FEATURES

- Infinite resolution element
- Rotational Life: 50,000,000 shaft revolutions
- Standard Linearity: 0.5%; Special Linearities Available
- Dither Life: 5° ARC @ 60 cps for 1,000 hours
- Extended Temperature Range: –55°C to +125°C
- Outstanding resistance to humidity.
- Exceeds moisture resistance requirements of MIL-R-39023
- Output smoothness: 0.1% standard
- Shaft supported front and rear by precision ball bearings
- Performance of the Model 3416 is guaranteed by the Bourns Reliability Assurance Program, which includes individual inspection to published electrical and physical characteristics
- Custom design capability is available to satisfy your most demanding and difficult special requirements

STANDARD RESISTANCES

<table>
<thead>
<tr>
<th>Resistance (MΩ)</th>
<th>Part number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>380</td>
<td>34155-1-201</td>
</tr>
<tr>
<td>390</td>
<td>34155-1-301</td>
</tr>
<tr>
<td>1,000</td>
<td>34155-1-015</td>
</tr>
<tr>
<td>7,000</td>
<td>34155-1-022</td>
</tr>
<tr>
<td>5,000</td>
<td>34155-1-002</td>
</tr>
<tr>
<td>10,000</td>
<td>34155-1-089</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resistance (MΩ)</th>
<th>Part number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000</td>
<td>34155-1-205</td>
</tr>
<tr>
<td>50,000</td>
<td>34155-1-180</td>
</tr>
<tr>
<td>100,000</td>
<td>34155-1-001</td>
</tr>
<tr>
<td>200,000</td>
<td>34155-1-204</td>
</tr>
<tr>
<td>500,000</td>
<td>34155-1-204</td>
</tr>
<tr>
<td>1,000,000</td>
<td>34155-1-106</td>
</tr>
</tbody>
</table>

*The last three digits of the part number represent the resistance in standard code.

TRIMPOT DIVISION

AUGUST 1967
No. 34155-7-TM
### STANDARD SPECIFICATIONS

The specifications listed below are for the standard model. Modifications of all types (mechanical, electrical, and environmental) can be custom engineered to your specific requirements.

#### ELECTRICAL CHARACTERISTICS

- **Resistance Range**: 2000 to 1 megohm
- **Resistance Tolerance**
  - **5%**
- **Linearity Independent**
  - **±1%**
- **Best Practical**
  - **±0.5%**
- **Cursory Factory**
  - **±1%**
- **Resolution**
  - **Essentially infinite**
- **Effective Electrical Angle**
  - **360° ±12°**
- **Minimum Voltage**
  - **0.1% minimum**
- **Output Signal(less)**
  - **0.1%**
- **Power Rating (500 V Maximum)**
  - **0.5 watts**
  - **125°C**
  - **0 watts**
- **Dielectric Strength**
  - **50,000 volts**
- **Leakage, 500 VDC minimum**
- **Insulation Resistance, 500 VDC minimum**
  - **1000 megohm minimum**

#### ENVIRONMENTAL CHARACTERISTICS

- **Temperature Operating Range**: -55°C to 125°C

#### MECHANICAL AND PHYSICAL CHARACTERISTICS

- **Shaft Dimensions**
  - **Shaft Runout**
    - **0.001 in. T.I.R.**
  - **Shaft End Play**
    - **0.003 in. T.I.R.**
  - **Shaft Radial Play**
    - **0.006 in. T.I.R.**

#### Additional Information

- **Total Torque**
  - **1.5 oz-in. maximum**
  - **1.0 oz-in. maximum**
  - **add 0.03 oz-in. for each additional stop**

- **Gauge**
  - **8 cross maximum**

- **Weight**
  - **Approximately 3 oz.**

- **Terminals**
  - **Gold-plated terminals**

- **Marking**
  - **Manufacturers name and part number, resistance value and tolerance, linearly tolerance, wiring diagram and date code.**

#### NOTES:

- **Noise** 1000 or 15, CRR maximum available as 3405-14-2R.
- **100% or statistical sampling inspection performed to insure highest quality.**
- **Specifications are subject to change without notice.**

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**BOURNS® Potentiometer Model 3416**

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**BOURNS, INC., TRIMPOUT DIVISION, 1200 COLUMBIA AVE, RIVERSIDE, CALIFORNIA**

**SUBSIDIARY: BOURNS (CANADA) LTD., 26 CHAMPIEG RD, EAST YORK, TORONTO, ONTARIO, CANADA**