## Nomenclature



## Number of potentiometers to be mounted.

2 $\cdots 2$ potentiometers mounted (in case of the knob with an incorporated switch.)
$3 \cdots 3$ potentiometers mounted.
Number of Switches to be mounted.
$0 \cdots$ no switch mounted.
$2 \cdots 2$ switches mounted (These switches operate at both ends, which mount inside the knob instead of potentiometer, which is special version.)

## With spring return device :

R3 : with spring return device for 3-dimensional coordinate type. (30JH standard option)
Mounting accessories : G: with dust proof rubber cover. (30JH standard option) P: with sub-
panel for mounting.
Special part number basing on customer's specifications with 4 digits number.



30JHK-ZT-30R3G
(standard)
(3-dimensional coordinate type)

## STANDARD SPECIFICATIONS

## OMechanical Performances

Controlling range of operating lever : 3-dimensional coordinate type
$X$ and $Y$ directions : Approx. $\pm 10^{\circ} \sim \pm 15^{\circ}$ from center position.(Omni-directionally)
$Z$ direction : Approx. $\pm 30^{\circ} \sim \pm 35^{\circ}$ from center position.
Operating force (With standard automatically center returning spring return device type)(Omnidirectionally)
$X$ and $Y$ directions : Approx.1~2N (1000~200gf)
$Z$ direction : Approx. $30 \sim 70 \mathrm{mN} \cdot \mathrm{m}$ (300~700gf.cm)
Operating temperature range :- $20^{\circ} \mathrm{C} \sim+60^{\circ} \mathrm{C}$
Vibration : $10 \sim 55 \mathrm{~Hz} 98 \mathrm{~m} / \mathrm{s}^{2}$ (10G)
Shock : 294m/s² (30G)
Life expectancy : Approx. 2,000,000 operations
Mass : Approx. 130g

## OElectrical Performances

Potentiometer mounted : Special conductive plastic resistive element exclusively used for 30 JH series is incorporated.
( X and Y axes pots)
Resistance value : $10 \mathrm{k} \Omega \pm 20 \%$
Rating : 0.1W
Electrical rotating angle : Approx. $20^{\circ}$
Independent linearity tolerance : $\pm 5 \%$
(Z axis pot.)
Resistance value : $10 \mathrm{k} \Omega \pm 20 \%$
Rating : 0.04W
Electrical rotating angle : Approx. $60^{\circ}$
Independent linearity tolerance : $\pm 5 \%$

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 $1,000 \mathrm{M} \Omega$ at 500 V.D.C.
-Terminal Connection Diagram
1 (yellow) 3 (green)
$\Theta$ O- WYYИM.
$\xrightarrow[\sim]{\wedge} \rightarrow \begin{aligned} & \text { For } \mathrm{X} \text { axis } \oplus \text { direction } \\ & \text { For } \mathrm{Y} \text { axis } \oplus \text { direction }\end{aligned}$ 2 (red) For Z axis CW direction

Note: Terminals shall be lead-wire terminals with approx. 300 mm long.

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

