

90JA · 90JB

● 90JA: Potentiometer outside-mounted ● 90JB: Potentiometer incorporated ● With conductive plastic element

Nomenclature

S means special mechanical specifications not applicable to our standards.

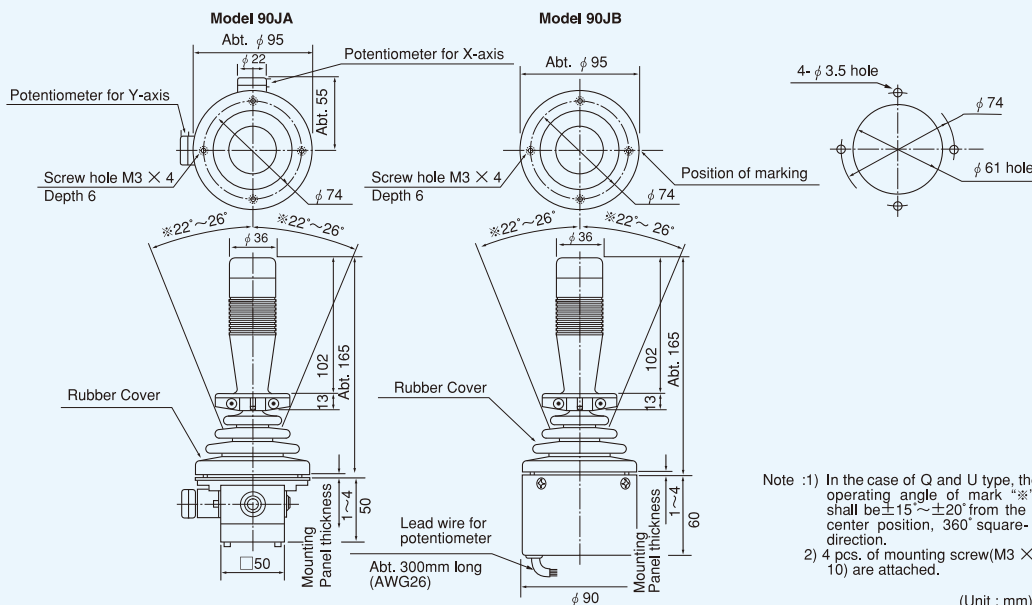
- 90 means approx. size of base housing in mm.
- J means joystick controller.
- A means kind of type :
A : 1,2 or 3-dimensional coordinate is available and also means Potentiometer outside-mounted type.
B : 1,2 or 3-dimensional coordinate Potentiometer is incorporated inside the housing.
- M : means round type
- Y means kind of mechanism : X 1-dimensional coordinate.
Y : 2-dimensional coordinate. Z: 3-dimensional coordinate.
4 and more numbers : Over 4-dimensional coordinate.
- Available directions of lever operation
Standard version:
O : Omni-directional 360° operating type.
Special version:
I : I figure (Y) directional operating type.
L : L figure(+Y, +X only) directional operating type.
X : Cross directional of X and Y operating type.
Q : Square-directional 360° operating angle.
T : In addition to omni-directional 360° operation, this type is 3-dimensional coordinate operation by rotating knob in which a potentiometer is incorporated.
U : In addition to square-directional 360° operation, this type is 3-dimensional coordinate operation by rotating knob in which a potentiometer is incorporated.
S : Special operating directions other than the above-mentioned types.



S 90 J A M - Y O - 2 0 R2 G - 00000

- Number of potentiometers to be incorporated.
0...no potentiometer incorporated. 2...2 potentiometers incorporated.
1...1 potentiometer incorporated. 3...3 potentiometers incorporated.
- Number of switches to be incorporated.
0...no switch incorporated. 1...1 switch incorporated. 2...2 switches incorporated.
3...3 switches incorporated. 4...4 switches incorporated. 5...5 switches incorporated.
6...6 and over 6 switches incorporated. 9...others.
- With spring return device (90JA · JB standard) :
R1 : with spring return device for 1-dimensional coordinate.
R2 : with spring return device for 2-dimensional coordinate.
R3 : with spring return device for 3-dimensional coordinate.
- Mounting accessories :
G : with dust proof rubber cover.(90JA · JB standard) P : with sub-panel or mounting.
- Special part number :
In the case we produce customized product, we add 4-digit or 5-digit branch number.

Standard Dimensions



Panel Arrangements

Note :1) In the case of Q and U type, the operating angle of mark "※" shall be ±15°~±20° from the center position, 360° square-direction.
2) 4 pcs. of mounting screw(M3 × 10) are attached.

(Unit : mm)



90JAM-YO-20R2G
(Standard

2-dimensional coordinate type)



90JBM-YO-20R2G
(Standard

2-dimensional coordinate type)

STANDARD SPECIFICATIONS

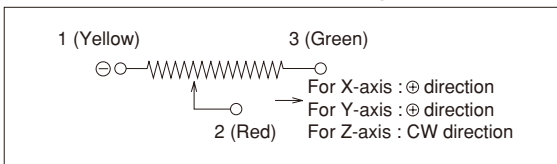
Mechanical Performance

Controlling range of operating lever	<ul style="list-style-type: none"> ● 2-dimensional coordinate type : Approx. $\pm 22^\circ \sim \pm 26^\circ$ omni-direction from center position. ● 3-dimensional coordinate type : Approx. $\pm 45^\circ \sim \pm 50^\circ$ operation from center position of knob in addition to the operating range of 2-dimensional coordinate type.
Operating force	Standard spring return device : Automatically return to center. X, Y directions : Approx. 2 ~ 12N (200 ~ 1,200gf) Z direction : Approx. 20 ~ 85mN·m (200 ~ 850gf·cm)
Operating temperature range	-20°C ~ +65°C
Vibration	10 ~ 55Hz 98m/s ²
Shock	294m/s ²
Life expectancy	Approx. 5,000,000 operations.
Mass	2-dimensional coordinate type : Approx. 650g 3-dimensional coordinate type : Approx. 750g

Electrical Performance

Potentiometer mounted	90JA type : SFPC22E, 10kΩ±15%, 0.2W, (conductive plastic resistive element) Independent linearity tolerance ±3% Electrical rotating angle for X & Y axis : Approx. 44° 90JB type : Special resistive element is exclusively used for 90JB series : 10kΩ±15%, 0.2W (conductive plastic resistive element) Independent linearity tolerance ±3%, Electrical rotating angle for X & Y axis : Approx. 44° In case of 90JA and 90JB with 3-dimensional coordinate Z-axis potentiometer-inside-knob incorporated type, the following potentiometer is used: SFPC22AC, 10kΩ±15%, 0.3W, Independent linearity tolerance ±3% Electrical rotating angle: Approx. 90°
Output smoothness	Below 0.2% against input voltage.
Contact resistance variation	Below 5% C.R.V.
Resolution	Essentially infinite.
Dielectric strength	1 minute at 500 V.A.C.
Insulation resistance	Over 1,000 MΩ at 500 V.D.C.

Terminal Connection Diagram



Special Specifications Available

Please see page 55, a table of "Special Specifications Available".

⊙ For outdoor applications, please use model 90JA series.

Special Knobs Available

The following versions are available to knob for both models 90JAM and 90JBM.

