

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 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

Note) ★ is made to order

⑥ Number of block plates (Manifold type only)

0	none	3	3 units
1	1 unit	4	4 units
2	2 units	5	5 units

⑦ Number of bodies (Manifold type only)

1	1 unit
2	2 units
3	3 units
4	4 units
5	5 units

⑧ 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.

Keep blank in the case of unit type

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

S V9 4 B 3 2 1 L

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	
Construction		Solenoid valve (vacuum)	Solenoid valve (blow-off)
Fluid		Vacuum pressure	Non-lubricated air
Ambient temperature	℃	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	mm²	2.4	0.2
Control flow	ℓ /min (ANR)	About 19 (when -101kPa)	About 10 (When 0.5MPa)
Mass	g	57	

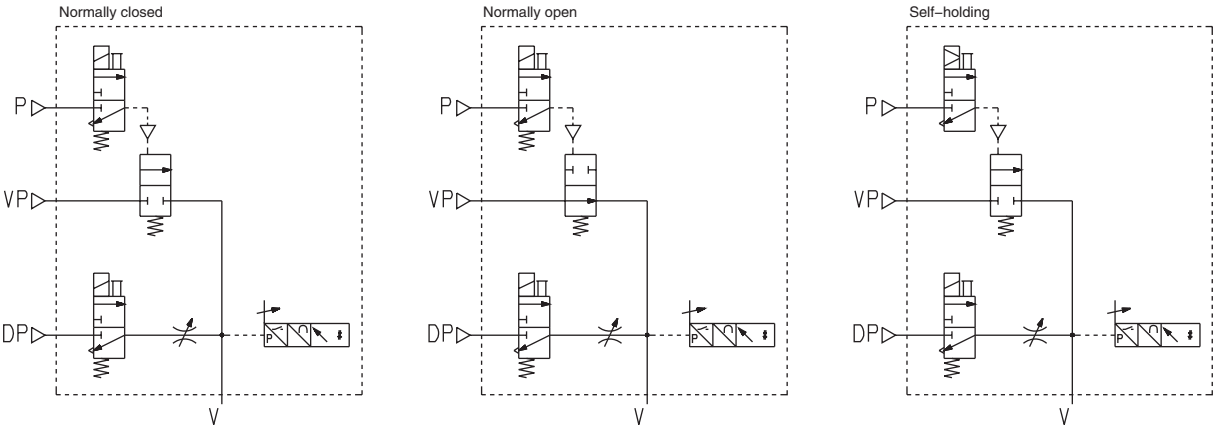
Note1) If you do not connect the power supply port in the free atmosphere is destroyed.

Solenoid valve specifications

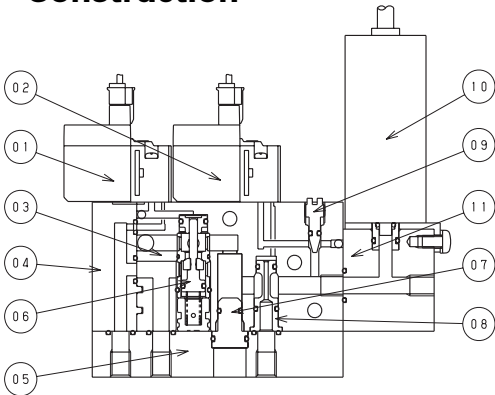
Description	Unit	CKV010-4E	LV290-4E	Note
Solenoid valve air passage		Normally open (N.O), normally closed(N.C)	Self-holding	
Operating voltage	V	DC24		
Allowable voltage tolerance	%	± 10		
Power consumption	W	1	1.3 /1.5	
Grade of insulation		B class		
Manual override operation		Non-lock push button		
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



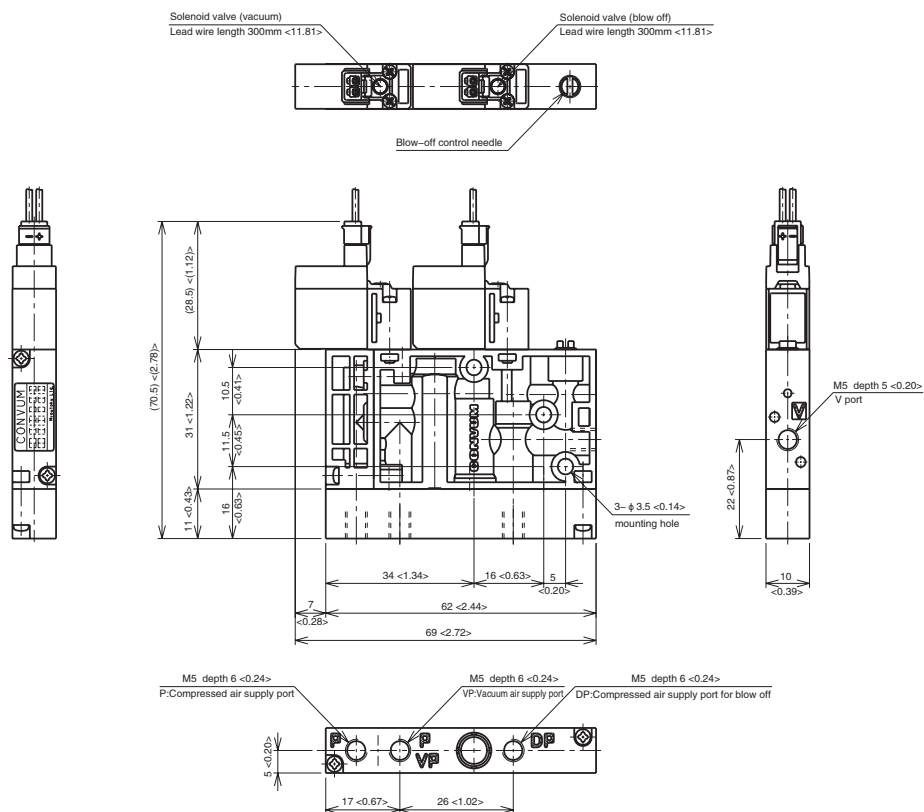
Main parts

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

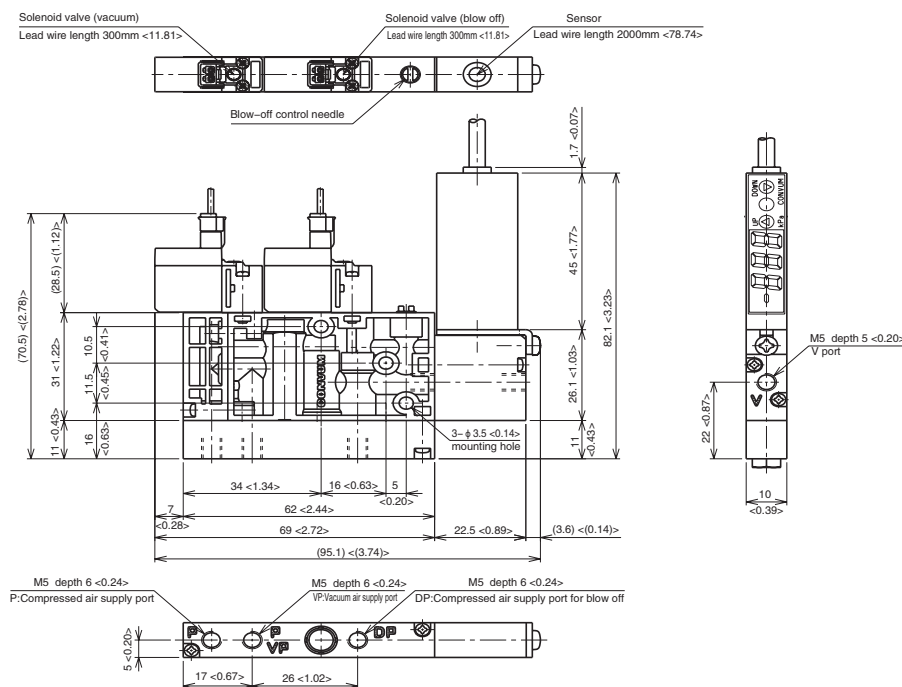
Dimensions

Unit:mm <inch>

Single unit type/without sensor



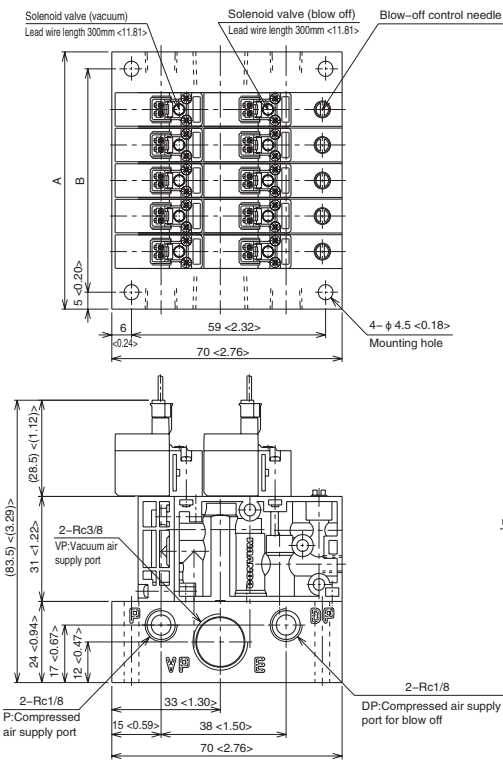
Single unit type/with sensor



Dimensions

Unit:mm <inch>

Manifold type/without sensor

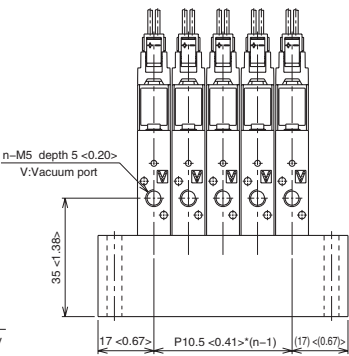


mm

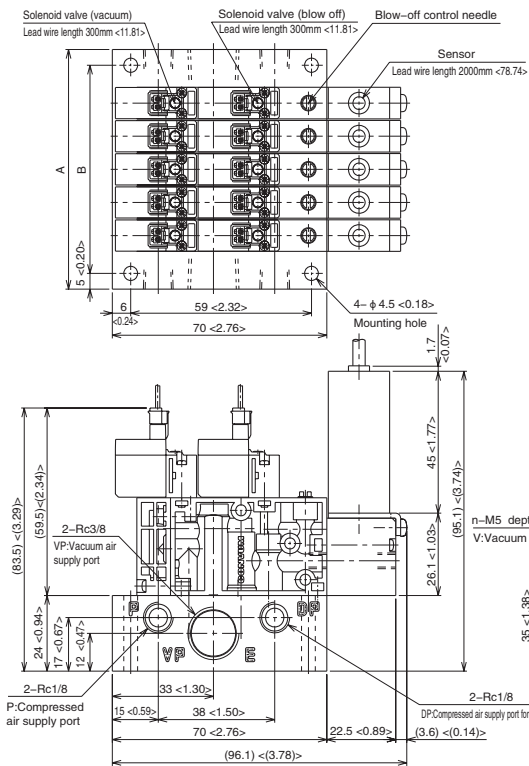
n (number of units)	1	2	3	4	5
A	34	44.5	55	65.5	75
B	24	34.5	45	55.5	66

<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

