

PRESSURE SWITCHES

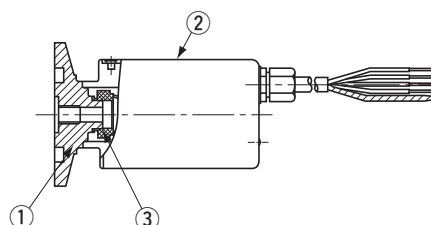
PS91



FEATURES

- Can be used in High vacuum
- Selection of Quick-release coupling (ISO standard) and Gasket joint
- Switch setting adjustable by 2 VRs on the back

INTERNAL STRUCTURE (KF25[NW25])



Part name		Material
①	Fitting	SUS316L
②	Housing	Aluminum
③	Sensor module	SUS316L

MODEL NUMBER DESIGNATION

PS91 - 102V - N2K2

Series name

Rated pressure range

102V : -100 ~ 10 kPa

Pressure reference

N1 : NPN(Upper and upper limit mode)
 N2 : NPN(Upper and lower limit mode)
 P1 : PNP(Upper and upper limit mode)
 P2 : PNP(Upper and lower limit mode)

Fitting

K2 : Flange joint KF25 (NW25)
 VC : Gasket joint (9/16-18UNF)

LIST OF MODEL NUMBERS

		Gauge	
Rated pressure range	Switch output interface	K2 : Flange joint KF25 (NW25)	VC : Gasket joint (9/16-18UNF)
102V	NPN (Upper and upper limit mode)	PS91-102V-N1K2	PS91-102V-N1VC
	NPN (Upper and lower limit mode)	PS91-102V-N2K2	PS91-102V-N2VC
	PNP (Upper and upper limit mode)	PS91-102V-P1K2	PS91-102V-P1VC
	PNP (Upper and lower limit mode)	PS91-102V-P2K2	PS91-102V-P2VC

PS91

PRESSURE SWITCHES

STANDARD SPECIFICATIONS

Item		Model number	PS91
			102V
General specifications	Pressure reference		Gauge
	Rated pressure range	kPa	- 100 ~ 10
	Maximum pressure	kPa	200
	Break-down pressure	kPa	300
	Operating temp. range	°C	- 20 ~ 80
	Compensated temp. range	°C	0 ~ 50
	Pressure medium		Corrosive gases/liquids compatible with SUS 316L
	Pressure port		K2 (Flange joint : KF25)、VC (9/16-18UNF)
	Net weight	g	Approx. 140
Power	Supply voltage	VDC	12 ~ 24 ± 10 %
	Consumption current	maximum	15
Switch output	No. of outputs		2 (NPN / PNP open collector)
	Setting method		Adjustable by VR
	Adjustable range		0 ~ 100 %
	Output mode		Upper and upper limit mode / Upper and lower limit mode
	Accuracy 0 ~ 50 °C (Reference temp.: 25 °C)	%F.S.	± 3
	Hysteresis	%F.S. maximum	2
	Response	ms	Approx. 2

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 operating pressure : ± 2 %F.S. maximum ※ 1
Shock	490 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.	

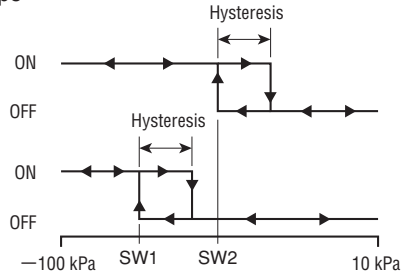
※ 1: Working pressure of switch output is variation ± 2 %F.S. before or after test.

PS91

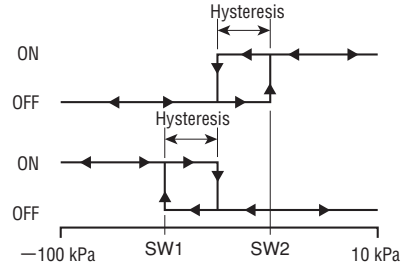
PRESSURE SWITCHES

SWITCH OUTPUT SCHEMATICS

● N1/P1 Type

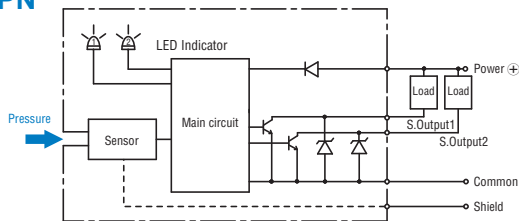


● N2/P2 Type

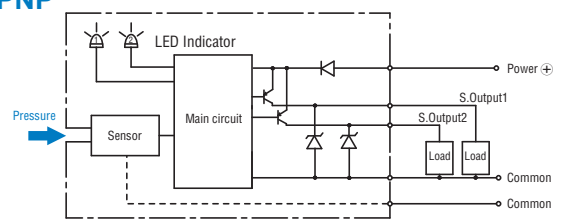


INTERNAL ELECTRICAL SCHEMATICS

● NPN



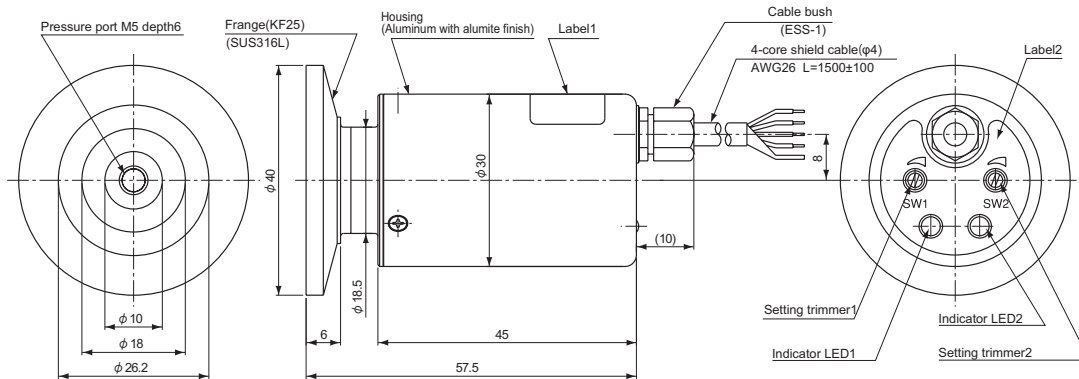
● PNP



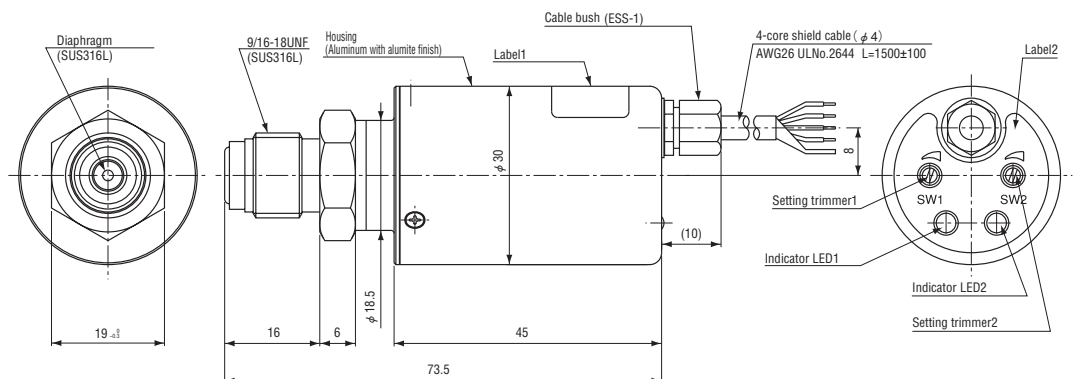
OUTLINE DIMENSIONS

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

● K2



● VC



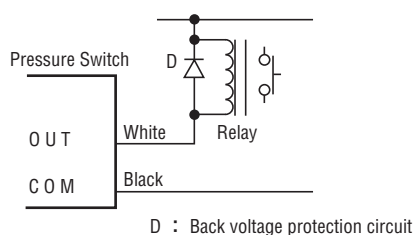
Wire color	Connection
Red	Power
Green	Switch output 1
White	Switch output 2
Black	Common
Shield	Fitting

PRESSURE SWITCHES TYPICAL CIRCUIT CONNECTION

TYPICAL CIRCUIT CONNECTION

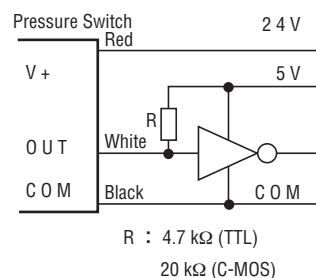
● Connection with a small size relay or a solenoid

Practically the switch can directly drive a small size, 1 W class, relay or a similar wattage solenoid at 24 V. Back voltage protection must be prepared.



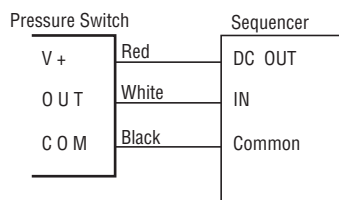
● Connection with TTL or CMOS

Due to the employment of the open collector configuration, a pull-up resistor is required.



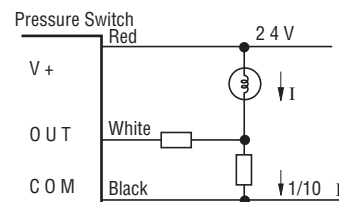
● Connection with a sequence controller

The switch output can be directly connected to the non-contact input terminal of the sequence controller. The switch can make use of the sensor power supply from the sequence controller.



● Load current

A lamp load or like that may cause excessive current flow and requires the proper preventive measure.



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