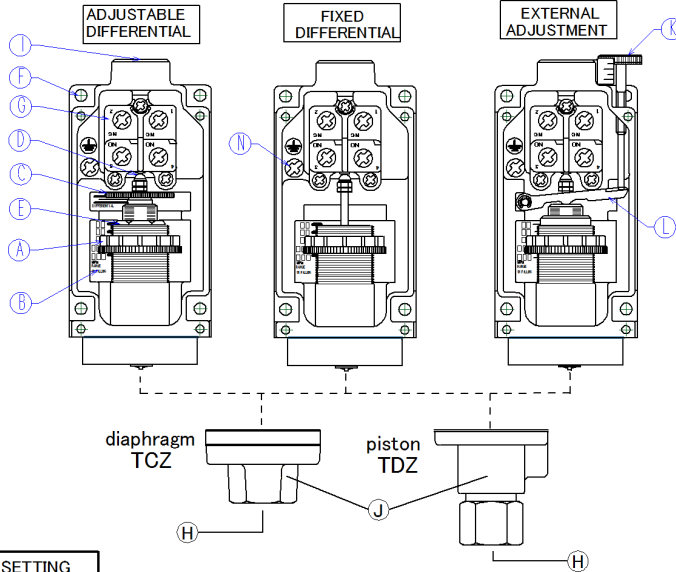


## SWITCH MECHANISM



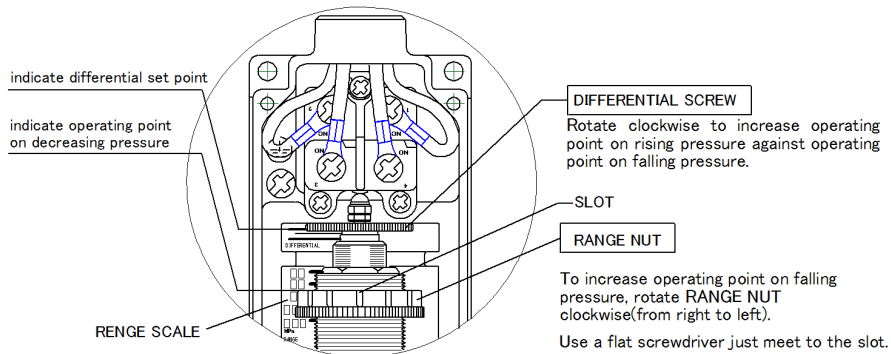
- A : RANGE NUT
- B : RANGE SCALE
- C : DIFFERENTIAL SCREW
- D : E FACTORY SET DON'T TOUCH
- F : 4-MOUNTING
- G : MICRO SWITCH
- H : PRESSURE PORT
- I : CONDUIT
- J : ACTUATOR
- K : HANDLE
- L : ARM
- N : GROUND SCREW

## SETTING



**step 1 RANGE NUT (A)**  
Rotate RANGE NUT to set operating point on decreasing pressure.

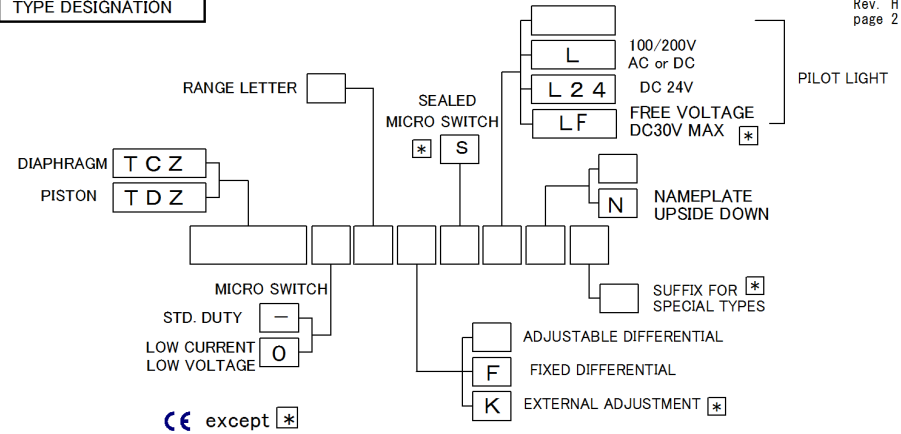
**step 2 DIFFERENTIAL SCREW (C)**  
Adjustment of differential between switch trip point and reset point is made by DIFFERENTIAL SCREW without any change set point on decreasing pressure which has been set by RANGE NUT. As the results, operating point on rising pressure is setting point on decreasing pressure+setting differential.



Use a pressure gage for more accurate setting.

Fixed differential devices do not make differential adjustment.  
Adjustment of external adj. devices please refer to the catalog.

## TYPE DESIGNATION



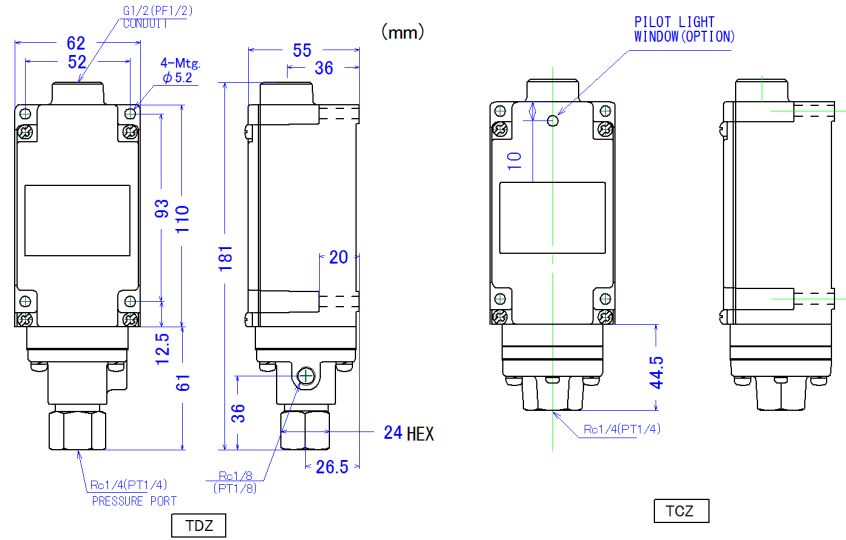
## PRESSURE RATINGS

TYPES	RANGE	ADJUSTABLE DIFFERENTIAL			PROOF PRESSURE	ACTUATOR	MPa
		LOW	MID.	HIGH			
TCZ-5	0.005 — 0.52	0.02 — 0.1	0.02 — 0.11	0.03 — 0.12	1.8	DIAPHRAGM : NITRIL RUBBER FLANGE : ALUMINUM DIE CAST O-RING : NITRIL RUBBER	DIAPHRAGM
TCZ-1	0.005 — 1	0.03 — 0.2	0.04 — 0.21	0.05 — 0.22	3		
TCZ-2	0.02 — 1.8	0.08 — 0.39	0.08 — 0.4	0.12 — 0.42	4		
TDZ-1	0.1 — 3.2	0.2 — 0.7	0.2 — 0.7	0.25 — 0.8	10	CYLINDER : BRASS PISTON : BRASS O-RING : NITRIL RUBBER CAPSEAL : TEFLON	PISTON
TDZ-3	0.2 — 7	0.25 — 1.3	0.28 — 1.4	0.3 — 1.5	35		
TDZ-4	0.5 — 20.5	0.6 — 3.8	0.7 — 4	1.2 — 4.2	70	CYLINDER : BRASS PISTON : STAINLESS STEEL O-RING : NITRIL RUBBER CAPSEAL : TEFLON	
TDZ-7	1 — 40	1.4 — 7.8	1.5 — 8	1.8 — 8.5	70		
TDZ-8	2 — 63.5	2 — 11	2.5 — 12	3 — 12	120	CYLINDER : STAINLESS STEEL PISTON : STAINLESS STEEL O-RING : NITRIL RUBBER CAPSEAL : TEFLON	ACTUATED
TDZ-13	0.2 — 3.5	0.25 — 1.3	0.3 — 1.4	0.35 — 1.5	35	SAME AS TDZ-3	
TDZ-34	0.5 — 10	0.6 — 3.8	0.7 — 3.8	1.2 — 4	70	SAME AS TDZ-4	
TDZ-47	1 — 20	1.4 — 7.5	1.5 — 8	1.8 — 8.5	70	SAME AS TDZ-7	
TDZ-78	2 — 30	2 — 11	2.5 — 12	3.5 — 12	120	SAME AS TDZ-8	

- RANGE is reset operating pressure on falling.
- ADJUSTABLE DIFFERENTIAL listed above is for the adjustable differential devices. Differential of the fixed differential devices is min. value of each adjustable differential device listed above. As to pressure ratings of the external adjustment devices, please refer the catalog of the type Z.
- PROOF PRESSURE is a test pressure for a short duration --- not a pressure to be applied occasionally or for long term. Do not apply any amount of pressure exceeding the proof pressure at any moment.
- Use a dumper or surge reducer in an application where a system pressure including surge pressure or pulsation exists. In some cases, including surge or pulsation, the piston is moved as a vibrator, that eventually makes the life of seal shorten excessively, and this results in the leakage of pressure media.

Ambient Temperature : -10°C to +80°C (without icing)  
Max. Allow. Cycle Speed : 120 C.P.M.  
Insulating Resistance : > 100Mohms at D.C.500V  
Dielectric Strength : 2200V A.C. for 1 min.  
Orifice included : TCZ : 1.5mm dia  
TDZ : 0.8mm dia  
Degree of Protection : IP65 (however, except for external adjustment type)

**DIMENSION-MOUNTING**



- Securely mount the housing with four(4) screws at mounting holes. Don't support the pressure switch by only pressure pipe.
  - The piston devices have a Rc1/8(PT1/8) drain port but practically cause no leakage because of sealed piston.
- As the piston strokes, very slight amount of fluid which is necessary to lubricate between the piston and the seal materials is pulled out and in some cases, it extrudes from the drain port for long term usage. Please do drain piping if even very slight amount of seepage of fluid mentioned above is not allowed. Don't plug the drain port. Max. allowable back pressure of drain piping is less than 0.1MPa.

**ELECTRICAL CONTACTS RATINGS**

**STANDARD DUTY and SEALED microswitch**

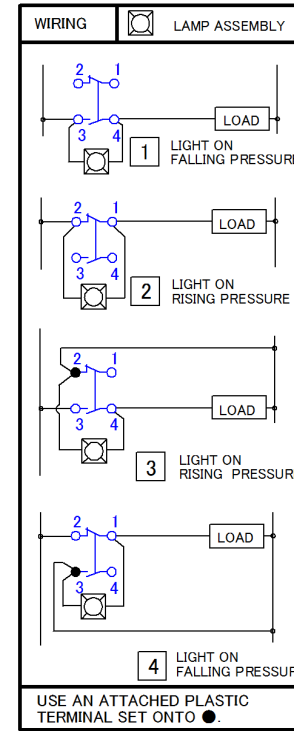
1 CURRENT ON THIS TABLE IS CONTINUOUS CARRING AMPERES.		DESCRIPTION ON THE NAMEPLATE ELECTRICAL CONTACT RATINGS 10A~125/250 or 480V A.C. 0.8A~120V D.C., 0.4A~250V D.C.							
2 INDUCTIVE LOAD: POWER FACTOR >0.4 A.C. TIME CONST. <0.7 D.C.									
3 LAMP LOAD: INCLUDE 10 TIMES INRUSH CURRENT.									
4 MOTOR LOAD: INCLUDE 6 TIMES INRUSH CURRENT.									
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.
	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	
	600	3	1	1	0.5	1.5	1	0.5	
	DC 8	10	10	6A	3A	10A	6A	6A	
14	10	6	3	10	6	6	4		
30	6	4	3	10	6	4	4		
125	0.8	0.2	0.2	10A	0.8	0.2	0.2		
250	0.4	0.1	0.1	10A	0.4	0.1	0.1		

**LOW VOLTAGE, LOW CURRENT microswitch**

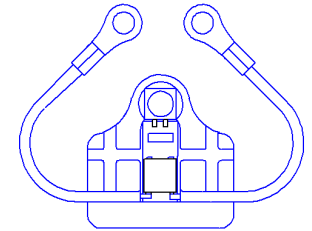
RATING	125V AC 100mA 30V DC 100mA
LOAD RECOMMENDED	DC 5~30V, 0.5~100mA
CONTACT SPDT	

Contacts of the microswitch are single pole double throw, each one normally open and normally closed circuits. These contacts are electrically separated from the other, but not be used on opposite polarities. Terminals of same column should be wired to same polarities.

**PILOT LIGHT (OPTION)**



LAMP ASSEMBLY
<b>L24</b>
RATING : DC 24V RESISTANCE : 10KΩ LAMP : LED A RECTIFIER INCLUDED
<b>L</b>
RATING : AC 100/200V RESISTANCE : 100KΩ LAMP : NEON LAMP



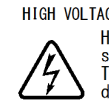
LAMP ASSEMBLY L24

- Connect LAMP ASSEMBLY according to wiring diagram.
- Wiring diagram is also attached on the cover gasket of the device.
- Onto ● on the diagram, use a plastic terminal set attached to the each device instead of a metal terminal screw of the microswitch itself. Regarding how to use the plastic terminal set, refer to the instruction sheet inclosed in the terminal set.
- L24 LAMP ASSEMBLY is free from polarity because of a rectifier.
- LF LAMP ASSEMBLY have no series resistor itself, please put a corrective resistor into your circuit in series to the LAMP ASSEMBLY.
- Put the LAMP ASSEMBLY on the microswitch after wiring and mount the cover of the device.

**REPLACEMENT PARTS**

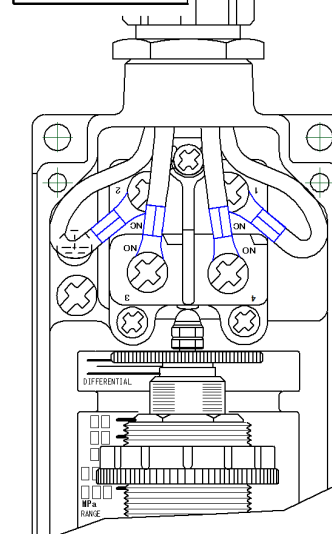
microswitch	standard duty .....ZSW	
	seal.....ZSW8	
	low voltage, low current.....ZSW0	
actuator	TCZ-5.....Z5D	TDZ-1.....Z1P
	TCZ-1.....Z1D	TDZ-3.....Z3P
	TCZ-2.....Z2D	TDZ-4.....Z4P
		TDZ-7.....Z7P
		TDZ-8.....Z8P
lamp assembly	L.....ZL	
	L24.....ZL24	
	L with a cover attached a nameplate...ZKL	
	L24 with a cover attached a nameplate...ZKL24	

**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.

**TYPICAL WIRING**



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