

LED Digital Pressure Sensor

Instruction Manual

Thank you for purchasing a CONVUM product. Please read this instruction manual carefully and make sure that you understand its operation procedure before using the product. This manual is important for later reference, so please keep it in good hands.



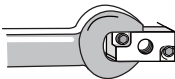
MPS-009A-M002

Caution

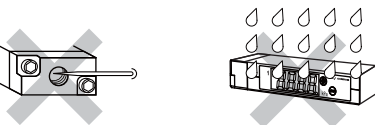
- Operating environment
Do not use this product in a place exposed to explosive or inflammable gas.
- Source voltage
Avoid overload beyond the source voltage and do not charge AC100V because it may burn the product.
- This product is used for pressure confirmation, not for safeguard against accidents or the like.

Please Mind Correct Use.

- This sensor is used for non-corrosive gas only, cannot be used for liquid or corrosive gas.
- Do not apply excessive force to the resin part when installing a joint or nipple onto the pressure port.

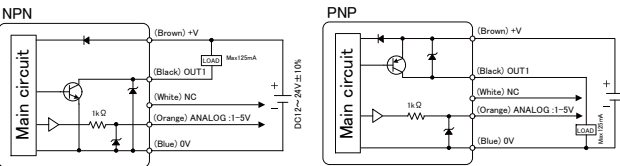


- Don't insert the pressure port with wire or the like. Pressure diaphragm may be damaged. The protection structure of this sensor is IP40. Don't water it.



- Don't put the cable parallel to high-tension cable or power line, which may cause a malfunction.

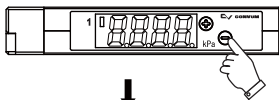
Output circuit diagram



※The white line insulates the terminal and please don't connect it anywhere. It will be the cause of the failure.

How to reset the set value to zero

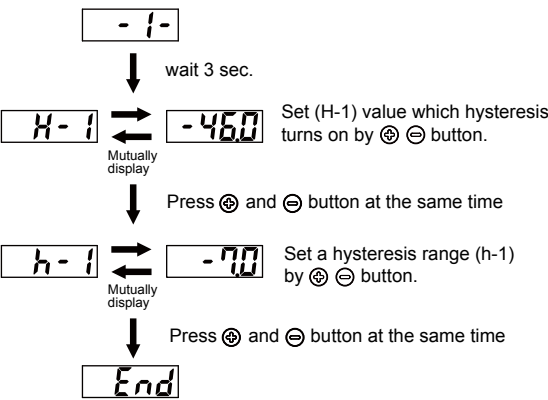
Press and hold $\ominus$ button for more than 3 sec.



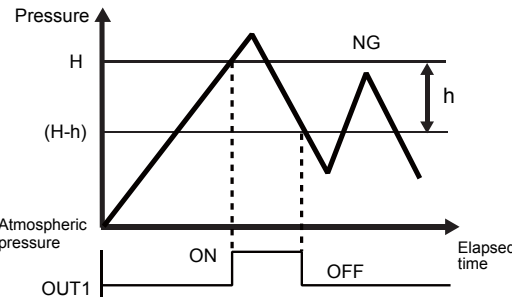
※Zero resetting is possible only with an atmospheric pressure equivalent to $\pm 3\%$ or less of F.S.

1 OUT1 setting

Press $\oplus$ button once.



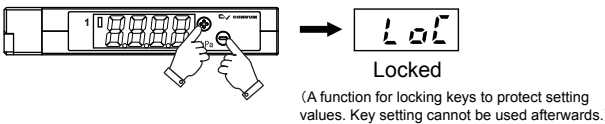
Hysteresis mode chart



The value to turn ON is set by H.
The differential width is set by h.
The value to turn OFF is (H-h).

How to set the security lock

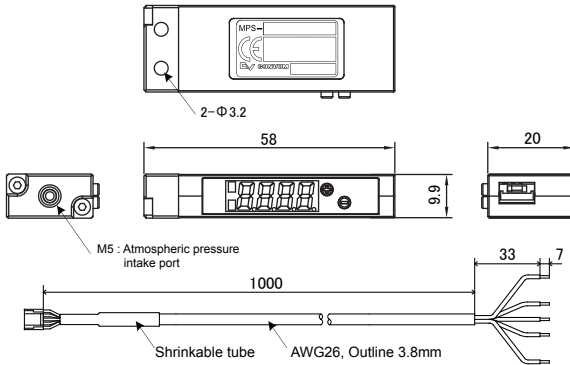
Press $\oplus$ and $\ominus$ button for more than 3 sec.



※Unlock method: Press $\oplus$ and $\ominus$ button for more than 3 sec again then 'UnL' displays and it is unlocked.

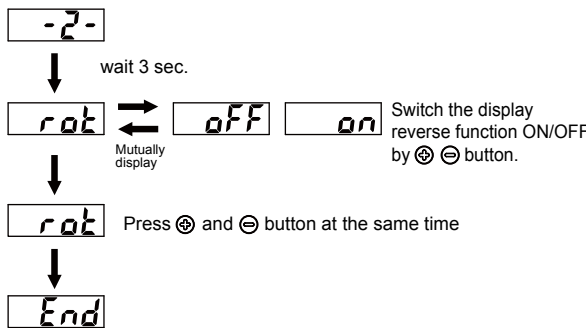
Dimensional outline drawing

Body (M5 port type)



2 Display reverse setting

Press $\oplus$ button twice.



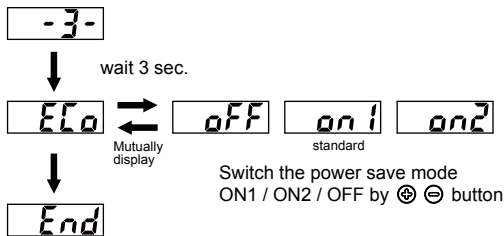
Feature Description

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



3 Power save setting

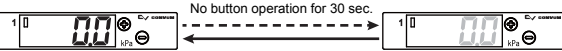
Press $\oplus$ button three times.



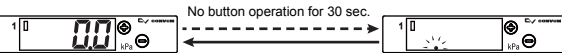
Feature Description

- ★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.

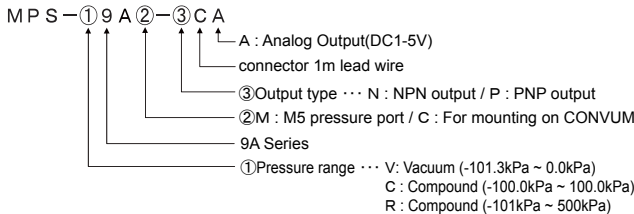
Set to ON1



Set to ON2



Model number and specifications



● Model number for accessories ... MPS-ACCK6: L9 bracket (L9A, L9B fitting 1pc each)

Specification

Model	unit	Vacuum	Compound
		MPS-V9A□-□CA	MPS-C9A□-□CA MPS-R9A□-□CA
Applicable fluid		Filtered air, Non-corrosive / Non-flammable gas	
Diaphragm		Silicon diaphragm	
Pressure range	kPa	-101.3~0.0	-100.0~100.0 -101~500
Display resolution	kPa	0.1	1
Withstand pressure	MPa	0.5	0.8
Ambient temp. range	°C	Operation: 0 ~ 50, Storage: -10 ~ 60 (No condensation or freezing)	
Ambient humidity range	%	Operation/Storage: 35 ~ 85 RH (No condensation)	
pressure port		M5 / For mounting on CONVUM	
Power supply voltage	V	DC12 to 24, Ripple (Vp-p) 5% or less	
Current consumption	mA	40	
Switch output		NPN(30V DC) or PNP(24V DC) open collector	
	load current	Max125, 1 output	
Analog output	V	DC: 1-5 (±0.1) F.S. Linearity: 1%F.S.	
Repeatability	%	≤±0.2 F.S. 1digit	
Temperature characteristic		≤±2 %F.S. at 25°C with in a range of 0°C to +50°C	
Response time	ms	≤1.5	
Display	Digital	4 digits, 7 segments Red LED	
Output		Red LED (ON lighting)	
Enclosure		IP40	
Vibration proof		Total amplitude 1.5mm or 10G, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z	
Shock proof	m/s ²	980(100G), 3 times each in direction of X, Y and Z	
Electrical connection		Manufacturer: JST, Model: GHR-05V-S	
Cable	※1	5 wire, 26AWG, UL AWM 20276, 1000mm	
Standard accessories		Instructions Manual	
Mass	g	15	
CE marking		EN61000-6-2: EN61000-6-4	

※1: The white wire of the cable insulates the terminal and don't use.

Alarm list

LoL	OUT1 over current	Output current of over 125mA is flowing.	Check for load.
Err	Zero reset error	Zero reset at over 3% F.S.	Correct atmospheric pressure intake
Er1	System error	Internal failures	Contact Service Dept.

Other display items (not alarms)

FFF	Rated range full	Pressure value surpassing the rated range
-FF	Back pressure full scal	Pressure value surpassing the back pressure range