THERMAL PROTECTION FOR MOTOR WINDINGS & TRANSFORMERS
These thermal protectors operate by means of a thermally sensitive snap action bimetal which switches open a single pole/single throw electrical contact upon reaching a factory calibrated response temperature. Heat transfer occurs on all sides via conduction, convection or radiation. The bimetal disc snaps closed once the reset temperature has been reached.

### Features
- Snap action accuracy
- Universal size
- Maximum switch load 22 Amps
- Very economical
- Current & temp sensitive

### Applications
Single Phase Motors, Generators, Convertors, Transformers, Pumps, Heating Elements, Signal Transmitters, Fire Detectors, Magnets, Relays, Chokes, Coils, Power Supplies, Inverters

### Examples
AC Motors, Transformers, Battery packs, Blanket heaters, Heating appliances, Fluorescent light ballasts, Recessed lighting fixtures, Automotive DC Motors, Water bed heaters

### Installation tips
When installing thermal cutouts, it is important to ensure good heat transfer. The heat sensitive surface (base) should be placed on/near to the heat source. Heat conducting paste or paint will improve heat transfer.

It should be noted that standard version thermal cutouts have a current-carrying housing, and that with electrically insulated cutouts the impaired heat transfer can alter the effective switching temperature. This should be borne in mind when selecting the nominal response temperature.

With single-phase motors, the cutout should switch the mains supply. It will then switch the motor off if there is any undesirable heating. The motor short circuit current will then be safely interrupted, if this is larger than the current rating of the cutout.

For three-phase motors, the motor current will not be interrupted direct from the mains supply. The cut-out installed in the windings should switch in series with the magnetic coil of the contactor. The electrical supply to the cutouts should lead either singly or together from the motor terminals so that connection with the control circuit is possible.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Current (Res.)</th>
<th>Endurance (No. Cycles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 VAC</td>
<td>5 Amperes</td>
<td>100,000</td>
</tr>
<tr>
<td>16 VDC</td>
<td>20 Amperes</td>
<td>10,000</td>
</tr>
<tr>
<td>120 VAC</td>
<td>22 Amperes</td>
<td>10,000</td>
</tr>
<tr>
<td>277 VAC</td>
<td>8 Amperes</td>
<td>10,000</td>
</tr>
</tbody>
</table>
### Technical data

<table>
<thead>
<tr>
<th>Contact arrangement</th>
<th>Normally Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact resistance</td>
<td>&lt;50 MΩ</td>
</tr>
<tr>
<td>Response temperature range</td>
<td>65°C to 145°C</td>
</tr>
<tr>
<td>Tolerance</td>
<td>+/- 5°C, +/- 10°C</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>Insulating sleeve withstand 1,500 VAC for 60 seconds or 1,800 VAC for one second, with leakage current less than 10 MA</td>
</tr>
<tr>
<td>Insulating resistance</td>
<td>Over 100 Mega Ohm for 500 VDC</td>
</tr>
<tr>
<td>Options</td>
<td>Insulating sleeve: Heat shrink, Mylar* spiral wound tube Lead wire: 18, 20 AWG, 300 or 600 volts, 105°C, 125°C, 150°C, 200°C or bare solid tinned copper. *Registered Trademark of E.I. duPont Co.</td>
</tr>
</tbody>
</table>

#### Current vs Temperature

![Current vs Temperature graph](image1)

Bimetal resistance 40 ohm This graph shows mean values

#### Response time vs Current

![Response time vs Current graph](image2)

Mean initial cycle response time T 25°C
**Specification**

Model: A = Terminals at same end    B = Terminals at opposite ends  
**Tolerance:** 05 = ±5°C or 10 = ±10°C  
**Temperature Range:** (65°C to 145°C)  
Part Number

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