

Vacuum sensor (digital display)

MPS-23



● Wide pressure range, $-0.1 \sim 1.0\text{MPa}$

"Vacuum pressure type: -101.3 kPa , Positive pressure: $-0.1 \sim 1\text{MPa}$

Compound pressure: $-101 \sim 500\text{kPa}$ "

● Easy settings

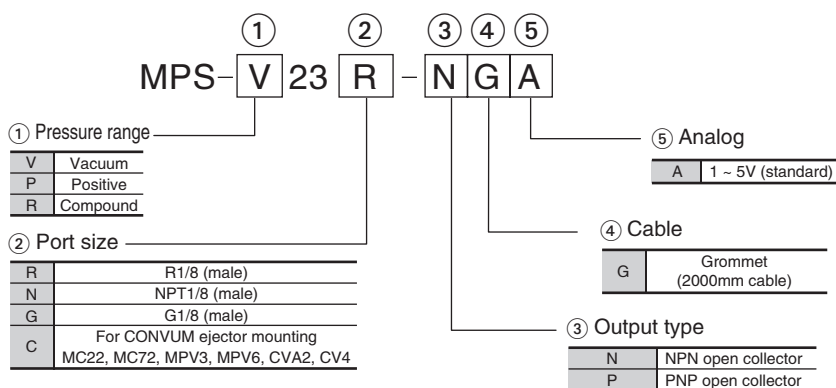
Use UP and DOWN keys to set the value.

Automatic settings mode available.

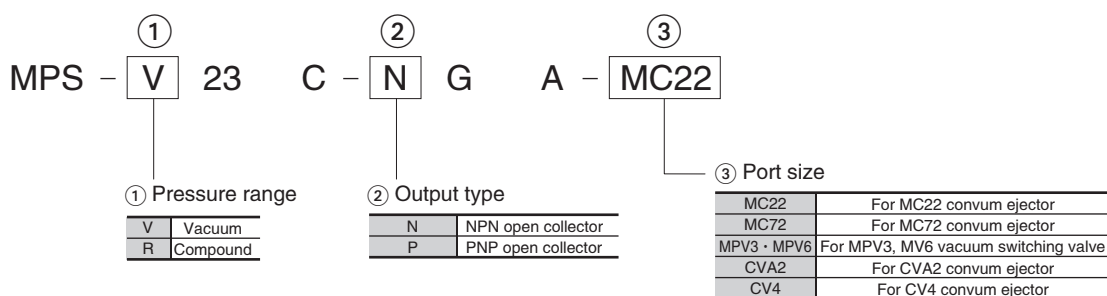
● Standard switch output and analog output

Switch output (open collector) Analog output ($1 \sim 5\text{V}$)

How to order



CONVUM mounting reference



Specifications

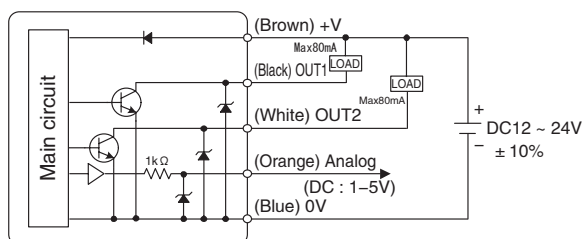
Description		Unit	MPS-V23	MPS-P23	MPS-R23
Fluid			Air (non corrosive, nonflammable gas)		
Diaphragm			Silicon diaphragm *1)		
Pressure range		kPa	-101.0 ~ 0kPa	-0.1 ~ 1MPa	-101 ~ 500kPa
Proof pressure		MPa	0.3	1.5	0.8
Operating ambient temperature		°C	0 ~ 50		
Operating humidity		%	35 ~ 85 RH(without condensation)		
Port size			R1/8(male)、NPT1/8(male)、G1/8(male)		
Power supply		V	DC12 ~ 24 ± 10%、Ripple (Vp-p) less than 10%		
Power consumption		mA	Less than 55		
Switch output	type		NPN or PNP open collector 2 points output		
	Current load	mA	max.80mA		
Analog output (Option)	Voltage output	V	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.

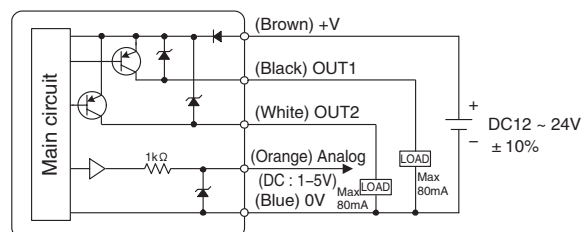
Note 2) Analog output of positive pressure type (P) in range of pressure 0 to 1 Mpa can output DC1~5V and 4~20mA. In range of pressure -0.1 to 0 it does not output.

Internal circuit

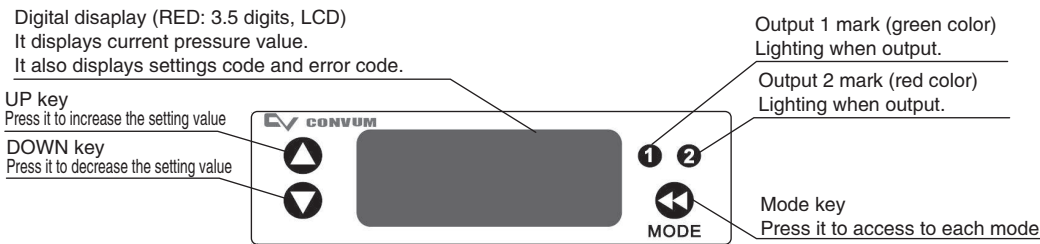
NPN output (Analog voltage output)



PNP output (Analog voltage output)



Display description

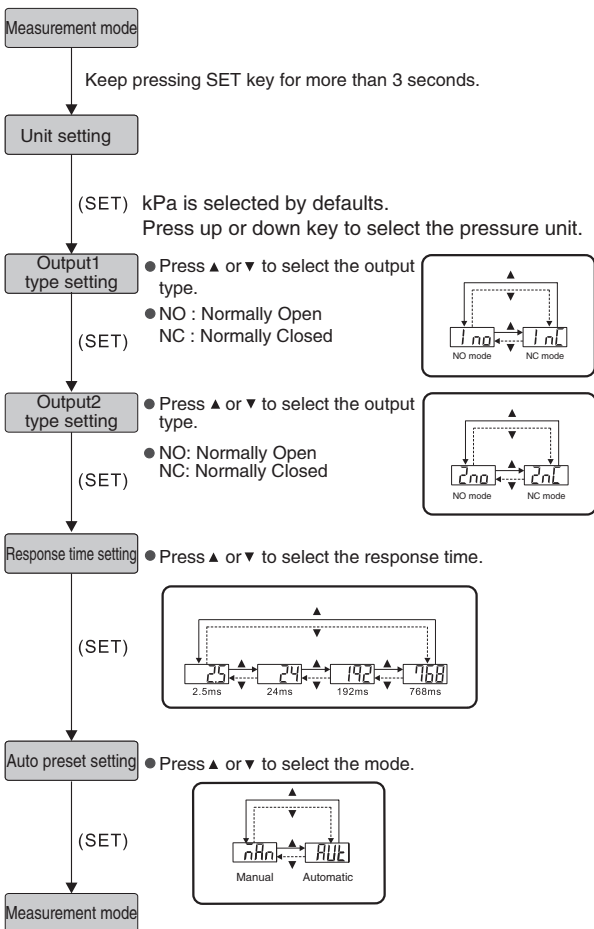


MPS-23

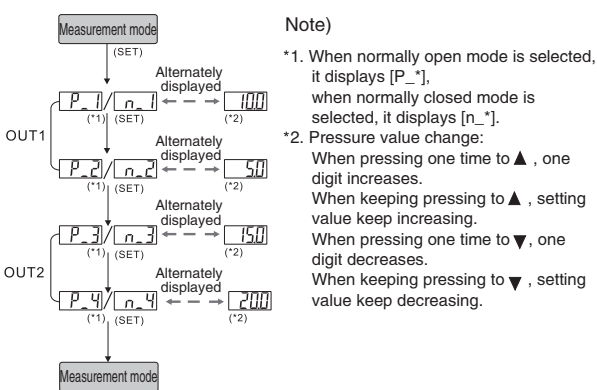
Setting method

Please refer to the instruction manuals for details

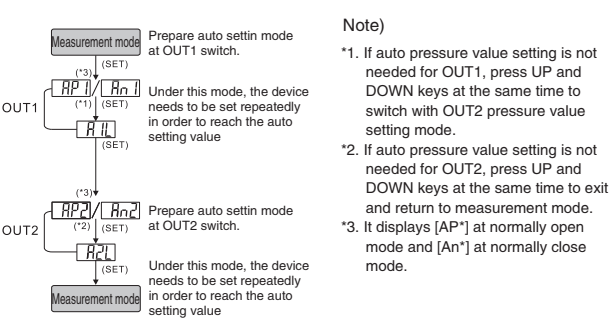
Initial settings mode



Manual settings



Auto setting mode



[Calculation of setting value]

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

$$P1(n1) \\ P3(n3) = A - \frac{A-B}{4}$$

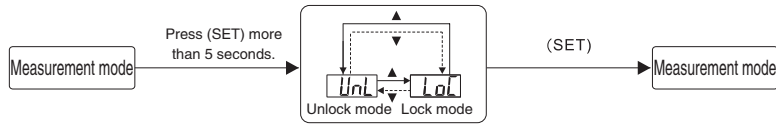
$$P2(n2) \\ P4(n4) = B + \frac{A-B}{4}$$

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

(mm)

