

# PRESSURE SWITCHES

# PS8



## FEATURES

- Solidstate pressure switch with no mechanical moving parts
- High corrosion resistance by double diaphragm structure
- Two pressure setting points
- Wide pressure medium compatibility

**INTERNAL STRUCTURE**  
PS8

Part name	Material
① Stainless steel diaphragm	SUS 316L
② Sealed liquid	Silicone oil
③ "O" ring (P18)	Fluoro-rubber
④ Sensor chip	Silicone
⑤ Fitting	SUS 316

## MODEL NUMBER DESIGNATION

PS8 - 102 G

Series name

Rated pressure range

102 : 0 ~ 98.1 kPa {0 ~ 1 kgf/cm<sup>2</sup>}  
 352 : 0 ~ 343 kPa {0 ~ 3.5 kgf/cm<sup>2</sup>}  
 103 : 0 ~ 981 kPa {0 ~ 10 kgf/cm<sup>2</sup>}

Pressure reference

G : Gauge  
 V : Gauge (Vacuum)

## LIST OF MODEL NUMBERS

Pressure reference	Gauge			
Pressure / kPa {kgf/cm <sup>2</sup> } Rated pressure range	0 ~ 98.1 {0 ~ 1}	0 ~ 343 {0 ~ 3.5}	0 ~ 981 {0 ~ 10}	0 ~ 98.1 {0 ~ 1}
G 3/8(PF 3/8)	PS8-102G	PS8-352G	PS8-103G	PS8-102V

※ Verify the above model numbers when placing orders.

# PS8

## PRESSURE SWITCHES

### STANDARD SPECIFICATIONS

● Unless otherwise specified, the specs are defined at an ambient temperature of  $25 \pm 5$  °C and excitation voltage of 12 VDC.

Item	Model number	PS8				
		102G	102V	352G	103G	
General specifications	Pressure reference	Gauge				
	Rated pressure range	kPa {kgf/cm <sup>2</sup> }	98.1 {1}	- 98.1 {-1}	343 {3.5}	981 {10}
	Maximum pressure	kPa {kgf/cm <sup>2</sup> }	196 {2}		686 {7}	1961 {20}
	Break-down pressure	kPa {kgf/cm <sup>2</sup> }	294 {3}		1030 {10.5}	2941 {30}
	Operating temp. range	°C	- 20 ~ 70			
	Compensated temp. range	°C	0 ~ 50			
	Operating humidity	%RH	35 ~ 85 (No condensation)			
	Storage temp.	°C	- 20 ~ 70 (Atmospheric pressure humidity 65 %RH maximum)			
	Pressure medium		Corrosive gases/liquids compatible with SUS316L and SUS316			
	Insulation resistance	MΩ minimum	100 (500 VDC)			
	Dielectric strength		500 VAC, 60 s (Leakage current 1mA maximum)			
	Sealed liquid		Silicone oil			
	Pressure port		G 3/8 (PF 3/8) ※			
	Net weight	g	Approx. 120			
Power	Supply voltage	VDC	12 ~ 24 ± 10 %			
	Ripple content	maximum	10 % (P-P) maximum			
	Consumption current	maximum	20 mA			
Switch output	No. of output		2			
	Output interface		NPN open collector output			
	Setting method		Adjustable by VR			
	Adjustable range		10 ~ 100 % of rated pressure			
	Display		Red LED (lighted when output is ON.)			
	Accuracy (Reference temp.: 25 °C)	% F.S.	± 3			
	Hysteresis	% F.S. maximum	2			
	Switching capacity		30 VDC 80 mA maximum			
	Residual voltage	V maximum	0.8			
	Response	ms	Approx. 2			

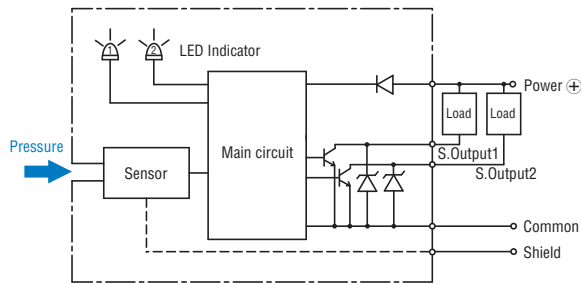
※ : An "O" ring is supplied as accessory. (P18).

# PS8 PRESSURE SWITCHES

## ENVIRONMENTAL CHARACTERISTICS

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

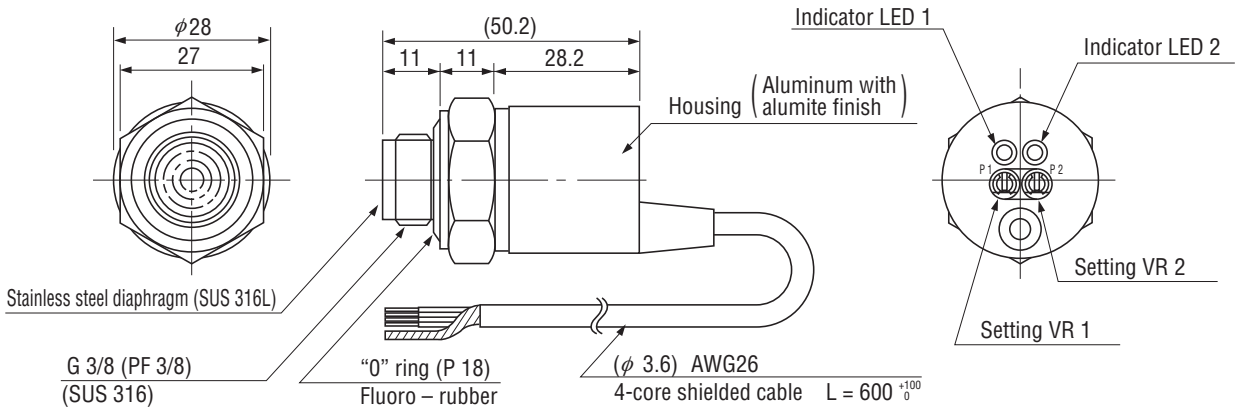
## INTERNAL ELECTRICAL SCHEMATICS



## OUTLINE DIMENSIONS

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

### PS8

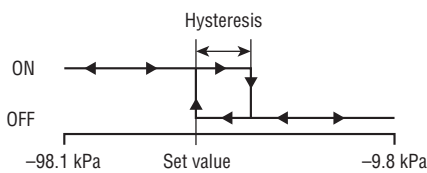


⚠ Extra care should be taken with the diaphragm part. Do not touch the diaphragm directly to avoid damaging the diaphragm.

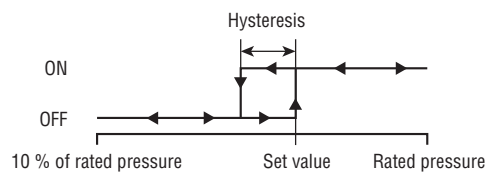
Wire color	Connection
Red	Power ⊕
Green	Output 1
White	Output 2
Black	Common
Shield	Fitting

## SWITCHING OPERATION

### PS8-102V



### PS8-\*\*\*G



※ 2 switches show same performance.