High Voltage Resistors Series 400E
Precision, Non-Inductive, Low TC, Epoxy Coating

High Voltage Resistors Series 400E have been specifically developed for use in high performance industrial high voltage systems. These precision high voltage resistors combine proprietary non-inductive resistance system and design to achieve low temperature coefficient, low voltage coefficients, high stability and increased high operating voltages.

Low TC Precision High Voltage Resistors Series 400E with high-temperature, solvent-resistant epoxy coating are intended for use in almost any environment, including oil and SF6. Typical applications are medical systems like X-ray as well as power supplies or instruments.

### Characteristics

**Resistance Values**
from 1KΩ to as high as 100GΩ on all models (to 1TΩ on request)

**Tolerances**
0.05%, 0.1%, 0.25%, 0.5%, 1%, 2%, 5%, 10% (0.05% avail. to 10G, 0.25% to 100G, other on request)

**Temperature Coefficients**
5, 10, 15, 25, 50 and 100 ppm/°C (10 ppm/°C available to 10G, 25 ppm/°C to 100G, other on request)

**Operating Temperature**
-55 to +225° C (extended temperature range to 350° C available)

**Insulation Resistance**
> 10'000 MQ

**Dielectric Strength**
> 1'000 Volt

**Thermal Shock**
Δ R/R < 0.1% typ., 0.20% max.
MIL Std. 202, method 107 Cond. C IEC 68 - 2 - 14

**Overload**
Δ R/R < 0.1% typ., 0.25% max.
1.5 x Pnom, 5 sec (do not exceed max. voltage)

**Moisture Resistance**
Δ R/R < 0.1% typ., 0.25% max.
MIL Std. 202, method 106 IEC 68 - 2 - 3

**Load Life**
Δ R/R < 0.1% typ., 0.25% max.
1000 hours at rated power IEC 115 - 1

**Encapsulation**
Epoxy Conformal Coating

**Lead Material**
Gold Plated

### Voltage Coefficients of Resistance

<table>
<thead>
<tr>
<th>Model</th>
<th>Resistance Range</th>
<th>VCR (&lt;ppm/V)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.2E</td>
<td>1K .. 500M</td>
<td>&lt; 0.40</td>
</tr>
<tr>
<td></td>
<td>500M .. 5G</td>
<td>&lt; 0.75</td>
</tr>
<tr>
<td>400.3E</td>
<td>1K .. 1G</td>
<td>&lt; 0.20</td>
</tr>
<tr>
<td></td>
<td>1G .. 10G</td>
<td>&lt; 0.40</td>
</tr>
<tr>
<td>400.5E</td>
<td>1K .. 1G5</td>
<td>&lt; 0.15</td>
</tr>
<tr>
<td></td>
<td>1G5 .. 15G</td>
<td>&lt; 0.30</td>
</tr>
<tr>
<td>400.7E</td>
<td>1K .. 2G5</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td></td>
<td>2G5 .. 25G</td>
<td>&lt; 0.15</td>
</tr>
<tr>
<td>400.10E</td>
<td>1K .. 3G</td>
<td>&lt; 0.08</td>
</tr>
<tr>
<td></td>
<td>3G .. 30G</td>
<td>&lt; 0.12</td>
</tr>
<tr>
<td>400.12E</td>
<td>1K .. 4G</td>
<td>&lt; 0.06</td>
</tr>
<tr>
<td></td>
<td>4G .. 40G</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td>400.15E</td>
<td>1K .. 5G</td>
<td>&lt; 0.04</td>
</tr>
<tr>
<td></td>
<td>5G .. 50G</td>
<td>&lt; 0.08</td>
</tr>
</tbody>
</table>

* typical values, contact factory for details

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