



**THE DATASHEET OF**  
**3296X-1-502LF**





## Features

- Multiturn / Cermet / Industrial / Sealed
- 5 terminal styles
- Tape and reel packaging available
- Chevron seal design
- Listed on the QPL for style RJ24 per MIL-R-22097 and RJR24 per High-Rel Mil-R-39035
- [Mounting hardware available \(H-117P\)](#)
- RoHS compliant\* version available
- For trimmer applications/processing guidelines, [click here](#)

## 3296 - 3/8" Square Trim Pot® Trimming Potentiometer

### Electrical Characteristics

|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Standard Resistance Range    | 10 ohms to 2 megohms<br>(see standard resistance table) |
| Resistance Tolerance         | ±10 % std.<br>(tighter tolerance available)             |
| Absolute Minimum Resistance  | 1 % or 2 ohms max.<br>(whichever is greater)            |
| Contact Resistance Variation | 1.0 % or 3 ohms max.<br>(whichever is greater)          |
| Adjustability                |                                                         |
| Voltage                      | ±0.01 %                                                 |
| Resistance                   | ±0.05 %                                                 |
| Resolution                   | Infinite                                                |
| Insulation Resistance        | 500 vdc.<br>1,000 megohms min.                          |
| Dielectric Strength          |                                                         |
| Sea Level                    | 900 vac                                                 |
| 70,000 Feet                  | 350 vac                                                 |
| Effective Travel             | 25 turns nom.                                           |

### Environmental Characteristics

|                               |                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------|
| Power Rating (300 volts max.) |                                                                                        |
| 70 °C                         | 0.5 watt                                                                               |
| 125 °C                        | 0 watt                                                                                 |
| Temperature Range             | -55 °C to +125 °C                                                                      |
| Temperature Coefficient       | ±100 ppm/°C                                                                            |
| Seal Test                     | 85 °C Fluorinert†                                                                      |
| Humidity                      | MIL-STD-202 Method 103<br>96 hours<br>(2 % ΔTR, 10 Megohms IR)                         |
| Vibration                     | 20 G (1 % ΔTR; 1 % ΔVR)                                                                |
| Shock                         | 100 G (1 % ΔTR; 1 % ΔVR)                                                               |
| Load Life..                   | 1,000 hours 0.5 watt @ 70 °C<br>(3 % ΔTR; 3 % or 3 ohms,<br>whichever is greater, CRV) |
| Rotational Life               | 200 cycles<br>(4 % ΔTR; 3 % or 3 ohms,<br>whichever is greater, CRV)                   |
| Moisture Sensitivity Level    | N/A                                                                                    |
| ESD Classification (HBM)      | 2                                                                                      |

### Physical Characteristics

|                    |                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------------------|
| Torque             | 3.0 oz-in. max.                                                                                              |
| Mechanical Stops   | Wiper idles                                                                                                  |
| Terminals          | Solderable pins                                                                                              |
| Weight             | 0.03 oz.                                                                                                     |
| Marking            | Manufacturer's<br>trademark, resistance code, wiring<br>diagram, date code, mfr's. model<br>number and style |
| Wiper              | 50 % (Actual TR) ±10 %                                                                                       |
| Flammability       | U.L. 94V-0                                                                                                   |
| Standard Packaging | 50 pcs. per tube                                                                                             |
| Adjustment Tool    | H-90                                                                                                         |

### Product Dimensions

#### Common Dimensions



#### 3296P



#### 3296W



#### 3296X



### Standard Resistance Table

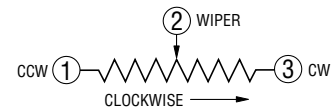
| Resistance (Ohms) | Resistance Code |
|-------------------|-----------------|
| 10                | 100             |
| 20                | 200             |
| 50                | 500             |
| 100               | 101             |
| 200               | 201             |
| 500               | 501             |
| 1,000             | 102             |
| 2,000             | 202             |
| 5,000             | 502             |
| 10,000            | 103             |
| 20,000            | 203             |
| 25,000            | 253             |
| 50,000            | 503             |
| 100,000           | 104             |
| 200,000           | 204             |
| 250,000           | 254             |
| 500,000           | 504             |
| 1,000,000         | 105             |
| 2,000,000         | 205             |

Popular values listed in boldface. Special resistances available.

#### 3296Y



#### 3296Z



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

TOLERANCES: ±  $\frac{0.25}{(.010)}$  EXCEPT WHERE NOTED

### How To Order

**3296 W - 1 - 103 LF**

|                        |                                                          |
|------------------------|----------------------------------------------------------|
| Model                  | 3296                                                     |
| Style                  | W                                                        |
| Standard or Modified   | -                                                        |
| Product Indicator      | 1 = Standard Product                                     |
| Resistance Code        | 103                                                      |
| Packaging Designator   | LF                                                       |
| Blank                  | = Tube (Standard)                                        |
| R                      | = Tape and Reel (X and W Pin Styles Only)                |
| A                      | = Ammo Pack (X and W Pin Styles Only)                    |
| Tape and reel material | meets Antistatic ANSI/ESD 5541-2003 packaging standards. |
| Terminations           |                                                          |
| LF                     | = 100 % Tin-plated (RoHS compliant)                      |
| Blank                  | = 90 % Tin / 10 % Lead-plated (Standard)                 |

Consult factory for other available options.

†"Fluorinert" is a registered trademark of 3M Co.



**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

# 3296 - 3/8" Square Trimpot® Trimming Potentiometer

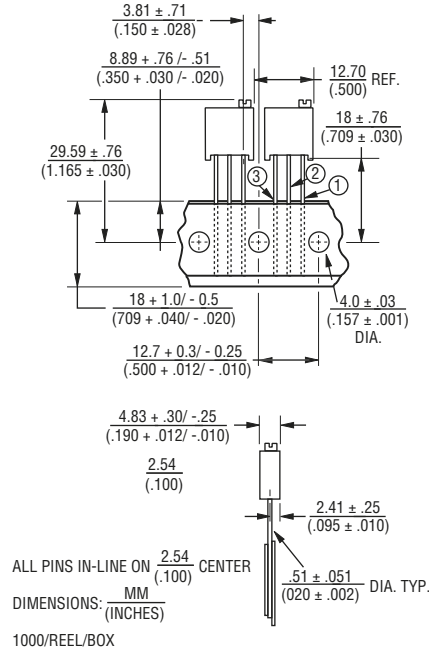
**BOURNS®**

## Packaging Specifications

### SIDE ADJUST 3296X-1



### TOP ADJUST 3296W-1



Meets EIA Specification 468.

REV. 06/18

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