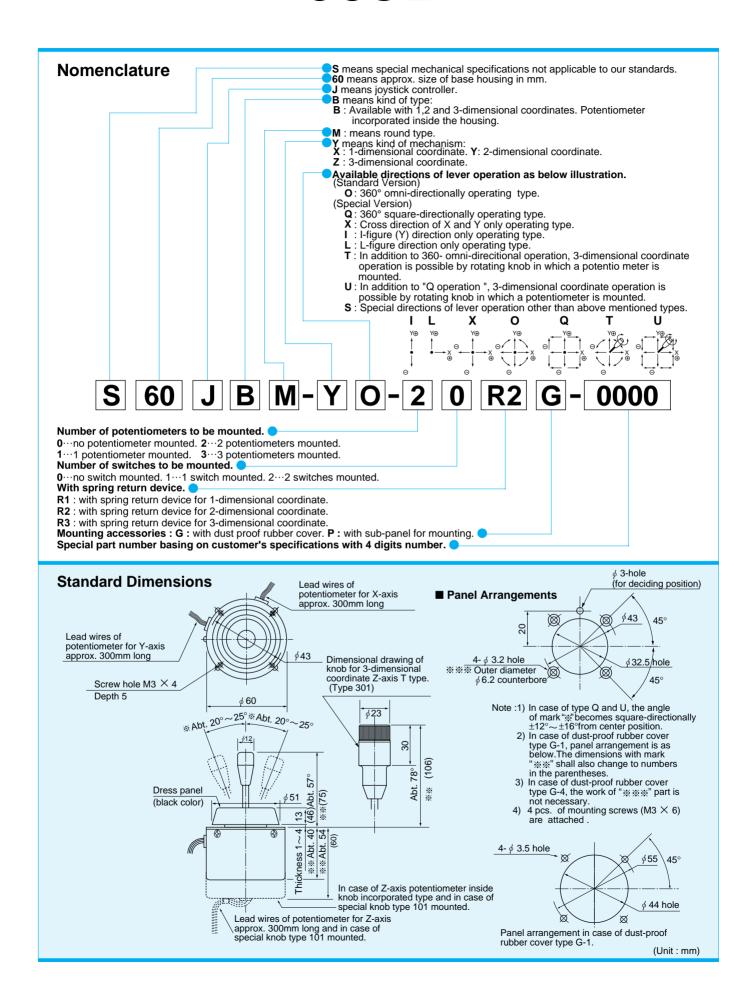
60JB







60JBM-YO-20R2 (standard) (2-dimensional coordinate type)

60JBM-ZT-30R3

(3-dimensional coordinate Z-axis potentiometer-inside-knob incorporated type) and flat shaped rubber cover (type G-4)



60JBM-YO-20R2G (With dust-proof rubber type G-1)

STANDARD SPECIFICATIONS

•Mechanical Performances

Controlling range of operating lever:

- 2-dimensional coordinate type: Omni-directionally approx. $\pm 20^{\circ} \sim \pm 25^{\circ}$ operation from center position.
- ullet 3-dimensional coordinate type : Approx. $\pm 45^{\circ} \sim \pm 50^{\circ}$ operation from the center position of knob, in addition to the controlling range of 2-dimensional coordinate type.

Operating force :

With standard automatically center returning spring return device.

X, Y directions : Approx. $0.8 \sim 1.5 \text{N}$ ($80 \sim 150 \text{gf.}$) [2 springs fitted (subject to directivity) are standard ver-

sion]

X, Y directions: Approx. 1~5N (100~500gf.) [1 spring fitted (omni-directional type) is optional version.]

Z direction : Approx. $20 \sim 85 \text{mN} \cdot \text{m}$ (200 $\sim 850 \text{gf} \cdot \text{cm}$)

Operating temperature range : $-20^{\circ}\text{C} \sim +65^{\circ}\text{C}$

Vibration: 10~55Hz 98m/s² (10G)

Shock: 294m/s2 (30G)

Life expectancy : Approx. 5,000,000 operations **Mass :** 2-dimensional coordinate type : Approx. 240g

3-dimensional coordinate type : Approx. 300g

Electrical Performances

Potentiometers mounted:

Special resistive element exclusively used for 60JB series is incorporated, $10k\Omega\pm15\%$, 0.2W (Electrical rotating angle approx. 40°), independent linearity tolerance $\pm3\%$ (conductive plastic resistive element).

In case of 3-dimensional coordinate Z-axis potentiometer-inside-knob incorporated type (T-type), the following potentiometer is used :

SFCP12AC $10k\Omega\pm15\%$. independent linearity tolerance $\pm3\%$, 0.06W (Electrical rotating angle : Approx. 90°).

Output smoothness: Below 0.2% against input voltage

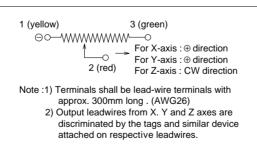
Contact resistance variation: Below 6% C.R.V.

Resolution: Essentially infinite

Dielectric strength: 1 minute at 500V.A.C.

Insulation resistance : Over 1,000M Ω at 500V.D.C.

Terminal Connection Diagram



Special Specifications Available

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