

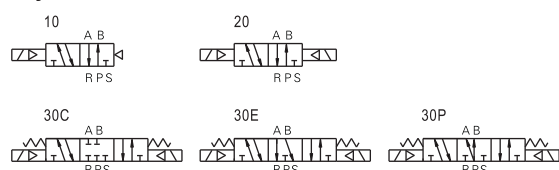
Solenoid valve(5/2 way \ 5/3 way)

AIRTAC

7V Series



Symbol

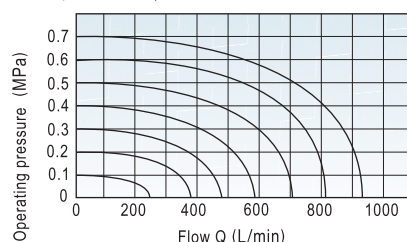


Product feature

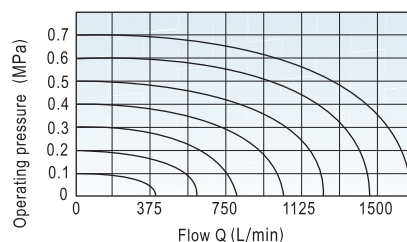
- 1.Plug terminal , option for horizontal (JPC type) and vertical (M type) installation.
- 2.Aluminium alloy die-casting body, Improved internal structure for larger flow rate.
- 3.Air filter installed in the piston seat . Make sure clear air used.
- 4.Aluminium alloy die-casting body, Optimise internal structure for larger flow rate.
- 5.Tubing options allow direct tubing(7V) on the valves or manifold mount (7MV)for space saving.
- 6.Option '7MV' is used with valve sub base.

Flow chart

Model: 7V110-06、7MV110



Model: 7V210-08、7MV210



Specification

Model	7V110-06	7V120-06	7V130-06	7V210-08	7V220-08	7V230-08
Port size ①	In=Out=Exhaust=1/8"			In=Out=1/4" Exhaust=1/8"		
Model	7MV110	7MV120	7MV130	7MV210	7MV220	7MV230
Orifice size	9.5mm ²		8.0mm ²	14.0mm ²		11.0mm ²
Cv value	0.55		0.48	0.83		0.65
Valve type	5 port 2 position		5 port 3 position	5 port 2 position		5 port 3 position
Weight	80g	90g	100g	120g	135g	145g
Fluid	Air(to be filtered by 40 μm filter element)					
Acting	Piloted					
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					
Exhaust type of pilot valve	Main valve and pilot valve centralized exhaust					
Max. frequency ③	8 cycle/sec		5 cycle/sec	8 cycle/sec		5 cycle/sec

① PT thread、NPT thread and G thread are available.(Except 7MV series).

② It can't stop in the midway of luring. 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	DC24V
Scope of voltage	DC: ± 10%
Power consumption	DC: 0.9W(Standard) 0.6W(Lower power consumption, available)
Protection	Dustproof
Temperature classification	B Class
Electrical entry	Terminal
Activating time	0.05 sec and below

Ordering code

7V 1 10 06 B □ M P □ -NS									
7MV 1 10 B □ M □ -NS									
Model					Pilot valve type				
7V: Solenoid valve(5/2 5/3 way) (Directly plug)					NS: Nass pilot valve				
7MV: Solenoid valve(5/2 5/3 way) (Manifold plug)					Manual override type				
					Blank: Slotted type (Push-turn locking)				
					E: Lever type (Push-turn locking)				
Code									
1: 100 Series									
2: 200 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									
Series		Port size							
7V100		06: 1/8"							
7V200		08: 1/4"							
7MV		No this code							
Voltage									
B: DC24V									
					Thread type				
					Series		Thread type		
					7V		P: PT T: NPT G: G		
					7MV		No this code		
					Electrical entry				
					Blank: Plug connector (JPC type)				
					M: Plug connector (M type)				
					Coil type				
					Coil type		Adapt to electrical entry		
					Blank: Standard type		Plug connector(JPC type) Plug connector(M type)		
					L: Lower power consumption type		Plug connector(JPC type)		

Please refer to P52-53 for manifold specification and the order way.



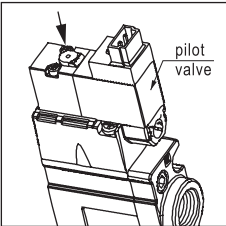
Solenoid valve(5/2 way \ 5/3 way)

AIRTAC

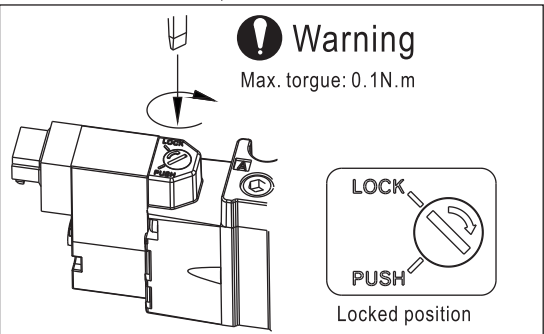
7V Series

How to mounting and using

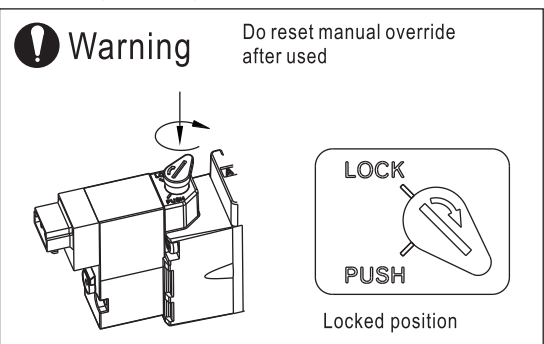
- 1.Handle with care;
- 2.Prevent rough handling of miniature pilot valve & coil;
- 3.Tigtening torque of 0.1~0.15N.m is sufficient to secure pilot valve (M1.6 screw), in case of tampering;
- 4.Manual override:
 - 4.1. Ensure no personnel is in the way, prior to activating manual override;
 - 4.2. For push button option, activate by push the button in the direction shown;



- 4.3. For slotted option, push the slotted button with correct size screw driver & turn to lock;



- 4.4. For lever option, it can be simply turn the lever to detent at the manually overriding position.



- 4.5. Do reset manual override after used.

Inner structure

7V110

7V120

7V130C

NO. Item	NO. Item	NO. Item	NO. Item	NO. Item	NO. Item
1 Pilot valve	6 Filter element	11 Gasket	16 Piston O-ring	21 Spring	26 Spring
2 Manual override	7 O-ring	12 Small piston	17 Piston holder	22 Wear ring	
3 Piston holder	8 Screw	13 Piston O-ring	18 Big piston	23 Spool O-ring	
4 Piston O-ring	9 Port block	14 Bottom cover	19 Side cover	24 Spool	
5 Big piston	10 Body	15 Gasket	20 Spring holder	25 Spool gasket	

7MV110

7MV120

7MV130C

NO. Item	NO. Item	NO. Item	NO. Item	NO. Item
1 Pilot valve	6 Filter element	11 Bottom cover	16 Side cover	21 Spool
2 Manual override	7 O-ring	12 Gasket	17 Spring holder	22 Spool gasket
3 Piston holder	8 Body	13 Piston O-ring	18 Spring	23 Spring
4 Piston O-ring	9 Small piston	14 Piston holder	19 Wear ring	
5 Big piston	10 Piston O-ring	15 Big piston	20 Spool O-ring	



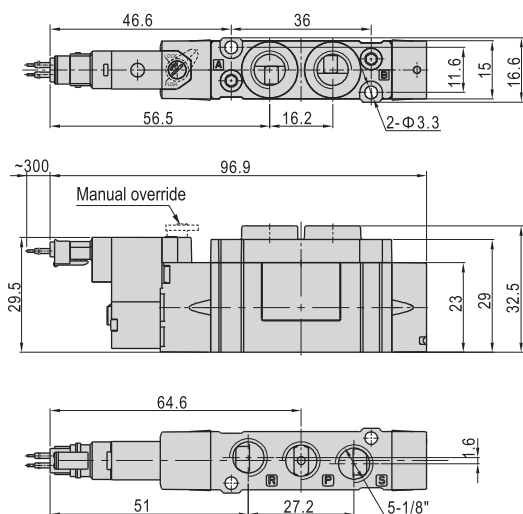
Solenoid valve(5/2 way \ 5/3 way)

AIRTAC

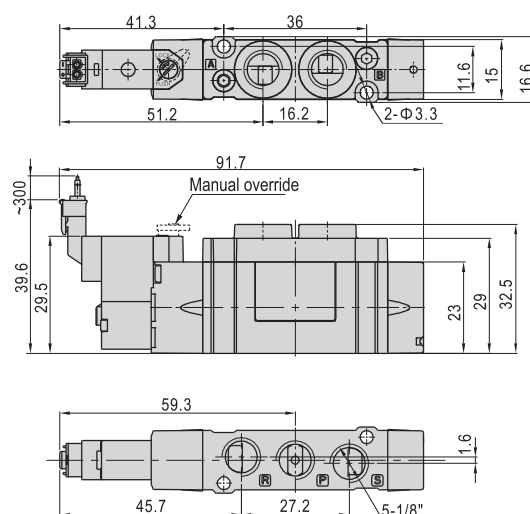
7V Series

■ Dimensions

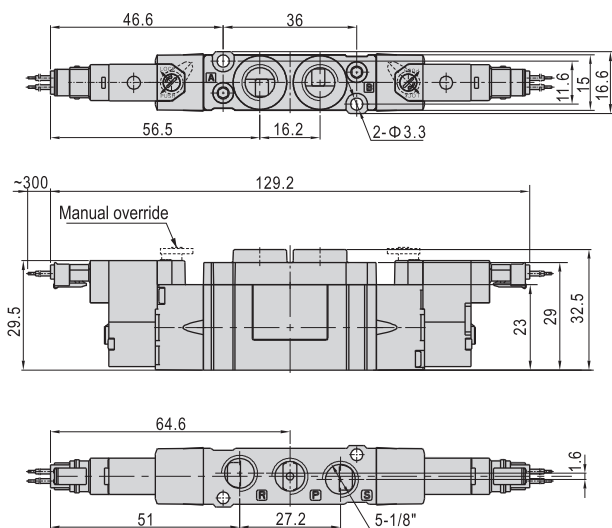
7V110(JPC type)



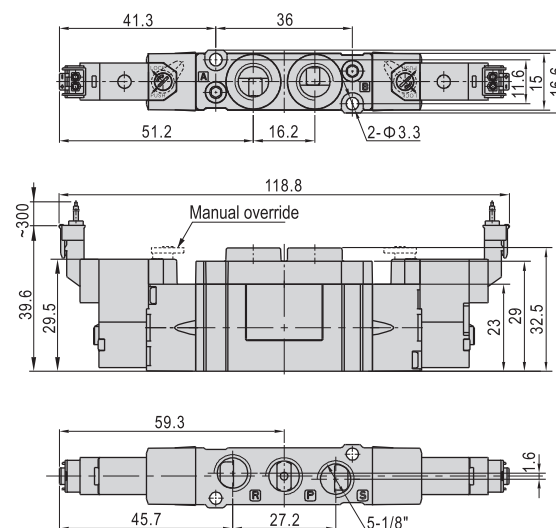
7V110(M type)



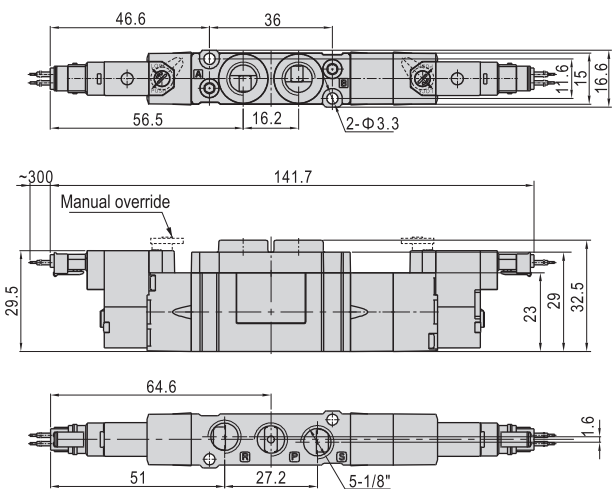
7V120(JPC type)



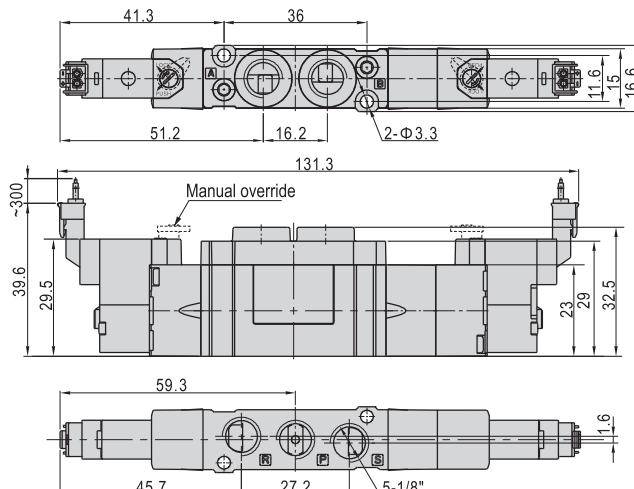
7V120(M type)



7V130(JPC type)



7V130(M type)

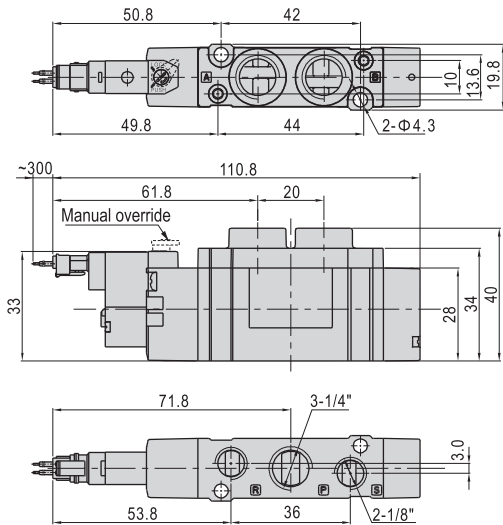


Solenoid valve(5/2 way \ 5/3 way)

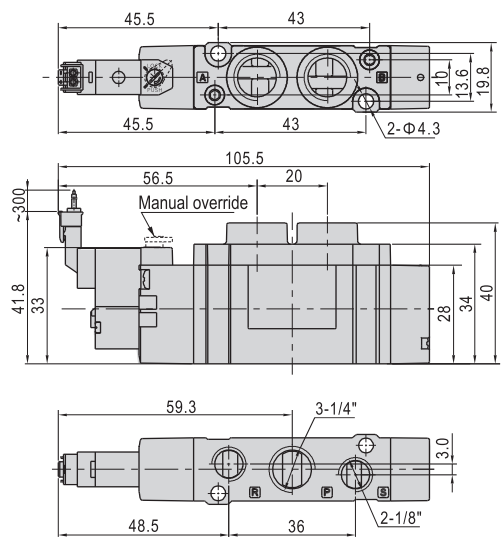
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7V Series

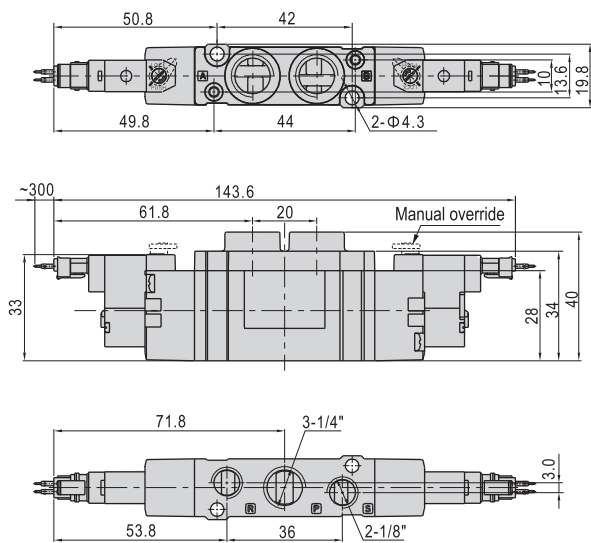
7V210(JPC type)



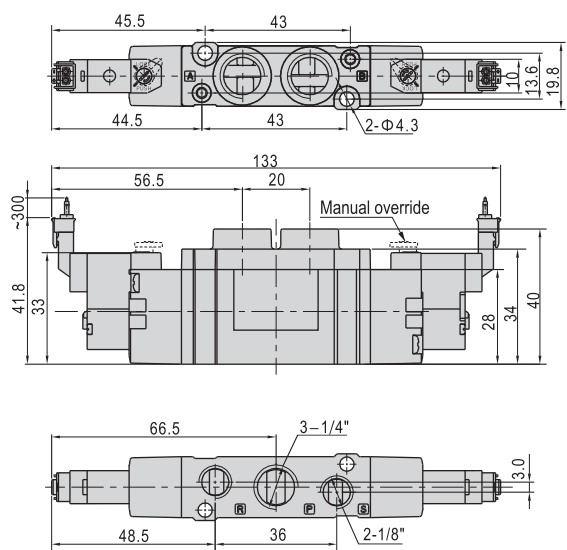
7V210(M type)



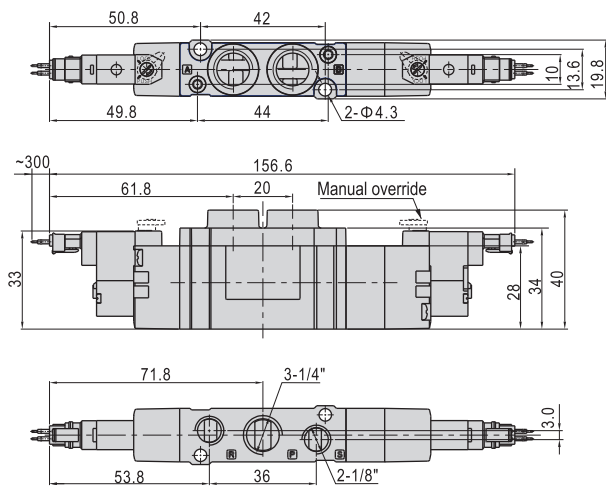
7V220(JPC type)



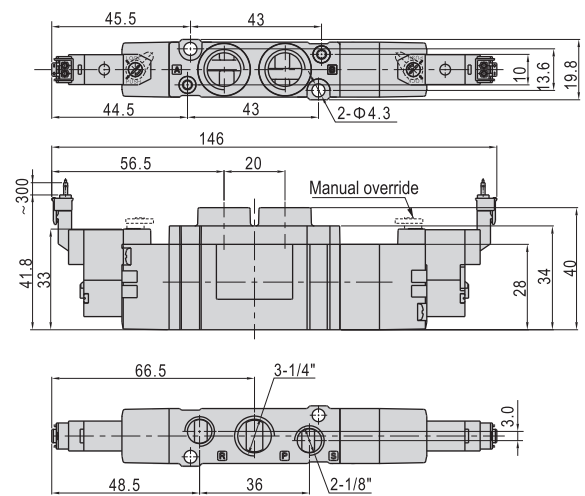
7V220(M type)



7V230(JPC type)



7V230(M type)



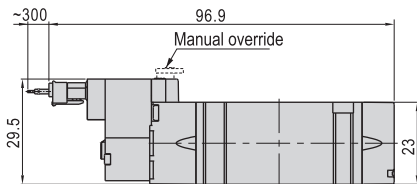
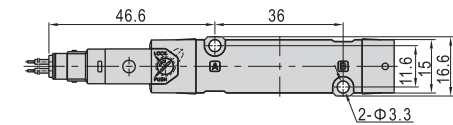
Solenoid valve(5/2 way \ 5/3 way)



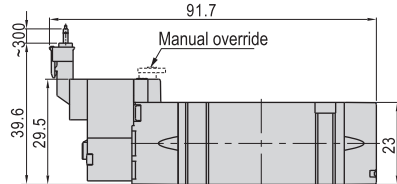
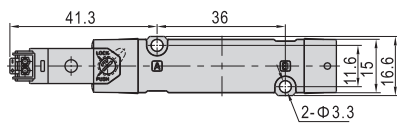
7V Series



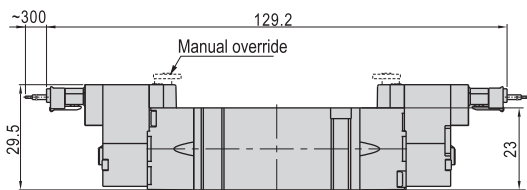
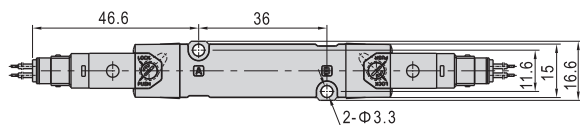
7MV110(JPC type)



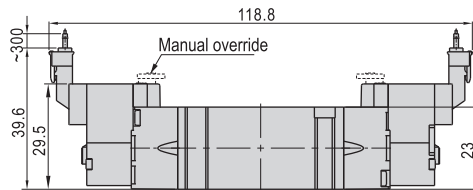
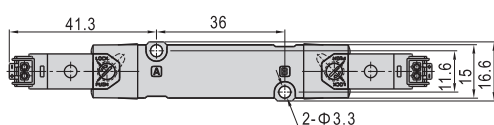
7MV110(M type)



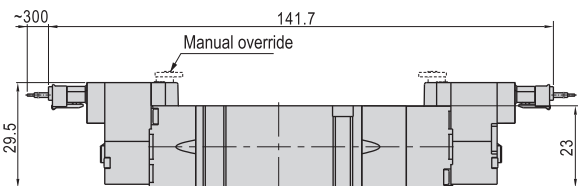
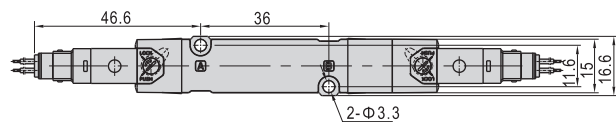
7MV120(JPC type)



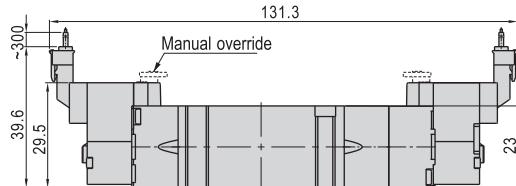
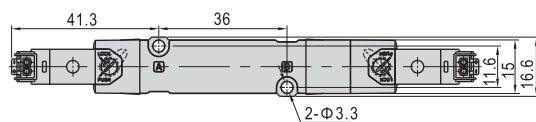
7MV120(M type)



7MV130(JPC type)



7MV130(M type)

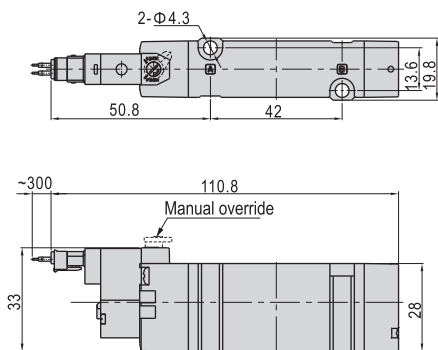


Solenoid valve(5/2 way \ 5/3 way)

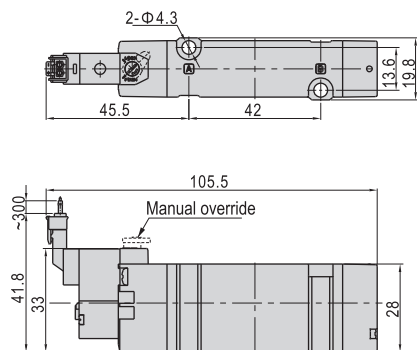
AIRTAC

7V Series

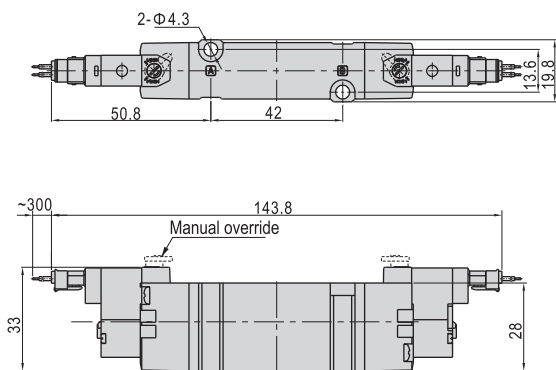
7MV210(JPC type)



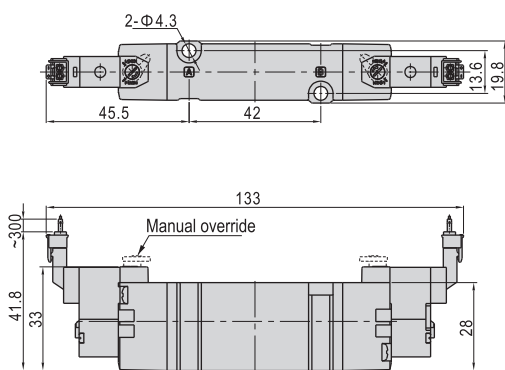
7MV210(M type)



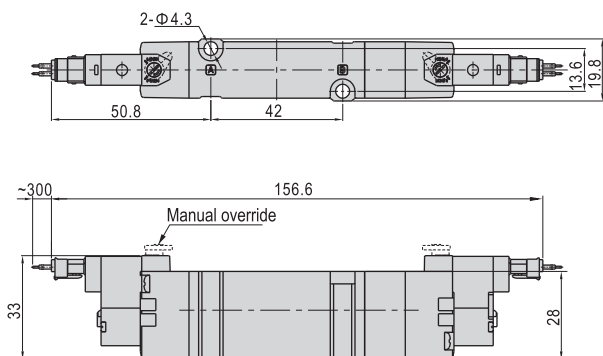
7MV220(JPC type)



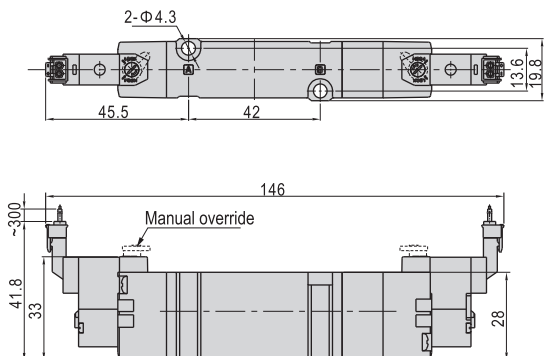
7MV220(M type)



7MV230(JPC type)



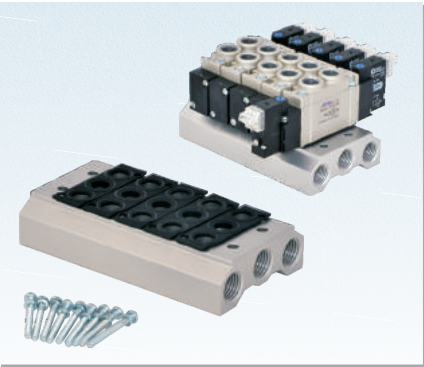
7MV230(M type)



Solenoid valve(Accessories)



Manifold for 7V Series



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	7V100M	7V200M
Fluid	Air(to be filtered by 40 μ m filter element)	
Temperature °C	-20~70	
Adaptable valve's series	7V100 Series	7V200 Series

Ordering code

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

1 Ordering code for manifold

7V100M 5F P

Model	Thread type
7V100M: 7V100 Series manifold	P: PT
7V200M: 7V200 Series manifold	T: NPT
	G: G

Number of stations
1F: 1 Station
2F: 2 Stations
.....
16F: 16 Stations

2 Ordering code for blank plate

P-7V100M R2

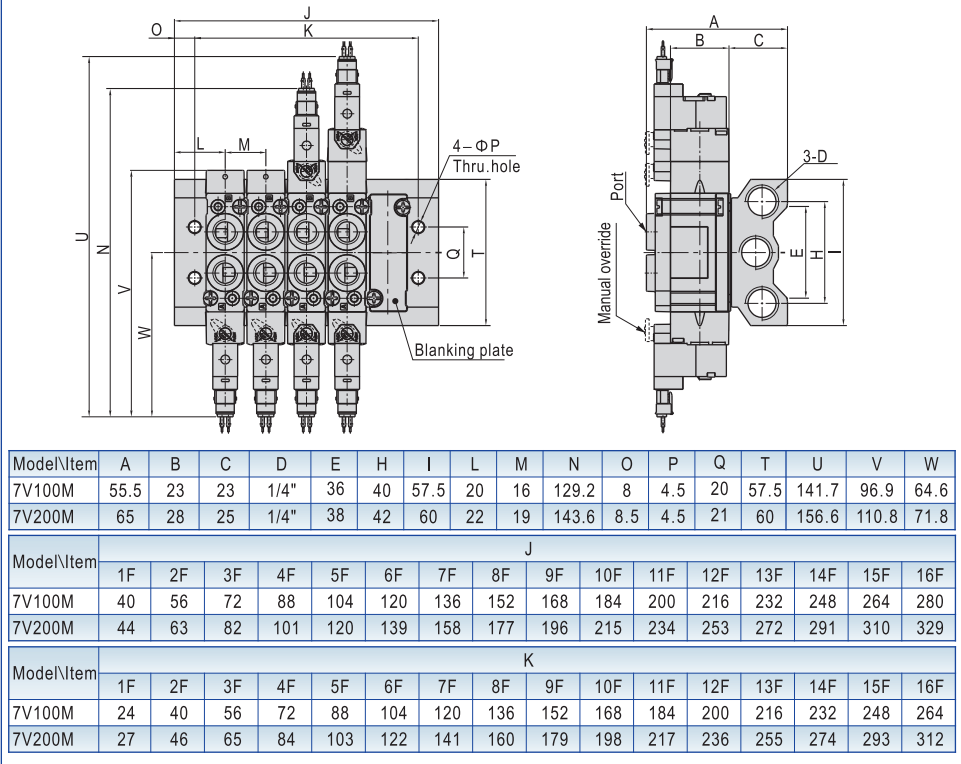
Model	Code
7V100M: 7V100 Series manifold	R2: Blank plate for manifold
7V200M: 7V200 Series manifold	

Note:

- 1. Manifold assembly contains manifold, gasket, screw.
- 2. Blank plate assembly contains blank plate, screw.

Dimensions

With 7V100\7V200 solenoid valve



Model\Item	A	B	C	D	E	H	I	L	M	N	O	P	Q	T	U	V	W
7V100M	55.5	23	23	1/4"	36	40	57.5	20	16	129.2	8	4.5	20	57.5	141.7	96.9	64.6
7V200M	65	28	25	1/4"	38	42	60	22	19	143.6	8.5	4.5	21	60	156.6	110.8	71.8

Model\Item	J															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
7V100M	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280
7V200M	44	63	82	101	120	139	158	177	196	215	234	253	272	291	310	329

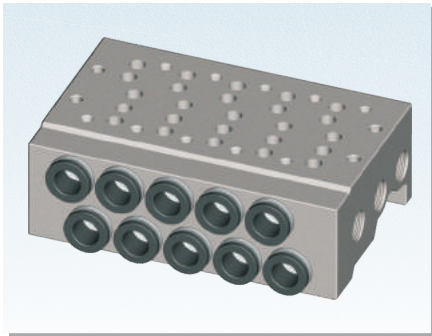
Model\Item	K															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
7V100M	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264
7V200M	27	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312



Solenoid valve(Accessories)



Manifold for 7MV Series



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.
- 4. The manifold's plugged ports can make it easy and fast to joint tube.

Specification

Item\Manifold model	7MV100M	7MV200M
Fluid	Air(to be filtered by 40 μ m filter element)	
Temperature ℃	-20~70	
Adaptable valve's series	7MV100 Series	7MV200 Series

Ordering code

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

1 Ordering code for manifold

7MV100M 5F P6 P

Model	Thread type
7MV100M: 7MV100 Series manifold	P: PT
7MV200M: 7MV200 Series manifold	T: NPT
	G: G

Number of stations	OD of work port
1F: 1 Station	Model OD of work port
2F: 2 Stations	7MV100M P6: Φ6mm
.....	P8: Φ8mm
16F: 16 Stations	7MV200M P8: Φ8mm
	P10: Φ10mm

2 Ordering code for blank plate

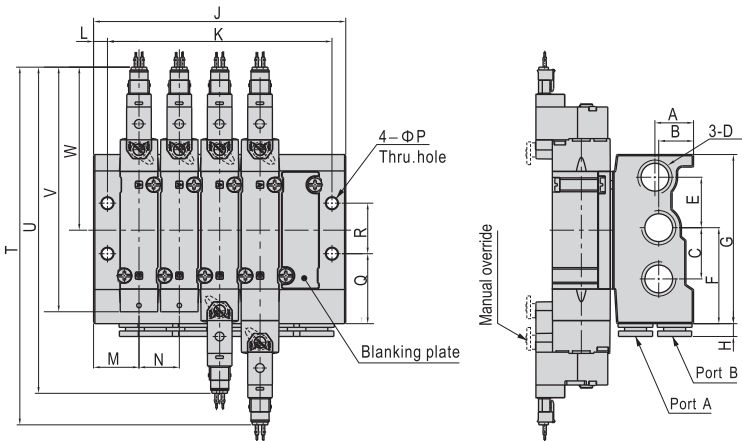
P-7MV100M R2

Model	Code
7MV100M: 7MV100 Series manifold	R2: Blank plate for manifold
7MV200M: 7MV200 Series manifold	

Note:
1. Manifold assembly only contains manifold. 2. Blank plate assembly contains blank plate, gasket, screw.

Dimensions

With 7MV100\7MV200 solenoid valve



Model\Item	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	T	U	V	W
7MV100M	15.3	13.8	20	1/4"	20	38	67	5.1	5.5	18.5	16	4.5	28	20	141.7	129.2	96.9	64.6
7MV200M	19.2	19.2	21	1/4"	21	42	73	5.1	6	21	19	4.5	31.5	21	156.6	143.6	110.8	71.8

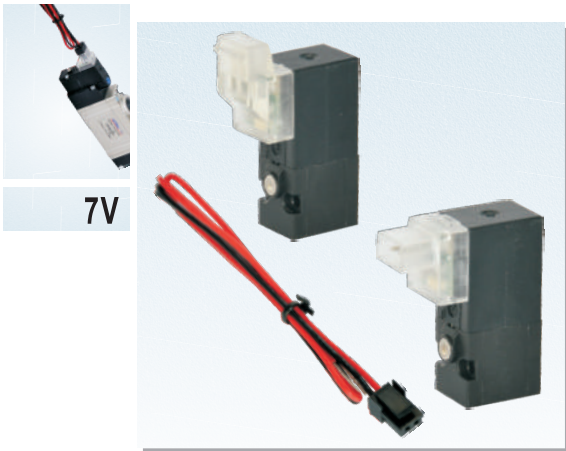
Model\Item	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
7MV100M	36.5	52.5	68.5	84.5	100.5	116.5	132.5	148.5	164.5	180.5	196.5	212.5	228.5	244.5	260.5	276.5
7MV200M	42	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327

Model\Item	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
7MV100M	26	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266
7MV200M	30	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315

Solenoid valve(Accessories)



Pilot valve for 7V, 7MV Series



Symbol



Points to note prior connection

- 1. Corrector connection to solenoid is un-directional.
- 2. Polarity sensitive red to "+" black to "-".

Specification

Model	CPV10B-NS	CPV10BM-NS	CPV10BL-NS
Fluid	Air(to be filtered by 40 μ m filter element)		
Acting	Direct acting		
Orifice size	Φ 0.7mm		Φ 0.5mm
Valve type	3 port 2 position		
Lubrication	Not required		
Operating pressure	0~0.8MPa(0~114psi)		
Proof pressure	1.5MPa(215psi)		
Standard voltage	DC24V		
Scope of voltage	± 10 %		
Protection	Dustproof		
Temperature classification	B Class		
Power consumption	0.9W		0.6W

Partnership of pilot valve with main valve

Main valve	Matching pilot valve	Voltage of coil	Wiring diagram of coil	Matching plug connector
7V100	CPV10B-NS	DC24V		7V110-007-P1
7MV100	CPV10BM-NS			
7V200	CPV10BL-NS			
7MV200	CPV10BL-NS			

Ordering code

Ordering code contains the two parts of the pilot valve's and the plug connector's.

1 Ordering code for pilot valve

CPV 10 B □ □ -NS

Model
CPV: Pilot valve for 7V series

Width of valve
10: 10mm

Voltage
B: DC24V

Coil type
Adapt to electrical entry

Pilot valve type
NS: Nass pilot valve

Electrical entry
Blank: Plug connector (JPC type)
M: Plug connector (M type)

Blank: Standard type
Plug connector(JPC type)
Plug connector(M type)

L: Lower power consumption type
Plug connector(JPC type)

2 Ordering code for plug connector

The ordering code of plug connector is 7V110-007-P1. Note: The length of wire is 300mm.

Dimensions

