## For multi-functional control \& with cobra head shaped knob C90JAM •C90JBM

Nomenclature
O means special mechanical specifications not applicable to our standards. C means with cobra shaped knob.
90 means approx. size of base housing in mm . J means joystick controller.
A means type available. A : Potentiometers outside-mounted type.
M means round type.
4 means kind of mechanism: more than 4-dimensional coordinates.
Available direction of lever operation as below illustration. Standard version)
T : $360^{\circ}$ omni-directionally operating type. and in addition,
3 -dimensional coordinate opreation is possible by the lever mounting a knob incorporated pot
(Special version)
Q : $360^{\circ}$ square-directionally operating type.
$\mathbf{X}$ : Cross direction of X and Y only operating type.
I : l-figure ( Y ) direction only operating type
$\mathrm{L}: \mathrm{L}$-figure direction only operating type.
T : In addition to $360^{\circ}$ omni-directional operation. 3-dimensional coordinate operation is possible by rotating knob in which a potentiometer is mounted.
$\mathbf{U}$ : In addition to "O operation" 3-dimensional coordinate operation is possible by rotating knob in which a potentiometer is mounted.

## S C 90 J A M-4 T-4 5 R4 GP-0000

Number of potentiometers to be mounted
$4 \cdots 4$ potentioneters mounted.
$1 \cdots 1$ potentioneters mounted.
2 $\cdots 2$ potentioneters mounted.
3 $\cdots 3$ potentioneters mounted
Number of switches to be mounted.
$4 \cdots 4$ switches mounted.
$5 \cdots 5$ switches mounted
6 $\cdots 6$ and over 6 switches mounted.
$9 \cdots$ other switches mounted.
With spring return device :
R4 : with spring return device for 2-dimensional coordinate as well as for see-saw pot.
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: $\mathbf{G}$ : with dust proof rubber cover. $\mathbf{P}$ : with sub-panel for mounting
(C90TAM C90JBM standard options)
Special part number basing on customer's specifications with 4 digits number.

## Standard Dimensions(In case of model C90JAM)

The dimensions on the knob part are the same for model C90JBM in common.


This unique lever mounted cobra head shaped knob can offer your operations of complex controls in wide range. The cobra head shaped knob incorporates some push-button switches and see-saw type potentiometer, which enables such multi-functional operations.


SC90JAM-4U-46R4GP
[The specs. of pot. and switches used】
[Outer dimensions \& Optional specs. on cobra shaped knob]
(Common dimensions for both of models C90J AM and C90J BM)


1: Specs. of $X$ and $Y$ axes pots. (C90JA type: SFCP22E outside mounted)
(C90JB type: Special resistance element exclusively used for C90JB series is incorporated)

1) Total resistance value : $10 \mathrm{k} \Omega \pm 15 \%$
2) Independent linearity $: \pm 3 \%$
3) Electrical rotating angle : $44^{\circ} \pm 5^{\circ}$
4) Center return accuracy : $50 \% \pm 1.5 \%$
5) Power rating :0.2W
6) Life expectancy : Approx. 5,000,000 operations
7) Terminal connection diagram

| 1anymmmmon | NOTE |
| :---: | :---: |
| (llow) $\longrightarrow 2$ (Red) (Green) | 1 : Only C90JBM model has leadwire termina |
| (ion | vire is shown in parenthes |

2: Specs. of $\mathbf{Z 1}$ and $\mathbf{Z 2}$ axes pots..

1) Model No.
2) Total resistance value
3) Independent linearity
4) Electrical rotating angle
5) Center return accuracy
6) Power rating
7) Life expectancy
8) Terminal connection diagram


3: Specs. of push button switch (SW1, 2, 3 and 6)

1) Operating characteristics
2) Rating
3) Dielectric strength
4) Insulation resistance
5) Life expectancy
6) Circuit diagram

4: Specs. of illumination push button switch(SW4 \& SW5)

1) Operating characteristics
: Alternate type
2) Rating
: 30VDC, 5A
3) Rating for illumination LED
4) Dielectric strength
$1.85 \mathrm{VDC}, 20 \mathrm{~mA}$
5) Insulation resistance

1 minute at 1,000V AC
6) Life expectancy

Over $200 \mathrm{M} \Omega$ at 500 V DC
7) Circuit diagram

| SW4 | (Green) | $\mathrm{NO}^{\circ}$ | :(Green) |  | (White) | $\bigcirc$ | (White) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathrm{CON}{ }^{\mathrm{ND}}{ }^{\circ}{ }^{\text {L+ }}$ | (Red) | SW5 |  | $\mathrm{CON}{ }^{\mathrm{ND}}{ }^{\circ} \underline{L+}$ | (Red) |
|  |  | LED ${ }_{\text {col }}$ | (Yellow) |  |  | LED $\left.{ }_{\text {\% }}\right)_{0}^{\text {L- }}$ | (Yellow) |
|  |  |  |  | NOTE <br> 1 : The color <br> 2 : AWG27 | or of lea 7 leadwi | dwire is shown re is used. | in parenthesis. |

5: Specs. of trigger switch (SW7)

1) Operating characteristics
2) Rating

Momentary type
3) Dielectric strength

30VDC, 100 mA
4) Insulation resistance

1 minute at 600 V AC
5) Life expectancy
6) Circuit diagram

| SW7 (Red) $\bigcirc \bigcirc \bigcirc \bigcirc$ (Red) | NOTE <br> 1 : The color of leadwire is shown in parenthesis. <br> 2 : AWG27 leadwire is used. <br> 3 : SW7 is an optional spec. |
| :---: | :---: |

## 6: Others

The mechanical performances on $X$ and $Y$ axes are the same as those of standard 90JA/90JB models respectively.

