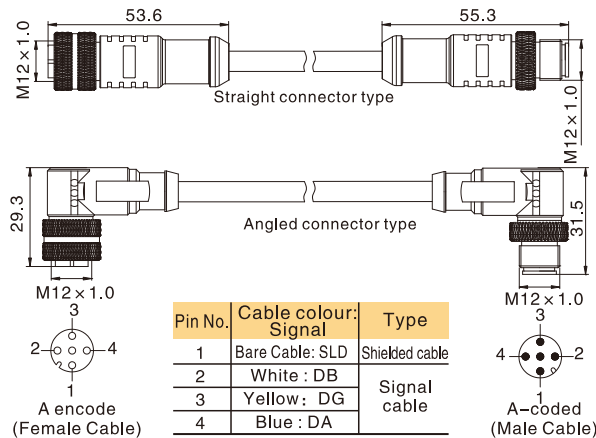
CC Male Cable (Shielded)



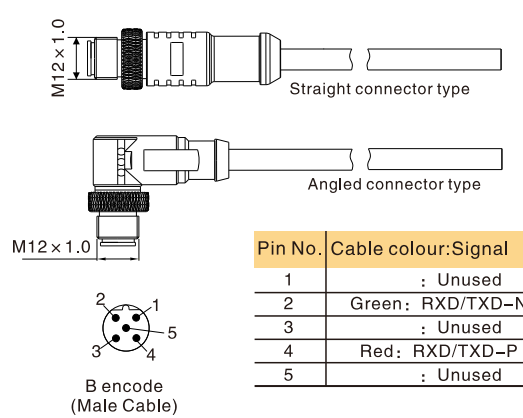
CC Female Cable (Shielded)



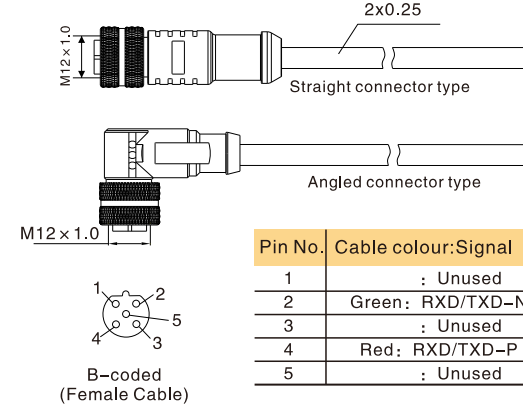
CC Male & Female Cable (Shielded)



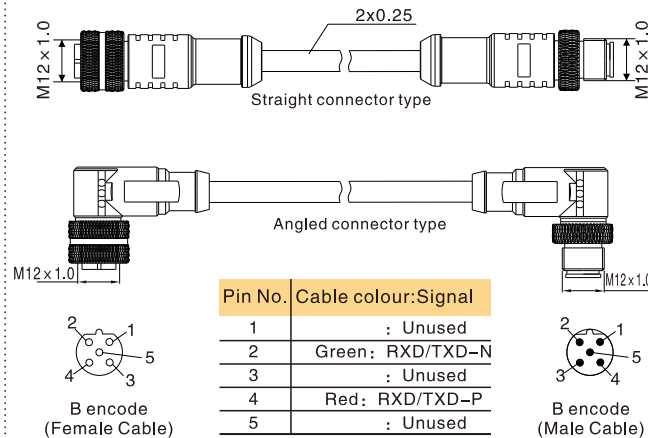
DP Male Cable (Shielded)



DP Female Cable (Shielded)



DP Male & Female Cable (Shielded)

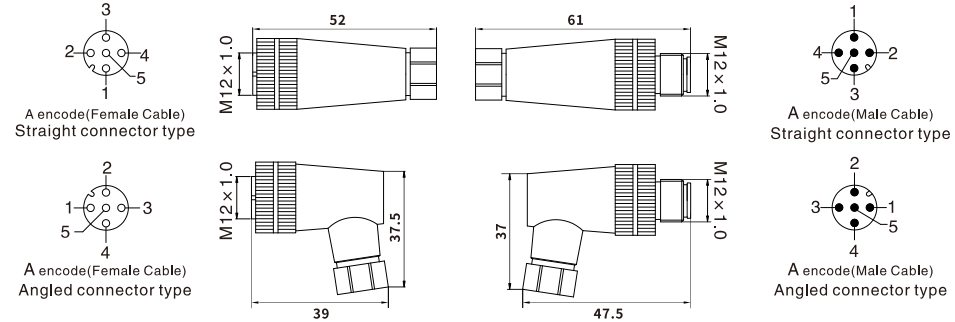


Cable Ordering encode

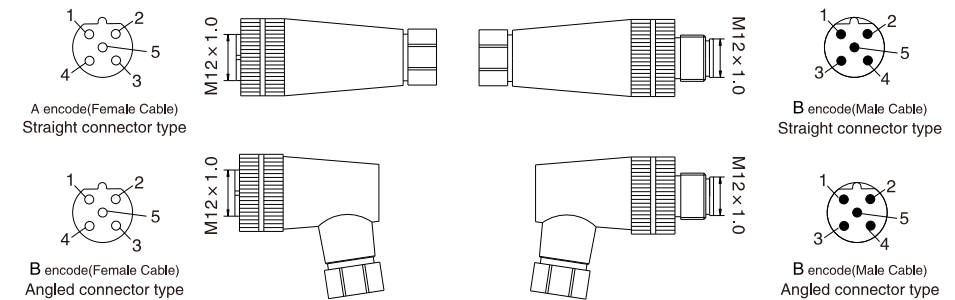
5-Cores Connector(M12-A encode)

M125			
5-Cores Connector (M12-A Code)	R:Rotating Female Head(Straight connector type) RL:Rotating Female Head(Angled connector type) RF:Rotating Male Head(Straight connector type) RFL:Rotating Male Head(Angled connector type)	Blank: A encode B: B encode	

M12-A encode



M12-B encode



Status LED Indicator

PROFIBUS DP

BF ○ ○ SF
SD ○ ○ RD
PWR ○ ○ PWR(V)

Status Indicator	BF	SF	Meaning
Data Interaction Indicator	Off	Off	Normal internet communication
	Red Light On	Off	Unable to detect baud rate
	Red light flash	Off	Baud rate detected but not addressed by master
	Off	Red Light On	Internal error (no load voltage,voltage out of range)
	Red Light On	Red Light On	Address out of range
	Red light flash	Red Light On	DP master sending parameters do not match local parameters
Power Indicator	SD	RD	Meaning
	Off	Off	No data interaction
	Green Light On	Green Light On	Have data interaction
Power Indicator	PWR	PWR(V)	Meaning
	Off	Off	System without power supply
	Green Light On	Red light flash	Load without power supply
	Red Light On	Green Light On	System voltage is higher than 26.4V
	Red light flash	Green Light On	System voltage is below 21.6V
	Green Light On	Red Light On	Load voltage is higher than 26.4V
	Green Light On	Red light flash	Load voltage is below 21.6V
	Green Light On	Green Light On	Normal module power supply

● Status LED Indicator

PROFINET

BF ○ ○ SF
L/A1 ○ ○ L/A2
PWR ○ ○ PWR(V)

EtherNet/IP

NS ○ ○ MS
L/A1 ○ ○ L/A2
PWR ○ ○ PWR(V)

EtherCAT

RUN ○ ○ ERR
L/A1 ○ ○ L/A2
PWR ○ ○ PWR(V)

Indicator	Status	Meaning
BF	Red light on	Communication not connected,IP address or device name are duplicated.
	Green light flash	Module is connecting with PN master station,no module address assigned
	Green light on	System is normal
SF	Green light on	System is normal
	Green light flash	short circuit,open-circuit,reverse polarity,count limited
L/A1	Yellow light on	BUS1 PROFINET internet connection
	Off	BUS1 no internet connection
L/A2	Yellow light flash	BUS1 internet communication is normal
	Yellow light on	BUS2 PROFINET internet connection
PWR	Off	BUS2 no internet connection
	Yellow light flash	BUS2 internet communication is normal
PWR	Off	Module without power supply
	Green light on	Module with 24V power supply
	Red light on	Module overvoltage
	Red light flash	Module undervoltag
PWR (V)	Off	Load without power supply
	Green light on	Load with 24V power supply
	Red light on	Load overvoltage
	Red light flash	Load undervoltage

Indicator	Status	Meaning
NS	Off	No power supply or no module address assigned
	Red light flash	EtherNet/IP timeout
	Green light flash	EtherNet/IP no communication connection
MS	Green light on	System is normal
	Red light flash	short circuit,open-circuit,reverse polarity,count limited
L/A1	Yellow light on	BUS1 EtherNet/IP internet connection
	Off	BUS1 no internet connection
L/A2	Yellow light flash	BUS1 internet communication is normal
	Yellow light on	BUS2 EtherNet/IP internet connection
PWR	Off	BUS2 no internet connection
	Yellow light flash	BUS2 internet communication is normal
PWR	Off	Module without power supply
	Green light on	Module with 24V power supply
	Red light on	Module overvoltage
	Red light flash	Module undervoltage
PWR (V)	Off	Load without power supply
	Green light on	Load with 24V power supply
	Red light on	Load overvoltage
	Red light flash	Load undervoltage

Indicator	Status	Meaning
RUN	Off	Initial status
	Green light flash	Pre-operation or safe operation
ERR	Green light flash	Normal working status
	Off	Initialization normal
L/A IN	Red light flash	Initialization fail
	Green light on	BUS1 EtherCAT internet connection
L/A OUT	Off	BUS1 no internet connection
	Green light flash	BUS1 internet communication is normal
PWR	Green light on	BUS2 EtherCAT internet connection
	Off	BUS2 no internet connection
PWR	Green light flash	BUS2 internet communication is normal
	Off	Module without power supply
	Green light on	Module without power supply
	Red light on	Module overvoltage
PWR (V)	Red light flash	Module undervoltage
	Off	Load without power supply
	Green light on	Load with 24V power supply
	Red light on	Load overvoltage
	Red light flash	Load undervoltage

DeviceNet

NS ○ ○ MS
PWR ○ ○ PWR(V)

CC-Link

RUN ○ ○ ERR
SD ○ ○ RD
PWR ○ ○ PWR(V)

CANopen

MS ○ ○ NS
IO ○ ○ SD
PWR ○ ○ PWR(V)

Indicator	NS	MS	Meaning
	Off	Off	Network Power Supply
	Off	Red Light on	Offline, the watchdog timer is incorrect
ERR	Off	Red light flash	The parameter is in -correctly written
	Red Light on	Green Light on	Bus off, MAC ID repeated
SD	Red light flash	Green light flash	The IO connection times out
	Green light on	Green light on	Normal Communication

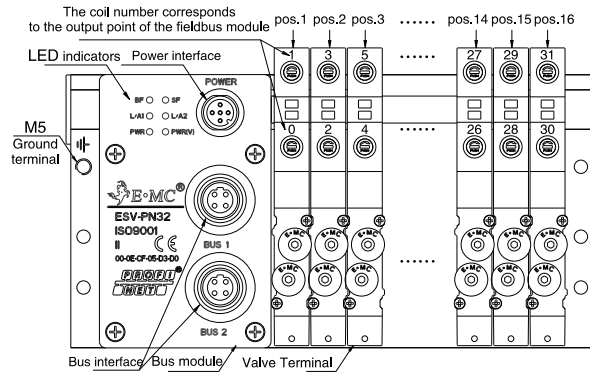
Indicator	PWR	PWR(V)	Meaning
	Off	Off	Module is not powered on
	Green Light on	Red light flash	Load is not powered on
PWR	Red light on	Green Light on	Module Overvoltage
	Red light flash	Green Light on	Module Undervoltage
PWR(V)	Green Light on	Red light on	Load Overvoltage
	Green Light on	Red light flash	Load Undervoltage
	Green Light on	Green Light on	Normal Communication

Indicator	Status	Meaning
RUN	Green light on	normal internet connection
	Off	no internet connection
ERR	Red light on	abnormal internet communication
	Red light flash	The station number setting and baud rate were changed in the communication
SD	Off	normal internet communication
	Green light on	normal data transmission
RD	Off	No data interaction or data sending exception
	Green light on	normal data reception
PWR	Off	No data interaction or Data reception exception
	Green light on	Module without power supply
PWR(V)	Off	Module without power supply
	Red light flash	Module undervoltage
	Red light on	Module overvoltage
	Off	Module with 24V power supply
PWR(V)	Green light on	Load with 24V power supply
	Off	Load without power supply
	Red light flash	Load undervoltage
	Red light on	Load overvoltage
	Off	Load undervoltage

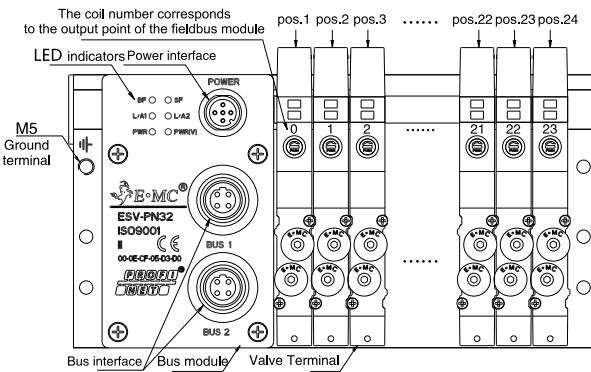
Indicator	Color	Status	Meaning
MS	Green	on	Normal module operation
		off	Abnormal module or Abnormal power
NS	Red	on	Bus not operating, not connected or stop, Node 0 or 127
		off	Communication failure
IO	Green	on	Normal communication
		off	Running mode
SD	Green	Rapid Flash	Prerunning mode
		Slow Flash	Bus interruption attempt to reconnect or change nodes while running, baud rate
PWR	Green	off	Bus not operating, not connected or stop
		Flash	Normal data transmission
PWR(V)	Green	on	Normal control power supply
		off	Abnormal control power supply
	Red	on	Control power overvoltage
		Flash	Control power undervoltage
	Green	off	Normal control power supply
		on	Normal load power supply
PWR(V)	Red	off	Abnormal load power supply
		on	Load power supply overvoltage
	Red	SlowFlash	Load power supply undervoltage
		Rapid Flash	Load power supply reversed
	off	off	Auxiliary power supply is normal

● Wiring Diagram—ESV-PN/EC/EP/DN/CC/CP/DP Series

Wiring for double control(maximum 16 positions)



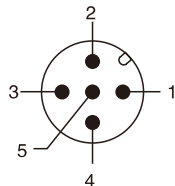
Wiring for single control(maximum 24 positions)



ESV-LK Series

● Power interface

Power Interface (M12, A encode, Class B)



Pin No.	Type	Description
1	PS24	+24V Control voltage
2	PL24	+24V Operating voltage of load valve
3	PS0	0V Control voltage
4	C/Q	Data communication (IO-Link)
5	PL0	0V Operating voltage of load valve

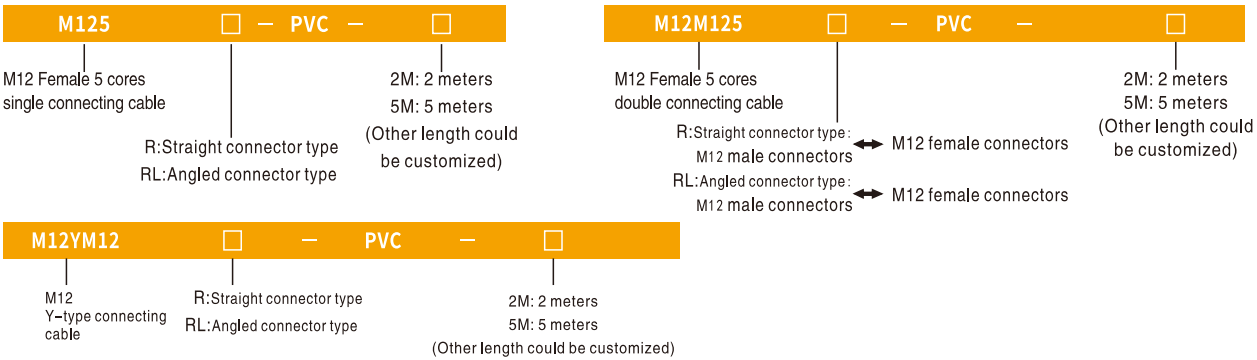
● Status LED Indicator

Indicators	Status	Meaning
X1	LED Close	Abnormal power supply
	Green open	Normal power supply , no establish protocols
	Red open	Fault or abnormal load power supply
	Green flash	Normal working

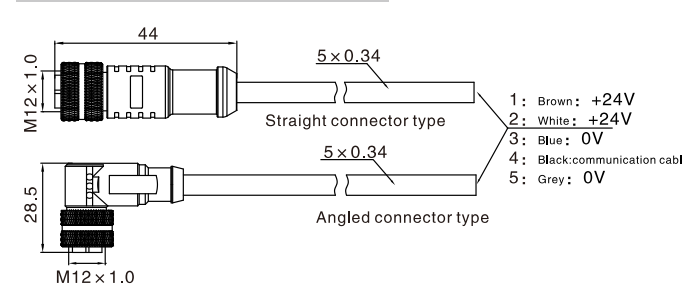
● Specifications

Model	ES1V(VM/VB)-LK16 ES2V(VM/VB)-LK16	ES1V(VM/VB)-LK32 ES2V(VM/VB)-LK32	ES1V(VM/VB)-LK48 ES2V(VM/VB)-LK48
Output	16	32	48
Protocols	IO-Link		
Baud rate	COM2 (38.4kbps)		
Configuration files	IODD file		
Specification	V1.1		
Output Voltage	DC24V(DC21.6~26.4V)		
Current consumption	25mA below		
Output power supply voltage (valve)	DC24V(DC22.8 ~ 26.4V)		
Power interface	M12, 5pin, A encode		
Type	Class B		
Diagnostic	System diagnosis,communication error,short circuit protection		
Protection	IP40		
Storage temperature	-20 ~ 70℃		
Working temperature	-10~60℃		

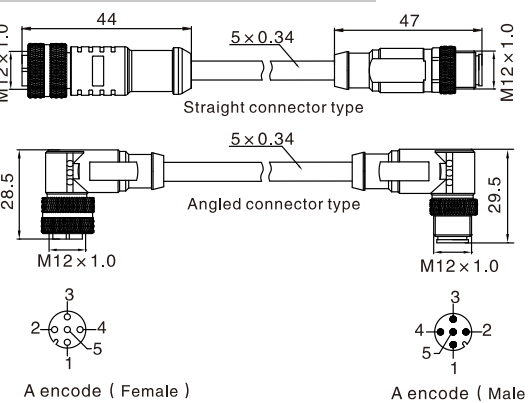
◎ Cable Ordering Code



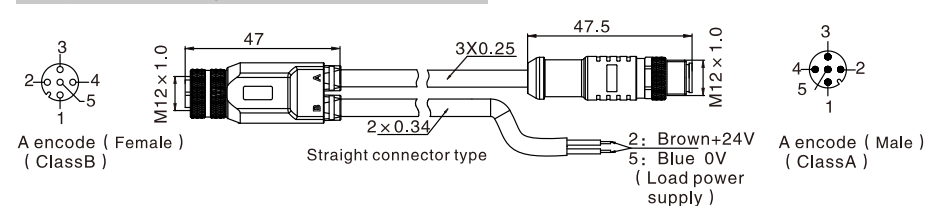
Single connecting cable (Class B)



Double connecting cable (Class B)



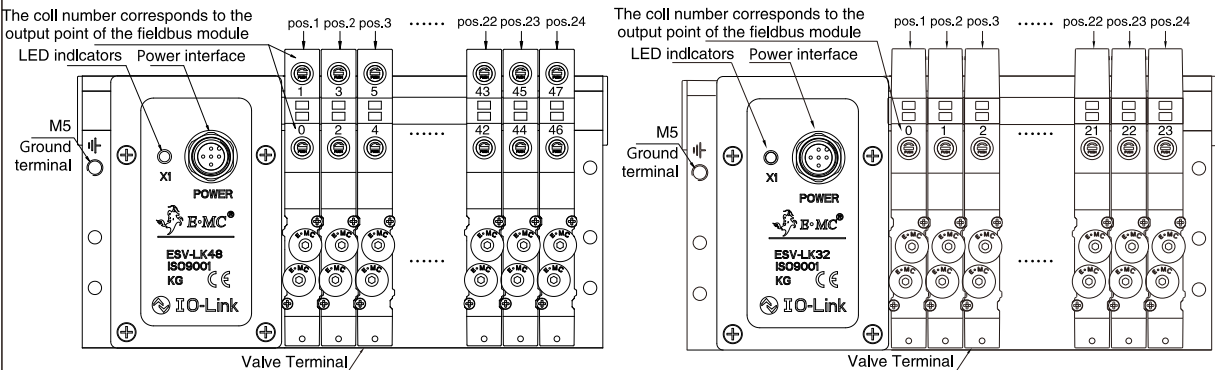
Y-type connecting cable(Class A&Class B)



◎ Wiring diagram——ESV-LK Series

Wiring for double (Max 24 positions)

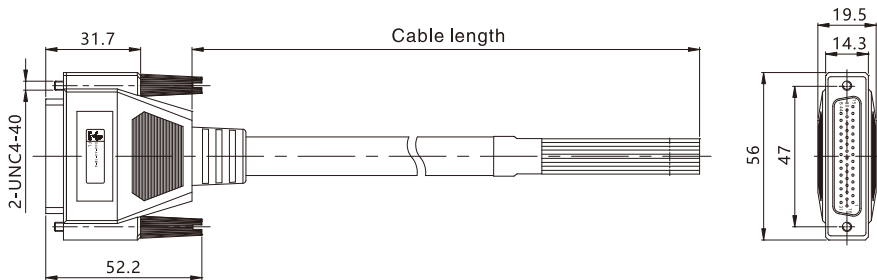
Wiring for single control (Max 24 positions)



◎ Precautions for Use

1. Do not disassemble, modify(including replacing printed circuit boards) or repair without authorization, which may cause injury or failure.
2. Do not operate the product exceeding the parameters(limited values), and do not use it for flammable or harmful liquids, which may cause fire, malfunction or damage to the product. Please verify the manual before using.
3. Do not operate in an environment containing flammable and explosive gases, which may cause fire or explosion. This product is not designed of explosion-proof.
4. If use this product in the interlock circuit:(1)Provide double interlocking systems, such as mechanical system;(2)Check the products regularly, avoid accidentsby malfunctions.
5. The following instructions must be followed during maintenance: (1)turn off the power;(2) stop providing air, remove the remaining pressure and make sure that there is no air supply before maintenance; otherwise, it may cause injury.
6. After the maintenance is completed, check the functions properly. If the equipment does not work properly, please stop the operation. In case of unexpected failure, safety cannot be guaranteed.
7. The product designed used for industries. Except under industrial environments, when used under enviroments such as: mixed commercial and residential areas, measures must be taken to prevent radio interference.
8. The bus manifold and power cord must be functionally grounded to ensure the safety and anti-noise performance of the fieldbus system.
9. IO-Link valve terminal provide the opetrating voltage through the B-type port,normally,please provide power separately when A-type port used .

◎ Connector Cable



Connector Cable Terminal Diagram	PIN number & Wire color							
	Pin No.	D44-44 wire color	Pin No.	D44-44 wire color	Pin No.	D44-44 wire color	Pin No.	D44-44 wire color
	1	orange	12	purple with 1 point	23	blue with 2 points	34	white with 3 points
	2	orange with 1 point	13	purple with 2 points	24	blue with 3 points	35	white with 4 points
	3	orange with 2 points	14	purple with 3 points	25	blue with 4 points	36	grey
	4	orange with 3 points	15	purple with 4 points	26	brown	37	grey with 1 point
	5	orange with 4 points	16	black	27	brown with 1 point	38	grey with 2 points
	6	pink	17	black with 1 point	28	brown with 2 points	39	grey with 3 points
	7	pink with 1 point	18	black with 2 points	29	brown with 3 points	40	grey with 4 points
	8	pink with 2 points	19	black with 3 points	30	brown with 4 points	41	yellow
	9	pink with 3 points	20	black with 4 points	31	white	42	yellow with 1 point
	10	pink with 4 points	21	blue	32	white with 1 point	43	red (COM)
	11	purple	22	blue with 1 point	33	white with 2 points	44	green (COM)

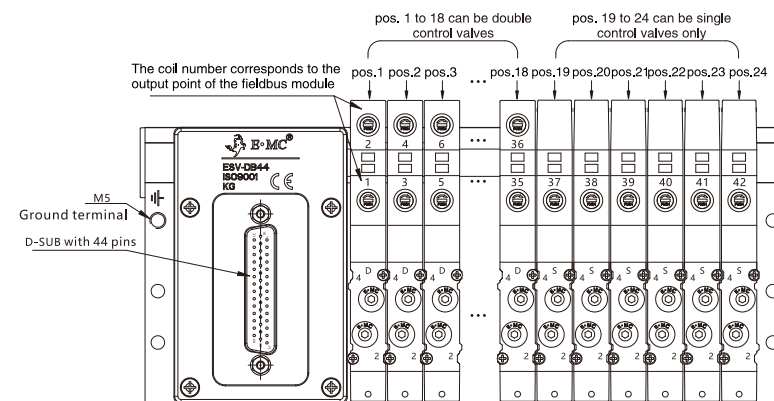
Note: PIN number from 1 to 36 pins can use double control valves , PIN number from 37 to 42 pins can use singal control valves only(18 pcs double control valves ,6 pcs single control valves)

◎ Cable Ordering Code

Connect Types	Wires In Cable	Cable Length	A
D44: D-SDB connector with 44 pins	44: 44wires(42 coils or less)	1M: 1 meters 2M: 2 meters 3M: 3 meters (Other length could be customized)	

● **ESV-DB44 Valve Terminal Inner Wiring Diagram**

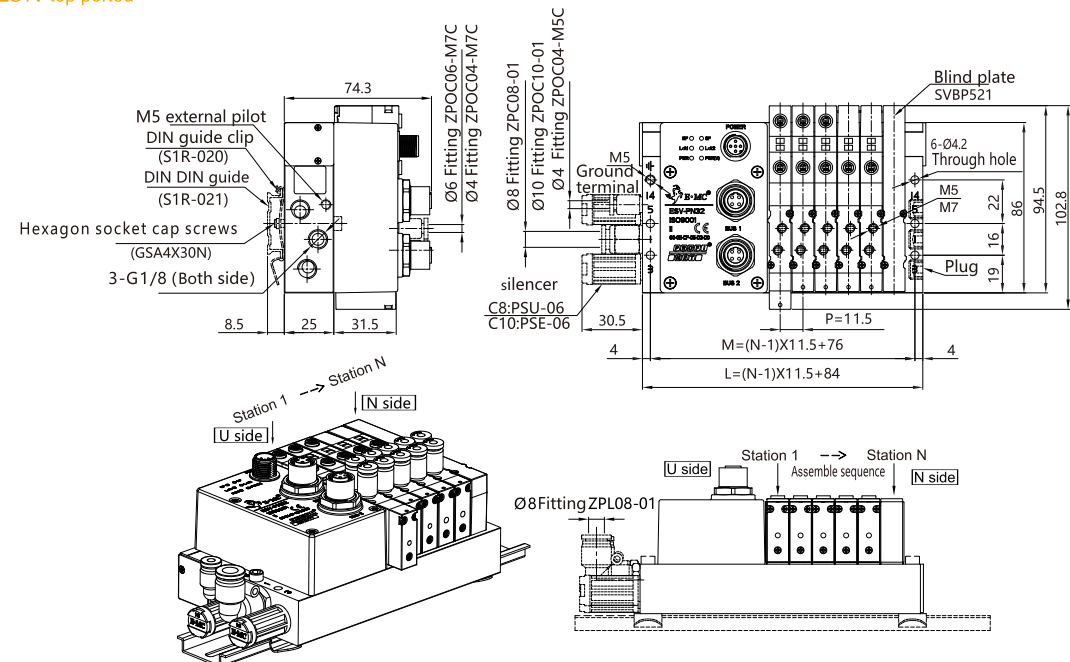
Wiring diagram of mixed single/double control (control 42 coils maximum and 24 valve stations maximum, suitable for 13 to 18 pcs double control valves, when the coils is more than 36, station 19 to 24 can be single control valves only)



○ Main Dimension

ES1V Valve Terminal

ES1V top ported

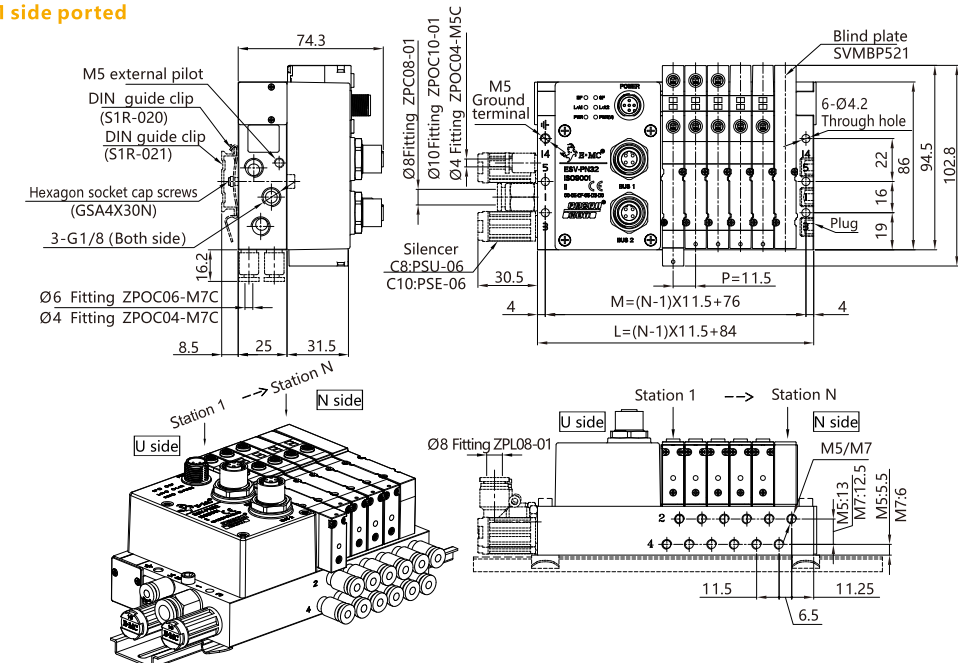


Note: N means valve link

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	95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
	M	87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5

○ Main Dimension

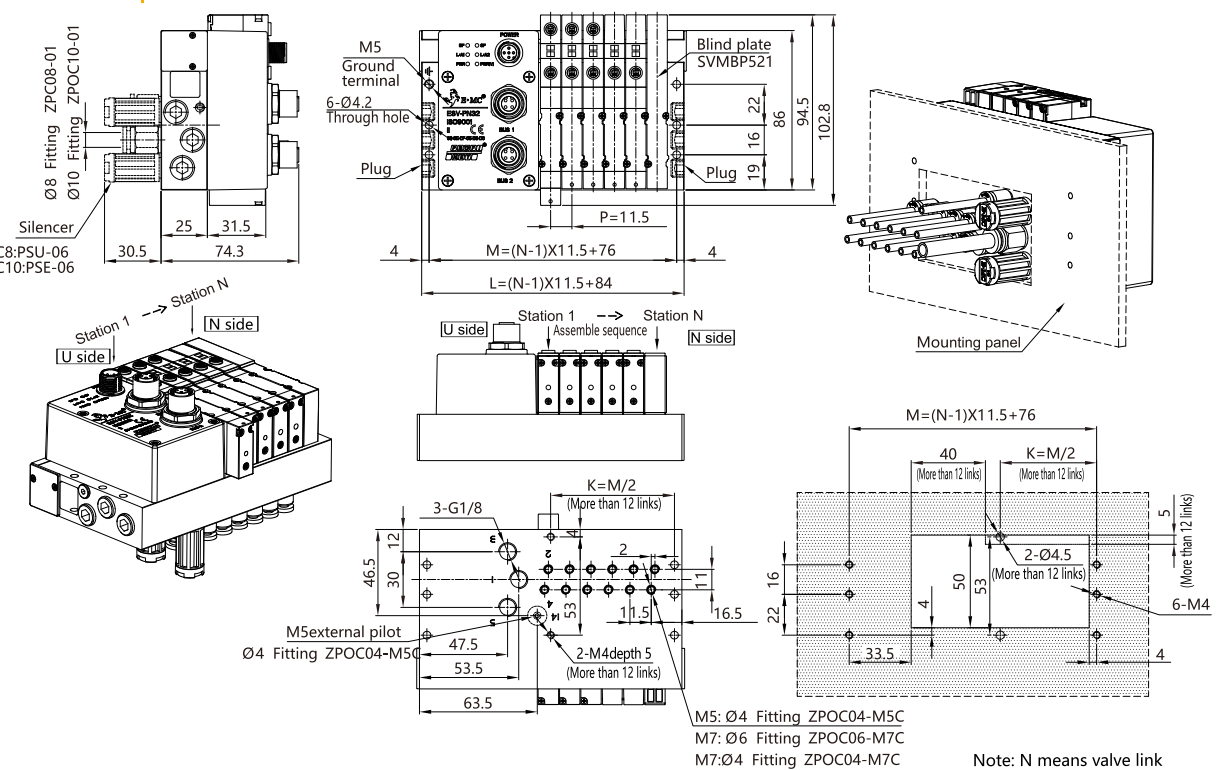
ES1VM side ported



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	95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M	87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5

ES1VB bottom ported



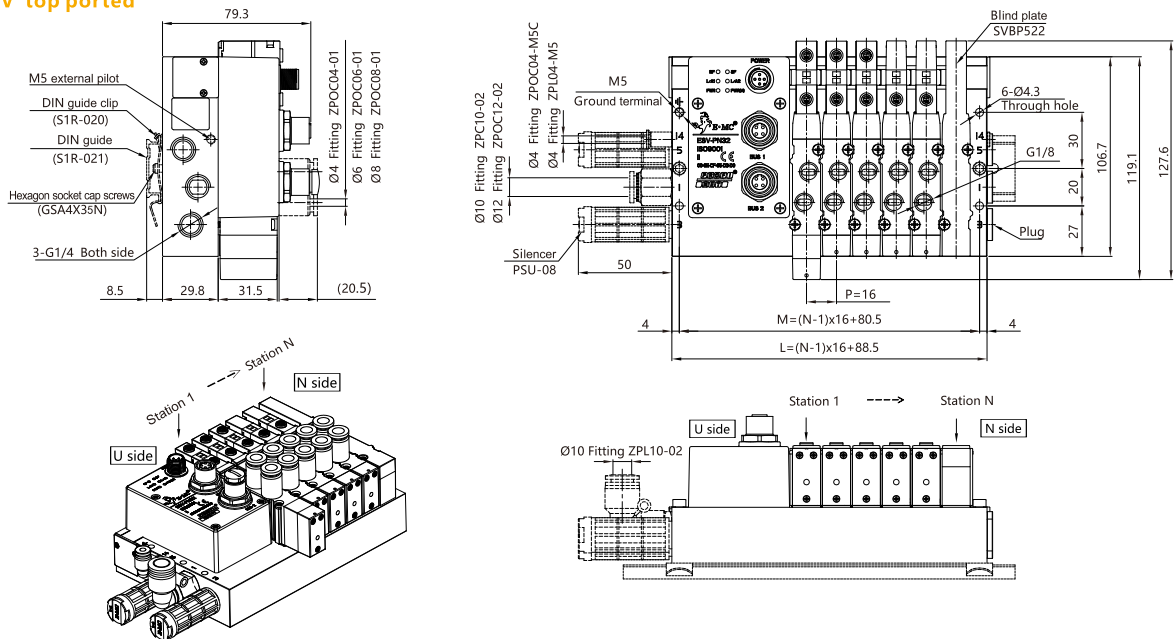
Note: N means valve link

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		95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M		87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5
K													107	112.75	118.5	124.25	130	135.75	141.5	147.25	153	158.75	164.5	170.25

Main Dimension

ES2V Valve Terminal

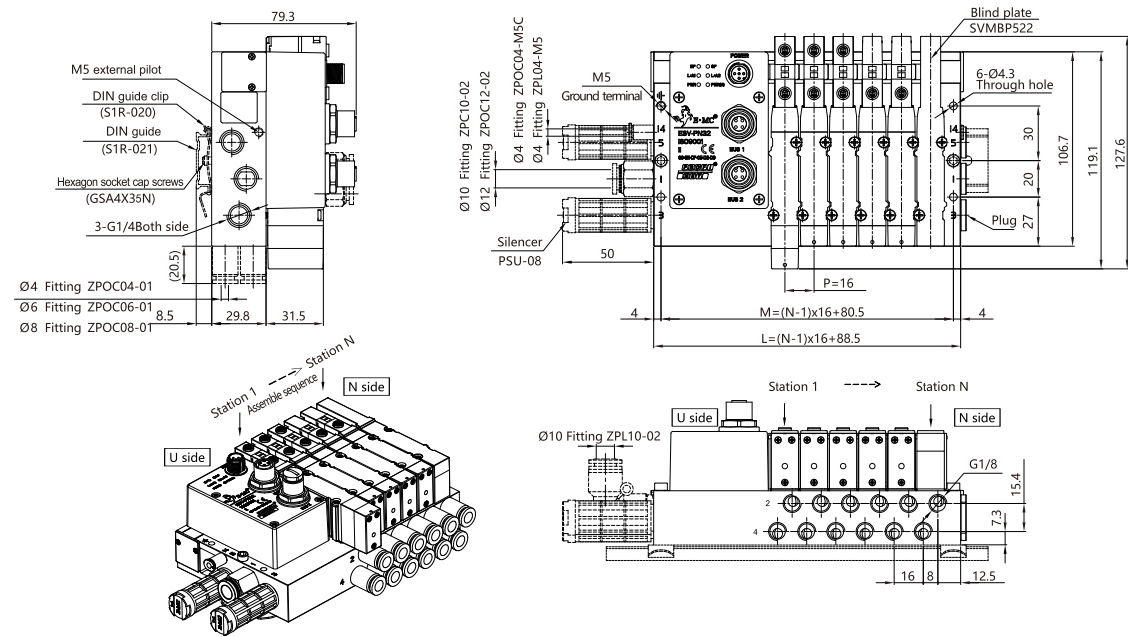
ES2V top ported



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

ES2V Valve Terminal

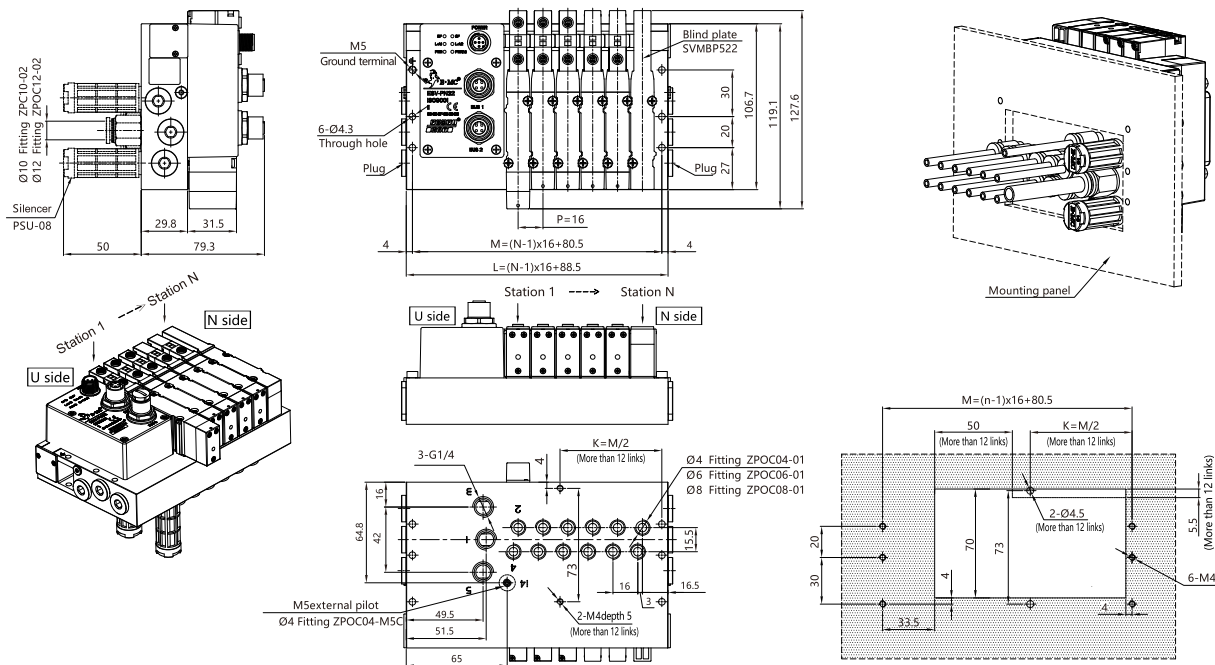
ES2VM side ported



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

Main Dimension

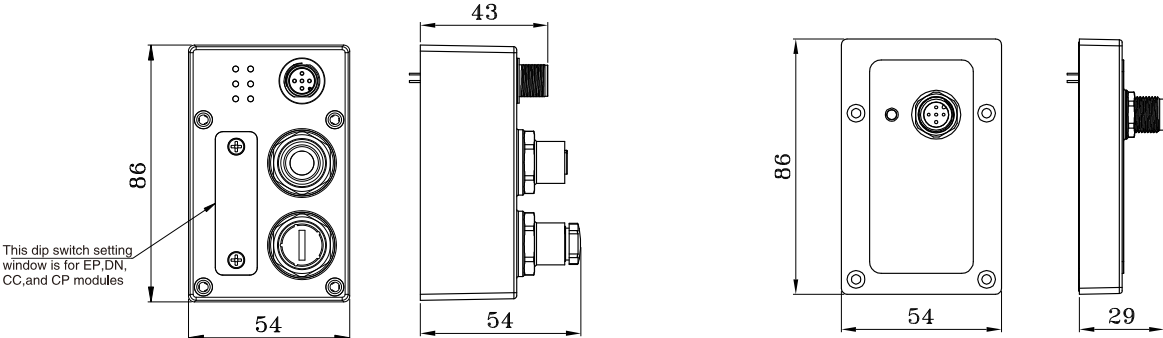
ES2VB bottom ported



Sign	Model	2	3	4	5	6	7	8	9	10	11	12	
	L	104.5	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	
Sign	M	96.5	112.5	128.5	144.5	160.5	176.5	192.5	208.5	224.5	240.5	256.5	
	Model	13	14	15	16	17	18	19	20	21	22	23	24
Sign	L	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	272.5	288.5	304.5	320.5	336.5	352.5	368.5	384.5	400.5	416.5	432.5	448.5
Sign	K	136.25	144.25	152.25	160.25	168.25	176.25	184.25	192.25	200.25	208.25	216.25	224.25

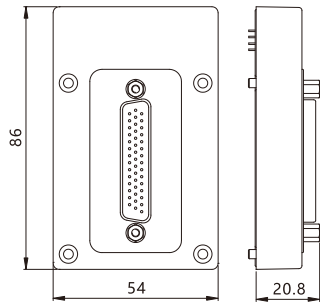
Note: N means valve link

Dimensions of Control Module



PN/EC/EP/DN/CC/CP Protocol control module

IO-Link Protocol control module

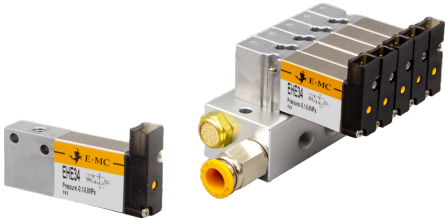
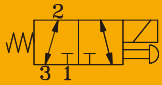


DB44 dimensions

Note: The valve terminal dimensions of ESV-DB44/LK/EC/PN/EP/DN/CC/CP are same ,except the modules.

EHE34

3-way Fast-switching Valve



Product Features

- Direct-acting structural design, ensuring sensitive operation and rapid response ;
- Fast response and high-speed switching, with an opening response time of 3.4ms and a closing response time of 2ms;
- Precision die-casting valve body process, achieving a high flow rate of up to 120L/min;
- Coaxial, balanced spool design, high durability and sealing;
- Zero-pressure start, suitable for vacuum;
- 3/2-way valve, versatile for high-speed applications;
- Optional pipe mounting and panel mounting methods; with a manual pushbutton for more convenient operation.

How to Order?

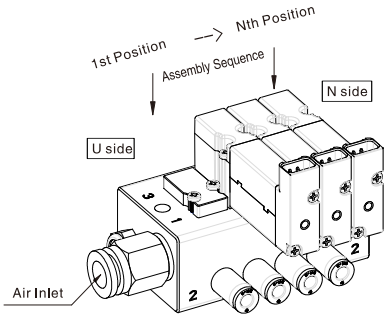
Valve Slice

Series	Valve Body Type	Port Size	Voltage	Plug-in Wiring
EHE34	A: Tubular M: Manifold (Plate Type Manifold valves require a sub-plate for use)	M5: M5 C4: Φ4 C6: Φ6 (Not applicable for manifold type)	E4:DC24V	Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter

Order Example: EHE34 series, tubular type, with an M5 connection port diameter, cable length of 0.3 meters, the ERP code: EHE34A-M5E4.

Valve Terminal

Series	Valve Body Type	Quantity		Voltage	Inlet and Exhaust Port	Plug-in Wiring	Thread type			
EHE34	M: Manifold	Quantity (Valve Position Number)	Quantity (For different specifications when mixed. Not required if the same specification.)	E4:DC24V		Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter	Blank:G			
		Code	Valve Function	Code	Working Port	Note	Code	Inlet and Exhaust Port	Tubing	Note
		Y	Normally Closed (N.C.)	06	M5 connection port	Valve Position Number Starting from the U-side as the 1st Position.	Blank	No mufflers, connectors, or plugs on either side.	—	—
		H	Normally Open (N.O.)	C4	Φ4 Pneumatic Fittings (ZPOC04-M5C)		U	Muffler and PC connector installed on the U side.		
		B	Blind Plate	C6	Φ6 Pneumatic Fittings (ZPOC06-M5C)		N	Muffler and PC connector installed on the N side.		
							UN	Mufflers and PC connectors installed on both sides.	Ø8	Install a plug on the side opposite the air inlet
							UL	Muffler and PL connector installed on the U side.		
							NL	Muffler and PL connector installed on the N side.		
							UNL	Mufflers and PL connectors installed on both sides.		
							U1	Muffler and POC connector installed on the U side.	Ø10	Silencer V-08G
							N1	Muffler and POC connector installed on the N side.		
							UN1	Mufflers and POC connectors installed on both sides.		



Order Example:

EHE34 Series Manifold Type, Standard type, 4-position Normally Closed Valves, 1-position Blind Plate, Working Port Ø6 Pneumatic Fittings, Terminal Box Type, Silencer and PC Fittings on Side U, Pneumatic Tube Size Ø8, G-thread, The ERP Code: EHE34M-4YB-C6E4-U.

Manifold Plate

Manifold Plate			
EHE34M	N	F	Thread type
Series Code	1: 1 Position 2: 2 Position 3: 3 Position 26: 26 Position	F: Manifold Plate	Blank:G

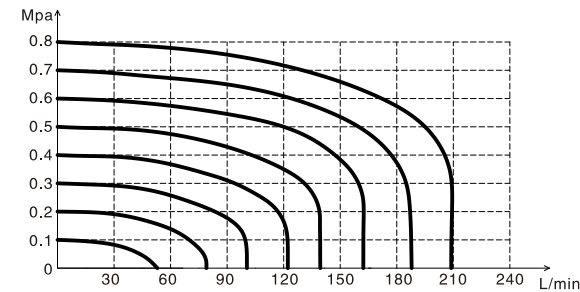
Blind Plate

EHE34M	BP
Series Code	Component Code

Specification

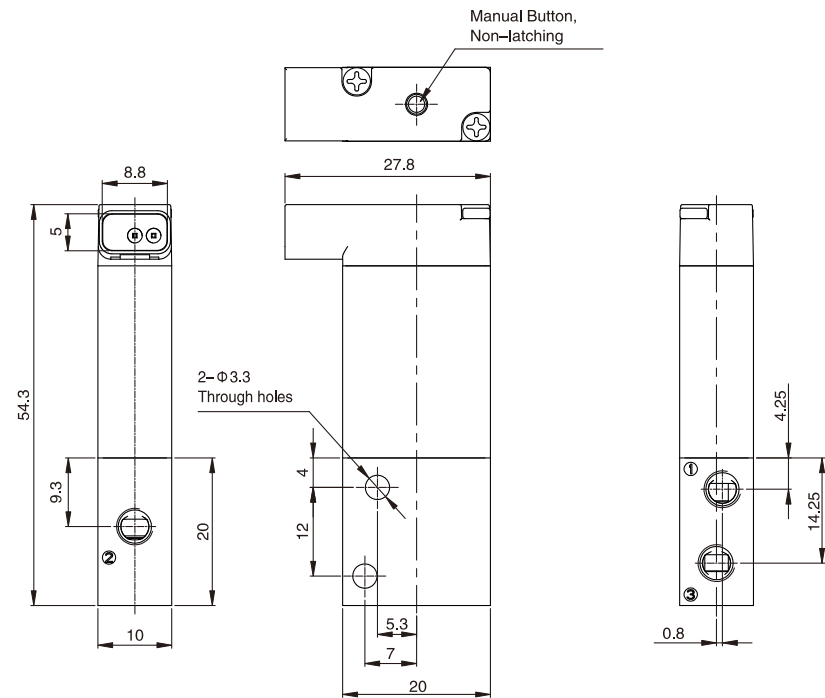
Model	EHE34A	EHE34M
Working Medium	Dried compressed air filtered through a 40 μ m filter element	
Actuation Type	Direct-acting	
Effective Cross-sectional Area (mm ²)	2(Cv=0.12)	
Port Size	M5	/
Lubrication	Not required	
Working Pressure (Mpa)	-0.1~0.8	
Maximum Pressure Resistance (Mpa)	1.2	
Operating Temperature (°C)	-20 to 60 (non-freezing).	
Voltage Range	± 10%	
Power Consumption	4W	
Insulation Class	Class F	
Response Time	Open 3.4ms; Close 2ms.	
Weight (g)	34	

Flow Characteristics

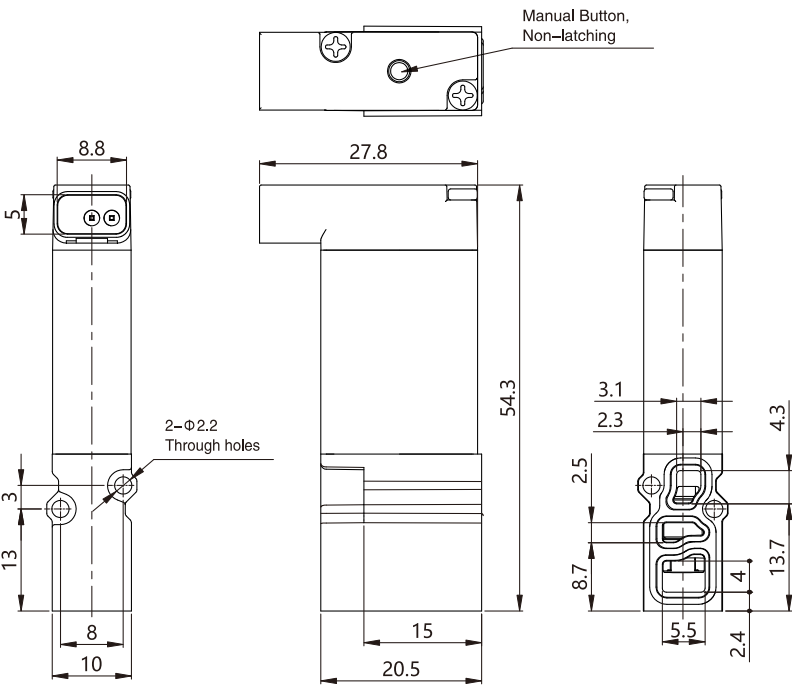


Dimensions

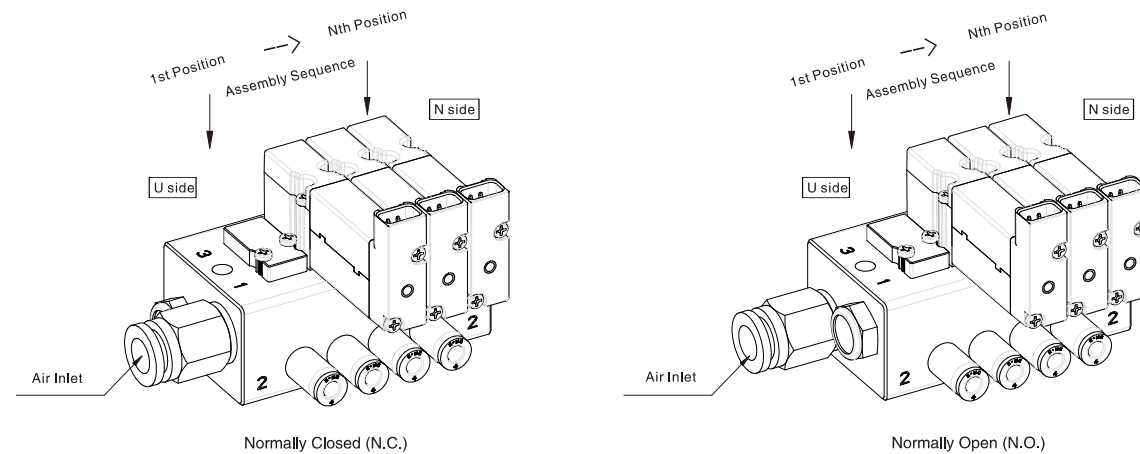
Single Valve- EHE34A



Single Valve- EHE34M



Integrated Valve Group



A diagram of a 2D hexagonal lattice. A zigzag line is drawn across the lattice, with arrows indicating a direction of movement or flow. The zigzag line starts at a vertex labeled '3', goes up to a vertex labeled '2', then down to a vertex labeled '1', and continues to the right. The arrows point from '3' to '2', from '2' to '1', and from '1' to the right.



- Direct-acting structural design, ensuring sensitive operation and rapid response ;
- Fast response and high-speed switching, with an opening response time of 6ms and a closing response time of 2ms.
- Precision die-cast valve body with a standard high flow rate of 180L/min;
- Coaxial, balanced spool design, high durability and sealing.
- Zero-pressure start, suitable for vacuum.
- 3/2-way valve, versatile for high-speed applications.
- Optional pipe mounting and panel mounting methods, with a manual pushbutton for more convenient operation.

Valve Slice

Series	Type	Valve Body Type	Port Size	Voltage	Electrical Connection	Plug-in Wiring	Thread type
EHE35	Blank: Standard type L: High-flow type	A: Tubular M: Manifold (Plate Type Manifold valves require a sub-plate for use)	06: 1/8" (Not applicable for manifold type)	E4:DC24V	Blank: Wiring box type F: Lead wire type L: Plug-in type	Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "F Type" and "L: Plug-in type" Only)	Blank:G

Order Example: EHE35 Series, Tubular Type, Terminal Box Type, G-thread, the ERP Code: EHE35A-06E4.

Valve Terminal

Series

Type

Valve Body Type

—

—

—

—

Voltage

Electrical Connection

—

Inlet and Exhaust Port

—

Plug-in Wiring

—

Thread type

EHE35

Blank: Standard type
L: High-flow type

M: Manifold

Quantity

(For different specifications when mixed. Not required if the same specification.)

E4:DC24V(5.4W)

Blank: Wiring box type
F: Lead wire type
L: Plug-in type

Blank: Patchcord length is 0.3 meter
0.6M: Patchcord length is 0.6 meter
1M: Patchcord length is 1 meter
(Options for "F Type" and "L: Plug-in type" Only)

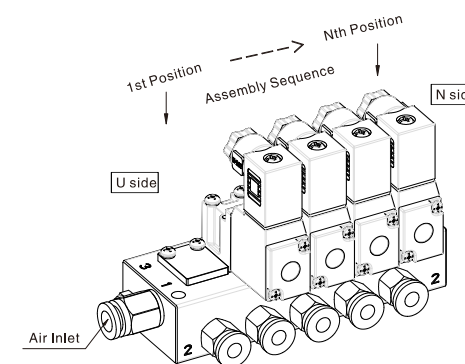
Blank:G

Code	Valve Function
Y	Normally Closed (N.C.)
H	Normally Open (N.O.)
B	Blind Plate

Code	Working Port	Note
06	1/8" Pipe Connection	Valve Position Number Starting from the U-side as the 1st Position.
C4	φ4 Pneumatic Fittings (ZPC04-01G)	
C6	φ6 Pneumatic Fittings (ZPC06-01G)	
C8	φ8 Pneumatic Fittings (ZPC08-01G)	

Blank	Inlet and Exhaust Port	Tubing	Note
06	No silencers, fittings, or plugs on either side	—	Install a plug on the side opposite the air inlet
U	Silencer and PC fitting installed on U-side	Ø8	
N	Silencer and PC fitting installed on N-side		
UN	Silencers and PC fittings installed on both sides		
UL	Silencer and PL fitting installed on U-side		Ø10
NL	Silencer and PL fitting installed on N-side		
UNL	Silencers and PL fittings installed on both sides		
U1	Silencer and PC fitting installed on U-side		
N1	Silencer and PC fitting installed on N-side	Ø10	Silencer V-Ø8G
UN1	Silencers and PC fittings installed on both sides		

Nth Position



Order Example:

EHE35 Series Manifold Type, Standard type, 4-position Normally Closed Valves,
1-position Blind Plate, Working Port Ø6 Pneumatic Fittings, Terminal Box Type,
Silencer and PC Fittings on Side U, Pneumatic Tube Size Ø8, G-thread,
the ERP Code: EHE35M-4YB-C6E4-U.



Manifold Plate

Manifold Plate

EHE35M	N	F	Thread type
Series Code	1: 1 Position 2: 2 Position 3: 3 Position 15: 15 Position	F: Manifold Plate	Blank:G

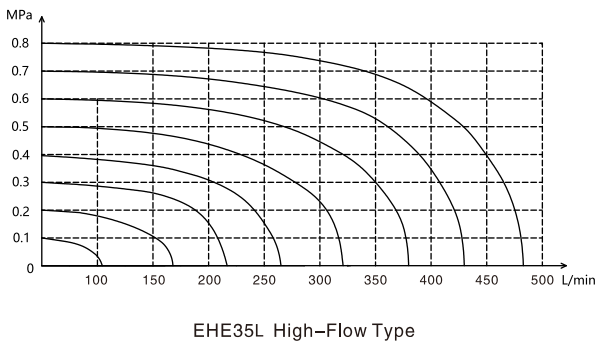
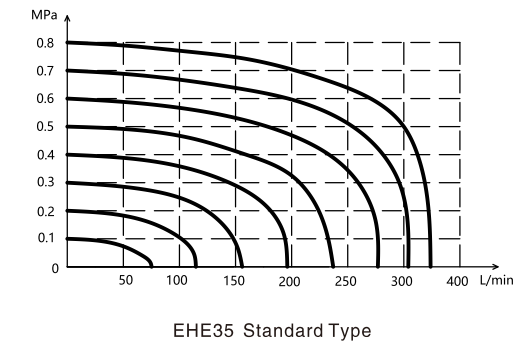
Blind Plate

EHE35M	BP
Series Code	Component Code

Specification

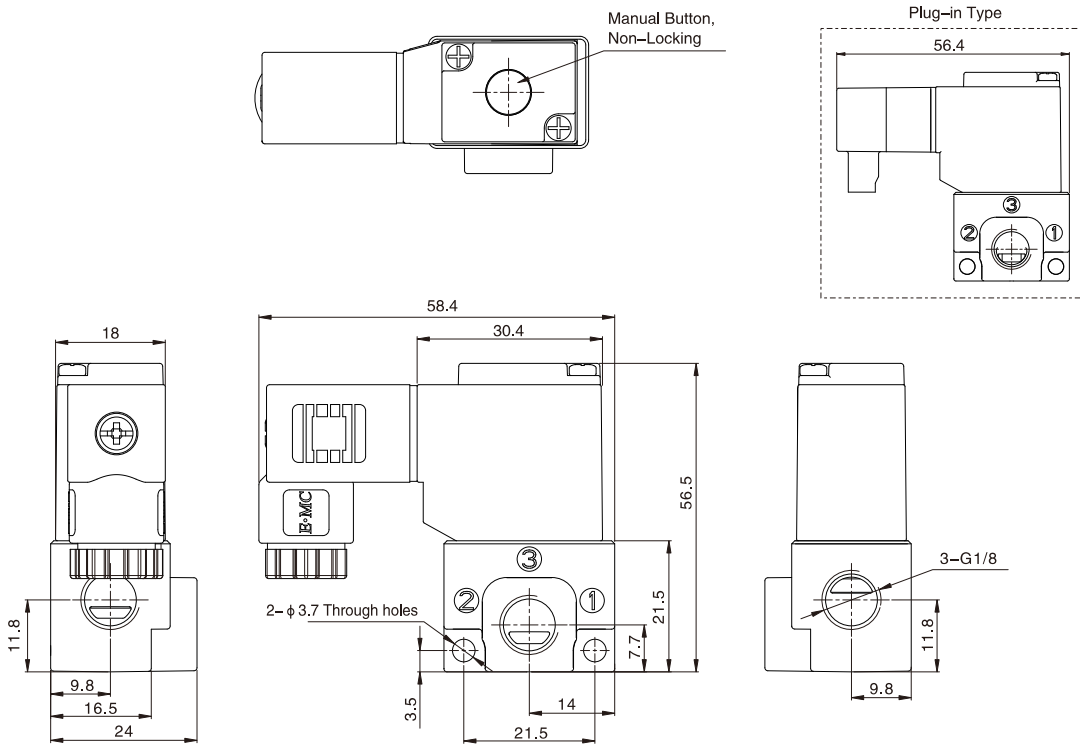
Model	EHE35A	EHE35M	EHE35LA	EHE35LM
Working Medium	Dried compressed air filtered through a 40 μ m filter element			
Actuation Type	Direct-acting			
Effective Cross-sectional Area (mm ²)	3(Cv=0.18)		4.25(Cv=0.25)	
Port Size	G1/8	/	G1/8	/
Lubrication	Not required			
Working Pressure (Mpa)	-0.1~0.8			
Maximum Pressure Resistance (Mpa)	1.2			
Operating Temperature (°C)	-20 to 60 (non-freezing).			
Voltage Range	± 10%			
Power Consumption	5.4W		12.7W	
Insulation Class	Class F			
Protection Class	IP65(DIN40050)			
Response Time	Open 6ms; Close 2ms.		Open 4.5ms; Close 2ms.	
Weight (g)	77	70	77	70

Flow Characteristics

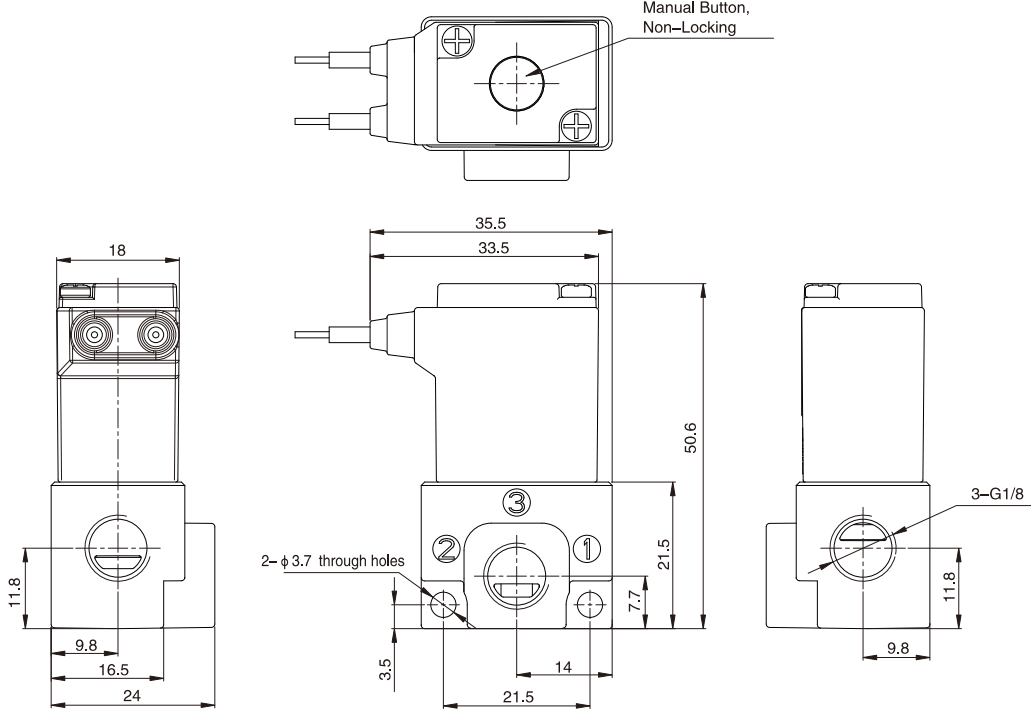


Dimensions

EHE35A Terminal Box Type / Plug-in Type

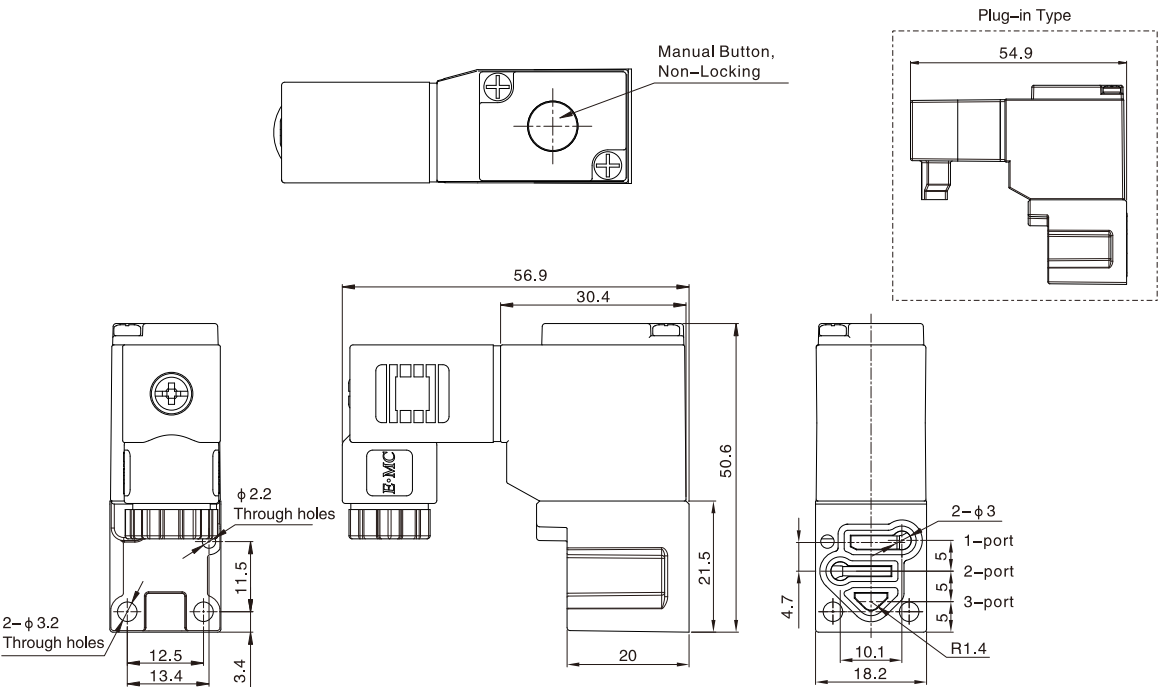


EHE35A Leaded Type

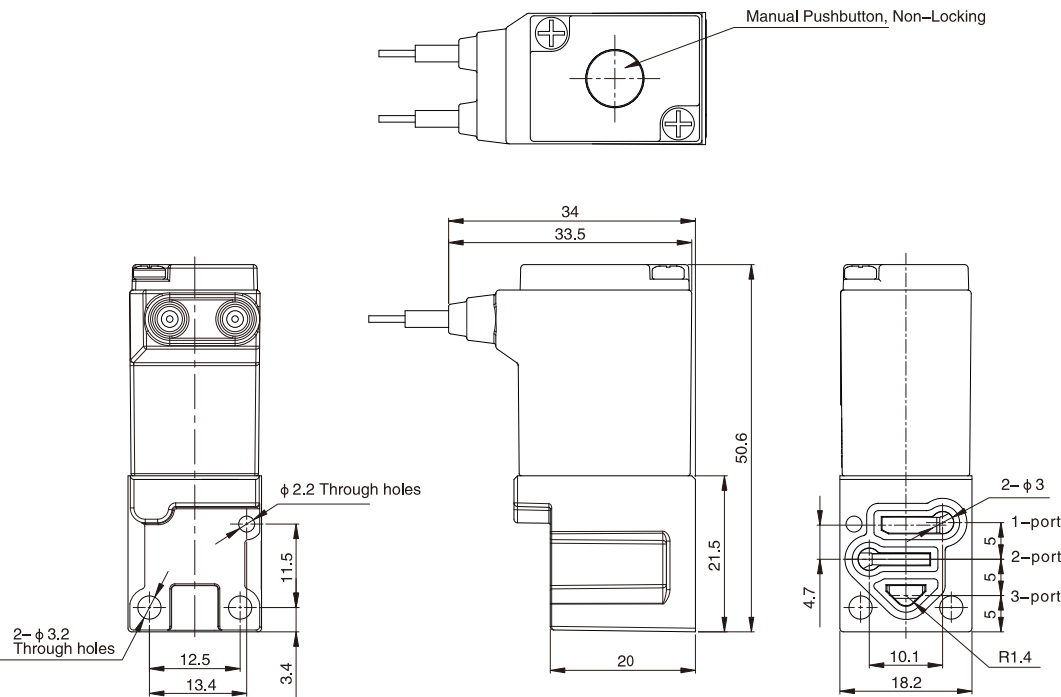


Dimensions

EHE35M Terminal Box Type / Plug-in Type

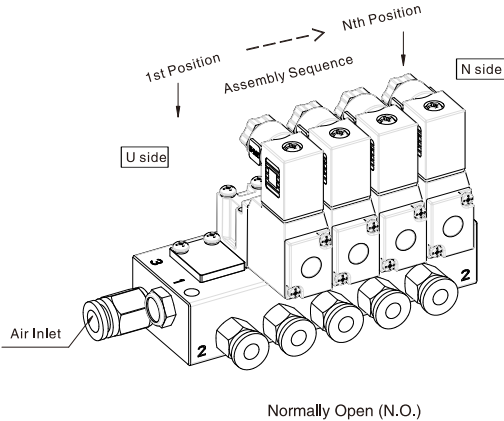
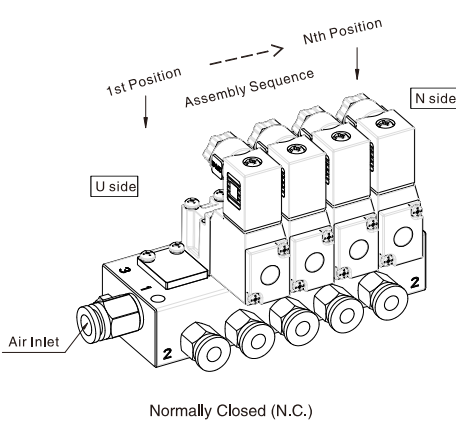
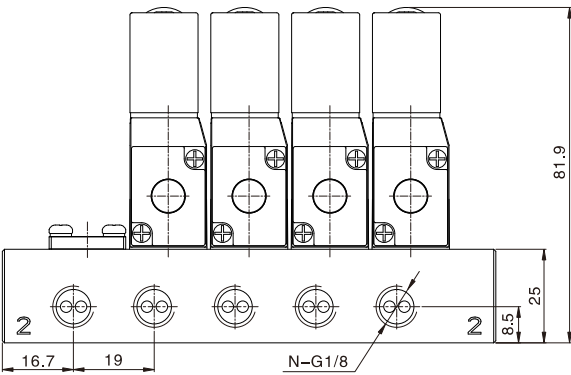
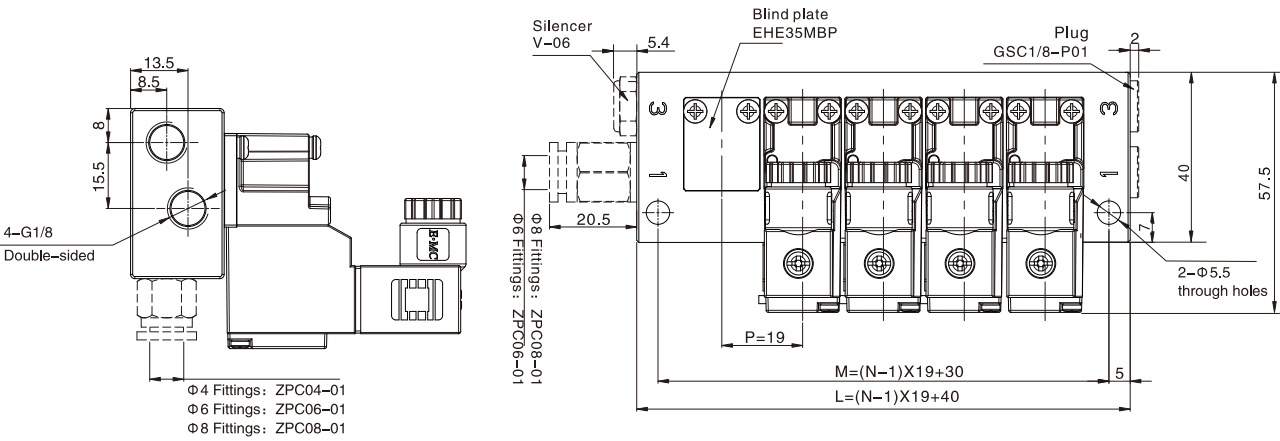


EHE35M Leaded Type

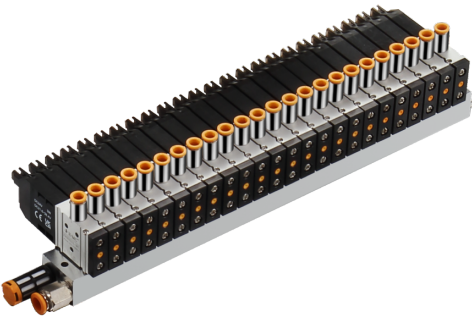
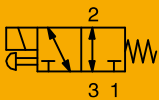


Dimensions

EHE35 Series Integrated Valve Group



EHE
Fast-Switching Valves



Product Features

- High-speed driving chip is adopted, with power as low as 2W and response time as low as 2ms
- Large flow rate of 100L/min and long service life of more than 200 million times
- Coaxial cut-off structure, no back pressure balance valve core. solenoid valve action is not affected by working medium pressure, with strong dirt resistance and good sealing performance
- Zero pressure start, which can be used for vacuum
- 3/2 way, Universal for N.C. & N.O. type, suitable for 8 kinds applications such as high-speed screening, dispensing, gluing, packaging and high-speed vacuum adsorption and handling, etc.
- Single valve and manifold installation methods, and manual lever is set to facilitate installation and debugging

How to Order?

Solenoid Valve

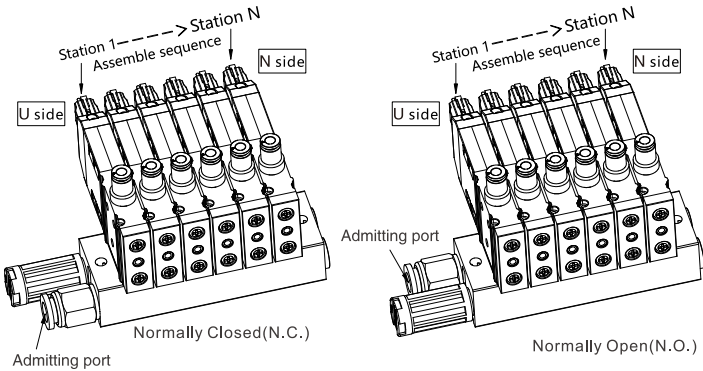
Series No.	Ports	Positions	Valve Body Size	Controls	Switch Time	Port Size	Voltage	Patch Cord
EHE:EHE Series	3:3 ports	2:2 positions	1:1 series	1:Single electronic control	Blank: 7ms(Standard) S: 2ms(high speed type)	M5:M5 M7:M7 C4:Ø4 C6:Ø6	E4:DC24V	Black:wiring length 0.3 meter 0.6M:wiring length 0.6 meter 1M:wiring length 1 meter

Order Example:EHE series, 3/2 ways, 1 series valve body size, standard coil, Pros that switch as fast as 2 milliseconds, port size M5, voltage DC24V, patch cord wiring length 0.6 meter, ERP code is: EHE3211S-M5E4-0.6M

Valve Terminal

Series No.	3/2 ways	Valve body size	Controls	Switch Time		Voltage	Inlet&Exhaust Port	Patch Cord	Thread Type																													
EHE:EHE Series	32	1:1series	Blank: 7ms(Standard) S: 2ms(high speed type)	Number	Number	E4:DC24V		Black:wiring length 0.3 meter 0.6M:wiring length 0.6 meter 1M:wiring length 1meter	Black: G P: PT T: NPT																													
			1:Single electronic control	<table><tr><th>Code</th><th>Port Size</th><th>Remark</th></tr><tr><td>Y</td><td>2/3 position(N.C.)</td><td>Assembly sequence, 1st link start from U side</td></tr><tr><td>H</td><td>2/3 position(N.O.)</td><td></td></tr><tr><td>B</td><td>Blind spot</td><td></td></tr></table>	Code	Port Size	Remark	Y	2/3 position(N.C.)	Assembly sequence, 1st link start from U side	H	2/3 position(N.O.)		B	Blind spot																							
Code	Port Size	Remark																																				
Y	2/3 position(N.C.)	Assembly sequence, 1st link start from U side																																				
H	2/3 position(N.O.)																																					
B	Blind spot																																					
				<table><tr><th>Code</th><th>Port Size</th><th>Remark</th></tr><tr><td>M5</td><td>M5 fitting</td><td rowspan="4">Assembly sequence, 1st link start from U side</td></tr><tr><td>C4</td><td>4 one-touch fitting(ZPOC04-M5C)</td></tr><tr><td>M7</td><td>M7 fitting</td></tr><tr><td>C6</td><td>6 one-touch fitting(ZPOC06-M7C)</td></tr></table>	Code	Port Size	Remark	M5	M5 fitting	Assembly sequence, 1st link start from U side	C4	4 one-touch fitting(ZPOC04-M5C)	M7	M7 fitting	C6	6 one-touch fitting(ZPOC06-M7C)																						
Code	Port Size	Remark																																				
M5	M5 fitting	Assembly sequence, 1st link start from U side																																				
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M7	M7 fitting																																					
C6	6 one-touch fitting(ZPOC06-M7C)																																					
						<table><tr><th>Code</th><th>Port Entry</th><th>1 Series</th><th>Remark</th></tr><tr><td>Blank</td><td>Both side without silencer, fitting, plug</td><td>—</td><td rowspan="11">Plugs are mounted on the opposite side of the selected ports</td></tr><tr><td>U</td><td>U side with silencer, PC fitting</td><td rowspan="5">φ 8</td></tr><tr><td>N</td><td>Station N with silencer, PC fitting</td></tr><tr><td>UN</td><td>Both side with silencer, PC fitting</td></tr><tr><td>UL</td><td>U side without silencer, PL fitting</td></tr><tr><td>NL</td><td>Station N with silencer, PL fitting</td></tr><tr><td>UNL</td><td>Both side with silencer, PL fitting</td><td rowspan="5">φ 10</td></tr><tr><td>U1</td><td>U side with silencer, POC fitting</td></tr><tr><td>N1</td><td>Station N with silencer, POC fitting</td></tr><tr><td>UN1</td><td>Both side with silencer, POC fitting</td></tr><tr><td></td><td></td></tr></table>	Code	Port Entry	1 Series	Remark	Blank	Both side without silencer, fitting, plug	—	Plugs are mounted on the opposite side of the selected ports	U	U side with silencer, PC fitting	φ 8	N	Station N with silencer, PC fitting	UN	Both side with silencer, PC fitting	UL	U side without silencer, PL fitting	NL	Station N with silencer, PL fitting	UNL	Both side with silencer, PL fitting	φ 10	U1	U side with silencer, POC fitting	N1	Station N with silencer, POC fitting	UN1	Both side with silencer, POC fitting				
Code	Port Entry	1 Series	Remark																																			
Blank	Both side without silencer, fitting, plug	—	Plugs are mounted on the opposite side of the selected ports																																			
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U1	U side with silencer, POC fitting																																					
N1	Station N with silencer, POC fitting																																					
UN1	Both side with silencer, POC fitting																																					

Order Example:
EHE series, 1 series valve body size, single electronic controlstandard coil, Pros that switch as fast as 2 milliseconds, 6 N.C. solenoid valves 2 blind plates, the first and second stations of the working port are C4, voltage DC24V, U side with c, PC fitting, G thread patch cord wiring length 0.3 meter. ERP code is: EHE3211S-6Y2B-2C64C4E4-U



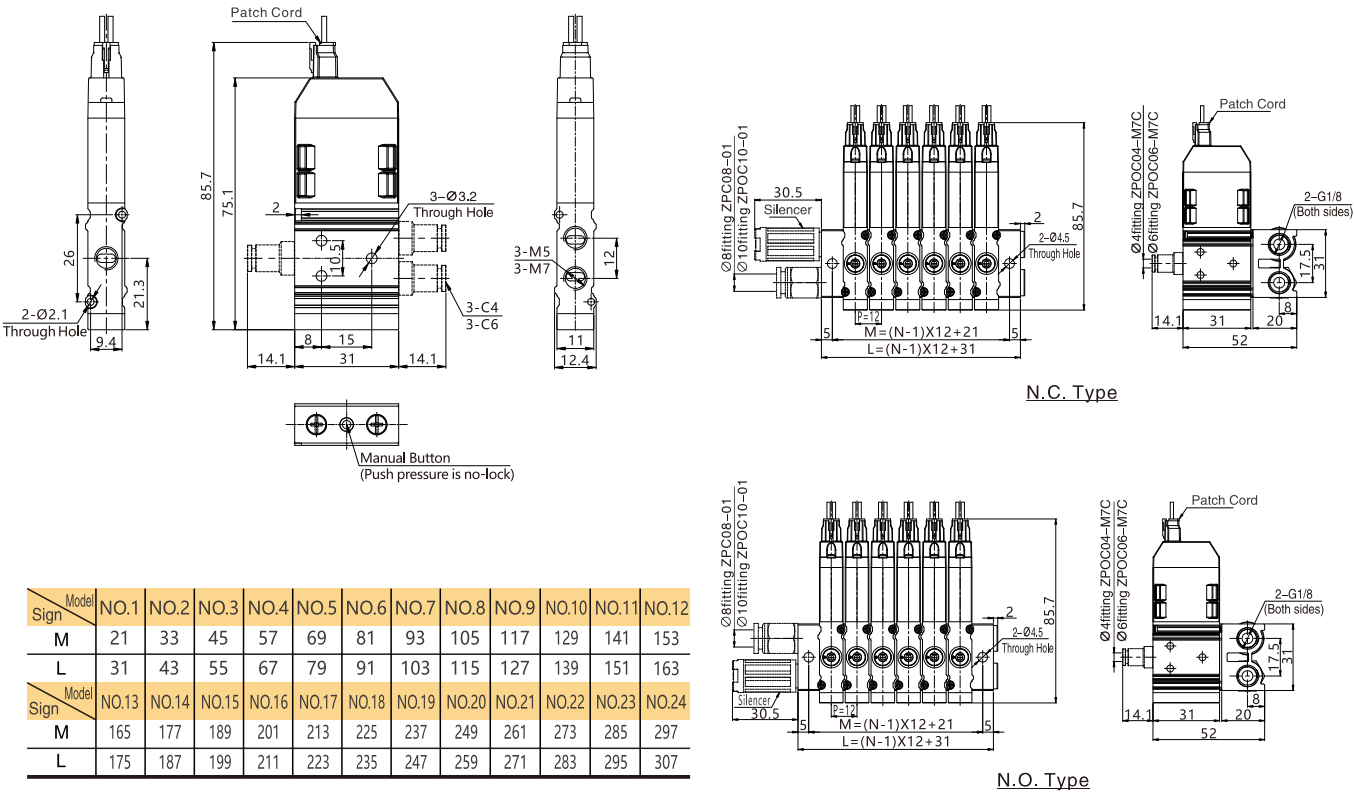
Manifold						Blind Plate
EHE	32	□	—	N	F — Thread Type	EHEBP321
EHE Series	3 port, 2 position	1:1 series valve body	1:1station 2:2stations 3:3stations 24:24stations	F:Manifold	Black:G P:PT T:NPT	EHE3211 series manifold blind plate

Specifications

Model	EHE3211-M5	EHE3211-M7	EHE3211S-M5	EHE3211S-M7
Working Medium	Clean Air(After 40 μ m filtration)			
Acting Type	Direct Acting			
Sectional Area(mm²)	1.4 (Cv=0.08)	1.7 (Cv=0.1)	1.4 (Cv=0.08)	1.7 (Cv=0.1)
Port Size	M5	M7	M5	M7
Lubrication	Not Required			
Working Pressure(MPa)	-0.09~0.8			
Guaranteed Pressure(MPa)	1.5			
Working Temperature(°C)	-5~60(No Freezing)			
Voltage Range	DC24V±10%			
Power Consumption	3w		Start 20W, maintain 2W	
Insulation Class			F	
Protection Class			IP40	
Max. acting Frequency	130Hz		330Hz ①	
Seal Material	NBR			
Switch Time	Open 7ms:Close 3.5ms		Open 1.8ms:Close 2ms	
Weight(g)	63	60	65	62

Note: ①When the frequency exceeds 125Hz, the ambient temperature must be limited

Main Dimension



Model	NO.1	NO.2	NO.3	NO.4	NO.5	NO.6	NO.7	NO.8	NO.9	NO.10	NO.11	NO.12
M	21	33	45	57	69	81	93	105	117	129	141	153
L	31	43	55	67	79	91	103	115	127	139	151	163
Model	NO.13	NO.14	NO.15	NO.16	NO.17	NO.18	NO.19	NO.20	NO.21	NO.22	NO.23	NO.24
M	165	177	189	201	213	225	237	249	261	273	285	297
L	175	187	199	211	223	235	247	259	271	283	295	307

EHE

5/3 Port Fast Switching Valve



Product Features

- Three port and five port fast switching valve, Pilot structure, big flow rate;
- Use high speed drive chip, fast response, low power of 2W, short response time of 4.5ms only;
- Balanced valve core structure, no back pressure, sensitive switching and good sealing;
- When used for blowing or low pressure (or vacuum), the external pilot type can be selected to ensure stable operation;
- Single valve and manifold installation method, installation dimensions are the same as RV3221, RV5221 series, and a manual lever is provided for easy installation and debugging.

How to Order?

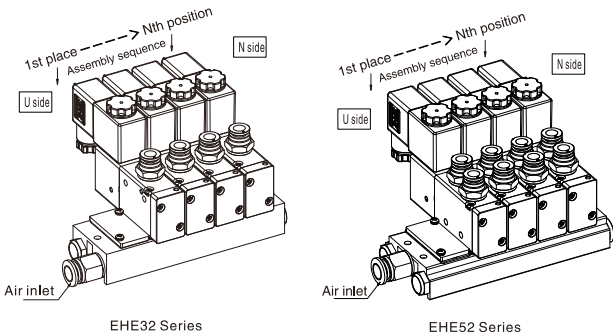
Valve slice													
Series No.	Ports	Positions	Body size	Controls	Switch Time	Initial status	Port size	Voltage	Connection Mode	Cover color	Pilot type	Patch Code	Thread type
EHE: EHE Series	3:3 Ports 5:5 Ports	2:2 Position	2:2 series	Blank: standard S: High speed	Blank: standard S: High speed	Blank: Normal Close H: Normal Open	06:1/8" 08:1/4"	E4:DC24V		Blank: Brown translucent J: Colorless and translucent B: Black(K connector is only available in black)	Blank: internal pilot WB: External pilot		Blank:G
Blank: DIN connector type F: Flying(High speed: N/A) K: Water proof connector type L: Plug-in Type													
Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "F Type" and "L: Plug-in type" Only)													

Order Example: EHE series ,5/2 way,High speed type, 1/8" port size, standard coil,DC24V,DIN connector, brown translucent,,internal pilot, G thread, single control,ERP code : EHE5221S-08E4

Valve Terminal

Series No.	Ports	Body size	Switch time	—	□	—	□	□	Voltage	Connection mode	Cover color	—	Pilot type	—	Inlet & Exhaust port	Patch code	—	Thread type																																									
EHE: EHE Series		2:2 series			Qty			Qty (Valve quantity for different port)	E4:DC24V Blank: DIN connector type F: Flying(High speed: N/A) K: Water proof connector type L: Plug-in Type				Blank: Internal pilot WB: External pilot			Blank:Patchcord length is 0.3 meter 0.6M:Patchcord length is 0.6 meter 1M:Patchcord length is 1 meter(Options for "F Type" and "L: Plug-in type" Only)		Blank:G																																									
<table><tr><th>Code</th><th>Function</th><th>Remark</th></tr><tr><td>Y</td><td>3/2(N.C.)</td><td rowspan="5">assembly sequence, 1st link start from U side</td></tr><tr><td>H</td><td>3/2(N.O.)</td></tr><tr><td>D</td><td>5/2 Double control</td></tr><tr><td>S</td><td>5/2 Single control</td></tr><tr><td>B</td><td>Blind plate</td></tr></table> <table><tr><th>Code</th><th>Ports</th><th>Remark</th></tr><tr><td>06</td><td>1/8"port</td><td rowspan="5">assembly sequence, 1st link start from U side</td></tr><tr><td>08</td><td>1/4" Port</td></tr><tr><td>C6</td><td>φ6 one-touch fitting(ZPC06-02G)</td></tr><tr><td>C8</td><td>φ8 one-touch fitting(ZPC08-02G)</td></tr><tr><td>C10</td><td>φ10 one-touch fitting(ZPC10-02G)</td></tr><tr><td>L6</td><td>φ6 one-touch fitting(ZPL06-02G)</td><td rowspan="3">assembly sequence, 1st link start from U side</td></tr><tr><td>L8</td><td>φ8 one-touch fitting(ZPL08-02G)</td></tr><tr><td>L10</td><td>φ10 one-touch fitting(ZPL10-02G)</td></tr><tr><td colspan="3"></td></tr><tr><td colspan="3"></td></tr></table>																			Code	Function	Remark	Y	3/2(N.C.)	assembly sequence, 1st link start from U side	H	3/2(N.O.)	D	5/2 Double control	S	5/2 Single control	B	Blind plate	Code	Ports	Remark	06	1/8"port	assembly sequence, 1st link start from U side	08	1/4" Port	C6	φ6 one-touch fitting(ZPC06-02G)	C8	φ8 one-touch fitting(ZPC08-02G)	C10	φ10 one-touch fitting(ZPC10-02G)	L6	φ6 one-touch fitting(ZPL06-02G)	assembly sequence, 1st link start from U side	L8	φ8 one-touch fitting(ZPL08-02G)	L10	φ10 one-touch fitting(ZPL10-02G)						
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L10	φ10 one-touch fitting(ZPL10-02G)																																																										

Code	Port	Size	Remark
Blank	Both side without silencer, fitting, plug	—	—
U	U side with silencer, PC fitting	Ø8	1) plugs are mounted on the opposite of the selected ports;
N	N side with silencer, PC fitting		
UN	Both side with silencer, PC fitting		
UL	U side with silencer, PL fitting		
NL	N side with silencer, PL fitting		
UNL	Both side with silencer, PL fitting	Ø10	Silencer V-08G
U1	U side with silencer, PC fitting		
N1	N side with silencer, PC fitting		
UN1	Both side with silencer, PC fitting		
UL1	U side with silencer, PL fitting		
NL1	N side with silencer, PL fitting		
UNL1	Both side with silencer, PL fitting		



Order Example: EHE series ,3/2 way,high speed type,2pcs normal close solenoid valves,4pcs normal open solenoid valves,2 pcs blind plates,NO1 ,2 port is C6,NO 3-6 is C8,DC24V, plug-in type,external pilot,0.3M wiring,U side with silencer, PC fitting,G thread, ERP code is: EHE32S-2Y4H2B-2C64C8E4-L-WB-U

Manifold							Blind Plate		
V	32	2	-	N	F	Thread	VBP	32	2
Series	32:3/2 way 52:5/2way	2 series	1:1 station 2: 2 stations 3: 3 stations 16:16 stations	F: Manifold		Blank:G	V series blind plate	32:3/2 way 52:5/2way	2:2 series

Specification

3 Ports Fast Switching Valve				
Model	EHE3221-06 EHE3222-06	EHE3221-08 EHE3222-08	EHE3221S-06 EHE3222S-06	EHE3221S-08 EHE3222S-08
Working medium	Clean air(After 40 μ m filtration)			
Acting Type	Internal pilot type /External pilot type			
Sectional Area (mm)	20 (Cv=1.2)	25.5 (Cv=1.5)	20 (Cv=1.2)	25.5 (Cv=1.5)
Port Size	G1/8	G1/4	G1/8	G1/4
Lubrication	No required			
Working pressure(MPa)	Internal pilot type: 0.15-0.7 /External pilot type: -0.1-0.7			
Pilot pressure	0.2-0.7			
Guaranteed pressure(MPa)	1.1			
Temperature(℃)	Storage temperature: -20~70 (No freezing) / Working temperature: -10-60(No Freezing)			
Voltage range	± 10%			
Power Consumption	6.5w		Starting 20W, Holding 2W	
Insulation class	F			
Protective class	IP65(DIN40050)			
Max. acting Frequency	50Hz		80Hz ①	
Switch time	Open 8ms: Close 4.5ms		Open 4.5ms: Close 4.5ms	
Weight(g)	EHE3221 : 241		EHE3221S : 249	
	EHE3222 : 387		EHE3222S : 402	

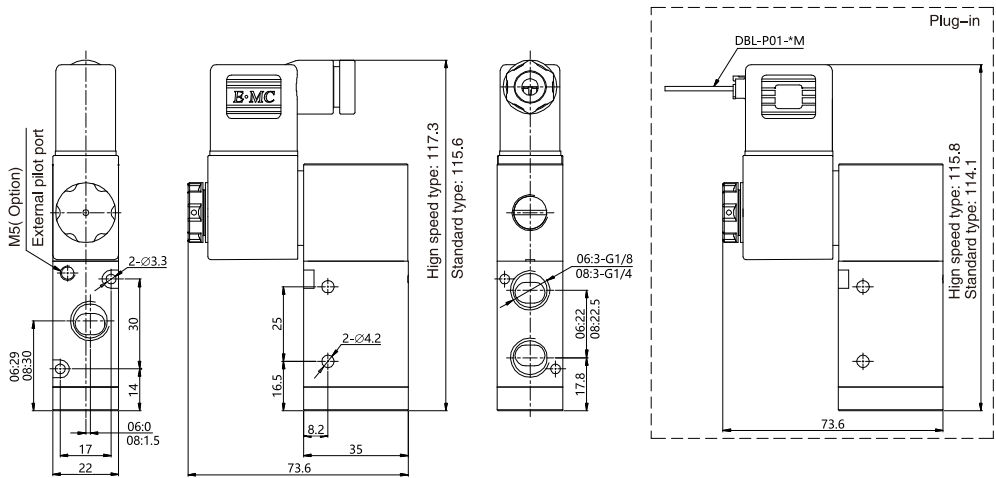
① When the frequency exceeds 70Hz, the ambient temperature must be limited.

5 Ports Fast Switching Valve				
Model	EHE5221-06 EHE5222-06	EHE5221-08 EHE5222-08	EHE5221S-06 EHE5222S-06	EHE5221S-08 EHE5222S-08
Working medium	Clean air(After 40 μ m filtration)			
Acting Type	Internal pilot type /External pilot type			
Sectional Area (mm ²)	2 position:20(Cv=1.2)	2 position:25.5(Cv=1.5)	2 position:20(Cv=1.2)	2 position:25.5(Cv=1.5)
Port Size	G1/8	G1/4'(EXH.G1/8')	G1/8	G1/4'(EXH.G1/8')
Lubrication	No required			
Working pressure(MPa)	Internal pilot type: 0.15-0.7 /External pilot type: -0.1~0.7			
Pilot pressure	0.2~0.7			
Guaranteed pressure(MPa)	1.1			
Temperature(℃)	Storage temperature: -20~70 (No freezing)/ Working temperature: -10~60(No Freezing)			
Voltage range	± 10%			
Power Consumption	6.5w		Starting 20W, Holding 2W	
Insulation class	F			
Protective class	IP65(DIN40050)			
Max. acting Frequency	50Hz		80Hz ①	
Switch time	Open 8ms:Close 4.5ms		Open 4.5ms:Close 4.5ms	
Weight(g)	EHE5221: 251		EHE5221S:259	
	EHE5222: 399		EHE5222S:415	

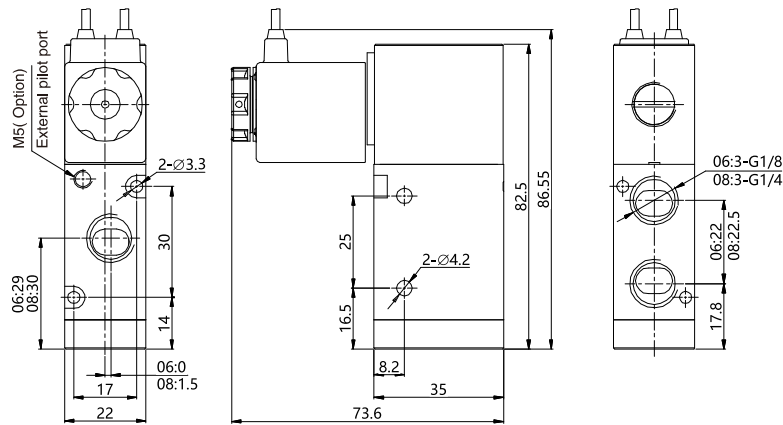
① When the frequency exceeds 70Hz, the ambient temperature must be limited.

Dimensions

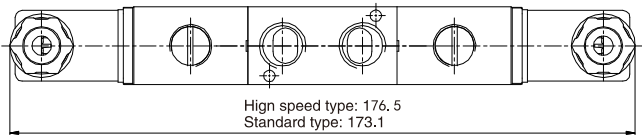
EHE3221 Series



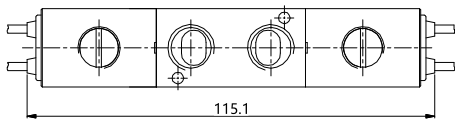
Single Control-connector Type



Single Control- Flying Type



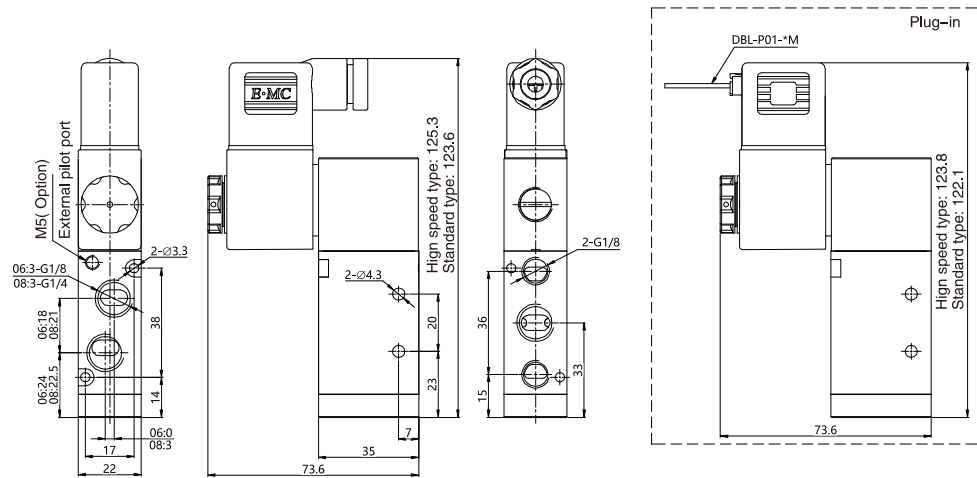
Double Control- Connector Type



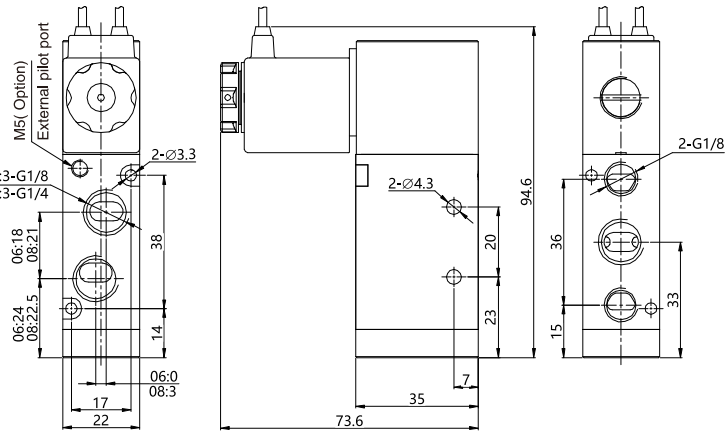
Double Control- Flying Type

Dimensions

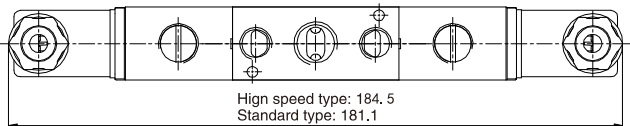
EHE5221 Series



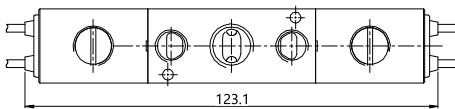
Single Control-connector Type



Single Control- Flying Type



Double Control- Connector Type



Double Control- Flying Type



1
ET307/ETA307

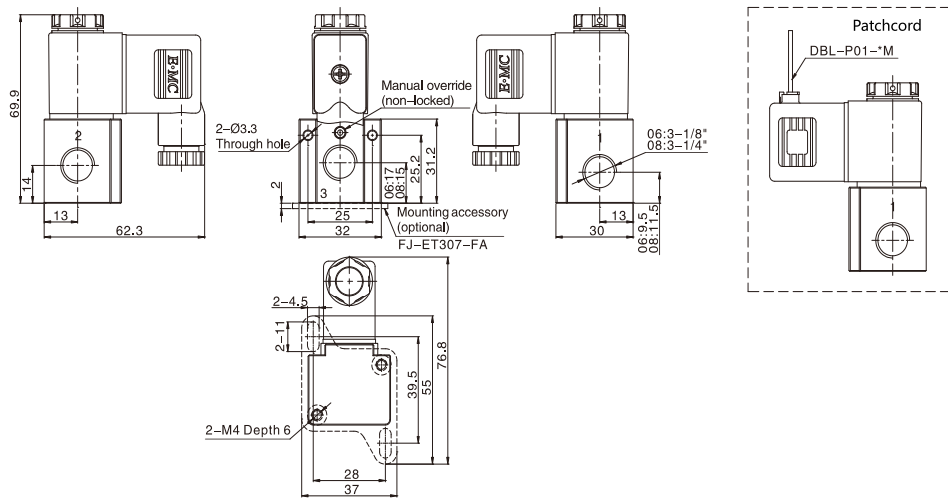
Specifications

Model No.	ET307-06	ET307-08	ETA307-06	ET307S-06	ET307S-08	ETA307S-06
Working Medium	Clean air(After 40 μ m filtration)					
Acting type	Direct acting					
Sectional area(mm)	3.9(Cv=0.23)	4.2(Cv=0.25)	3.9(Cv=0.23)	3.9(Cv=0.23)	4.2(Cv=0.25)	3.9(Cv=0.23)
Port size	G1/8"	G1/4"	G1/8"	G1/8"	G1/4"	G1/8"
Lubrication	Not required					
Working Pressure(MPa)	-0.1~0.7					
Max.Pressure(MPa)	1.5					
Working Temperature(°C)	-20~70 (No freezing)					
Voltage Range	± 10%					
Power consumption	6.5			2		
Insulation Class	F Class					
Protective class	IP65(DIN40050)					
Max. acting frequency	50			125 ^①		
Seals Material	NBR					
Response Time	On: 8 Off: 2.5			On: 3 Off: 2		
Weight (g)	163	159	150	174	170	161

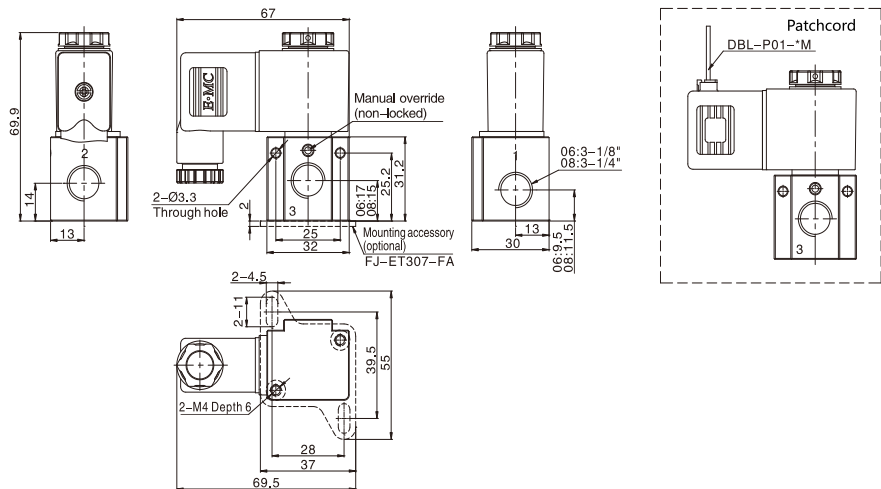
① When the frequency exceeds 70Hz, the ambient temperature must be restricted.

Main Dimension

ET307



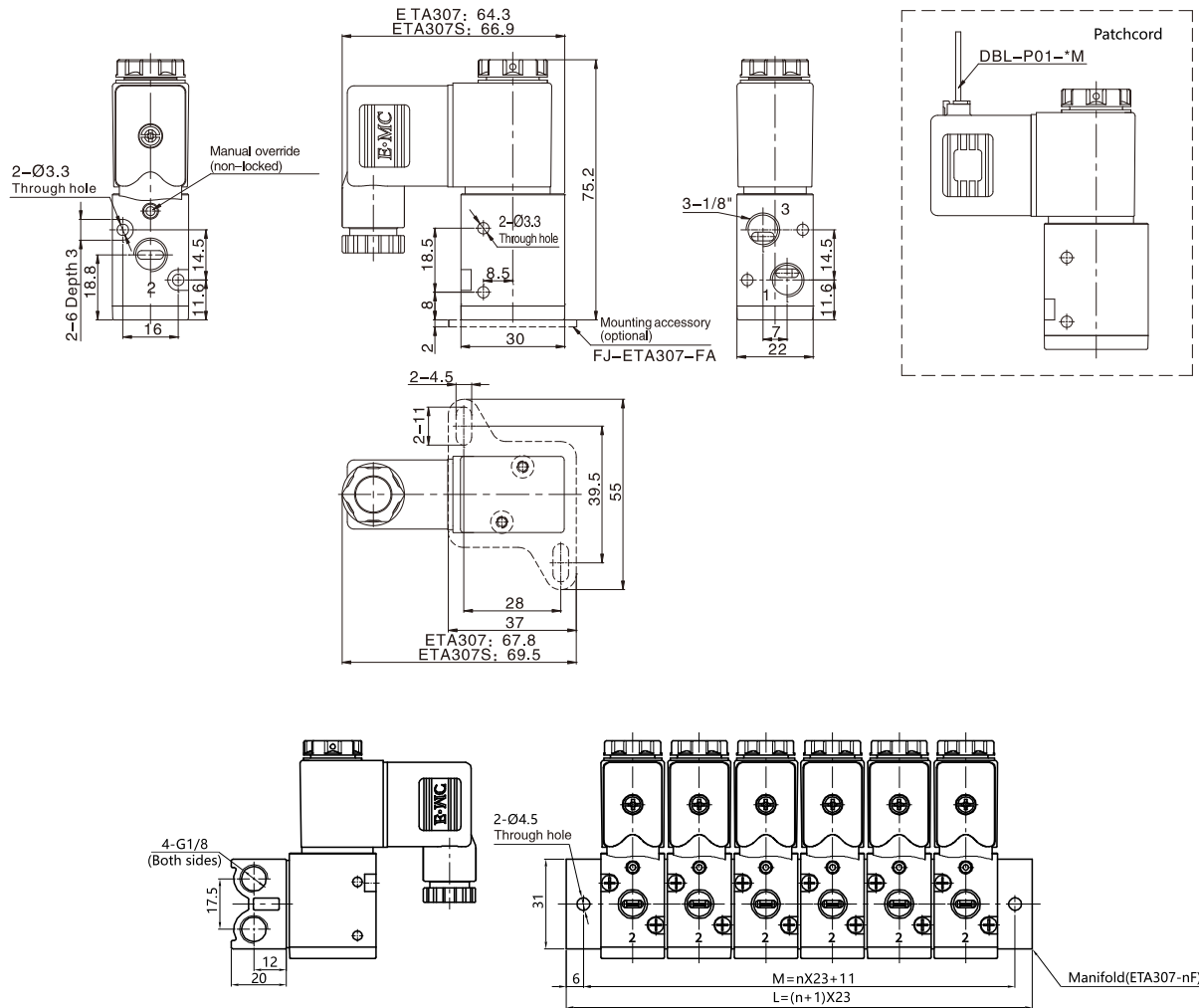
ET307S



1
ET307/ETA307

Main Dimension

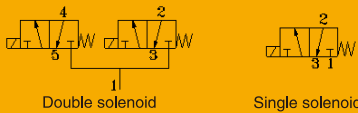
ETA307/ETA307S



sign	model	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F
M		34	57	80	103	126	149	172	195	218	241
L		46	69	92	115	138	161	184	207	230	253

S1PV

3/2-way Integrated Valve Terminal



Product Features

- 3/2-way direct-acting solenoid valve terminal, with sensitive shifting and the ability to start under zero pressure or vacuum conditions;
- The valve terminal integrates two solenoid valves in one valve position with integrated wiring, significantly reducing the installation space in the length direction;
- Uses a high-density 26-pin D-sub connector to reduce installation time, and there is no polarity distinction on the COM terminal;
- Maximum number of valve positions is 12, accommodating 24 solenoid valves;
- The integrated valve terminal features a high-strength aluminum alloy manifold plate, resulting in a compact structure with a sleek and elegant overall appearance, and it holds a design patent;
- The patented structure with two solenoid valves on the same side allows wiring in the same direction, with a modular design that facilitates maintenance;
- Manual buttons are provided for easy maintenance, installation, and commissioning;
- Solenoid valves use SV series pilot valves, ensuring stable and reliable performance;
- Coil power standard type is 0.8W, low-power energy-saving type is 0.35W (suitable for long-term energized applications)."



How to Order?

Integrated valve manifold

Series	Valve	Code	—	□	□	—	Voltage	—	Wiring method	—	Inlet port	—	Thread type
S: Standard type SN: Energy-saving type	1:1 series PV: PV series	NO.: 2~12 link					E4:DC24V		Blank: Double solenoid wiring				Blank: G
												Blank: No fitting C6: Φ6 tube fitting(ZPOC06-01G) L6: Φ6 tube fitting(ZPL06-01G) C8: Φ8 tube fitting(ZPOC08-01G) L8: Φ8 tube fitting(ZPL08-01G)	
Code		Valve function		Remark		Code		Working Port		Remark			
S		3/2 solenoid valve (Single solenoid)		assembly sequence, 1st link start from U side		M5		M5		assembly sequence, 1st link start from U side			
D		3/2 solenoid valve (Double solenoid)				C4		Φ4 tube fitting (ZPOC04-M5C)					

Order Example:

S series (Standard type), 1-series valve body, PV series 2-position 3-port direct-acting solenoid valve, 9 double-solenoid 2-position 3-port valves, DC24V voltage, Φ4 tube fitting for working ports, Φ6 tube fitting for inlet port, G thread. ERP code: SIPV-9D-C4E4-C6

Solenoid valve

Series	Valve	Ports	—	Working Positions	Control Heads	—	Voltage
S: Standard type SN: Energy-saving type	PV:PV series	3: 3-por		2: 2-Position	1: Single solenoid, 2: Double solenoid		E4: DC24V

Note: Standard installation screws included

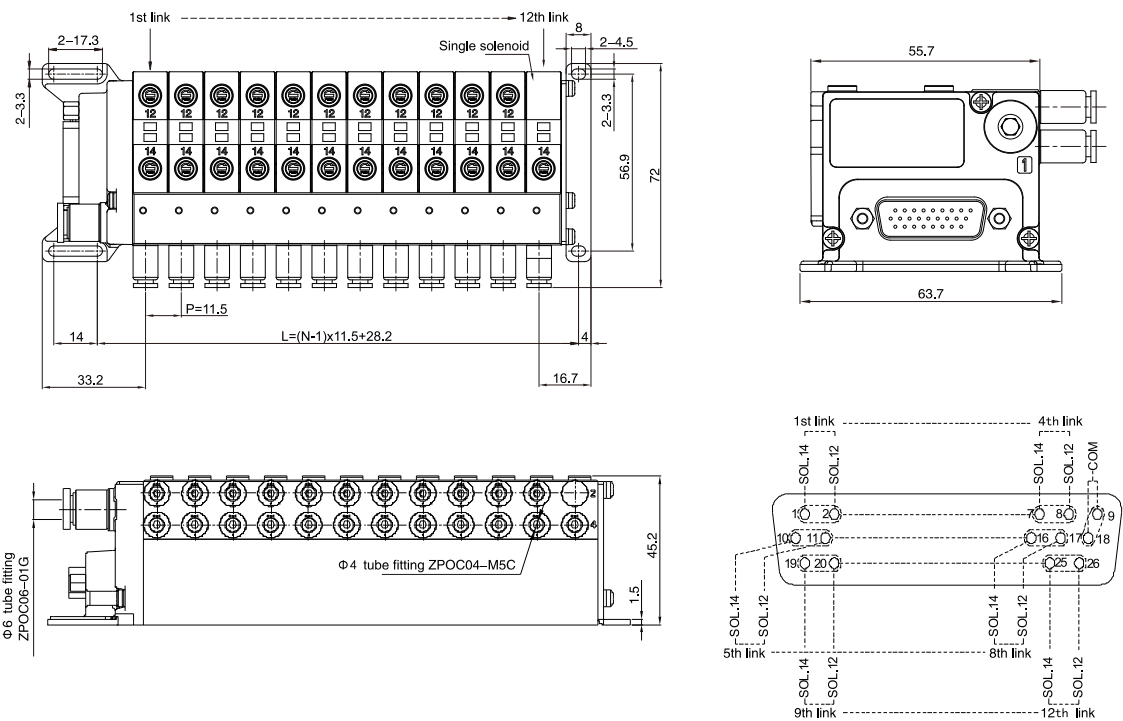
Integrated Valve Manifold Connector & Cable

Connector	—	Cable Core Configuration	—	Cable Length
D26: 26-pin D-sub connector		26: 26 cores (for ≤24 coils)		1M: 1 meter 2M: 2 meters 3M: 3 meters Note: Other lengths available upon request.

Specifications

Model	SN1PV	S1PV
Operating medium	Dry compressed air filtered through a 40 μ m filter	
Positions	3/2-Way	
Actuation type	Direct-acting	
Cv value	0.01	
Port size	Inlet G1/8, Working port M5	
Lubrication	Not required	
Operating pressure (MPa)	0 ~ 0.8	
Max. pressure resistance (MPa)	1.2	
Operating temperature (° C)	-20 ~ 70(under ice-free conditions)	
Operating voltage	DC24V	
Voltage tolerance	± 10%	
Power consumption	1.2W (startup), 0.35W (holding)	0.8W
Insulation class	Class F	
Protection rating	IP40	
Max. operating frequency	20Hz	
Response	≤5ms	

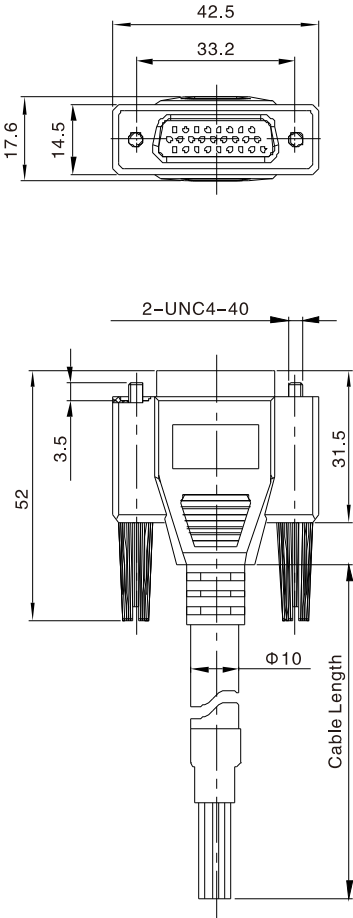
Dimensions

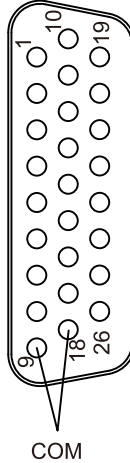


Note: n represents the number of valve positions.

n	2 link	3 link	4 link	5 link	6 link	7 link	8 link	9 link	10 link	11 link	12 link
L	39.7	51.2	62.7	74.2	85.7	97.2	108.7	120.2	131.7	143.2	154.7
Weight (g)	Single solenoid	175	218	261	304	347	389	432	475	518	561
	Double solenoid	192	250	304	357	411	464	518	571	625	678

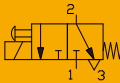
Connector& Cable



Connector Cable	PIN number & WireColor	
	PIN number	D26-26 Wire Color
	1	Red and black
	2	Red and white
	3	Red
	4	Orange and black
	5	Orange and white
	6	Orange
	7	Yellow and black
	8	Yellow
	9(COM)	Black
	10	Pink and black
	11	Pink
	12	Blue and white
	13	Blue
	14	Green and black
	15	Green
	16	Purple and white
	17	Purple
	18(COM)	Black
	19	Brown and white
	20	Brown
	21	Grey and black
	22	Grey
	23	White and black
	24	White
	25	Green and White
	26	Light green

S1PA

3/2 integrated manifold



- Product Features
- * 3/2 direct acting solenoid valve, sensitive to direction change, 0 pressure/low vacuum start.
 - * The integrated manifold adopts a dual row electromagnetic valve integrated wiring, greatly reducing the installation space in the length direction.
 - * Using a 37 pin D-sub socket reduces installation time, and the COM common terminal has no positive or negative polarity.
 - * The integrated valve group single valve adopts a pin type coil and a plate type installation with sealing gasket, which is easy to maintain; On the basis of the current S1P series, upgrades and modifications will be made, with the main changes being as follows:
 - * The circulation aperture has been changed from ϕ 1.1mm to ϕ 1.3mm, increasing the flow rate.
 - * The valve body has been changed from processing aluminum alloy profiles to precision injection molding, effectively ensuring product consistency and avoiding burrs.
 - * The integrated valve group single valve adopts a pin type coil and a plate type installation with sealing gasket, which is easy to maintain; On the basis of the current S1P series, upgrades and modifications will be made, with the main changes being as follows.
 - * Add manual buttons for easy maintenance, installation, and debugging.
 - * The front and rear end plates have been changed from aluminum alloy profiles to die casting, while achieving product lightweighting
 - * Overall design optimization, valve body color adopts E MC gray yellow ("brilliant") color.
 - * The product has multiple technical patents (appearance, utility model, and invention).

How to order

S1PA series 3/2 integrated manifold

Series No	Body Size	Identification Code	Valve Quantity	Port Size	Port size	Input Port	Thread Type
S: Standard type SN: Energy saving type	1: 1 series	PA: PA series solenoid valve	7F: 7 stations 32F: 32stations	M5: M5 C4: ϕ 4	E4: DC24V E5: DC12V (Only DC24V is available for energy-saving)	Blank: no fittings C8: ϕ 8	Blank: G P: PT T: NPT

Order Example:S1PA series integrated manifold, 1 series body size, PA series 3/2 direct acting solenoid valve, 16 stations solenoid valve, voltage DC24V, equipped with ϕ 4 port size, input port equipped with ϕ 8 tube, G thread type, its ERP code is S1PA16F-C4E4-C8.

S1PA series 3/2 single valve

Series No.	Identification Code	Port	Positions	Body Size	Voltage
S: Standard type SN: Energy saving type	PA: PA series solenoid valve	3: 3 ports	2: 2 positions	1: 1series	E4: DC24V E5: DC12V (Only DC24V is available for energy-saving)

Note: Standard installation screws

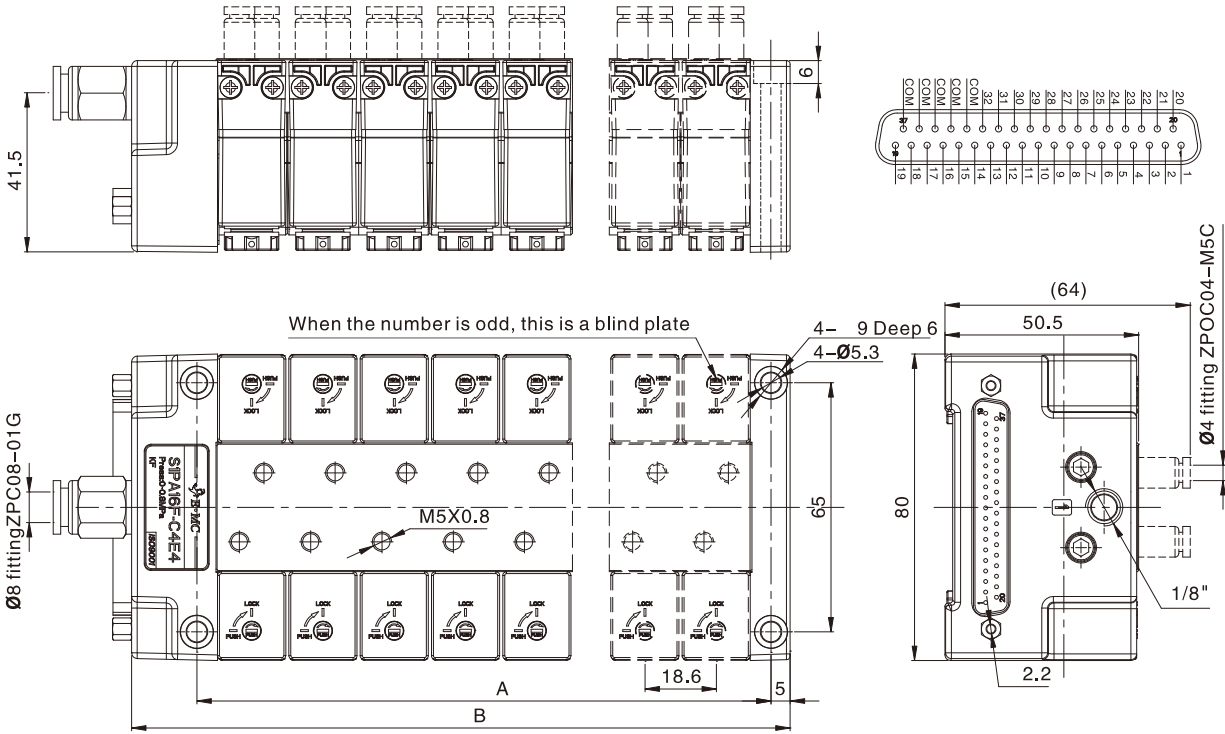
S1PA series 3/2 integrated manifold cable

Connector Type	Cable Core	Cable Length
D37: D-sub connector 25 pins	37: 37 cores(32 cores or less) 25: 25 cores(20 cores or less) 16: 16 cores(11 cores or less)	1M: 1M cable 2M: 2M cable 3M: 3M cable (Remark: Other length can be customized.)

Specifications

Model	SN1PA□F	S1PA□F
Working medium	Dry compressed gas filtered by a 40 μ m filter element	
Action form	Direct acting	
Flow aperture	1.3	
Tube size	Input port G1/8, working port M5	
Lubrication	No need	
Working pressure(MPa)	0-0.8	
Max pressure(MPa)	1.2	
Working temperature(°C)	-20-70	
Voltage range	-15%-10%	
Power consumption	0.6W	2.8W
Insulation grade	F Grade	
Protection level	IP40	
Max acting frequency	20times/S	
Seal material	HNBR	
Response time (S)	≤7ms	

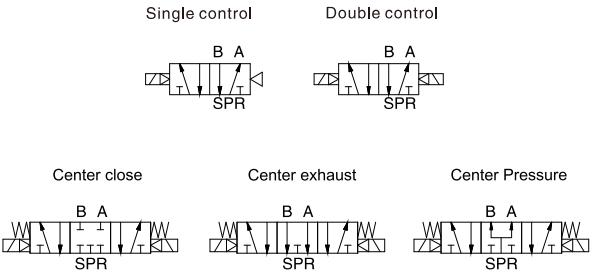
Main Dimension



Sign/Model	S1PA7F S1PA8F	S1PA9F S1PA10F	S1PA11F S1PA12F	S1PA13F S1PA14F	S1PA15F S1PA16F	S1PA17F S1PA18F	S1PA19F S1PA20F
A	84.4	103	121.6	140.2	158.8	177.4	196
B	106.4	125	143.6	162.2	180.8	199.4	218
Sign/Model	S1PA21F S1PA22F	S1PA23F S1PA24F	S1PA25F S1PA26F	S1PA27F S1PA28F	S1PA29F S1PA30F	S1PA31F S1PA32F	
A	214.6	233.2	251.8	270.4	289	307.6	
B	236.6	255.2	273.8	292.4	311	329.6	

SR

Integrated Manifold (Plug-in Type)



Product Features

- * Integrated valve manifold, integrated wiring, adopt 15-pin D-Sub connector, COM pin is universal for both positive pole and negative pole;
- * 5/2 ways single control, 5/2 ways double control, 5/3 ways can be integrated on same valve manifold;
- * Integrated valve manifold own double control core technical patent, initiative design;
- * Each connector with LED, more intuitive;
- * With DIN coils, more convenient in assembling & maintenance, low-power type is optional, achieve energy saving 80%;
- * Newly designed sub-base, installation size same as RV manifold, DIN guide rail assembly on optional.

How to Order?

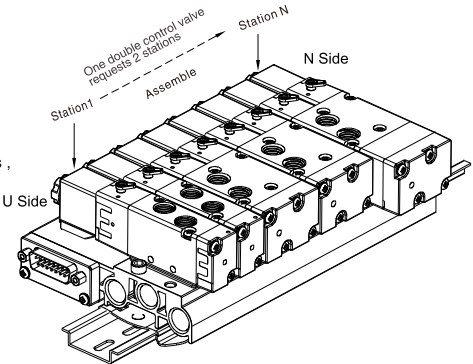
SR Valve Group

Series No.	Valve Body Size	ID code	—	□	—	Port Size	Voltage	—	Manual Button	—	Mounting Type	Thread Type																	
S: Common type SN: Low power type	1: 1 series 2: 2 series	R: RV series valve				M5: M5 06: 1/8" 08: 1/4"	E4:DC24V E5:DC12V (Only DC24V for low power type)		Blank: Press & Rotate Lock H: Without Lock		Blank: No accessory D: DIN guide rail clip with 1 meter DIN guide rail D0: DIN guide rail clip without DIN guide rail (DIN guide rail packed separately)	Blank: G P: PT T: NPT																	
Qty (suitable for same valve, single control 2~14 pieces double control 2~7 pieces) (for mixed valves, maximum manifold is 14 stations Note: double control valve request 2 stations)			<table><tr><th>Code</th><th>Function</th><th>Remark</th></tr><tr><td>S</td><td>5/2 single</td><td rowspan="5">assembly sequence, 1st link start from U side</td></tr><tr><td>D</td><td>5/2 double</td></tr><tr><td>C</td><td>5/3 center closed</td></tr><tr><td>P</td><td>5/3 center pressure</td></tr><tr><td>E</td><td>5/3 center exhaust</td></tr><tr><td>B</td><td>blind plate</td><td></td></tr></table>										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	B	blind plate	
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																												
B	blind plate																												

Order Example:

SR series integrated manifold with same valves, 1 series valve body, RV series valve, 6 pieces valves, single control, 1/8 port size, voltage DC24V, without accessories, G thread, ERP code is: S1R-6S-06E4

SR series integrated manifold with different valves, 1 series valve body, RV series valve, station 1 and 2 are 5/2 single control valves, station 3,4,5,6 are 2 pieces 5/2 double control valves, station 7 and 8 are 1 piece 5/3 double control, center close valve, 1/8 port size, voltage DC24V, with clips and 1 meter DIN rail, G thread, ERP code is: S1R-2S2DC-06E4-D



Connecting Cable

Connector	Number of cable core	Length of cable	Injection molding type
D15: 15 pins D-sub Connector	15:15 cores (14 coils maximum) 08:8 cores (7 coils maximum)	1M: 1 meters 2M: 2 meters 3M: 3 meters Note: Length can be customized	A

Blind Plate

SRBP	52	1
SR series blind plate	5/2 way	1: 1 series 2: 2 series

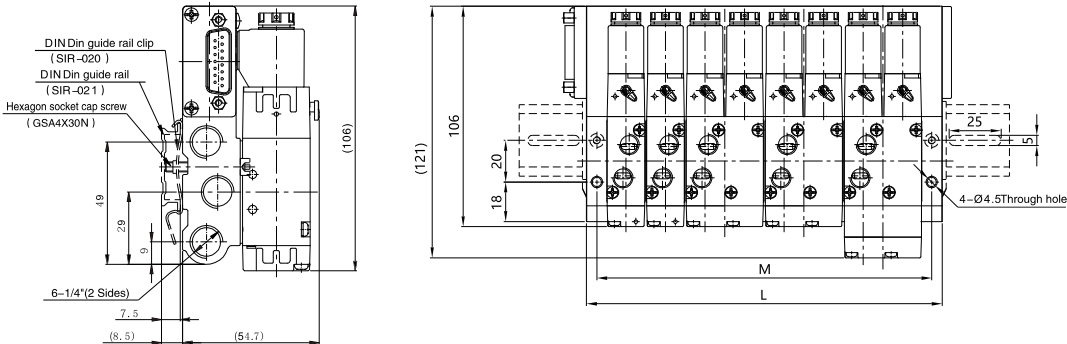
Order Example: SR series integrated manifold, Valve Group,Length of cable:3 meters, ERP code is: D15-15-3M

Specifications

Model No.	S1R-M5 SN1R-M5	S1R-06 SN1R-06	S2R-06 SN2R-06	S2R-08 SN2R-08
Port Size	M5	G1/8	G1/8	G1/4(Ex.G1/8)
Sectional area(mm²)	2 ways: 5.5 (CV=0.31) 3 ways: 5.5 (CV=0.28)	2 ways: 12 (CV=0.67) 3 ways: 9 (CV=0.50)	2 ways: 14 (CV=0.78) 3 ways: 12 (CV=0.67)	2 ways: 16 (CV=0.89) 3 ways: 12 (CV=0.67)
Working medium	Clean air(After 40 μ m filtration)			
Acting type	Internal pilot type			
Reset type	Air reset			
Lubrication	Not required			
Working pressure(MPa)	0.15~0.8			
Guaranteed pressure(MPa)	1.2			
Working temperature(°C)	-20~70(No freezing)			
Voltage range	-15%~10%			
Power consumption	S1R: 2.8W ; SN1R: 0.6W		S2R: 3.0W ; SN2R: 0.7W	
Insulation class	Class F			
Max. acting frequency	2 positions: 5 Cycles/s; 3 positions: 3 Cycles/s			
Activate time(S)	Below 120mA			
Weight(g)	S1R5212: 196 ; S1R5312: 230		S2R5222: 351 ; S2R5322: 409	

Main Dimension

S1R



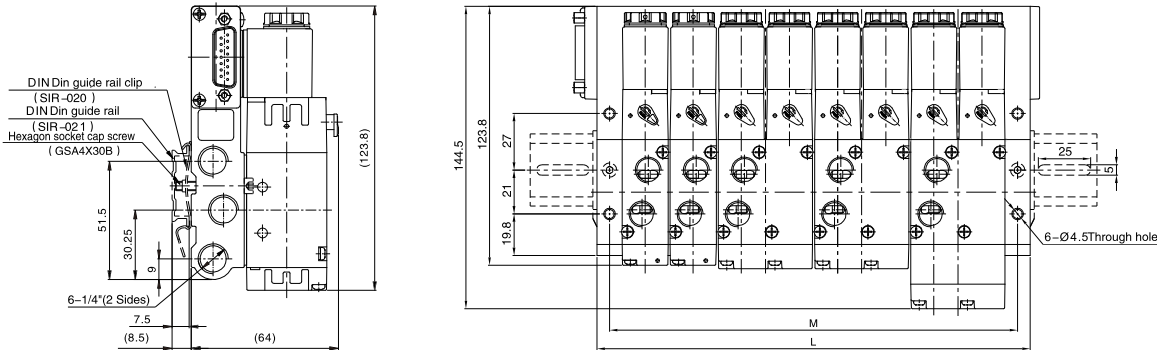
* The hole positions of Din guide rail can't be specified, its may change randomly.

Sign/Model	S1R3S	S1R4S	S1R5S	S1R6S	S1R7S	S1R8S	S1R9S	S1R10S	S1R11S	S1R12S	S1R13S	S1R14S
L	76	95	114	133	152	171	190	209	228	247	266	285
M	66	85	104	123	142	161	180	199	218	237	256	275

(mm)

Main Dimension

S2R



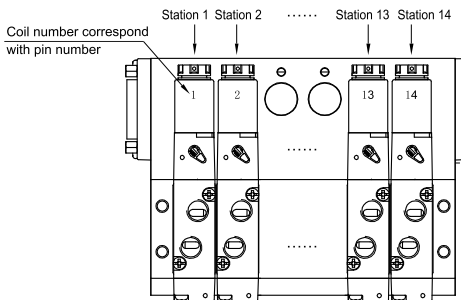
*The hole positions of Din guide rail can't be specified, its may change randomly.

Sign/Model	S2R3S	S2R4S	S2R5S	S2R6S	S2R7S	S2R8S	S2R9S	S2R10S	S2R11S	S2R12S	S2R13S	S2R14S
L	92	115	138	161	184	207	230	253	276	299	322	345
M	80	103	126	149	172	195	218	241	264	287	310	333

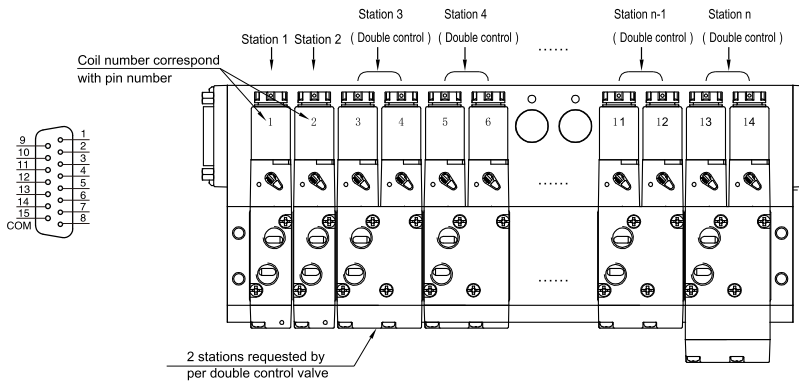
(mm)

Internal Wiring Diagram

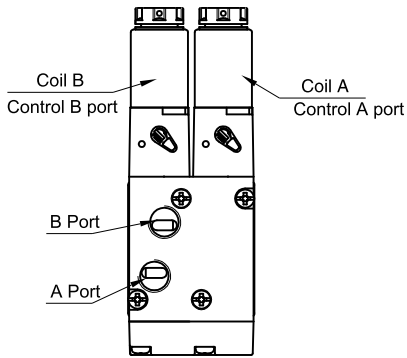
Wiring diagram of single control valves (14 stations maximum)



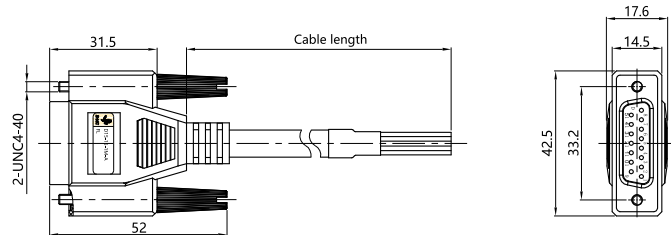
Wiring diagram of mixed single control and double control



Coil Specification

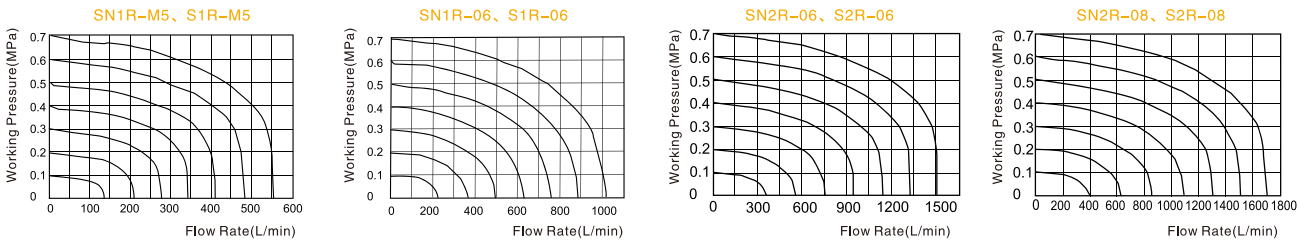


Wiring diagram and specification for cable of SR series



Connecting cable pin diagram	PIN number & Wire Color	
	Pin number	Wire color
	1	Red and black
	2	Red
	3	Orange and black
	4	Orange
	5	Yellow and black
	6	Yellow
	7	Pink
	8	Blue
	9	Green
	10	Light green
	11	Purple
	12	White
	13	Brown
	14	Gray
	15(COM)	Black

Flow Chat



ESR Valve Terminal (IO-Link)

Product Features

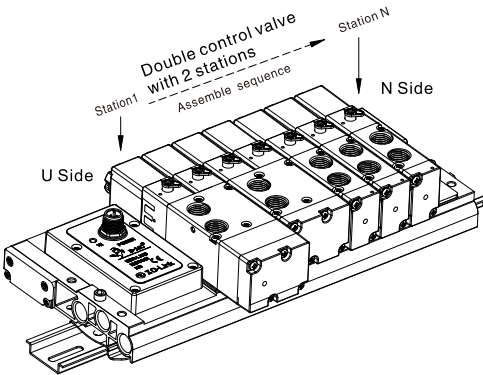
- * Compatible Protocols: I/O-Link, general-purpose 5-wire unshielded cables are used for connection I/O-Link master and exchange data with PLC.
- * 16 outputs, Max. 16pcs single control/8pcs double control/16pcs stations.
- * Support hot swap, data is stored in the I/O-Link master, no need to reconfigure parameters to replace the valve terminal, the newly replaced is automatically identified and start to work at once, reduce equipment downtime, reduce maintenance costs, and improve production efficiency.
- * Diagnostic functions: system diagnosis, communication error, short circuit protection.
- * Independent of fieldbus, possess strong industrial network compatibility, supply popular fieldbus and industry Ethernet.
- * Simple installation and configuration, easy to operate.
- * Communication is completely digitally transmitted, reduce the accuracy loss of analog-to-digital conversion, possess strong anti-interference ability.

How to Order?

Series No.	Body Size	ID code	Communication Protocol	Port Size	Voltage	Manual Button	Mounting	Thread Type
ES: Valve Terminal	R:RV series valve			M5:M5 06:1/8" 08:1/4"	E4: DC24V	Blank: Press & Rotate Lock H: Without Lock		Blank: G
1: 1 Series 2: 2 Series	Code LK16	Communication Protocol IO-Link	Output 16					
		Qty	Code	Function	Remark			
(Max. 16 stations for same valve of single control Max. 8 stations for same valve of double control Max. 16 stations manifold mixed. Noted: every double control valve with 2 stations.)			S	5/2 single	Assembly sequence, station 1 start from U side			
			D	5/2 double				
			C	5/3 center closed				
			P	5/3 center pressure				
			E	5/3 center exhaust				
			B	Blind plate				

Order Example:

- 1.Same valve: ES Fieldbus Valve Terminal, 1 series, IO-Link, 16 outputs, 6pcs 5/2 single control RV5211, port size 1/8" , DC24V, without accessories, G thread. The ERP code is ES1R-LK16-6S-06E4.
2. Mixed different valves: ES Fieldbus Valve Terminal, 1 series, IO-Link, 16 outputs, see right picture: station 1 & station 2 are 5/3 center closed SR5312C, station 3 & station 4 are 5/2 double control SR5212, station 5 & station 6 & station 7 are 5/2 single control RV5211, port size 1/8" , DC24V, with DIN guide rail clip and 1M guide rail, G thread. The ERP code is ES1R-LK16-CD3S-06E4-D.



Specifications

Code		ES1R-LK16 ES2R-LK16
Output		16
Protocols		IO-Link
Baud rate		COM2 (38.4kbps)
Configuration files		IODD file
Specification version		V1.1(Compatible with 1.0)
Control power supply	Voltage	DC24V(DC21.6~26.4V)
	Current consumption	Below 150mA
	Output voltage (valve)	DC24V(DC22.8 ~ 26.4V)
Interface		M12, 5 pins, code A
Interface type		Class B
Device diagnosis		System diagnosis, communication error, short circuit protection
Protection		IP65
Storage temperature		-20 ~ 70°C
Working temperature		-10 ~ 50°C

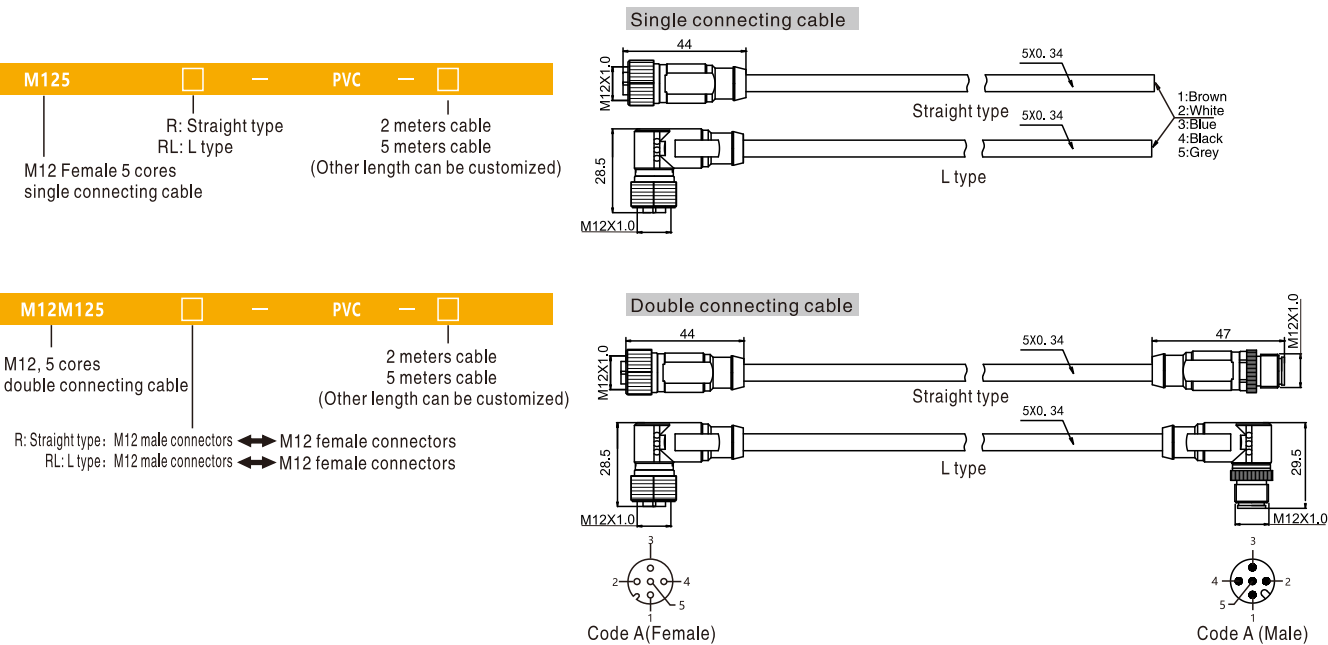
Interface

Interface (M12, code A, Class B)				
Pin	Type	Description		
1	PS24	Control working voltage +24V		
2	PL24	Working voltage of load valve +24V		
3	PS0	Control working voltage 0V		
4	C/Q	Data communication (IO-Link)		
5	PL0	Working voltage of load valve 0V		

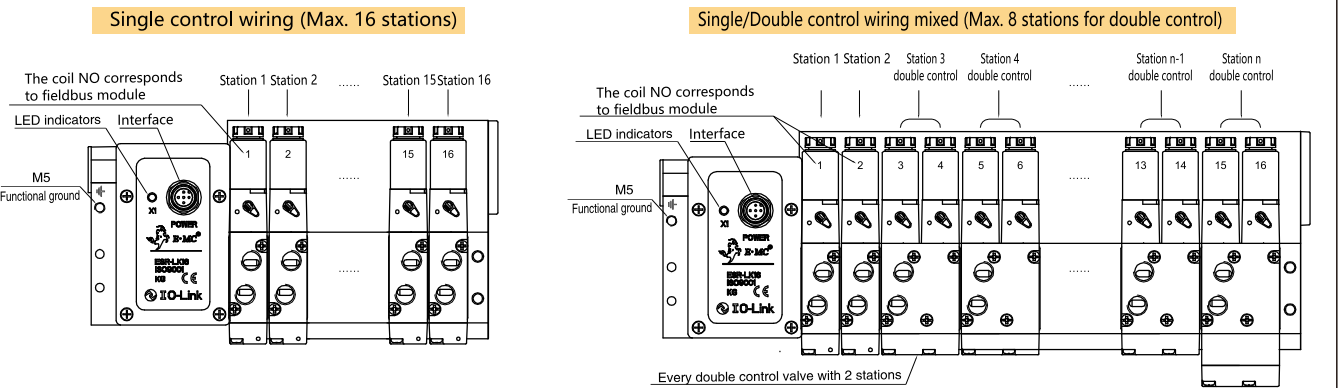
LED Indicators

Indicators	Status	Meaning
X1	LED close	Abnormal power supply
	Green open	Normal power supply, no communication established
	Red open	Fault or abnormal load power supply
	Green Flash	Normal working

Wiring



Wiring Diagram

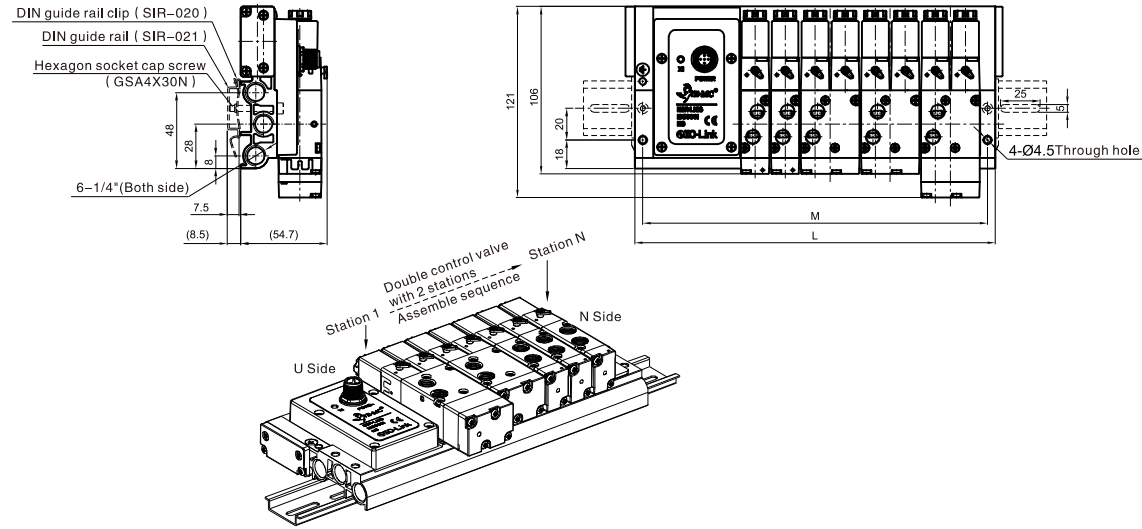


Precautions for Use

- Do not disassembly, modify (including replacing printed circuit boards) or replace without authorization, which may result in injury or failure.
- Do not operate the product exceeding the parameters (limited value), and do not use it for flammable or harmful liquids, which may cause fire, malfunction or damage to the product. Please verify the instructions before use.
- Do not operate in an environment containing flammable and explosive gases, which may cause fire or explosion. This product is not designed of explosion-proof.
- If use this product in the interlocking circuit:
 - Provide double interlocking systems, such as mechanical system;
 - Check regularly whether the product is operating normally; Otherwise, malfunctions may occur and lead to accidents.
- The following instructions must be followed during maintenance: (1) turn off the power; (2) stop providing gas, remove the remaining pressure and make sure that there is no air supply before maintenance; Otherwise, it may cause injury.
- After the maintenance is completed, perform proper functional checks. If the equipment does not work properly, Please stop the operation. In case of unexpected failure, safety cannot be guaranteed.
- The product designed used for industries. Except under industrial environments, when used under environments such as: mixed commercial and residential areas, measures must be taken to prevent radio interference.
- The bus manifold and power cord must be functionally grounded to ensure the safety and anti-noise performance of the fieldbus system.
- IO-Link valve terminal provides the load voltage through the B-type port, using A-type port, adding power supply should be provided.

○ Main Dimension

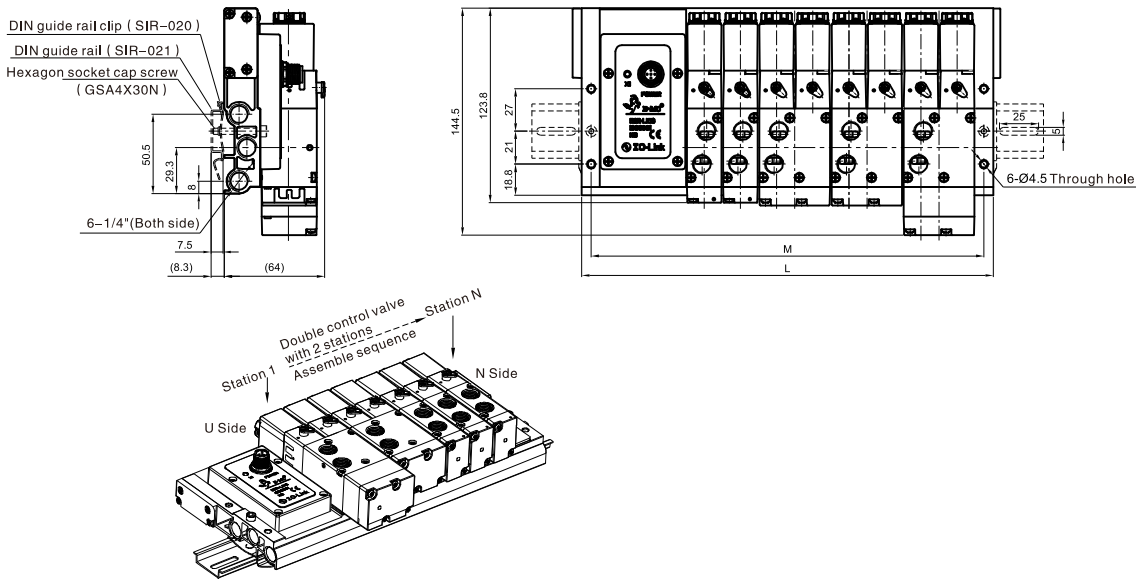
ES1R Series



Note: N means valve link

Model	ES1R3S	ES1R4S	ES1R5S	ES1R6S	ES1R7S	ES1R8S	ES1R9S	ES1R10S	ES1R11S	ES1R12S	ES1R13S	ES1R14S	ES1R15S	ES1R16S	
Sign	L	123	142	161	180	199	218	237	256	275	294	313	332	351	370
M	133	152	171	190	209	228	247	266	285	304	323	342	361	380	

ES2R Series

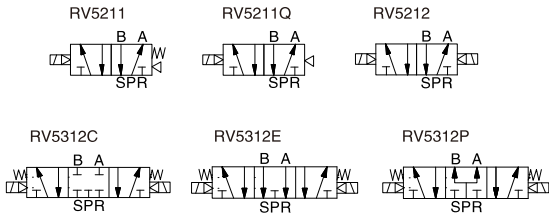


Note: N means valve link

Model	ES2R3S	ES2R4S	ES2R5S	ES2R6S	ES2R7S	ES2R8S	ES2R9S	ES2R10S	ES2R11S	ES2R12S	ES2R13S	ES2R14S	ES2R15S	ES2R16S	
Sign	L	135	158	181	204	227	250	273	296	319	342	365	388	411	434
M	147	170	193	216	239	262	285	308	331	354	377	400	423	446	

RV

Standard/ Low Power Solenoid Valve(5/2,5/3)



○ How to Order?

Low Power Solenoid Valve

Series No.	Valve body size	ID Code	Positions	Ways	Controls	Original Status	Port Size	Reset Form	Voltage	Connection Mode	Cover Color	Acting Type	Manual Button	Patchcord	Thread Type
N	1: 1Series 2: 2Series 3: 3Series 4: 4Series		2: 2 positions 3: 3 positions	5: 5 ways	R: Standard armature +Energy saving coil	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)	M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Spring Q: Air (Only single control)	E1: AC110V E2: AC220V E4: DC24V (1 Serie only DC24V)	Blank: DIN connector type L: Plug-in Type K: Water proof connector type (only for 2,3,4 series)	Blank: Brown translucent J: Colorless and translucent B: Black (K/M connector is only available in black)	Blank: Press & Rotate Lock H: Without Lock Blank: Internal pilot WB: External pilot			Blank: G P: PT T: NPT

Order Example:

RV series solenoid valve, 2 series valve body size, standard pilot+Energy saving coil, 5/2 way, single control, 1/4" port size, standard coil,DC24V,DIN connector, G thread, ERP code is: N2R251-08E4

Blank:Patchcord length is 0.3 meter
0.6M:Patchcord length is 0.6 meter
1M:Patchcord length is 1 meter
(Options for "L:Plug-in type" Only)

○ Specifications

Model No.	N1R251-M5 N1R252-M5 N1R352-M5	N1R251-06 N1R252-06 N1R352-06	N2R251-06 N2R252-06 N2R352-06	N2R251-08 N2R252-08 N2R352-08	N3R251-08 N3R252-08 N3R352-08	N3R251-10 N3R252-10 N3R352-10	N4R251-10 N4R252-10 N4R352-10	N4R251-15 N4R252-15 N4R352-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8 (Exhaust G1/4)	G3/8	G1/2
Sectional area(mm ²)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 40 μ m filtration)							
Acting type	Internal pilot type / External pilot type							
Reset Type	Air reset					Spring reset /Air reset		
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-20~70(No freezing)							
Voltage range	-15%~10%							
Power consumption	Start 2.8W, hold 0.6W		Start 3.0W, hold 0.7W					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5/2 : 5 Cycles/s ; 5/3 : 3 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1R251: 110 N1R252: 171 N1R352: 181		N2R251: 209 N2R252: 314 N2R352: 357		N3R251: 289 N3R252: 400 N3R352: 450		N4R251: 528 N4R252: 638 N4R352: 727	

How to Order?

Standard Solenoid Valve

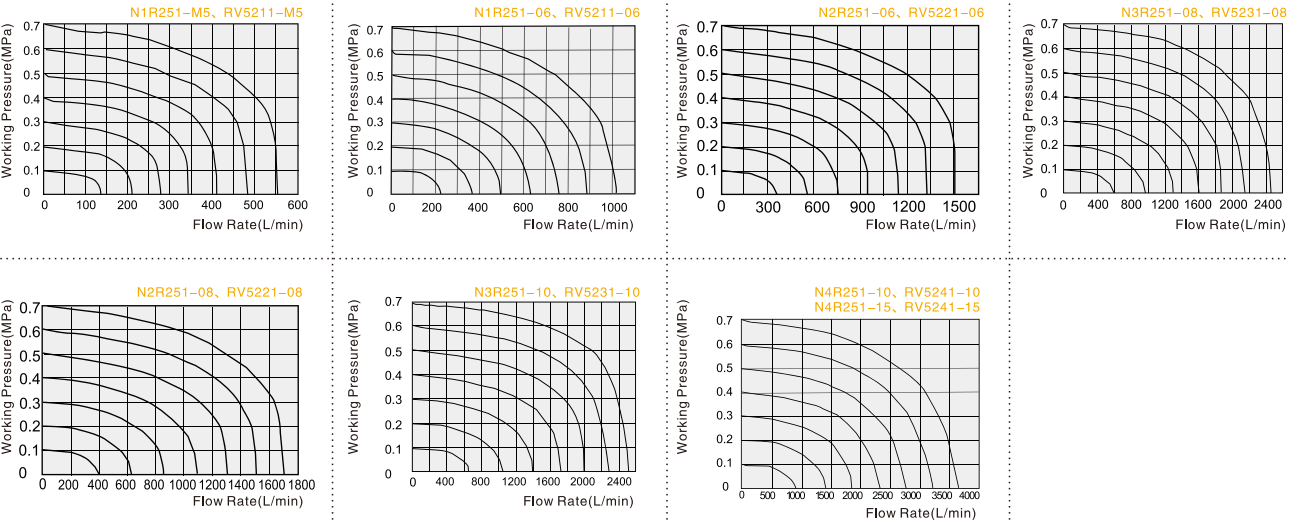
Series No.	Ways	Positions	Valve Body Size	Controls	Original Status	Port Size	Reset Form	Voltage	Connection Mode	Cover Color	Acting Type	Manual Button	Patchcord	Thread Type
RV	5:5 ways	2:2 positions 3:3 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)	M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V	E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: Internal pilot WB: External pilot	Blank: Brown translucent J: Colorless and translucent B: Black (K/M connector is only available in black)	Blank: Press & Rotate Lock H: Without Lock	Blank: G P: PT T: NPT			
Blank: Spring Q: Air (Only single control)														
Blank: DIN connector L: Plug-in Type F: Flying leads K: Waterproof DIN connector (Only 2, 3, 4 series is optional for K/M)														
Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" and "F: Flying leads type" Only)														

Order Example:
RV series solenoid valve, 2 series valve body size, 5/2 way, single control, 1/4" port size, standard coil, DC24V, DIN connector, G thread, ERP code is: RV5221-08E4

Specifications

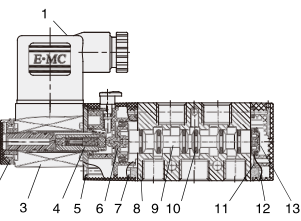
Model No.	RV5211-M5 RV5212-M5 RV5312-M5	RV5211-06 RV5212-06 RV5312-06	RV5221-06 RV5222-06 RV5322-06	RV5221-08 RV5222-08 RV5322-08	RV5231-08 RV5232-08 RV5332-08	RV5231-10 RV5232-10 RV5332-10	RV5241-10 RV5242-10 RV5342-10	RV5241-15 RV5242-15 RV5342-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm ²)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 40 μ m filtration)							
Acting type	Internal pilot type / External pilot type							
Reset Type	Air reset						Spring reset /Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-20~70(No freezing)							
Voltage range	-15%~10%							
Power consumption	DC:2.8W ; AC:3.0VA		DC:3.0W ; AC:4.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5/2 : 5 Cycles/s ; 5/3 : 3 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	RV5211: 110 RV5212: 171 RV5312: 181		RV5221: 209 RV5222: 314 RV5322: 357		RV5231: 289 RV5232: 400 RV5332: 450		RV5241: 528 RV5242: 638 RV5342: 727	

Flow Chat

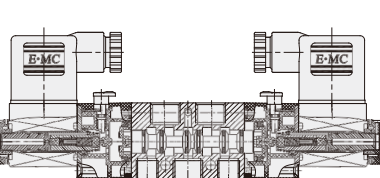


Internal Structure

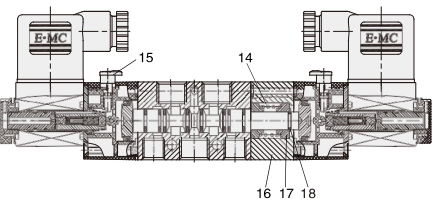
Single Solenoid Valve



Double Solenoid Valve



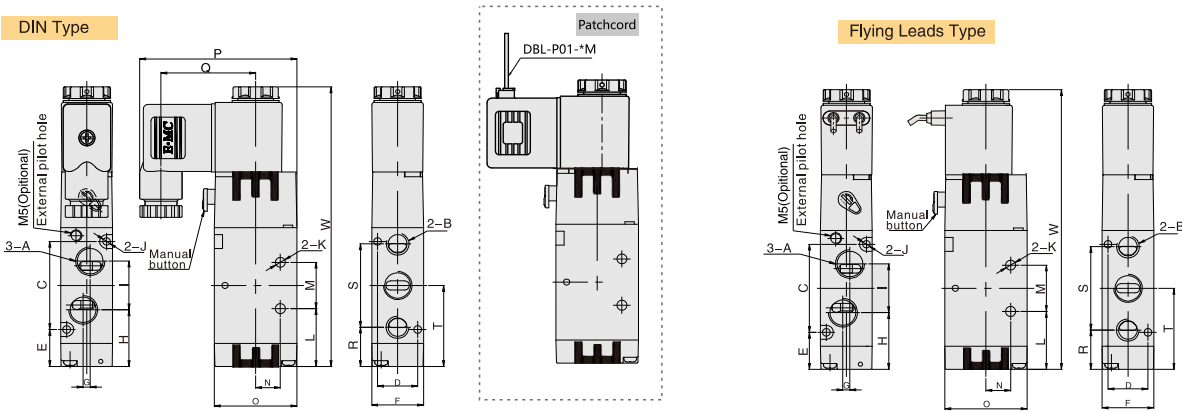
5/3 Solenoid Valve



No.	Part Name	Material
1	Connector	Engineered plastics
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	Engineered plastics
5	Plate	Carbon steel
6	Piston	POM
7	Pilot seat	Engineered plastics
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Rear cover	Engineered plastics
12	Filter	Synthetic material
13	Piston	POM
14	Spring	Stainless steel
15	Manual override	Engineered plastics
16	Back seat	Aluminum alloy
17	Spring seat	Aluminum alloy
18	C-type buckle	65Mn

Main Dimension

Single Solenoid Valve

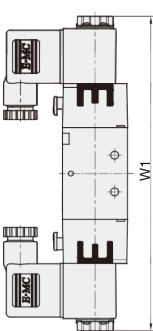


Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	W
RV5211-M5	M5	M5	30	13	16.5	18	0	24.5	14.1	3.3	3.3	24.5	14	9.5	27	55.2	33.9	17.9	27.2	31.5	103.1
RV5211-06	G1/8	G1/8	30	13	16.5	18	3	23.5	16	3.3	3.3	24.5	14	9.5	27	55.2	33.9	17.5	28	31.5	103.1
RV5221-06	G1/8	G1/8	38	17	16	22	0	26	18	3.3	4.3	25	20	10.5	35	66.7	40.2	17	36	35	120.7
RV5221-08	G1/4	G1/8	38	17	16	22	3	24.5	21	3.3	4.3	25	20	10.5	35	66.7	40.2	17	36	35	120.7
RV5231-08	G1/4	G1/4	50	20	19.1	27	0	33.1	22	4.3	4.3	32.1	24	13.5	40	69.2	40.2	21.6	45	44.1	139.3
RV5231-10	G3/8	G1/4	50	20	19.1	27	4	32.1	24	4.3	4.3	32.1	24	13.5	40	69.2	40.2	21.6	45	44.1	139.3
RV5241-10	G3/8	G3/8	72	27	21	34	0	39	36	4.3	5.5	43	28	17.5	50	74.2	40.2	25.5	63	57	168.7
RV5241-15	G1/2	G1/2	72	27	21	34	4	39	36	4.3	5.5	43	28	17.5	50	74.2	40.2	25.5	63	57	168.7

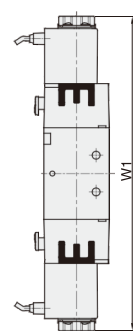
Note: The dimensions of NR series and RV series are same.

Double Solenoid Valve

DIN Type

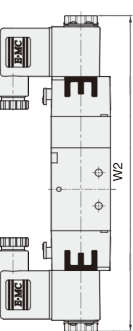


Flying Leads Type

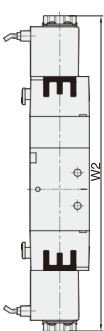


5/3 Solenoid Valve

DIN Type



Flying Leads Type

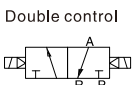
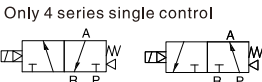
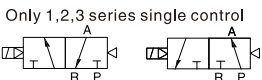


Model/Sign	W1
RV5212-M5	143.2
RV5212-06	143.2
RV5222-06	171.4
RV5222-08	171.4
RV5232-08	190.4
RV5232-10	190.4
RV5242-10	223.4
RV5242-15	223.4
Model/Sign	W2
RV5312-M5	158.2
RV5312-06	158.2
RV5322-06	190.4
RV5322-08	190.4
RV5332-08	209.4
RV5332-10	209.4
RV5342-10	244.4
RV5342-15	244.4

Note: The dimensions of NR series and RV series are same.

RV

Standard / Low Power Solenoid Valve (3/2)



How to Order?

Low Power Solenoid Valve

Series	Valve body size	ID code	Positions	Ways	Controls	Original Status	Port Size	Reset Type	Voltage	Connection Mode	Cover Color	Acting Type	Manual Button	Patchcord	Thread Type
N	1: 1Series 2: 2Series 3: 3Series 4: 4Series		2: positions 3: 3 ways	1: Single control 2: Double control			M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"		E1: AC110V E2: AC220V E4: DC24V (for 1series, only DC24V available)	Blank: Brown translucent J: Colorless and translucent B: Black (Only black color available for water proof connector)		Blank: Press & Rotate Lock H: Without Lock			Blank: G P: PT T: NPT
R: Standard armature + Energy saving coil															
Blank: Spring (4 series single control only) Q: Air (1,2,3 series single control)															
Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" Only)															

Order Example:
RV series energy saving solenoid valve, 2 series valve body size, 3/2 ways, double control, 1/8" port size, AC220V, DIN connector, G thread, ERP code is :N2R232-06E2

Specifications

Model No.	N1R231-M5 N1R232-M5	N1R231-06 N1R232-06	N2R231-06 N2R232-06	N2R231-08 N2R232-08	N3R231-08 N3R232-08	N3R231-10 N3R232-10	N4R231-10 N4R232-10	N4R231-15 N4R232-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 40 μ m filtration)							
Acting type	Internal pilot type/External pilot type							
Reset type	Air reset						Spring reset /Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressur(MPa)	1.2							
Working temperature(℃)	-20~70(No freezing)							
Voltage range	-15%~10%							
Power consumption	Start 2.8W, hold 0.6W		Start 3.0W, hold 0.7W					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1R231: 102 N1R232: 169		N2R231: 107 N2R232: 303		N3R231: 260 N3R232: 370		N4R231: 443 N4R232: 569	

Note: Normal open is same as normal close.

How to Order?

Standard Solenoid Valve

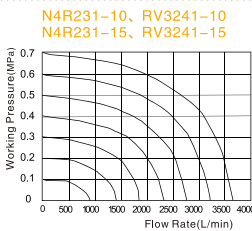
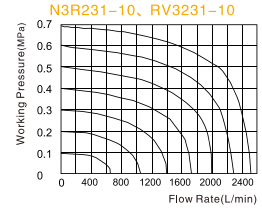
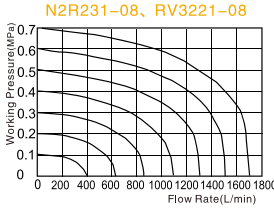
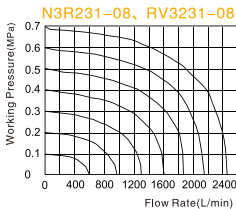
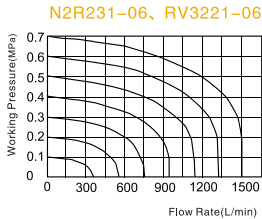
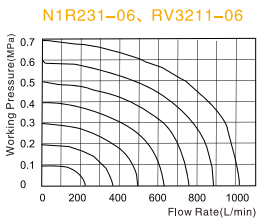
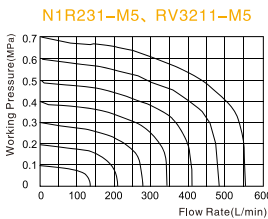
Series No.	Ways	Positions	Valve Body ID Code	Controls	Original Status	Port Size	Reset Type	Voltage	Connection Mode	Cover Color	Valve Color	Manual Button	Patchcord	Thread Type
RV	3: 3 ways	2: 2 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2: Double control		M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"		E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: DIN connector L: Plug-in Type F: Flying leads K: Waterproof DIN connector (Only 2, 3, 4 series is optional for K/M)		Blank: Internal pilot WB: External pilot			Blank: G P: PT T: NPT
Blank: Normal close H: Normal open														
Blank: Spring (Only 4 series single control) Q: Air (1,2,3 series single control)														
Blank: Brown translucent J: Colorless and translucent B: Black (Only Waterproof DIN connector)														

Order Example:
RV series solenoid valve, 2 series valve body size, 3/2 ways, single control, 1/8" port size, air return, standard coil, AC220V, DIN connector, G thread, ERP code is :RV3221-06QE2

Specifications

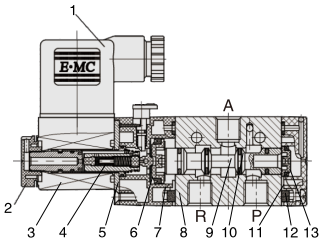
Model No.	RV3211-M5 RV3212-M5	RV3211-06 RV3212-06	RV3221-06 RV3222-06	RV3221-08 RV3222-08	RV3231-08 RV3232-08	RV3231-10 RV3232-10	RV3241-10 RV3242-10	RV3241-15 RV3242-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm)	2 way:5.5(CV=0.31)	2 way:12(CV=0.67)	2 way:14(CV=0.78)	2 way:16(CV=0.89)	2 way:25(CV=1.40)	2 way:30(CV=1.68)	2 way:50(CV=2.79)	2 way:50(CV=2.79)
Working medium	Clean air(After 40 μ m filtration)							
Acting type	Internal pilot type/External pilot type							
Reset type	Air reset						Spring reset /Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressur(MPa)	1.2							
Working temperature(℃)	-20~70(No freezing)							
Voltage range	-15%~10%							
Power consumption	DC:2.8W ; AC:3.0VA		DC:3.0W ; AC:4.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	RV3211: 102 RV3212: 169		RV3221: 107 RV3222: 303		RV3231: 260 RV3232: 370		RV3241: 443 RV3242: 569	

Flow Chat

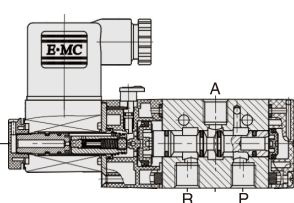


Internal Structure

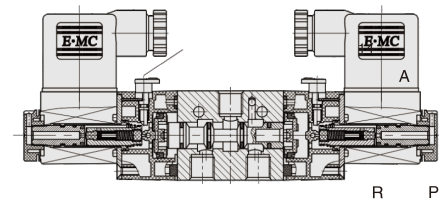
Single Solenoid Valve(Normal close)



Single Solenoid Valve(Normal open)



Double solenoid valve(Normal close)

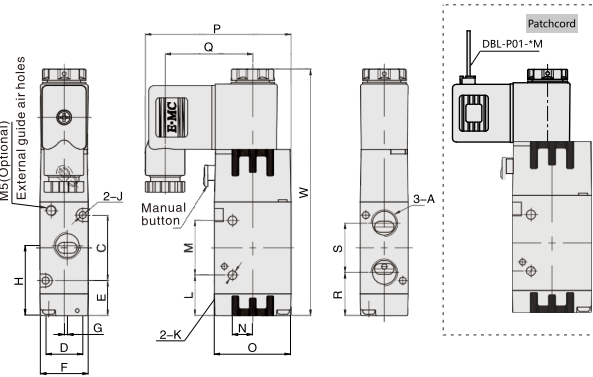


No.	Part Name	Material
1	Connector	Engineered plastics
2	Nut	POM
3	Coil	Cu+ Thermosetting resin
4	Pilot units	Pure iron + copper + stainless steel
5	Plate	Carton steel
6	Piston	POM
7	Pilot seat	Engineered plastics
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	NBR
11	Rear cover	Engineered plastics
12	Filter	Synthetic material
13	Piston	Engineered plastics
14	Manual button	Engineered plastics

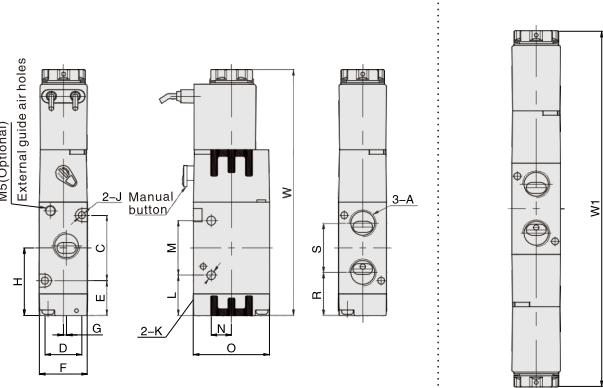
Main Dimension

Single Solenoid Valve

DIN Type



Flying Leads Type



Double Solenoid Valve

Model/Sign	A	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	W	W1*
RV3211-M5	M5	19	13	16.5	18	0	26	3.3	3.1	15.5	21	6	27	55.2	33.9	18.9	14.2	92.1	132.2
RV3211-06	G1/8	19	13	16.5	18	1.5	27	3.3	3.1	15.5	21	6	27	55.2	33.9	18	16	92.1	132.2
RV3221-06	G1/8	30	17	16	22	0	31	3.3	4.2	18.5	25	9.3	35	66.7	40.2	20	22	112.7	163.4
RV3221-08	G1/4	30	17	16	22	1.5	32	3.3	4.2	18.5	25	9.3	35	66.7	40.2	19.8	22.5	112.7	163.4
RV3231-08	G1/4	35	20	19.1	27	0	36.6	4.3	4.3	21.6	30	9.5	40	69.2	40.2	24.6	24	124.3	175.4
RV3231-10	G3/8	35	20	19.1	27	2	36.6	4.3	4.3	21.6	30	9.5	40	69.2	40.2	24.6	24	124.3	175.4
RV3241-10	G3/8	40.5	27	24.8	34	0	45	4.3	5.2	21	48	11.5	50	74.2	40.2	29.3	31.5	144.7	199.4
RV3241-15	G1/2	40.5	27	24.8	34	2	45	4.3	5.2	21	48	11.5	50	74.2	40.2	29.3	31.5	144.7	199.4

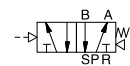
Note: The dimension of NR series and RV series are same, The dimension of normal open type and normal close type are same, W1* is the dimension of double control solenoid valve.

RVA

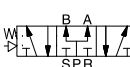
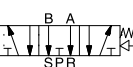
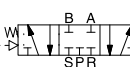
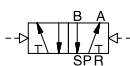
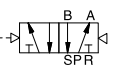
Air Control Valve(5/2,5/3)



4 series single air control valve only



1,2,3 series single air control valve



How to Order?

Series No.	Ways	Positions	Valve Body ID Code	Controls	Initial Status	Port Size	Reset Type	Thread Type
RVA	5: 5 ways	2:2 positions 3:3 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2: Double control	C: Center close P: Center pressure E: Center exhaust (only for 5/3 ways)	M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Spring return (Apply to 4 series single control valve) Q: Air return (Apply to 1,2,3 series single control valve)	Bland: G P: PT T: NPT

Order Example:

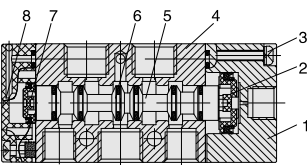
RV series air control valve, 5/2 way, 2 series valve body size, single control, 1/8" port size, air return, G thread, ERP code is: RVA5221-06Q

Specifications

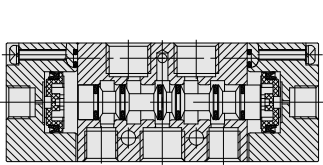
Model No.	RVA5211-M5 RVA5212-M5 RVA5312-M5	RVA5211-06 RVA5212-06 RVA5312-06	RVA5221-06 RVA5222-06 RVA5322-06	RVA5221-08 RVA5222-08 RVA5322-08	RVA5231-08 RVA5232-08 RVA5332-08	RVA5231-10 RVA5232-10 RVA5332-10	RVA5241-10 RVA5242-10 RVA5342-10	RVA5241-15 RVA5242-15 RVA5342-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm)	5/2: 5.5(CV=0.31) 5/3: 5.5(CV=0.28)	5/2: 12(CV=0.67) 5/3: 9(CV=0.50)	5/2: 14(CV=0.78) 5/3: 12(CV=0.67)	5/2: 16(CV=0.89) 5/3: 12(CV=0.67)	5/2: 25(CV=1.40) 5/3: 18(CV=1.00)	5/2: 30(CV=1.68) 5/3: 18(CV=1.00)	5/2: 50(CV=2.79) 5/3: 30(CV=1.67)	5/2: 50(CV=2.79) 5/3: 30(CV=1.67)
Working medium	Clean air(After 40 μm filtration)							
Acting type	External type							
Reset type	Air reset						Spring reset / Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-20~70 (No freezing)							
Max. acting frequency	5/2: 5 Cycles/s; 5/3: 3 Cycles/s							
Weight(g)	RVA5211:72 RVA5212:87 RVA5312:181		RVA5221:128 RVA5222:153 RVA5322:219		RVA5231:218 RVA5232:260 RVA5332:358		RVA5241:437 RVA5242:490 RVA5342:598	

Internal Structure

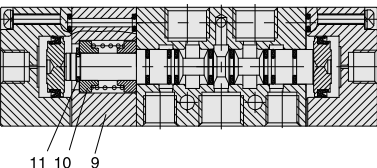
Single Air Control



Double Air Control

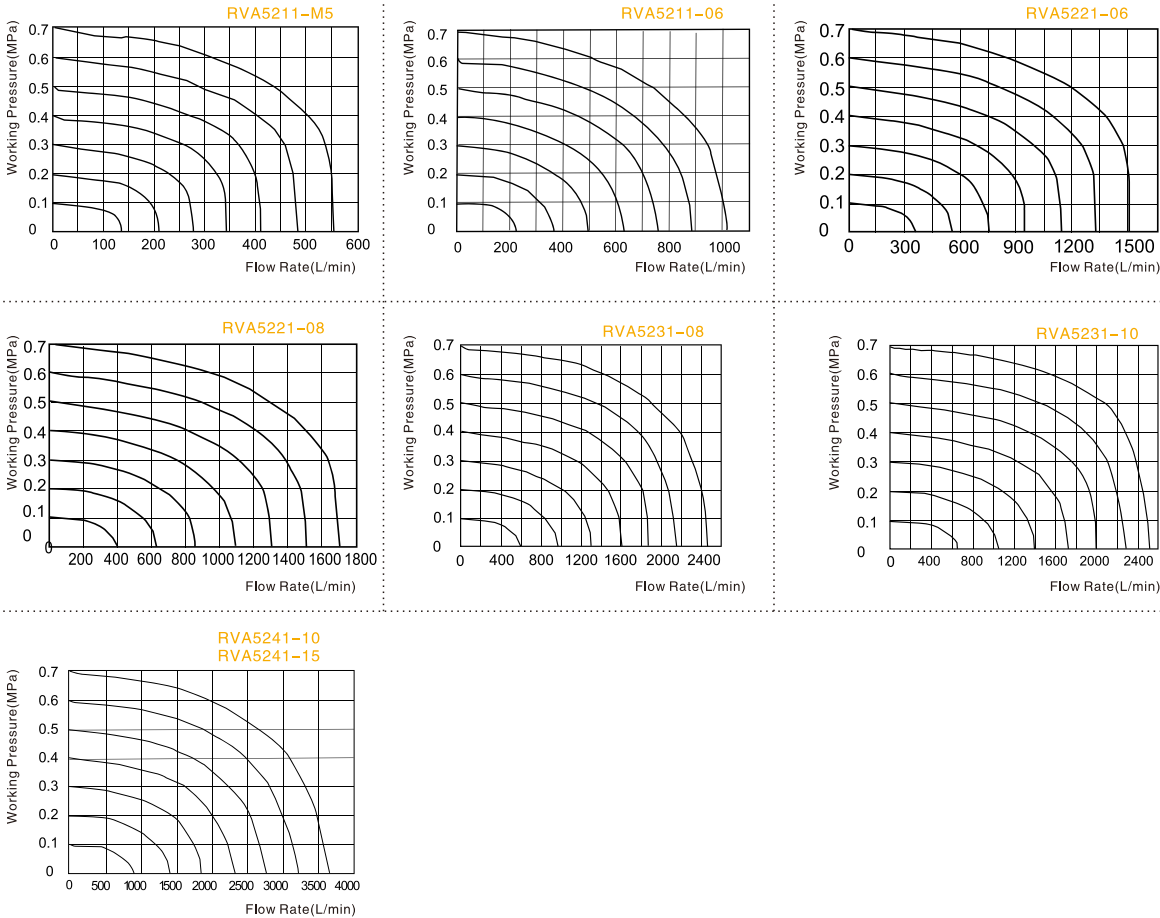


5/3 Ways Solenoid Valve

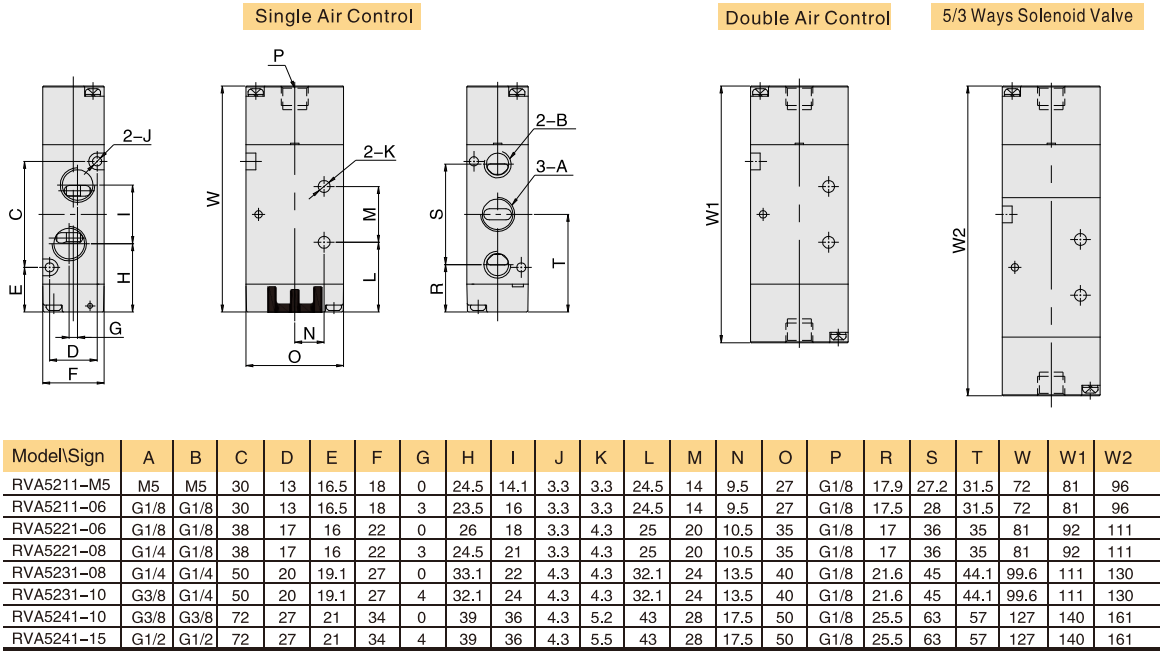


No.	Part Name	Material
1	Air Control Cover	Aluminum Alloy
2	Piston	POM
3	Screw	Carbon Steel
4	Valve Body	Aluminum Alloy
5	Spool	Aluminum Alloy
6	O-ring	NBR
7	Piston	POM
8	Rear Cover	Zinc Alloy
9	Back Seat	Aluminum Alloy
10	Spring Seat	Aluminum Alloy
11	C-type Buckle	65Mn

Flow Chat



Main Dimension

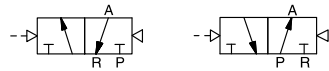


RV

Air Control Valve(3/2)



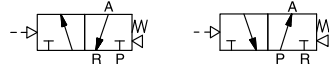
1,2,3 series single air control valve



Double control valve



4 series single air control valve only



How to Order?

Series No.	Ways	Positions	Valve Body ID Code	Controls	Initial Status	Port Size	Reset Type	Thread Type
RVA	3: 3 ways	2:2 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2: Double control	Blank: Normal close(N.C) H:Normal open(N.O)	M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Spring return (Apply to 4 series single control valve) Q: Air return (Apply to 1,2,3 series single control valve)	Blank: G

Order Example:

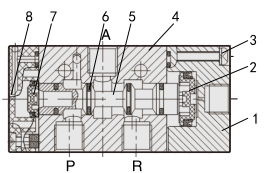
RVA series air control valve, 3/2 way, 2 series valve body size, single control, NC type, 1/4" port size, air return, G thread
ERP code is: RVA3221-08Q

Specifications

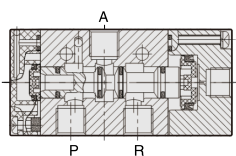
Model No.	RVA3211-M5 RVA3212-M5	RVA3211-06 RVA3212-06	RVA3221-06 RVA3222-06	RVA3221-08 RVA3222-08	RVA3231-08 RVA3232-08	RVA3231-10 RVA3232-10	RVA3241-10 RVA3242-10	RVA3241-15 RVA3242-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 40 μm filtration)							
Acting type	External type							
Reset type	Air reset						Spring reset /Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed Pressure(MPa)	1.2							
Working temperature(℃)	-20~70(No freezing)							
Max. acting frequency	5 Cycles/s							
Weight(g)	RVA3211:60 RVA3212:75		RVA3221:116 RVA3222:143		RVA3231:187 RVA3232:220		RVA3241:378 RVA3242:430	

Internal Structure

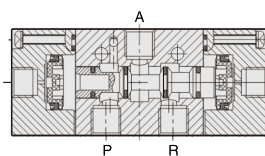
Single Air Control(N.C)



Single Air Control(N.O)



Double Air Control

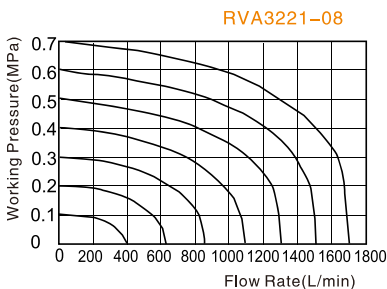
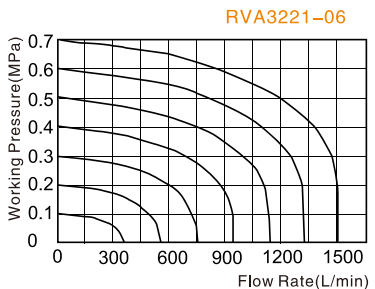
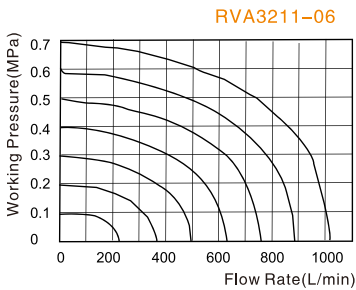
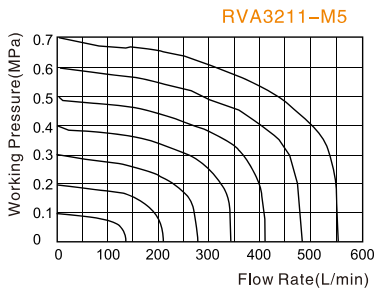


No.	Part Name	Material
1	Air Control Cover	Aluminum Alloy
2	Piston	POM
3	Screw	Carbon Steel
4	Valve Body	Aluminum Alloy
5	Spool	Aluminum Alloy
6	O-ring	NBR
7	Piston	POM
8	Rear Cover	Zinc Alloy



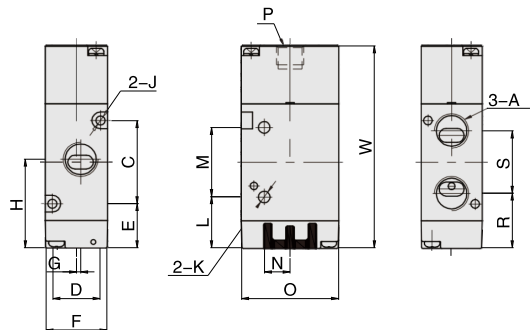
1
RVA
(3/2)

Flow Chat

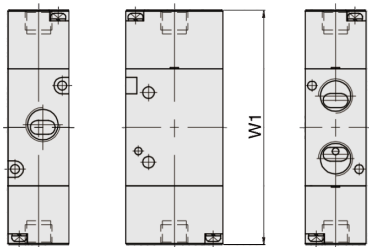


Main Dimension

Single Air Control



Double Air Control



Model/Sign	A	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	W	W1*
RVA3211-M5	M5	19	13	16.5	18	0	26	3.3	3.1	15.5	21	6	27	G1/8	18.9	14.2	61	70
RVA3211-06	G1/8	19	13	16.5	18	1.5	27	3.3	3.1	15.5	21	6	27	G1/8	18	16	61	70
RVA3221-06	G1/8	30	17	16	22	0	31	3.3	4.2	18.5	25	9.3	35	G1/8	20	22	73	84
RVA3221-08	G1/4	30	17	16	22	1.5	32	3.3	4.2	18.5	25	9.3	35	G1/8	19.8	22.5	73	84
RVA3231-08	G1/4	35	20	19.1	27	0	36.6	4.3	4.3	21.6	30	9.5	40	G1/8	24.6	24	84.6	96
RVA3231-10	G3/8	35	20	19.1	27	2	36.6	4.3	4.3	21.6	30	9.5	40	G1/8	24.6	24	84.6	96
RVA3241-10	G3/8	40.5	27	24.8	34	0	45	4.3	5.2	21	48	11.5	50	G1/8	29.3	31.5	103	116
RVA3241-15	G1/2	40.5	27	24.8	34	2	45	4.3	5.2	21	48	11.5	50	G1/8	29.3	31.5	103	116

Note: The dimesnion of N.O type and N.C type are same, W1* is the dimesnion of double control type.

1
V/RV
(5/2,5/3)

V/RV
Manifold (5/2,5/3)



How to Order?

V	52	1	—	N	F
V Series	5 port, 2 position	1:1 series valve body 2:2 series valve body 3:3 series valve body 4:4 series valve body		1: 1 station 2: 2 stations 3: 3 stations 16: 16 stations	Manifold

Order Example:
* V series manifold for 5/2, 2 series valve body, 5 stations, Model: V522-5F

VBP	52	2
V series blind plate (for V series manifold)	5:5 port, 2 position	1:1 series valve body 2:2 series valve body 3:3 series valve body 4:4 series valve body

Order Example:
* Blind plate for 5/2 valve, 2 series valve body, Model: VBP-522

Note: 1.The dimensions of 5/3 way is same as 5/2 way series.
2.Blind plate assembly include: plate, gasket and screws.

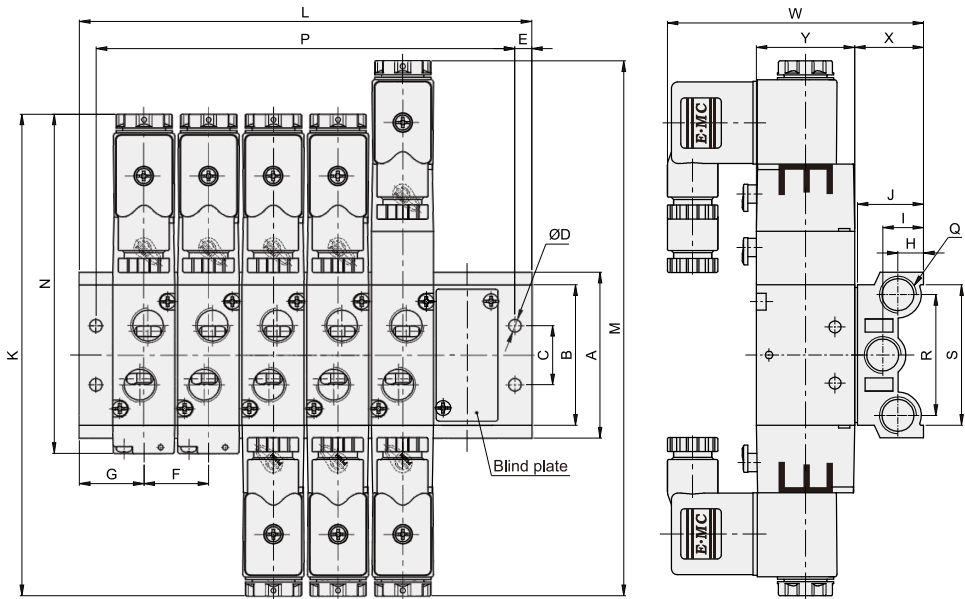
Corresponding Application

Valve Model	RV5211/RV5212/RV5312	RV5221/RV5222/RV5322	RV5231/RV5232/RV5332	RV5241/RV5242/RV5342
Manifold Model	V521-NF(N≤16)	V522-NF(N≤16)	V523-NF(N≤12)	V524-NF(N≤7)



1
V/RV
(5/2,5/3)

○ Main Dimension



Model/Sign	L															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
V521-□F	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
V522-□F	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
V523-□F	54	82	110	138	166	194	222	250	278	306	334	362	-	-	-	-
V524-□F	63	98	133	168	203	238	273	-	-	-	-	-	-	-	-	-

Model/Sign	A	B	C	D	E	F	G	H	I	J
V521-□F	58	43	20	4.5	5	19	19	9.5	14	23
V522-□F	59	50	21	4.5	6	23	23	9.5	15	23.5
V523-□F	75	64	26	4.5	6	28	27	12	17.5	28
V524-□F	98	94	32	5.5	7	35	31.5	16	21.5	35

Model/Sign	P															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
V521-□F	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313
V522-□F	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379
V523-□F	42	70	98	126	154	182	210	238	266	294	322	350	-	-	-	-
V524-□F	49	84	119	154	189	224	259	-	-	-	-	-	-	-	-	-

Model/Sign	K	M	N	Q	R	S	W	X	Y
V521-□F	143.2	158.2	103.1	G1/4	40	49	79.2	24	27
V522-□F	171.4	190.4	120.7	G1/4	43	50	91.2	24.5	35
V523-□F	190.4	209.4	139.3	G3/8	53	67	98.2	29	40
V524-□F	223.4	244.4	168.7	G1/2	70.5	86.8	110.2	36	50

V/RV
Manifold(3/2)



○ Manifold Model

No.	Manifold Model	Valve Model
1	V321-NF (N≤16)	RV3211 (H) /RV3212
2	V322-NF (N≤16)	RV3221 (H) /RV3222
3	V323-NF (N≤12)	RV3231 (H) /RV3232
4	V324-NF (N≤7)	RV3241 (H) /RV3242

○ How to Order?

V	32	1	-	N	F	-	Thread Type
V series	3/2 way	1:1 series valve body 2:2 series valve body 3:3 series valve body 4:4 series valve body	-	1:1 station 2:2 stations 3:3 stations 16:16 stations	Manifold	Blank: G P: PT T: NPT	

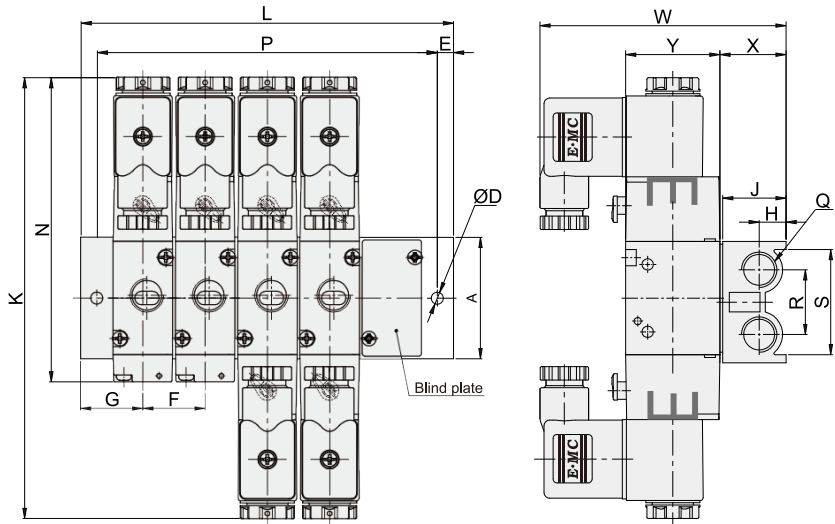
Order Example:
* V series manifold for 3/2, 2 series valve body, 5 stations,
Model: V322-5F

VBP	-	32	2
V series blind plate (for V series manifold)	-	3/2 way	1:1 series valve body 2:2 series valve body 3:3 series valve body 4:4 series valve body

Order Example:
* Blind plate for 3/2 valve, 2 series valve body,
Model: VBP-322

Note: Blind plate assembly includes: Blinds, gaskets
and mounting screws

○ Main Dimension

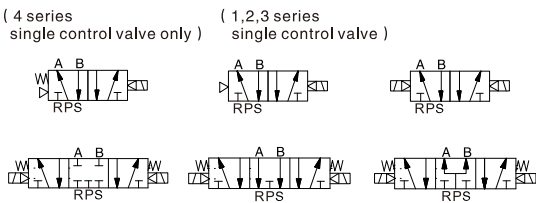


Model\Sign	L										(mm)							
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	A	D	E	F	G	H	J	K
V321-□F	38	57	76	95	114	133	152	171	190	209	31	4.5	5.25	19	18	7.75	19	132.2
V322-□F	46	69	92	115	138	161	184	207	230	253	45	4.5	6	23	23	10	23.5	163.4
V323-□F	54	82	110	138	166	194	222	250	278	306	50	4.5	6	28	26	12	28	175.4
V324-□F	63	98	133	168	203	238	273	308	343	378	62.5	5.5	7	35	31.5	16	35	199.4

Model\Sign	P										N	Q	R	S	W	X	Y
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F							
V321-□F	28	47	66	85	104	123	142	161	180	199	92.1	G1/8	17.5	25	75.2	20	27
V322-□F	34	57	80	103	126	149	172	195	218	241	112.7	G1/4	24	39	91.2	24.5	35
V323-□F	42	70	98	126	154	182	210	238	266	294	124.3	G3/8	29	42	98.2	29	40
V324-□F	49	84	119	154	189	224	259	294	329	364	144.7	G1/2	35.5	51.5	110.2	36	50

1
V/RV
(3/2)

RV
NAMUR Solenoid Valve(5/2,5/3)



How to Order?

Low Power Solenoid Valve

Series No.	Valve Body ID Code	ID Code	Positions	Ways	Controls	Initial Status	Port Size	Reset Type	Valve Body Type	Voltage	Connection Mode	Cover Color	— Patchcord —	Thread Type
N	1: 1Series 2: 2Series 3: 3Series 4: 4Series	R: Standard armature +Energy saving coil	2:2 positions 3:3 positions	5:5 ways	1: Single control 2: Double control	M5:M5 06:1/8" 08:1/4" 10:3/8" 15:1/2"	Blank: Spring return (4 series single solenoid control only) Q: Air return (1,2,3 series single solenoid control)	M:NAMUR	E1: AC110V E2: AC220V E4: DC24V (for 1series, only DC24V available)	Blank: DIN connector type L: Plug-in Type K: Water proof connector type (only for 2,3,4 series)	Blank: Brown translucent J: Colorless and translucent B: Black (only black color available for K/M)	Blank: G P: PT T: NPT	Blank: Patchcord length is 0,3 meter 0,6M: Patchcord length is 0,6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" Only)	

Order Example:
RV series Energy saving solenoid valve,5/2 ways,1 series valve body size, double control,1/8 "port size, NUMAR type, DC24V,DIN connector, G thread, ERP code is N1R252-06ME4

Specifications

Model	N1R251-M5QM N1R252-M5M N1R352-M5M	N1R251-06QM N1R252-06M N1R352-06M	N2R251-06QM N2R252-06M N2R352-06M	N2R251-08QM N2R252-08M N2R352-08M	N3R251-08QM N3R252-08M N3R352-08M	N3R251-10QM N3R252-10M N3R352-10M	N4R251-10M N4R252-10M N4R352-10M	N4R251-15M N4R252-15M N4R352-15M
Port Size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/8)	G3/8	G1/2
Sectional area(mm)	5/2: 5.5(CV=0.31) 5/3: 5.5(CV=0.28)	5/2: 12(CV=0.67) 5/3: 9(CV=0.50)	5/2: 14(CV=0.78) 5/3: 12(CV=0.67)	5/2: 16(CV=0.89) 5/3: 12(CV=0.67)	5/2: 25(CV=1.40) 5/3: 18(CV=1.00)	5/2: 30(CV=1.68) 5/3: 18(CV=1.00)	5/2: 50(CV=2.79) 5/3: 30(CV=1.67)	5/2: 50(CV=2.79) 5/3: 30(CV=1.67)
Working medium	Clean air(After 40 μ m filtration)							
Acting type	Internal pilot							
Reset type	Air reset						Spring reset / Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed Pressure(MPa)	1.2							
Working temperature(℃)	-20~70 (No freezing)							
Voltage Range	-15%~10%							
Power Consumption	Start 2.8W, hold 0.6W		Start 3.0W, hold 0.7W					
Insulation Class	Class F							
Protective Class	IP65(DIN40050)							
Max. acting frequency	5 cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1R251-M:113 N1R252-M:176 N1R352-M:186		N2R251-M:208 N2R252-M:306 N2R352-M:349		N3R251-M:300 N3R252-M:409 N3R352-M:459		N4R251-M:533 N4R252-M:666 N4R352-M:755	

How to Order?

Standard Solenoid Valve

Series No.	Ways	Positions	Valve Body ID Code	Controls	Initial Status	Port Size	Reset Type	Valve Body Type	ID Code	Voltage	Connection Mode	Cover Color	Patchcord	Thread Type
RV(Solenoid valve)	5:5 ways	2:2 positions 3:3 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2: Double control	C: Center close P: Center pressure E: Center exhaust (only for 5/3 ways)	M5:M5 06:1/8" 08:1/4" 10:3/8" 15:1/2"	Blank: Spring return (Only apply to 4 series single control valve) Q: Air return (Only apply to 1,2,3 series single control valve)	M:NAMUR type	Blank: Standard type A: Amisco coil	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V	E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: DIN connector L: Plug-in Type F: Flying leads K: Waterproof DIN connector (Only 2, 3, 4 series is optional for K/M)	Blank: Brown translucent J: Colorless and translucent B: Black(only black color available for K/M)	Blank: G P: PT T: NPT

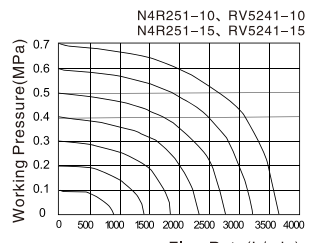
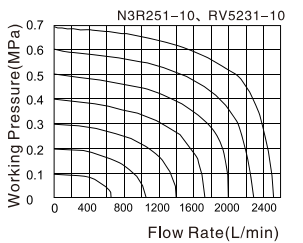
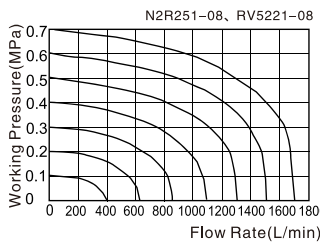
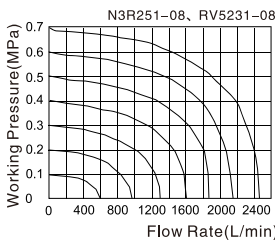
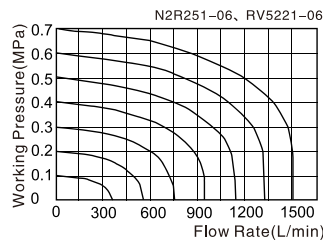
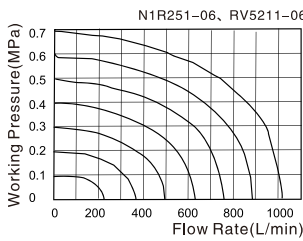
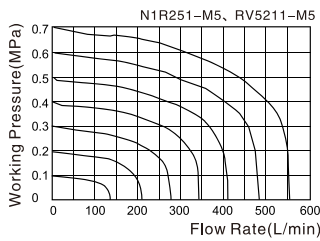
Order Example:

RV series solenoid valve,5/2 ways,1 series valve body size, double control,1/8 "port size, NUMAR type, standard coil, DC24V, Fly leads connector, G thread, ERP code is RV5212-06ME2F

Specifications

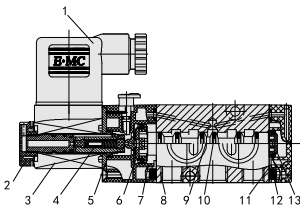
Model	RV5211-M5QM RV5212-M5M RV5312-M5M	RV5211-06QM RV5212-06M RV5312-06M	RV5221-06QM RV5222-06M RV5322-06M	RV5221-08QM RV5222-08M RV5322-08M	RV5231-08QM RV5232-08M RV5332-08M	RV5231-10QM RV5232-10M RV5332-10M	RV5241-10M RV5242-10M RV5342-10M	RV5241-15M RV5242-15M RV5342-15M
Port Size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm)	5/2: 5.5(CV=0.31) 5/3: 5.5(CV=0.28)	5/2: 12(CV=0.67) 5/3: 9(CV=0.50)	5/2: 14(CV=0.78) 5/3: 12(CV=0.67)	5/2: 16(CV=0.89) 5/3: 12(CV=0.67)	5/2: 25(CV=1.40) 5/3: 18(CV=1.00)	5/2: 30(CV=1.68) 5/3: 18(CV=1.00)	5/2: 50(CV=2.79) 5/3: 30(CV=1.67)	5/2: 50(CV=2.79) 5/3: 30(CV=1.67)
Working medium	Clean air(After 40 μ m filtration)							
Acting type	Internal pilot							
Reset type	Air reset						Spring reset / Air reset	
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed Pressure(MPa)	1.2							
Working temperature(℃)	-20~70(No freezing)							
Voltage Range	-15%~10%							
Power Consumption	DC:2.8W ; AC:3.0VA		DC:3.0W ; AC:4.0VA					
Insulation Class	Class F							
Protective Class	IP65(DIN40050)							
Max. acting frequency	5/2: 5 cycles/s; 5/3: 3 cycles/s							
Activate time(S)	<0.05							
Weight(g)	RV5211: M:113 RV5212: M:176 RV5312: M:186		RV5221: M:208 RV5222: M:306 RV5322: M:349		RV5231: M:300 RV5232: M:409 RV5332: M:459		RV5241: M:533 RV5242: M:666 RV5342: M:755	

Flow Chat

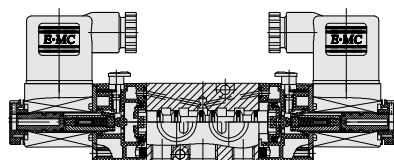


Internal Structure

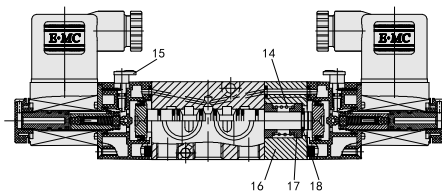
Single Solenoid Valve



Double Solenoid Valve



5/3 Ways Solenoid Valve

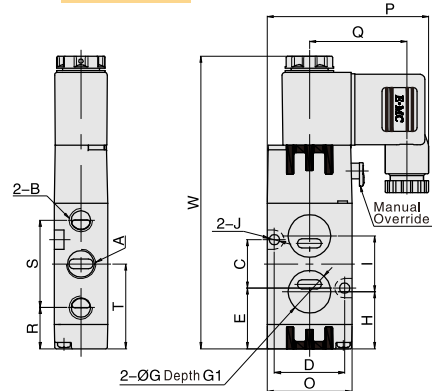


No.	Part Name	Material
1	Connector	Engineered plastics
2	Fixing Nut	POM
3	Coil	Brass+Thermoset Resin
4	Pilot Units	Pure iron+Brass +Stainless Steel
5	Plate	Carbon Steel
6	Piston	POM
7	Pilot Seat	Engineered plastics
8	Valve Body	Aluminum Alloy
9	Spool	Aluminum Alloy
10	O ring	NBR
11	Rear Cover	Engineered plastics
12	Filter	High Molecular Material
13	Piston	Engineered plastics
14	Spring	Stainless Steel
15	Manual Override	Engineered plastics
16	Back Seat	Aluminum Alloy
17	Spring Seat	Aluminum Alloy
18	C type buckle	65Mn

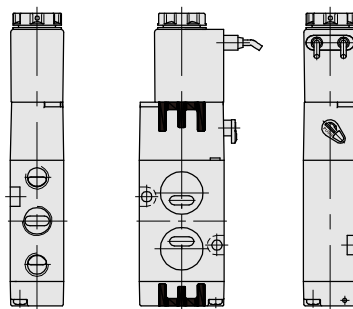
Main Dimension

Single Solenoid Valve

DIN Type



Flying Lead Type



(mm)

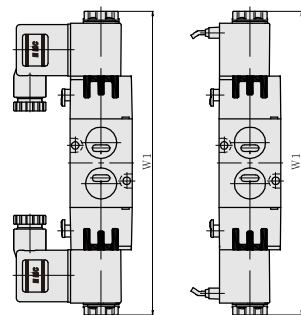
Model/Sign	A	B	C	D	E	F	G	G1	H	I	J	O	P	Q	R	S	T	W
RV5221-08QM	G1/4	G1/8	20	29	25	22	17.6	1.5	23.5	23	4.3	35	66.7	40.2	17	36	35	120.7
RV5231-08QM	G1/4	G1/4	24	32	32.1	27	19.6	1.5	32.1	24	5.2	40	69.2	40.2	21.6	45	44.1	139.3
RV5231-10QM	G3/8	G1/4	24	32	32.1	27	19.6	1.5	32.1	24	5.2	40	69.2	40.2	21.6	45	44.1	139.3

Note: N series energy saving solenoid valve have same sizes as above table.

Double Solenoid Valve

DIN Type

Flying Lead Type



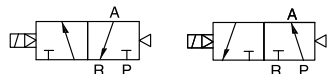
Model/Sign	W1
RV5222-08QM	171.4
RV5232-08QM	190.4
RV5232-10QM	190.4

RV

NAMUR Solenoid Valve (3/2)



Single control valve only



How to Order?

Low Power Solenoid Valve

Series No.	Valve body ID code	ID Code	Positions	Ways	Controls	Initial Status	Port Size	Reset Type	Valve Body Type	Voltage	Connection Mode	Cover Color	Patchcord	Thread Type
N	2: 2Series 3: 3Series		2: 2 positions R: Standard armature +Energy saving coil	3: 3 ways	1: Single control	Blank: Normal close H: Normal open	08: 1/4" 10: 3/8"		M: NAMUR Q: Air return (1,2,3 series single solenoid control)	E1: AC110V E2: AC220V E4: DC24V (for 1series, only DC24V available)	Blank: DIN connector type L: Plug-in Type K: Water proof connector type (only for 2,3,4 series)	Blank: Brown translucent J: Colorless and translucent B: Black(only black color available for K/M)		Blank: G P: PT T: NPT

Order Example:
RV series low power solenoid valve, 3/2 ways, 2 series valve body size, single control, 1/8 "port size, NUMAR type, DC24V, DIN connector, G thread, ERP code is N2R231-06ME4

Blank: Patchcord length is 0.3 meter
0.6M: Patchcord length is 0.6 meter
1M: Patchcord length is 1 meter
(Options for "L: Plug-in type" Only)

Specifications

Model	N2R231-08QM	N3R231-08QM	N3R231-10QM
Port Size	G1/4	G1/4	G3/8
Sectional area(mm)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)
Working medium	Clean air(After 40 μ m filtration)		
Acting type	Internal pilot		
Reset type	Air reset		
Lubrication	Not required		
Working pressure(MPa)	0.15~0.8		
Guaranteed Pressure(MPa)	1.2		
Working temperature(°C)	-20~70 (Dry air)		
Voltage Range	-15%~10%		
Power Consumption	Start 3.0W, hold 0.7W		
Insulation Class	Class F		
Protective Class	IP65(DIN40050)		
Max. acting frequency	5 Cycles/s		
Activate time(S)	<0.05		
Weight(g)	N2R231-M:203	N3R231-M:295	

How to Order?

Standard Solenoid Valve

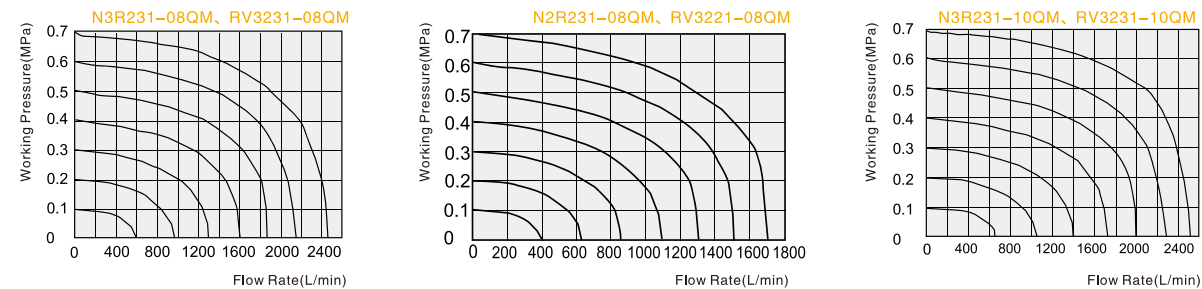
Series No.	Ways	Positions	Valve body ID code	Controls	Initial Status	Port Size	Reset Type	Valve body Type	Voltage	Connection Mode	Cover Color	Patchcord	Thread Type
RV(Solenoid valve)	3:3 ways	2: 2 positions 3: 3 positions	2: 2Series 3: 3Series	Blank: Normal close H: Normal open	Blank: Normal close H: Normal open	08: 1/4" 10: 3/8"	Q: Air return (Only apply to 1,2,3 series single control valve)	M: NAMUR type	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: DIN connector L: Plug-in type F: Flying leads K: Waterproof DIN connector (Only 2, 3 series is optional for K/M)	Blank: Brown translucent J: Colorless and translucent B: Black(only black color available for K/M)	Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" and "F: Flying leads type" Only)	Blank: G P: PT T: NPT

Order Example:
RV series solenoid valve, 3/2 ways, 2 series valve body size, single control, 1/4 "port size, NUMAR type, standard coil, DC24V, Fly leads connector, G thread, ERP code is RV3221-08ME2F

Specifications

Model	RV3221-08QM	RV3231-08QM	RV3231-10QM
Port Size	G1/4	G1/4	G3/8
Sectional area(mm)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)
Working medium	Clean air(After 40 μ m filtration)		
Acting type	Internal pilot		
Reset type	Air reset		
Lubrication	Not required		
Working pressure(MPa)	0.15~0.8		
Guaranteed Pressure(MPa)	1.2		
Working temperature(°C)	-20~70 (Dry air)		
Voltage Range	-15%~10%		
Power Consumption	DC:3.0W ; AC:4.0VA		
Insulation Class	Class F		
Protective Class	IP65(DIN40050)		
Max. acting frequency	5 cycles/s		
Activate time(S)	<0.05		
Weight(g)	RV3221- M:203	RV3231- M:295	

Flow Chat



Internal Structure

Single Air Control(N.C)

Single Air Control(N.O)

No.	Part Name	Material
1	Connector	Engineered plastics
2	Fixing Nut	POM
3	Coil	Brass+Thermoset Resin
4	Pilot Units	Pure iron+Brass +Stainless Steel
5	Plate	Carbon Steel
6	Piston	POM
7	Pilot Seat	Engineered plastics
8	Valve Body	Aluminum Alloy
9	Spool	Aluminum Alloy
10	O ring	NBR
11	Rear Cover	Engineered plastics
12	Filter	High Molecular Material
13	Piston	Engineered plastics
14	Manual Override	Engineered plastics

Main Dimension

Single Solenoid Valve

DIN Type

Flying Lead Type

Model\Sign	A	B	C	D	E	F	K	L	M	N	O	P	Q	R	S	W	W1*
RV3221-08QM	G1/4	17.6	1.5	79	31	22	4.3	15.5	20	29	35	66.7	40.2	25.5	18	115.7	166.4
RV3231-08QM	G1/4	19.6	1.5	97.6	42.1	27	5.2	18.1	24	32	40	69.2	40.2	31.1	21	134.3	185.4
RV3231-10QM	G3/8	19.6	1.5	97.6	42.1	27	5.2	18.1	24	32	40	69.2	40.2	30.1	23	134.3	185.4

Note: The dimensions of N series and RV series are same.

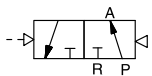
RV

NAMUR Air Control Valve(3/2, 5/2)

RVA Series 3/2



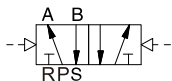
Single Air Control Valve



RVA Series 5/2



Single Air Control Valve



How to Order?

Low Power Solenoid Valve

Series No.	Ways	Positions	Valve body ID code	Controls	Initial Status	Port size	Reset Type	Valve Type	Thread Type
RVA	3: 3 ways 5: 5 ways	2:2 positions	2: 2Series 3: 3Series	1: Single control	3/2 Way Blank: Normal close H: Normal open	2 series 08: 1/4" 3 series 08: 1/4" 10: 3/8"	Q: Air return	M: NAMUR	Blank: G P: PT T: NPT

Order Example:

RV series air control valve, 3/2 ways, 2 series valve body size, normal close, single control, 1/4 "port size, gas reset, NUMAR type, PT thread, ERP code is RVA3221-08QM-P

Specifications

Model	RVA5221-08M	RVA5231-08M	RVA5231-10M
Port Size	G1/4(Exhaust G1/8)	G1/4	G3/8(Exhaust G1/4)
Sectional area(mm)	2P: 16(CV=0.89)	2P: 25(CV=1.40)	2P: 30(CV=1.68)
Working Medium	Clean air(After 40 μ m filtration)		
Acting type	Outer air control		
Reset type	Air reset		Spring Reset/Air reset
Lubrication	Not Required		
Working Pressure(MPa)	0.15~0.8		
Guatranteed Pressure(MPa)	1.2		
Working Temperature(°C)	-20~70 (No freezing)		
Insulation Class	F Class		
Max.acting frequency	2 Positon: 5 Cycles/s		

Note: 2P: 2 Position 3P: 3 Position

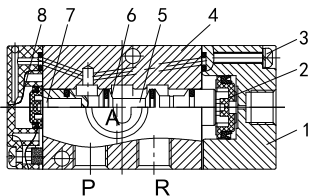
Specifications

Model	RVA3221-08M	RVA3231-08M	RVA3231-10M
Port Size	G1/4	G1/4	G3/8
Sectional area(mm)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)
Working Medium	Clean air(After 40 μ m filtration)		
Acting type	Outer air control		
Reset type	Air reset		
Lubrication	Not Required		
Working Pressure(MPa)	0.15~0.8		
Guatranteed Pressure(MPa)	1.2		
Working Temperature(°C)	-20~70 (No freezing)		
Max.acting frequency	5 Cycles/s		

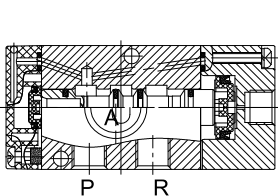
Internal Structure

3/2 Way

Single Air Control(N.C)



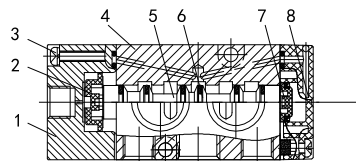
Single Air Control(N.O)



No.	Part Name	Material
1	Air Control Cover	Aluminum alloy
2	Piston	POM
3	Nut	Carbon steel
4	Valve body	Aluminum alloy
5	Spool	Aluminum alloy
6	O-ring	NBR
7	Piston	POM
8	Rear cover	Zinc Alloy

5/2 Way

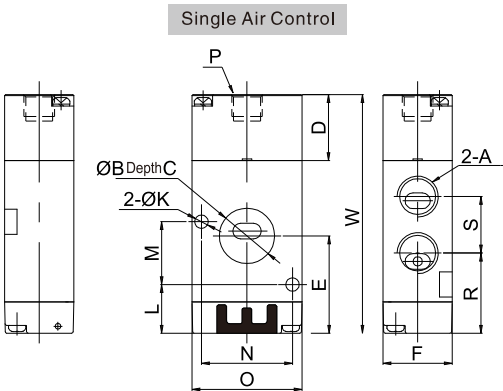
Single Air Control



No.	Part Name	Material
1	Air Control Cover	Aluminum alloy
2	Piston	POM
3	Nut	Carbon steel
4	Valve body	Aluminum alloy
5	Spool	Aluminum alloy
6	O-ring	NBR
7	Piston	POM
8	Rear cover	Zinc Alloy
9	Back seat	Aluminum alloy
10	Spring seat	Aluminum alloy
11	C type buckle	65Mn

◎ Main Dimension

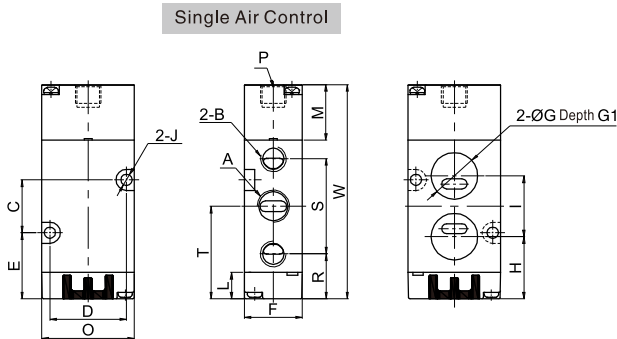
3/2 Way



Model/Sign	A	B	C	D	E	F	K	L	M	N	O	P	R	S	W	W1*
RVA3221-08QM	G1/4	17.6	1.5	21	31	22	4.3	15.5	20	29	35	G1/8	25.5	18	76	87
RVA3231-08QM	G1/4	19.6	1.5	23	42.1	27	5.2	18.1	24	32	40	G1/8	31.1	21	94.6	106
RVA3231-10QM	G3/8	19.6	1.5	23	42.1	27	5.2	18.1	24	32	40	G1/8	30.1	23	94.6	106

Note: The dimensions of N.O type and N.C type are same, w1 is double control direction valve's dimensions.

5/2 Way

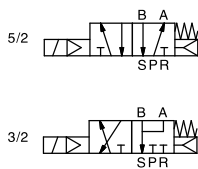


Model/Sign	A	B	C	D	E	F	G	G1	H	I	J	M	O	P	R	S	T	W	W1*	W2*
RVA5221-08QM	G1/4	G1/8	20	29	25	22	17.6	1.5	23.5	23	4.3	21	35	G1/8	17	36	35	81	92	111
RVA5231-08QM	G1/4	G1/4	24	32	32.1	27	19.6	1.5	32.1	24	5.2	23	40	G1/8	21.6	45	44.1	99.6	111	130
RVA5231-10QM	G3/8	G1/4	24	32	32.1	27	19.6	1.5	32.1	24	5.2	23	40	G1/8	21.6	45	44.1	99.6	111	130

Note:W1 is double control direction valve's dimensions, W2 is three position air control valve's dimensions.

Universal Convertible

NAMUR Solenoid Valve (3/2,5/2)



◎ How to Order?

Series No.	Ways	Valve Body Size	Controls	Port Size	Valve Type	Exhaust Type	ID Code	Voltage	Connection Mode	Cover Color	Valve Color	Thread Type
V	Universal convertible 3/2 and 5/2	3:3 series	1: Single control	08: 1/4" M: NAMUR type		R:Outer exhaust G:Inner exhaust	Blank: Standard type A: Amisco coil	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank:Black	Blank: G P: PT T: NPT
								E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V				

Order Example:

Universal convertible 3/2 and 5/2 NAMUR solenoid valve, 3 series valve body, single control, port size 1/4",inner exhaust type, standard coil, AC220V,flying leads coil, black color valve, G thread, ERP code is: V523231-08MGE2F

◎ Specifications

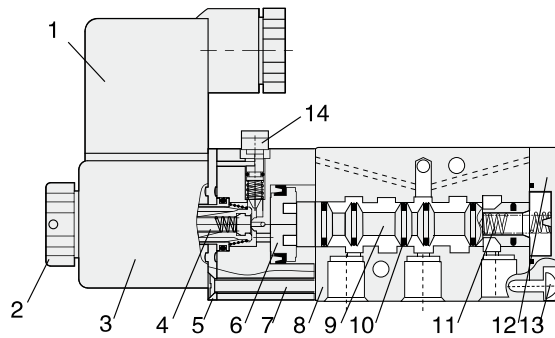
Model No.	V523231-08MR	V523231-08MG
Port size	1/4	
Sectional area(mm²)	25(CV=1.40)	
Working medium	Clean air(After 40 μ m filtration)	
Acting type	Pilot type	
Flow rate	At 5/2 way: 1830L/min; At 3/2 way: 1090L/min	
Lubrication	Not required	
Working pressure(psi)	21.8~116	
Guaranteed pressure(psi)	174	
Working temperature	-5~60℃ (23~140 F)(No freezing)	
Voltage range	-15%~10%	
Power consumption	DC:3.0W ; AC:4.0VA	
Insulation class	Class F	
Protective class	IP65(DIN40050)	
Max. acting frequency	5 Cycles/s	
Activate time(s)	<0.05	
Accessories	1pc D20X16 O - Ring, 1pc position seal plate, 2pcs M5X30 mounting bolts	
Weight(g)	340	460

● G、PT、 NPT thread type is optional.



Internal Structure

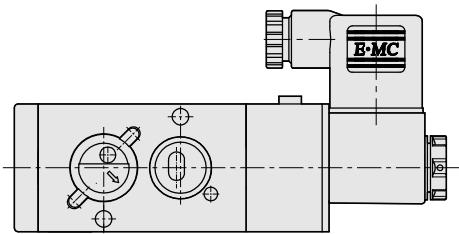
Single Solenoid Valve



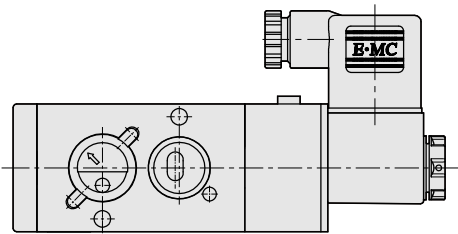
NO.	Part Name	Material
1	Connector	Engineered plastics
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Screw	Carbon steel
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Spring	Stainless steel
12	Rear cover	Zinc alloy
13	Screw	Carbon steel
14	Manual override	Engineered plastics

How to Mount?

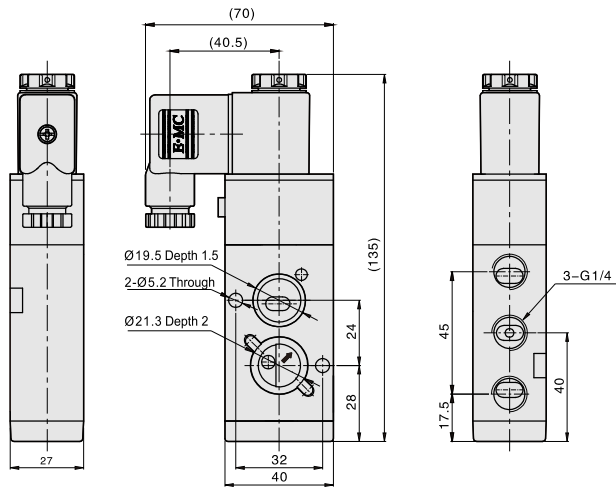
2/5 way



2/3 way



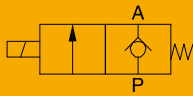
Main Dimension



Note:The boundary dimensions of MG series and MR series are same.

V

Standard/Low Power Solenoid Valve (2/2)



Product Features

- * Various voltages and working styles are available.
- * Different surface treatment, thread types (G,PT,NPT) are available.

How to Order?

Low Power Solenoid Valve

Series No.	ID Code	Positions	Ways	Controls	Port Size	Voltage	Connection Mode	Cover Color	Patchcord	Thread Type
N	M: Standard armature +Energy saving coil	2 positions	2:2 ways	1: Single control	06: 1/8 " 08: 1/4 "	E1 : AC110V E2: AC220V E4: DC24V	Blank: DIN connector type L: Plug-in Type	Blank: Brown translucent J: Colorless and translucent	Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" Only)	Blank: G P: PT T: NPT

Standard Solenoid Valve

Series No.	Positions	Ways	Controls	Port Size	Voltage	Connection Mode	Cover Color	Patchcord	Thread Type
V	2 positions	2:2 ways	1: Single control	06: 1/8 " 08: 1/4 "	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V	E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: DIN connector F: Flying leads L: Plug-in Type	Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" and "F: Flying leads type" Only)	Blank: G P: PT T: NPT

Order Example:

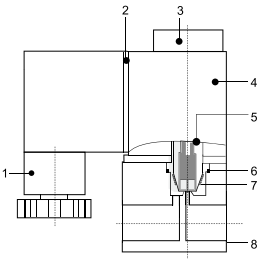
V series directional valve, 2/2 way, single control, 1/8 port size, AC110V, DIN connector, G thread, the ERP code is: V221-06E1

Specifications

Model No.	NM221-06		NM221-08	V221-06	V221-08
Working medium	Air, water, oil				
Acting type	Direct acting				
Orifice (mm)	2				
Port size	1/8	1/4	1/8	1/4	
Lubrication	Not required				
Working pressure (MPa)	0~0.8				
Guaranteed pressure (MPa)	1.2				
Working temperature (°C)	-5~60(No freezing)				
Voltage range	-15% - +10%				
Power consumption	DC24V:0.7W	AV220V:0.9VA	AC110V:1.4VA	AC:4VA DC:3W	
Insulation class	Class F				
Protective class	IP65 (DIN40050)				
Activate time (s)	<0.05				
Seal material	NBR				
Weight (g)	141	138	141	138	

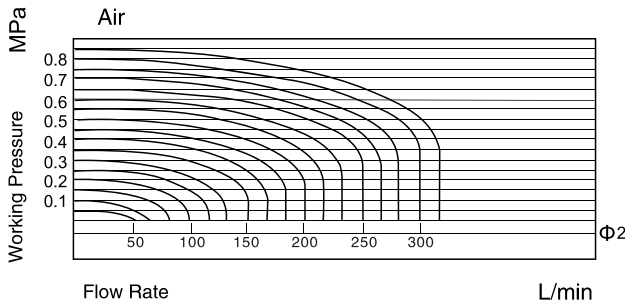
1
V(2/2)

Internal Structure



No	Designation
1	Connector
2	Connector washer
3	Nut
4	Coil
5	Pilot units
6	O-ring
7	Spring
8	Valve body

Flow Chat

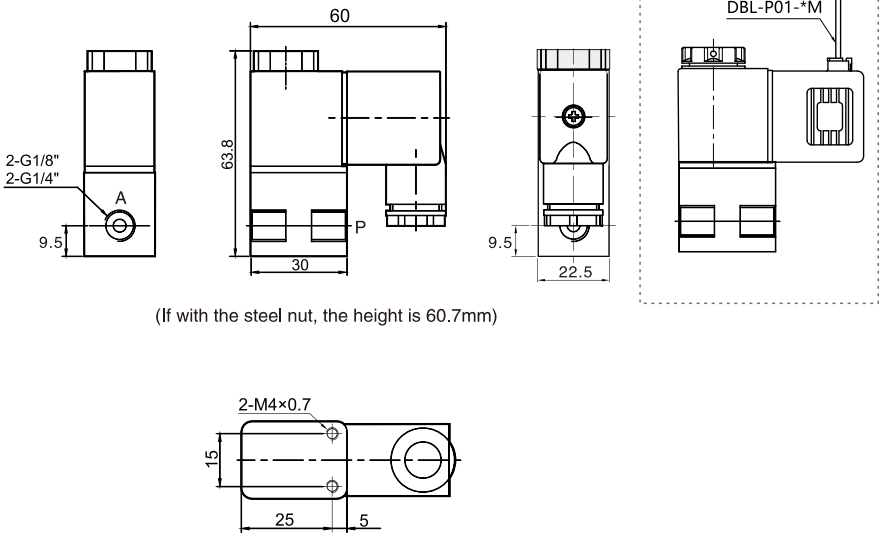


Main Parts Material

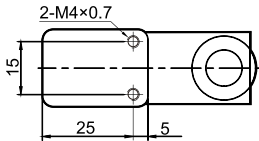
Part name	Material
Valve body	Aluminum alloy
Connector	Engineered plastics
Connector washer	NBR (FPM)
Pilot units	Pure steel+Cu+Stainless steel
Diaphragm	NBR
Nut	POM+Carbon steel
Coil	Brass Wire covered with heat resistance colophony

Main Dimension

V221-06/08



(If with the steel nut, the height is 60.7mm)

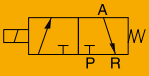


1
V(3/2)

V

Standard/Low Power Solenoid Valve (3/2)

V321



Product Features

- Various voltages and working styles are available.
- Different surface treatment, thread types (G,PT,NPT) are available.
- With manual installation, easy to debugging

How to Order?

Low Power Solenoid Valve

Series No.	Valve Body ID code	ID Code	Positions	Ways	Controls	Port Size	Voltage	Connection Mode	Cover Color	Patchcord	Thread Type	Valves
N		M: Standard armature +Energy saving coil	3:3 ways			M5: M5 06: 1/8 "	E1: AC110V E2: AC220V E4: DC24V	Blank: DIN connector type L: Plug-in Type			Blank: G P: PT T: NPT	Blank: 1Valve (No mounting accessory) 2F:2 Valves 3F:3 Valves 10F:10 Valves
Note : Only V series solenoid valve has port size M5 and only the 1 valve type (no mounting accessory)												

Standard Solenoid Valve

Series No.	Ways	Positions	Controls	Port Size	ID Code	Voltage	Connection Mode	Cover Color	—Patchcord—	Thread Type—	Valves										
V: Standard valve body VP: European valve body	3:3 ways	2:2 positions	1: Single control	V321 M5:M5 06: 1/8 " VP321 06: 1/8 "	Blank: Standard type	<table><tr><td>E1: AC110V</td><td>E6: AC36V</td></tr><tr><td>E2: AC220V</td><td>E7: AC24V</td></tr><tr><td>E3: AC380V</td><td>E8: DC110V</td></tr><tr><td>E4: DC24V</td><td>E9: DC48V</td></tr><tr><td>E5: DC12V</td><td>E10: DC36V</td></tr></table>	E1: AC110V	E6: AC36V	E2: AC220V	E7: AC24V	E3: AC380V	E8: DC110V	E4: DC24V	E9: DC48V	E5: DC12V	E10: DC36V	Blank: DIN connector F: Flying leads L: Plug-in Type	Blank: Brown translucent J: Colorless and translucent		Blank: G P: PT T: NPT	Blank: 1Valve (No mounting accessory) 2F:2 Valves 3F:3 Valves 10F:10 Valves
E1: AC110V	E6: AC36V																				
E2: AC220V	E7: AC24V																				
E3: AC380V	E8: DC110V																				
E4: DC24V	E9: DC48V																				
E5: DC12V	E10: DC36V																				
Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" and "F: Flying leads type" Only)																					
Note : Only V series solenoid valve has port size M5 and only the 1 valve type (no mounting accessory)																					

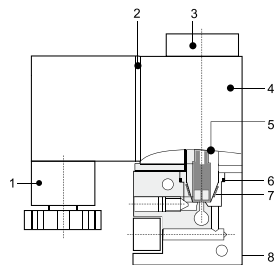
Order Example:

N series solenoid valve, standard pilot+Energy saving coil, 3/2 way, single control,1/8" port size, standard coil,DC24V, 2 valves
DIN connector, G thread, ERP code is: NM231-06E4-2F

Specifications

Model No.	NM231-M5	NM231-06	NPM231-06	V321-M5	V321-06	VP321-06
Working medium	Clean air (After 40 μm filtration)					
Acting type	Direct acting					
Orifice (mm)	1.0					1.2
Port size	M5	G 1/8		M5	G 1/8	
Lubrication	Not required					
Working pressure (MPa)	0~0.8					
Guaranteed pressure (MPa)	1.2					
Working temperature (℃)	-5~60(No freezing)					
Voltage range	-15% - +10%					
Power consumption	DC24V:0.7W	AC220V:0.9VA	AC110V:1.4VA	AC:4VA	DC:3W	AC:7VA DC:6.5W
Insulation class	Class F					
Protective class	IP65 (DIN40050)					
Max. acting frequency	10 cycles/s					
Seal material	NBR					
Activate time	Below 0.05 Sec.					
Weight (g)	141		138	141		138

Internal Structure

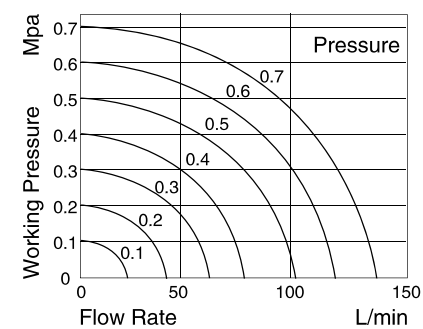


No.	Designation
1	Connector
2	Connector washer
3	Nut
4	Coil
5	Pilot units
6	O-Ring
7	Spring
8	Valve body

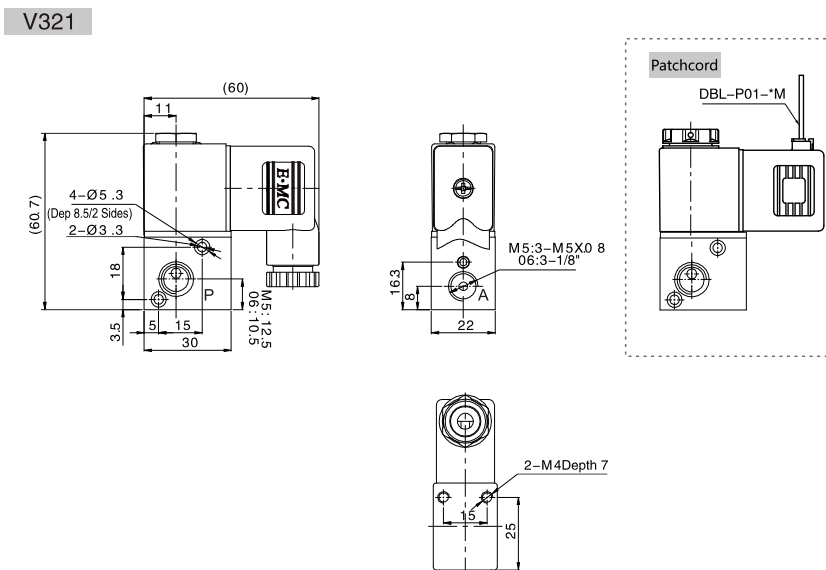
◎ Main Parts Material

Part name	Material
Valve body	Aluminum alloy
Connector	Engineered plastics
Connector washer	NBR
Pilot units	Pure steel+Cu+Stainless steel
Nut	POM+Carbon steel
Coil	Brass Wire covered with heat resistance colophony

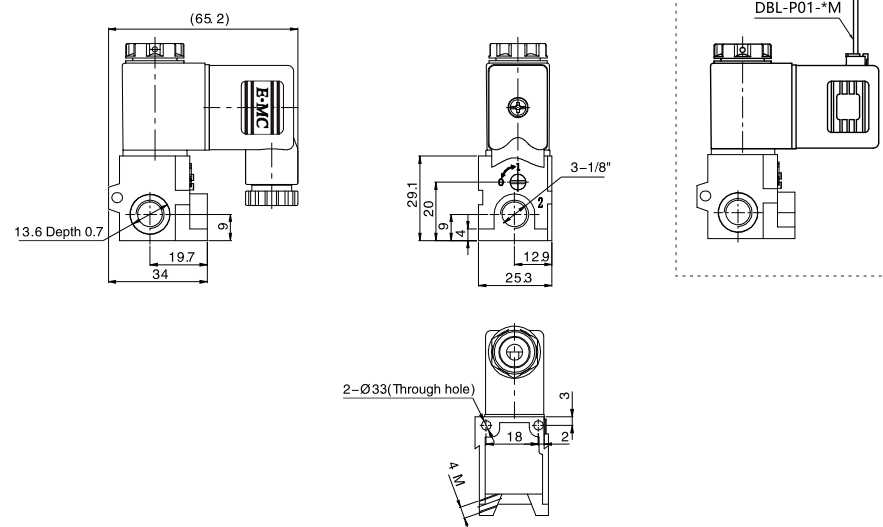
 Flow Chat



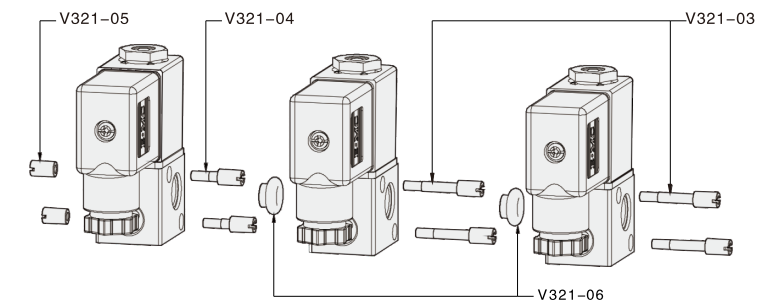
© Main Dimension



VP321



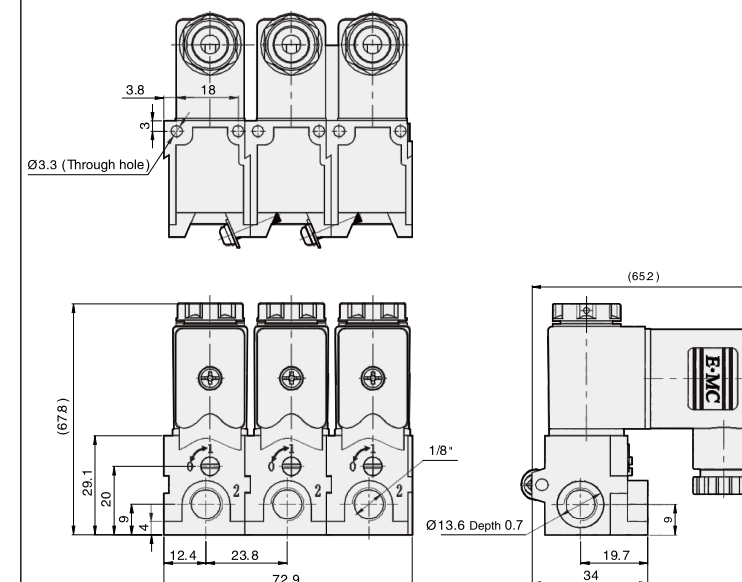
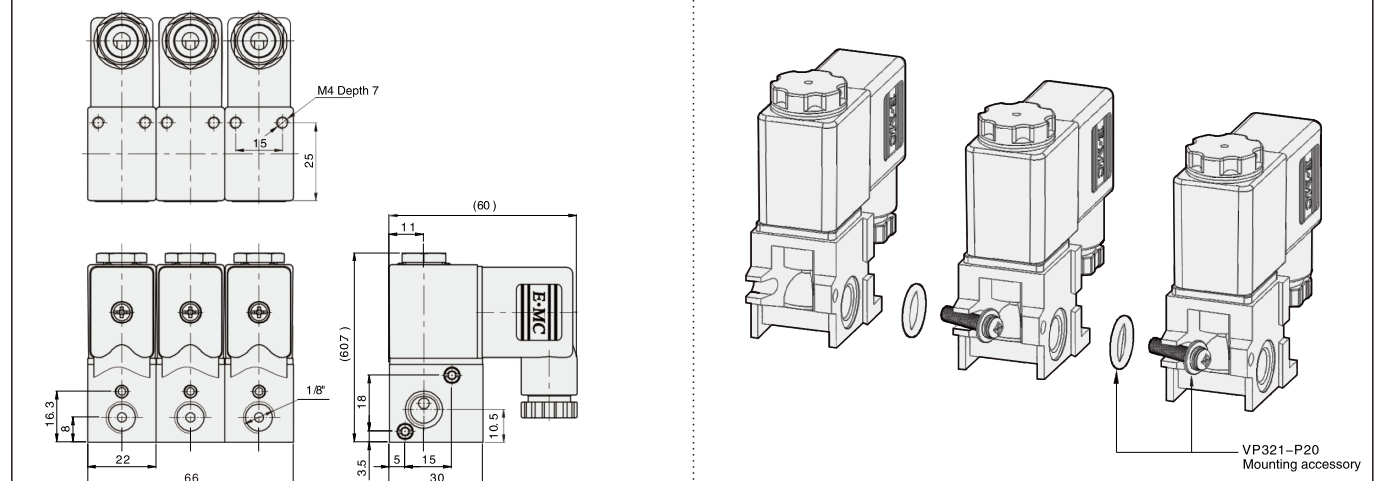
Combination of Schematic Diagram



Mounting accessory order details:

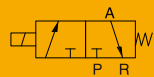
Valve Quantity	V321-06□ The finished valves	V321-03	V321-04	V321-05	V321-06
V321-06□-□-2F	2	2	2	2	1
V321-06□-□-3F	3	4	2	2	2
*****	*****	*****	*****	*****	*****
V321-06□-□-nF	n	2(n-1)	2	2	n-1

Note : n indicates valve quantity , and $2 \leq n \leq 10$



RVT

Standard/Low Power Solenoid Valve (3/2)



Product Features

- *Direct Acting, Normal Close, Sensitive Response;
- *Same pilot units as RV valve , High temperature resistance by HNBR seals ,longer working life;
- *Integrated body with grey surface oxidation , Easy installation;
- *Multiple valtage and Energy-Saving are optional;
- *Multiple connection mode are optional.

How to Order?

Low Power Solenoid Valve

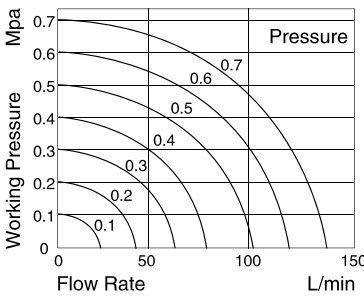
Series No.	Valve Body ID code	ID Code	Positions	Ways	Controls	Port Size	Voltage	Connection Mode	Cover Color	Thread Type	Patchcord	Valves
N	T: Integrated body		2: 2 positions	3: 3 ways		06: 1/8"	E4: DC24V					
	R: Standard armature +Energy saving coil				1: Single control							
								Blank: Brown translucent J: Colorless and translucent B: Black (Only black color available for water proof connector)		Blank: G P: PT T: NPT		2F: 2 Valves 3F: 3 Valves 13F: 13 Valves
								Blank: DIN connector type L: Plug-in Type K: Water proof connector type			Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" Only)	

Standard Solenoid Valve

Series No.	Ways	Positions	Controls	Port Size	ID Code	Voltage	Connection Mode	Cover Color	Thread Type	Patchcord	Valves
RVT	3: 3 ways		1: Single control	06: 1/8"	Blank: Standard type						
		2: 2 positions									
						E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V	E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V				2F: 2 Valves 3F: 3 Valves 13F: 13 Valves
							Blank: DIN connector L: Plug-in Type F: Flying leads K: Waterproof DIN connector (Only 2, 3, 4 series is optional for K/M)	Blank: Brown translucent J: Colorless and translucent B: Black (Only black color available for water proof connector)		Blank: Patchcord length is 0.3 meter 0.6M: Patchcord length is 0.6 meter 1M: Patchcord length is 1 meter (Options for "L: Plug-in type" and "F: Flying leads type" Only)	

Order Example:
RVT series solenoid valve, 3/2 way, single control, 1/8" port size,, AC110V, DIN connector, G thread,
ERP code is: RVT321-06E1-5F

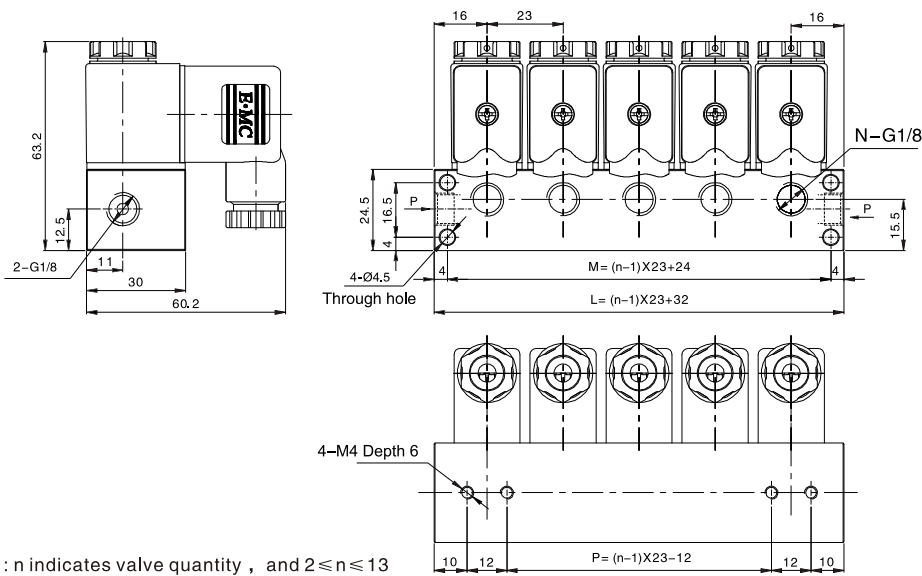
Flow Chat



Specifications

Model No.	NTR231-06	RVT321-06
Working medium	Clean air (After 40 μm filtration)	
Acting type	Direct acting	
Orifice (mm)	1.2	
Port size	G 1/8	
Lubrication	Not required	
Working pressure (MPa)	0-0.8	
Guaranteed pressure (MPa)	1.2	
Working temperature (°C)	-20~70	
Voltage range	-15% - +10%	
Power consumption	Start at 3W, maintain at 0.7W	AC: 4VA DC: 3W
Insulation class	Class F	
Protective class	IP65 (DIN40050)	
Max. acting frequency	10 cycles/s	
Seal material	HNBR	
Activate time	0.05s below	
Weight (g)	Each valve increases at 141g	Each valve increases at 138g

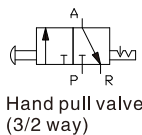
Main Dimension



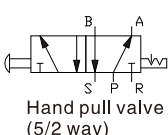
Note : n indicates valve quantity , and 2 ≤ n ≤ 13

Sign/Valves	2Valves	3Valves	4Valves	5Valves	6Valves	7Valves	8Valves	9Valves	10Valves	11Valves	12Valves	13Valves
L	55	78	101	124	147	170	193	216	239	262	285	308
M	47	70	93	116	139	162	185	208	231	254	277	300
P	11	34	57	80	103	126	149	172	195	218	241	264

R
hand pull valve



Hand pull valve
(3/2 way)



Hand pull valve
(5/2 way)

Product Features

- 1、The hand pull valve uses a manual way to directly control the opening and closing of the spool, and does not rely on external energy sources (such as electricity, air pressure, etc.) to work;
- 2、Due to its relatively simple structure, the hand pull valve can still work normally in the case of no power supply or control system failure, with high reliability and self-locking;
- 3、Hand pull valve internal parts less, less affected by environmental factors, maintenance is relatively simple, long service life;
- 4、The cost of hand pull valve is relatively low, easy to install, the technical requirements of the operator is not high, so it is widely used in many industrial fields and civil facilities.

How to order

Series code and working position and port	Valve body size	Function code	Nozzle diameter		Thread type
3R: 3/2way 4R: 5/2way	1: Series 1 2: Series 2 3: Series 3 4: Series 4	10: two-position	Series 1 06:1/8"	Series 2 06:1/8" 08:1/4"	Blank: G P: PT T: NPT
			Series 3 08:1/4" 10:3/8"	Series 4 15:1/2"	

Ordering example:

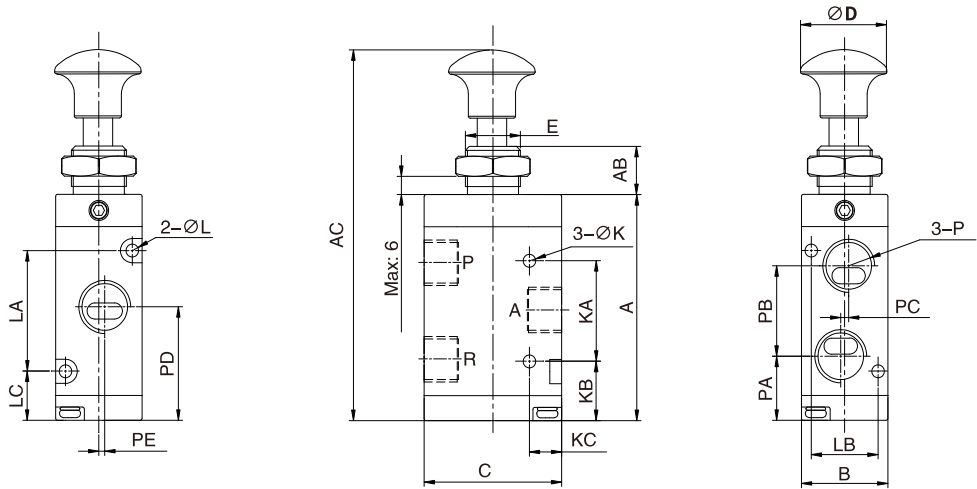
R series hand pull valve, 3/2way, 3 series body, nozzle diameter 1/4, G thread, its ERP code is 3R310-08.

Specification

Model number	R series hand pull valve
Working medium	Clean air(After 40 μm filtration)
Acting type	External control
Lubrication	unnecessary
Working pressure(Mpa)	0~0.8
Maximum pressure(Mpa)	1.2
Working temperature(°C)	-20~70

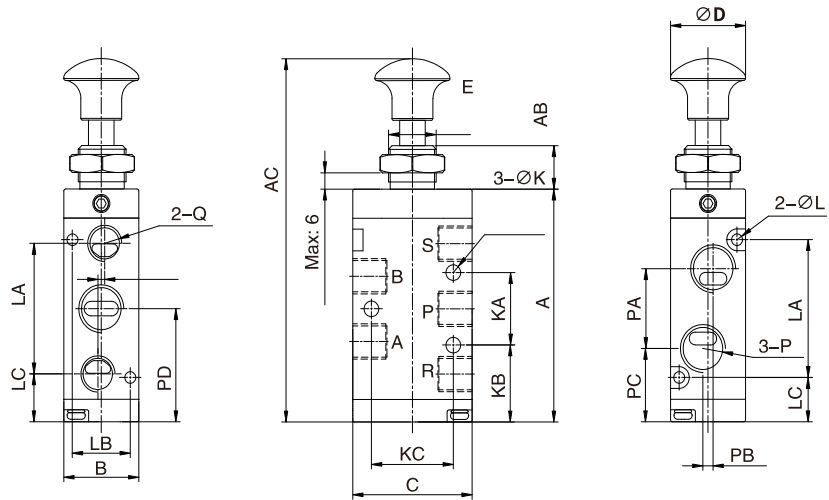
Main Dimension

3R Series



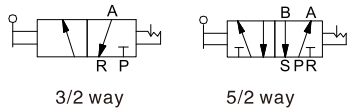
Model/Code	A	AB	AC	B	D	C	E	K	KA	KB	KC	L	LA	LB	LC	P	PA	PB	PC	PD	PE
3R110-06	49	10	79	18	22	27	M12x1	3.2	21	12	7.5	3.2	19	13	13	1/8	14.5	16	2	22.5	1
3R210-06	56.5	11.8	87.5	22	22	35	M14x1	4.2	25	15	8.2	3.2	30	17	12.5	1/8	16.5	22	0	27.5	0
3R210-08	56.5	11.8	87.5	22	22	35	M14x1	4.2	25	15	8.2	3.2	30	17	12.5	1/4	16.25	22.5	0	26.5	1.5
3R310-08	65.5	11.8	100	27	22	40	M16x1	4.2	30	17.5	10.25	4.2	35	20	15	1/4	20.5	24	0	32.5	0
3R310-10	65.5	11.8	100	27	22	40	M16x1	4.2	30	17.5	10.25	4.2	35	20	15	3/8	20.5	24	0	32.5	2
3R410-15	81.5	15.8	120	34	22	50	M22x1.5	5.2	50	15.5	13.75	4.2	43	27	19	1/2	22.5	36	0	40.5	3

4R Series



Model/Code	A	AB	AC	B	C	D	E	K	KA	KB	KC	L	LA	LB	LC	P	PA	PB	PC	PD	Q	QA	QB	QC
4R110-06	60	10	88.5	18	27	22	M12x1	3.2	14	21	19	3.2	30	13	13	1/8	16	3	20	28	1/8	28	1.5	14
4R210-06	64.5	11.8	95.5	22	35	22	M14x1	4.2	20	21.5	23.5	3.2	38	17	12.5	1/8	18	0	22.5	31.5	1/8	36	0	13.5
4R210-08	64.5	11.8	95.5	22	35	22	M14x1	4.2	20	21.5	23.5	3.2	38	17	12.5	1/4	21	3	21	31.5	1/8	36	0	13.5
4R310-08	80	11.8	116	27	40	22	M16x1	4.2	24	28	27.5	4.2	50	20	15	1/4	22	0	29	40	1/4	45	0	17.5
4R310-10	80	11.8	116	27	40	22	M16x1	4.2	24	28	27.5	4.2	50	20	15	3/8	24	4	28	40	1/4	45	0	17.5
4R410-15	110	15.8	149.8	34	50	22	M22x1.5	5.2	28	41	33	4.2	72	27	19	1/2	36	4	37	55	1/2	63	0	23.5

H
Hand Push Valve



Product Features

- 1、The hand push valve uses a manual way to directly control the opening and closing of the spool, and does not rely on external energy sources (such as electricity, air pressure, etc.) to work;
- 2、Due to its relatively simple structure, the hand push valve can still work normally in the case of no power supply or control system failure, with high reliability and self-locking;
- 3、Hand push valve internal parts less, less affected by environmental factors, maintenance is relatively simple, long service life;
- 4、The cost of hand push valve is relatively low, easy to install, the technical requirements of the operator is not high, so it is widely used in many industrial fields and civil facilities.

How to order

Series code and working position and port	Valve body size	Function code	Nozzle diameter		Thread type
3H: 3/2way 4H: 5/2way	2: Series 2 3: Series 3 4: Series 4	10: two-position	Series 2 06:1/8" 08:1/4"	Series 3 08:1/4" 10:3/8"	Blank: G P: PT T: NPT
			Series 4 15:1/2"		

Ordering example:

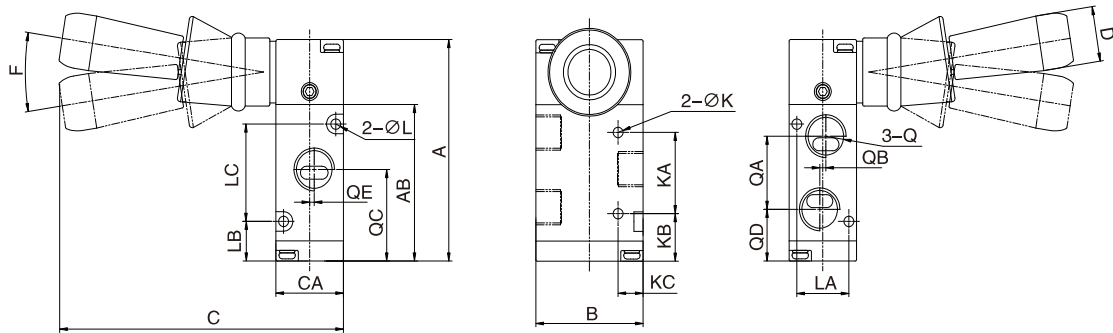
H series hand push valve, 3/2way, 3 series body, nozzle diameter 1/4, G thread, its ERP code is 3H310-08.

Specification

Model number	H series hand push valve
Working medium	Clean air(After 40 μm filtration)
Acting type	External control
Lubrication	unnecessary
Working pressure(Mpa)	0~0.8
Maximum pressure(Mpa)	1.2
Working temperature(℃)	-20~70
Seal material	NBR

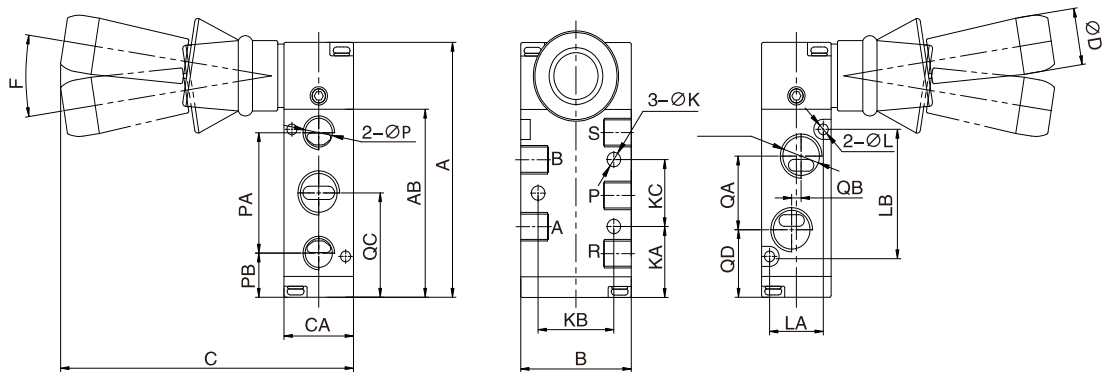
Main Dimension

3H Series



Model/Code	A	AB	B	C	CA	D	K	KA	KB	KC	L	LA	LB	LC	Q	QA	QC	QD	QE	F
3H210-06	68.5	48.5	35	93	22	17	4.2	25	15	8.2	3.2	17	12.5	30	1/8	22	27.5	16.5	0	17
3H210-08	68.5	48.5	35	93	22	17	4.2	25	15	8.2	3.2	17	12.5	30	1/4	22.5	28.5	16.2	1.5	17
3H310-08	77.5	57.5	40	96.5	27	17	4.2	30	17.5	10.25	4.2	20	15	35	1/4	24	32.5	20.5	0	20
3H310-10	77.5	57.5	40	96.5	27	17	4.2	30	17.5	10.25	4.2	20	15	35	3/8	24	32.5	20.5	2	20
3H410-15	101	73	50	104	34	17	5.2	50	15.5	13.75	4.2	27	19	43	1/2	36	40.5	22.5	3	25

4H Series

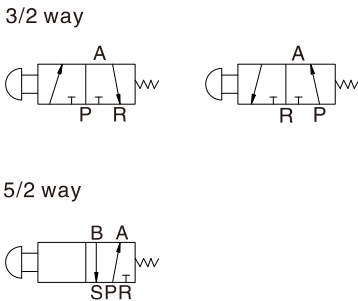


Model/Code	A	AB	B	C	CA	D	K	KA	KB	KC	L	LA	LB	P	PA	PB	Q	QA	QB	QC	QD	F
4H210-06	76.5	56.5	35	93	22	17	4.2	21.5	23.5	20	3.2	17	38	1/8	36	13.5	1/8	18	0	31.5	22.5	17
4H210-08	76.5	56.5	35	93	22	17	4.2	21.5	23.5	20	3.2	17	38	1/8	36	13.5	1/4	21	3	31.5	21	17
4H310-08	92.5	72.5	40	97	27	17	4.2	28	27.5	24	4.2	20	50	1/4	45	17.5	1/4	22	0	40	29	20
4H310-10	92.5	72.5	40	97	27	17	4.2	28	27.5	24	4.2	20	50	1/4	45	17.5	3/8	24	4	40	28	20
4H410-15	130	102	50	104	34	17	5.2	41	33	28	4.2	27	72	1/2	63	23.5	1/2	36	4	55	37	25

EM
Mechanical Valve



EMOV Series EMJ Series EMV322 Series EMV522 Series



Product Features

- 1、The mechanical valve uses manual mode to directly control the opening and closing of the spool, and does not rely on external energy sources (such as electricity, air pressure, etc.) to work;
- 2、Due to its relatively simple structure, the mechanical valve can still work normally in the case of no power supply or control system failure, with high reliability and self-locking;
- 3、Mechanical valve internal parts less, less affected by environmental factors, maintenance is relatively simple, long service life;
- 4、Compared with electronic control or pneumatic smoke, the action response speed of the mechanical valve may be slow, and the adjustment accuracy is relatively low, but it is suitable for occasions without complex adjustment or accurate control of flow and pressure;
- 5、The cost of the mechanical valve is relatively low, easy to install, the technical requirements of the operator is not high, so it is widely used in many industrial fields and civil facilities;
- 6、There are a variety of buttons, switches can be selected, suitable for use under different working conditions.

How to order

Series code	Valve body size	Nozzle diameter	Button Type	Button color
EMOV: EMOV series	32: 3/2 way	1:G1/8"(EMOV, EMV series optional)	Blank: basic type	R: red
EMJ: EMJ series	52: 5/2 way	2:G1/4"(EMV, EMJ series optional)	R: Roller type	G: Green
EMV: EMV series	(Only EMV series optional)	3:PT1/8"(EMOV, EMV series optional)	PP: Parallel button	B: Black
		4:PT1/4"(EMV, EMJ series optional)	EB: Button with lock	Y: Yellow
		5:NPT1/8"(EMOV, EMV series optional)	PPL: Concave button	
		6:NPT1/4"(EMV, EMJ series optional)	PB: Big round button	
		The conventional thread is G-thread		TB: Select button

Ordering example:

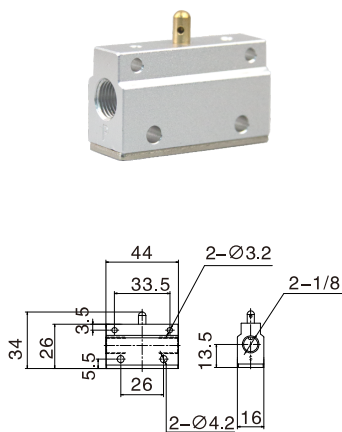
EMV series mechanical valve , 2/3 way, nozzle diameter 1/8, G thread,select button, The ERP code is EMV321-TB.

Specification

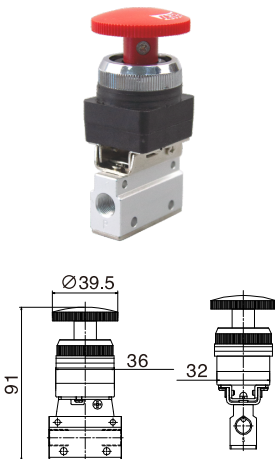
Model number	EMOV321	EJM322	EMV321	EMV521
Working medium	Clean air(After 40 μm filtration)			
Acting type	External control			
Lubrication	unnecessary			
Working pressure(Mpa)	0~0.8			
Maximum pressure resistance(Mpa)	1.2			
Working temperature(℃)	-5~60			
Maximum operating frequency	5 cycles/s			
Nozzle diameter	1/8", 1/4"			

EMOV Series Main Dimension

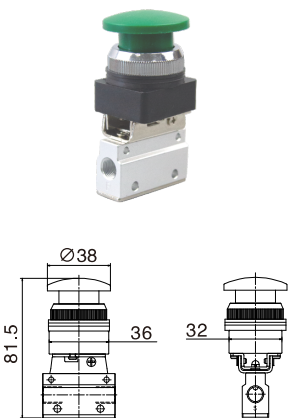
EMOV321



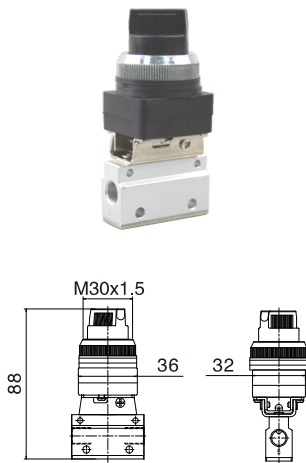
EMOV321-EB



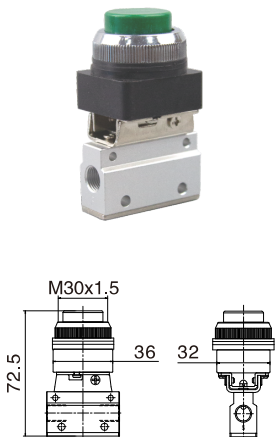
EMOV321-PB



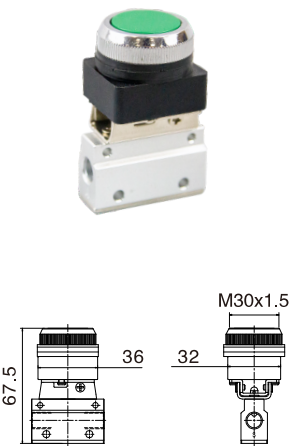
EMOV321-TB



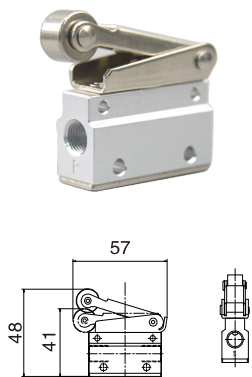
EMOV321-PPL



EMOV321-PP

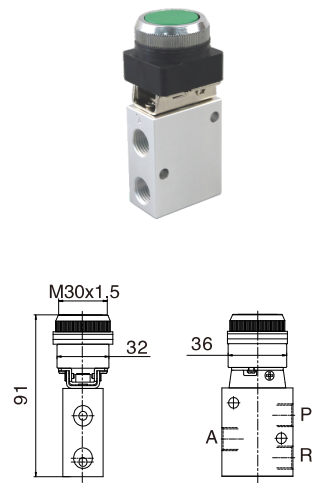


EMOV321-R

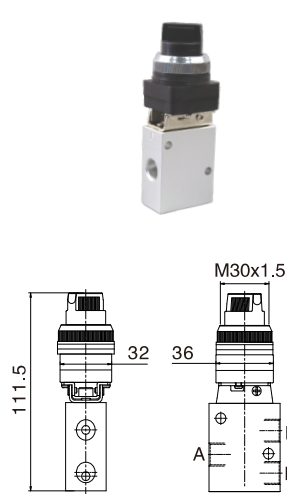


EMJ Series Main Dimension

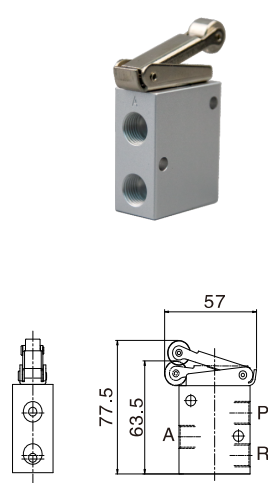
EMJ322-PP



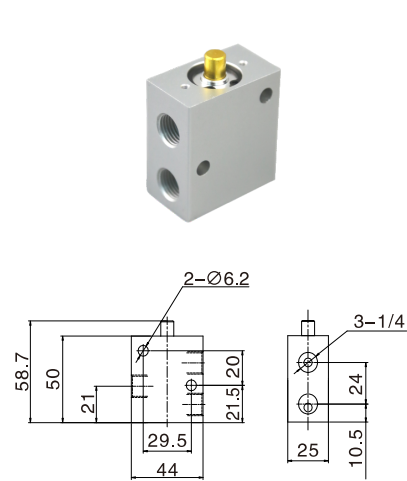
EMJ322-TB



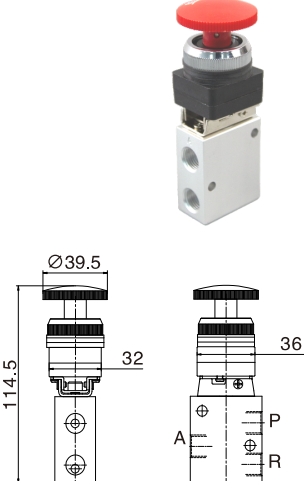
EMJ322-R



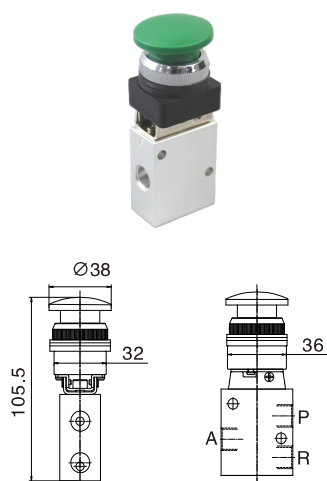
EMJ322



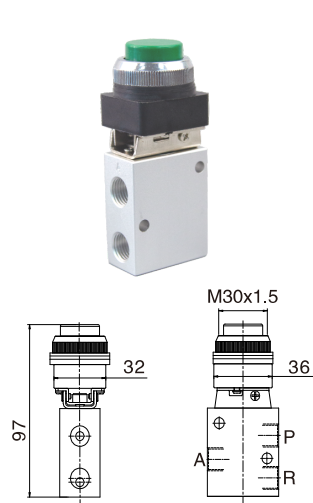
EMJ322-EB



EMJ322-PB

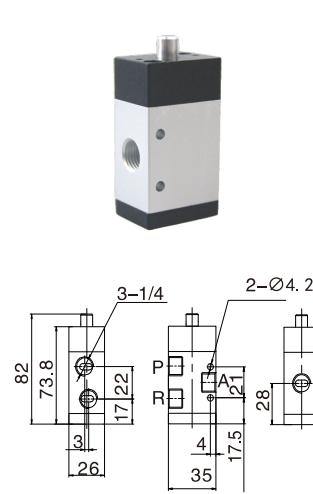


EMJ322-PPL

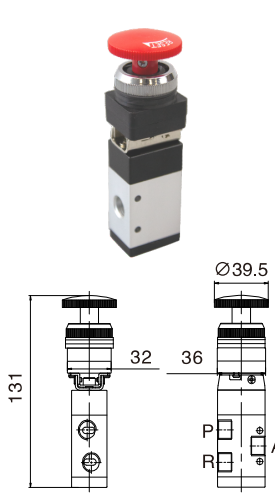


EMV32 Series Main Dimension

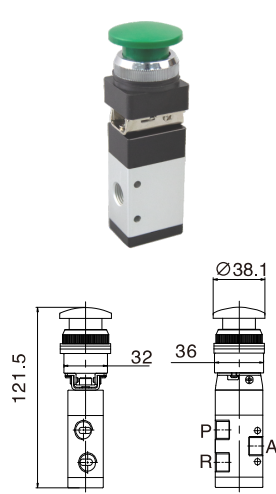
EMV322



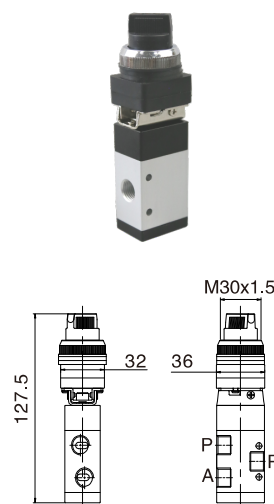
EMV322-EB



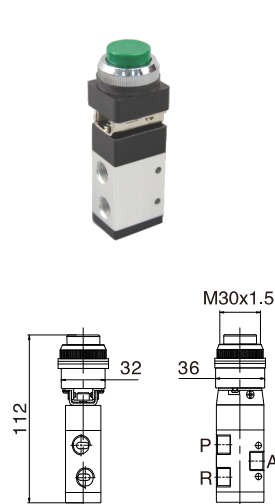
EMV322-PB



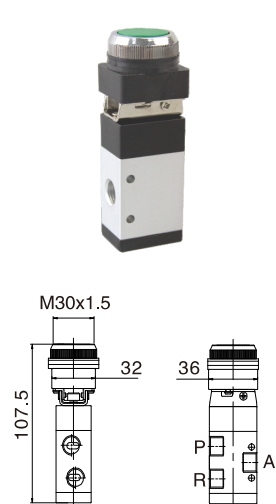
EMV322-TB



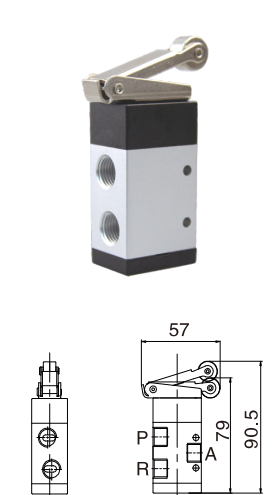
EMV322-PPL



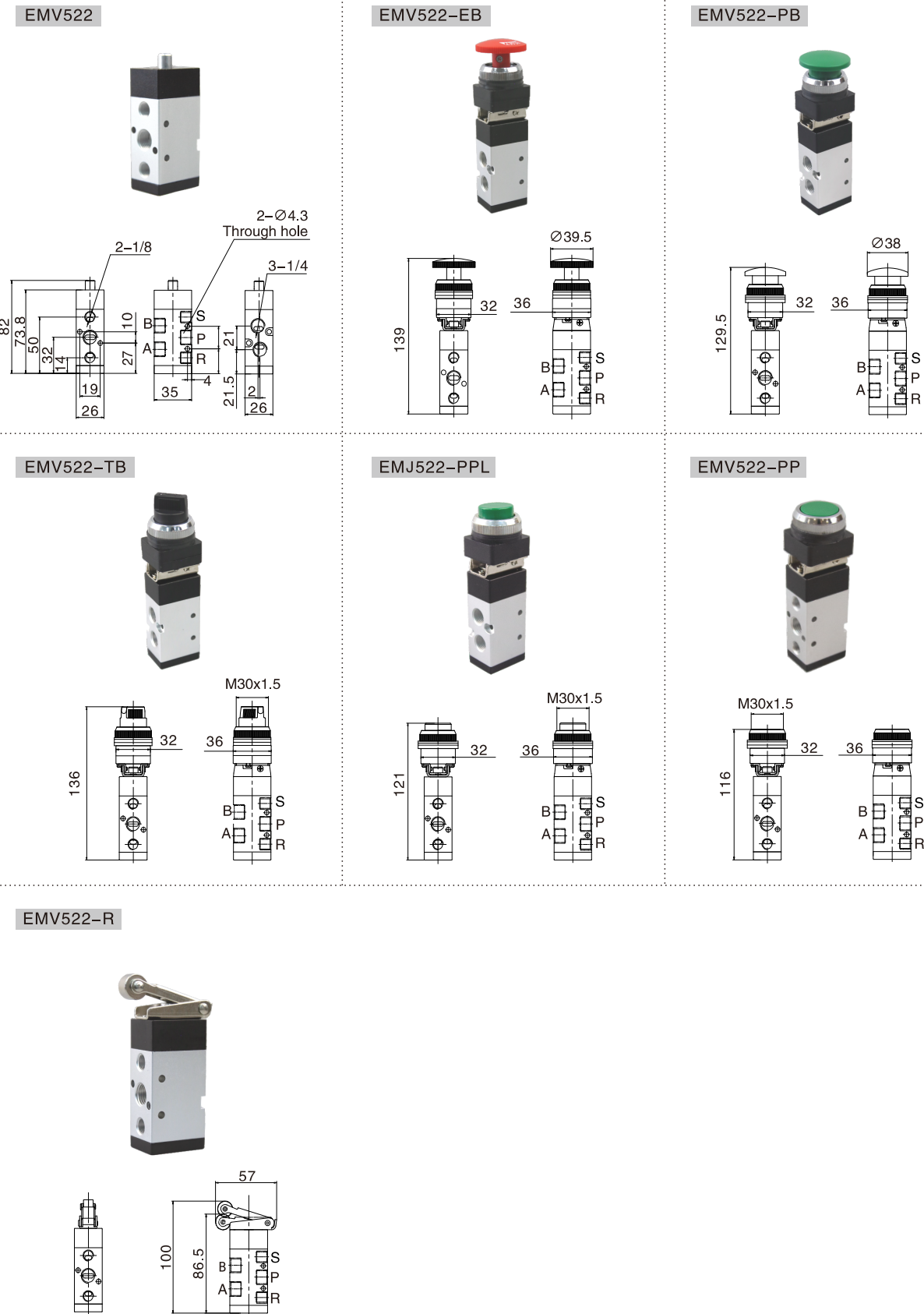
EMV322-PP



EMV322-R

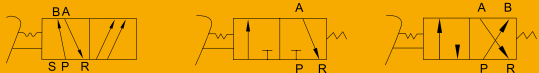


Main Dimension



F

Foot Valve (3/2, 4/2, 5/2)



- Product Features
- * Strong design and work in harsh environment
- * Various types are available

How to Order?

Series No.	Ways	Positions	Valve Body Size	Type	Port Size	Valve Type	Thread Type
F: F series foot valve	3: 3 ways 4: 4 ways 5: 5 ways	2: 2 position	2: 2 series	Blank: No cover C: With cover	06 : 1/8 " 08 : 1/4 "	Blank: Basic type L: With lock	Blank: G P: PT T: NPT

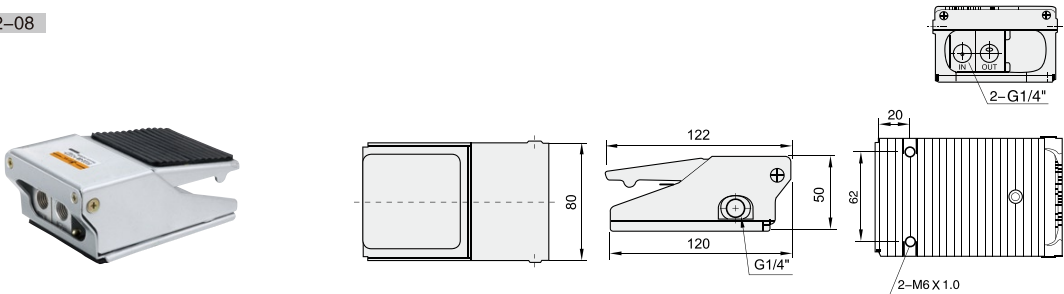
Order Example:
F series foot valve, 5/2 way, 2 series valve body, without cover, 1/4" port size, with lock, G thread, ERP code is: F522-08L

Specifications

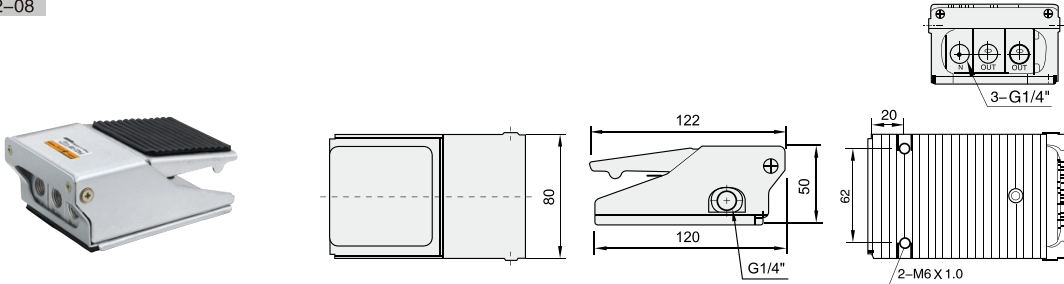
Model	F322	F422	F522
Working medium	Clean air(After 40 μm filtration)		
Acting type	External control		
Lubrication	Not required		
Working pressure (MPa)	0~0.8		
Max pressure (MPa)	1.2		
Working temperature (°C)	-5~60		
Port size	1/8 " , 1/4 "		

Main Dimension

F322-08

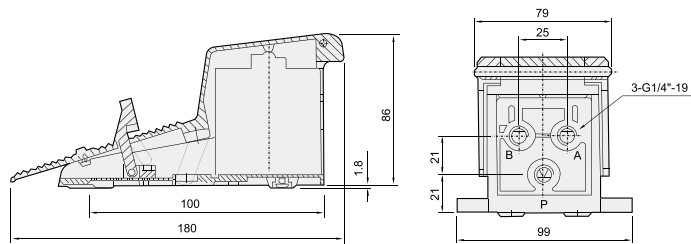


F422-08

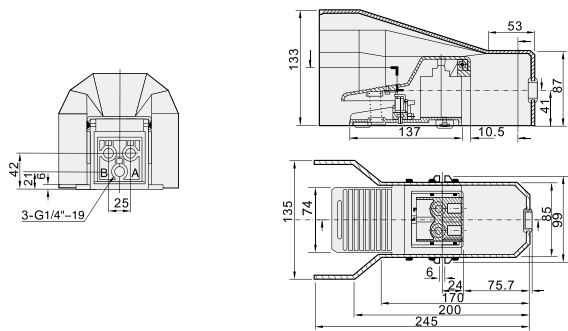


Main Dimension

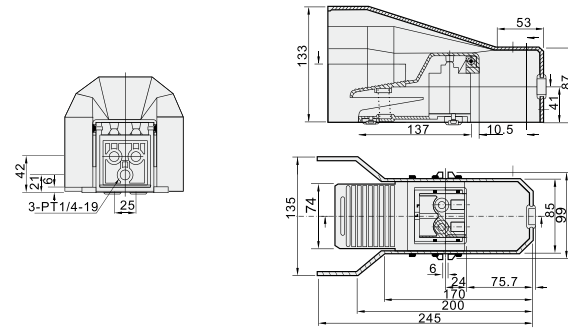
F522-08L



F522C-08L

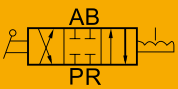


F522C-08



R

Hand Switch Valve 4/3



Specifications

Model	M432	U432	R432	MR432
Working medium	Clean air(After 40 μm filtration)			
Acting type	External control			
Lubrication	Not required			
Working pressure (MPa)	0~1.0			
Guaranteed pressure (MPa)	1.5			
Working temperature (°C)	-5~60			
Port size	1/4 " , 3/8 " , 1/2 "			

* Note:R432 series also have "bottom thread" type

How to Order?

Series No.	Ways	Positions	Valve Body Size	Port Size	Thread Type
M: M series U: U series R: R series MR: MR series	4: 4 ways	3: Three position	2:2 series	M432/U432: 08: 1/4 " R432/MR432: 08: 1/4 " 10: 3/8 " 15: 1/2 "	Blank: G P: PT T: NPT

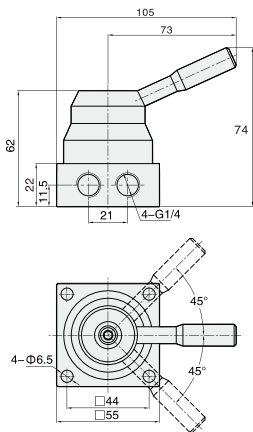
Order Example:
R series hand switch valve, 4/3 way, 2 series valve body, G thread,
ERP code is: R432-08

Product Features

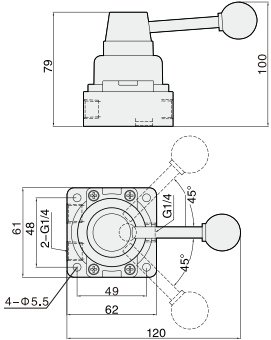
- * Different types are available
- * MR series valve is the valve with longer lifetime and the better performance
- * Sizes are from 1/4" to 1/2"

Main Dimension

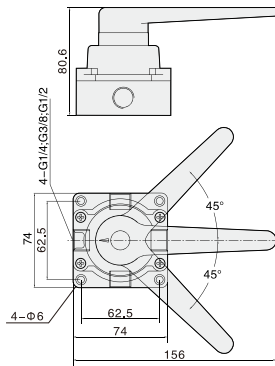
M432-08



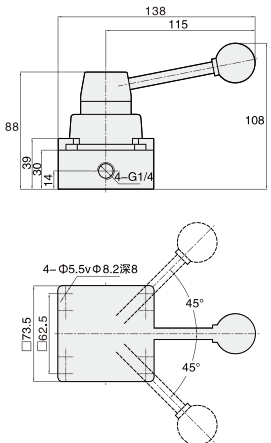
U432-08



R432-08/10/15

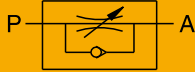


MR432-08/10/15



QSC

Flow Control Valve (Precise Type)



Specifications

Model (mm)	QSC-06	QSC-08	QSC-10	QSC-15
Working medium	Clean air(After 40 μm filtration)			
Working Pressure (Mpa)	0.05~1.0			
Guaranteed pressure (Mpa)	1.5			
Working temperature(°C)	-20~70			
Port size ①	1/8"	1/4"	3/8"	1/2"
Standard rated flow P→A	0~350	0~860	0~1650	0~1900
The amount (L/min) A→P	300~450	760~890	1320~1650	1610~1990
Weight(g)	33	50	128	119

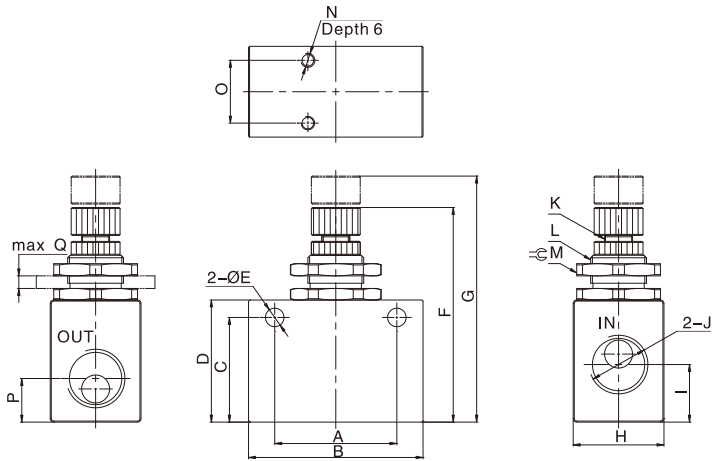
① G、PT、NPT thread type is optional.

How to Order?

Series No.	Port Size	Thread Type
QSC:Flow control valve (precise type)	06:1/8" 08:1/4" 10:3/8" 15:1/2"	Blank: G P : PT T : NPT

Order Example:
QSC series flow control valve, 1/4" port size, G thread,
the ERP code is QSC-08

Main Dimension

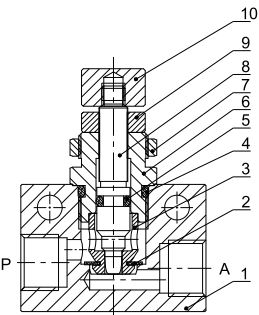


Model	A	B	C	D	E	F	G	H	I
QSC-06	22	32	20	25	4.3	46	51	15	8.5
QSC-08	26	36	23	27	4.3	51	57.5	18	13.3
QSC-10	35	50	30	35	5.3	62.5	71.5	26	16.5
QSC-15	35	50	30	35	5.3	62.5	71.5	26	16.5
Model	J	K	L	M	N	O	P	Q	
QSC-06	1/8	M5x0.4	M12x0.75	14	--	--	8.5	3	
QSC-08	1/4	M6X0.5	M14X1	17	--	--	9	5	
QSC-10	3/8	M8x0.75	M16X1	24	M4X0.7	18	12.5	6	
QSC-15	1/2	M8X0.75	M16X1	24	M4X0.7	18	12.5	6	

Product Features

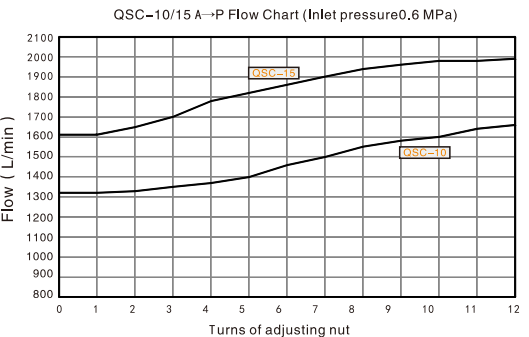
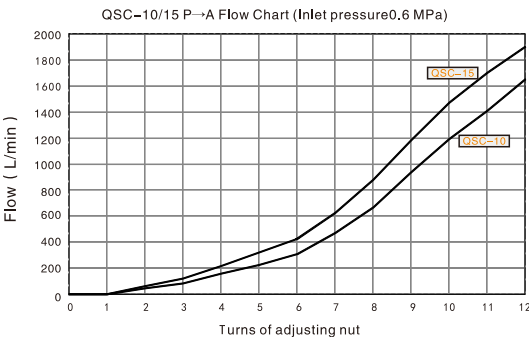
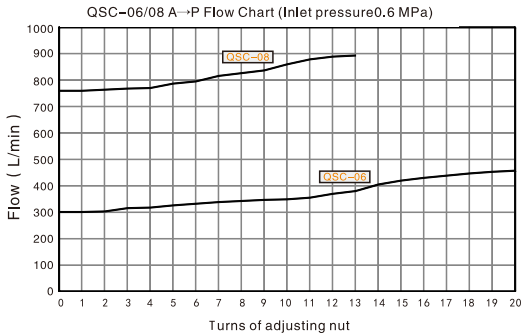
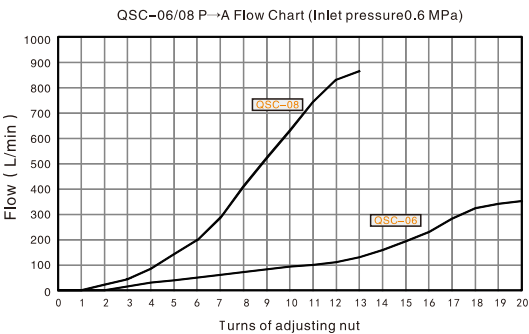
- * Compact structure and high precision.
- * Install in several positions to facilitate ,
installation and application.
- * Apply to exhaust throttle, widely used
for cylinder speed adjustment.

Internal Structure

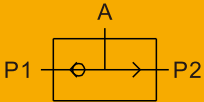


No.	Name
1	Valve body
2	Diaphragm
3	Throttle body
4	O-ring
5	O-ring
6	Throttle sheath
7	Fixed nut
8	Throttle column
9	Lock nut
10	Adjustment cap

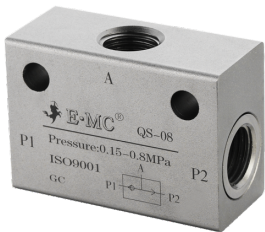
Flow Chat



QS Shuttle Valve



Specifications



Model	QS-06	QS-08
Working medium	Clean air(After 40 μ m filtration)	
Working Pressure (psi)	0.15~0.8	
Guaranteed pressure (psi)	1.2	
Working temperature(°F)	-20~70	
Port size ❶	1/8"	1/4"
Standard rated flow	P1 700	2300
The amount (L/min)	P2 500	1700
Weight(g)	45	85

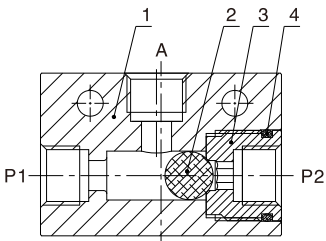
❶ G、PT、NPT thread type is optional.

How to Order?

Series No.	Port Size	Thread Type
QS:Shuttle valve	06: 1/8" 08: 1/4"	Blank: G P: PT T: NPT

Order Example:
QS series shuttle valve, port size: 1/4", G thread,
the ERP code is: QS-08

Internal Structure

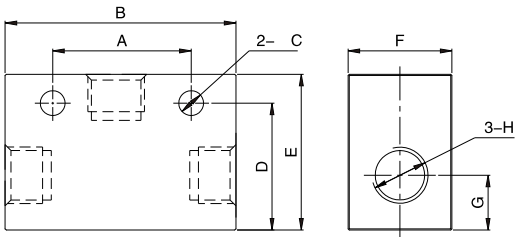


No.	Name
1	Valve body
2	Rubber ball
3	End cover
4	O-ring

Product Features

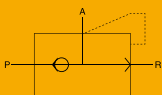
- * Normally working with main valve together, not be used separately.
- * Valve provides better assistance for completed control pneumatic system.

Main Dimension



Model	A	B	C	D	E	F	G	H
QS-06	24	40	4.3	22	27	18	10	1/8"
QS-08	35	50	6.5	27.5	35	22	13	1/4"

KKP Quick Exhaust Valve



Specifications



Model	KKP-06	KKP-08	KKP-10	KKP-15
Working medium	Clean air(After 40 μ m filtration)			
Working pressure(MPa)	0.15~0.8			
Guaranteed. pressure resistance (MPa)	1.2			
Working temperature (°C)	-5~60			
Port size	1/8" - 1/2"			

How to Order?

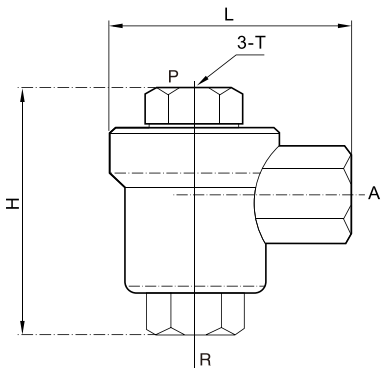
Series No.	Port Size	Thread Type
KKP: Quick exhaust valve	06: 1/8 " 08: 1/4 " 10: 3/8 " 15: 1/2 "	Blank: G P: PT T: NPT

Order Example:
KKP quick exhaust valve. 1/4" port size, G thread, ERP code is: KKP-08

Product Features

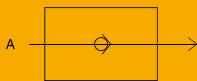
- * Normally working with main valve together, not be used separately
- * Provide assistance to control the system better

Main Dimension



Model	T	H	L
KKP-06	1/8"	37	41.5
KKP-08	1/4"	45.5	38
KKP-10	3/8"	56	46.5
KKP-15	1/2"	67	54

EA
One Way Valve



Specifications

Model	EA-06	EA-08	EA-10	EA-15	EA-20	EA-25
Working medium	Clean air(After 40 μ m filtration)					
Lubrication	Not required					
Working pressure (MPa)	0.05~0.8					
Guaranteed pressure (MPa)	1.2					
Working temperature (°C)	-5~60					
Port size	1/8"	1/4"	3/8"	1/2"	3/4"	1"

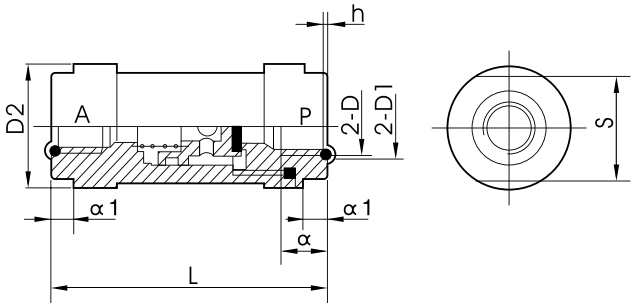
How to Order?

Series No.	Port Size	Thread Type
EA: One-way valve	06: 1/8 " 20: 3/4 " 08: 1/4 " 25: 1 " 10: 3/8 " 32: 1 1/4 " 15: 1/2 " 40: 1-1/2 " 50: 2 "	Blank: G P: PT T: NPT

Order Example:

EA series one way valve. 1/4" port size, G thread, ERP code is : EA-08

Main Dimension

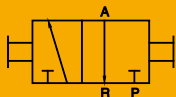


Model	Port size	D	D1	D2	S	L	α	α1	H
EA-6	6	G1/8	φ13	φ25	24	63	10	6	1.4 ^{0.1} ₀
EA-8	8	G1/4	φ16	φ25	24	63	12	6	1.4 ^{0.1} ₀
EA-10	10	G3/8	φ20	φ38	36	81	14	8	1.8 ^{0.1} ₀
EA-15	15	G1/2	φ26	φ38	36	81	14	8	1.8 ^{0.1} ₀
EA-20	20	G3/4	φ32	φ49	46	109	21	10	1.8 ^{0.1} ₀
EA-25	25	G1	φ40	φ49	46	109	23	10	2.7 ^{0.12} ₀
EA-32	32	G1-1/4	φ48	φ86	75	160	25	18	2.7 ^{0.12} ₀
EA-40	40	G1-1/2	φ54	φ86	75	160	26	18	2.7 ^{0.12} ₀
EA-50	50	G2	φ70	φ86	90	160	26	26	4.5 ^{0.18} ₀

Product Features

- * Normally working with main valve together, not be used separately
- * Provide assistance to control the system better

YHS
Slide Valve



Product Features

- * Normally working with main valve together, not be used separately
- * Provide assistance to control the system better

How to Order?

Series No.	Port Size	Type	Thread Type
YHS: Slide valve	06: 1/8 " 15: 1/2 " 08: 1/4 " 20: 3/4 " 10: 3/8 " 25: 1 "	Blank: Standard type MM: Double male thread type FF: Double female thread type MF: One male and the other female type	Blank: G P: PT T: NPT

Order Example:

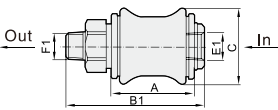
YHS slide valve, 1/4" port size, double male thread type, G thread ,ERP code is: YHS-08MM

Specifications

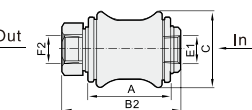
Model	YHS-06	YHS-08	YHS-10	YHS-15	YHS-20	YHS-25
Working medium	Clean air(After 40 μ m filtration)					
Acting type	Manul direct acting					
Lubrication	Not required					
Working pressure (MPa)	0~1.0					
Guaranteed pressure (MPa)	1.5					
Working temperature (°C)	-5~60					
Port size	1/8"	1/4"	3/8"	1/2"	3/4"	1"

Main Dimension

Standard type

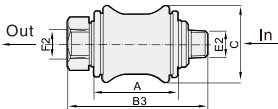


Double female thread type (FF)

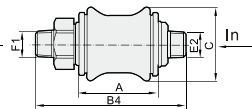


Model	A	B1	B2	B3	B4	C
YHS06	20	38	38	38	46	20
YHS08	32	58	58	58	68	26
YHS10	32	58	58	58	69	32
YHS15	40	80	80	80	94	38
YHS20	45	85	85	85	101	46
YHS25	45	85	85	85	101	52

One male and the other female thread type (MF)



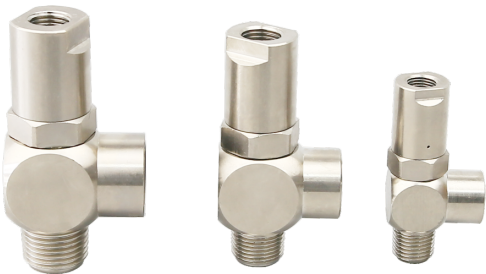
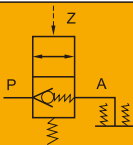
Double male thread type(MM)



Model	D	E1	E2	F1	F2
YHS06	14	G1/8"	G1/8"	G1/8"	G1/8"
YHS08	19	G1/4"	G1/4"	G1/4"	G1/4"
YHS10	22	G3/8"	G3/8"	G3/8"	G3/8"
YHS15	27	G1/2"	G1/2"	G1/2"	G1/2"
YHS20	34	G3/4"	G3/4"	G3/4"	G3/4"
YHS25	38	G1"	G1"	G1"	G1"

QPC

Pilot No–return Valve



- Product Features
1. Can make cylinder momentary stop, accurate orientation;

2. Prevent cylinder moving after stopped;

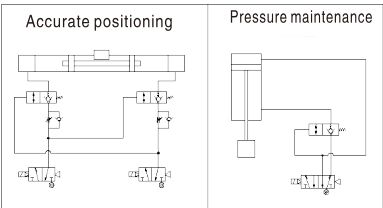
3. Can be used for safety loop of presure holding;

4. Can be used for special loop.

How to Order?

Series	—	Port Size
QPC		08: 1/4 " 10: 3/8 " 15: 1/2 "

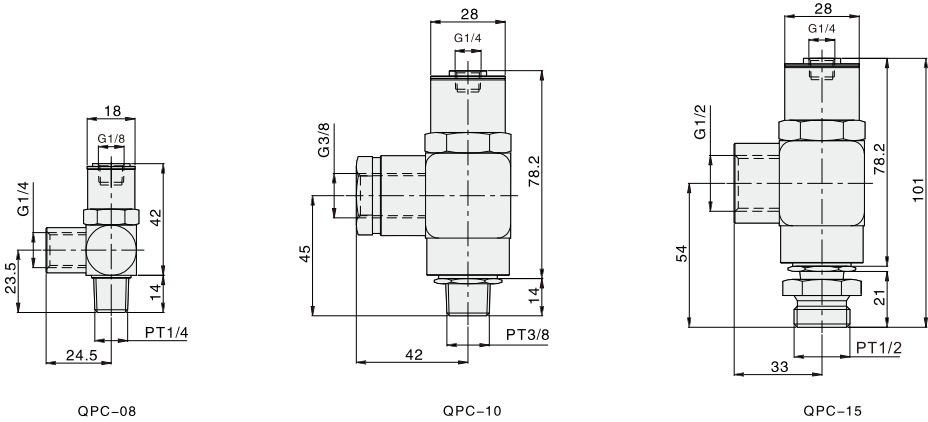
Order Example:
QPC series valve, 1/4" port size, ERP code is: QPC-08



Specifications

Model	QPC-08	QPC-10	QPC-15
Working medium	Clean air(After 40 μ m filtration)		
Sectional (mm)	24	79	79
Working pressure(MPa)	0.1~1.0		
Guaranteed pressure(MPa)	1.5		
Working temperture(℃)	-20~70		
Operating Frequency (Times/min)	60	40	40
Valve material	Nickel plated brass	Aluminum alloy	Aluminum alloy
Port size	1/4 "	3/8 "	1/2 "
Pilot Port Size	1/8 "	G 1/4	

Main Dimension



Note: