Model 90JA | 90JB

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.

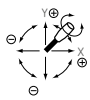
I

L

X

O

Q

T

U

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

Number of potentiometers to be incorporated.
0 no potentiometer incorporated. **2** potentiometers incorporated.
1 potentiometer incorporated. **3** potentiometers incorporated.
Number of switches to be incorporated.
0 no switch incorporated. **1** switch incorporated. **2** switches incorporated.
3 switches incorporated. **4** switches incorporated. **5** switches incorporated.
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 case we produce customized product, we add 4-digit branch number.

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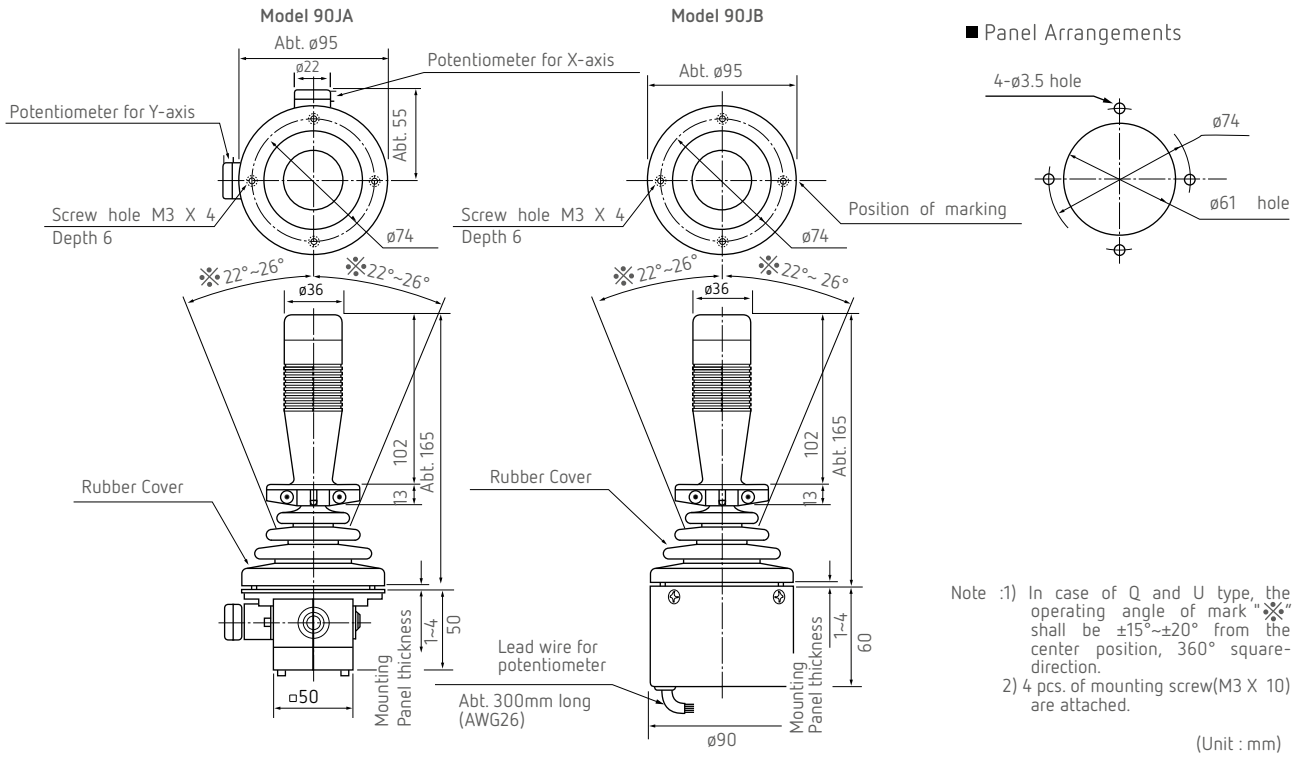
Standard Dimensions



Note :1) In 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 X 10) are attached.

(Unit : mm)

Standard Specifications

Mechanical Performance

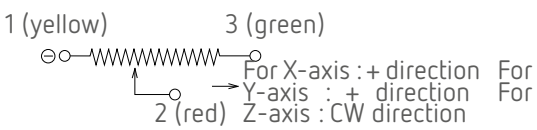
Controlling range of operating lever :
- 2-dimensional coordinate type : Approx. ±22° ~±26° omni-direction from center position.
- 3-dimensional coordinate type : Approx. ±45° ~±50°operation from center position of knob in addition to the operating range of 2-dimensional coordinate type.

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

Terminal Connection Diagram



Electrical Performance

Potentiometer mounted :
90JA type : SFCP22E, 10kΩ±15%, 0.2W, independent linearity tolerance ±3% (conductive plastic resistive element), electrical rotating angle for X and Y axis : Approx. 44°.
90JB type : Special resistive element is exclusively used for 90JB series:10k 15%,0.2W, Independent linearity tolerance 3% (conductive plastic resistive element), Electrical rotating angle for X and 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 : SFCP22AC, 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.

Special Specifications Available

For outdoor applications, please use model 90JA series.

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90JAM-YO-20R2G
(Standard)
(2-dimensional coordinate type)

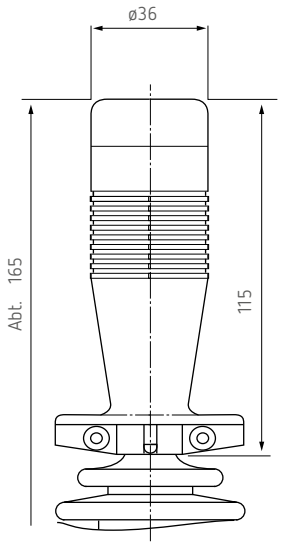
90JBM-YO-20R2G
(Standard)
(2-dimensional coordinate type)

Specially Ordered Versions for Z axis

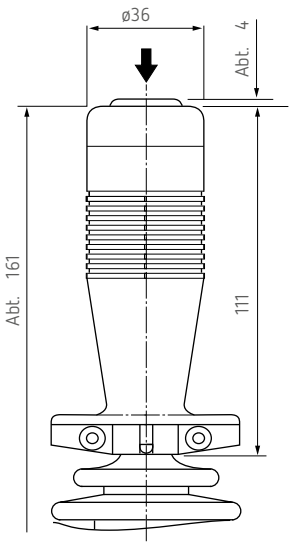
The following versions are available to Z axis knob for both models 90JAM and 90JBM.

(Unit : mm)

Standard knob

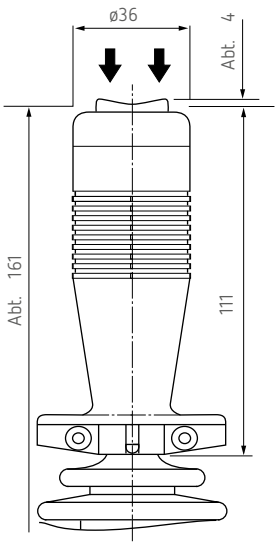


With push-button switch on the top of knob
S90JAM-YO-21R2G
S90JBM-YO-21R2G



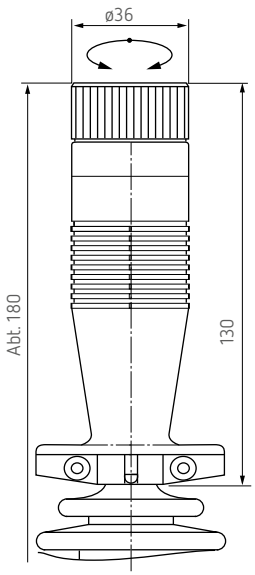
(knob type 105)

With rocker-switch on the top of knob
S90JAM-YO-21R2G
S90JBM-YO-21R2G



(knob type 106)

With potentiometer for Z axis operation
S90JAM-ZT-30R3G
S90JBM-ZT-30R3G



(knob type 306)

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The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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