## MODEL 89

## 3/4" Rectangular Multiturn

Cermet Trimming Potentiometer


## ELECTRICAL

| Standard Resistance Range, Ohms | 10 to 2 Meg |
| :--- | ---: |
| Standard Resistance Tolerance | $\pm 10 \%(<100$ Ohms $= \pm 20 \%)$ |
| Input Voltage, Maximum | 200 Vdc or rms not to exceed power rating |
| Slider Current, Maximum | 100 mA or within rated power, whichever is less |
| Power Rating, Watts | 0.75 at $85^{\circ} \mathrm{C}$ derating to 0 at $125^{\circ} \mathrm{C}$ |
| End Resistance, Maximum | 2 Ohms |
| Actual Electrical Travel, Turns, Nominal | 20 |
| Dielectric Strength | 1,000 Vrms |
| Insulation Resistance, Minimum | 1,000 Megohms |
| Resolution | Essentially infinite |
| Contact Resistance Variation, Maximum | $1 \%$ or 1 Ohm, whichever is greater |

## ENVIRONMENTAL

| Seal | $85^{\circ} \mathrm{C}$ Fluorinert ${ }^{\text {R ( }}$ (No Leaks) |
| :---: | :---: |
| Temperature Coefficient, Maximum | $\pm 100 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ |
| Operating Temperature Range | $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}$ |
| Thermal Shock | 5 cycles, $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}(1 \% \Delta \mathrm{RT}, 1 \% \Delta \mathrm{VR})$ |
| Moisture Resistance | Ten 24 hour cycles ( $1 \% \Delta \mathrm{RT}$, IR 100 Megohms Min.) |
| Shock, 6ms Sawtooth | 100G's (1\% $\Delta \mathrm{RT}, 1 \% \Delta \mathrm{VR})$ |
| Vibration | 20G's, 10 to 2,000 Hz (1\% $\Delta \mathrm{RT}$, 1\% 4 VR ) |
| High Temperature Exposure | 250 hours at $125^{\circ} \mathrm{C}(2 \% \Delta R T, 2 \% \Delta V R)$ |
| Rotational Life | 200 cycles ( $3 \% \Delta \mathrm{RT}$ ) |
| Load Life at 0.5 Watts | 1,000 hours at $70^{\circ} \mathrm{C}(2 \% \Delta \mathrm{RT})$ |
| Resistance to Solder Heat | $260^{\circ} \mathrm{C}$ for $10 \mathrm{sec} .(1 \% \Delta \mathrm{RT})$ |

## MECHANICAL

| Mechanical Stops | Clutch Action, both ends |
| :--- | ---: |
| Torque, Starting Maximum | 5 oz.-in. $(0.035 \mathrm{~N}-\mathrm{m})$ |
| Weight, Nominal | .05 oz. $(1.4$ grams $)$ |

[^0]
## LOW PROFILE (Inch/mm)

Model 89P and 90P


Model 89P dimensions applicable to all other models except as noted.

Model 89W


Model 89X


## HICH PROFILE (Inch/mm)

## Model 89PH



## Circuit Diagram Marked

 On This Surface

Molded Plastic
(All Models)
Pin Dimensions Same For 89P And 89PH

## Model 89WH



Pin Dimensions Same For 89W And 89WH

## Model 89XH



Pin Dimensions Same For 89X And 89XH

## PANEL MOUNT ADAPTER (Inch/mm)

## Model 89B



## Standard resistance values, Оhms

|  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: |
| 10 | 200 | 5 K | 500 K |  |
| 20 | 500 | 10 K | 100 K | 1 Meg |
| 50 | 1 K | 20 K | 200 K | 2 Meg |
| 100 | 2 K | 25 K | 250 K |  |

## PACKAGING

Standard: Boxes

| Capacity $\quad=\quad 100$ Units (89P) |  |
| :--- | :--- |
|  | 50 Units (All other styles) |

Option: Tubes (Models 89P, 89PH, 89X, 89XH and 90P only.) All units oriented with \#1 pin to same side.

Magazine | Width | $=$ | $0.28^{\prime \prime}$ |
| :--- | :--- | :--- |
| Height | $=$ | $0.65^{\prime \prime}$ |
| Length | $=$ | $21.5 "$ |
| Capacity | $=$ | 25 Units |

## ORDERING INFORMATION

## Standard:

89 P R 10K
$\square$ Resistance Value
(Use Model 90 to order with transparent housing) Pin Style $\qquad$ Resistance Prefix

Option:
89 P R 10K TB
Pin Style


Packaging Option: TB = Tubes
(Models 89P, 89PH, 89X, 89H, 90P Only.)

Option:

> Pin Style
> 89 P B R 10K
> Panel Mount Adapter
> (Use 89B to order
> Adapter without
> Trimmer)

## CIRCUIT DIAGRAM

(2)
(1)

$\rightarrow \mathrm{CW}$

## NOTES

Metric equivalents, based on 1 inch $=25.4 \mathrm{~mm}$ are rounded to the same number of significant figures as in the original English units and are provided for general information only.

Tolerances unless otherwise specified: Linear $= \pm .01$ inches ( .25 mm ) Angular $= \pm 2$ degrees



[^0]:    Fluorinert®R is a registered trademark of 3M Company Specifications subject to change without notice.

