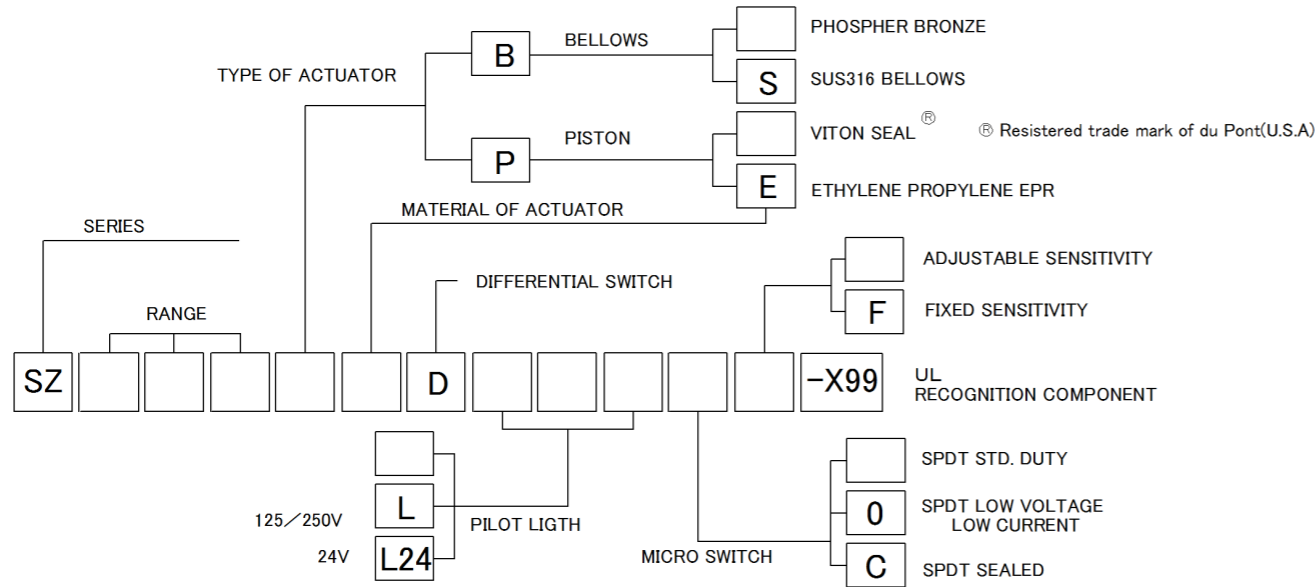


(1) TYPE DESIGNATION

Please refer type and specifications of the device in order to type designation as follows.

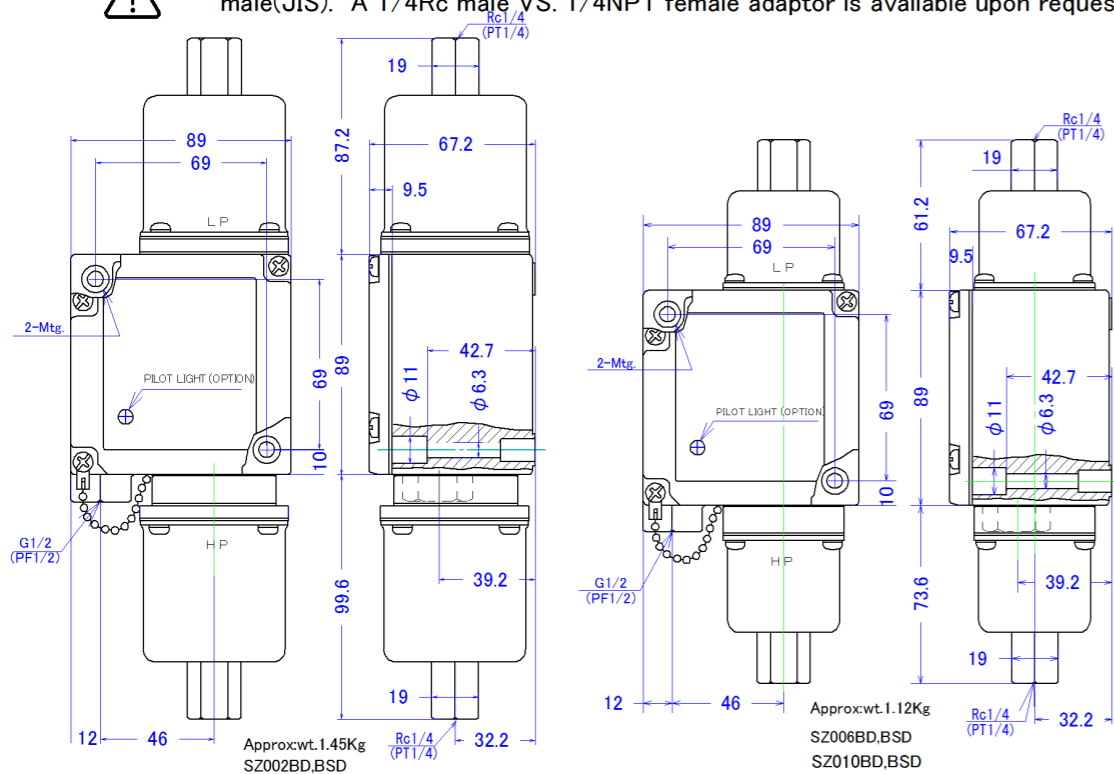


**RANGE:** Range is the working pressure of the differential pressure switches.  
**DIFFERENTIAL:** Differential of the differential pressure switches is difference between high pressure line and low pressure line at which the differential pressure switches is reset.  
**SENSITIVITY:** Sensitivity is the pressure difference between the switch trip and reset.  
**RATED PRESSURE:** For the best life expectancy, applied pressure occasionally or continuously to the bellows should be limited less than rated pressure of each type.  
**PROOF PRESSURE:** Proof pressure is the max. momentary pressure, including, surge which may be applied to a pressure switch without permanent degradation.  
**CAUTION:** If the pressure switch is exposed to pressure, including surge, greater than proof pressure, reduction of the bellows life or leakage from the actuator or a shift of operating pressure may result.

**CAUTION:** RANGE, DIFFERENTIAL and PROOF PRESSURE are listed on the nameplate as range, differential and max. allowable pressure.

(2) MOUNTING **CAUTION:** It is not recommended to support the pressure switch only by pressure piping. Securely mount the switch housing using 2(two)-6mm or 1/4" screws through mounting holes shown in drawing. Mounting screw is not attached. SZ1/10BSD and SZ1/10BSDC must be used on vertical (⊥), mounting Hp bellows downward because the bellows is very sensitive and large, mass of the bellows itself affect the setting pressure.

(3) PIPING **CAUTION:** When piping, use a wrench onto the hexagonal connector of the actuator and don't apply any force to the actuator and switch housing. Pressure port of the Super Z is 1/4Rc male(JIS). A 1/4Rc male VS. 1/4NPT female adaptor is available upon request.

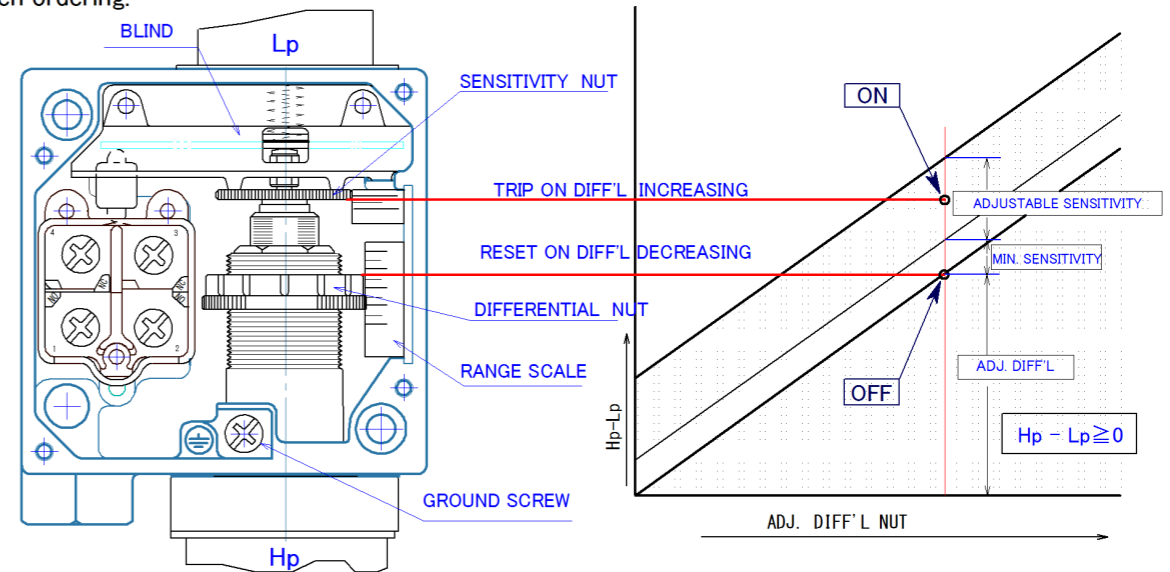


タイプ	A	B
SZ025BD	95.4	83
SZ025BSD	85.4	73

(4) OPERATING POINT ADJUSTMENT

Hp must always be greater than Lp. When there is no pressure on either bellows, the pressure difference is zero, a normally open contact is open, a normally closed contact is closed. If pressure is applied to either or both bellows, causing a difference in pressure to occur, the micro switch is trip when the pressure difference is just greater than the setting differential plus the sensitivity and, the micro switch is reset when the pressure difference narrows in amount of the setting sensitivity. Before adjustment of operating point, please refer "factory setting point" on the label attached on outside of the housing. Sensitivity of the standard device has been set at min. of the device if special setting requirement has not been specified when ordering.

**WARNING:** Don't touch terminal screws when alive.  
**CAUTION:** Don't touch or loosen any parts except of RANGE NUT and SENSITIVITY NUT during this adjustment. Don't remove the BLIND in any case.



1. DIFFERENTIAL ADJUSTMENT

It is recommended to set operating point first of all, switch reset pressure when pressure difference between Hp and Lp comes close. This adjustment made by DIFF'L NUT which is rotated with a screw driver.

2. SENSITIVITY ADJUSTMENT

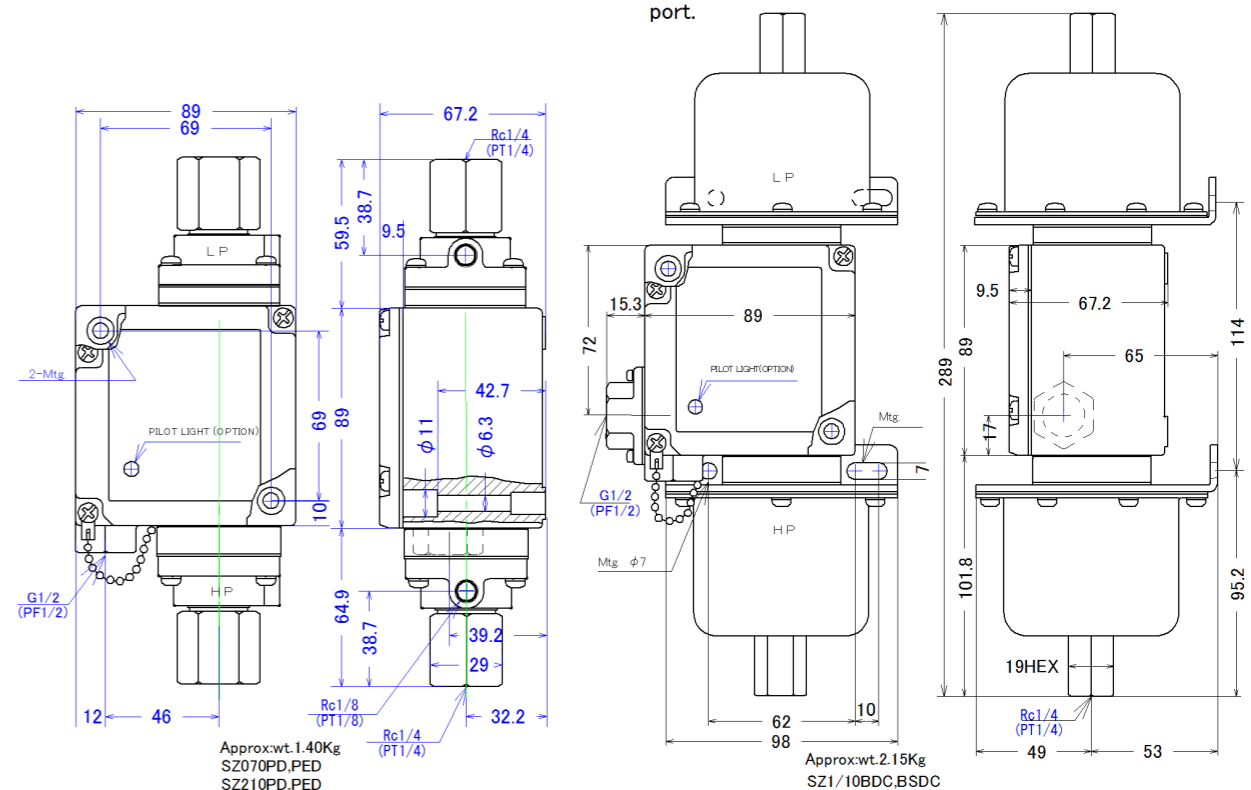
Switch trip pressure when pressure difference between Hp and Lp is increased can be adjusted by SENSITIVITY NUT. The nut can be rotated by fingers without any affect or change switch reset point which has been set at step 1.

3. Fixed sensitivity devices which are identified by type designation letter(F) can not be made to adjust sensitivity. Adjust and set operating point on decreasing pressure by the DIFFERENTIAL NUT according to requirement of your application.

Both of DIFFERENTIAL NUT and sensitivity NUT are self locked by the lock spring.

**CAUTION:** DRAIN PIPING: The piston actuated devices of the Super Z pressure switch don't require drain piping, but have a drain port 1/8Rc, to prevent environmental contamination with very slight seepage for long term.

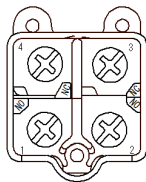
**CAUTION:** Allowable back pressure for the drain port is limited less than 0.1MPa(15 P.S.I.). Don't plug the drain port.



(5) WIRING

SPDT

SPDT single pole double throw switch has each one normally open contact and one normally closed contact. These contacts are electrically separated from the other, but not control different voltage or invert phase.

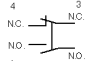



(6) ELECTRICAL RATINGS



SPDT STANDARD DUTY

- CURRENT ON THIS TABLE IS CONTINUOUS CARRING AMPERES
- INDUCTIVE LOAD POWER FACTOR >0.4 A.C. TIME CONST. <0.7 D.C.
- LAMP LOAD INCLUDE 10 TIMES INRUSH CURRENT.
- MOTOR LOAD INCLUDE 10 TIMES INRUSH CURRENT

DESCRIPTION ON THE NAMEPLATE  
ELECTRICAL CONTACT RATINGS  
10A-125/250 or 480V A.C.  
0.8A-125V D.C. 0.4A-250V D.C.

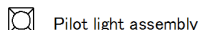
CONTACT SPDT	VOLT V	RESISTIVE LOAD		LAMP LOAD		INDUCTIVE LOAD		MOTOR LOAD	
		N.C.	N.O.	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.
3.4:N.C. 	AC 125	10A	10A	3A	1.5A	10A	5A	2.5A	
	250	10	10	2	1	10	3	1.5	
	480	10	10	1.5	0.8	3	1.5	0.8	
1.2:N.O. 	DC 8	10		6A	3A	10A	6A		
	14	10		6	3	10	6		
	30	8		4	3	6	4		
	125	0.8		0.2	0.2	0.8	0.2		
	250	0.4		0.1	0.1	0.4	0.1		

SPDT Low Voltage, Low Current

CONTACT SPDT	RATINGS	RECOMMENDED LOAD
3.4:N.C. 	125V AC 0.1A	DC 5~30V
1.2:N.O. 	30V DC 0.1A	0.5~100mA

(7) PILOT LIGHT(type designation letter:L and L24)

Please wire the Lamp Assembly according to wiring diagram listed below.  
L24 Lamp Assembly is Light on without polarities, because the assembly includes a rectifier.

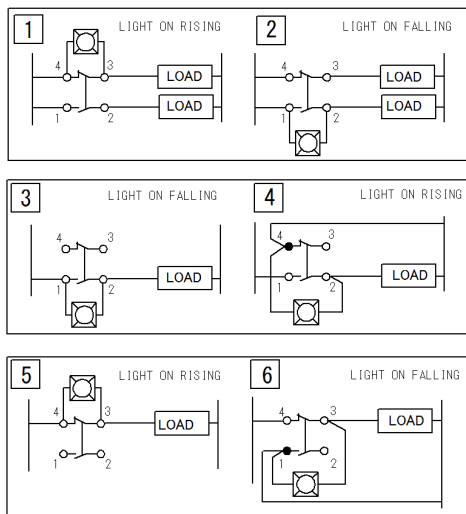
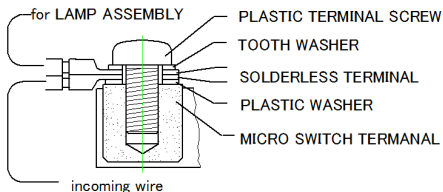


CAUTION

Use an attached plastic terminal screw onto ● marked on the wiring diagram.

The plastic terminal screw set is not attached for UL approved devices with suffix-X99 and so, #4 and #6 wiring is prohibited.

USE OF TERMINAL SET



(8) ENGINEERING DATA

Ambient Temperature: -20°C ~ +80°C(without icing) (-4°F ~ +176°F)  
Media Temperature: phosphor bronze bellows: -40 °C ~ 125°C (-40°F ~ +257°F)  
stainless steel bellows: -40 °C ~ 250°C (-40°F ~ +482°F)  
piston actuator: -20 °C ~ 120°C (-4°F ~ +248°F)  
Max. Allow. Cycle Speed: 120 C.P.M.  
Insulating Resistance: between terminals and housing > 100Mohms at D.C.500V  
Dielectric Strength: between terminals and housing 2200V A.C. for 1 min.  
Orifice: bellows: 1.5mm dia (SZ1/10BDC,SZ1/10BSDC : 4mm dia)  
piston: 1mm dia  
Enclosure type: IP65

(9)REPLACEMENT PARTS

BELLOWS ASSEMBLY

TYPE	P/N
SZ002BD,BSD	002BD,BSD
SZ006BD,BSD	006BD,BSD
SZ010BD,BSD	010BD,BSD
SZ025BD,BSD	025BD,BSD
SZ1/10BDC,BSDC	1/10BDC,1/10BSDC

006BD: phosphor bronze bellows  
010BSD: stainless steel bellows

PISTON ASSEMBLY

TYPE	P/N
SZ070PD,PED	070PD,PED
SZ210PD,PED	210PD,PED

070PD: Viton seal  
PISTON ASSEMBLY  
210PED: Ethylene Propylene EPR  
PISTON ASSEMBLY

MICRO SWITCH

MICRO SWITCH	P/N
SPDT standard duty	SPDT
SPDT low voltage	
low current	SPDT-0
SPDT sealed	SPDT-C

PILOT LIGHT

PILOT LIGHT	P/N
125/250V	L
24V	L24
Kit of 125/250V	KL
Kit of 24V	KL24

To convert standard devices to UL approved devices with pilot light is not permitted.  
KL and KL24 include a pilot light assembly and a cover assembly. Let us know type of the pressure switch and also DATE CODE on the nameplate which you have for an information of nameplate imprinting.



Bellows assembly and micro switch are field replaceable, but it is needed to make re-adjustment of the device itself. Further investigations at our factory is required for final guarantee after replacement of these assemblies.

WARNING

HIGH VOLTAGE



Hazardous voltage on the switch terminals can cause severe injury or death. To prevent the hazardous electrical shock, always disconnect power before installing, wiring, adjusting, or maintenance.

SOLE AGENT: TAIHEI BOEKI CO., LTD  
2-2-2, Nihonbashi Honcho, Chuo-ku, Tokyo  
Phone 03-3270-4821 Facsimile 03-3245-1767  
MANUFACTURER: TAIHEI SYSTEM KOGYO CO., LTD