E•MC®

Directional Valve

With the advanced electrolysis technology to remove the burrs, the inner surface of the valve comes to be very smooth, and it is also a big support for ensuring the life cycles of valves when using the Japanese seals. 64 pcs valve bodies are machined simultaneously by completely computer controlled CNC machines at one time, coils are tested under 20,000 voltage equipment, and armatures are well provided by 3–D CNC machines imported from Japan, all these details make E・MC to be the top in China.

◎ Precaution for Installation and Use

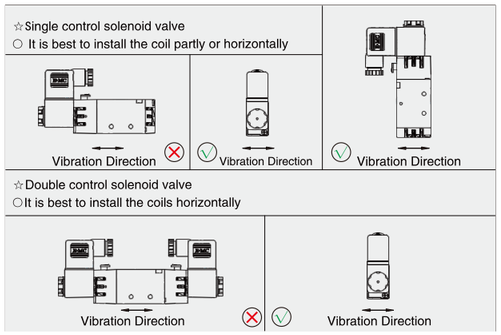
1. Please check whether the product is damaged during transport, and check the technical parameters (such as operating voltage, working pressure, working temperature, etc.) to confirm whether they satisfy the requirements before installation.

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).

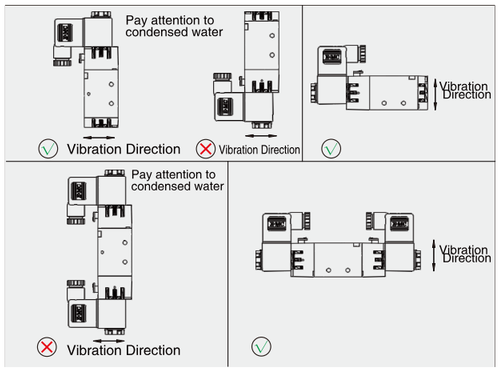
3. Before installation,the pipeline should be completely cleaned (Propos to use air guns or empty the pipeline directly before connection) to remove pipeline dust, debris and oil, so that to avoid the influence of valve action (such as stuck, no response or response slowly, etc.), avoid noise from damaged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



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 .



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

13. It is recommended to install muffler to the exhaust port to avoid inhaling of impurity into the valve body.

14. Such as valves used in vacuum condition, should use direct acting valve or exterior pilot type valve, and measures should be taken to prevent dust from sucking in the suction cup

15. Double electric air control valve has memory function (except three position valve), power up time should be more than 0.1s in time to ensure the valve reversing in place.

16. Although the coil calibration is 100%ED, long time continuous electricity will cause overheating, accelerated insulation aging, reduce the performance of the solenoid valve、lifetime and energy, so in the condition of continuous power on,we should consider to use double electronically controlled solenoid valve with memory function or adopt energy saving and low power coil . in order to extended coil life , and save energy.

17. Solenoid valve installed in the control cabinet,We should pay attention to the ventilation of the control cabinet, heat radiation, to ensure that the temperature in the cabinet within the safety use range.

18. Solenoid valve coil should not be connected to the wrong voltage (such as the DC24V coil connect to the AC220V voltage), Otherwise, the coil will be burned, and the working voltage should be in the required voltage range, to make sure the valve works well.

19. Since DC solenoid valve has polarity indicator light, please pay attention to the positive and negative poles when wiring, "1" connect the positive pole, and "2" connect the negative pole, If the positive and negative poles are reversed, The light will not turn on, but the valve can still be actuated.

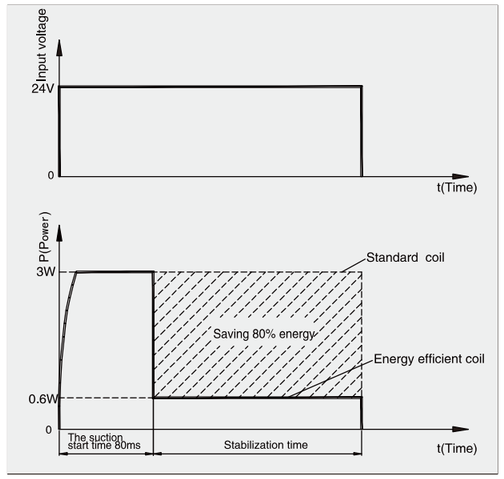
20. During use energy saving and low power consumption coil solenoid valve, please refer to energy-saving, low-power solenoid valve instructions.

21. The valve on this catalogue shall not be used as an emergency shut-off valve. If the emergency shut-off function is required, other ways of ensuring safety shall be used to control it.

◎ 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).



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

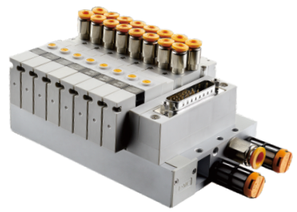
Note: The rise time shall be less than 5 ms when the voltage start from 0 to rated voltage in the proceed of solenoid valve energization.

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 pilo.
5. Working temperature: -20~80℃, the internal energy saving chip can no 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; Thyistor 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.

SV

Solenoid Valve&Valve Terminal



◎ 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?

S1V valve terminal

Series No. | Body Size | Piping Type — | | | — | | Valve quantity for different port | | Voltage — Pilot Type — Wiring Type — Manifold Port — Mounting — Thread Type

- Series No.: S: Standard
- Body Size: 1: 1 series; 2: 2 series
- Piping Type: V: Top ported; VM: Side ported; VB: Bottom ported
- Qty: (Max.24 links for single control; Max.12 links for double control)
- Valve quantity for different port
- Voltage: E4: DC24V
- Pilot Type: Blank: Internal pilot; WB: External pilot①
- Wiring Type: Blank: Double control wiring (max.12 links); S: Single control wiring (max.24 links); (Note:Mix wiring is available to customize)
- Manifold Port: Blank: Without accessories; D: With DIN rail clip and 1M guide rail; D0: With DIN rail clip, no guide rail; DIN guide rail packed separately)
- Mounting
- Thread Type: Blank: G; P: PT; T: NPT

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

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

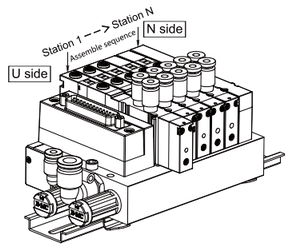
Code	Port entry	1Series	2Series	Remark
Blank	Both side without silencer, fitting, plug	–	–	1) plugs are mounted on the opposite of the selected ports; 2) only U,U1 is available for bottom ported 3) No need this code if order manifold only
U	U side with silencer	ϕ8	ϕ10	
N	Station N with silencer			
UN	Both side with silencer			
UL	U side with silencer			
NL	Station N with silencer			
UNL	Both side with silencer			
U1	U side with silencer	ϕ10	ϕ12	
N1	Station N with silencer			
UN1	Both side with silencer			

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

Order Example:

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

2. Mix different valve: S series standard valve, 1 series body, top ported, see right picture : station 1 is 5/3 center closed, station 2 is 5/2 double control, station 3 is 2pcs 3/2 (N.O.) ,station 4 & station 5 are 5/2 single, station 6 is blind plate,station 1 & 2 with ϕ6 one–touch fitting ZPOC06–M7C, station 3~5 with with ϕ4 one–touch fitting ZPOC04–M7C, DC24V,G thread, external pilot, double control wiring, U–sub side with silencer, ϕ8 PL fitting, with DIN rail clip and 1M guide rail, the ERP code is S1V–CDH2SB–2C63C4AE4–WB–UL–D



Solenoid valve

Series No. | Piping Type | Ports | Positions | Body Size | Controls — Original Status — Port Size | Voltage — Pilot Type — Wiring — Thread Type

- Series No.: S: Standard
- Piping Type: V：Piping on valve; VM：Piping on manifold (VM series should work with manifold)
- Ports: 5：5 ports
- Positions: 2：2 position; 3：3 position; 4：Dual 3/2 valves
- Body Size: 1: 1 series; 2: 2 series
- Controls: 1：Single control; 2：Double control
- Original Status: C：3 position 5 port(center close); P：3 position 5 port(center pressure); E：3 position 5 port(center exhaust); Y：Dual 3/2 valves(N.C.); H：Dual 3/2 valves(N.O.); U：Dual 3/2 valves(N.C./N.O.)
- Port Size: M5：M5; M7：M7; 06：1/8"; (Note:Available for V type only)
- Voltage: E4：DC24V
- Pilot Type: Blank：Internal pilot; WB：External pilot
- Wiring: Blank：None; 0.3M：0.3m wiring; 0.6M：0.6m wiring; 1M：1m wiring; (Note: Available for V type only)
- Thread Type: Blank: G; P: PT; T: NPT

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 valve terminal

Series No. | 5/2 way | Body Size — | | — | | Voltage — Manifold Port — Wiring — Thread Type

- Series No.: SV：SV series
- 5/2 way: 52
- Body Size: 1：1 series; 2：2 series
- Qty
- Valve quantity for different port
- Voltage: E4：DC24V
- Manifold Port
- Wiring: Blank：Without wiring; 0.3M：0.3M wiring; 0.6M：0.6M wiring; 1M：1M wiring
- Thread Type: Blank: G; P: PT; T: NPT

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

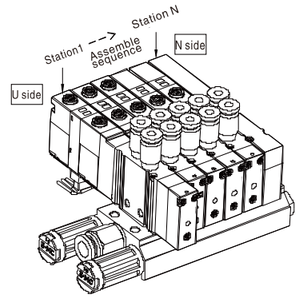
No.	Code	Port size	Remark
1Series	M5	M5: M5 port	assembly sequence, 1st link start from U side
	C4	ϕ4 one–touch fitting(ZPOC04–M5C)	
	M7	M7: M7 port	
	C6	ϕ6 one–touch fitting(ZPOC06–M7C)	
2Series	06	1/8 port	
	C4	ϕ4 one–touch fitting(ZPOC04–01G)	
	C6	ϕ6 one–touch fitting(ZPOC06–01G)	
	C8	ϕ8 one–touch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

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

Order Example:

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

2. Mix different valve: SV series valve block, 1 series body, see right picture： station 1 is 5/3 center closed, station 2 is 5/2 double control, station 3 is 2pcs 3/2 (N.O.) , station 4 & station 5 are 5/2 single SV5211, station 6 is blind plate. station 1 & 2 with ϕ6 one–touch fitting ZPOC06–M7C, station 3~5 with with ϕ4 one–touch fitting ZPOC04–M7C, DC24V,G thread, U–sub side with silencer, ϕ8 PC fitting, the ERP code is SV521–CDH2SB–2C63C4AE4–U



How to Order?

Manifold

SV	52	1	—	N	F	—	Thread Type
SV series	2 position 5 port	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

Connector

Connector Type	—	Cable Core	—	Cable Length	Injection Molding
D25: D–sub connector 25 pins		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)		1M: 1m cable 2M: 2m cable 3M: 3m cable (Note: please contact EMC for customized length)	A

Wiring

Wiring Series	—	Accessory	—	Wiring Length
SV5211: Single control SV5212: Double control		P01: With accessory		0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring (Note:Please contact EMC to customize wiring)

Blind plate

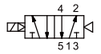
SVBP	52	1
Blind plate for SV valve	2 position 5 port	1:1 series valve body 2:2 series valve body

Specifications

Model	SV5211 SVM5211	SV5212 SVM5212	SV5312C/P/E SVM5312C/P/E	SV5412Y/H/U SVM5412Y/H/U	SV5221 SVM5221	SV5222 SVM5222	SV5322C/P/E SVM5322C/P/E	SV5422Y/H/U SV5422Y/H/U
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 positon 5 port	2 positon 5 port	3 positon 5 port	Dual 3/2 valves	2 positon 5 port	2 positon 5 port	3 positon 5 port	Dual 3/2 valves
Working Pressure (MPa)	0.15~0.8	0.15~0.8	0.2~0.8	0.15~0.8	0.15~0.8	0.15~0.8	0.2~0.8	0.15~0.8
Port Size	M5/M7 (Not available for VM series)				G1/8 (Not available for VM series)			
Working Medium	Clean air(After 40μm filteration)							
Pilot Exhaust Type	Internal pilot type / External pilot type							
Reset Type	Air reset							
Lubrication	No required							
Proof Pressure (Mpa)	1.2							
Working Temperature (℃)	-20~70 (No freezing)							
Working Voltage	DC24V							
Voltage Range	±10%							
Power Consumption	0.8W							
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	68	65	88	97	104	98.5

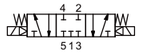
Symbol

SV5211
(5/2 single control)

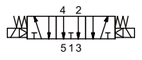


SV5212
(5/2 double control)

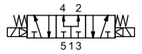
SV5312C
(5/3 center close)



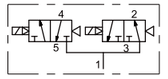
SV5312E
(5/3 center exaust)



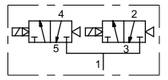
SV5312P
(5/3 center pressure)



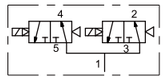
SV5412U
(1pc 3/2 N.C + 1pc 3/2 N.O)



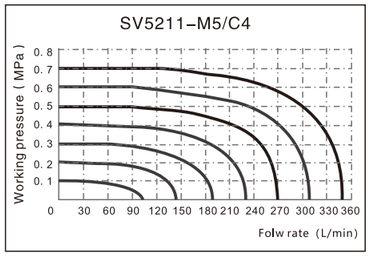
SV5412Y
(2pcs 3/2 N.C)

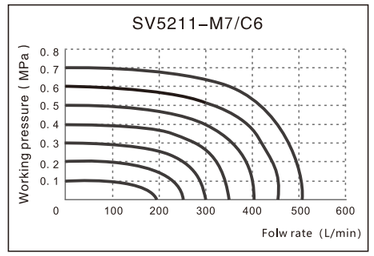


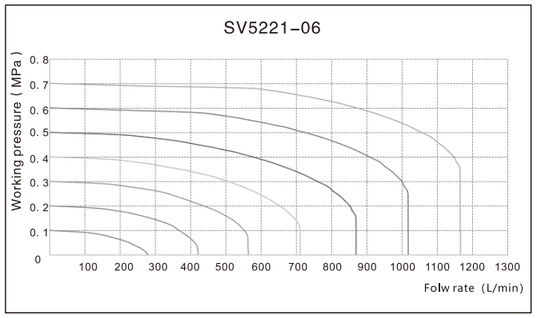
SV5412H
(2pcs 3/2 N.O)



Flow Chart



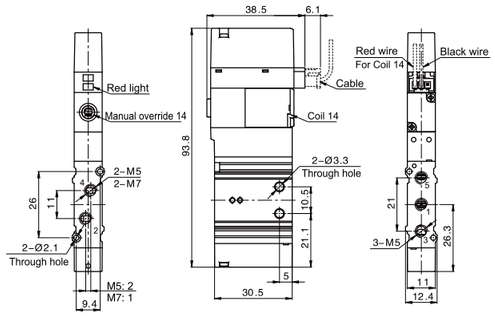




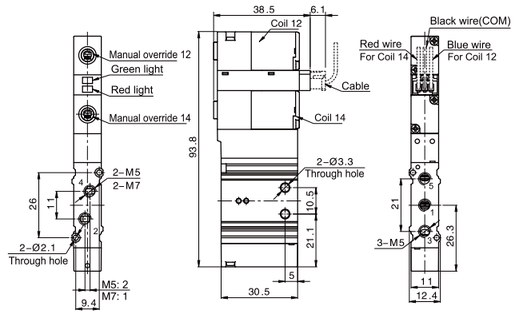
Main Dimension

Solenoid valve

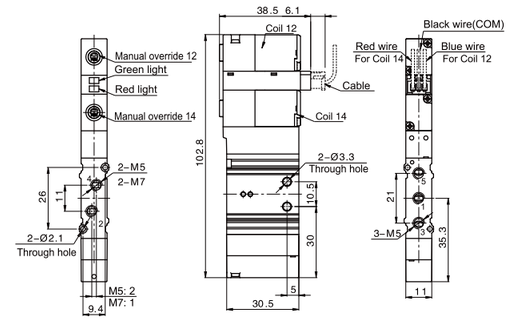
SV5211



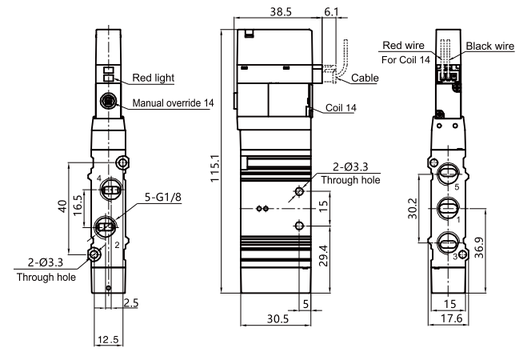
SV5212/SV5412



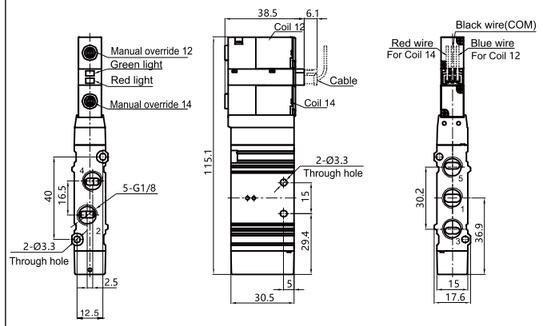
SV5312



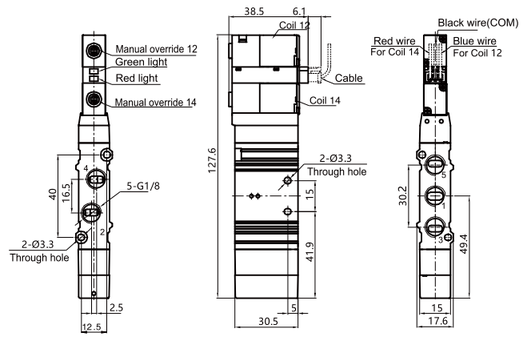
SV5221



SV5222/SV5422



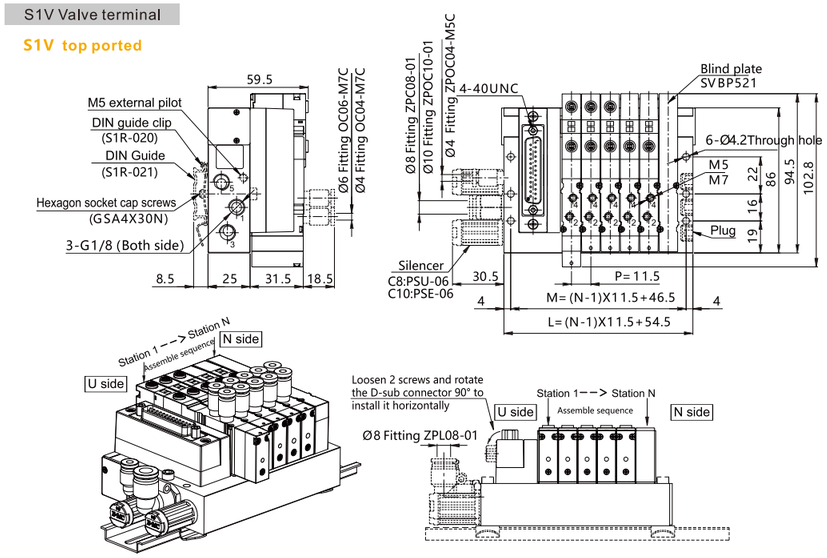
SV5322



Main Dimension

S1V Valve terminal

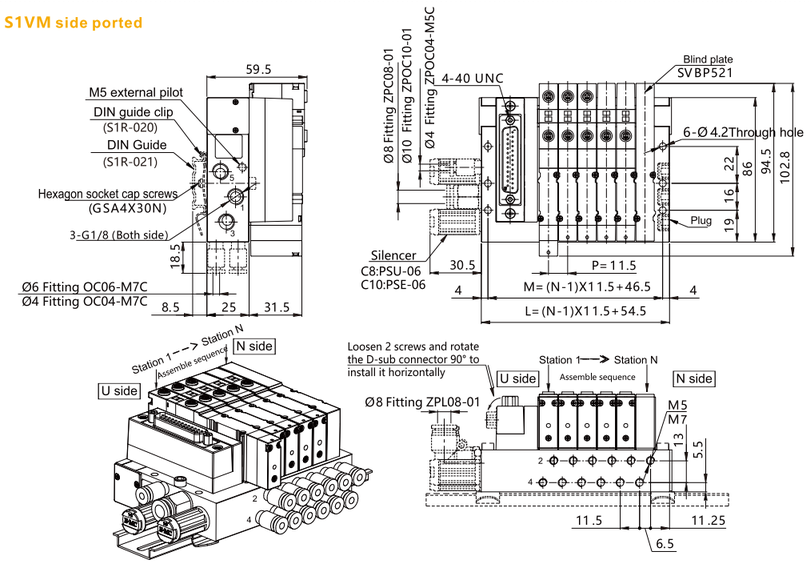
S1V top ported



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	66	77.5	89	100.5	112	123.5	135	146.5	158	169.5	181	192.5	204	215.5	227	238.5	250	261.5	273	284.5	296	307.5	319
M	58	69.5	81	92.5	104	115.5	127	138.5	150	161.5	173	184.5	196	207.6	219	230.5	242	253.5	265	276.5	288	299.5	311

S1VM side ported



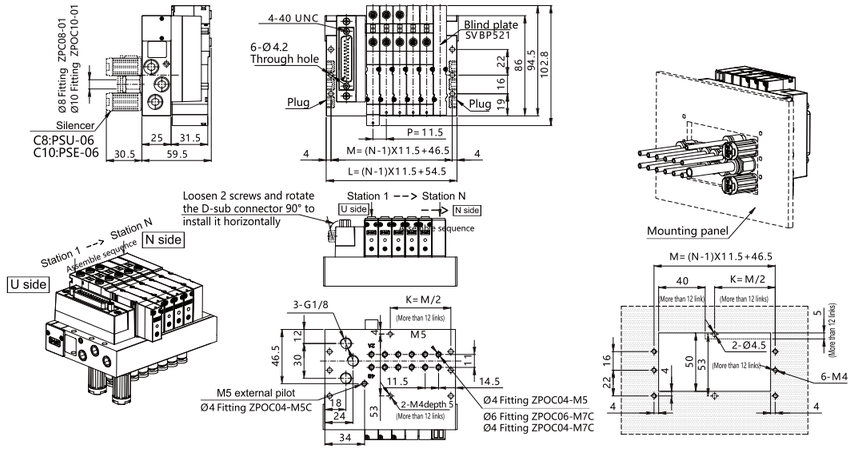
Note: N means valve link

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

Main Dimension

SV Valve terminal

S1VB bottom ported

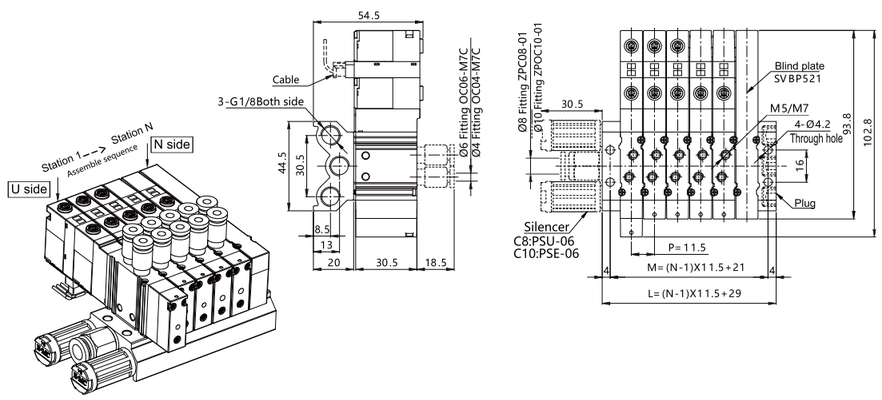


Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	13
L	66	77.5	89	100.5	112	123.5	135	146.5	158	169.5	181	192.5
M	58	69.5	81	92.5	104	115.5	127	138.5	150	161.5	173	184.5

Sign \ Model	14	15	16	17	18	19	20	21	22	23	24	
L	204	215.5	227	238.5	250	261.5	273	284.5	296	307.5	319	
M	196	207.6	219	230.5	242	253.5	265	276.5	288	299.5	311	
K	98	103.75	109.5	115.25	121	126.75	132.5	138.25	144	149.75	155.5	

Note: N means valve link

SV521 Valve terminal



Note: N means valve link

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

SV Series Solenoid Valve&Valve Terminal

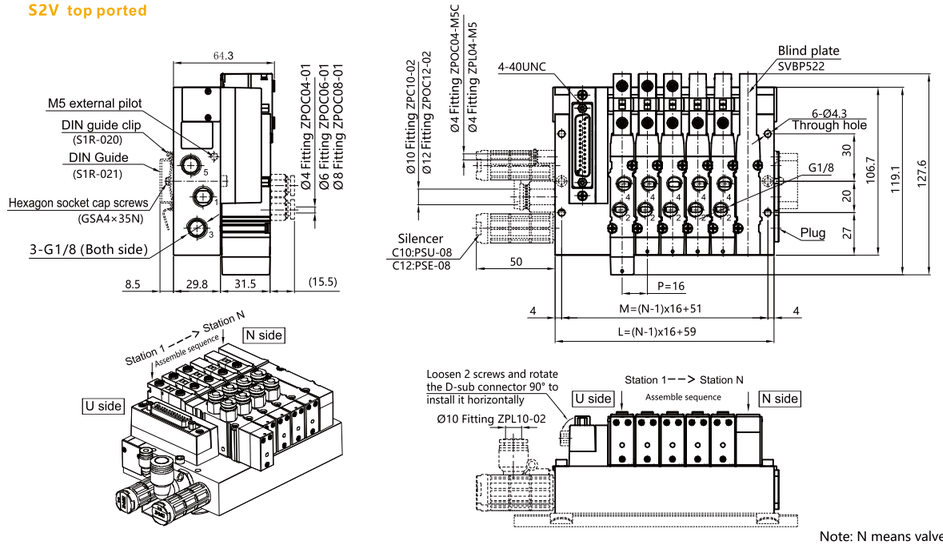
E•MC®

1
SV

Main Dimension

S2V Valve terminal

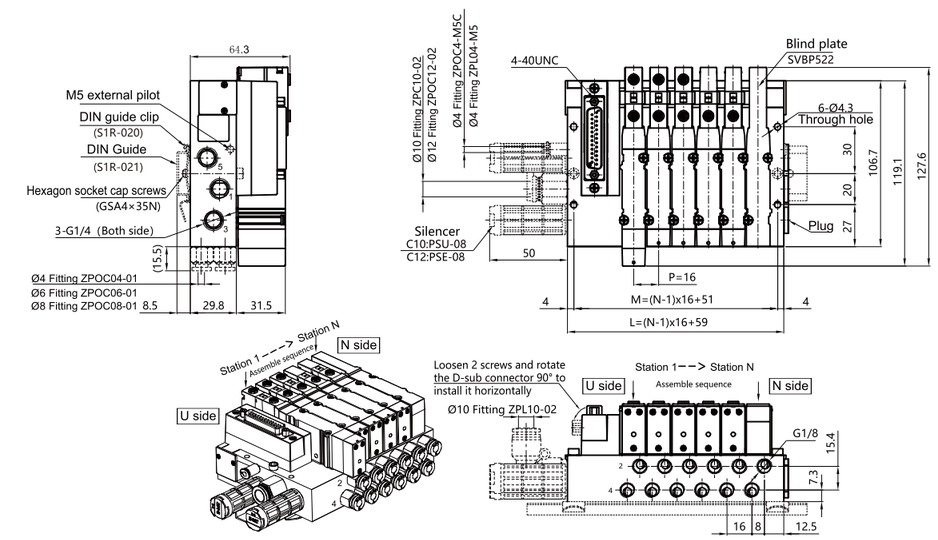
S2V top ported



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



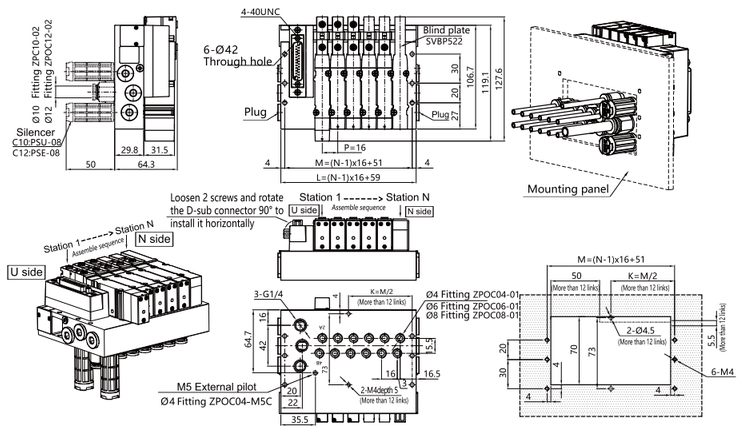
Note: N means valve link

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

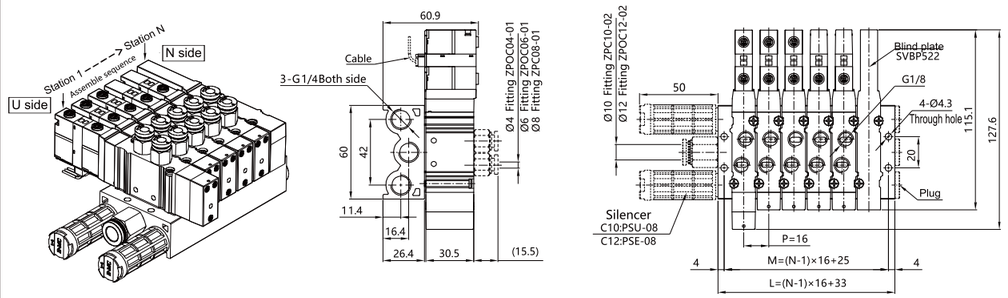
S1VB bottom ported



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

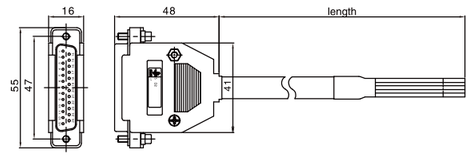
SV521 Valve terminal



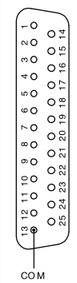
Note: N means valve link

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	49	65	81	97	113	129	145	161	177	193	209	225	241	257	273	289	305	321	337	353	369	385	401
M	41	57	73	89	105	121	137	153	169	185	201	217	233	249	265	281	297	313	329	345	361	377	393

Connector & Cable

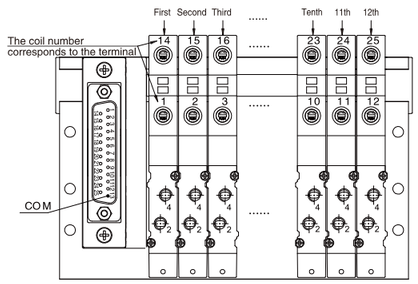


Connector Cable	PIN number	PIN number & Wire Color			
		Wire Color			
		D25-25	D25-15D	D25-15S	D25-08S
	1	Red and Black	Red and Black	Red and Black	Red
	2	Red and White	Red	Red	Yellow
	3	Red	Orange and Black	Orange and Black	Blue
	4	Orange and Black	Orange	Orange	Orange
	5	Orange and White	Yellow and Black	Yellow and Black	Purple
	6	Orange	Yellow	Yellow	Brown
	7	Yellow and Black	Pink	Pink	Green
	8	Yellow	---	Light Green	---
	9	Pink and Black	---	Purple	---
	10	Pink	---	White	---
	11	Blue and White	---	Brown	---
	12	Blue	---	Grey	---
	13(COM)	Black	Black	Black	Black
	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	---	---	---

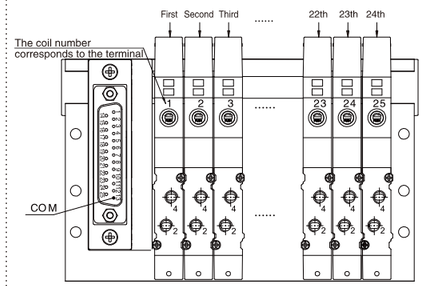


Valve Terminal Inner Wiring Diagram

Double control wiring
max.12 links

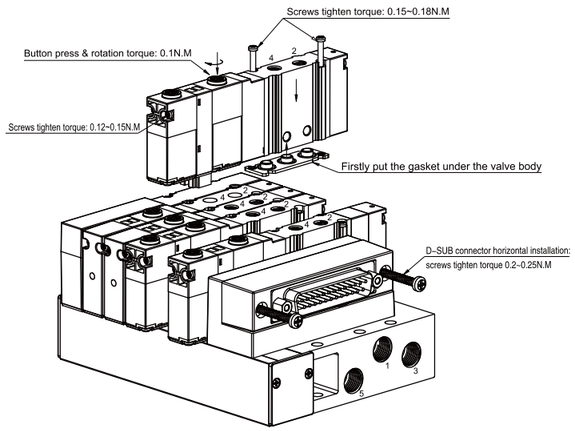


Single control wiring
max.24 links



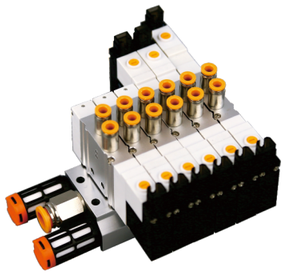
Installation & Usage Attention

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



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	—	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	1:Signal control 2:Double control	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.) H: 4 position dual 3-port valve(N.O.) U: 4 position dual 3-port valve(N.C./N.O.)	M5:M5 M7:M7	E4:DC24V		Blank: None 0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring		Blank:G P:PT T:NPT

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 :SVY5211-M5E4.

SVY Valve Terminal

Series NO.	5/2 way	Body Size	— □ □ —	□ □	Voltage	—	Inlet& Exhaust Port	— Wiring —	Thread Type
SVY: SVY Series	52	1: 1 series	Qty (Max.24 links for same valve type)	Valve qty (Applicable to different ports mixed, blank if same ports.)	E4: DC24V		Blank: None 0.3m: 0.3m wiring 0.6m: 0.6m wiring 1m: 1m wiring		Blank:G P:PT T:NPT

Code	Function	Remark
S	5/2 single	Assembly sequence, 1st link start from U side.
D	5/2 double	
C	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.)	
H	4 position dual 3-port valve(N.O.)	
U	4 position dual 3-port valve(N.C./N.O.)	
B	Blind plate	

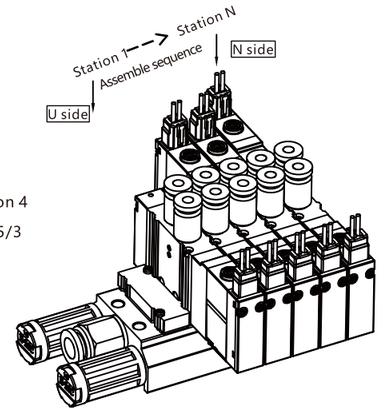
Series	Code	Port size	Remark
1series	M5	M5 fitting	Assembly sequence, 1st link start from U side
	C4	ϕ4 one-touch fitting(ZPOC04-M5C)	
	M7	M7 fitting	
	C6	ϕ6 one-touch fitting(ZPOC06-M7C)	

Code	Port Entry	1Serie	Remark
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.
U	U side with silencer	ϕ8	
N	Station N with silencer		
UN	Both side with silencer		
UL	U side with silencer		
NL	Station N with silencer		
UNL	Both side with silencer		
U1	U side with silencer	ϕ10	
N1	Station N with silencer		
UN1	Both side with silencer		

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,φ8 PC fitting, G thread.
The ERP code is SVY521-B2SDHC-C4E4-U.



Specifications

Model	SVY5211	SVY5212	SVY5213C/P/E	SVY5412Y/H/U
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)	
Positions	2-position 5 port	2-position 5 port	3-position 5 port	4-position dual 3-port valve
Working Pressure(Mpa)	0.15~0.8	0.15~0.8	0.2~0.8	0.15~0.8
Port Size	M5/M7/C4/C6			
Working Medium	Clean air(After 40μm filteration)			
Pilot Exhaust Type	Internal pilot type/ External pilot type			
Reset Type	Air reset			
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)

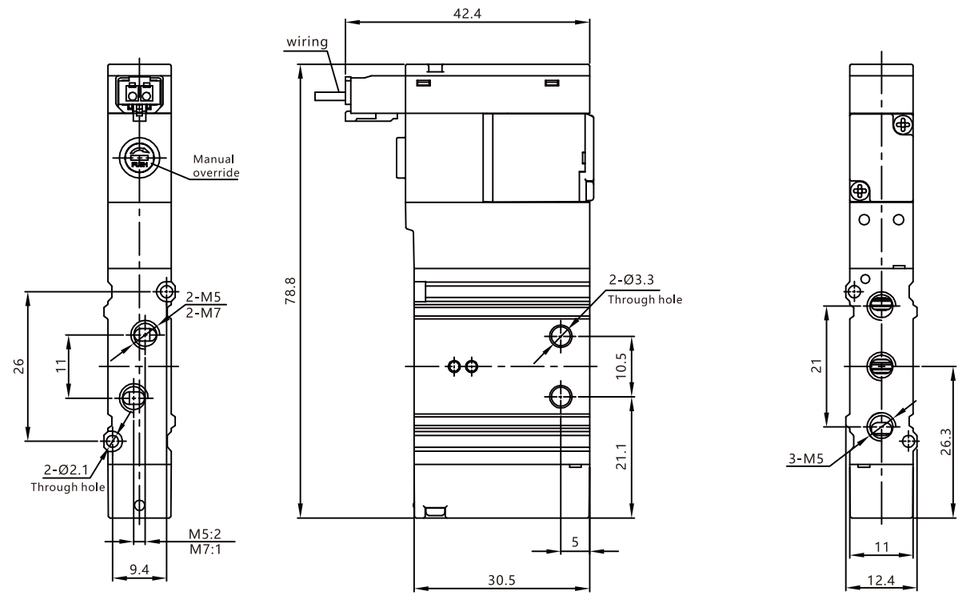
Wiring Series	—	Accessory	—	Wiring Length
DBL		P01: wiring accessory		0.3M: 0.3m wiring 0.6M: 0.6m wiring 1M: 1m wiring ..... (Note: Please contact E.MC for customized length)

Blind Plate

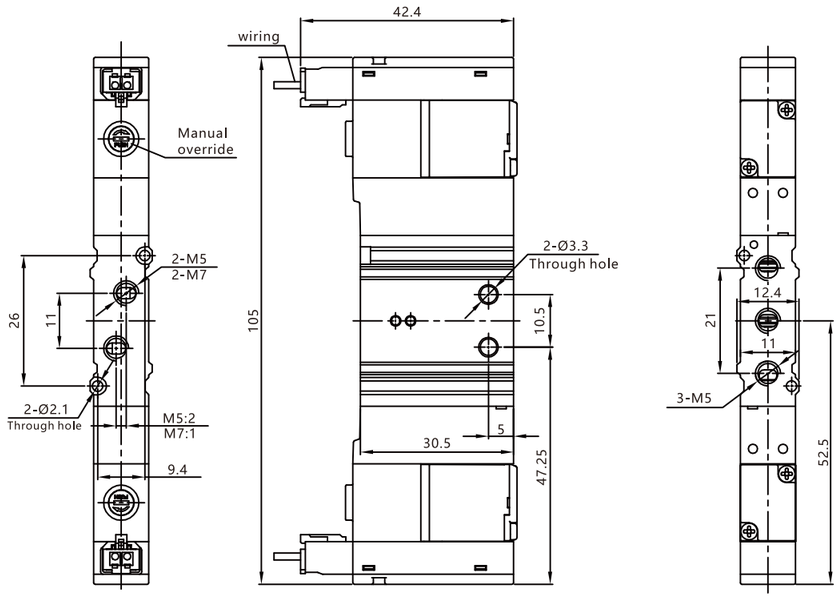
Series	Type	Accessory	5/2 way	Body Size
S:Standard	VY:Normal	BP	52	1:1 Series

◎ Main Dimension

SVY5211

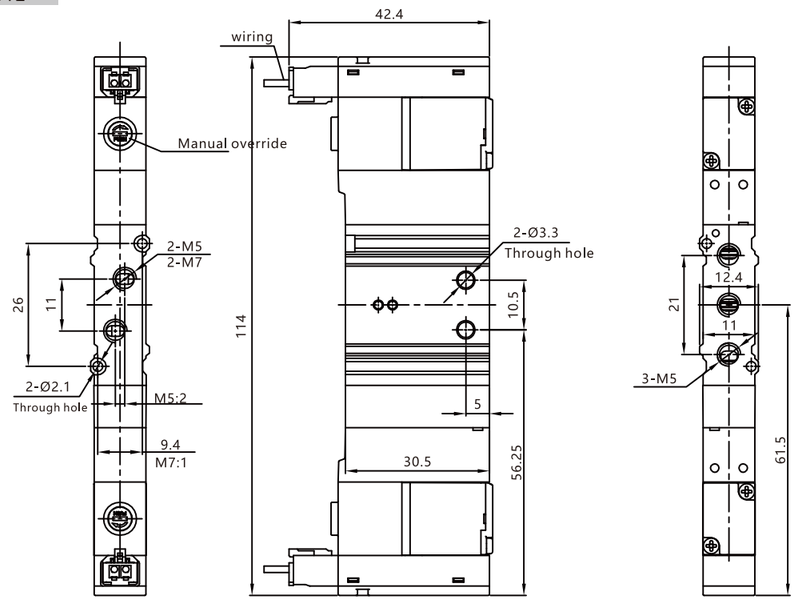


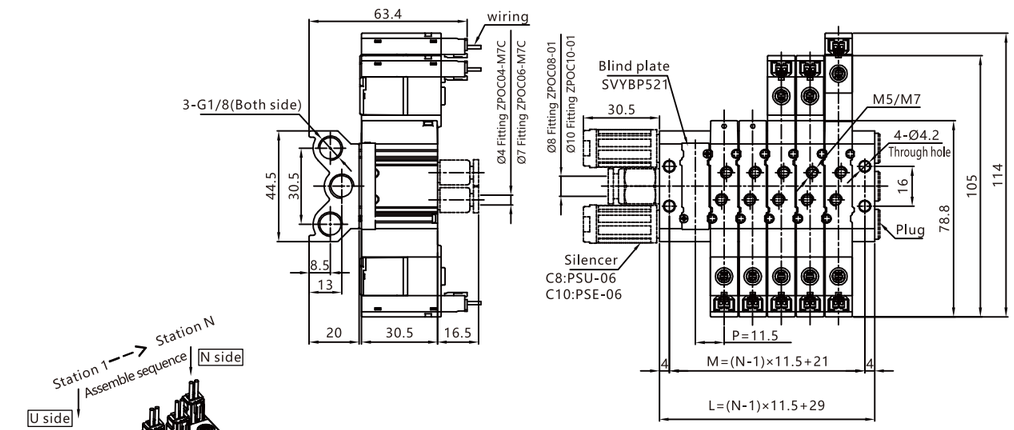
SVY5212

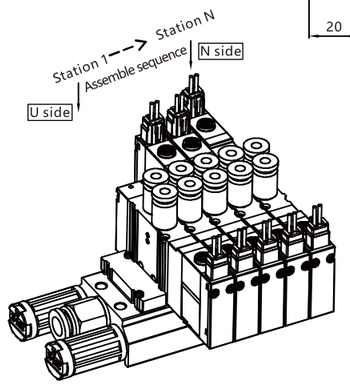


◎ Main Dimension

SVY5312







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

ESV

Solenoid Valve&Valve Terminal

PROFINET
EtherCAT

Product Features

* Compatible Protocols: PROFINET and EtherCAT
* 32 outputs, max.32pcs coil/16pcs double control valve/24pcs stations (8pcs double control + 16pcs single control)
* Equipped with two M12 BUS Interface, realize daisy-chain wiring communication, branch connector is not neccessary, reduced wiring space
* Diagnostic functions: system diagnosis, communication error, undervoltage .
* 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.
* Shielded cable with strong anti-jamming, maximum transmission distance is 100 meters , communication is stable and reliable.

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.
* 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?

ES Fieldbus Valve Terminal

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

- Series No.: ES: Fieldbus valve terminal
- Body Size: 1: 1 series; 2: 2 series
- Piping Type: V: Top ported; VM: Side ported; VB: Bottom ported
- Communication Protocol:

Protocols type	Communication Protocol	Output
PN32	PROFINET	32
EC32	EtherCAT	32
LK16	IO-Link	16
LK32		32

- Qty (Max.24 links for same valve of single control; Max.16 links for same valve of double control)

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	
Y①	2pcs 3/2 (N.C.)	
H①	2pcs 3/2 (N.O.)	
U①	2pcs 3/2 (N.O./N.C.)	
B	blind plate	

- Valve quantity for different port
- E4: DC24V
- Pilot Type: Blank: Interal pilot; WB: External pilot①
- Wiring Type: Blank: Double control wiring (max.16 links); S: Single control wiring (max.24 links); (Note:Mix wiring is available to customize)

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

- Manifold Port:

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 3) No need this code if order manifold only
U	U side with silencer	ϕ8	ϕ10	
N	Station N with silencer			
UN	Both side with silencer			
UL	U side with silencer			
NL	Station N with silencer			
UNL	Both side with silencer			
U1	U side with silencer	ϕ10	ϕ12	
N1	Station N with silencer			
UN1	Both side with silencer			

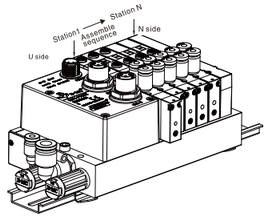
- Mounting: Blank: Without accessories; D: With DIN rail clip and 1M guide rail; D0: With DIN rail clip, no guide rail DIN guide rail packed separately (if order with guide rail, the guide rail will be packed separately)
- Thread Type: Blank: G; P: PT; T: NPT

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

Order Example:

1. Same valve: ES Fieldbus Valve Terminal, 1 series body, top ported, PROFINET,32 outputs, 6 links 5/2 double controled, 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.) SV5412H ,station 4 & station 5 are 5/2 single SV5211, station 6 is blind plate. station 1 & 2 with ϕ6 one-touch fitting ZPOC06-M7C, station 3~5 with with ϕ4 one-touch fitting ZPOC04-M7C, DC24V,G thread, external pilot, double control wiring, U-sub side with silencer, ϕ8 one-touch fitting EPL, with DIN rail clip and 1M guide rail, the ERP code is ES1V-PN32-CDH2SB-2C63C4AE4-WB-UL-D



ESV-PN/EC Series

Specifications

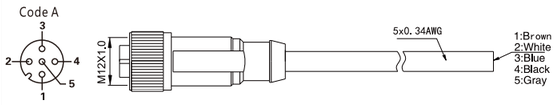
Code		ES1V(VM/VB)-PN32 ES2V(VM/VB)-PN32	ES1V(VM/VB)-EC32 ES2V(VM/VB)-EC32
Output		32	32
Protocols		PROFINET	EtherCAT
Baud rate		100Mbps	100Mbps
Configuration files		GSDML file	XML file
Control power supply	Voltage	DC24V(DC21.6～26.4V)	
	Current consumption	120mA below	
Output voltage(valve)		DC24V(DC22.8～26.4V)	
Output type		NPN/Sink (+com)	
Power interface		M12, 5pin, A encode	
Bus Interface		2xM12 socket, 4 holes, D encode	
Diagnostic		System diagnosis, communication error, undervoltage	
Protection		IP40 Dust proof	
Storage temperature(℃)		-20～70	
Working temperature(℃)		-10～50	

Wiring

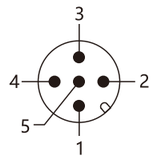
M125R – PVC – □

- M12 Female 5 cores
- 2M: 2 meters; 5M: 5 meters (Other length could be customized)

Power cable



Power interface

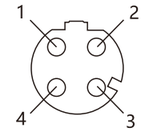


Pin	Type	Description
1	PS24	+24V Control voltage +24V
2	PL24	+24V Operating voltage of load valve
3	PS0	0V Control voltage 0V
4	PL0	0V Operating voltage of load valve
5	FE	Grounding

ESV-EN – □ – □

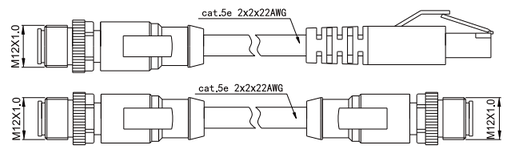
- Ethernet fieldbus wiring
- M12RJ：M12male connectors ⇔ RJ45
- M12M12：M12male connectors ⇔ M12male connectors
- 2M: 2 meters; 5M: 5 meters (Other length could be customized)

BUS interface

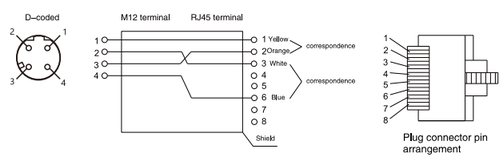


Pin	Type	Description
1	TD+	Send data+
2	RD+	Receive data+
3	TD-	Send data-
4	RD-	Receive data-

Communication Cable



Connections(Straight-through cable)



LED Indicators

PROFINET

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

Indicators	Status	Meaning
BF	ON	Communication not connected
	Flash	Module is connecting with PN master station, IP address or device name duplicated.
	OFF	System is normal
SF	OFF	System is normal
	ON	Diagnosed fault, or the master station configuration does not match the slave station
L/A1 L/A2	Yellow light on	Internet connection
	Yellow light off	No internet connection
	Green light flash	Internet activated
	Green light off	No internet activated
PWR	ON	Module with 24V power supply
	OFF	Module without power supply
PWR(V)	OFF	24V load voltage is normal
	ON	The load voltage is not connected or the load voltage is too low (During the under voltage monitor is on)

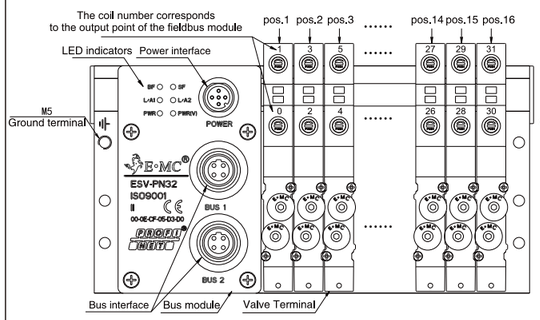
EtherCAT

RUN ○ ○ ERR
L/A IN ○ ○ L/A OUT
PWR ○ ○ PWR(V)

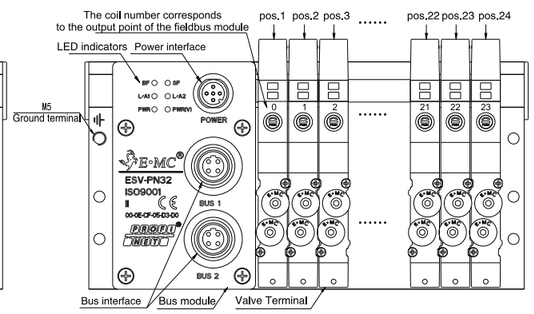
Indicators	Status	Meaning
RUN	OFF	Initial Status
	Rapid Flash	Pre-operational status
	Slow Flash	Safe Status
	ON	Operational Status(Enter into normal data exchange status)
ERR	OFF	Normal Initiation
	ON	Initiantion Failure
L/A IN L/A OUT	ON	Internet connection
	OFF	No internet connection
	Flash	Internet connection with data transmission
PWR	ON	Module with 24V power supply
	OFF	Module without power supply
PWR(V)	OFF	24V load voltage is normal
	ON	The load voltage is not connected or the load voltage is too low (During the under voltage monitor is on)

Wiring Diagram——ESV–PN/EC Series

Wiring for double control(maximum 16 positions)



Wiring for single control(maximum 24 positions)



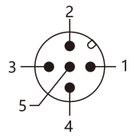
ESV–LK Series

Specifications

Code		ES1V(VM/VB)–LK16 ES2V(VM/VB)–LK16	ES1V(VM/VB)–LK32 ES2V(VM/VB)–LK32
Output		16	32
Protocols		IO–Link	
Baud rate		COM2 (38.4kbps)	
Configuration files		IODD file	
Specification		V1.1(Compatible with V1.0)	
Output voltage	Voltage	DC24V(DC21.6～26.4V)	
	Current consumption	15mA 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		IP40	
Storage temperature		–20 ~ 70℃	
Working temperature		–10 ~ 50℃	

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

Wiring

M125 □ — PVC — □

R:Straight connector type
RL:Angled connector type

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

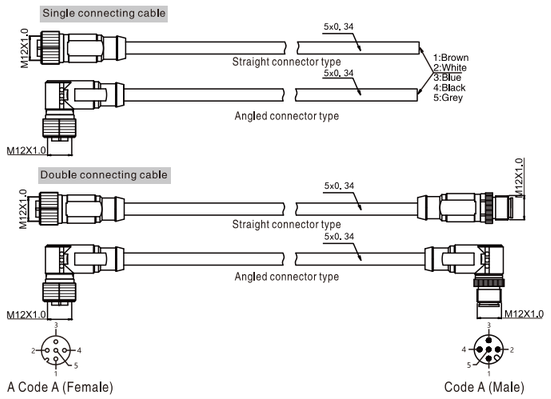
M12 Female 5 cores
single connecting cable

M12M125 □ — PVC — □

M12 Female 5 cores
double connecting cable

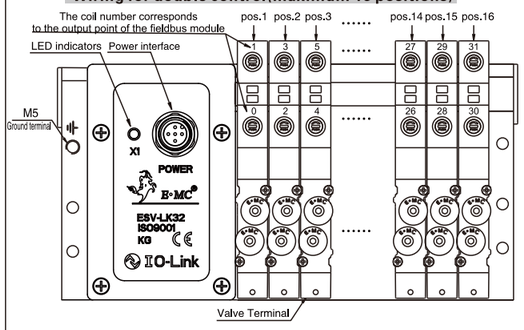
2M: 2 meters long
5M: 5 meters long
(Other length could be customized)

R:Straight connector type : M12 male connectors ↔ M12 female connectors
RL:Angled connector type : M12 male connectors ↔ M12 female connectors

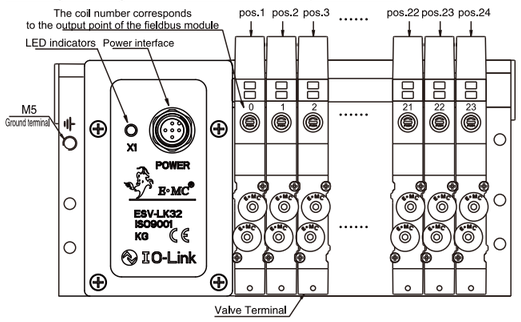


Wiring Diagram——ESV–LK Series

Wiring for double control(maximum 16 positions)



Wiring for single control(maximum 24 positions)



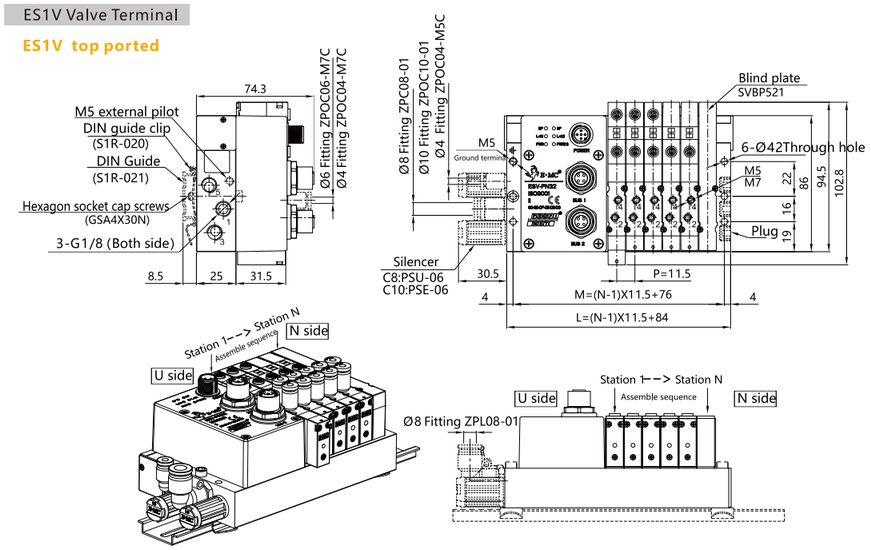
Precautions for Use

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 regularlly,avoid accidents by 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. Ecept 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.

◎ Main Dimension

ES1V Valve Terminal

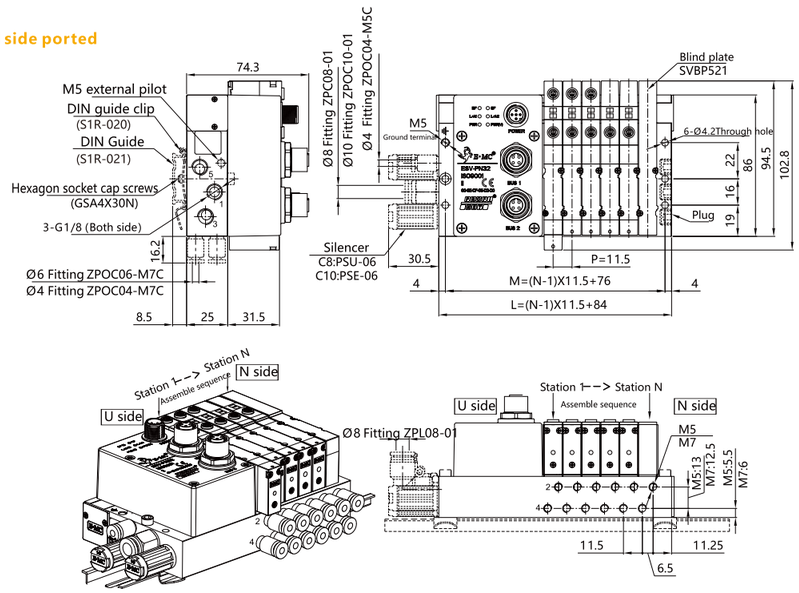
ES1V top ported



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

ES1VM side ported



Note: N means valve link

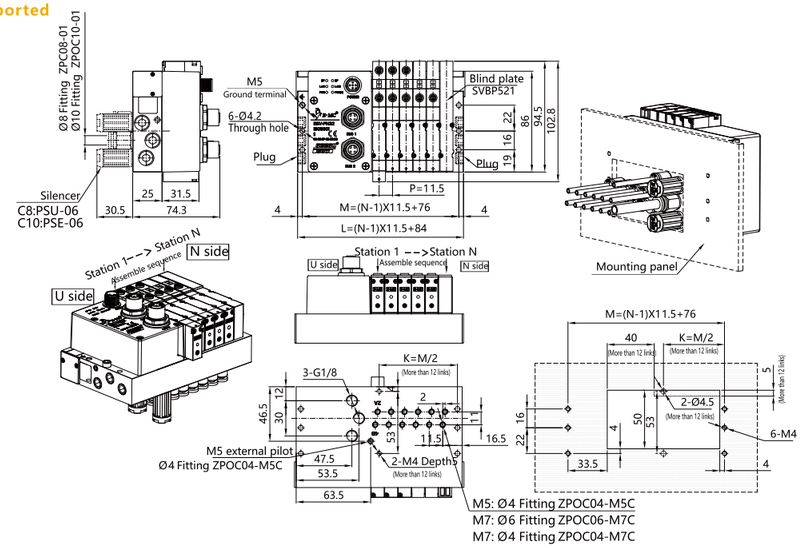
Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L	95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M	87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5

ESV Fieldbus Valve Terminal

1
ESV

◎ Main Dimension

ES1VB bottom ported



Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	
L	95.5	107	118.5	130	141.5	153	164.5	176	187.5	199	210.5	
M	87.5	99	110.5	122	133.5	145	156.5	168	179.5	191	202.5	

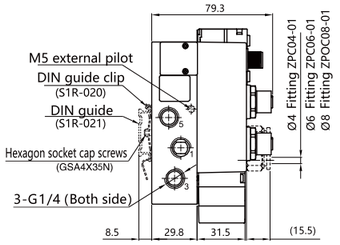
Sign \ Model	13	14	15	16	17	18	19	20	21	22	23	24
L	222	233.5	245	256.5	268	279.5	291	302.5	314	325.5	337	348.5
M	214	225.5	237	248.5	260	271.5	283	294.5	306	317.5	329	340.5
K	107	112.75	118.5	124.25	130	135.75	141.5	147.25	153	158.75	164.5	170.25

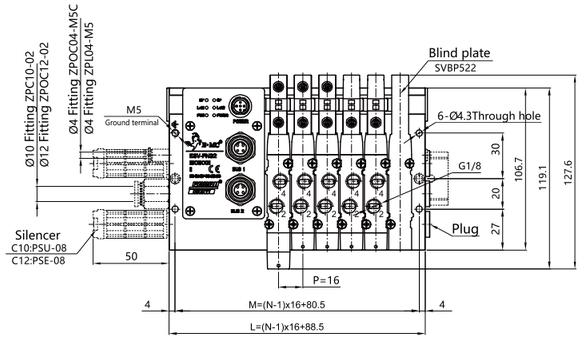
Note: N means valve link

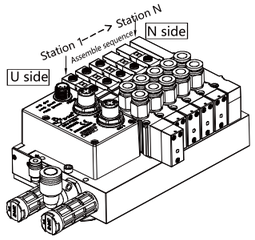
◎ Main Dimension

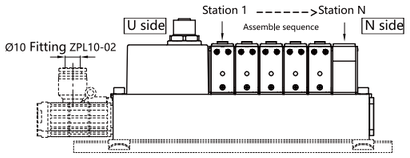
ES2V Valve Terminal

ES2V top ported







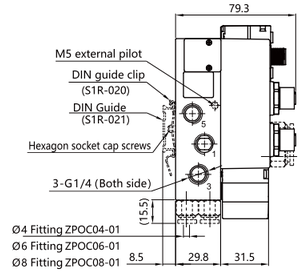


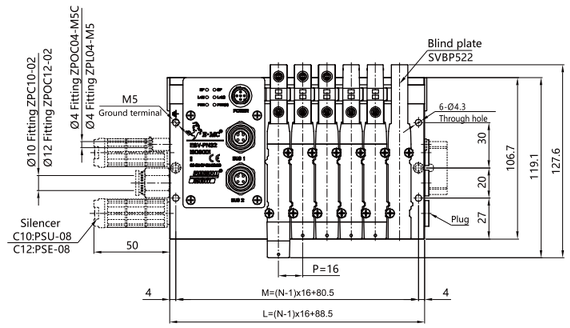
Note: N means valve link

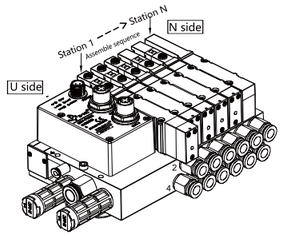
Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L	104.5	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	280.5	296.5	312.5	328.5	344.5	360.5	376.5	392.5	408.5	424.5	440.5	456.5
M	96.5	112.5	128.5	144.5	160.5	176.5	192.5	208.5	224.5	240.5	256.5	272.5	288.5	304.5	320.5	336.5	352.5	368.5	384.5	400.5	416.5	432.5	448.5

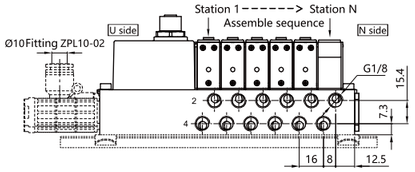
ES2V Valve Terminal

ES2VM side ported









Note: N means valve link

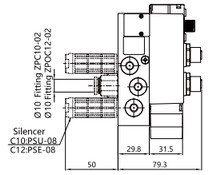
Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L	104.5	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	280.5	296.5	312.5	328.5	344.5	360.5	376.5	392.5	408.5	424.5	440.5	456.5
M	96.5	112.5	128.5	144.5	160.5	176.5	192.5	208.5	224.5	240.5	256.5	272.5	288.5	304.5	320.5	336.5	352.5	368.5	384.5	400.5	416.5	432.5	448.5

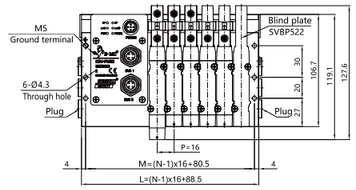
ESV Fieldbus Valve Terminal

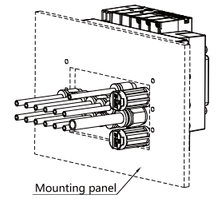
1
ESV

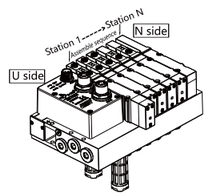
◎ Main Dimension

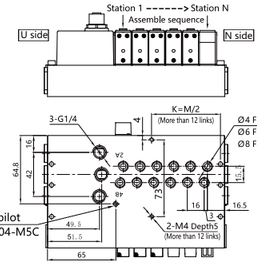
ES2VB bottom ported

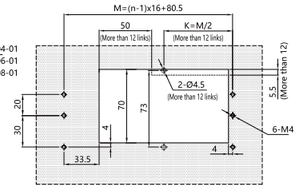








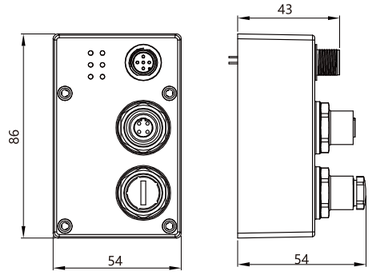




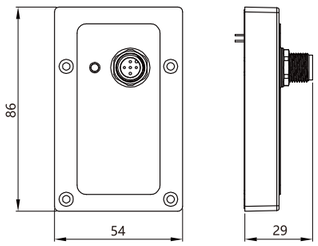
Sign \ Model	2	3	4	5	6	7	8	9	10	11	12	
L	104.5	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	
M	96.5	112.5	128.5	144.5	160.5	176.5	192.5	208.5	224.5	240.5	256.5	
Sign \ Model	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
L	280.5	296.5	312.5	328.5	344.5	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
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



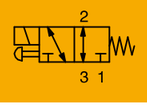
EC/PN Protocol control module



IO-Link Protocol control module

Note: The valve terminal dimensions of ESV-LK and ESV-PN/EC are same ,except the modules.

EHE
Fast-Switching Valves



Product Features

- Direct acting , sensitive action.
- Zero pressure starting, suitable for vacuum application.
- Universal for N.C. &N.O.tpye.
- Coaxial shut–off design, balanced spool without back pressure, no influence from working medium pressure, high anti–dirty and excellent sealing.
- Manual button equipped for convenient 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	Single electronic control	Blank：7ms S：2ms		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

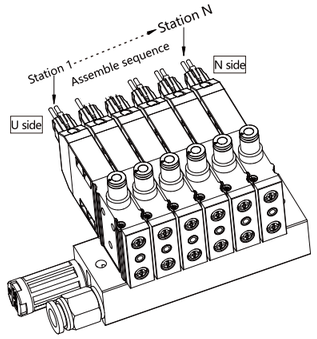
Order Example: EHE series, 3/2 ways, 1 series valve body size, standard coil, Pros that switch as fast as 2 milliseconds, port size M5, voltage DC24V, patch cord wiring length 0.6 meter, ERP code is: EHE3211S-M5E4-0.6M

Valve Terminal

Series No.	3/2 ways	Valve body size	Number of coils	Switch Time	— □ □	Voltage	—	Inlet&Exhaust Port	—	Patch Cord	—	Thread TYPE
EHE:EHE Series	32	1:1series	1:Single electronic control	Blank：7ms S：2ms	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

Code	Port Size	Remark
M5	M5 fitting	Assembly sequence, 1st link start from U side
C4	4 one-touch fitting(ZPOC04-M5C)	
M7	M7:M7 fitting	
C6	6 one-touch fitting(ZPOC6-M7C)	

Code	Port Emtry	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, φ8 PC fitting	ϕ 8	
N	Station N with silencer,φ8 PC fitting		
UN	Both side with silencer, φ8 PC fitting		
UL	U side without silencer, φ8 PC fitting		
NL	Station N with silencer,φ8 PC fitting		
UNL	Both side with silencer, φ8 PC fitting		
U1	U side with silencer, φ10 POC fitting	ϕ 10	
N1	Station N with silencer,φ10 POC fitting		
UN1	Both side with silencer, φ10 POC fitting		



Order Example: EHE series, 1 series valve body size, single electronic controlstandard coil, Pros that switch as fast as 2 milliseconds, port size M5, voltage DC24V, both side without c, fitting ,pug, G thread patch cord wiring length 0.3 meter, ERP code is: EHE3211S-M5E4

Manifold

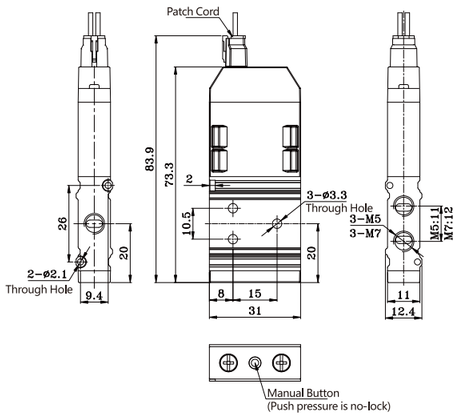
EHE	32	□	N	F	—	Thread Type
EHE Series	3 port, 2 position	1:1 series valve body	1:1station 2:2stations 3:3stations 24:24stations	F:Manifold		Black:G P:PT T:NPT

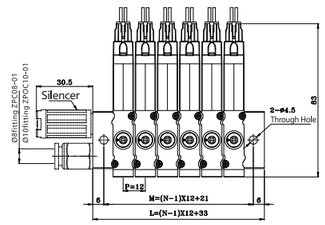
Specifications

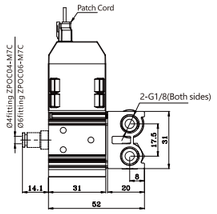
Model	EHE3211-M5	EHE3211-M7	EHE3211S-M5	EHE3211S-M7
Working Medium	Clean Air(After 40 μ m filteration)			
Acting Type	Direct Acting			
Sectional Area(mm²)	1.4 (Cv=0.08)	1.7 (Cv=0.1)	1.4 (Cv=0.08)	1.7 (Cv=0.1)
Port Size	M5	M7	M5	M7
Lubrication	Not Required			
Working Pressure(MPa)	-0.09~0.8			
Guaranteed Pressure(MPa)	1.5			
Working Temperature(°C)	-5~60(No Freezing)			
Voltage Range	DC24V±10%			
Power Consumption	3w		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



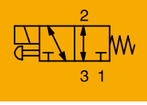




Model/Sign	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L	33	45	57	69	81	93	105	117	129	141	141	165	117	189	201	213	225	237	249	261	273	285	297	309
M	21	33	45	57	69	81	93	105	117	129	129	153	165	177	189	201	213	225	237	249	261	273	285	297

ET307/ETA307

Direct Acting Solenoid Valve(3/2 way)



Product Features

- Direct acting, sensitive action.
- Zero pressure starting, suitable for vacuum application.
- Universal for N.C. & N.O. type, suitable for 8 kinds applications.
- Coaxial shut–off design, balanced spool without back pressure, no influence from working medium pressure, high anti–dirty and excellent sealing.
- Multiple mounting types, manual button equipped for convenient debugging.
- Valve body is made by high strength aluminum alloy, and manufactured at one time, with hard oxidized surface treatment.

How to Order?

Series No.	ID code	—	Port Size	Voltage	Connection Mode	Connector Color	—	Wiring	—	Thread Type	Mounting
ET: ET Series	307		06: 1/8" 08: 1/4"	E1: AC110V E2: AC220V E4: DC24V E5: DC12V E7: AC24V	Blank: DIN type F: Flying leads K: Water proof type L: Plug–in Type	Blank: Brown translucent J: Colorless and translucent B: Black(Black is available for water proof connector only)		Blank:0.3 meter cable 0.6M:0.6 meter cable 1M:1 meter cable (Options for "L:Plug–in type" and "F:Flying leads type" Only)		Blank: G P: PT T: NPT	Blank: No FA: With bracket

Series No.	ID code	—	Port Size	Voltage	Connection Mode	Connector color	—	Patchcord	—	Thread Type	Mounting	—	Stations
ETA: ETA Series	307		06: 1/8"	E1: AC110V E2: AC220V E4: DC24V E5: DC12V E7: AC24V	Blank: DIN type F: Flying leads K: Water proof type L: Plug–in Type	Blank: Brown translucent J: Colorless and translucent B: Black(Black is available for water proof connector only)		Blank:0.3 meter cable 0.6M:0.6 meter cable 1M:1 meter cable (Options for "L:Plug–in type" and "F:Flying leads type" Only)		Blank: G P: PT T: NPT	Blank: No FA: With bracket (Not available for valve group)		2F: 2 Stations 3F: 3 Stations …… 16F: 16 Stations (Available for valve group only)

Order Example:

ET Series，1/8 prot size , AC220V, flying leads，brown translucent，G thread，no mounting , ERP code is: ET307–06E2F

Manifold

Series No.	—	N	F	—	Thread Type
ETA307 Series		2F: 2 Stations 3F: 3 Stations …… 16F: 16 Stations	F: Manifold		Blank: G P: PT T: NPT

Blind Plate

ETABP307
ETA307 Series Blind Plate

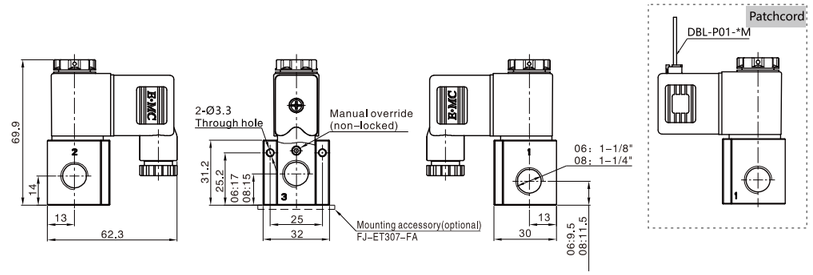
Specifications

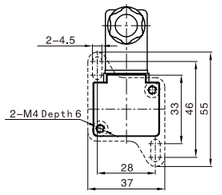
Model No.	ET307–06	ET307–08	ETA307–06
Working Medium	Clean air(After 40 μm filteration)		
Acting type	Direct acting		
Sectional area(mm)	3.2(CV=0.18)	3.4(CV=0.19)	3.2(CV=0.18)
Port size	G1/8	G1/4	G1/8
Lubrication	Not required		
Working Pressure(MPa)	–0.1~0.7		
Max.Pressure(MPa)	1.5		
Working Temperature(℃)	–20~70 (No freezing)		
Voltage Range	–15%~10%		
Power consumption	AC:7VA DC:6.5W		
Insulation Class	F Class		
Protective class	IP65(DIN40050)		
Max. acting frequency	10 cycles/s		
Seals Material	NBR		
Response Time	15ms Below		
Weight (g)	163	159	150

Remark: Max.acting frequency on unload status.

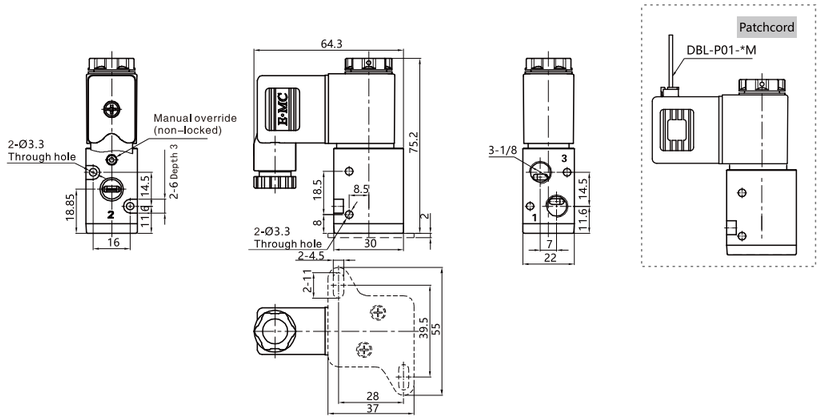
Main Dimension

ET307





ETA307

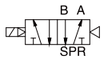


Sign \ Model	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F
M	34	57	80	103	126	149	172	195	218	241
L	46	69	92	115	138	161	184	207	230	253

SR

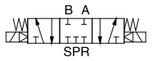
Integrated Manifold (Plug-in Type)

Single control

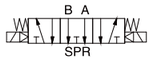


Double control

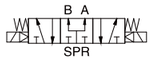
Center close



Center exhaust



Center Pressure



◎ 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:

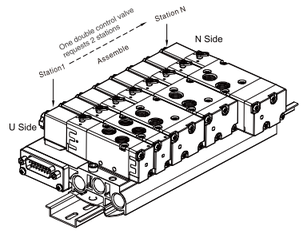
Series No.	Valve Body Size	ID code	— □	□ —	Port Size	Voltage	Mounting Type	—	Thread Type
S: Common type SN: Low power type	1: 1 series 2: 2 series	R: RV series valve	Qty (suitable for same valve, single control 2~14 pieces double control 2~7 pieces) (for mixed valves, maximum manifold is 14 stations Note: double control valve request 2 stations)	See table below	M5: M5 06: 1/8" 08: 1/4"	E4:DC24V E5:DC12V (Only DC24V for low power type)	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

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

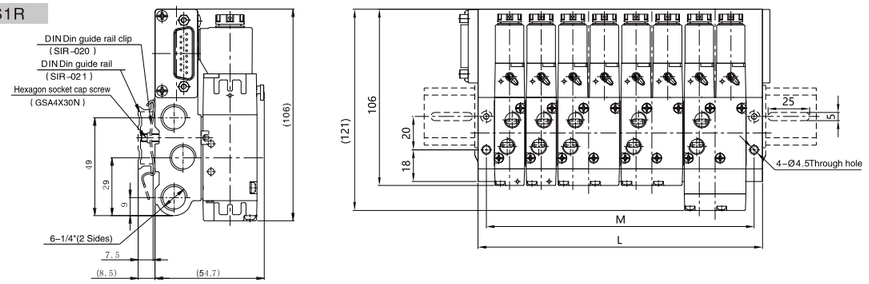
Order Example: SR series integrated manifold，Valve Group,Length of cable:3 meters，ERP code is: D15-15-3M

◎ 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(mm^2)	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 filteration)			
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(℃)	–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)	Within 25ms			
Weight(g)	S1R5212：196 ; S1R5312：230		S2R5222：351 ; S2R5322：409	

◎ Main Dimension

S1R



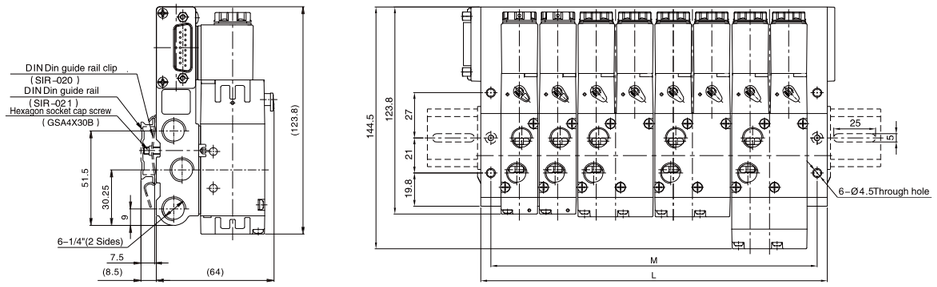
* The hole positions of Din guide rail can't be specified, its may change randomly.

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



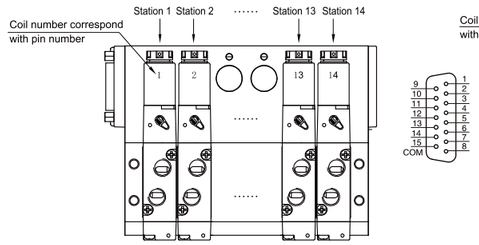
*The hole positions of Din guide rail can't be specified, its may change randomly.

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

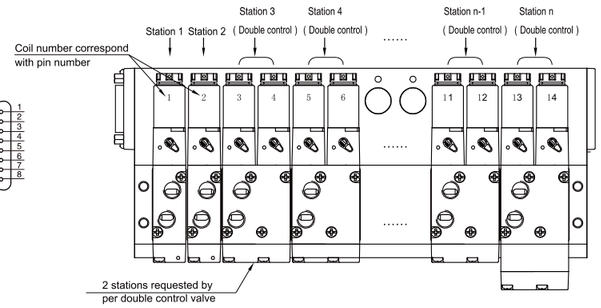
(mm)

◎ Internal Wiring Diagram

Wiring diagram of single control valves (14 stations maximum)

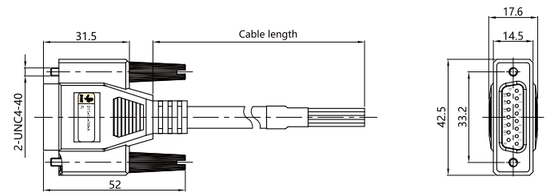


Wiring diagram of mixed single control and double control



Coil Specification

Wiring diagram and specification for cable of SR series

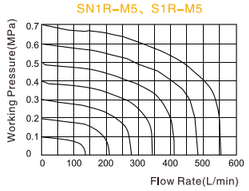


Connecting cable pin diagram	PIN number & Wire Color		
	Pin number	Wire color	
		D15-15	D15-08
	1	Red and black	Red
	2	Red	Yellow
	3	Orange and black	Blue
	4	Orange	Orange
	5	Yellow and black	Purple
	6	Yellow	Brown
	7	Pink	Green
	8	Blue	— —
	9	Green	— —
	10	Light green	— —
	11	Purple	— —
	12	White	— —
	13	Brown	— —
	14	Gray	— —
	15(COM)	Black	Black

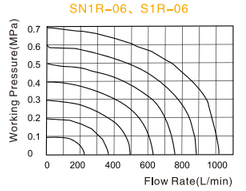
COM

◎ Flow Chat

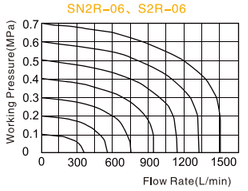
SN1R-M5、S1R-M5



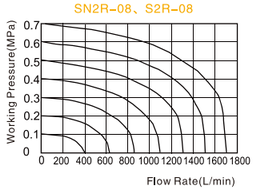
SN1R-06、S1R-06



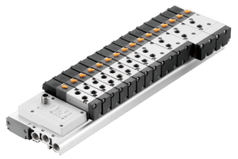
SN2R-06、S2R-06



SN2R-08、S2R-08



ESR
Valve Terminal



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	—	Mounting	—	Thread Type

ES: Valve Terminal

1: 1 Series
2: 2 Series

R:RV series valve

Code	Communication Protocol	Output
Lk16	IO-Link	16

Qty
(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.)

Code	Function	Remark
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	

M5:M5
06:1/8"
08:1/4"

E4: DC24V

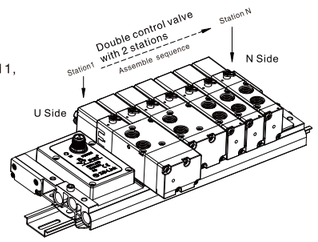
Blank: Without accessories
D: With DIN guide rail clip and 1M guide rail
D0: With DIN guide rail clip, no guide rail
(DIN guide rail packed separately)

Blank: G

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.

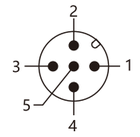


Specifications

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	150mA below
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℃
Working temperature		–10 ~ 50℃

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

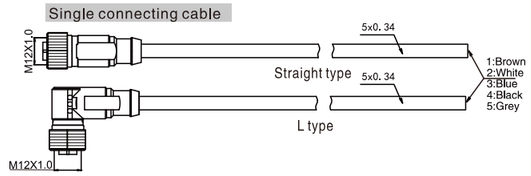
M125	□	—	PVC	—	□

M12 Female 5 cores
single connecting cable

R: Straight type
RL: L type

2 meters cable
5 meters cable
(Other length can be customized)

Single connecting cable



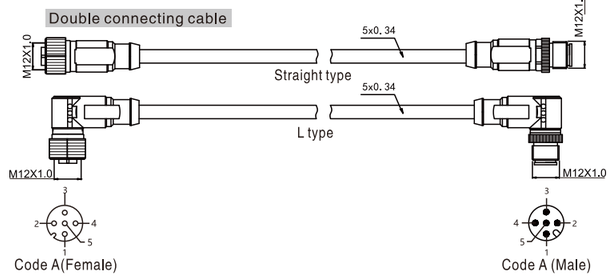
M12M125	□	—	PVC	—	□

M12, 5 cores
double connecting cable

R: Straight type：M12 male connectors ◀▶M12 female connectors
RL: L type：M12 male connectors ◀▶M12 female connectors

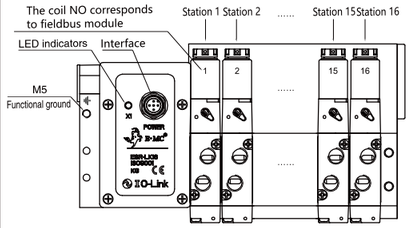
2 meters cable
5 meters cable
(Other length can be customized)

Double connecting cable

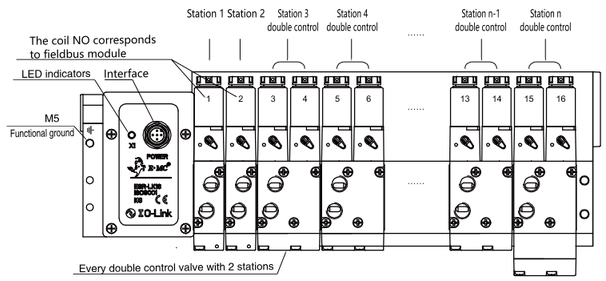


Wiring Diagram

Single control wiring (Max. 16 stations)



Single/Double control wiring mixed (Max. 8 stations for double control)

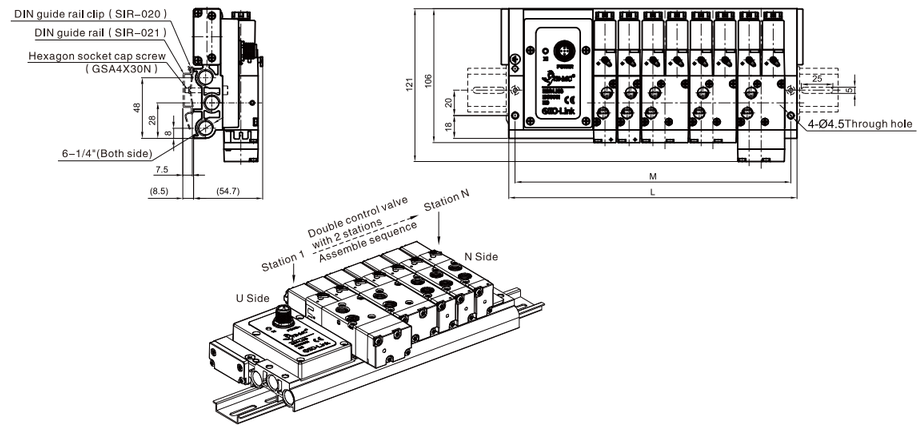


Precautions for Use

1. Do not disassembly, modify (including replacing printed circuit boards) or replace without authorization, which may result in injury or failure.
2. 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.
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 interlocking circuit:
   (1) Provide double interlocking systems, such as mechanical system;
   (2) Check regularly whether the product is operating normally; Otherwise, malfunctions may occur and lead to accidents.
5. 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.
6. 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.
7. 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 ratio 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 provides the load voltage through the B–type port, using A–type port, adding power supply should be provided.

Main Dimension

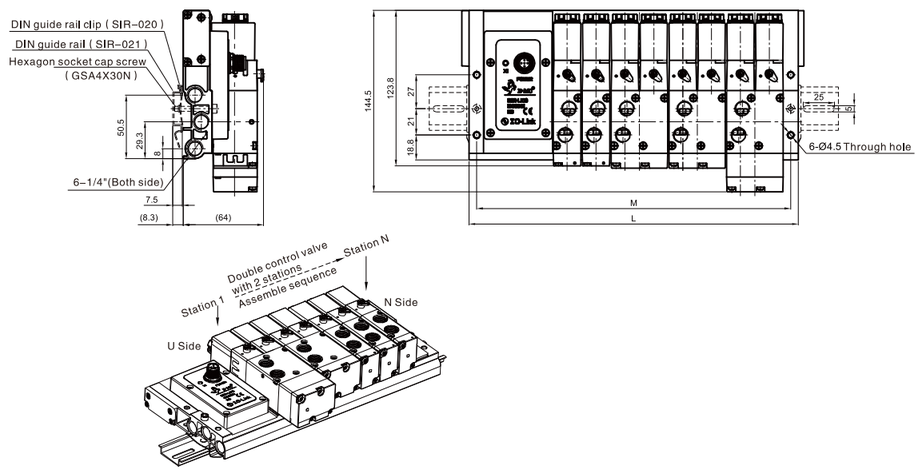
ES1R Series



Note: N means valve link

Sign \ Model	ES1R3S	ES1R4S	ES1R5S	ES1R6S	ES1R7S	ES1R8S	ES1R9S	ES1R10S	ES1R11S	ES1R12S	ES1R13S	ES1R14S	ES1R15S	ES1R16S
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

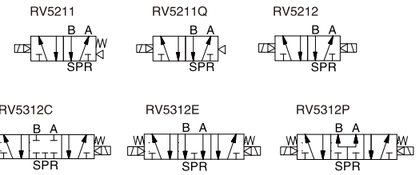


Note: N means valve link

Sign \ Model	ES2R3S	ES2R4S	ES2R5S	ES2R6S	ES2R7S	ES2R8S	ES2R9S	ES2R10S	ES2R11S	ES2R12S	ES2R13S	ES2R14S	ES2R15S	ES2R16S
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	—	Patchcord	—	Thread Type
N	1：1Series 2：2Series 3：3Series 4：4Series	R: Standard armature +Engergy saving coil	2:2 positions 3:3 positions	5:5 ways	1: Single control 2:Double control	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 Serise 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: 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 "L:Plug-in type" Only)		Blank: G P: PT T: NPT

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

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(排气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 filteration)							
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	DC24V:0.6W	DC24V:0.7W AC220V:0.9VA AC110V:1.4VA						
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

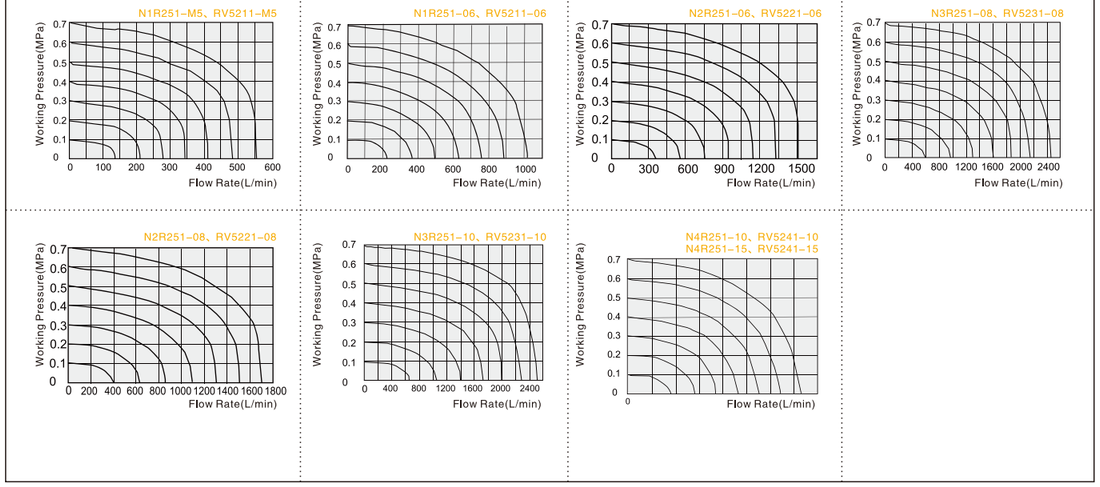
Series No.	Ways	Positions	Valve Body Size	Controls	Original Status	—	Port Size	Reset Form	Voltage	Connection Mode	Cover Color	Acting Type	—	Patchcord	—	Thread Type
RV	5:5 ways	2:2 positions 3:3 positions	1：1Series 2：2Series 3：3Series 4：4Series	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		M5：M5 06：1/8" 08：1/4" 10：3/8" 15：1/2"	Blank: Spring Q：Air (Only single control)	E1：AC110V E6：AC36V E2：AC220V E7：AC24V E3：AC380V E8：DC110V E4：DC24V E9：DC48V E5：DC12V 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 (K/M connector is only available in black)	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 "L:Plug-in type" and "F:Flying leads type" Only)		Blank: G P: PT T: NPT

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

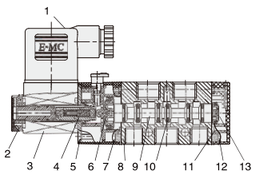
Model No.	RV5211-M5 RV5212-M5 RV5312-M5	RV5211-06 RV5212-06 RV5312-06	RV5221-06 RV5222-06 RV5322-06	RV5221-08 RV5222-08 RV5322-08	RV5231-08 RV5232-08 RV5332-08	RV5231-10 RV5232-10 RV5332-10	RV5241-10 RV5242-10 RV5342-10	RV5241-15 RV5242-15 RV5342-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	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 filteration)							
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

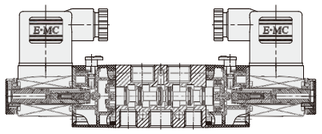


◎ Internal Structure

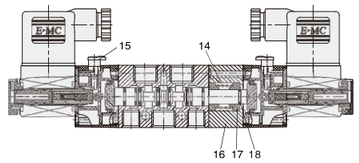
Single Solenoid Valve



Double Solenoid Valve



5/3 Solenoid Valve

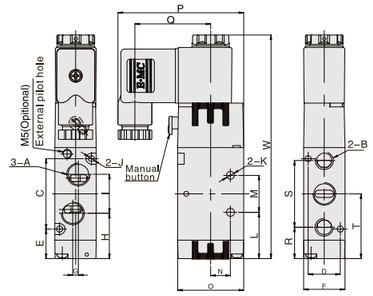


No.	Part Name	Material
1	Connector	Engineered plastics
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	Engineered plastics
5	Plate	Carbon steel
6	Piston	POM
7	Pilot seat	Engineered plastics
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O–ring	HNBR
11	Rear cover	Engineered plastics
12	Filter	Synthetic 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

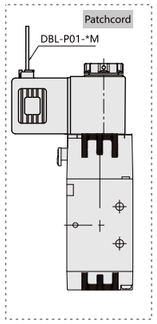
◎ Main Dimension

Single Solenoid Valve

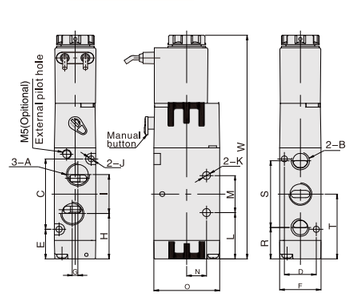
DIN Type



Patchcord



Flying Leads Type



(mm)

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

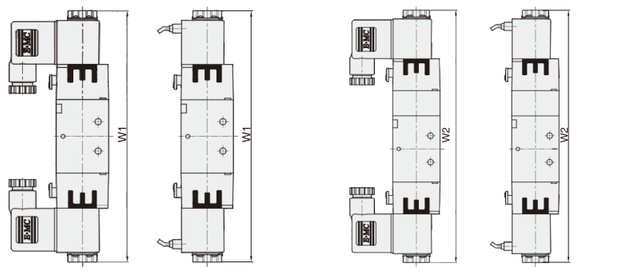
5/3 Solenoid Valve

DIN Type

Flying Leads Type

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

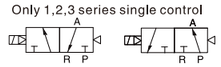
Model\Sign	W2
RV5312–M5	158.2
RV5312–06	158.2
RV5322–06	190.4
RV5322–08	190.4
RV5332–08	209.4
RV5332–10	209.4
RV5342–10	244.4
RV5342–15	244.4

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

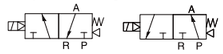
RV

Standard/ Low Power Solenoid Valve (3/2)

Only 1,2,3 series single control



Only 4 series single control



Double control

◎ 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	—	Patchcord	—	Thread Type
N	1：1Series 2：2Series 3：3Series 4：4Series	R: Standard armature + Engergy saving coil	2：positions	3：3 ways	1: Single control 2: Double control	Blank: Normal close H: Normal open		M5：M5 06：1/8" 08：1/4" 10：3/8" 15：1/2"	Blank: Spring (4 series single control only) Q:Air (1,2,3 series single 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 availale for water proof connector)	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 "L:Plug–in type" Only)		Blank：G P：PT T：NPT

Order Example:

RV series engergy 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 μm filteration)							
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	DC24V:0.6W		DC24V:0.7W AC220V:0.9VA AC110V:1.4VA					
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	Patchcord	Thread Type
RV	3: 3 ways	2: 2 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2: Double control	Blank: Normal close H: Normal open	M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Spring (Only 4 series single control) Q: Air (1,2,3 series single control)	E1: AC110V E6: AC36V E2: AC220V E7: AC24V E3: AC380V E8: DC110V E4: DC24V E9: DC48V E5: DC12V 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 Waterproof DIN connector)	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 "L:Plug-in type" and "F:Flying leads type" Only)	Blank: G P: PT T: NPT

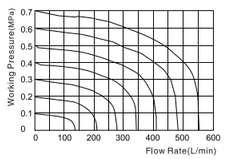
Order Example:
RV series solenoid valve, 2 series valve body size, 3/2 ways, single control, 1/8" port size, air return, standard coil, AC220V, DIN connector, G thread, ERP code is :RV3221-06QE2

Specifications

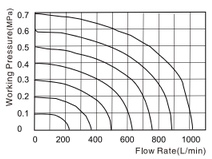
Model No.	RV3211-M5 RV3212-M5	RV3211-06 RV3212-06	RV3221-06 RV3222-06	RV3221-08 RV3222-08	RV3231-08 RV3232-08	RV3231-10 RV3232-10	RV3241-10 RV3242-10	RV3241-15 RV3242-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm)	2 way:5.5(CV=0.31)	2 way:12(CV=0.67)	2 way:14(CV=0.78)	2 way:16(CV=0.89)	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 μm filteration)							
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

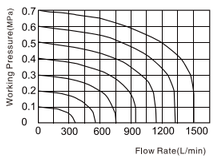
N1R231-M5、RV3211-M5



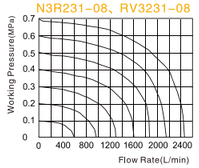
N1R231-06、RV3211-06



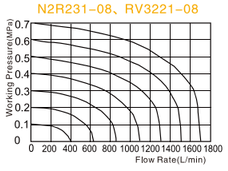
N2R231-06、RV3221-06



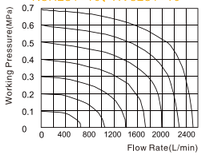
N3R231-08、RV3231-08



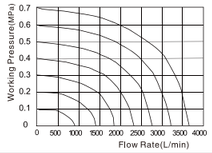
N2R231-08、RV3221-08



N3R231-10、RV3231-10

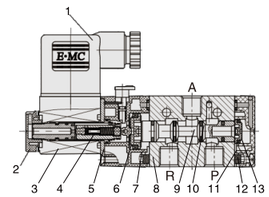


N4R231-10、RV3241-10
N4R231-15、RV3241-15

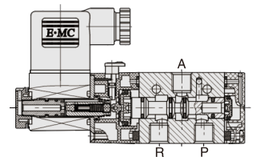


Internal Structure

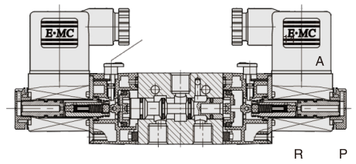
Single Solenoid Valve(Normal close)



Single Solenoid Valve(Normal open)



Double solenoid valve(Normal close)

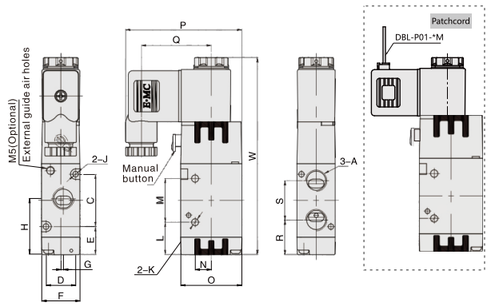


No.	Part Name	Material
1	Connector	Engineered plastics
2	Nut	POM
3	Coil	Cu+ Thermosetting resin
4	Pilot units	Pure iron + copper + stainless steel
5	Plate	Carton steel
6	Piston	POM
7	Pilot seat	Engineered plastics
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	NBR
11	Rear cover	Engineered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

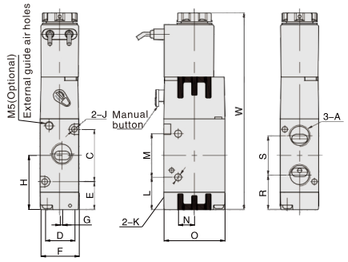
Main Dimension

Single Solenoid Valve

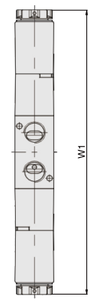
DIN Type



Flying Leads Type



Double Solenoid Valve



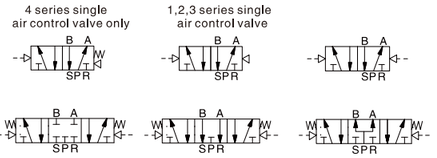
(mm)

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.

RV

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



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:

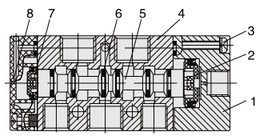
RV series air control valve, 5/2 way, 2 series valve body size, single control, 1/8" port size, air return, G thread,
ERP code is: RVA5221–06Q

Specifications

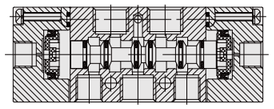
Model No.	RVA5211–M5 RVA5212–M5 RVA5312–M5	RVA5211–06 RVA5212–06 RVA5312–06	RVA5221–06 RVA5222–06 RVA5322–06	RVA5221–08 RVA5222–08 RVA5322–08	RVA5231–08 RVA5232–08 RVA5332–08	RVA5231–10 RVA5232–10 RVA5332–10	RVA5241–10 RVA5242–10 RVA5342–10	RVA5241–15 RVA5242–15 RVA5342–15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	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 filteration)							
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

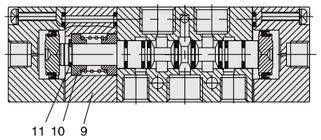
Single Air Control



Double Air Control

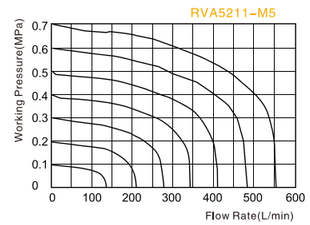


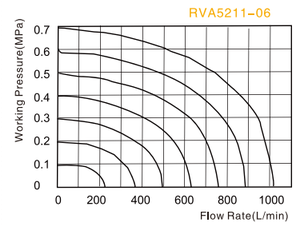
5/3 Ways Solenoid Valve

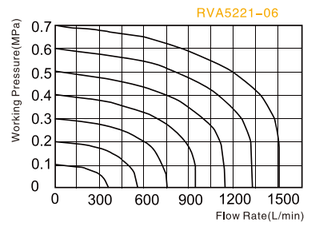


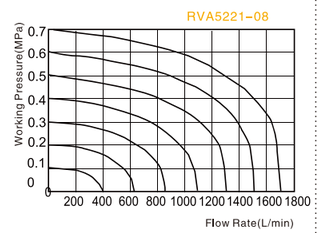
No.	Part Name	Material
1	Air Control Cover	Aluminum Alloy
2	Piston	POM
3	Screw	Carbon Steel
4	Valve Body	Aluminum Alloy
5	Spool	Aluminum Alloy
6	O–ring	NBR
7	Piston	POM
8	Rear Cover	Zinc Alloy
9	Back Seat	Aluminum Alloy
10	Spring Seat	Aluminum Alloy
11	C–type Buckle	65Mn

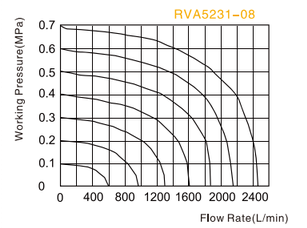
Flow Chat

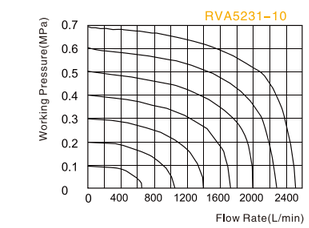


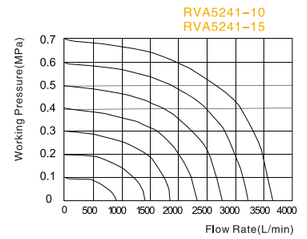






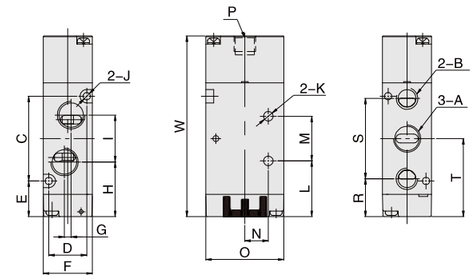




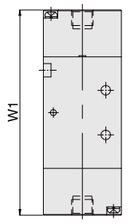


Main Dimension

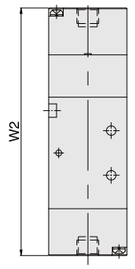
Single Air Control



Double Air Control



5/3 Ways Solenoid Valve



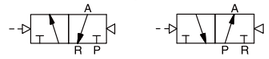
Model\Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	W	W1	W2
RVA5211–M5	M5	M5	30	13	16.5	18	0	24.5	14.1	3.3	3.3	24.5	14	9.5	27	G1/8	17.9	27.2	31.5	72	81	96
RVA5211–06	G1/8	G1/8	30	13	16.5	18	3	23.5	16	3.3	3.3	24.5	14	9.5	27	G1/8	17.5	28	31.5	72	81	96
RVA5221–06	G1/8	G1/8	38	17	16	22	0	26	18	3.3	4.3	25	20	10.5	35	G1/8	17	36	35	81	92	111
RVA5221–08	G1/4	G1/8	38	17	16	22	3	24.5	21	3.3	4.3	25	20	10.5	35	G1/8	17	36	35	81	92	111
RVA5231–08	G1/4	G1/4	50	20	19.1	27	0	33.1	22	4.3	4.3	32.1	24	13.5	40	G1/8	21.6	45	44.1	99.6	111	130
RVA5231–10	G3/8	G1/4	50	20	19.1	27	4	32.1	24	4.3	4.3	32.1	24	13.5	40	G1/8	21.6	45	44.1	99.6	111	130
RVA5241–10	G3/8	G3/8	72	27	21	34	0	39	36	4.3	5.2	43	28	17.5	50	G1/8	25.5	63	57	127	140	161
RVA5241–15	G1/2	G1/2	72	27	21	34	4	39	36	4.3	5.5	43	28	17.5	50	G1/8	25.5	63	57	127	140	161

RV Series Air Control Valve (3/2 way)

RV

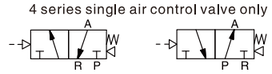
Air Control Valve(3/2)

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:

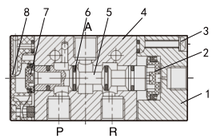
RVA series air control valve, 3/2 way, 2 series valve body size, single control, NC type, 1/4" port size, air return, G thread
ERP code is: RVA3221–08Q

Specifications

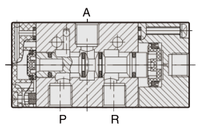
Model No.	RVA3211–M5 RVA3212–M5	RVA3211–06 RVA3212–06	RVA3221–06 RVA3222–06	RVA3221–08 RVA3222–08	RVA3231–08 RVA3232–08	RVA3231–10 RVA3232–10	RVA3241–10 RVA3242–10	RVA3241–15 RVA3242–15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 40 μm filteration)							
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

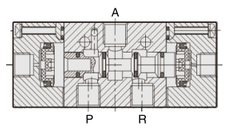
Single Air Control(N.C)



Single Air Control(N.O)



Double Air Control

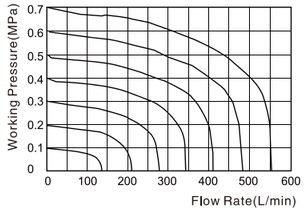


No.	Part Name	Material
1	Air Control Cover	Aluminum Alloy
2	Piston	POM
3	Screw	Carbon Steel
4	Valve Body	Aluminum Alloy
5	Spool	Aluminum Alloy
6	O–ring	NBR
7	Piston	POM
8	Rear Cover	Zinc Alloy

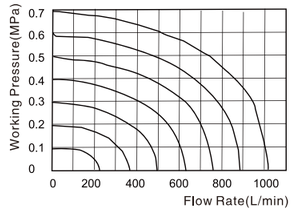
1
RVA(2/3)

Flow Chat

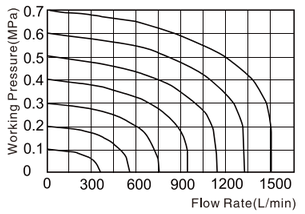
RVA3211–M5



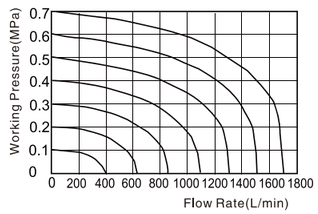
RVA3211–06



RVA3221–06

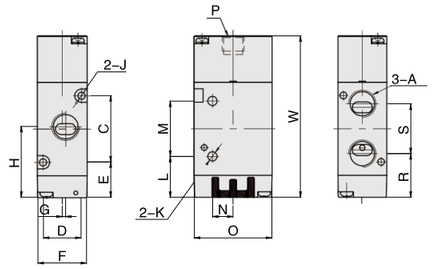


RVA3221–08

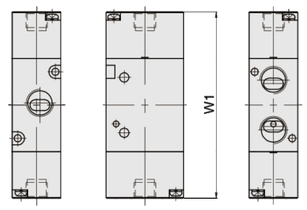


Main Dimension

Single Air Control



Double Air Control

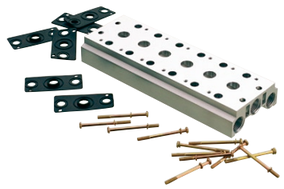


Model/Sign	A	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	W	W1*
RVA3211–M5	M5	19	13	16.5	18	0	26	3.3	3.1	15.5	21	6	27	G1/8	18.9	14.2	61	70
RVA3211–06	G1/8	19	13	16.5	18	1.5	27	3.3	3.1	15.5	21	6	27	G1/8	18	16	61	70
RVA3221–06	G1/8	30	17	16	22	0	31	3.3	4.2	18.5	25	9.3	35	G1/8	20	22	73	84
RVA3221–08	G1/4	30	17	16	22	1.5	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.

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

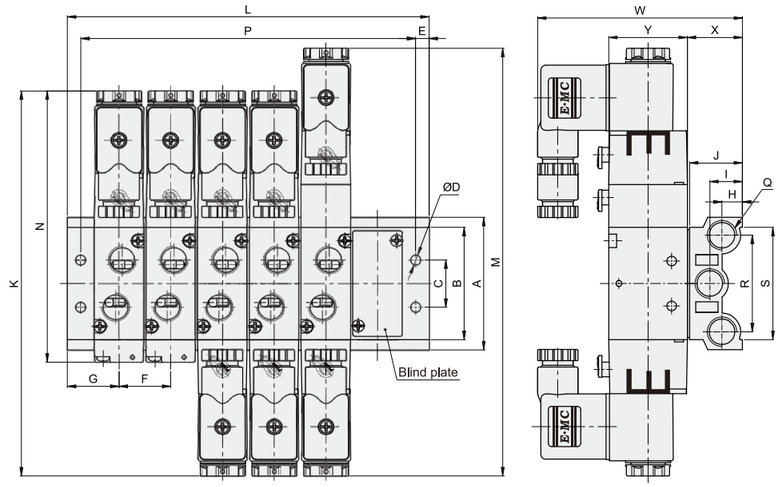
Order Example:
* Blind plate for 5/2 valve, 2 series valve body, Model: VBP–522

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)

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	–	–	–	–	–	–	–	–	–

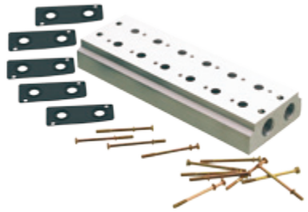
Model/Sign	A	B	C	D	E	F	G	H	I	J
V521–□F	58	43	20	4.5	5	19	19	9.5	14	23
V522–□F	59	50	21	4.5	6	23	23	9.5	15	23.5
V523–□F	75	64	26	4.5	6	28	27	12	17.5	28
V524–□F	98	94	32	5.5	7	35	31.5	16	21.5	35

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: V series
- 32: 3/2 way
- 1: 1:1 series valve body; 2:2 series valve body; 3:3 series valve body; 4:4 series valve body
- N: 1:1 station; 2:2 stations; 3:3 stations; ..... ; 16:16 stations
- F: Manifold
- Thread Type: 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

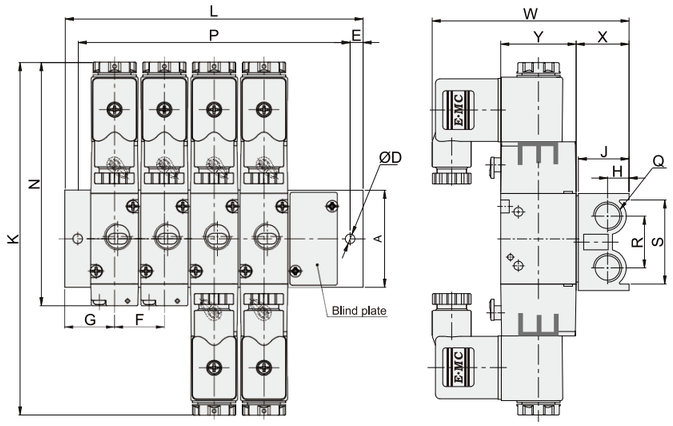
- VBP: V series blind plate (for V series manifold)
- 32: 3/2 way
- 2: 1:1 series valve body; 2:2 series valve body; 3:3 series valve body; 4:4 series valve body

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



(mm)

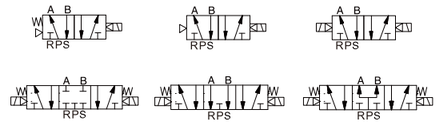
Model\Sign	L										A	D	E	F	G	H	J	K
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F								
V321–□F	38	57	76	95	114	133	152	171	190	209	31	4.5	5.25	19	18	7.75	19	132.2
V322–□F	46	69	92	115	138	161	184	207	230	253	45	4.5	6	23	23	10	23.5	163.4
V323–□F	54	82	110	138	166	194	222	250	278	306	50	4.5	6	28	26	12	28	175.4
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

RV

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

(4 series single control valve only)　　(1,2,3 series single control valve)



◎ 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

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

Order Example:

RV series Engergy 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 μm filteration)							
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	DC24V:0.6W	DC24V:0.7W　AC220V:0.9VA　AC110V:1.4VA						
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 E6: AC36V E2: AC220V E7: AC24V E3: AC380V E8: DC110V E4: DC24V E9: DC48V E5: DC12V 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: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

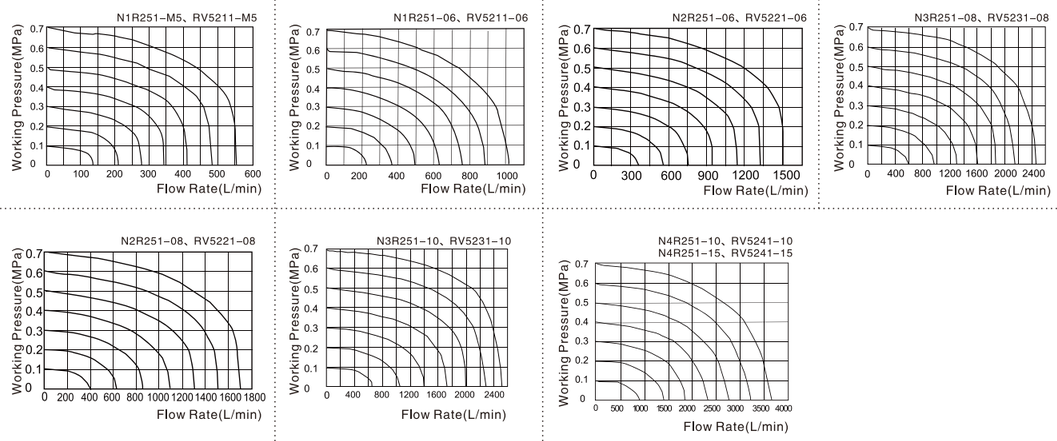
Order Example:

RV series solenoid valve,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

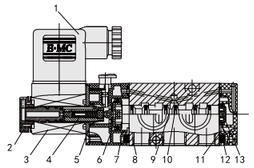
Model	RV5211-M5QM RV5212-M5M RV5312-M5M	RV5211-06QM RV5212-06M RV5312-06M	RV5221-06QM RV5222-06M RV5322-06M	RV5221-08QM RV5222-08M RV5322-08M	RV5231-08QM RV5232-08M RV5332-08M	RV5231-10QM RV5232-10M RV5332-10M	RV5241-10M RV5242-10M RV5342-10M	RV5241-15M RV5242-15M RV5342-15M
Port Size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	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 μm filteration)							
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

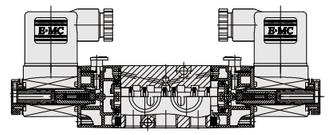


Internal Structure

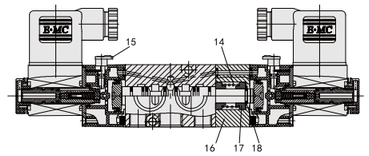
Single Solenoid Valve



Double Solenoid Valve



5/3 Ways Solenoid Valve

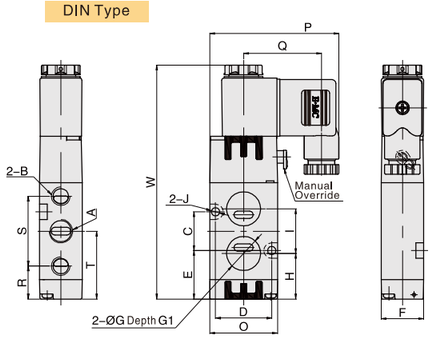


No.	Part Name	Material
1	Connector	Engineered plastics
2	Fixing Nut	POM
3	Coil	Brass+Thermoset Resin
4	Pilot Units	Pure Iron+Brass +Stainless Steel
5	Plate	Carton Steel
6	Piston	POM
7	Pilot Seat	Engineered plastics
8	Valve Body	Aluminum Alloy
9	Spool	Aluminum Alloy
10	O ring	NBR
11	Rear Cover	Engineered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

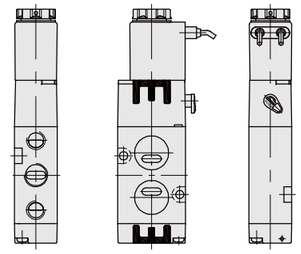
Main Dimension

Single Solenoid Valve

DIN Type



Flying Lead Type



(mm)

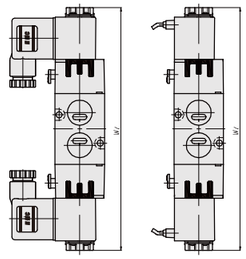
Model/Sign	A	B	C	D	E	F	G	G1	H	I	J	O	P	Q	R	S	T	W
RV5221-08QM	G1/4	G1/8	20	29	25	22	17.6	1.5	23.5	23	4.3	35	66.7	40.2	17	36	35	120.7
RV5231-08QM	G1/4	G1/4	24	32	32.1	27	19.6	1.5	32.1	24	5.2	40	69.2	40.2	21.6	45	44.1	139.3
RV5231-10QM	G3/8	G1/4	24	32	32.1	27	19.6	1.5	32.1	24	5.2	40	69.2	40.2	21.6	45	44.1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

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

Double Solenoid Valve

DIN Type

Flying Lead Type

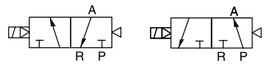


Model/Sign	W1
RV5222-08QM	171.4
RV5232-08QM	190.4
RV5232-10QM	190.4

RV

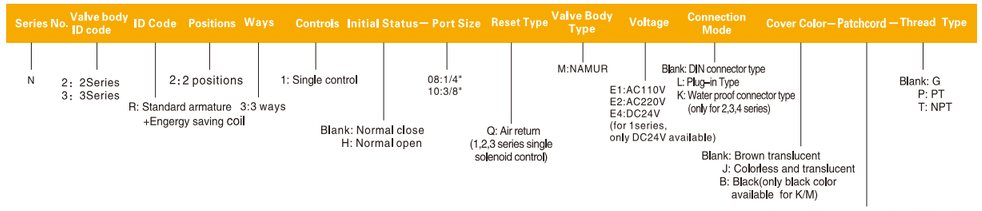
NAMUR Solenoid Valve (3/2)

Single control valve only



How to Order?

Low Power Solenoid Valve



Order Example:

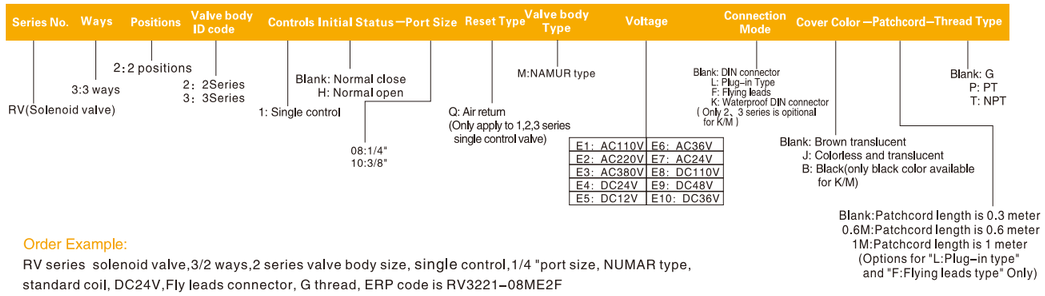
RV series low power solenoid valve,3/2 ways,2 series valve body size, single control,1/8 "port size, NUMAR type, DC24V,DIN connector, G thread, ERP code is N2R231-06ME4

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 μm filteration)		
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(℃)	-20~70（Dry air）		
Voltage Range	-15%~10%		
Power Consumption	DC24V:0.7W AC220V:0.9VA AC110V:1.4VA		
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



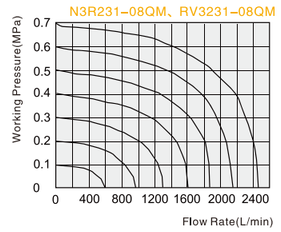
Order Example:

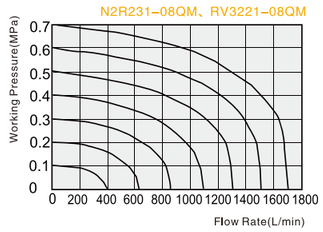
RV series solenoid valve,3/2 ways,2 series valve body size, single control,1/4 "port size, NUMAR type, standard coil, DC24V,Fly leads connector, G thread, ERP code is RV3221-08ME2F

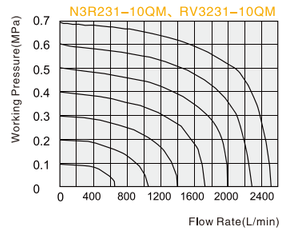
Specifications

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 μm filteration)		
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(℃)	-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



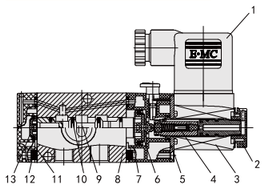




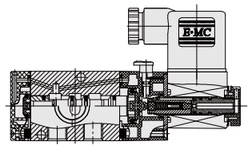
Flow Rate(L/min)

Internal Structure

Single Air Control(N.C)



Single Air Control(N.O)

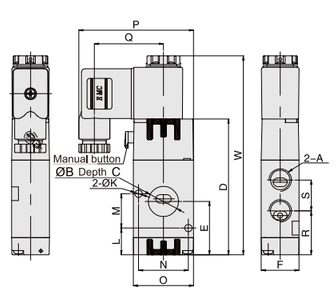


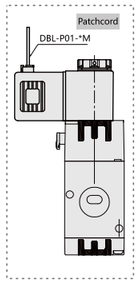
No.	Part Name	Material
1	Connector	Engineered plastics
2	Fixing Nut	POM
3	Coil	Brass+Thermoset Resin
4	Pilot Units	Pure iron+Brass +Stainless Steel
5	Plate	Carton Steel
6	Piston	POM
7	Pilot Seat	Engineered plastics
8	Valve Body	Aluminum Alloy
9	Spool	Aluminum Alloy
10	O ring	NBR
11	Rear Cover	Engineered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

Main Dimension

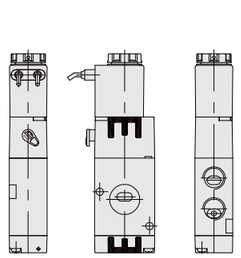
Single Solenoid Valve

DIN Type





Flying Lead Type



(mm)

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.

1
RVA Namur Type

RV

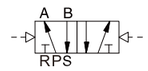
NAMUR Air Control Valve(3/2, 5/2)

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	Bland：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 filteration)		
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(℃)	-20~70 (No freezing)		
Insulation Class	F Class		
Max.acting frequnency	2 Positon：5 Cycles/s		

Note: 2P：2 Position 3P：3 Position

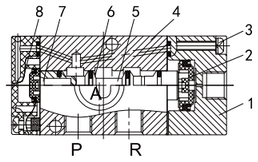
Specifications

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 filteration)		
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(℃)	–20~70 (No freezing)		
Max.acting frequnency	5 Cycles/s		

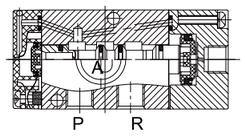
Internal Structure

3/2 Way

Single Air Control(N.C)



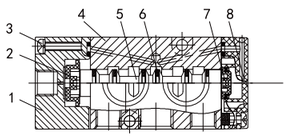
Single Air Control(N.O)



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

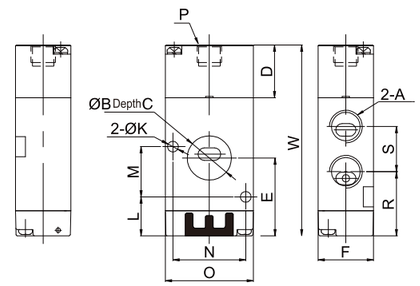


No.	Part Name	Material
1	Air Control Cover	Aluminum alloy
2	Piston	POM
3	Nut	Carbon steel
4	Valve body	Aluminum alloy
5	Spool	Aluminum alloy
6	O–ring	NBR
7	Piston	POM
8	Rear cover	Zinc Alloy
9	Back seat	Aluminum alloy
10	Spring seat	Aluminum alloy
11	C type buckle	65Mn

Main Dimension

3/2 Way

Single Air Control



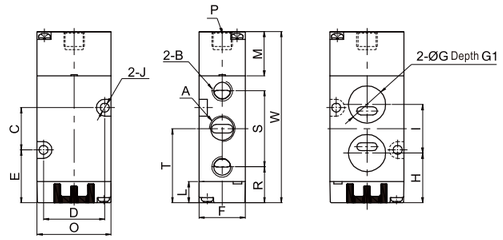
(mm)

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

Single Air Control



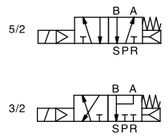
(mm)

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 demensions.

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 E6：AC36V E7：AC24V E8：DC110V E9：DC48V E10：DC36V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank:Black	Blank: G P: PT T: NPT

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

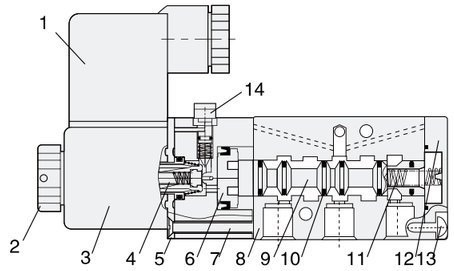
Specifications

Model No.	V523231–08MR	V523231–08MG
Port size	1/4❶	
Sectional area(mm²)	25(CV=1.40)	
Working medium	Clean air(After 40 μ m filteration)	
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℉)(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

❶ G、PT、NPT thread type is optional.

Internal Structure

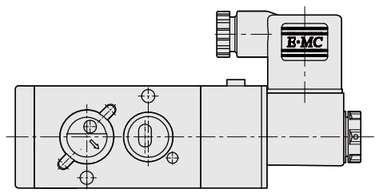
Single Solenoid Valve



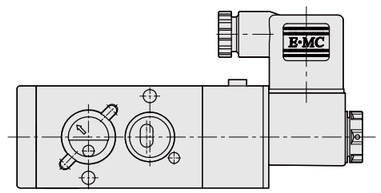
NO.	Part Name	Material
1	Connector	Engineered plastics
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Screw	Carbon steel
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O–ring	HNBR
11	Spring	Stainless steel
12	Rear cover	Zinc alloy
13	Screw	Carbon steel
14	Manual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

How to Mount?

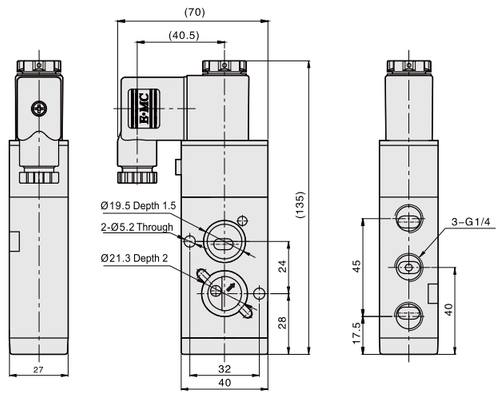
2/5 way



2/3 way



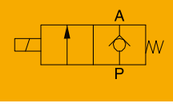
Main Dimension



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 +Engergy 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 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: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

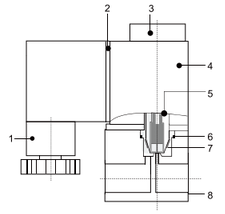
Order Example:

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

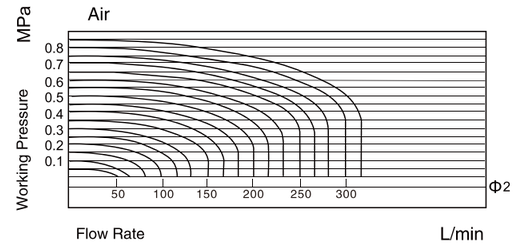
Model No.	NM221–06	NM221–08	V221–06	V221–08
Working medium	Air. water. oil			
Acting type	Direct acting			
Orifice (mm)	2			
Port size	1/8	1/4	1/8	1/4
Lubrication	Not required			
Working pressure (MPa)	0~0.8			
Guaranteed pressure (MPa)	1.2			
Working temperature (℃)	–5~60(No freezing)			
Voltage range	–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

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

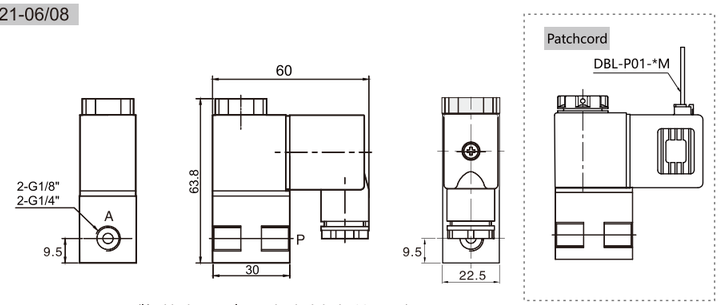


Main Parts Material

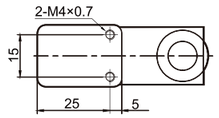
Part name	Material
Valve body	Aluminum alloy
Connector	Engineered plastics
Connector washer	NBR (FPM)
Pilot units	Pure steel+Cu+Stainless steel
Diaphragm	NBR
Nut	POM+Carbon steel
Coil	Brass Wire covered with heat resistance colophony

Main Dimension

V221-06/08



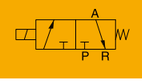
(If with the steel nut, the height is 60.7mm)



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	Blank: Standard valve body P: Europeans valve body (Only for 3/2 way)	M: Standard armature +Engergy saving coil	2:2 positions	3:3 ways	1: Single control	M5: M5 06: 1/8 "	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	Blank：1Valve (No mounting accessory) 2F:2 Valves 3F:3 Valves ..... 20F:20 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 VP	3:3 ways	2:2 positions	1: Single control	V321 M5:M5 06: 1/8 " VP321 06: 1/8 "	Blank: Standard type	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: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	Blank：1Valve (No mounting accessory) 2F:2 Valves 3F:3 Valves ..... 20F:20 Valves

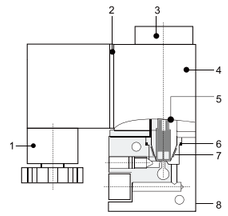
Note: Only V series solenoid valve has port size M5 and only the 1 valve type (no mounting accessory)

Order Example:
N series solenoid valve, standard pilot+Engergy 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 filteration)					
Acting type	Direct acting					
Orifice (mm)	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

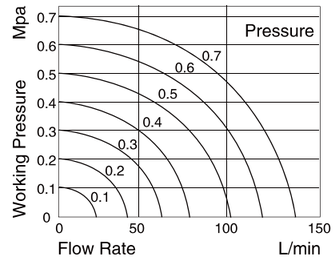


No.	Designation
1	Connector
2	Connector washer
3	Nut
4	Coil
5	Pilot units
6	O-Ring
7	Spring
8	Valve body

Main Parts Material

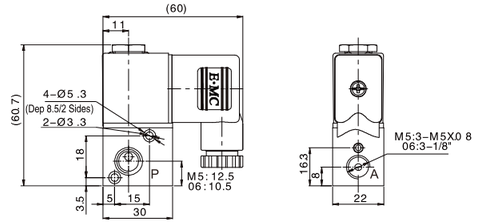
Part name	Material
Valve body	Aluminum alloy
Connector	Engineered plastics
Connector washer	NBR
Pilot units	Pure steel+Cu+Stainless steel
Nut	POM+Carbon steel
Coil	Brass Wire covered with heat resistance colophony

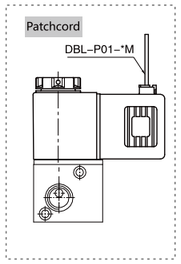
Flow Chat



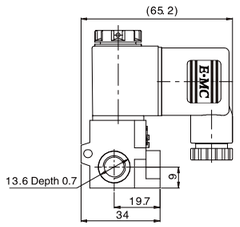
Main Dimension

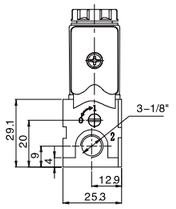
V321

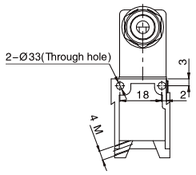


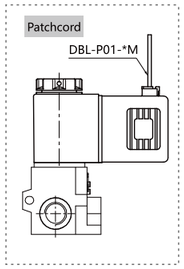


VP321

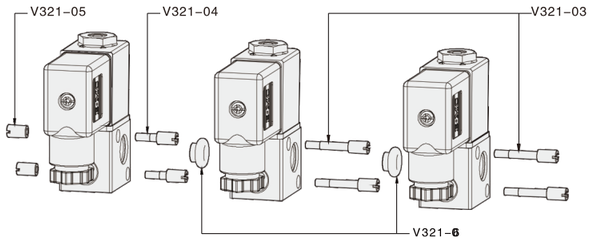








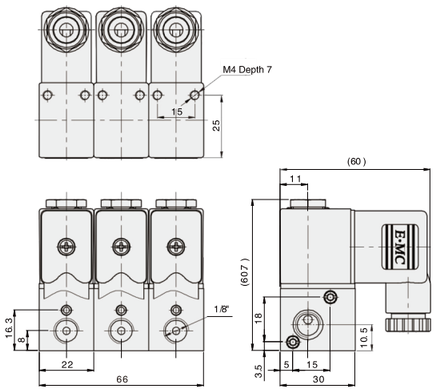
◎ Combination of Schematic Diagram

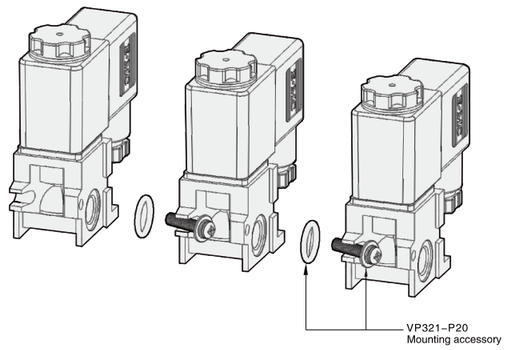


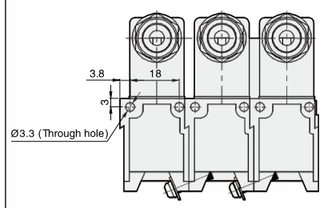
Mounting accessory order details:

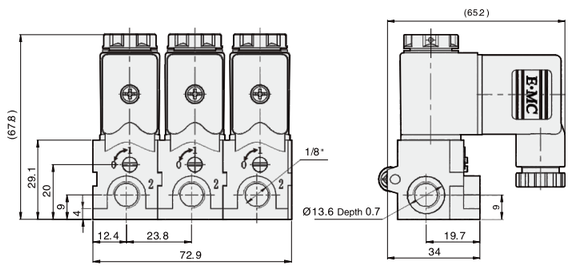
Valve Quantity	V321-06□ The finished valves	V321-03	V321-04	V321-05	V321-06
V321-06□-□-2F	2	2	2	2	1
V321-06□-□-3F	3	4	2	2	2
.....	.....	.....	.....	.....	.....
V321-06□-□-nF	n	2(n-1)	2	2	n-1

Note : n indicates valve quantity， and 2≤n≤20



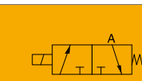






RVT

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

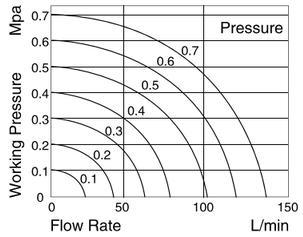
Series No.	Valve Body ID code	ID Code	Positions	Ways	Controls	—	Port Size	Voltage	Connection Mode	Cover Color	—	Thread Type	—Patchcord	—	Valves
N	T:Integrated body	R: Standard armature +Engergy saving coil	2:2 positions	3:3 ways	1: Single control		06:1/8"	E1:AC110V E2:AC220V E4:DC24V	Blank: DIN connector type L: Plug-in Type K: Water proof connector type	Blank: Brown translucent J: Colorless and translucent B: Black (Only black color availale for water proof connector)		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)		2F: 2 Valves 3F: 3 Valves ..... 13F: 13 Valves

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	2:2 positions	1: Single control		06:1/8"	Blank: Standard type	E1: AC110V E6: AC36V E2: AC220V E7: AC24V E3: AC380V E8: DC110V E4: DC24V E9: DC48V E5: DC12V 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 availale for water proof connector)		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" and "F:Flying leads type" Only)		2F: 2 Valves 3F: 3 Valves ..... 13F: 13 Valves

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

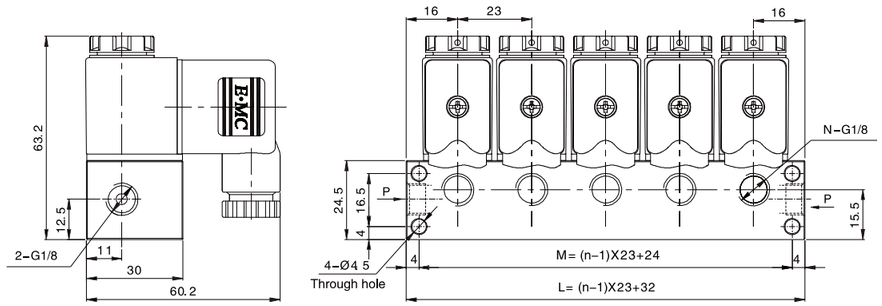
◎ Flow Chat



◎ Specifications

Model No.	NTR231-06	RVT321-06
Working medium	Clean air (After 40 μm filteration)	
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 (℃)	-20~70	
Voltage range	-15%~+10%	
Power consumption	DC24V:0.7W AC220V:0.9VA AC110V:1.4VA	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

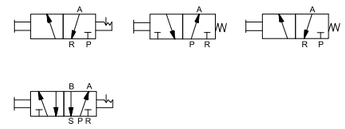


Note : n indicates valve quantity， and 2≤n≤13

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

L

Hand Pull Valve (3/2, 5/2)



How to Order?

Series No.	Ways	Positions	Valve Body size	—	Port Size		Reset	Valve Color	— Thread Type
L	3:3 ways 5:5 ways	2:2 positions	1：1 Series 2：2Series 3：3Series 4：4Series	1 Series 06：1/8 " 2 Series 06:1/8 " 08:1/4 "	3 Series 08：1/4 " 10：3/8 " 4 Series 10:3/8 " 15:1/2 "		Blank:Manual reset S:Spring return	Blank: Black W: White	Blank: G P: PT T: NPT

Order Example:
L series hand pull valve, 3/2 way, 2 series valve body, NC type, 1/4" port size, manual reset, black valve body, G thread, ERP code is: L322-08

Remarks: Manual reset of two position tee can be divided into non opening and non closing

Specifications

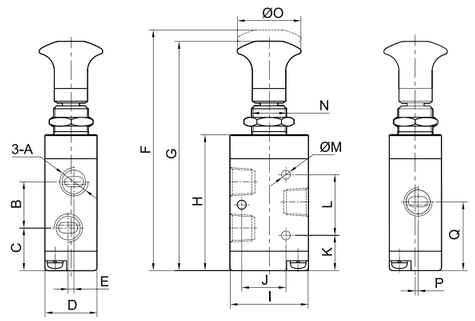
Model	L Series Hand pull valve
Working medium	Clean air(After 40 μm filteration)
Acting type	External control
Lubrication	Not required
Working pressure (MPa)	0~0.8
Guaranteed pressure (MPa)	1.2
Working temperature(℃)	-5~60

Product Features

* Manual operated
* Various working styles are available
* Black color is standard color, different color are optional

Main Dimension

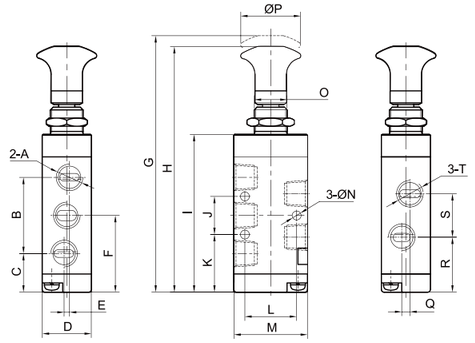
L321/L322/L323/L324



Model/ Sign	L321	L322 -06	L322 -08	L323 -08	L323 -10	L324 -10	L324 -15
A	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
B	16	18.5	22.5	22	24	31.5	31.5
C	14.7	18.45	16.45	21.5	20.5	29.25	29.3
D	18	22	22	27	27	34	34
E	2	0	0	0	2	0	0
F	84.5	94	94	111.3	111.3	141	141
G	80.5	89.7	89.7	105.7	105.7	136	136
H	44.7	54.7	54.7	63.5	63.5	87.5	87.5
I	27	35	35	40	40	50	50
J	19	24	24	28	28	36	36
K	15.7	17.7	17.7	20.5	20.5	31	31
L	16.7	20	20	24	24	28	28
M	3.1	4.3	4.3	4.3	4.3	5.5	5.5
N	M14x1	M14x1	M14x1	M14x1	M14x1	M22x2.5	M22x2.5
O	22.4	22.5	22.4	32	32	32	32
P	1	0	1.5	0	2	2	2
Q	23.7	27.7	28.7	32.5	32.5	45	45

Main Dimension

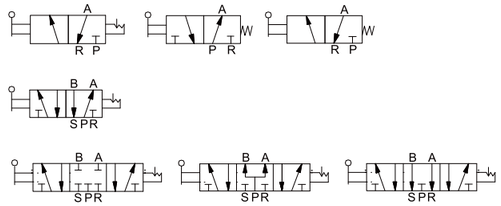
L521/L522/L523/L524



Model/ Sign	L521	L522 –06	L522 –08	L523 –08	L523 –10	L524 –10	L524 –15
A	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8	G1/2
B	28	35	35	45	45	63	63
C	14.2	14.2	14.2	17.5	17.5	25.5	25.5
D	18	22	22	27	27	34	34
E	1	0	0	0	4	0	0
F	28.2	31.7	31.7	40	40	57	57
G	95.5	102	102	126.3	126.3	165	165
H	91.5	98	98	120.7	120.7	160	160
I	55.7	62.7	62.7	78.5	78.5	111.5	111.5
J	14	20	20	24	24	28	28
K	21.2	21.7	21.7	28	28	43	43
L	19	24	24	28	28	36	36
M	27	35	35	40	40	50	50
N	3.3	4.3	4.3	4.3	4.3	5.5	5.5
O	M14x1	M14x1	M14x1	M14x1	M14x1	M22x1.5	M22x1.5
P	22.5	22.5	22.5	32	32	32	32
Q	3	0	3	0	4	0	4
R	20.2	22.7	21.7	28	28	39	39
S	16	18	20	24	24	36	35.5
T	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2

H

Hand Push Valve (3/2,5/2,5/3)



How to Order?

Series No.	Ways	Positions	Valve Body Size	Original Status	—	Port Size	Reset	—	Thread Type
H	3:3 ways 5:5 ways	2:2 positions 2:2 positions 3:3 positions	1: 1 Series 2: 2 Series 3: 3 Series 4: 4 Series	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		1 Series: M5: M5; 06: 1/8" 2 Series: 06: 1/8"; 08: 1/4" 3 Series: 08: 1/4"; 10: 3/8" 4 Series: 10: 3/8"; 15: 1/2"	Blank:Manual reset S:Spring return		Blank: G P: PT T: NPT

Order Example:
H series hand push valve, 3/2 way, 2 series valve body, NC type, 1/4" port size, manual reset, black valve body, G thread, ERP code is: H322–08
Remarks: Manual reset of two position tee can be divided into non opening and non closing

Specifications

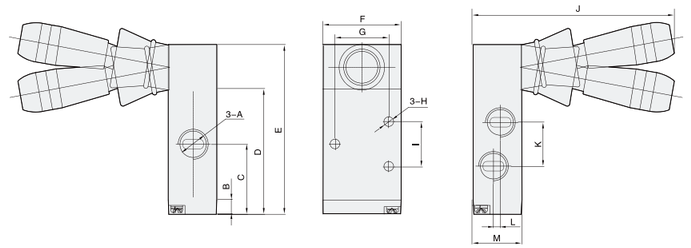
Model	H Series Hand push valve
Working medium	Clean air(After 40μm filteration)
Acting type	External control
Lubrication	Not required
Working pressure (MPa)	0~0.8
Guaranteed pressure (MPa)	1.2
Working temperature (°C)	–5~60
Seal material	NBR

Product Features

* Manual operated
* Various working style are available

Main Dimension

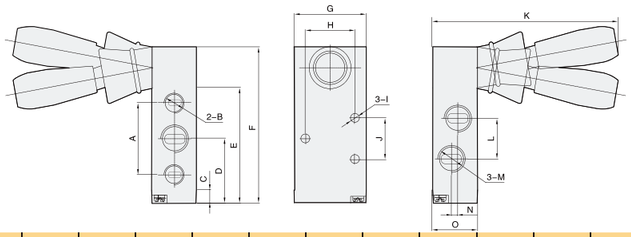
H321/H322/H323/H324



Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M
H321–06	G1/8	6.7	23.7	38.7	58.7	27	19	Φ3.1	14	83.8	16	2	18
H322–08	G1/4	6.7	28.7	48.7	68.7	35	24	Φ4.3	20	89	22.5	0	22
H323–10	G3/8	7.5	32.5	57.5	77.7	40	28	Φ4.3	24	99.3	24	2	27
H324–15	G1/2	10	45	80	108	50	36	Φ5.5	28	105.8	31.5	0	34

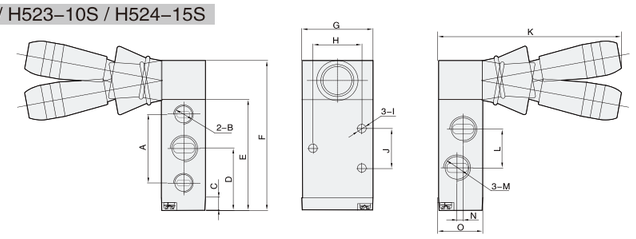
◎ Main Dimension

H521/H522/H523/H524



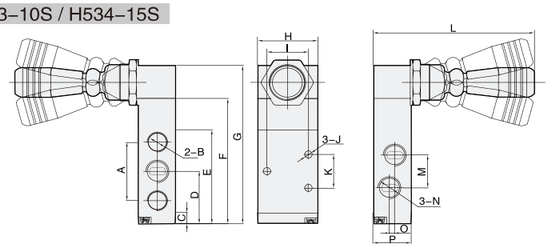
Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
H521–06	28	G1/8	6.7	28.2	49.7	69.7	27	19	Φ3.3	14	83.8	16	G1/8	3	18
H522–08	35	G1/8	6.7	31.7	56.7	76.7	35	24	Φ4.3	20	91.3	20	G1/4	3	22
H523–10	45	G1/4	7.5	40	72.5	92.5	40	28	Φ4.3	24	96.5	24	G3/8	4	27
H524–15	63	G1/2	10	57	104	132	50	36	Φ5.5	28	105	36	G1/2	4	34

H521–06S / H522–08S / H523–10S / H524–15S



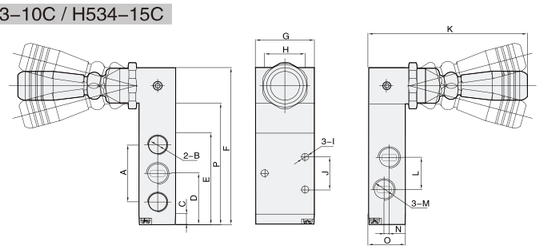
Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
H521–06S	28	G1/8	6.7	28.2	49.7	69.7	27	19	Φ3.3	14	87.5	16	G1/8	3	18
H522–08S	35	G1/8	6.7	31.7	56.7	76.7	35	24	Φ4.3	20	90	20	G1/4	3	22
H523–10S	45	G1/4	7.5	40	72.5	92.5	40	28	Φ4.3	24	96.5	24	G3/8	4	27
H524–15S	63	G1/2	10	57	104	132	50	36	Φ5.5	28	105	36	G1/2	4	34

H531–06S / H532–08S / H533–10S / H534–15S



Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
H531–06S	28	G1/8	6.5	28.2	49.7	64.5	84.7	27	19	Φ3.3	14	92.5	16	G1/8	3	18
H532–08S	35	G1/8	6.5	31.7	56.7	75.5	97.7	35	24	Φ4.3	20	94.2	20	G1/4	3	22
H533–10S	45	G1/4	7.5	40	72.5	91.5	113.5	40	28	Φ4.3	24	100	24	G3/8	4	27
H534–15S	63	G1/2	10	57	104	124	154	50	36	Φ5.5	28	109.6	36	G1/2	4	34

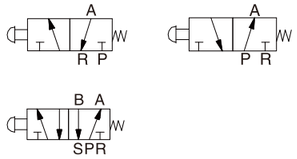
H531–06C / H532–08C / H533–10C / H534–15C



Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
H531–06C	28	G1/8	6.5	28.2	49.7	84.5	27	19	Φ3.3	14	94.5	16	G1/8	3	18	64.5
H532–08C	35	G1/8	6.5	31.7	56.7	97	35	24	Φ4.3	20	95.5	20	G1/4	3	22	75.5
H533–10C	45	G1/4	7.5	40	72.5	113.5	40	28	Φ4.3	24	100	24	G3/8	4	27	91.5
H534–15C	63	G1/2	10	57	104	152	50	36	Φ5.5	28	108	36	G1/2	4	34	124

M

Mechanical Valve (3/2,5/2)



◎ How to Order?

Series No.	Ways	Positions	—	Port Size	Button Type	—	Thread Type
MV MJ M	3: 3 ways 5: 5 ways	2: 2 position		06：1/8 " 08：1/4 "	Blank: No button S1B: The button with arrow mark(Black) S2: Roller type S3R: Button with "Reset" mark(Red) S4G: Concave button(Green) S5R: Flat button(Red) S6R: Mushroom head button(Red) S6B: Mushroom head button(Black) Note: S1 and S3 with manual return, Others with spring return.		Blank：G P：PT T：NPT

Order Example:

M series mechanical valve, 3/2 way, 1/8" port size, with black button with arrow mark, G thread, ERP code is: M32–06S1B

Note: Button mechanical valve assembly comprising: a Button component, the mounting bracket, under mounting brackets and mounting screws.

◎ Specifications

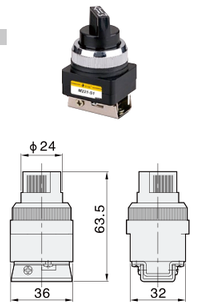
Model	MV32–06	MJ32–08	M32–08	M52–08
Working medium	Clean air(After μm filteration)			
Acting type	External control			
Lubrication	Not required			
Working pressure (MPa)	0~0.8			
Guaranteed pressure (MPa)	1.2			
Working temperature (°C)	–5~60			
Max. acting frequency	5 cycles/s			
Port size	1/8 , 1/4			

◎ Product Features

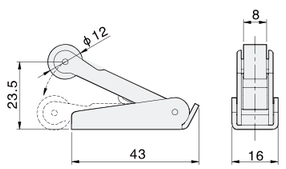
* Black color is standard color, different colors are optional
* Controlled by mechanical force
* Various buttons are available

◎ Main Dimension for Button

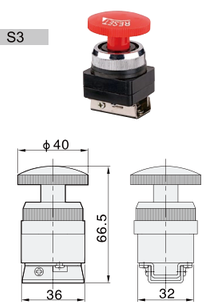
S1



S2

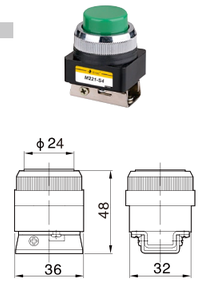


S3

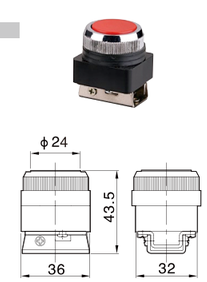


Main Dimension for Button

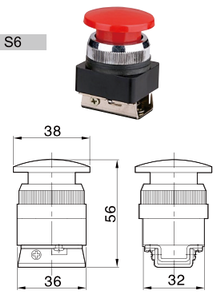
S4



S5



S6

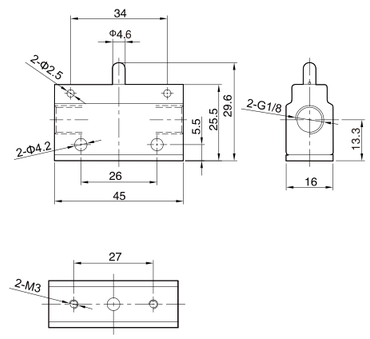


Main Dimension

MV32 Series

MV32–06S1 MV32–06S2 MV32–06S3

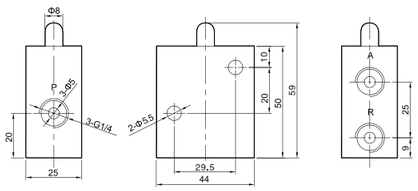
MV32–06S4 MV32–06S5 MV32–06S6



MJ32 Series

MJ32–08S1 MJ32–08S2 MJ32–08S3

MJ32–08S4 MJ32–08S5 MJ32–08S6

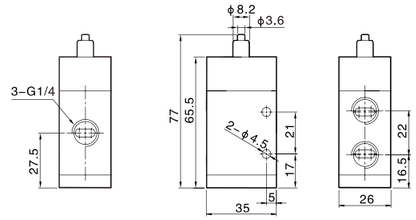


Main Dimension

M32 Series

M32–08S1 M32–08S2 M32–08S3 M32–08S4

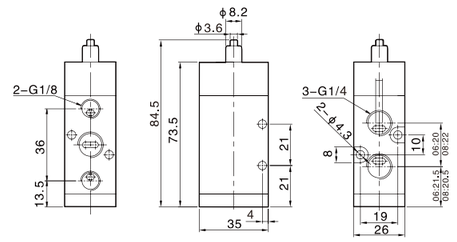
M32–08S5 M32–08S6 M32–08



M52 Series

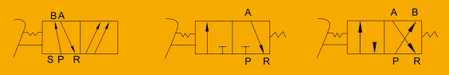
M52–08S1 M52–08S2 M52–08S3 M52–08S4

M52–08S5 M52–08S6 M52–08



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

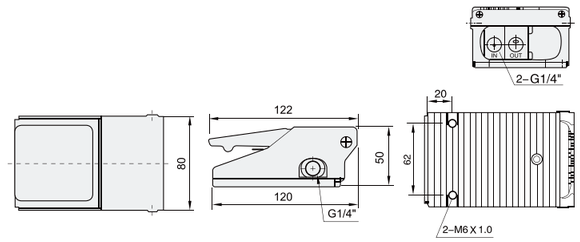
Order Example:
F series foot valve, 5/2 way, 2 series valve body, without cover, 1/4" port size, with lock, G thread, ERP code is: F522–08L

Specifications

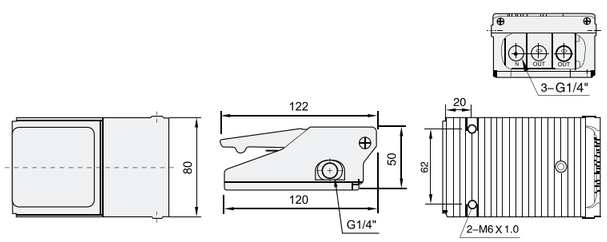
Model	F322	F422	F522
Working medium	Clean air(After 40 μm filteration)		
Acting type	External control		
Lubrication	Not required		
Working pressure (MPa)	0~0.8		
Max pressure (MPa)	1.2		
Working temperature (°C)	–5~60		
Port size	1/8 " , 1/4 "		

Main Dimension

F322–08



F422–08

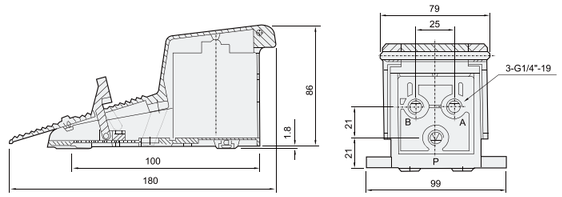


F Series Foot Valve (3/2, 4/2, 5/2 way)

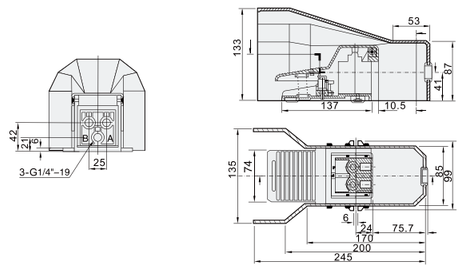
1 F Foot Valve

Main Dimension

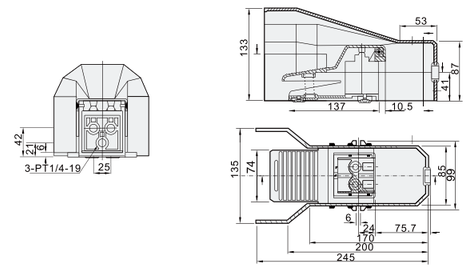
F522–08L



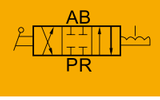
F522C–08L



F522C–08



R
Hand Switch Valve (4/3)



Specifications

Model	M432	U432	R432	MR432
Working medium	Clean air(After 40 μm filteration)			
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

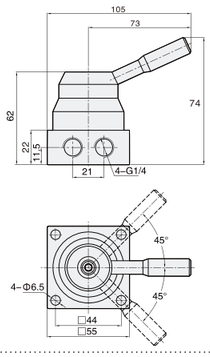
Order Example:
R series hand switch valve, 4/3 way, 2 series valve body, G thread,
ERP code is: R432–08

Product Features

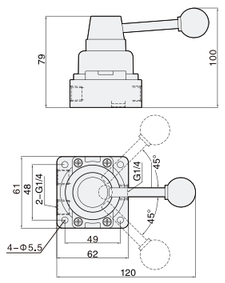
* Different types are available
* MR series valve is the valve with longer lifetime and the better performance
* Sizes are from 1/4" to 1/2"

Main Dimension

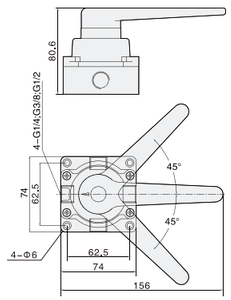
M432–08



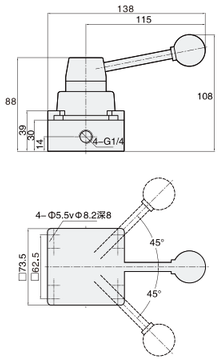
U432–08



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 μ m filteration)			
Working Pressure (Mpa)		0.05~1.0			
Guaranteed pressure (Mpa)		1.5			
Working temperature(˚C)		–20~70			
Port size ❶		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

❶ G、PT、 NPT thread type is optional.

How to Order?

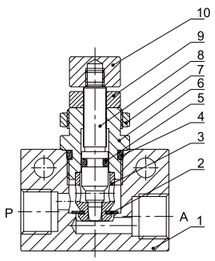
Series No.	Port Size	—	Thread Type
QSC:Flow control valve (precise type)	06:1/8" 08:1/4" 10:3/8" 15:1/2"		Blank: G P : PT T : NPT

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

Product Features

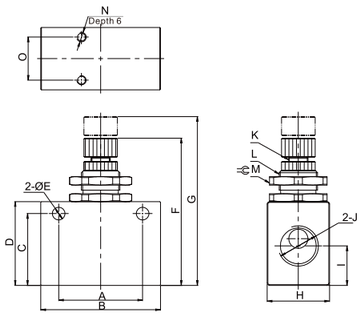
* Compact structure and high precision
* Install in several positions to facilitate ,installation and application
* Apply to exhaust throttle, widely used for cylinder speed adjustment

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

Main Dimension

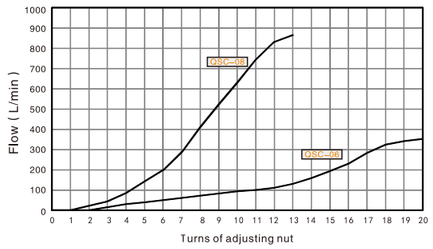


Model	A	B	C	D	E	F	G	H
QSC–06	22	32	20	25	4.3	46	51	15
QSC–08	26	36	23	27	4.3	51	57.5	18
QSC–10	35	50	30	35	5.3	62.5	71.5	26
QSC–15	35	50	30	35	5.3	62.5	71.5	26

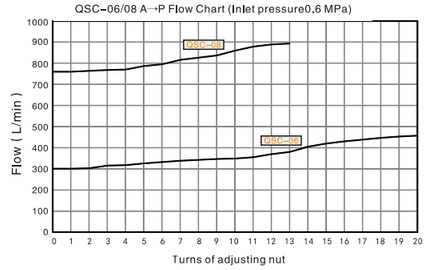
Model	I	J	K	L	M	N	O
QSC–06	8.5	1/8	M5X0.25	M12X0.75	14	––	––
QSC–08	13.3	1/4	M6X0.5	M14X1	17	––	––
QSC–10	16.5	3/8	M8X0.75	M16X1	24	M4X0.7	18
QSC–15	16.5	1/2	M8X0.75	M16X1	24	M4X0.7	18

Flow Chat

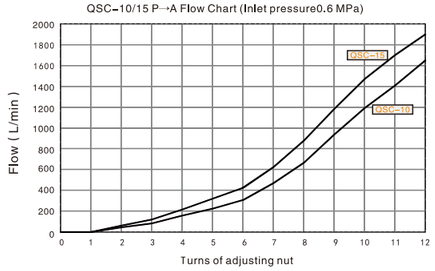
QSC-06/08 P→A Flow Chart (Inlet pressure0.6 MPa)



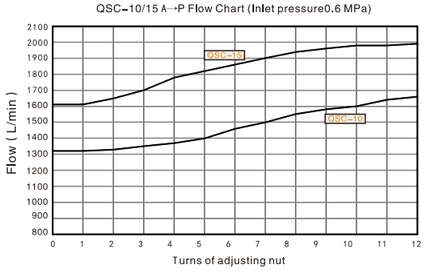
QSC-06/08 A→P Flow Chart (Inlet pressure0.6 MPa)



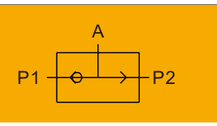
QSC-10/15 P→A Flow Chart (Inlet pressure0.6 MPa)

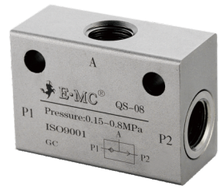


QSC-10/15 A→P Flow Chart (Inlet pressure0.6 MPa)



QS
Shuttle Valve





Specifications

Model (mm)		QS-06	QS-08
Working medium		Clean air(After 40 μm filteration)	
Working Pressure (psi)		0.15~0.8	
Guaranteed pressure (psi)		1.2	
Working temperature(℉)		-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?

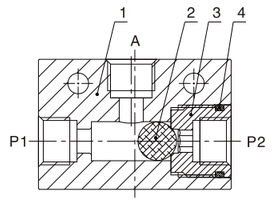
Series No.	–	Port Size	–	Thread Type
QS:Shuttle valve		06:1/8" 08:1/4"		Blank：G P：PT T：NPT

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

Product Features

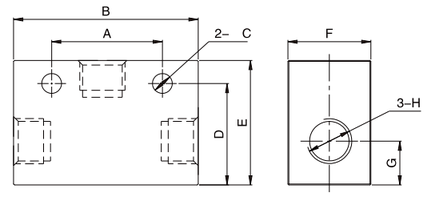
* Normally working with main valve together, not be used separately.
* Valve provides better assistance for completed control pneumatic system.

Internal Structure



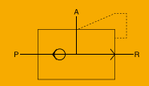
No.	Name
1	Valve body
2	Rubber ball
3	End cover
4	O-ring

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 μm filteration)			
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 "　10：3/8 " 08：1/4 "　15：1/2 "		Blank: G P: PT T: NPT

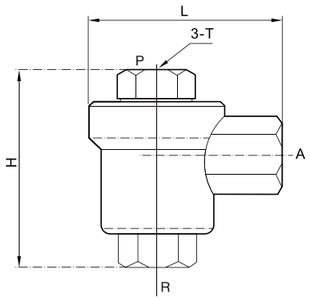
Order Example:

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–6	1/8"	37	41.5
KKP–8	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 μm filteration)					
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 "　32：11/4 " 15：1/2 "　40：1–1/2 " 50：2 "		Blank: G P: PT T: NPT

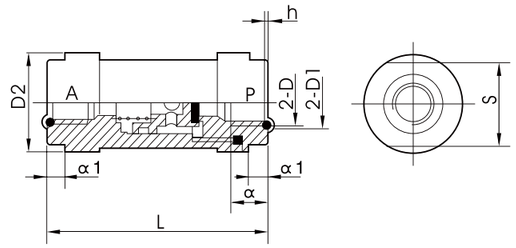
Order Example:

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

Product Features

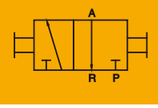
* Normally working with main valve together, not be used separately
* Provide assistance to control the system better

Main Dimension



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

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

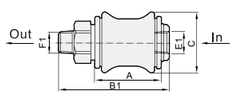
Order Example:
YHS slide valve,1/4" port size, double male thread type, G thread ,ERP code is: YHS–08MM

Specifications

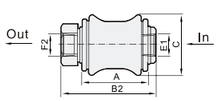
Model	YHS–06	YHS–08	YHS–10	YHS–15	YHS–20	YHS–25
Working medium	Clean air(After 40 μm filteration)					
Acting type	Manul direct acting					
Lubrication	Not required					
Working pressure (MPa)	0~1.0					
Guaranteed pressure (MPa)	1.5					
Working temperature (℃)	–5~60					
Port size	1/8"	1/4"	3/8"	1/2"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

Main Dimension

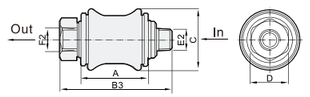
Standard type



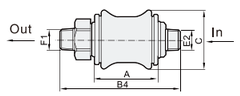
Double female thread type (FF)



One male and the other female thread type (MF)



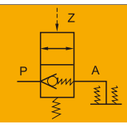
Double male thread type(MM)



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

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



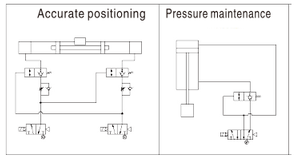
Product Features

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 "

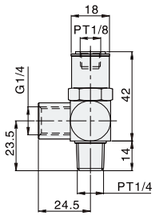
Order Example:
QPC series valve, 1/4" port size, ERP code is: QPC–08



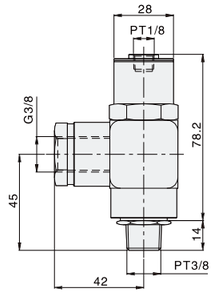
Specifications

Model	QPC–08	QPC–10	QPC–15
Working medium	Clean air(After 40 μm filteration)		
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"		

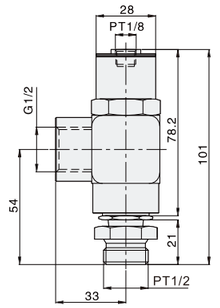
Main Dimension



QPC–08



QPC–10



QPC–15