Model 404 Series
Position Sensor

Features:
- Short travel (0.5 inches), linear motion with spring return
- Accurate position feedback
- Compact design for small spaces
- Conductive plastic technology
- Long life (5 million actuations)

Applications:
- Robotics
- Automotive
- Heavy equipment
- Industrial automation
- Wing flap position
- Pedal position
- Satellite dish
- Electro surgical equipment

Electrical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance range</td>
<td>1K to 150K Ohms</td>
</tr>
<tr>
<td>Standard resistance tolerance</td>
<td>±10%</td>
</tr>
<tr>
<td>Minimum practical resistance tolerance</td>
<td>±5%</td>
</tr>
<tr>
<td>Independent linearity</td>
<td>±1%</td>
</tr>
<tr>
<td>Minimum practical independent linearity</td>
<td>±0.5%</td>
</tr>
<tr>
<td>Input voltage</td>
<td>400 VDC maximum, not to exceed power rating</td>
</tr>
<tr>
<td>Dielectric strength</td>
<td>1,000 V rms</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>1,000 Megohms minimum</td>
</tr>
<tr>
<td>Output smoothness</td>
<td>0.1% maximum at 10” to 18” per minute</td>
</tr>
<tr>
<td>Actual electrical travel</td>
<td>0.50” ±0.015” (12.7 mm ±0.38 mm)</td>
</tr>
<tr>
<td>Electrical continuity travel</td>
<td>Within mechanical travel</td>
</tr>
<tr>
<td>End voltage</td>
<td>Maximum 0.5% of input voltage</td>
</tr>
<tr>
<td>Resolution</td>
<td>Essentially infinite</td>
</tr>
<tr>
<td>Temperature coefficient of resistance</td>
<td>-400 ppm/°C typical</td>
</tr>
<tr>
<td>Temperature coefficient of output voltage</td>
<td>±10 ppm/°C typical</td>
</tr>
</tbody>
</table>

Mechanical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque mechanical travel</td>
<td>0.56” ±0.015” (14.2 mm ±0.38 mm)</td>
</tr>
<tr>
<td>Actuating force</td>
<td>14 oz. maximum, internal spring to return slider to extended position</td>
</tr>
<tr>
<td>Backlash</td>
<td>0.003” maximum</td>
</tr>
<tr>
<td>Static stop strength</td>
<td>20 lb. minimum</td>
</tr>
<tr>
<td>Body style</td>
<td>Rectangular</td>
</tr>
<tr>
<td>Termination style</td>
<td>Turret terminations</td>
</tr>
</tbody>
</table>
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Environmental (MIL-PRF-39023)

Operating temperature range
-40°C to +125°C dynamic, -55°C to +125°C static

Load life
1 million shaft cycles at 0.25 Watts & 70°C, maximum 10% ΔR

Ordering Information

Circuit Diagram

Feature Codes

Outline Drawing