

Solenoid valve(5/2 way, 5/3 way)

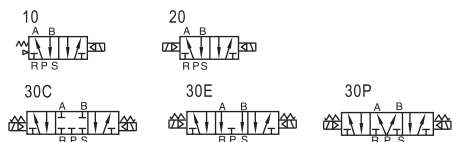


4V100 Series



4V100

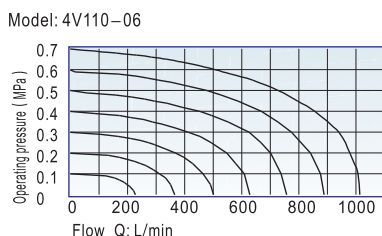
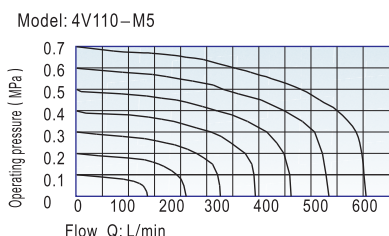
Symbol



Product feature

1. Pilot-oriented mode: optional for internal or external.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Three position solenoid valves have three kinds of central function for your choice.
4. Double control solenoid valves have memory function.
5. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
6. No need to add oil for lubrication.
7. It is available to form integrated valve group with the base to save installation space.
8. Affiliated manual devices are equipped to facilitate installation and debugging.
9. Several standard voltage grades are optional.

Flow chart



Specification

Model	4V110-M5 4V120-M5	4V130C-M5 4V130E-M5 4V130P-M5	4V110-06 4V120-06	4V130C-06 4V130E-06 4V130P-06
Fluid	Air(to be filtered by 40 μm filter element)			
Acting	Piloted			
Port size ①	In=Out=M5		In=Out=1/8"	
Orifice size	5.5mm ² (Cv=0.31)	5.0mm ² (Cv=0.28)	12.0mm ² (Cv=0.67)	9.0mm ² (Cv=0.50)
Valve type	5 port 3 position	5 port 2 position	5 port 3 position	5 port 2 position
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			
Lubrication ②	Not required			
Max. frequency ③	5 cycle/sec	3 cycle/sec	5 cycle/sec	3 cycle/sec
Weight	4V110-M5:120g 4V120-M5:175g	200g	4V110-06:120g 4V120-06:175g	200g

- ① PT thread, NPT thread and G thread are available.
- ② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
- ③ The maximum actuation frequency is in the no-load state.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:2.5VA DC:2.5W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code

4V 1 10 06 A □ □

- Model**: 4V: Solenoid valve(5/2, 5/3 way)
- Code**: 1: 100 Series
- Valve type**:
 - 10: Single solenoid 5/2 way
 - 20: Double solenoid 5/2 way
 - 30C: Double solenoid 5/3 way closed center
 - 30E: Double solenoid 5/3 way exhaust center
 - 30P: Double solenoid 5/3 way pressure center
- Port size**:
 - M5: M6
 - 06: 1/8"
- Thread type**:

Port size	Thread type
1/8"	Blank: PT
	T: NPT
	G: G
M5	Not this code
- Electrical entry**:
 - Blank: Terminal
 - I: Grommet
- Voltage**:
 - A: AC220V
 - B: DC24V
 - C: AC110V
 - E: AC24V
 - F: DC12V

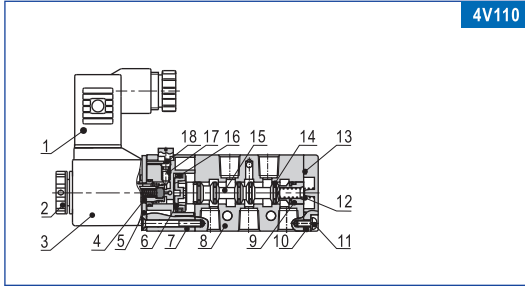
Please refer to 37 for manifold specification and the order way.



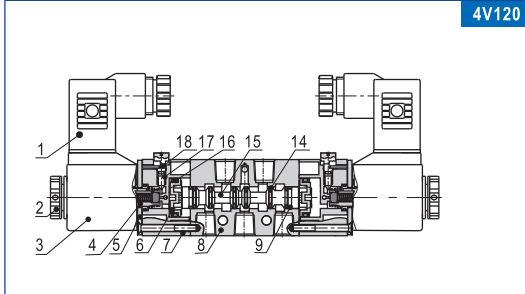
Solenoid valve(5/2 way, 5/3 way)

4V100 Series

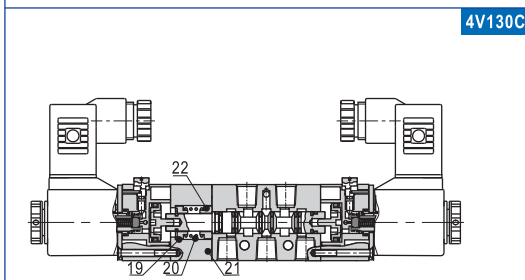
Inner structure



4V110



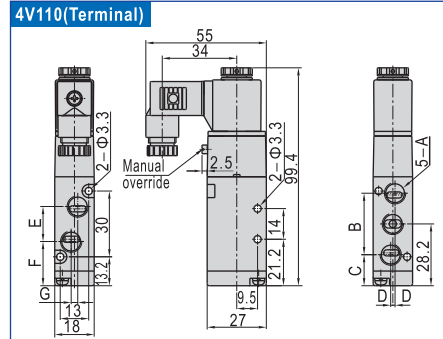
4V120



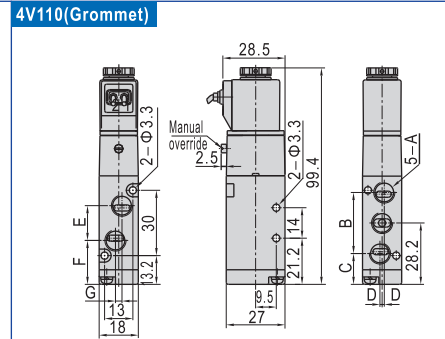
4V130C

No.	Item	No.	Item	No.	Item
1	Connector	9	Wear ring	17	Override spring
2	Coil net	10	Bottom cover	18	Manual override
3	Coil	11	Fixed screw	19	Spring holder
4	Armature	12	Spool spring	20	Return spring
5	Fixed plate	13	Bottom cover gasket	21	Side cover
6	Piston	14	Spool O-ring	22	Spring holder
7	Pilot kit	15	Spool		
8	Body	16	Piston O-ring		

Dimensions

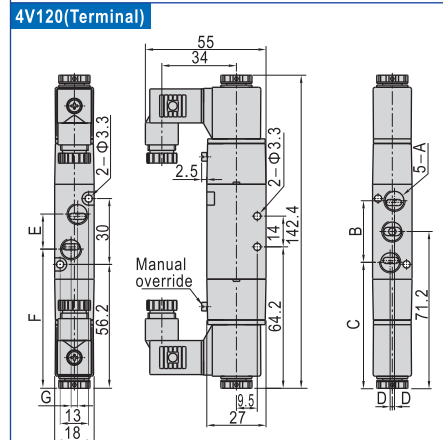


4V110(Terminal)

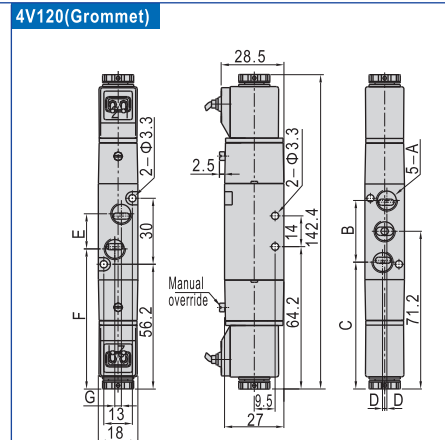


4V110(Grommet)

Model\Item	A	B	C	D	E	F	G
4V110-M5	M5x0.8	27	14.7	0	14	21.2	0
4V110-06	1/8"	28	14.2	1	16	20.2	3

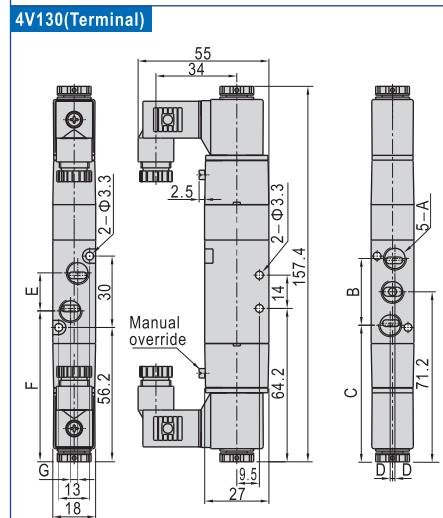


4V120(Terminal)

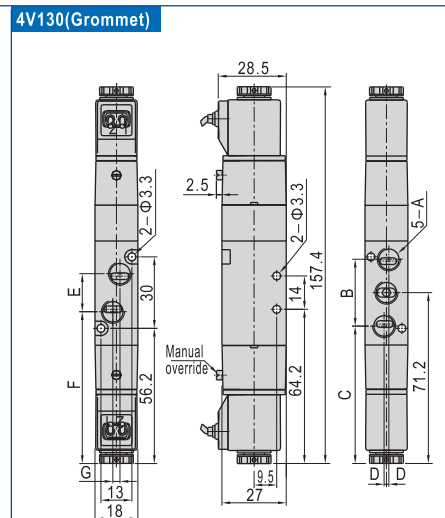


4V120(Grommet)

Model\Item	A	B	C	D	E	F	G
4V120-M5	M5x0.8	27	57.7	0	14	64.3	0
4V120-06	1/8"	28	57.2	1	16	63.2	3



4V130(Terminal)



4V130(Grommet)

Model\Item	A	B	C	D	E	F	G
4V130-M5	M5x0.8	27	57.7	0	14	64.3	0
4V130-06	1/8"	28	57.2	1	16	63.2	3



4V100

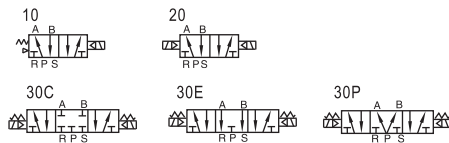
Solenoid valve(5/2 way, 5/3 way)

4V200 Series



4V200

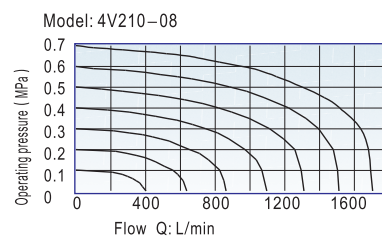
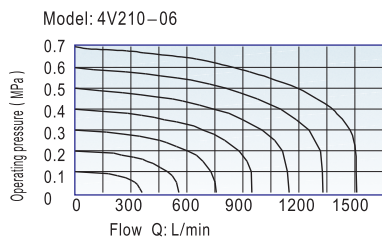
Symbol



Product feature

1. Pilot-oriented mode: optional for internal or external.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Three position solenoid valves have three kinds of central function for your choice.
4. Double control solenoid valves have memory function.
5. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
6. No need to add oil for lubrication.
7. It is available to form integrated valve group with the base to save installation space.
8. Affiliated manual devices are equipped to facilitate installation and debugging.
9. Several standard voltage grades are optional.

Flow chart



Specification

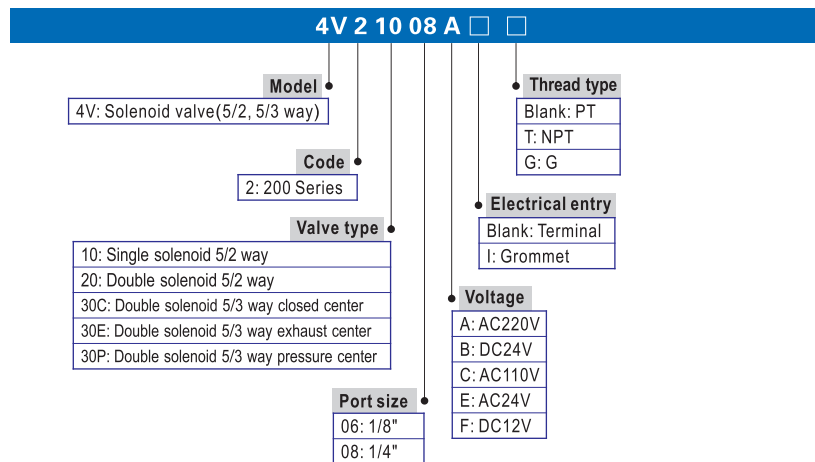
Model	4V210-06 4V220-06	4V230C-06 4V230E-06 4V230P-06	4V210-08 4V220-08	4V230C-08 4V230E-08 4V230P-08
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Piloted			
Port size ①	In=Out=Exhaust=1/8"		In=Out=1/4" Exhaust=1/8"	
Orifice size	14.0mm ² (Cv=0.78)	12.0mm ² (Cv=0.67)	16.0mm ² (Cv=0.89)	12.0mm ² (Cv=0.67)
Valve type	5 port 3 position	5 port 2 position	5 port 3 position	5 port 2 position
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			
Lubrication ②	Not required			
Max. frequency ③	5 cycle/sec	3 cycle/sec	5 cycle/sec	3 cycle/sec
Weight	4V210-06:220g 4V220-06:320g	360g	4V210-08:220g 4V220-08:320g	360g

- ① PT thread, NPT thread and G thread are available.
- ② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
- ③ The maximum actuation frequency is in the no-load state.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code



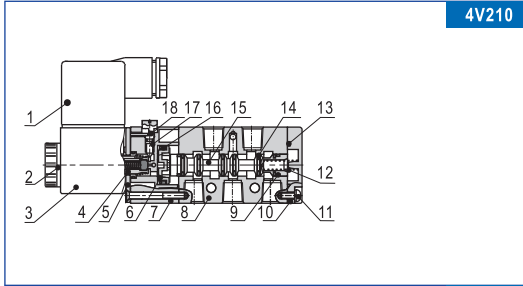
Please refer to 37 for manifold specification and the order way.



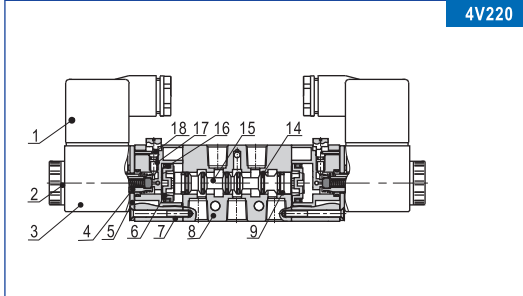
Solenoid valve(5/2 way, 5/3 way)

4V200 Series

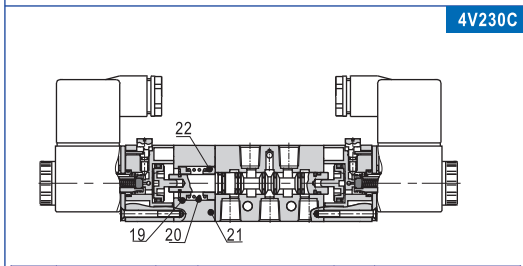
Inner structure



4V210



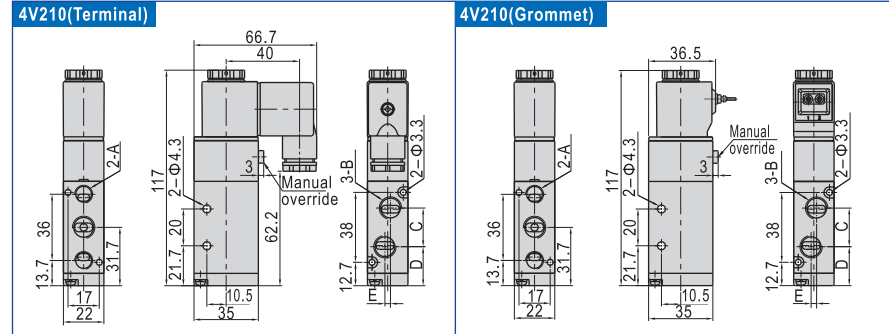
4V220



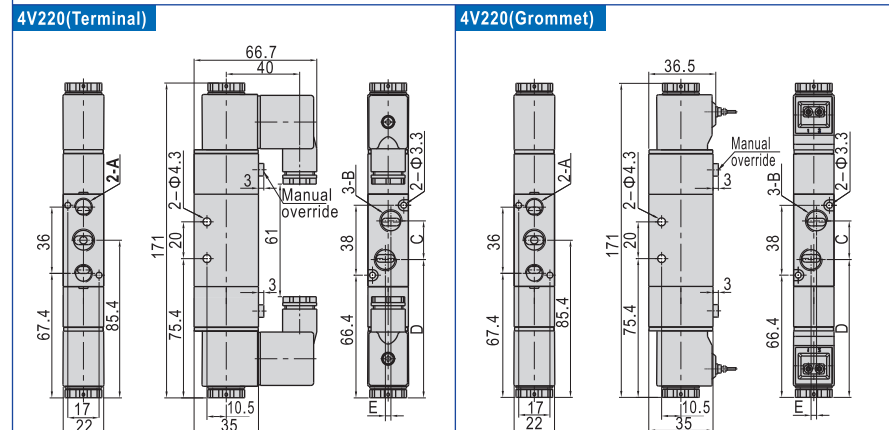
4V230C

No.	Item	No.	Item	No.	Item
1	Connector	9	Wear ring	17	Override spring
2	Coil net	10	Bottom cover	18	Manual override
3	Coil	11	Fixed screw	19	Spring holder
4	Armature	12	Spool spring	20	Return spring
5	Fixed plate	13	Bottom cover gasket	21	Side cover
6	Piston	14	Spool O-ring	22	Spring holder
7	Pilot kit	15	Spool		
8	Body	16	Piston O-ring		

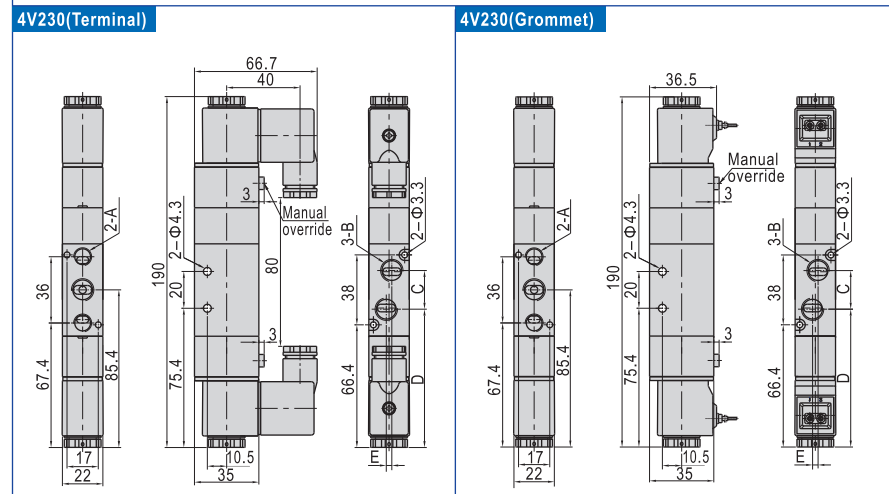
Dimensions



Model/Item	A	B	C	D	E
4V210-06	1/8"	1/8"	18	22.7	0
4V210-08	1/8"	1/4"	21	21.2	3



Model/Item	A	B	C	D	E
4V220-06	1/8"	1/8"	18	76.4	0
4V220-08	1/8"	1/4"	21	74.9	3



Model/Item	A	B	C	D	E
4V230-06	1/8"	1/8"	18	76.4	0
4V230-08	1/8"	1/4"	21	74.9	3



4V200



Solenoid valve(5/2 way, 5/3 way)

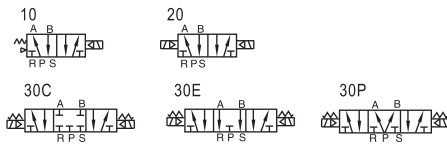


4V300 Series



4V300

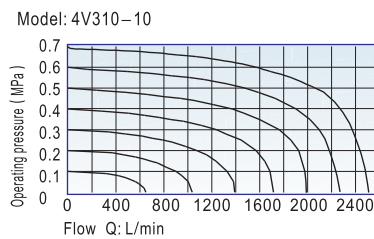
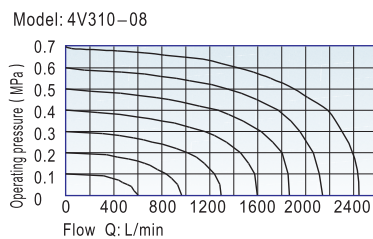
Symbol



Product feature

1. Pilot-oriented mode: optional for internal or external.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Three position solenoid valves have three kinds of central function for your choice.
4. Double control solenoid valves have memory function.
5. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
6. No need to add oil for lubrication.
7. It is available to form integrated valve group with the base to save installation space.
8. Affiliated manual devices are equipped to facilitate installation and debugging.
9. Several standard voltage grades are optional.

Flow chart



Specification

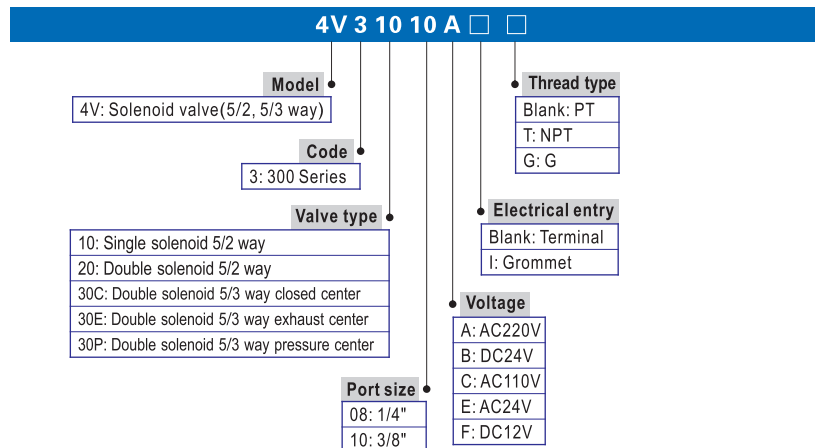
Model	4V310-08 4V320-08	4V330C-08 4V330E-08 4V330P-08	4V310-10 4V320-10	4V330C-10 4V330E-10 4V330P-10
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Piloted			
Port size ①	In=Out=Exhaust=1/4"		In=Out=3/8" Exhaust=1/4"	
Orifice size	25.0mm ² (Cv=1.40)	18.0mm ² (Cv=1.00)	30.0mm ² (Cv=1.68)	18.0mm ² (Cv=1.00)
Valve type	5 port 3 position	5 port 2 position	5 port 3 position	5 port 2 position
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			
Lubrication ②	Not required			
Max. frequency ③	4 cycle/sec	3 cycle/sec	4 cycle/sec	3 cycle/sec
Weight	4V310-08:310g 4V320-08:400g	450g	4V310-10:310g 4V320-10:400g	450g

- ① PT thread, NPT thread and G thread are available.
- ② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
- ③ The maximum actuation frequency is in the no-load state.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code



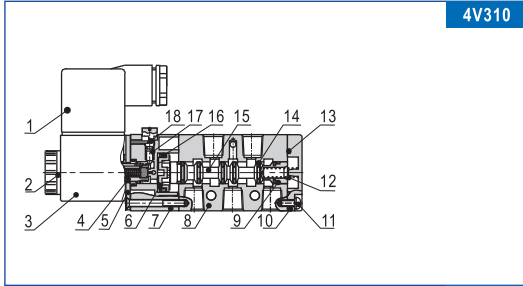
Please refer to 37 for manifold specification and the order way.



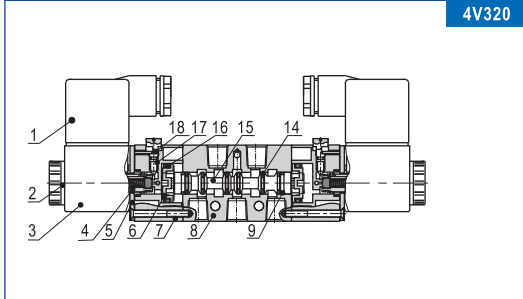
Solenoid valve(5/2 way, 5/3 way)

4V300 Series

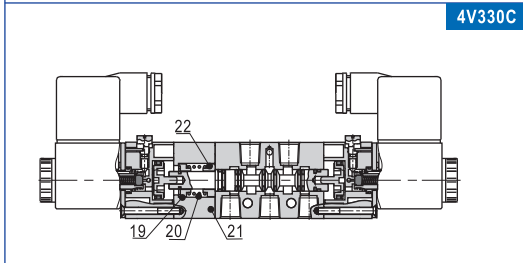
Inner structure



4V310



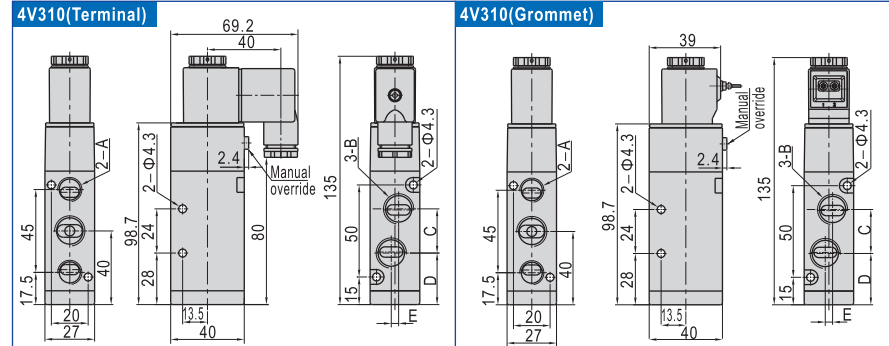
4V320



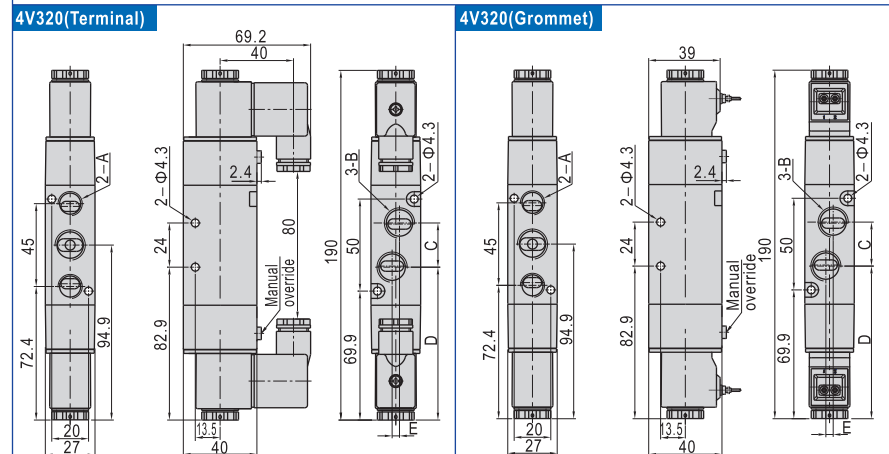
4V330C

No.	Item	No.	Item	No.	Item
1	Connector	9	Wear ring	17	Override spring
2	Coil net	10	Bottom cover	18	Manual override
3	Coil	11	Fixed screw	19	Spring holder
4	Armature	12	Spool spring	20	Return spring
5	Fixed plate	13	Bottom cover gasket	21	Side cover
6	Piston	14	Spool O-ring	22	Spring holder
7	Pilot kit	15	Spool		
8	Body	16	Piston O-ring		

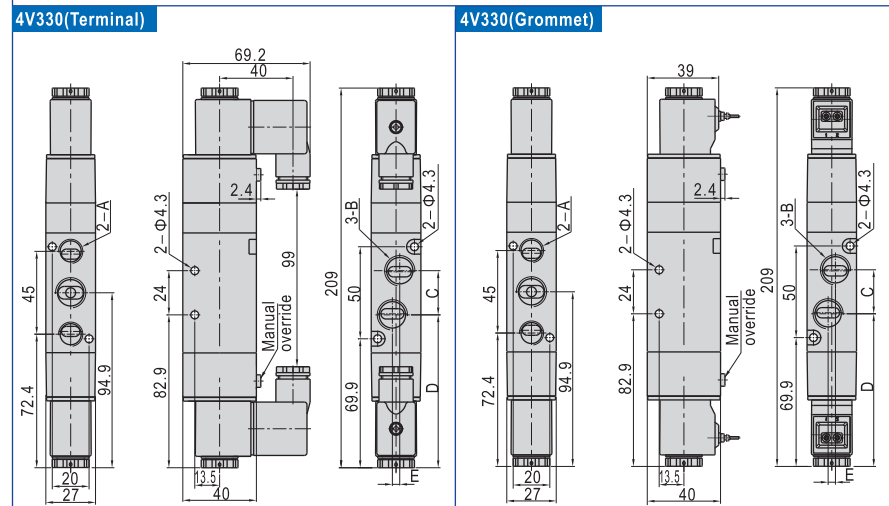
Dimensions



Model\Item	A	B	C	D	E
4V310-08	1/4"	1/4"	22	29	0
4V310-10	1/4"	3/8"	24	28	4



Model\Item	A	B	C	D	E
4V320-08	1/4"	1/4"	22	83.9	0
4V320-10	1/4"	3/8"	24	82.9	4



Model\Item	A	B	C	D	E
4V330-08	1/4"	1/4"	22	83.9	0
4V330-10	1/4"	3/8"	24	82.9	4



4V300



Solenoid valve(5/2 way, 5/3 way)

4V400 Series



Specification

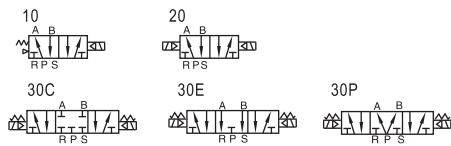
Model	4V410-15	4V420-15	4V430C-15	4V430E-15	4V430P-15
Fluid	Air(to be filtered by 40 μ m filter element)				
Acting	Piloted				
Port size ①	In=Out=Exhaust=1/2"				
Orifice size	50.0mm ² (Cv=2.79)		30.0mm ² (Cv=1.68)		
Valve type	5 port 2 position		5 port 3 position		
Operating pressure	0.15~0.8MPa(21~114psi)				
Proof pressure	1.5MPa(215psi)				
Temperature °C	-20~70				
Material of body	Aluminum alloy				
Lubrication ②	Not required				
Max. frequency ③	3 cycle/sec				
Weight	590g	7200g			770g

① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

③ The maximum actuation frequency is in the no-load state.

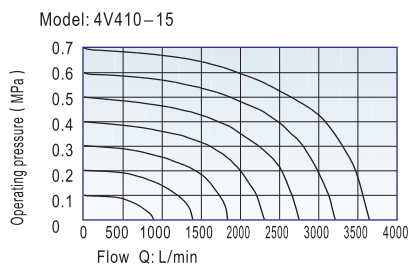
Symbol



Product feature

- Pilot-oriented mode: optional for internal or external.
- Structure in sliding column mode: good tightness and sensitive reaction.
- Three position solenoid valves have three kinds of central function for your choice.
- Double control solenoid valves have memory function.
- Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
- No need to add oil for lubrication.
- It is available to form integrated valve group with the base to save installation space.
- Affiliated manual devices are equipped to facilitate installation and debugging.
- Several standard voltage grades are optional.

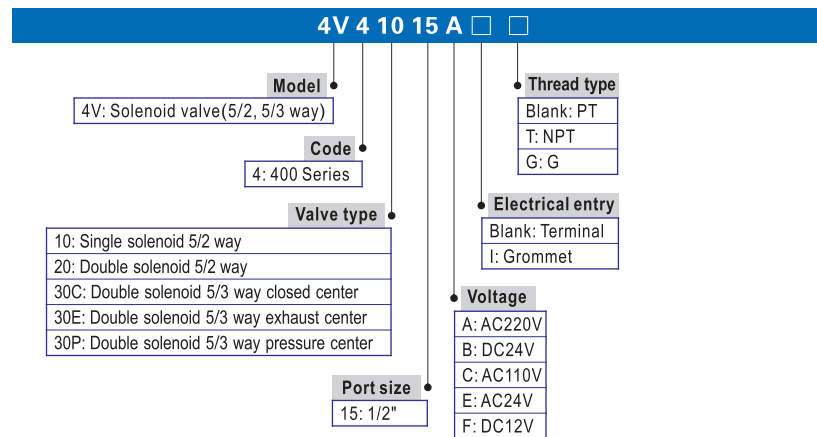
Flow chart



Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC: 3.5VA DC: 3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code



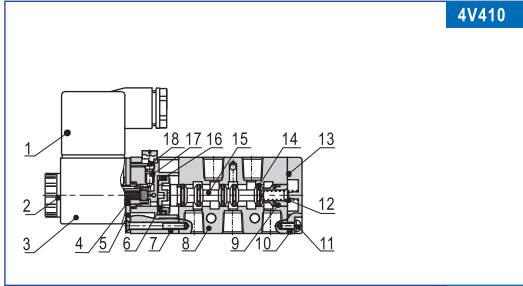
Please refer to 37 for manifold specification and the order way.



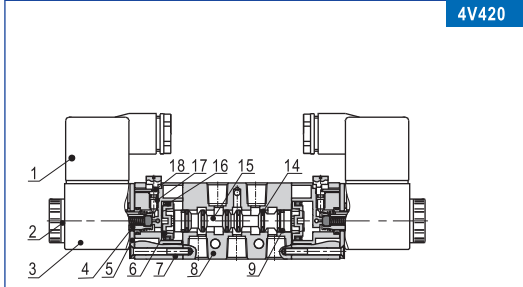
Solenoid valve(5/2 way, 5/3 way)

4V400 Series

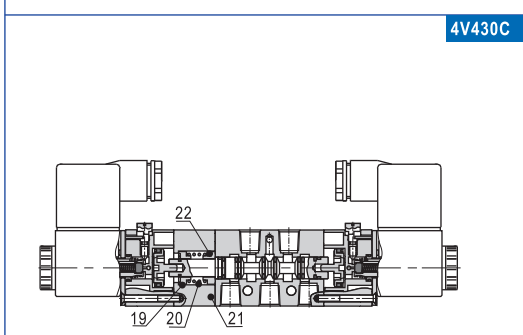
Inner structure



4V410



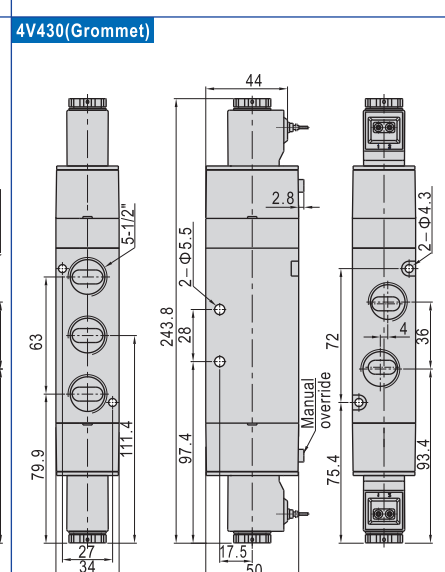
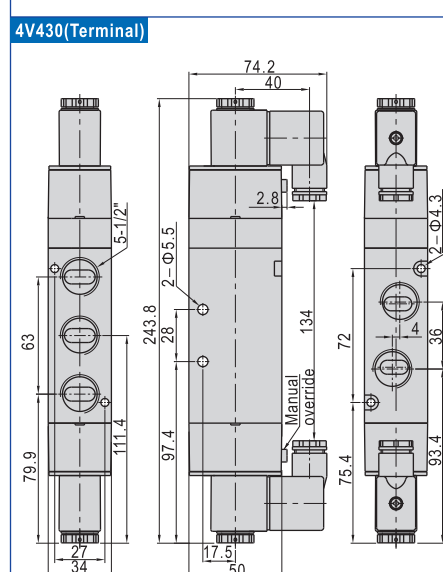
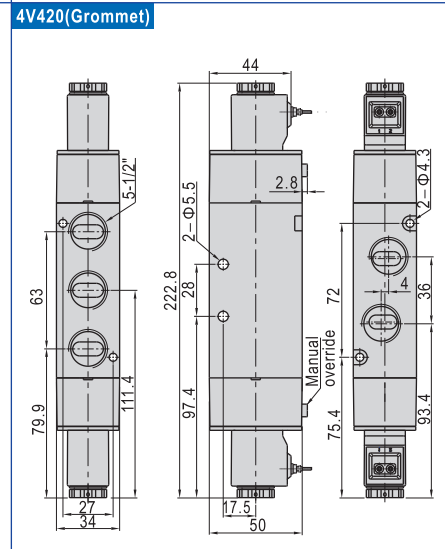
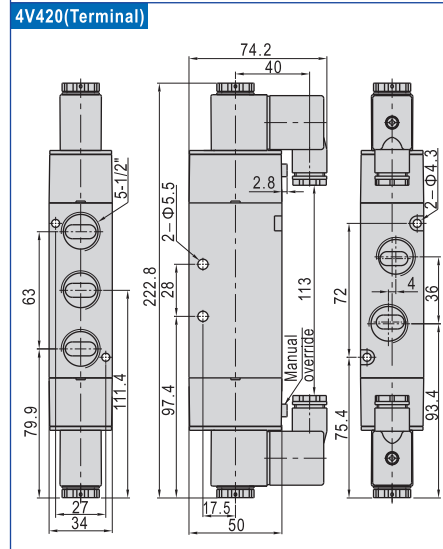
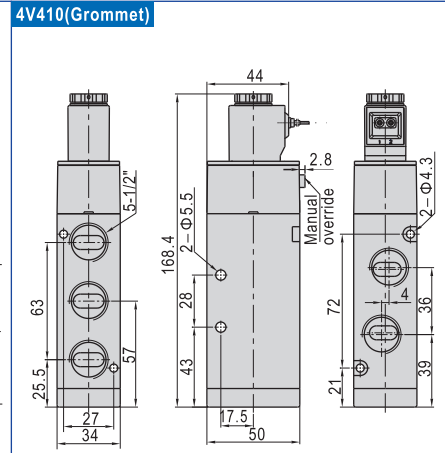
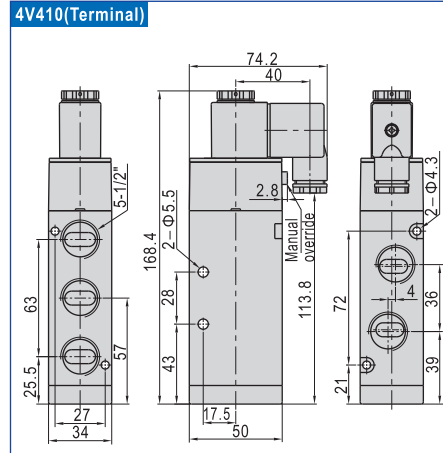
4V420



4V430C

No.	Item	No.	Item	No.	Item
1	Connector	9	Wear ring	17	Override spring
2	Coil net	10	Bottom cover	18	Manual override
3	Coil	11	Fixed screw	19	Spring holder
4	Armature	12	Spool spring	20	Return spring
5	Fixed plate	13	Bottom cover gasket	21	Side cover
6	Piston	14	Spool O-ring	22	Spring holder
7	Pilot kit	15	Spool		
8	Body	16	Piston O-ring		

Dimensions



4V400

Solenoid valve(5/2 way)

4M(NAMUR) Series



4M

Symbol



Product feature

1. Internally piloted structure.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Double control solenoid valves have memory function.
4. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
5. No need to add oil for lubrication.
6. Install in the side plate with the surface upward, which can be used by directly connecting with the actuators.
7. Affiliated manual devices are equipped to facilitate installation and debugging.
8. Several standard voltage grades are optional.

Flow chart

Please refer to the same types of 4V series solenoid valves.

Specification

Model	4M110-M5	4M110-06	4M120-06	4M210-06	4M210-08	4M220-08	4M310-08	4M320-08	4M310-10	4M320-10
Fluid	Air(to be filtered by 40 μm filter element)									
Acting	Internal piloted									
Port size ①	In=Out=M5	In=Out=1/8"	In=Out=1/8"	In=Out=1/8"	In=Out=1/4"	In=Out=1/4"	In=Out=1/4"	In=Out=3/8"	In=Out=3/8"	In=Out=3/8"
Orifice size	5.5mm ² (Cv=0.31)	12.0mm ² (Cv=0.67)	14.0mm ² (Cv=0.78)	16.0mm ² (Cv=0.89)	25.0mm ² (Cv=1.40)	30mm ² (Cv=1.67)				
Valve type	5 port 2 position									
Operating pressure	0.15~0.8MPa(21~114psi)									
Proof pressure	1.5MPa(215psi)									
Temperature °C	-20~70									
Material of body	Aluminum alloy									
Lubrication ②	Not required									
Max. frequency ③	5 cycle/sec					4 cycle/sec				
Weight	4M110:120g	4M120:175g	4M210:220g	4M220:320g	4M310:310g	4M320:400g				

① PT thread, NPT thread and G thread are available.

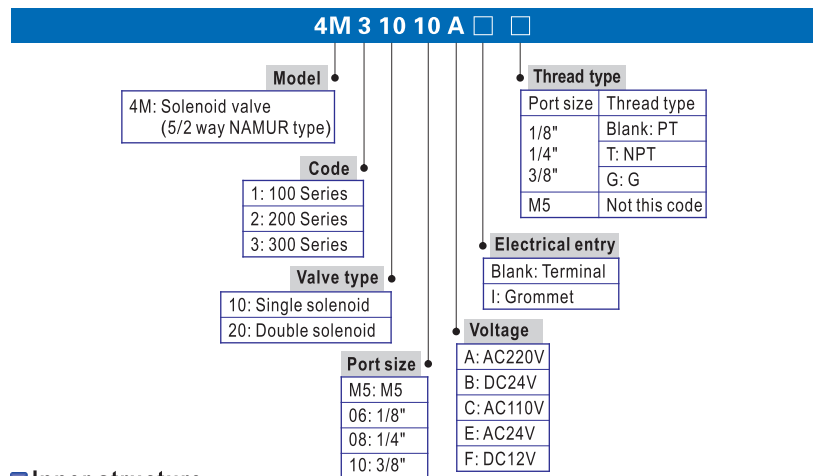
② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

③ The maximum actuation frequency is in the no-load state.

Coil specification

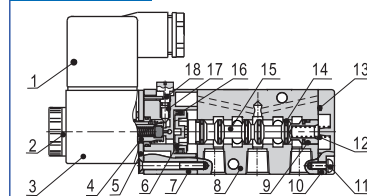
Item	4M110	4M120	4M210	4M220	4M310	4M320
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V					
Scope of voltage	AC: ± 15% DC: ± 10%					
Power consumption	AC:2.5VA	DC:2.5W	AC:3.5VA	DC:3.0W		
Protection	IP65(DIN40050)					
Temperature classification	B Class					
Electrical entry	Terminal, Grommet					
Activating time	0.05 sec and below					

Ordering code

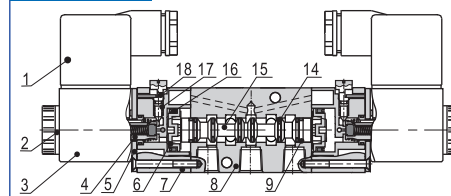


Inner structure

Single solenoid



Double solenoid



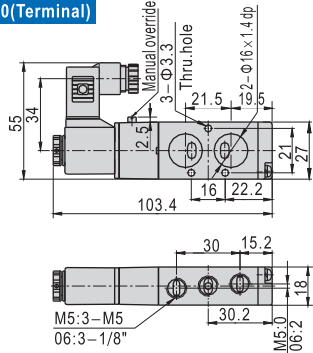
No.	Item	No.	Item
1	Connector	10	Bottom cover
2	Coil net	11	Fixed screw
3	Coil	12	Spool spring
4	Armature	13	Bottom cover gasket
5	Fixed plate	14	Spool O-ring
6	Piston	15	Spool
7	Pilot kit	16	Piston O-ring
8	Body	17	Override spring
9	Wear ring	18	Manual override

Solenoid valve(5/2 way)

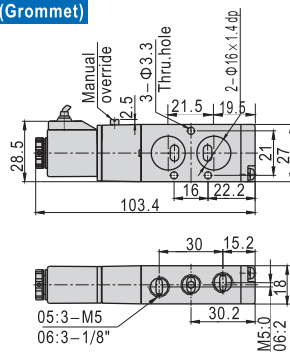
4M(NAMUR) Series

Dimensions

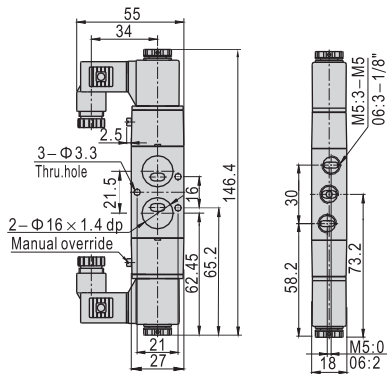
4M110(Terminal)



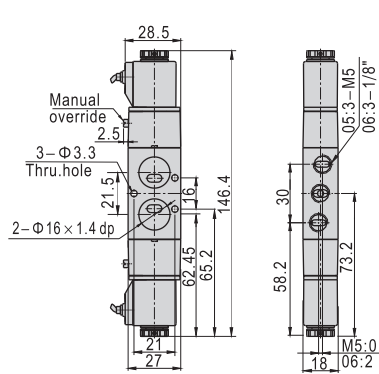
4M110(Grommet)



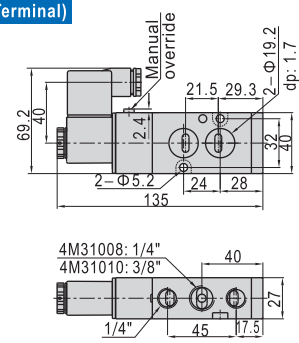
4M120(Terminal)



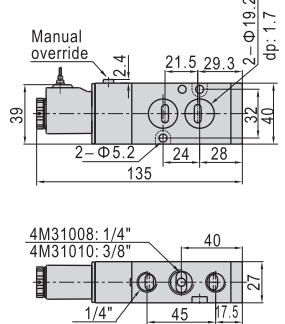
4M120(Grommet)



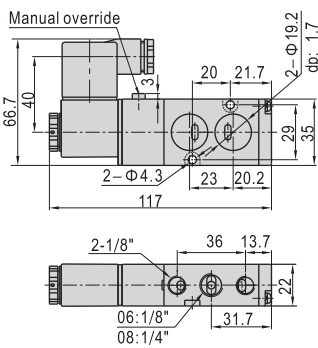
4M310(Terminal)



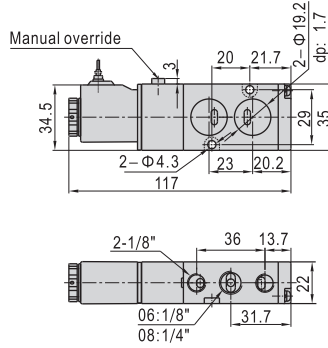
4M310(Grommet)



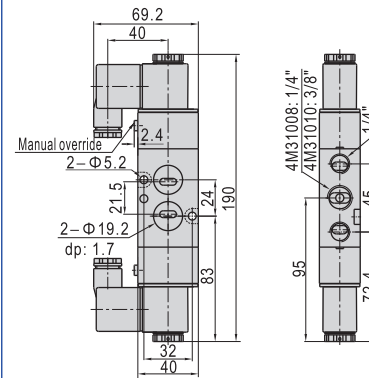
4M210(Terminal)



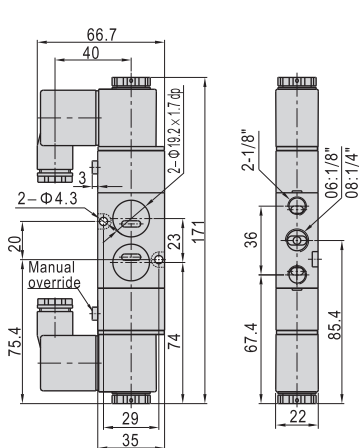
4M210(Grommet)



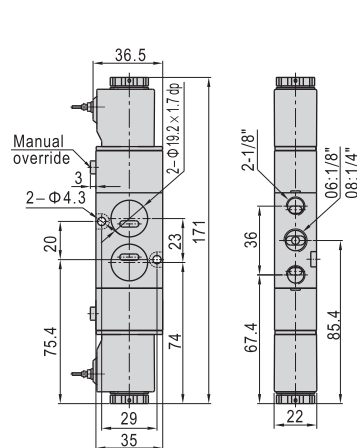
4M320(Terminal)



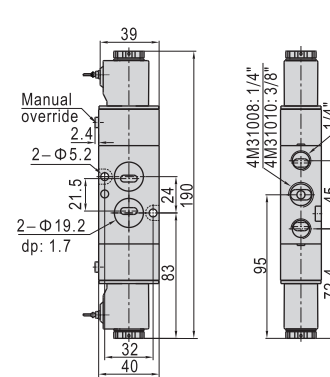
4M220(Terminal)



4M220(Grommet)



4M320(Grommet)



4M

Manifold



Product feature

1. It is available to integrate the direction control valves of the same series to form value group to save space and cost.
2. It is easy to examine when there are faults owing to the unified air intake and exhaust and unified wiring.
3. Flexible combination and strong expansion capability can make any combination or expansion of the numbers of direction control valves that are connected.

Specification

Item\Manifold Model	100M	200M	300M
Fluid	Air(to be filtered by 40 μ m filter element)		
Temperature °C	-20~70		
Adaptable valve's series	3V100 Series	3V200 Series	3V300 Series

Ordering code

Ordering code contains the two parts of the manifold's and the blank plate's.

1 Ordering code for manifold

3V100M 5F □

- Model**
 - 3V100M: 100 Series manifold
 - 3V200M: 200 Series manifold
 - 3V300M: 300 Series manifold
- Thread type**
 - Blank: PT
 - T: NPT
 - G: G
- Number of stations**
 - 1F: 1 Station
 - 2F: 2 Station
 -
 - 16F: 16 Station

2 Ordering code for blank plate

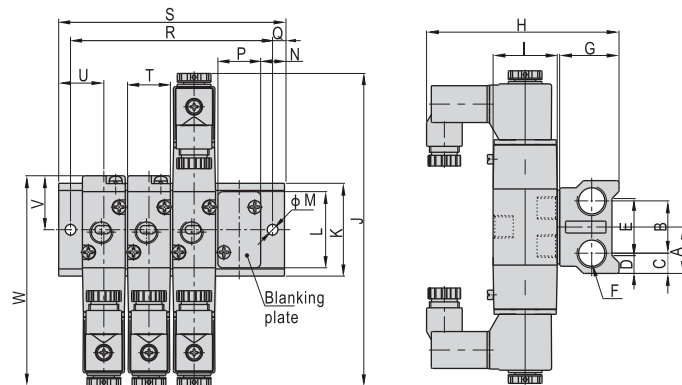
P-3V100M R2

- Model**
 - 3V100M: 100 Series manifold
 - 3V200M: 200 Series manifold
 - 3V300M: 300 Series manifold
- Code**
 - R2: Blank plate for manifold

Remark:1. Manifold kits contains manifold, seal and screw.
2. Blank plate kits contains blank plate and screw.

Dimensions

With 3V solenoid valve



Model\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	T	U	V	W
3V100M	19.5	22	8.5	7.5	24	1/4"	25	81	27	131.4	39	32	4.5	10	18	5	18	19	22.7	88.4
3V200M	22.5	25	10	8	29	1/4"	25	92.7	35	162.4	45	40	4.5	12	22	6	22	23	27.7	109.1
3V300M	26	28	12	8	36	3/8"	29	99.2	40	174.8	52	47	4.5	13.5	27	6	27	27	32.5	119.9

Model\Item	R															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
3V100M	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313
3V200M	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379
3V300M	42	70	98	126	154	182	210	238	266	294	322	350	378	406	434	462

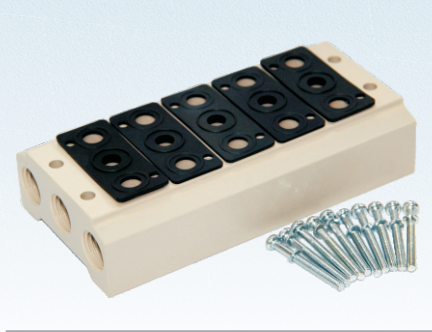
Model\Item	S															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
3V100M	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
3V200M	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
3V300M	54	82	110	138	166	194	222	250	278	306	334	362	390	418	446	474



Solenoid valve(Accessories)



Manifold



Product feature

1. It is available to integrate the direction control valves of the same series to form value group to save space and cost.
2. It is easy to examine when there are faults owing to the unified air intake and exhaust and unified wiring.
3. Flexible combination and strong expansion capability can make any combination or expansion of the numbers of direction control valves that are connected.

Specification

Item\Manifold Model	100M	200M	300M	400M
Fluid	Air(to be filtered by 40 μ m filter element)			
Temperature °C	-20~70			
Adaptable valve's series	4V100 Series	4V200 Series	4V300 Series	4V400 Series

Ordering code

Ordering code contains the two parts of the manifold's and the blank plate's.

1 Ordering code for manifold

100M 5F □

- Model**
 - 100M: 100 Series manifold
 - 200M: 200 Series manifold
 - 300M: 300 Series manifold
 - 400M: 400 Series manifold
- Thread type**
 - Blank: PT
 - T: NPT
 - G: G
- Number of stations**
 - 1F: 1 Station
 - 2F: 2 Station
 -
 - 16F: 16 Station

2 Ordering code for blank plate

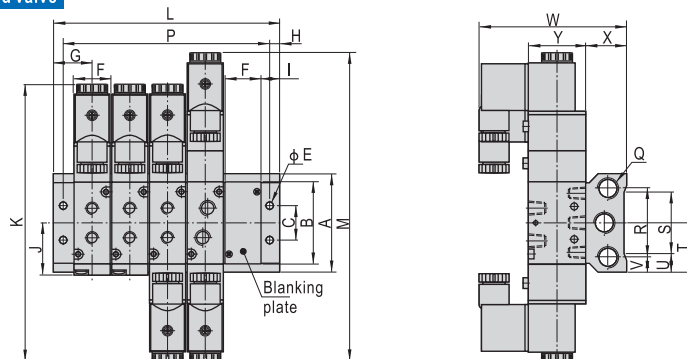
P-100M R2

- Model**
 - 100M: 100 Series manifold
 - 200M: 200 Series manifold
 - 300M: 300 Series manifold
 - 400M: 400 Series manifold
- Code**
 - R2: Blank plate for manifold

① 100M, 200M series have a maximum of 16 stations ; 300M series have a maximum of 12 stations; 400M series have a maximum of 8 stations.

Dimensions

With 4V solenoid valve



Model\Item	A	B	C	E	F	G	H	I	J	K	M	Q	R	S	T	U	V	W	X	Y
100M□F	58	43.2	20	4.5	18.3	19	5	10	28.2	139.4	154.5	1/4"	40	30	29	14	9	79	25	27
200M□F	61	50.7	21	4.5	22.4	23	6	12	31.7	170	189	1/4"	43	32	30.5	14.5	9	93	27	35
300M□F	75	64.8	26	4.5	27.3	27	6	13.5	40	188.8	208	3/8"	53	48	37.5	13.5	11	99.5	30	40
400M□F	104	94.5	32	5.5	34.3	31.5	7	14.5	57	221.8	243	1/2"	68	63	52	18.5	18	112.5	38	50

Model\Item	L															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
100M□F	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
200M□F	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
300M□F	54	82	110	138	166	194	222	250	278	306	334	362	-	-	-	-
400M□F	63	98	133	168	203	238	273	308	-	-	-	-	-	-	-	-

Model\Item	P															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
100M□F	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313
200M□F	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379
300M□F	42	70	98	126	154	182	210	238	266	294	322	350	-	-	-	-
400M□F	49	84	119	154	189	224	259	294	-	-	-	-	-	-	-	-



Manifold

