

Vacuum sensor (digital display)

MPS-23



● Wide pressure range, -0.1 ~ 1.0MPa

"Vacuum pressure type: -101kPa, Positive pressure: -0.1 ~ 1MPa
Compound pressure: -101 ~ 500kPa"

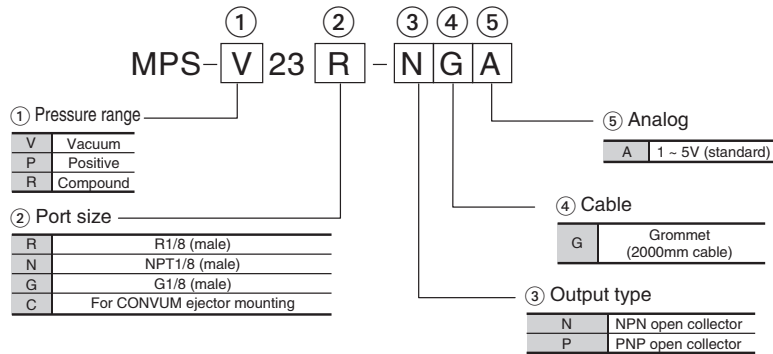
● Easy settings

Use UP and DOWN keys to set the value.
Automatic settings mode available.

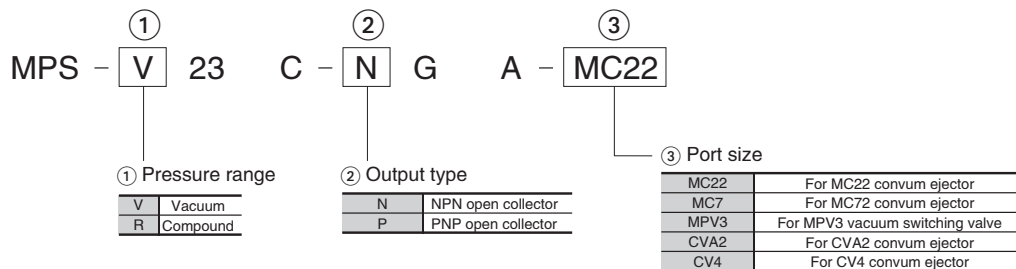
● Standard switch output and analog output

Switch output (open collector) Analog output (1 ~ 5V)

How to order



CONVUM mounting reference



Specifications

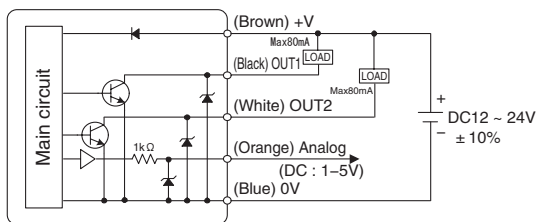
Description	Unit	MPS-V23	MPS-P23	MPS-R23
Fluid		Air (non corrosive, nonflammable gas)		
Diaphragm		Silicon diaphragm *1)		
Pressure range	kPa	-101.0 ~ 0kPa	-0.1 ~ 1MPa	-101 ~ 500kPa
Proof pressure	MPa	0.3	1.5	0.8
Operating ambient temperature	°C	0 ~ 50		
Operating humidity	%	35 ~ 85 RH(without condensation)		
Port size		R1/8(male), NPT1/8(male), G1/8(male)		
Power supply	V	DC12 ~ 24 ± 10%, Ripple (Vp-p) less than10%		
Power consumption	mA	Less than 55		
Switch output	type	NPN or PNP open collector 2 outputs		
	Current load	max.80mA		
Analog output (Option)	Voltage output	DC1 ~ 5 (± 0.1%), linearity less than ± 0.5% of F.S., output impedance 1kΩ*2)		
Repeatability	%	± 0.2 F.S., 1digit or less		
Temperature characteristic		Less than ± 2% of F.S. (At standard temperature 25°C, range 0 ~ 50°C)		
Response time	ms	Less than 2.5(Variable 24, 192, 768 options)		
Hysteresis		Variable		
Digital display		3 1/2 digits 7 segments, 1 color (Red) LCD		
Resolution		0.1kPa	0.01MPa	1kPa
Protection structure		IP40		
Vibration resistance		10 ~ 55Hz, total amplitude 1.5mm (2 hours in direction of XYZ)		
Shock resistance	m/s ²	980 (3 times in direction of XYZ)		
Electrical connection		Grommet		
Cable	Grommet	φ4 0.15mm ² 5 lead wires 2000mm		
Mass	g	135 (with lead wire)		

Note 1) Non grease specifications.

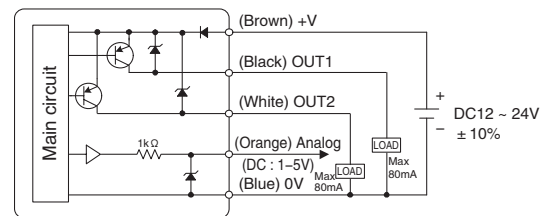
Note 2) Analog output of positive pressure type (P) in range of pressure 0 to 1 Mpa can output DC1-5V. In range of pressure -0.1 to 0 MPa it does not output.

Internal circuit

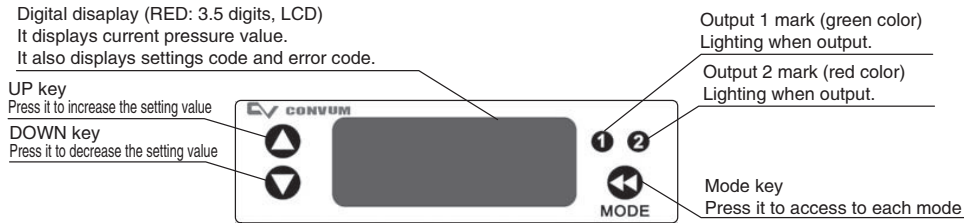
NPN output (Analog voltage output)



PNP output (Analog voltage output)



Display description

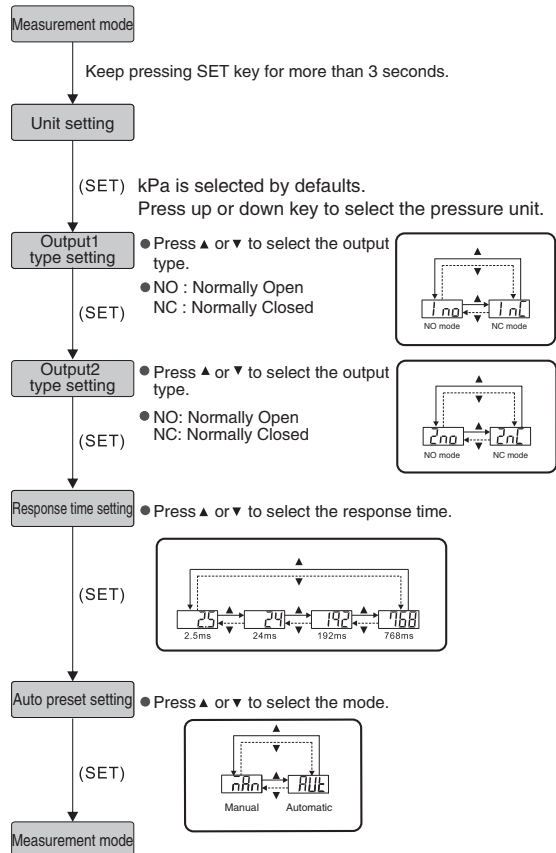


MPS-23

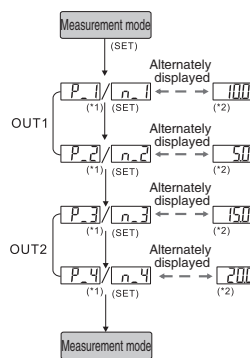
Setting method

Please refer to the instruction manuals for details

Initial settings mode



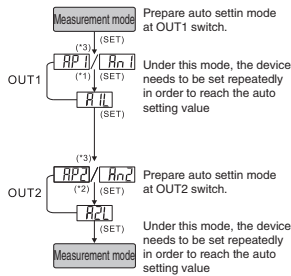
Manual settings



Note)

- *1. When normally open mode is selected, it displays [P_]. when normally closed mode is selected, it displays [n_].
- *2. Pressure value change: When pressing one time to ▲, one digit increases. When keeping pressing to ▲, setting value keep increasing. When pressing one time to ▼, one digit decreases. When keeping pressing to ▼, setting value keep decreasing.

Auto setting mode



Note)

- *1. If auto pressure value setting is not needed for OUT1, press UP and DOWN keys at the same time to switch with OUT2 pressure value setting mode.
- *2. If auto pressure value setting is not needed for OUT2, press UP and DOWN keys at the same time to exit and return to measurement mode.
- *3. It displays [AP*] at normally open mode and [An*] at normally close mode.

$$P1(n1) = A - \frac{A-B}{4}$$

$$P3(n3) = A - \frac{A-B}{4}$$

$$P2(n2) = B + \frac{A-B}{4}$$

$$P4(n4) = B + \frac{A-B}{4}$$

[Calculation of setting value]

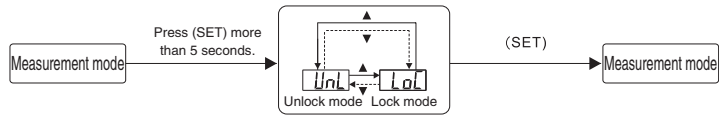
A=The max. pressure value under auto setting mode
B=The min. pressure value under auto setting mode

Other settings

① Zero reset setting:

Press UP and DOWN key at the same time until the "00" is displayed.
Release the keys to end the settings.

② Security lock setting



- Use ▲ and ▼ to change status of locking mode.

Dimensions

Unit : mm <inch>

