

Integrated solenoid valve (3/2 way)

CPV10S Series

AIRTAC

MOTIONUSA



Specification

Model		CPV10SB	CPV10SF
Integrated solenoid valve	Fluid	Air(to be filtered by 40 μ m filter element)	
	Acting	Direct acting	
	Number of stations	4~24 stations	
	Electrical entry	Terminal, 25pin D-Sub	
	Port size	P/R: M5 A: Φ3.2/ Φ4(Push in fittings)	
	The type of Inlet and exhaust	Centralized inlet and exhaust	
	Operating pressure	0~0.8MPa(0~114psi)	
	Proof pressure	1.2MPa(175psi)	
	Temperature	-20~70℃	
Coil	Protection	Dustproof	
	Standard voltage	DC24V	DC12V
	Scope of voltage	DC±10%	
	Temperature classification	F Class	
	Power consumption	DC: 0.9W	

Product feature

1. Integrated installation of air inlet/exhaust and power socket(25pin D-Sub) to save space and reduce additional accessories.
2. Equipped with manual override for adjustment and troubleshooting.
3. Low starting voltage and long service life.

Ordering code

CPV10S J04 B 12F

① ② ③ ④

①Model	②Port size	③Voltage	④Number of stations [Note]
CPV10S: CPV10S series integrated solenoid valve	J03: Φ3.2mm J04: Φ4.0mm	B: DC24V F: DC12V	4F: 4 stations 6F: 6 stations 8F: 8 stations 24F: 24 stations

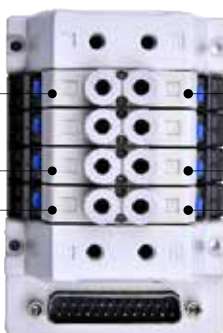
[Note] About stations as follow:

23F: The 12th mini solenoid valve on the left(12A)

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3F: The second mini solenoid valve on the left(2A)

1F: The first mini solenoid valve on the left(1A)



24F: The 12th mini solenoid valve on the right(12B)

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4F: The second mini solenoid valve on the right(2B)

2F: The first mini solenoid valve on the right(1B)

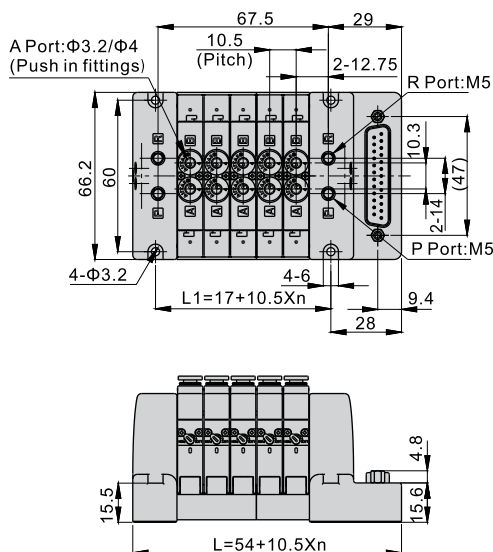
Integrated solenoid valve (3/2 way)

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CPV10S Series

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Dimensions

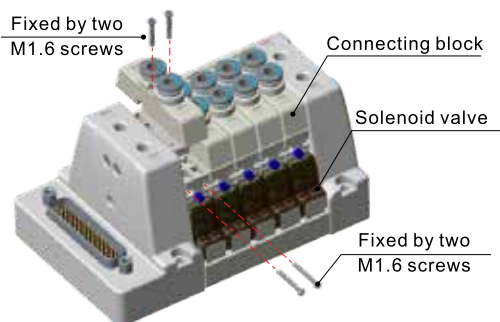


Item\Number of stations	4F	6F	8F	10F	12F	14F	16F	18F	20F	22F	24F
L	75	85.5	96	106.5	117	127.5	138	148.5	159	169.5	180
L1	38	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143

Installation and Application

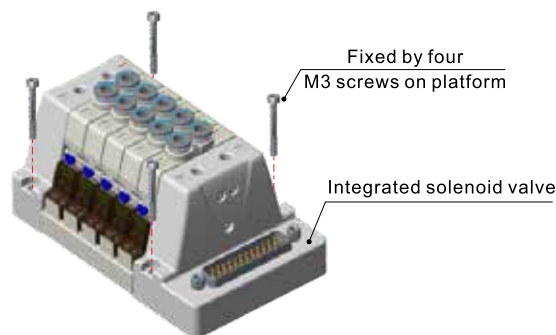
Assembly of connecting block and micro-solenoid valve

Mount micro-solenoid valve and connecting block with torque of 0.1~0.15N.m by two M1.6 screws as following.

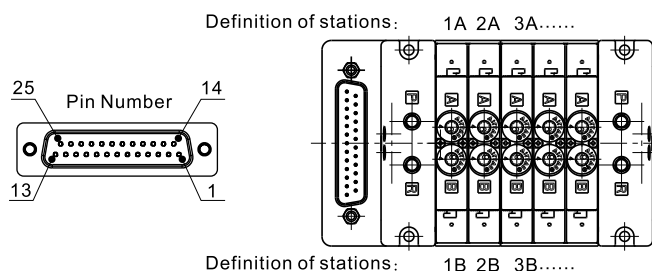


Mounting of integrated solenoid valve

Mount integrated solenoid valve by four M3 screws on platform as following.



Pin Assignment



Note: Gauge number of cable connecting to D-Sub pin No.13(COM) must be ≤22AWG

Pin NO.	Polarity		Control target	Pin NO.	Polarity		Control target
	-COM	+COM			-COM	+COM	
1	(+)	(-)	1A	14	(+)	(-)	1B
2	(+)	(-)	2A	15	(+)	(-)	2B
3	(+)	(-)	3A	16	(+)	(-)	3B
4	(+)	(-)	4A	17	(+)	(-)	4B
5	(+)	(-)	5A	18	(+)	(-)	5B
6	(+)	(-)	6A	19	(+)	(-)	6B
7	(+)	(-)	7A	20	(+)	(-)	7B
8	(+)	(-)	8A	21	(+)	(-)	8B
9	(+)	(-)	9A	22	(+)	(-)	9B
10	(+)	(-)	10A	23	(+)	(-)	10B
11	(+)	(-)	11A	24	(+)	(-)	11B
12	(+)	(-)	12A	25	(+)	(-)	12B
13	(-)	(+)	COM				

Micro-solenoid valve(3/2 way)

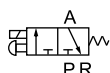
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Symbol



Product feature

1. With anti-surge component can avoid the damage of solenoid valve.
2. Multi-direction installation and polarless circuit design.
3. AC voltage models possess a built-in full wave rectifier circuit to reduce the noise effectively.
4. Various of standard voltages: AC220V, AC110V, DC24V, DC12V.
5. Low starting voltage and long service life.
6. Equipped with a push-turn locking manual override for adjustment and troubleshooting.

Specification

Model		CPV10
Fluid		Air(to be filtered by 40 μm filter element)
Acting		Direct acting
Nominal diameter		Φ0.55mm
Effective area		P to A:0.25mm ² (Cv=0.014); A to R:0.35mm ² (Cv=0.02)
Valve type		3 /2 way
Weight	micro-solenoid valve	15g
	Terminal line	050: 4.6g 200: 21.4g
	Screw(2pcs)	0.46g
Operating pressure		0~0.8MPa(0~114psi)
Proof pressure		1.2MPa(175psi)
Temperature		-20~70℃
Standard voltage		AC220V AC110V DC24V DC12V
Scope of voltage		DC±10%; AC+15%~-10%
Protection		Dustproof
Temperature classification		F Class
Power consumption		DC: 0.9W; AC: 1.5VA
Electrical entry		Terminal
Activating time		on<7ms; off<7ms

Ordering code

Ordering code of valve

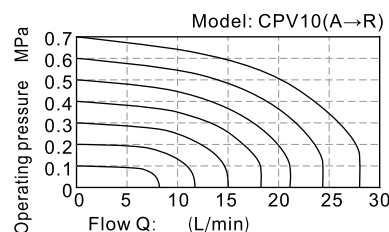
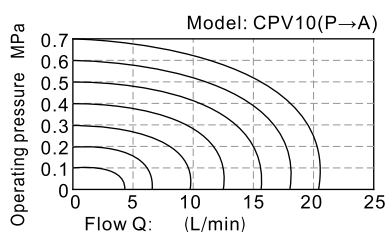
CPV 10 B P-050				
①	②	③	④	⑤
① Model	② Width of body	③ Voltage	④ Code of manual override	⑤ Wire length [Note1]
CPV: CPV series Micro-solenoid valve	10: 10mm	A: AC220V B: DC24V C: AC110V F: DC12V	P: With manual override	050: 0.5m 200: 2.0m

[Note1] Contain two M1.6 screws.

Ordering code of terminal wire

CPV T 050		
①	②	③
① Model	② Terminal wire	③ Wire length
CPV: CPV series Micro-solenoid valve	T: Terminal wire	050: 0.5m 200: 2.0m

Flow chart



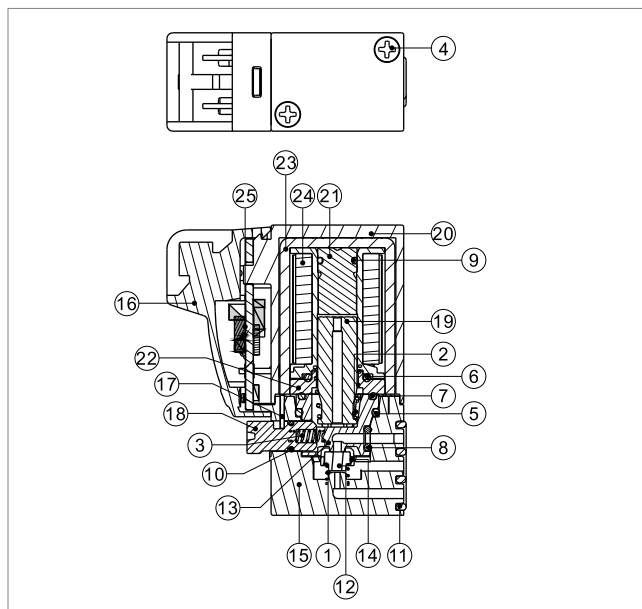
Micro-solenoid valve(3/2 way)

CPV10 Series

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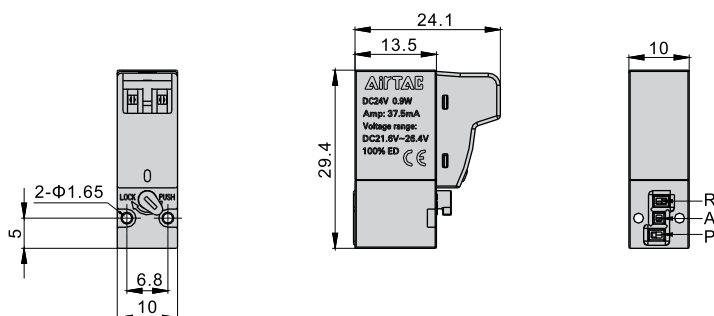
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Inner structure



No.	Item	Material	No.	Item	Material
1	Spring	Stainless steel	14	mandril	Resin
2	Spring	Stainless steel	15	Body	Resin
3	Spring	Stainless steel	16	Connector shell	Resin
4	Screw	Carbon steel	17	Manual pin plate	Stainless steel
5	O-ring	NBR	18	Manual pin	Brass
6	O-ring	NBR	19	Movable core	Stainless steel
7	O-ring	NBR	20	Cover	Resin
8	O-ring	NBR	21	Electromagnet	Stainless steel
9	O-ring	NBR	22	Plate	Carbon steel
10	O-ring	NBR	23	U shape bracket	Carbon steel
11	Gasket	NBR	24	Coil	
12	Gasket	NBR	25	PCB assembly	
13	Crater	Resin			

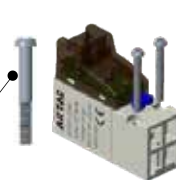
Dimensions



Installation and Application

- Micro-solenoid valve assembly:
Fastened with torque of 0.1~0.15N.m by two M1.6X14L screws.
- Wiring instruction:
Multi-direction installation and polar less circuit design.
Note: The terminal wire is non-polarity.
- Prevent to connect AC coils in series with other devices.

M1.6 × 14(long)
Screw



Vertically insert
(Wire is vertical to valve)



Horizontally insert
(Wire is parallel to valve)



Micro-solenoid valve(3/2 way)

CPV10 Series — Manifold

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Specification

Model	CPV10MJ□□2F	CPV10MJ□□3F	CPV10MJ□□20F
Fluid	Air(to be filtered by 40 μ m filter element)			
Temperature	-20~70℃			
Port size	P/R: M5 A: Φ3.2 / Φ4(Push in fittings)			
Applicable valves	CPV10 series micro-solenoid valve			

Product feature

1. Integrated installation saves space and reduces additional accessories.
2. Centralized air intake, exhaust, and wiring for quick air circuit checking.
3. Fixible combination and expandability for various applications. Blank plates are optional.

Ordering code

Ordering code of manifold

CPV10M J03 - 20F		
① Model	② Port size	③ Number of stations
CPV10M: CPV10 series Manifold	J03: Φ3.2 J04: Φ4	2F: 2 stations 4F: 4 stations 6F: 6 stations 20F: 20 stations

Ordering code of blank plate

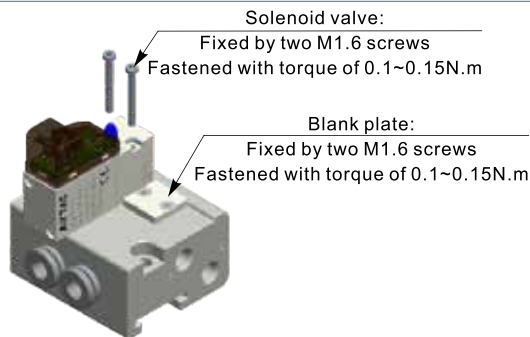
P-CPV10M-R2	
① Model	② Code
CPV10M: CPV10 series Manifold	R2: Blank plate for manifold

[Note] Blank plate kits contains blank plate, gasket and screws.



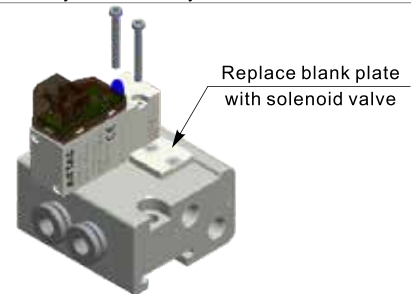
Installation and Application

Assembly of micro-solenoid valve (blank plate) and manifold



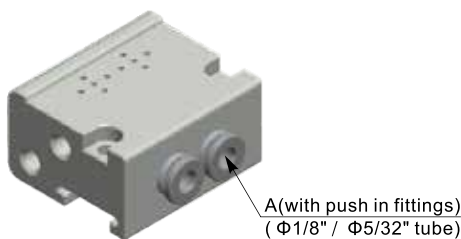
Expansion of micro-solenoid valve

Remove blank plate and install solenoid valve by the assembly instruction.



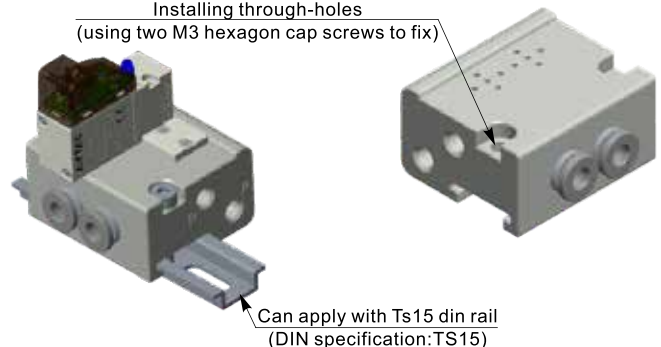
A port tubing

A port is at the side of manifold, port size is "Φ3.2 / Φ4"



Manifold mounting

Installing through-holes
(using two M3 hexagon cap screws to fix)

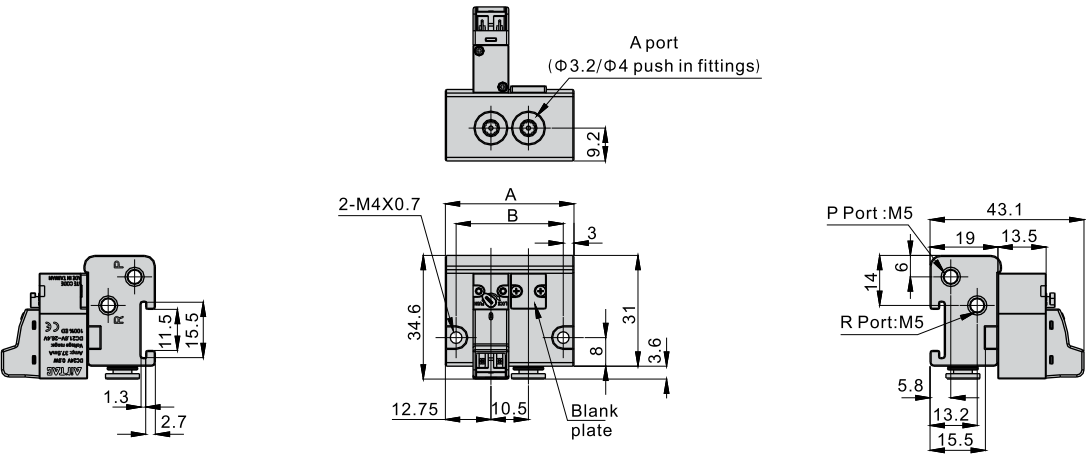


Micro-solenoid valve(3/2 way)

CPV10 Series — Manifold



Dimensions



Item\Number of stations	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
A	36	46.5	57	67.5	78	88.5	99	109.5	120	130.5	141	151.5	162	172.5	183	193.5	204	214.5	225
B	30	40.5	51	61.5	72	82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219