

MPS-9 Series

Slim Type Digital Display Pressure Sensor



Pressure Sensor
Slim Type Digital Display
Pressure Sensor

LED display can be reversed and installed in any directions!

04 Pressure sensor

MPS-35

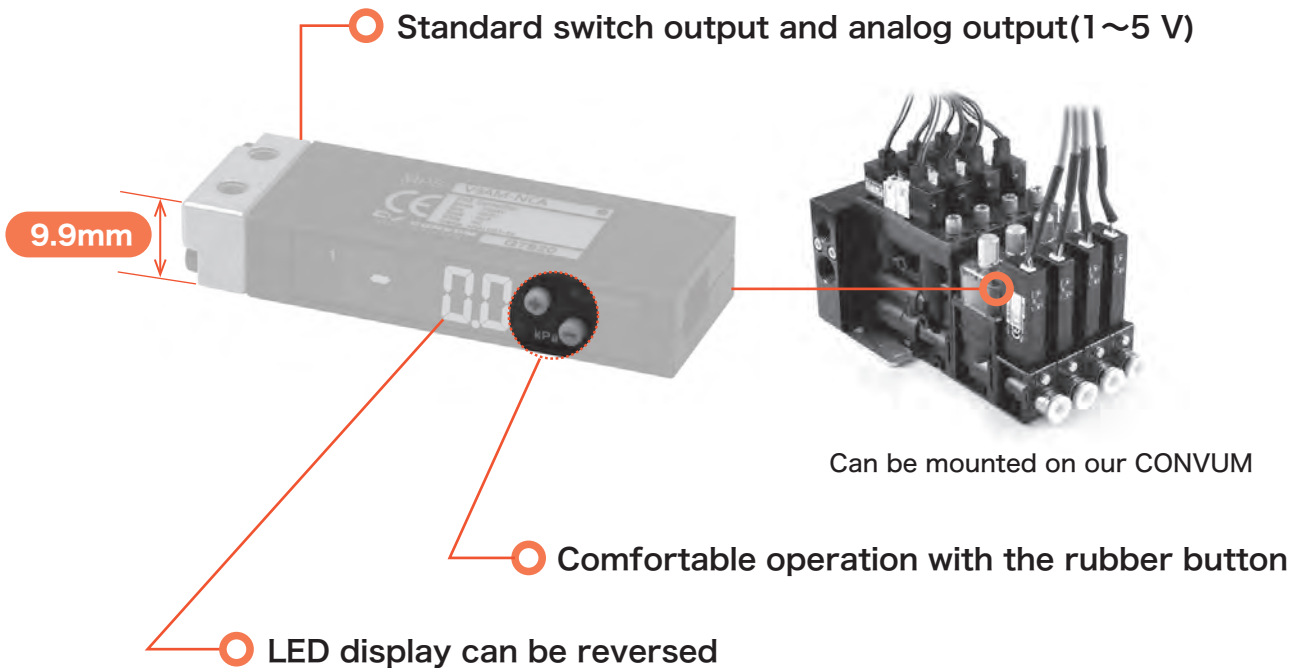
MPS-23

MPS-9

MPS-10

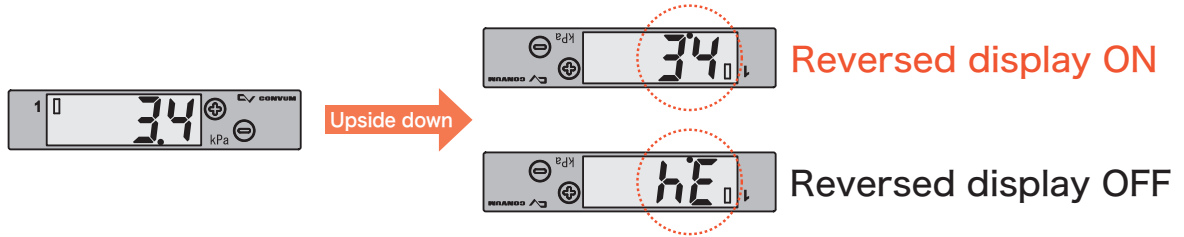
MVS-201

MVS-030AB



Can be mounted on our CONVUM

Display does not turn upside down in spite of the body upside down.



How to Order

• Single Type

MPS — **V** 9A **M** — **N** C A

①

① Pressure Range [kPa]

Symbol	Type	Range
V	Vacuum	-101.3~0
C	Compound	-100~100
R	Compound	-101~500

②

② Port Size

Symbol	Specifications
M	M5
C	for CONVUM

③

③ Output Type (Switch output)

Symbol	Specifications
N	NPN open collector
P	PNP open collector

— Analog output
1 ~ 5V Voltage output

— Cable
Connector type

• CONVUM Mounting Type

MPS — V 9 **P** — **SC1**

①

① Output Type(Switch output)

Symbol	Specifications
Nil	NPN open collector <small>Note1</small>
N	NPN open collector <small>Note2</small>
P	PNP open collector

Note 1) In the case of SC1, SC2 selected in ②.
2) In the case of SC3 selected in ②.

②

② Applicable CONVUM

Symbol	Applicable CONVUM
SC1	SC1
SC2	SC2
SC3	SC3

Pressure Range
Vacuum : -101.3 ~ 0kPa

Option Parts

• Bracket Fitting

MPS — ACCK6

(L9A and L9B)



• Connector Cable for Power / Control Input or Output

MPS — 10CC



L9 Bracket Fitting Installation

Prepare M3 screws for mounting.
For mounting N pieces :
length of M3 screw = N × 10 + (4 ~ 6) mm

● L 9 A bracket fitting

● L 9 B bracket fitting

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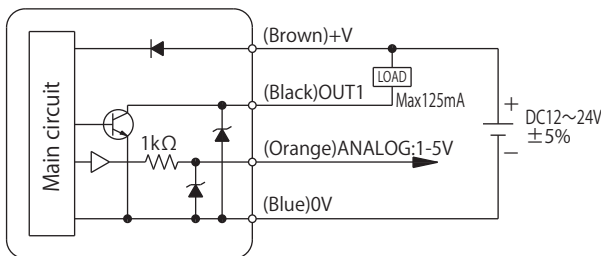
Specifications

Description \ Model number		Unit	MPS-V9	MPS-C9	MPS-R9
Fluid			Air, non-corrosive gas, non-flammable gas		
Diaphragm			Silicon diaphragm		
Rated pressure range		kPa	-101.3~0	-100~100	-101~500
Setting pressure range		kPa	-101.3~10	-101~101	-101~500
Withstand pressure		MPa	0.3		0.8
Ambient temperature range		°C	0~50(No freezing)		
Ambient humidity range		%RH	35~85(No condensation)		
Power supply voltage		V	DC12~24±10%, ripple(Vp-p) 5% or less		
Maximum power consumption		mA	40		
Switch output	Type		NPN or PNP open collector 1 output		
	Maximum load current	mA	125		
Analog output			DC1~5V(±0.1) linearity 1.0% F.S.		
Repeatability		%	±0.2F.S 1digit or less		
Temperature characteristic		%	Less than±2 F.S. (At standard temperature 25°C, range0~50°C)		
Response time		ms	1.5 or less		
Hysteresis			Variable		
Display	Digital		4-digits, 7-segment red LED		
	Operation		OUT:Red LED(ON lighting)		
Display/set resolution		kPa	0.1		1
IP class			IP40		
Vibration resistance			10~55Hz, total amplitude 1.5mm, 50m/s ² 2 hours each direction of XYZ		
Shock resistance		m/s ²	980 3 times each direction of XYZ		
Electrical connection			Maker:JST Model:GHR-05V-S		
Cable			5 lead wires, 24AWG, UL AWM 20276, 1000mm ^{Note1}		
Connector			Maker:JST Model:GHR-05V-S		-
Weight	Without cable	g	15		
	With cable		32		

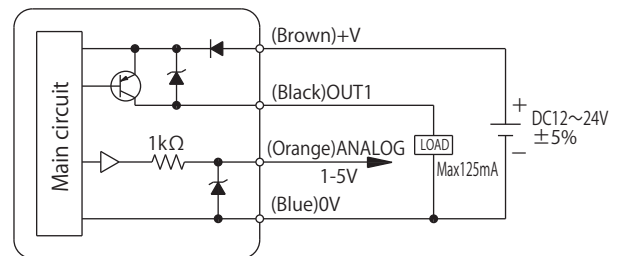
Note1)The white wire in cable of MPS-9 is not connected.

Internal Circuit

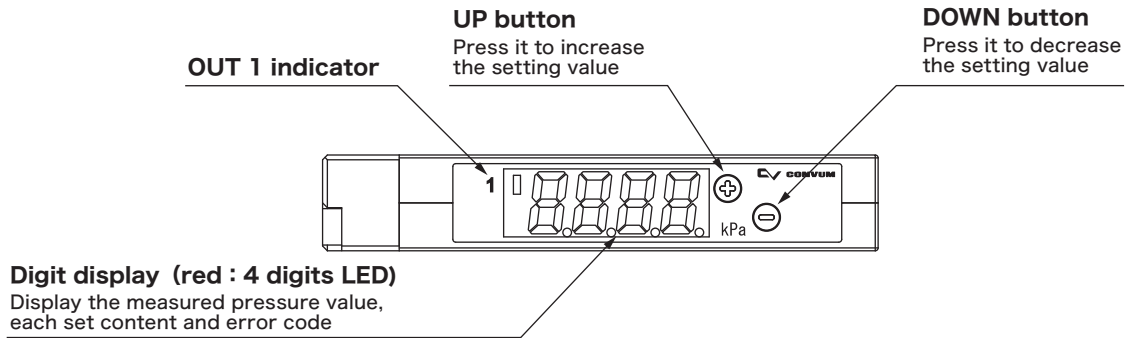
NPN Output (Analog voltage output)



PNP Output (Analog voltage output)



Display Description



Setting · Function

※ Please refer to the instruction manuals for details.

OUT1 SETTING

Press ⊕ button once.

- 1 -

↓ Wait 3 sec.

H-1 ↔ **-460** Set H-1 value which hysteresis turns on by ⊕ ⊖ button.
Alternately displayed

↓ Press ⊕ ⊖ button at the same time

h-1 ↔ **-70** Set a hysteresis range (h-1) by ⊕ ⊖ button.
Alternately displayed

↓ Press ⊕ ⊖ button at the same time.

End

DISPLAY REVERSE SETTING

Press ⊕ button twice.

- 2 -

↓ Wait 3 sec.

rot ↔ **off** ↔ **on** Switch the display reverse function ON/OFF by ⊕ and ⊖ button
Alternately displayed

↓ Press ⊕ ⊖ button at the same time

rot

↓

End

Feature Description

Display reverse function is set to ON, the display will be reversed. Please note that the decimal point is displayed above in this case.

POWER-SAVE SETTING

Press ⊕ button three times.

- 3 -

↓ Wait 3 sec.

ECO ↔ **off** ↔ **on1** ↔ **on2** Alternately displayed
Standard

↓

End Switch the power save mode ON1/ON2/OFF by ⊕ and ⊖ button.

Feature Description

- ★ No operation for 30 seconds in the measurement mode, it switches to power saving mode.
- ★ Set to ON1, the display turns dark after 30 seconds.
- ★ Set to ON2, the display turns off except decimal point after 30 seconds and only the decimal point is blinking.

● **Set to ON1** No button operation for 30 sec, it switches to power saving mode 1.

● **Set to ON2** No button operation for 30 sec, it switches to power saving mode 2.

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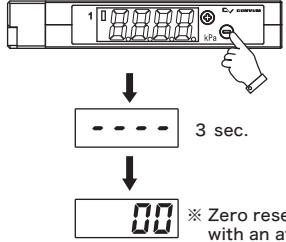
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Setting · Function

※ Please refer to the instruction manuals for details.

ZERO POINT SETTING

Press ⊖ button for more than 3 sec.



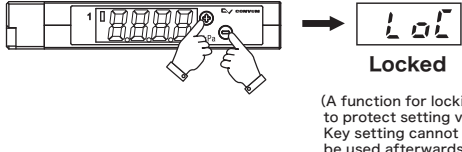
3 sec.

00

※ Zero resetting is possible only with an atmospheric pressure equivalent to $\pm 3\%$ or less of F.S.

SECURITY LOCK SETTING

Press ⊕ and ⊖ button for more than 3 sec.



Locked

(A function for locking keys to protect setting values. Key setting cannot be used afterwards.)

※ Unlock Method
Press ⊕ and ⊖ button for more than 3 sec again, then **UnL** displays and it is unlocked.

ERROR CODE INSTRUCTION

Error type	Error code	Error condition	Trouble shooting
OUT1 excess load current error	EEI	Load current is more than 125 mA.	Turn power off and check the cause of overload current or lower the current load under 125 mA, then restart.
Zero reset error	E-r-	During zero reset, input pressure is over $\pm 3\%$ F.S. of ambient pressure.	Change input pressure to ambient pressure and perform zero reset again.
System error	E-r-I	Internal system error	Please contact us.

OTHER DISPLAY ITEMS

Type	Display	Condition
Rated range full	FFF	Pressure value surpassing the rated range.
Back pressure full scale	-FF	Pressure value surpassing the back pressure range.

04
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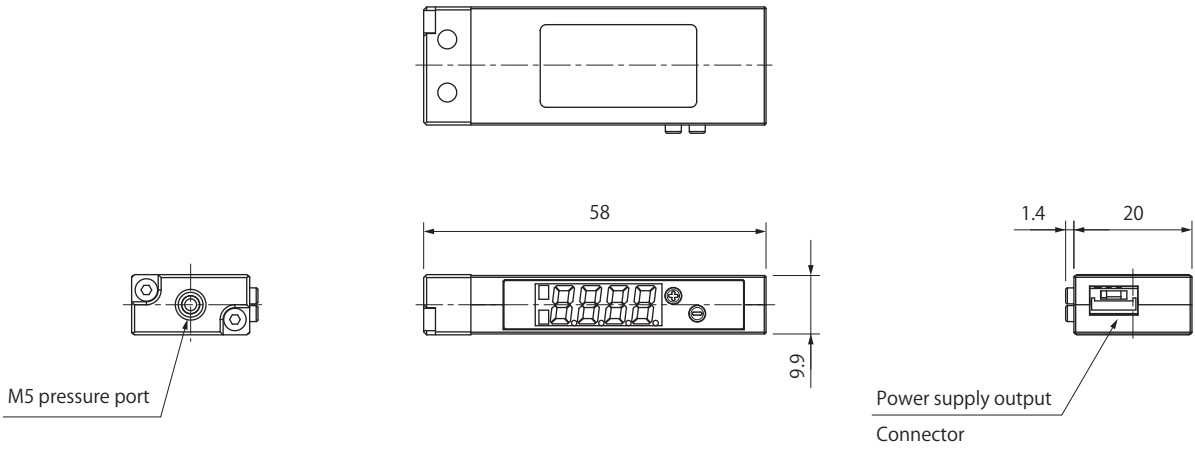
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MVS-030AB

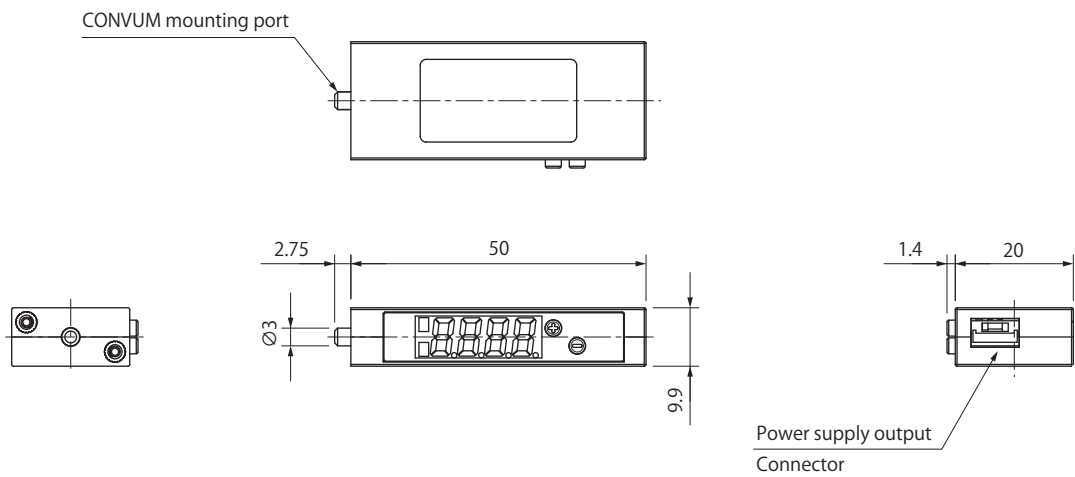
Dimensions

(mm)

Single Type



CONVUM Mounting Type



コネクタケーブル MPS-10CC

