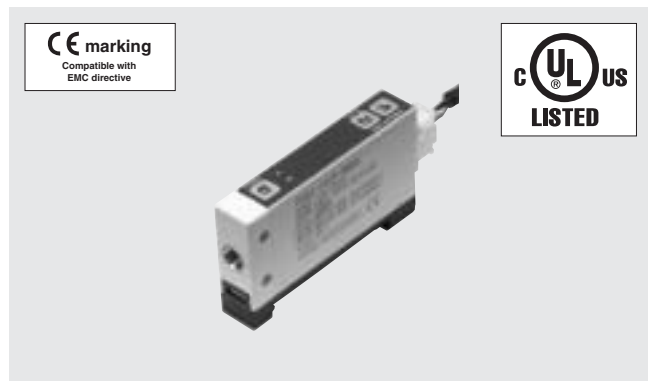


PRESSURE SWITCHES WITH GAUGE

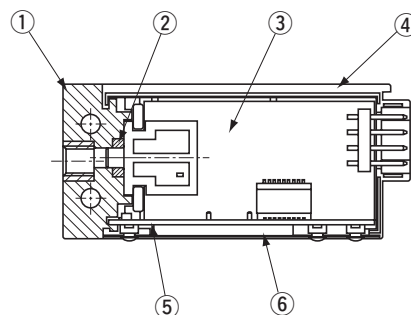
PS60



FEATURES

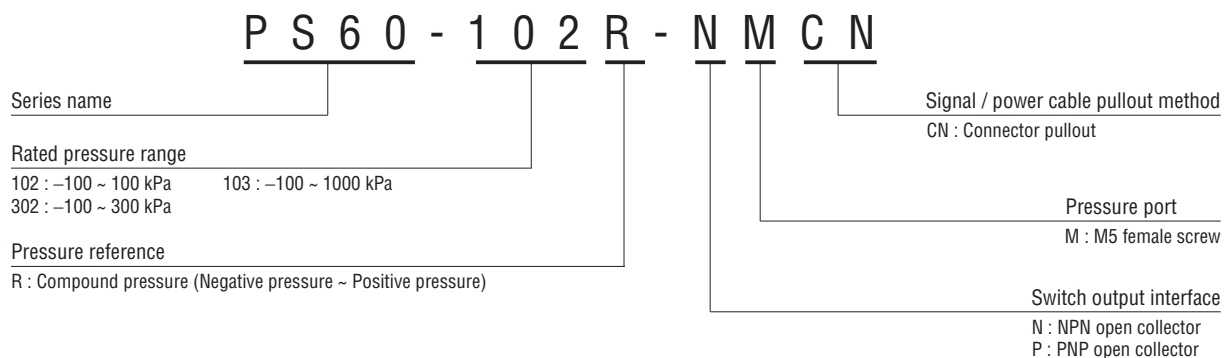
- Applicable for negative through positive pressure with 10 mm thick slim housing
- Suitable for use in clean rooms with easy-to-use push keys
- Plug-in connector is provided for easy installation and maintenance
- Space saving and mountable on DIN rails
- Data protection by panel lock system
- Low consumption by nondisplay mode

INTERNAL STRUCTURE



	Part name	Material
①	Pressure port	Polyamide (Resin of MXD6 series) Brass (Ni-plated)
②	"O" ring	Fluoro-rubber
③	Sensor module board	—
④	Housing	PBT (Polybutyleneterephthalate)
⑤	Display board	—
⑥	Operation panel seet	Polyester

MODEL NUMBER DESIGNATION



LIST OF MODEL NUMBERS

Pressure port	Switch output	102R	302R	103R
		-100 ~ 100 kPa	-100 ~ 300 kPa	-100 ~ 1000 kPa
M 5 female screw	NPN open collector output	PS60-102R-NMCN	PS60-302R-NMCN	PS60-103R-NMCN
	PNP open collector output	PS60-102R-PMCN	PS60-302R-PMCN	PS60-103R-PMCN

※ Verify the above model numbers when placing orders.

PS60

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 24 V DC.

Item		Model number	PS60		
			102R	302R	103R
General specifications	Pressure reference		Gauge		
	Rated pressure range	kPa	-100 ~ 100	-100 ~ 300	-100 ~ 1000
	Maximum pressure	kPa	200	600	1500
	Break-down pressure	kPa	500	1000	2000
	Operating temp. range	°C	-10 ~ 50		
	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)		
	Thermal error		± 3 %F.S. (0 ~ 50 °C)		
	Dielectric strength		500 V AC, 60 s (Leakage current 1 mA maximum)		
	Pressure port		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.	30		
Display	Display element		3-digit LED		
	Rated display range		-100 ~ 100 kPa	-100 ~ 300 kPa	-0.10 ~ 1.00 MPa
	Display accuracy 0 ~ 50 °C (Reference temp. 25 °C)		± 1 %F.S.		
	Resolution		1 count		
Switch output	No. of outputs		2		
	Output interface		NPN or PNP open collector output		
	Setting method		Adjustable by panel switch		
	Adjustable range		-110 kPa (approx.) ~ "999" counts		
	Display		Red LED ON		
	Repeatability		± 0.3 %F.S. maximum		
	Switch hysteresis		0 ~ 30 counts		
	Switching capacity		30 V 100 mA maximum		
	Residual voltage	V maximum	1.2 (NPN), 2.2 (PNP)		
	Response	ms	Approx. 5, 25, 250		
Accessories			PS60 cable, DIN rail adaptor		

PS60

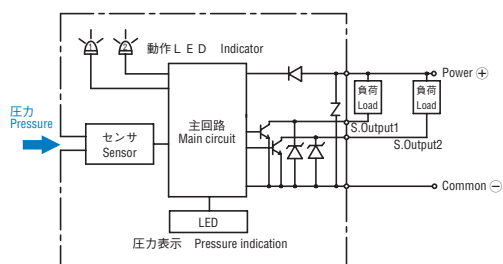
PRESSURE SWITCHES WITH GAUGE

ENVIRONMENTAL CHARACTERISTICS

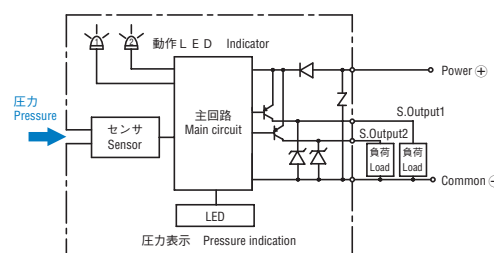
Test item	Test conditions	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s ² , 3 directions for 2 hours each	Pressure indication and switch operating point : ± 2 %FS., maximum each after test
Shock	490 m/s ² , 3 directions for 3 times each	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
EMC	EMI : EN55011 (Group 1, Class B) : 1998 EMS : EN61326-1 : 1997 / A1 : 1998, EN61000-6-2 : 1999	Pressure indication and switch operating point : ± 5 %FS., maximum during test

CIRCUIT DIAGRAMS

● NPN open collector



● PNP open collector



SWITCH OUTPUT MODE

Output	SW1				SW2			
Mode	Separate		Window comparator		Separate		Window comparator	
Operation	HI	LO	A	B	HI	LO	A	B
1	○				○			
2	○				○			
3		○				○		
4		○				○		
5			○				○	
6			○				○	
7				○				○
8				○				○
Pressure setting (Operating point)	Setting 1		(Lower limit) : Setting 1 (Upper limit) : Setting 2		Setting 2		(Lower limit) : Setting 1 (Upper limit) : Setting 2	

Separate mode	Window comparator mode
(HI operation) (LO operation) $P1 \leq P2$ or $P1 \geq P2$	(A operation) (B operation) $P1 \leq P2 - 2H$
H : Switch hysteresis, P1 = Setting 1, P2 = Setting 2	

Note 1. In the Separate Mode, setting 1 corresponds to SW1, and Setting 2 corresponds to SW2.

Note 2. In the Window Comparator Mode, the minimum value for SW1 and SW2 corresponds to Setting 1 and the maximum value corresponds to Setting 2.

DISPLAY RANGE

● Display range can be selected as the table.

Note) “—” on the table indicates that it is not selectable in relation to resolution and display lines.

※ : In terms of setting display range, please verify the default mode.

Number	Rated pressure range		
	102R	302R	103R
1 (kPa)	-100 ~ 100	-100 ~ 300	—
2 (MPa)	—	—	-0.10 ~ 1.00
3	-75 ~ 75	-75 ~ 225	—
4	-1.00 ~ 1.00	-1.00 ~ 3.00	-1.0 ~ 10.0
5	-14.5 ~ 14.5	-14.5 ~ 43.5	-14 ~ 145
6	29.5 ~ 0.0*	29.5 ~ 0.0*	—

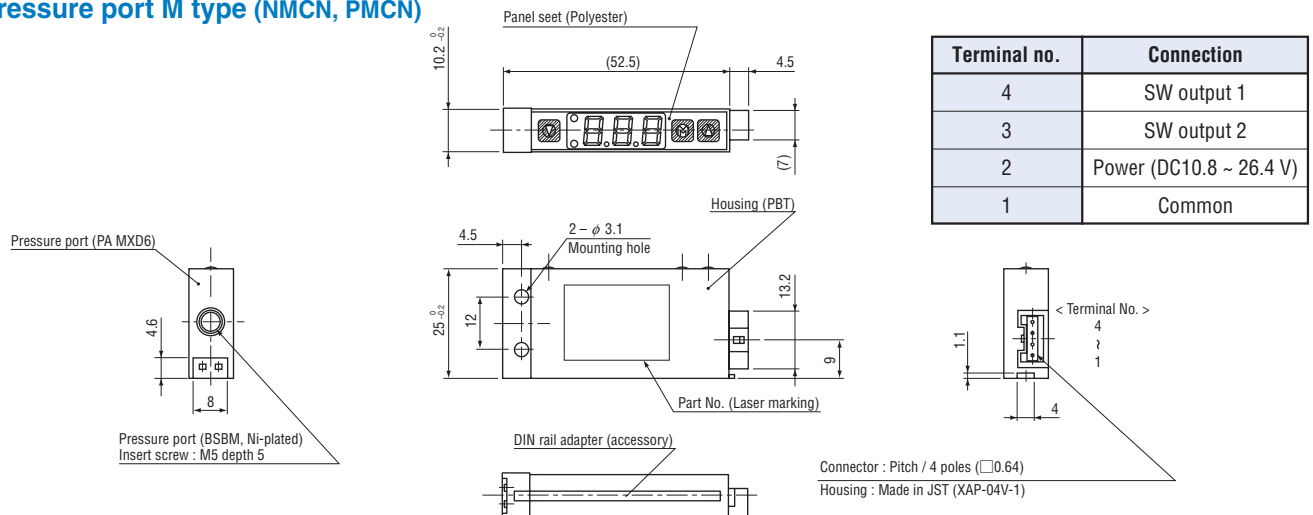
※ : Atmospheric pressure

PS60 PRESSURE SWITCHES WITH GAUGE

■ OUTLINE DIMENTIONS

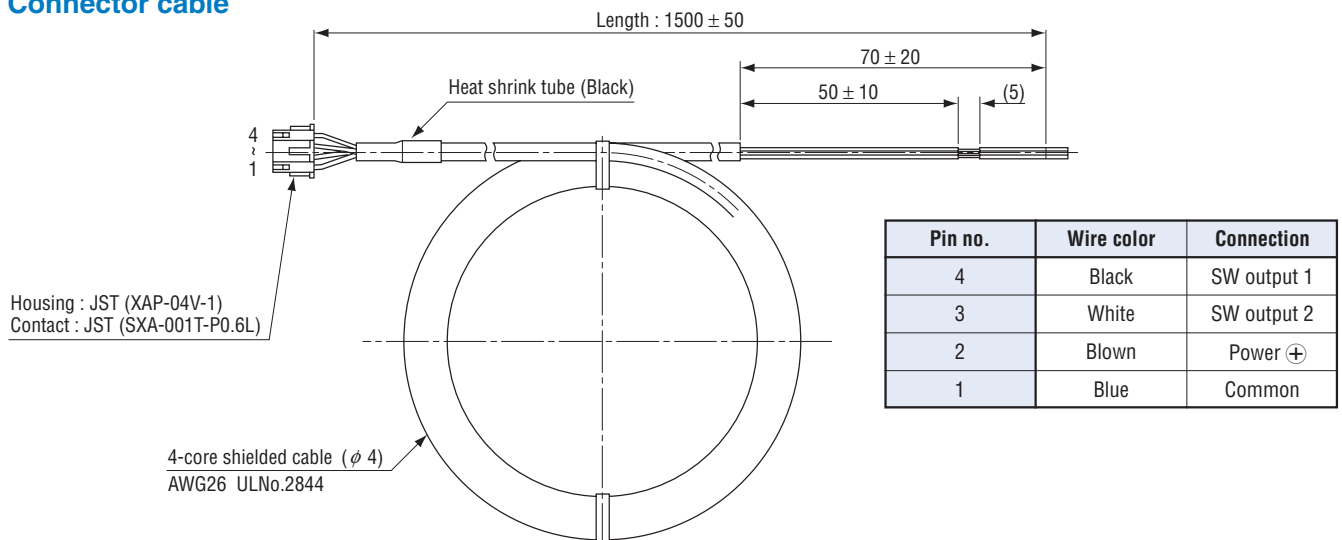
● **Pressure port M type (NMCN, PMCN)**

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



■ Accessories

- **Connector cable**



- **DIN rail adapter**

