## Precision

 Potentiometer/ Position Sensor

The ALL NEW Series 578 conductive plastic precision potentiometer puts CLAROSTAT proven variable resistor technology to work in a high performance, cost effective device. With its compact size, rugged construction and advanced versatility, the 578 provides superior control for applications such as joy stick controllers and position sensing devices where frequent manual adjustment is required. This control offers linearity of $1 \%$, rotational life of 5MM shaft revolutions for demanding applications, and comes with several options of terminal configurations. A wide variety of electrical output options and mechanical packages are available to suit specific applications with details available from CLAROSTAT applications engineering.

Sensor Systems

## Precision Potentiometer/Position Sensor

SPECIFICATIONS

| ELECTRICAL |  |
| :---: | :---: |
| Resistance Range: | 100 to 2.5 megohm, linear 500 to 1 megohm, non-linear |
| Tolerance: | $\pm 10 \%$ std. |
| Working Voltage: | 400 Vdc |
| Insulation Resistance (min.): | 1000 megohm |
| Dynamic Noise: | 2\% max. crv |
| Independent Linearity: | 1\% |
| Power Rating: | . 5 w at $70^{\circ} \mathrm{C}$ |
| Dielectric Strength: | 750 Vrms |
| Electrical Rot.: | $310^{\circ}+0-3^{\circ}$ |
| Temperature Coefficient: | $800 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ |
| Effective Rotation: | $292^{\circ} \pm 2^{\circ}$ |
| Electrical Tap: | Tap Width: $5^{\circ}$ to $45^{\circ}$ Tap Resistance: $1 \%$ of Tot. R |

MECHANICAL

## Mechanical

Rotation:
$320^{\circ} \pm 5^{\circ}$
(resistance decreases w CW rot from CCW end)
Stop Torque:
40 oz. in. min.
Operating Torque: 1 oz . in. max.
Mounting Torque: 25 in . lb. max.

## OPERATIONAL

| Operating <br> Temperature: | Static $-55^{\circ}$ to $+120^{\circ} \mathrm{C}$ <br> Dynamic $-40^{\circ}$ to <br> $+100^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Temperature <br> Cycling: | 5 cycles, $-40^{\circ}$ to <br> $+100^{\circ} \mathrm{C}$ |
| Rotational Life: | 5 MM shaft revs. |
| Shock: | 100 g |
| Vibration: | $10 \mathrm{~g}, 10$ to 500 Hz |

## PHYSICAL DIMENSIONS



## CONSTRUCTION

Shaft: Bushing: Housing: Contact Spring: Terminals:

Stainless steel Brass, Nickel plated Molded plastic Monel PC pins: Brass, Tin plated Wire leads PC board extension Ink stamp on rear Hex mtg nut Internal tooth lockwasher

## ORDERING INFORMATION

STANDARD PRODUCT (identified by significant part number designated by matrix of options below)
Configured OEM selection matrix* 578 X 1 G 48 S 103 S P

$$
\begin{aligned}
& \text { X = Mechanical } \\
& \text { X = standard } \\
& \mathrm{F}=\text { center tap } \\
& 1 \text { = Locating Pin } \\
& 1=\text { pin at 7:00 } \\
& 0=\text { no locating pin } \\
& \text { G = Bushing/Shaft } \\
& \mathrm{G}=3 / 8 \mathrm{D} \times 3 / 8 \mathrm{~L} ; 1 / 4 \mathrm{~d} \text { shaft } \\
& B=3 / 8 \mathrm{D} \times 3 / 8 \mathrm{~L} ; 1 / 8 \mathrm{~d} \text { shaft } \\
& 48 \text { = Shaft Length } \\
& \text { Increments of 64th in. } \\
& 32 \text { min; } 64 \text { max. } \\
& \text { S = Shaft End Style } \\
& \text { S = slot } \\
& \mathrm{F}=\text { flat } \\
& P \text { = plain round }
\end{aligned}
$$

103 = Resistance Value EIA code, first two significant digits, third is number of zeros

S = Resistance Taper
$S=$ linear
$Z=C W$ audio
$R=C C W$ audio
$A=$ Terminals

$$
A=P C \text { pin type } A
$$

$W=$ wire lead

* consult factory for custom OEM configurations
invensys

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