Electronics

Type 4290 Series


Where size and reliability are critical, this range of 10 mm square multiturn trimming potentiometers satisfies the requirements in industrial and professional applications.

The cermet resistance element offers stability and high resolution. The trimmer is actuated by a lead screw with a slipping clutch at each end of travel. Top or side adjustment components are available and pin configurations meet the majority of requirements. All units are fully sealed to withstand immersion in board washing solvents.

## Key Features

- High Stability Cermet Element
- 0.5 Watt Rating at $70^{\circ} \mathrm{C}$
- Slim Profile Assists Stacking
- Top \& Side Adjustment Styles Available
- Flame Retardant Case

Type 4290 Series

Characteristics -
Electrical

| Resistance Range: | 10 R to 2 M |
| :--- | :--- |
| Resistance Values: | 1,2 and 5 in each decade |
| Resistance Tolerance: | $\pm 10 \%$ |
| End Resistance: | 2 ohms or $1 \%$ whichever is greater |
| Slider Current: | 100 mA DC or AC, maximum |
| Power Rating: | 0.5 Watts at $70^{\circ} \mathrm{C}$ derating to zero at $125^{\circ} \mathrm{C}$ |
| Isolation Voltage: | 430 V DC or AC peak |
| Limiting Element Voltage: | $300 \mathrm{~V} \mathrm{DC} \mathrm{or} \mathrm{AC} \mathrm{RMS} maximum$, |
| Breakdown Voltage: | 900 V AC for one minute |
| Insulation Resistance: | 1000 M at 500 V DC, minimum |
| Resolution: | Essentially Infinite |
| Rotational Noise (CRV): | 30 hms or $1 \%$, whichever is greater |
| Temperature Coefficient: | $\pm 250 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$, maximum |
| Electrical Adjustment: | 25 turns |

Characteristics -
Mechanical

| End Stop: | Slipping clutch both ends |
| :--- | :--- |
| Starting Torque: | 35 mNm |
| Weight: | 0.8 gram, approx. |

Characteristics -
Environmental

| Temperature Range: | $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Temperature Storage: | 1000 Hrs at $125^{\circ} \mathrm{C}$ |
| Thermal Shock: | 5 Cycles $-55^{\circ} \mathrm{C} \mathrm{to}+125^{\circ} \mathrm{C}$ |
| Bump Severity: | $4000 \mathrm{Bumps} ; 40 \mathrm{G}\left(3 \mathrm{~mm}\right.$ or $\left.390 \mathrm{~m} / \mathrm{s}^{2}\right)$ |
| Vibration Severity: | $10-500 \mathrm{~Hz} ; 20 \mathrm{G}$ |
| Rotational Life: | 200 Cycles |
| Load Life at $85^{\circ} \mathrm{C}:$ | $\Delta \mathrm{R}<3 \%$ after 1000 hours |
| Sealing: | Sealed for board washing |
| Climatic Category: | $55 / 125 / 21$ |
|  |  |

## Dimensions




How to Order

|  | 4290 | W | 502 | K |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  | Common Part | Pin Configuration | Resistance Value | Tolerance |
|  | 4290 | W - Top Adjust <br> X - Side Adjust | The first two digits are significant figures of resistance value and the third denotes the number of zeros following. | K- $\pm 10$ \% |
|  |  | Y - Top Adjust | $\begin{gathered} \text { e.g. 1K: } 102 \\ \text { 100K: } 103 \\ \hline \end{gathered}$ |  |
| Literature No. 1773169 Issued: 04-06 | Dimensions are shown for reference purposes only. | Dimensions are in millimetres unless otherwise specified. | Specifications subject to change. | www.tycoelectronics.com passives.tycoelectronics.com |

