

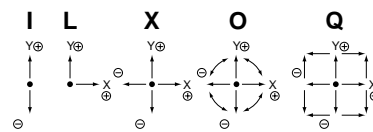
# L90LA

New Product

New Inductance Type  
Contactless Potentiometer inside-incorporated

## Nomenclature

- **S** means special mechanical specifications not applicable to our standards.
- **L** means contactless potentiometer used and there are two kinds.  
L : Larger output at plus output side.
- **90** means approx. size of base housing in mm.
- **J** means joystick controller.
- **A** means kind of type :  
A : Available with 1 and 2-dimensional coordinates. Potentiometer outside-mounted type.
- **M** : means round type.
- **Y** means kind of mechanism : X : 1-dimensional coordinate.  
Y : 2-dimensional coordinate.
- **Available directions of lever operation as below illustration.**  
(Standard Version)  
O : 360° omni-directionally operating type.  
(Special Version)  
I : I-figure (Y) direction only operating type.  
L : L-figure direction only operating type.  
X : Cross direction of X and Y only operating type.  
Q : 360° square-directionally operating type.



**S L 90 J A M - Y O - 2 0 R2 G - 0000**

**Number of potentiometers to be mounted.**

0...no potentiometer mounted. 2...2 potentiometers mounted.

1...1 potentiometer mounted.

**Number of switches to be mounted.**

0...no switch mounted. 1...1 switch mounted. 2...2 switches mounted.

3...3 switches mounted. 4...4 switches mounted. 5...5 switches mounted.

6...6 and over 6 switches mounted. 9...others.

**With spring return device.** (L90JA standard option)

R1 : with spring return device for 1-dimensional coordinate.

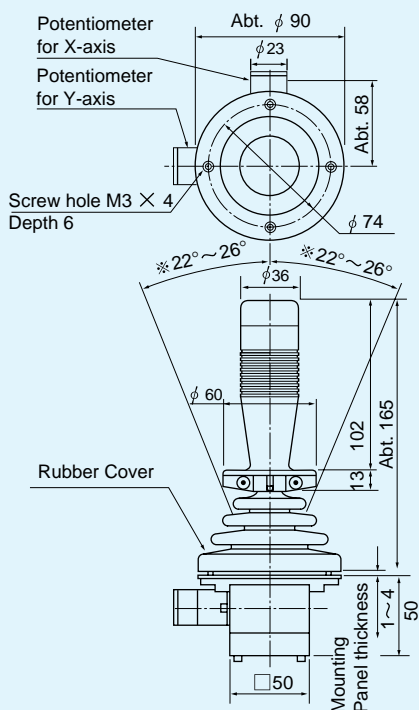
R2 : with spring return device for 2-dimensional coordinate.

**Mounting accessories :** G : with dust proof rubber cover. (L90JA standard option) P : with sub-panel for mounting.

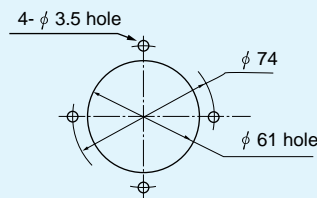
**Special part number basing on customer's specifications with 4 digits number.**

## Standard Dimensions

### Model L90JA



### Panel Arrangements (Common to models L90JA)



- Note : 1) In case of Q and U type, the operating angle of mark "※" shall be  $\pm 15^\circ \sim \pm 20^\circ$  from the center position, 360° square-directionally.  
2) 4 pcs. of mounting screws (M3 × 10) are attached.

(Unit : mm)

This new model offers long life expectancy, vibration proof, high reliability and safety.



**L90JAM-YO-20R2G**  
(standard)  
(2-dimensional coordinate type)

### STANDARD SPECIFICATIONS

**Model L90JA Series**  
(Larger output at plus output side)

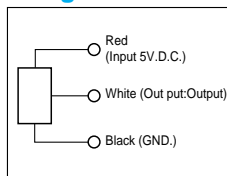
#### ●Mechanical Performances

- Controlling range of operating lever :**  
2-dimensional coordinate type : Omni-directionally  $\pm 22^\circ \sim \pm 26^\circ$  operation from center position.
- Operating force :** With standard automatically center returning operating force : With standard automatically center returning spring return device (omni-directional type) : X,Y directions : Approx. 2 ~ 12N(200 ~ 1,200gf)
- Operating temperature range :**  $-20^\circ\text{C} \sim +65^\circ\text{C}$
- Vibration :**  $10^{-5}$  55Hz 98m/s<sup>2</sup> (10G)
- Shock :** 294m/s<sup>2</sup> (30G)
- Life expectancy :** Approx. 10,000,000 operations
- Mass :** 2-dimensional coordinate type : Approx. 650g.

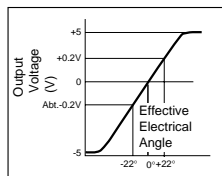
#### ●Electrical Performances

- Potentiometer mounted :** SKSM22E1-5, inductance type contactless potentiometer.
- Applied voltage : 5V.D.C
- Effective output : Approx. 1.52V ~ 3.48V
- Independent linearity tolerance :  $\pm 0.5\%$
- Load resistance : over 10K $\Omega$
- Resolution :** Infinitesimal.
- Dielectric strength :** 1 minute at 250V.A.C
- Insulation resistance :** Over 100M $\Omega$  at 250V.D.C.

#### ●Terminal Connection Diagram



#### ●Output Characteristic Diagram



#### ●Special Specifications Available

Please see page 41, table of "Standard and Special Specifications Available".

### ■Specially Ordered Joysticks (With switch inside incorporated knob)

**SL90JAM-YO-21R2G**  
(With push-button switch)



With knob type 105

**SL90JAM-YO-21R2G**  
(With locker-switch)



With knob type 106