

10mm with vacuum switching valve

MPV42 series



- Compact all in one unit vacuum switching valve

Slim design: 10mm width, light: 57g

High speed handling: suitable for mounting machine and inspection equipments

- Common attachments with CONVUM vacuum ejector MC42

Easy switch with CONVUM vacuum ejector

- Manifold option available

Up to 5 units

How to order

MPV42

① S ② V9 ③ 4 ④ B ⑤ 3 ⑥ 2 ⑦ 1 ⑧ L

Keep blank in the case of unit type

① Body type	
S	Single unit
M	Manifold unit

② Pressure sensor						
	Sensor type	Pressure	Display	Switch output	Analog output	Input specification
V9	MPS-9	Vacuum	Digital	NPN1 point	DC1 ~ 5V	Without
V9P	MPS-9	Vacuum	Digital	PNP1 point	DC1 ~ 5V	Without
10	MPS-10	Compound	Digital	NPN1 point	DC1 ~ 5V	Sink
10P	MPS-10	Compound	Digital	PNP1 point	DC1 ~ 5V	Sink
10PS	MPS-10	Compound	Digital	PNP1 point	DC1 ~ 5V	Source
ZZ	Without	-	-	-	-	-

③ Solenoid valve voltage	
4	DC24V

④ Solenoid valve air passage	
A	Normally open(N.O)
B	Normally closed(N.C)
W	Self-holding solenoid valve (note1)

Note1) The energy-saving function of a sensor cannot work if the self-holding valve is selected.

⑤ Number of units (Manifold type only)	
1	1 unit ★
2	2 units
3	3 units
4	4 units
5	5 units

⑥ Set side (Manifold type only)	
R	Placed to the right
L	Placed to the left
Blank	When ⑤&⑦ are same

Please turn the vacuum port towards your side, the unit body you faced could be either left or right upon chosen.

⑦ Number of bodies (Manifold type only)	
1	1 unit
2	2 units
3	3 units
4	4 units
5	5 units

⑧ Number of block plates (Manifold type only)			
0	none	3	3 units
1	1 unit	4	4 units
2	2 units	5	5 units

Note) ★ is made to order

Note) Compressed air more than 0.25Mpa is necessary for operating.

Vacuum switching valves

Maintenance parts

- Solenoid valve (with gasket and screw)
Common valve for vacuum generation and blow-off
CKV010-4E
- Self-holding vacuum switching valve
(can not use for blow-off)
LV290-4E
- Pressure switch (with O ring, setting screws)

MPS-V9-MC4
MPS-V9P-MC4
MPS-10-MC4-B (Normally Closed,sink input)
MPS-10-MC4-W (Self-holding,sink input)
MPS-10P-MC4-B (Normally Closed,sink input)
MPS-10P-MC4-B-S (Normally Closed,source input)
MPS-10P-MC4-W (Self-holding,sink input)
MPS-10P-MC4-W-S (Self-holding,source input)

Note) Please check P349 for details.

- Manifold base

MPV4 - M 1

Number of units	
1	1 unit ★
2	2 units
3	3 units
4	4 units
5	5 units

- Base for unit type

MC4-SB

- Plate for manifold

MC4-MM

Specifications

Series	Units	MPV42	
		Solenoid valve (vacuum)	Solenoid valve (blow-off)
Construction			
Fluid		Vacuum pressure	Non-lubricated air
Ambient temperature	°C	0 ~ 60(without freezing)	
Pressure range (VP, DP)	MPa	-90 ~ 0kPa	0 ~ 0.5MPa
Pressure range (P)	MPa	0.25 ~ 0.5	
Blow-off pressure supply range	MPa	0 ~ 0.5 *1)	
Blow-off flow	ℓ /min (ANR)	10 (at: 0.5)	
Vacuum valve function		Normally open, normally closed, self-holding	
Type of control valve		Pilot operated poppet	Poppet
Effective area	mm ²	2.4	0.2
Control flow	ℓ /min (ANR)	About 19 (when -101kPa)	About 10 (When 0.5MPa)
Mass	g	57	

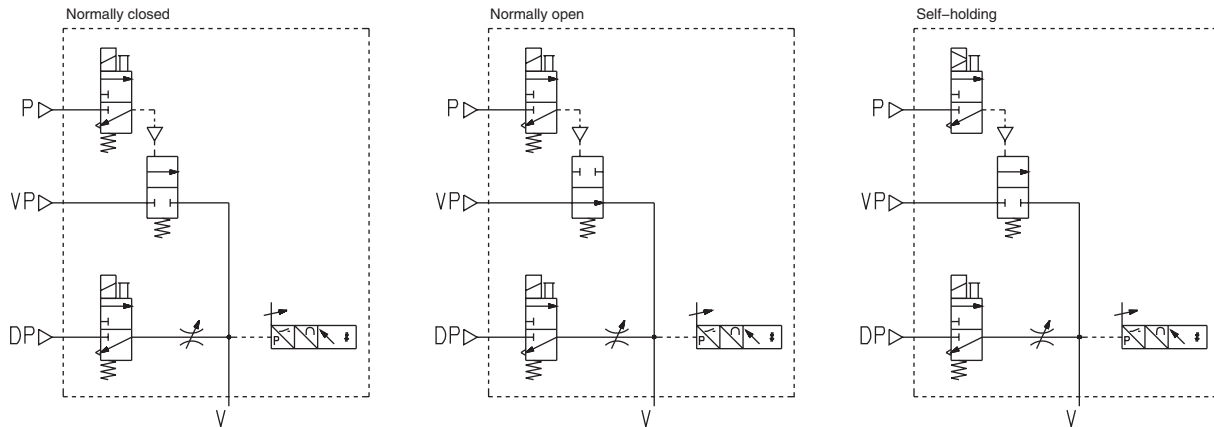
Note1) If you do not connect the power supply port in the free atmosphere is destroyed.

Solenoid valve specifications

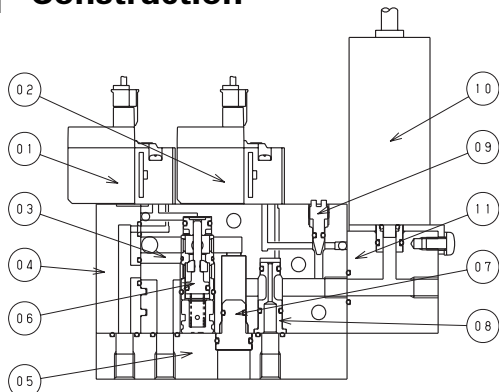
Description	Unit	CKV010-4E	LV290-4E Note
Solenoid valve air passage		Normally open (N.O), normally closed(N.C)	Self-holding
Operating voltage	V	DC24	
Allowable voltage tolerance	%	± 10	
Power consumption	W	1	1.3 /1.5
Grade of insulation		B class	
Manual override operation		Non-lock push button	
Display - Surge killer		LED · diode	
Cable		Lead wire with connector (300mm) <11.81inch>	

Note) Please check common cautions in regard to CONVUM vacuum ejector "self-holding valve"(P22).

Symbol



Construction



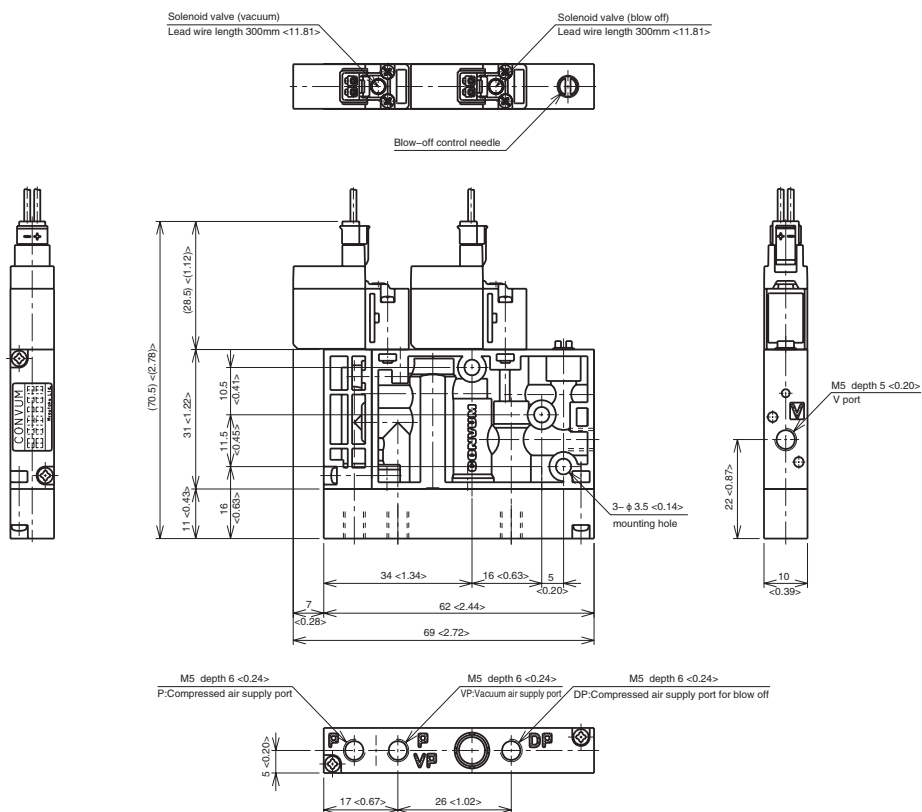
Main parts

No.	Part name	Materials
1	Solenoid valve (vacuum)	-
2	Solenoid valve (blow-off)	-
3	Body	PA
4	Side plate	PA
5	S base	Aluminium
6	Poppet valve	SUS, Aluminium, NBR, FKM
7	Plug	Aluminium, NBR
8	Adapter	Aluminium
9	Blow-off flow control needle	SUS, NBR
10	Pressure sensor	-
11	Sensor base	Aluminium

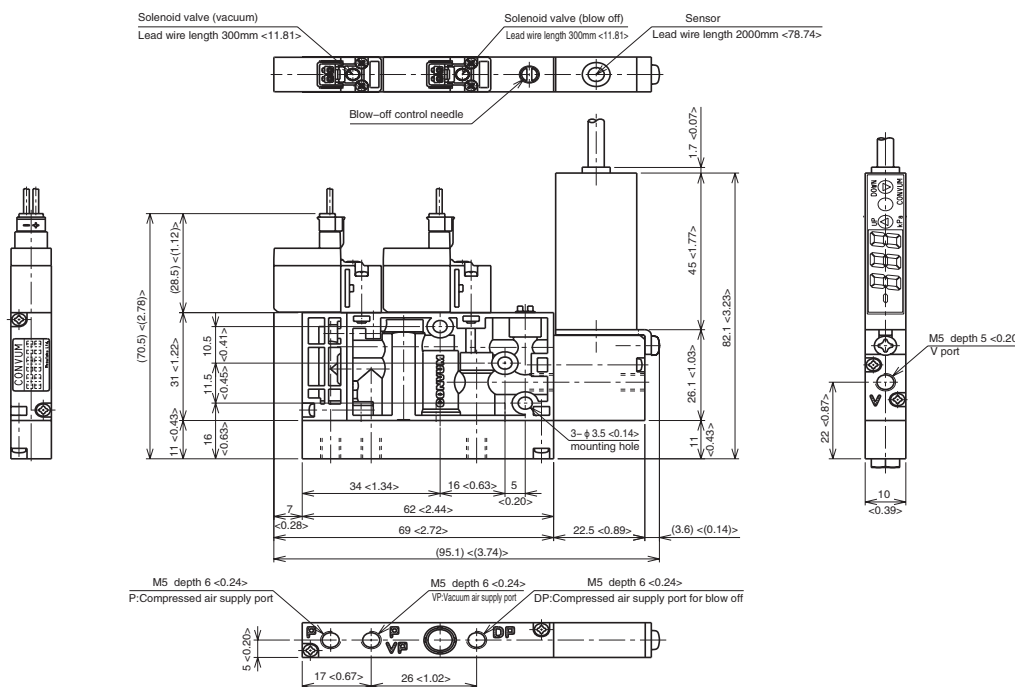
Dimensions

Unit:mm <inch>

Single unit type/without sensor



Single unit type/with sensor

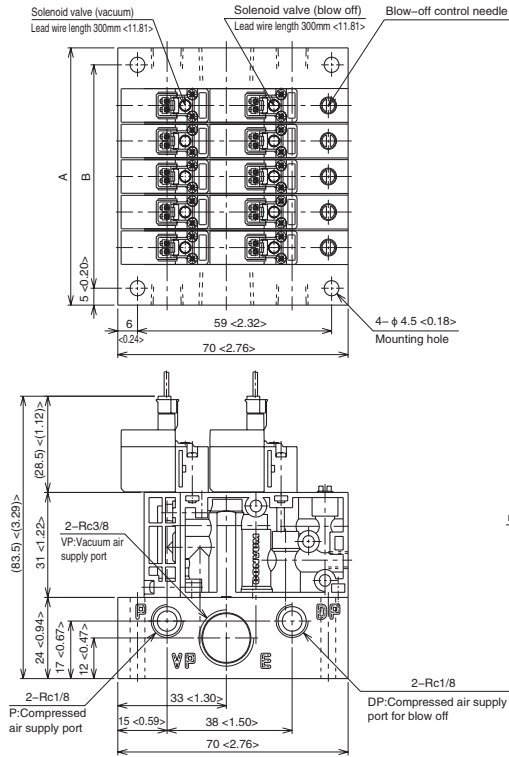


Vacuum switching valves

Dimensions

Unit:mm <inch>

Manifold type/without sensor

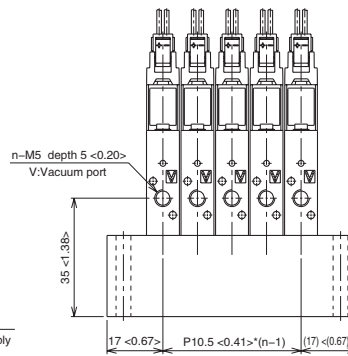


mm

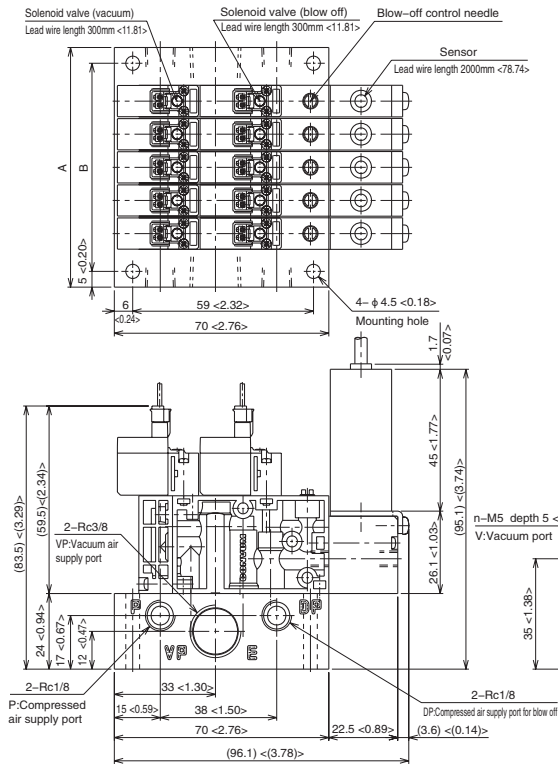
n (number of units)	1	2	3	4	5
A	34	44.5	55	65.5	75
B	24	34.5	45	55.5	66

<inch>

n (number of units)	1	2	3	4	5
A	1.34	1.75	2.17	2.58	2.95
B	0.94	1.36	1.77	2.19	2.6



Manifold type/with sensor



mm

n (number of units)	1	2	3	4	5
A	34	44.5	55	65.5	76
B	24	34.5	45	55.5	66

<inch>

n (number of units)	1	2	3	4	5
A	1.34	1.75	2.17	2.58	2.99
B	0.94	1.36	1.77	2.19	2.6

