**FEATURES**

- High power dissipation in conventional size:
  - 5.00 watts at 25°C;
  - 3.75 watts at 70°C;
  - 2.00 watts at 130°C.
- Excellent temperature stability to 200°C.
- Outstanding Mil Spec humidity performance. Meets applicable requirements of MIL-R-27208.
- Ceramic element mandrel has thermal expansion coefficient similar to resistance wire eliminating breakage and strain gage effects.
- **SILVERWELD®** termination alloys with multiple resistance wires eliminate vulnerable single wire termination.
- Wiper assembly idles at both ends of travel preventing damage from forced adjustments.
- Each instrument individually inspected for guaranteed electrical and physical characteristics.

**STANDARD RESISTANCES**

<table>
<thead>
<tr>
<th>Resistance (ohms)</th>
<th>Part Number *</th>
<th>Nominal Resolution (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>3020L-1-101</td>
<td>1.33</td>
</tr>
<tr>
<td>200</td>
<td>3020L-1-201</td>
<td>0.99</td>
</tr>
<tr>
<td>500</td>
<td>3020L-1-501</td>
<td>0.74</td>
</tr>
<tr>
<td>1,000</td>
<td>3020L-1-102</td>
<td>0.59</td>
</tr>
<tr>
<td>2,000</td>
<td>3020L-1-202</td>
<td>0.48</td>
</tr>
</tbody>
</table>

SPECIAL RESISTANCES AVAILABLE FROM 100 TO 50,000 OHMS

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

<table>
<thead>
<tr>
<th>Resistance (ohms)</th>
<th>Part Number *</th>
<th>Nominal Resolution (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000</td>
<td>3020L-1-502</td>
<td>0.36</td>
</tr>
<tr>
<td>10,000</td>
<td>3020L-1-103</td>
<td>0.30</td>
</tr>
<tr>
<td>20,000</td>
<td>3020L-1-203</td>
<td>0.25</td>
</tr>
<tr>
<td>25,000</td>
<td>3020L-1-253</td>
<td>0.24</td>
</tr>
<tr>
<td>50,000</td>
<td>3020L-1-503</td>
<td>0.20</td>
</tr>
</tbody>
</table>

(1) When ordering panel mount model, add "M" to part number. Example: 3020L-1-IC3M. See Panel Mount Bulletin for additional details.
SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

Standard Resistance Range 100 to 50,000 ohms
Resistance Tolerance* ±5%; Standard, closer tolerances available
Absolute Minimum Resistance* 100 to 50,000 ohms
Continuity* Maintained for full mechanical range
Noise During Adjustment* 100 ohms ENR maximum
Insulation Resistance, 500 volts DC* 1,000 megohms minimum
Resolution (See chart on front) 0.2% to 1.23%

ENVIRONMENTAL CHARACTERISTICS

Power Ratings:
25°C 5.0 watts
70°C 3.75 watts
130°C 2.0 watts
200°C 0 watt
Operating Temperature Range -65° to +200°C
Temperature Coefficient (per MIL-R-27268) 50 ppm/°C maximum
Moisture Resistance, MIL-R-27268 100 megohms minimum, insulation resistance after removal from chamber
Vibration Exceeds MIL-R-27268, 20g
Contact Bounce 0.1 millisecond maximum
Wiper Shift, maximum 1.0% or resolution
Shock Exceeds MIL-R-27268, 50g
Contact Bounce and Wiper Shift Same as vibration
Sand and Dust Meets MIL-E-5272, Procedure 1

Saltspray Meets MIL-R-27268
Fungus Materials meet MIL-E-5272
Load Life 1,000 hours per MIL-R-27268
Resistance Shift, maximum 2.0%
Mechanical Life 200 cycles without discontinuity
Dielectric Strength MIL-R-27268
Room Conditions 800 volts AC
80,000 Feet (0.8° Hg) 300 volts AC

PHYSICAL CHARACTERISTICS

Immersion Leak Test* No leaks
Shaft Torque* Maximum 5.0 oz.-in. maximum
Markings* Manufacturer's name, wiring diagram, date code, resistance and manufacturer's part number (customer's part number optional).
Appearance* Legible markings, no physical defects
Mechanical Adjustment 25 turns nominal
Mechanical Stops* Wiper assembly idles
Weight Approximately 0.19 oz.
Terminals:
(1) Teflon insulated stranded leads, 30 AWG (0.024 D. I.) 7 strands/38AWG
*Inspection Note: Applicable 100% or statistical sampling inspection performed to insure highest quality.
Specifications Note: Closer performance tolerances can be supplied upon request.
Specifications are subject to change without notice.

OBsolete

- .053 MAX. CEMENT FILLET
- 3 ELECTRICAL LEADS 11.5 INCHES MIN. LENGTH INSULATED STRANDLED WIRE DIA. OVER INSULATION .034
- .087 MIN. DIA. 2 MTG. HOLES (±.02 SCREW CLEARANCE)

Tolerances except as shown:
DECIMAL XXX ± .010 XXX ± .005

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