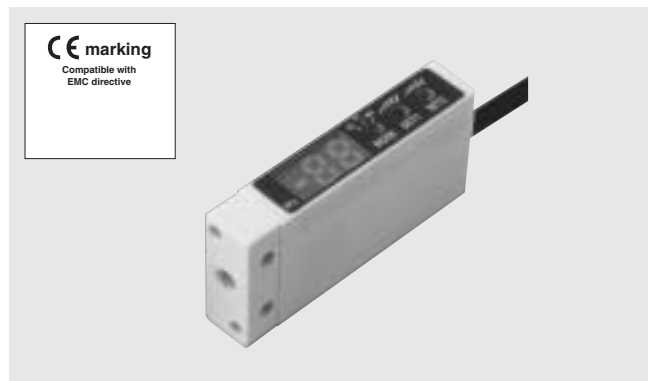


PS6

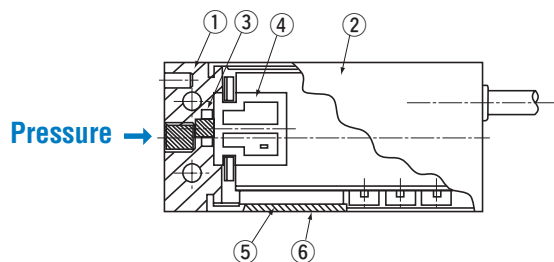
PRESSURE SWITCHES WITH GAUGE



FEATURES

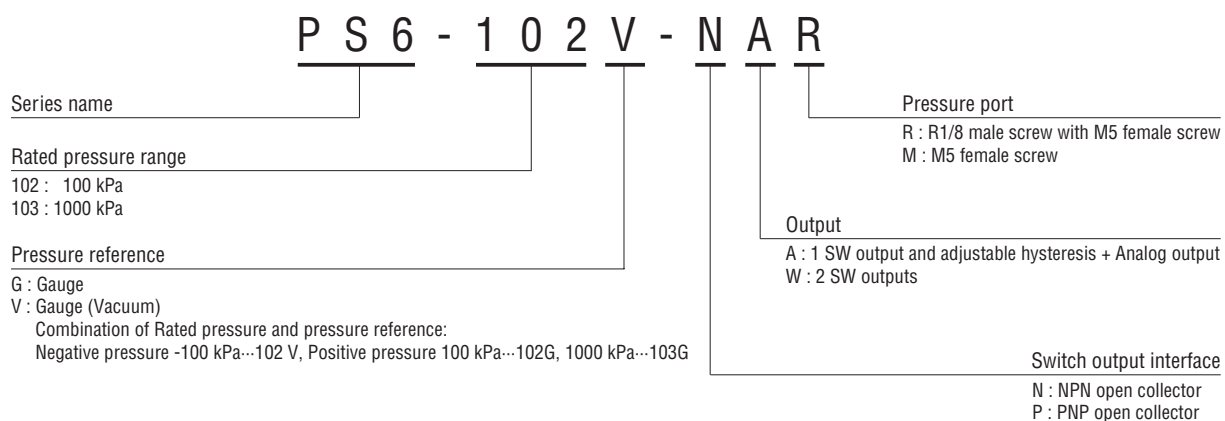
- Solidstate pressure switch with no mechanical moving parts
- 2 types of pressure ports are available
- Open collector output of either NPN or PNP is available
- Analog output type available

INTERNAL STRUCTURE



	Part name	Material
①	Pressure port	POM (Polyoxymethylene)
②	Housing	PC (Polycarbonate)
③	“O” ring	Fluoro-rubber
④	Sensor module board	—
⑤	Protection panel	PET (Polyethyleneterephthalate)
⑥	Main panel	

MODEL NUMBER DESIGNATION



LIST OF MODEL NUMBERS

Pressure port	Outputs	Switch output	102V	102G	103G
			0 ~ -100 kPa	0 ~ 100 kPa	0 ~ 1000 kPa
R 1/8 male screw	Adjustable hysteresis switch output + Analog output	NPN open collector output	PS6-102V-NAR	PS6-102G-NAR	PS6-103G-NAR
		PNP open collector output	PS6-102V-PAR	PS6-102G-PAR	PS6-103G-PAR
	Switch outputs (2 points)	NPN open collector output	PS6-102V-NWR	PS6-102G-NWR	PS6-103G-NWR
		PNP open collector output	PS6-102V-PWR	PS6-102G-PWR	PS6-103G-PWR
M 5 female screw	Adjustable hysteresis switch output + Analog output	NPN open collector output	PS6-102V-NAM	PS6-102G-NAM	PS6-103G-NAM
		PNP open collector output	PS6-102V-PAM	PS6-102G-PAM	PS6-103G-PAM
	Switch outputs (2 points)	NPN open collector output	PS6-102V-NWM	PS6-102G-NWM	PS6-103G-NWM
		PNP open collector output	PS6-102V-PWM	PS6-102G-PWM	PS6-103G-PWM

※ : Verify the above model numbers when placing orders.

PS6

PRESSURE SWITCHES WITH GAUGE

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	PS6		
			102V	102G	103G
General specifications	Pressure reference		Gauge		
	Rated pressure range	kPa	0 ~ -100	0 ~ 100	0 ~ 1000
	Maximum pressure	kPa	200	200	1500
	Break-down pressure	kPa	500	500	2000
	Operating temp. range	°C	-10 ~ 60		
	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		Non-corrosive gases		
	Insulation resistance	MΩ min.	100 (500 V DC)		
	Dielectric strength		500 V AC, 60 s (Leakage current 1 mA maximum)		
	Pressure port		R 1/8 (Female screw) or M5 female screw		
	Net weight	g	Approx. 50 (Including cable)		
Power	Supply voltage	V DC	12 ~ 24 V ± 10 % (Including ripple percentage)		
	Consumption current	mA max.	35		
Display	Display element		2-digit LED		
	Rated display range		-0 ~ -99 kPa	0 ~ 99 kPa	.0 ~ .99 MPa
	Display accuracy 0 ~ 50 °C (Reference temp. 25 °C)		± 3 %F.S.		
	Resolution		1 count		
Switch output	No. of outputs		1 or 2		
	Output interface		NPN or PNP open collector output		
	Setting method		Adjustable by VR		*1
	Adjustable range		0 ~ 100 of rated pressure		*2
	Display		Red LED ON (W type only : SW1 Red, SW2 Green)		
	Accuracy 0 ~ 50 °C (Reference temp. 25 °C)	%F.S	± 3		
	Switch hysteresis		Approx. 0 ~ 15 % of the set value (W type only 2 % F.S. maximum)		
	Switching capacity		30 V 80 mA maximum		
	Residual voltage	V maximum	0.8 (NPN), 1.2 (PNP)		
Analog output	Response	ms	Approx. 2		
	Output voltage	V	1 ~ 5		
	Zero voltage	V	1 ± 0.1		
	Span voltage	V	4 ± 0.1		
	Output current	mA maximum	1 (Load resistance 5 kΩ minimum)		

*1 : Please set adjusting torque at 30 mN·m maximum.

*2 : The actual setting range adjustable by VR has a little overrunning margin beyond the rated display of 0 through 99.
This could cause the setting value of VR may be under "0" or over "99".

PS6

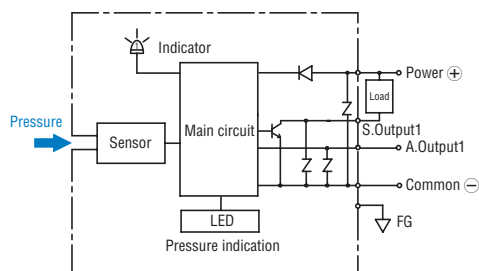
PRESSURE SWITCHES WITH GAUGE

ENVIRONMENTAL CHARACTERISTICS

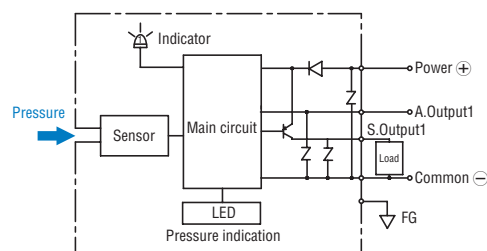
Test item	Test conditions	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s ² , 3 directions for 2 hours each	Pressure indication, switch operating points and analog output variation : ± 2 %F.S., maximum each after test
Shock	196 m/s ² , 3 directions for 3 times each	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
EMC	EN61326-1 (1997), -A1(1998)	± 5 %F.S., maximum during test

CIRCUIT DIAGRAMS

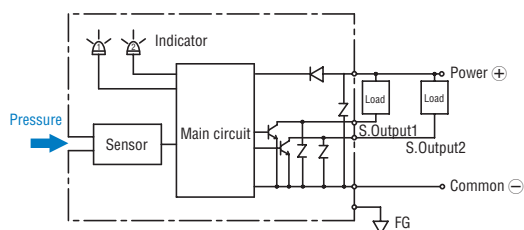
● NAN, NAR (NPN/Adjustable hysteresis switch)



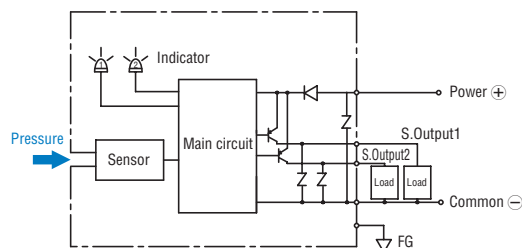
● PAN, PAR (PNP/Adjustable hysteresis switch)



● NWN, NWR (NPN/2 switch outputs)



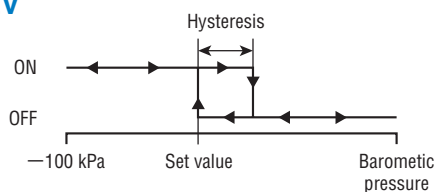
● PWN, PWR (PNP/2 switch outputs)



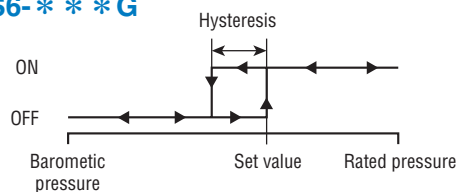
SWITCHING OPERATION

● The switch turns on at the set pressure and turns off at the set pressure minus the hysteresis.

● PS6-102V



● PS6-***G



※1 : *A* is adjustable hysteresis type.

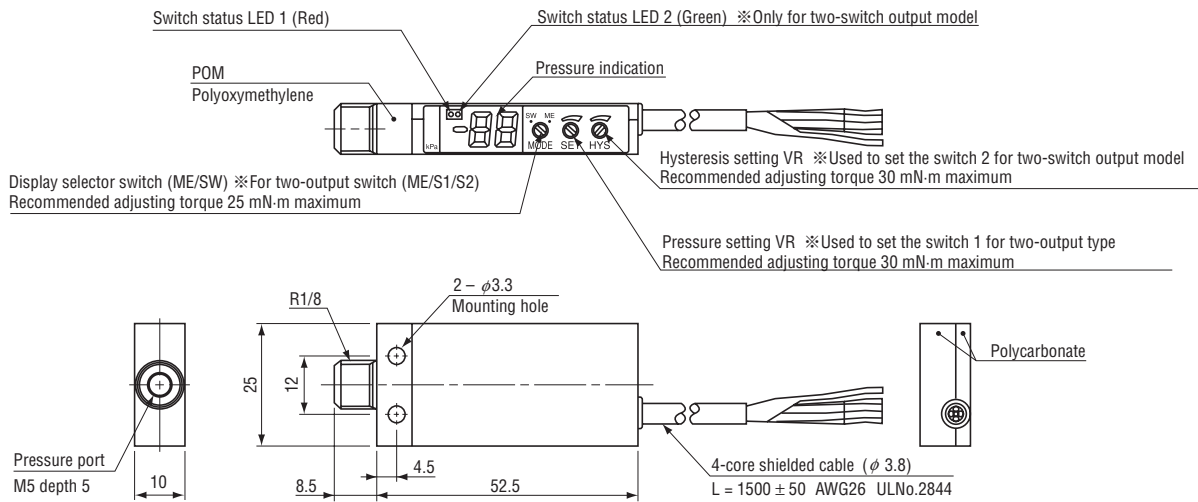
PS6

PRESSURE SWITCHES WITH GAUGE

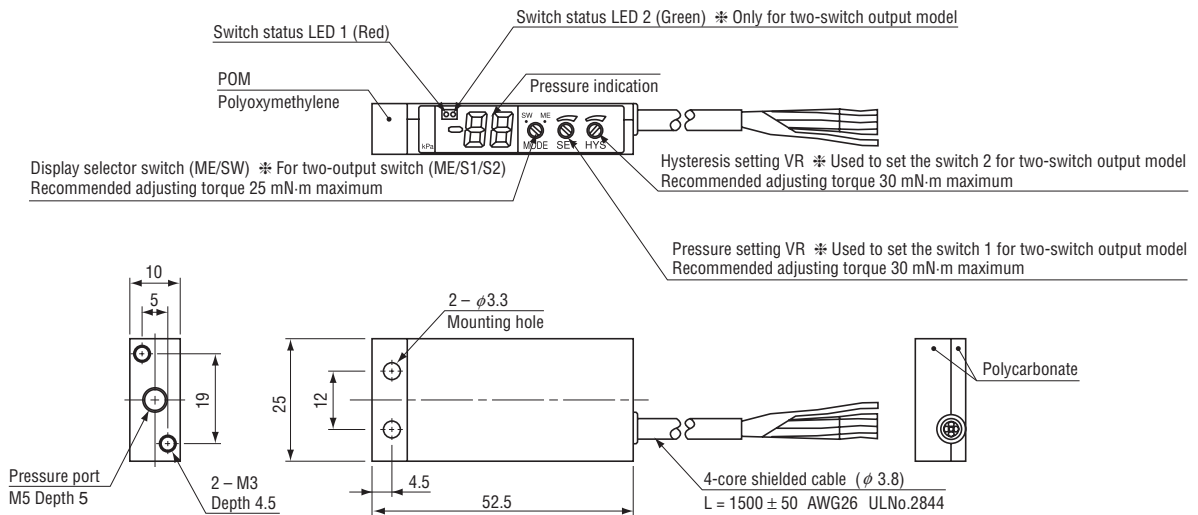
OUTLINE DIMENSIONS

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

● Pressure port R type (NAR, PAR, NWR, PWR)



● Pressure port M type (NAM, PAM, NWM, PWM)



PS6 (NAM, NAR, PAM, PAR)

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

PS6 (NWM, NWR, PWM, PWR)

Wire color	Connection
Brown	Power $\oplus$
Black	Switch output 1
White	Switch output 2
Blue	Common
Shield	N.C.