

PS4

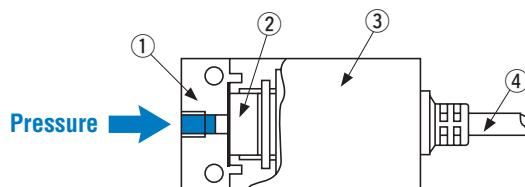
PRESSURE SWITCHES



FEATURES

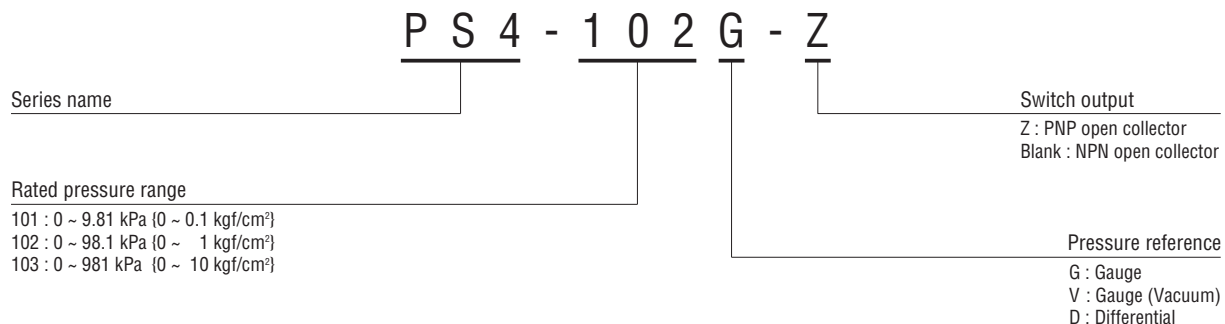
- For non-corrosive gases
- Electrical pressure switch with no mechanical moving parts
- Fast response of 1 ms
- Equips analog output function (1 ~ 5 V)
- Three pressure references to choose from (Gauge, Differential, Vacuum)

INTERNAL STRUCTURE



Part name		Material
①	Pressure port	Aluminum
②	Pressure transducer	P-2000
③	Housing	PC (Polycarbonate)
④	Cable	Vinyl chloride resin

MODEL NUMBER DESIGNATION



LIST OF MODEL NUMBERS

Switch output configuration	Pressure reference		Gauge			Differential
	Pressure port	Rated pressure range kPa {kgf/cm ² }	0 ~ 98.1 {0 ~ 1}	0 ~ 981 {0 ~ 10}	0 ~ -98.1 {0 ~ -1}	0 ~ ± 9.81 {0 ~ ± 0.1}
NPN open collector output	M 5		PS4-102G	PS4-103G	PS4-102V	➡ PS4-101D
PNP open collector output			➡ PS4-102G-Z	➡ PS4-103G-Z	➡ PS4-102V-Z	

☐ : Not available

✱ Verify the above model numbers when placing orders.

The products mared ➡ are manufactured upon receipt of order basis.

STANDARD SPECIFICATIONS

● Unless otherwise specified, the specs are defined at an ambient temperature of 25 ± 5 °C and excitation voltage of 12 V DC.

Item / Model number		PS4			
		102G	102V	103G	101D
General specifications	Pressure reference	Gauge			Differential
	Rated pressure range kPa {kgf/cm ² }	98.1 {1}	– 98.1 {–1}	981 {10}	± 9.81 {± 0.1}
	Maximum pressure kPa {kgf/cm ² }	196 {2}		1471 {15}	± 19.6 {± 0.2}
	Break-down pressure kPa {kgf/cm ² }	490 {5}		1961 {20}	± 49.0 {± 0.5}
	Operating temp. range °C	– 20 ~ 70			
	Compensated temp. range °C	0 ~ 50			
	Operating humidity %RH	35 ~ 85 (No condensation)			
	Storage temp. °C	– 20 ~ 80 (Atmospheric pressure, humidity 65 %RH maximum)			
	Pressure medium	Non-corrosive gases			
	Insulation resistance MΩ minimum	100 (500 V DC)			
	Dielectric strength	500 V AC, 60 s (Leakage current 1 mA maximum)			
	Pressure port	M5 “O” ring groove (Posi. : P10, Nega. : P8)			M 5
	Net weight g	Approx. 80			Approx. 90
Power	Supply voltage V DC	12 ~ 24 ± 10 %			
	Ripple content maximum	10 % (P-P)			
	Consumption current maximum	20 mA			
Switch output	No. of output	1			
	Output interface	NPN open collector output ※1			
	Setting method	Adjustable by VR			
	Adjustable range	Zero through rated pressure, minimum			
	Display	Red LED (lighted when output is ON.)			
	Accuracy 0 ~ 50 °C (Reference temp.: 25 °C) % F.S.	± 3			
	Hysteresis % F.S. maximum	2			
	Switching capacity	28 V DC 80 mA maximum			
	Residual voltage V maximum	0.8 ※2			
	Response ms	Approx. 1			

※1 : PS4-□□□□-Z series are PNP open collector output.

※2 : 1.2 V (maximum) for PS4-□□□□-Z

PS4

PRESSURE SWITCHES



Item		Model number	PS4			
			102G	102V	103G	101D
Analog output	Output voltage	V	1 ~ 5			1 ~ 3
	Zero voltage	V	1 ± 0.4			2 ± 0.4
	Span voltage	V	4 ± 0.4			1 ± 0.2
	Output current	mA maximum	1 (Load resistance: 5 kΩ minimum)			
	Linearity/Hysteresis	%F.S.	± 1			
	Thermal error 0 ~ 50 °C (Reference temp.: 25 °C)	ZERO %F.S./°C	± 0.12			
		SPAN %F.S./°C	± 0.12			

ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s ² , 3 directions for 2 hours each	Switch output setting and analog output (Zero voltage/span voltage): ± 1 %F.S., maximum, each
Shock	981 m/s ² 3 directions for 3 times each *	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

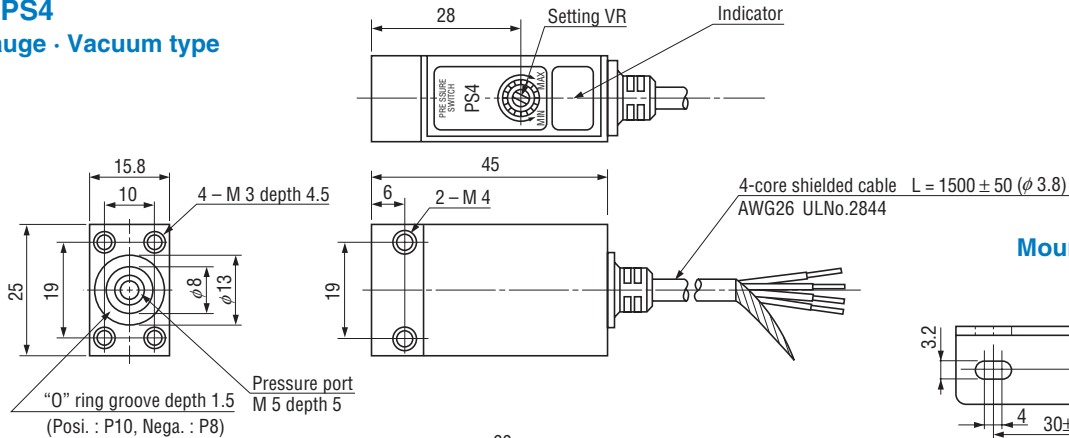
* : 490 m/s² for PS4-101D

PS4 PRESSURE SWITCHES

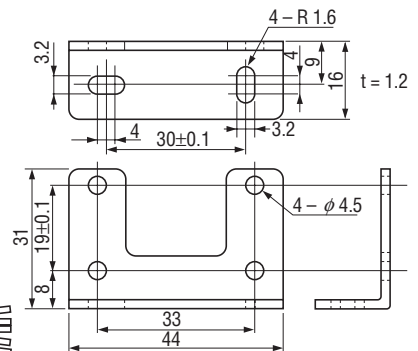
OUTLINE DIMENSIONS

Unless otherwise specified, tolerance : ± 0.5 (Unit: mm)

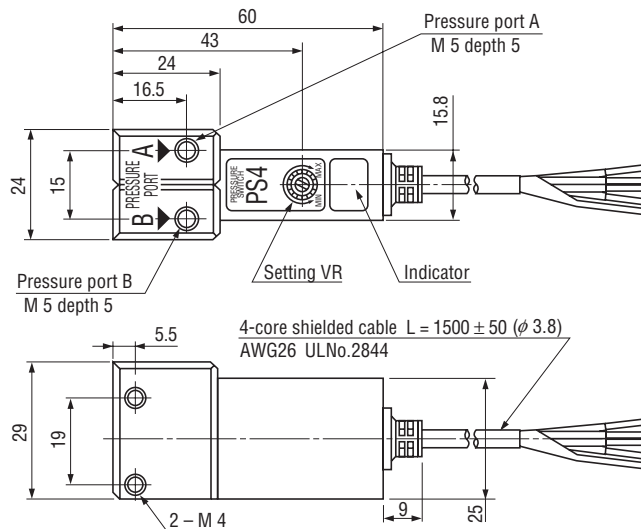
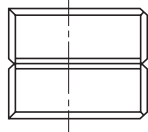
PS4 Gauge · Vacuum type



Mounting plate



PS4 Differential type

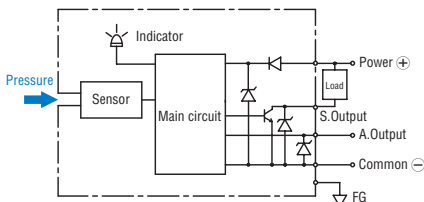


PS4

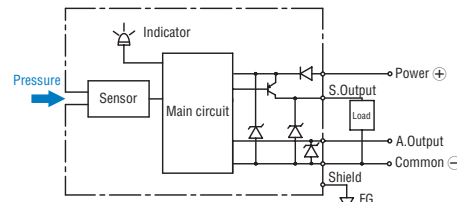
Wire color	Connection
Red	Power $\oplus$
Green	Analog output
White	Switch output
Black	Common
Shield	N.C.

INTERNAL ELECTRICAL SCHEMATICS

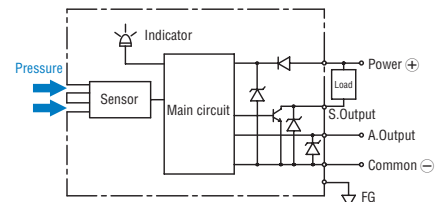
PS4 (NPN) Gauge · Vacuum type



PS4 (PNP) Gauge · Vacuum type

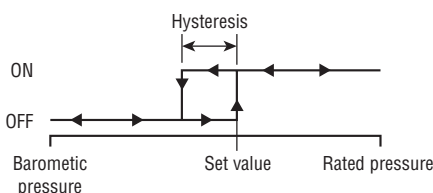


PS4 Differential type

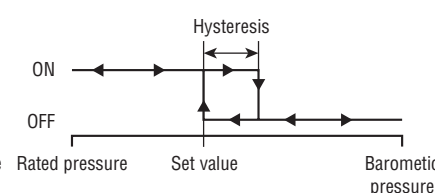


SWITCH OUTPUT SCHEMATICS

PS4-***G



PS4-102V



PS4-101D

