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## NTE8065 thru NTE8242 Thermal Cutoff (Thermal Fuse)

### Description:

Twenty One Thermal Cut-offs (also known as Thermal Fuses) are now included in the NTE product line. They are miniature, NON-RESETTING temperature sensitive devices designed to prevent appliances and electronic equipment from overheating. NTE thermal cutoffs are UL and CSA listed.

Literally thousands of different applications have been devised for thermal-cutoffs, thus providing a large replacement market. Such applications include:

- Hair Dryers
- Irons
- Electric Motors
- Microwave Ovens
- Toasters
- Refrigerators
- Hot Plates
- Window Fans
- Popcorn Poppers
- UPS
- Battery Chargers
- Glue Guns
- Coffee Makers
- Dishwashers
- And hundreds of others

The TCO (Thermal Cut-Off) responds to temperature by interrupting an electrical circuit when the operating and/or environmental temperature exceeds the thermal rating of the device. This is accomplished when the internal organic pellet experiences a phase change, allowing the spring activated contacts to permanently open the circuit.

| NTE Type No. | Diag. No. | Functioning Temperature |     | Holding Temperature |     | Maximum Temperature |     |
|--------------|-----------|-------------------------|-----|---------------------|-----|---------------------|-----|
|              |           | °C                      | °F  | °C                  | °F  | °C                  | °F  |
| 8065         | 193       | 66                      | 151 | 42                  | 108 | 130                 | 266 |
| 8070         | 193       | 72                      | 162 | 50                  | 122 | 115                 | 239 |
| 8076         | 193       | 77                      | 171 | -                   | -   | -                   | -   |
| 8081         | 193       | 84                      | 184 | 60                  | 140 | 125                 | 257 |
| 8085         | 193       | 87                      | 189 | -                   | -   | -                   | -   |
| 8090         | 193       | 93                      | 200 | -                   | -   | -                   | -   |
| 8096         | 193       | 98                      | 209 | 76                  | 169 | 140                 | 284 |
| 8098         | 193       | 100                     | 212 | -                   | -   | -                   | -   |
| 8103         | 193       | 104                     | 220 | 80                  | 176 | 150                 | 302 |
| 8108         | 193       | 109                     | 229 | 88                  | 190 | 140                 | 284 |
| 8115         | 193       | 117                     | 243 | -                   | -   | -                   | -   |

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|--------------|-----------|-------------------------|-----|---------------------|-----|---------------------|-----|
|              |           | °C                      | °F  | °C                  | °F  | °C                  | °F  |
| 8118         | 193       | 121                     | 250 | 95                  | 203 | 170                 | 338 |
| 8125         | 193       | 128                     | 263 | 106                 | 223 | 155                 | 311 |
| 8139         | 193       | 141                     | 286 | 117                 | 243 | 171                 | 340 |
| 8149         | 193       | 152                     | 306 | 128                 | 262 | 176                 | 349 |
| 8167         | 193       | 169                     | 336 | 146                 | 295 | 300                 | 572 |
| 8181         | 193       | 184                     | 364 | 160                 | 320 | 300                 | 572 |
| 8182         | 193       | 192                     | 378 | 162                 | 324 | 290                 | 554 |
| 8213         | 193       | 216                     | 421 | 191                 | 376 | 241                 | 466 |
| 8226         | 193       | 228                     | 443 | -                   | -   | -                   | -   |
| 8242         | 193       | 240                     | 464 | 200                 | 392 | 290                 | 554 |

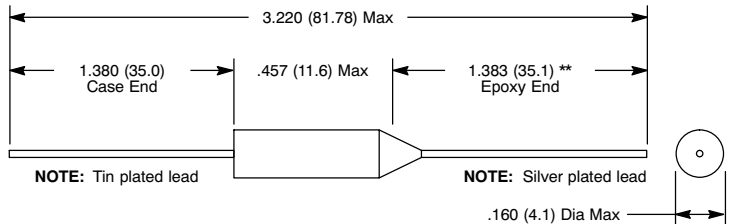
| Electrical Rating Volts | Interrupting | Continuous |
|-------------------------|--------------|------------|
| 120/250 VAC             | 15A          | 10A        |
| 240 VAC                 | 25A RES      | 16.7 RES   |
| 277 VAC                 | 20A RES      | 15A RES    |

| Electrical Rating Volts | Interrupting     | Continuous |
|-------------------------|------------------|------------|
| 120-277 VAC             | 125VA Pilot Duty |            |
| 180 VAC                 | 3A Motor Rating  |            |

### FEATURES:

- Maximum Current Rating: 15 Amps
- Typical Opening Temperature Tolerance: +0°C, -5°C
- 18 Gauge Solid Copper Wire
- Full 1 1/3" leads to fit all replacement configurations
- All types meet the requirements of Underwriters Laboratories Specifications, CSA, and VDE.
- Each device comes packaged with 2 crimp splices for solderless connection (Poly-bag orders only)
- UL File No. E49429
- UL File No. E117626 (Guide # XCMQ2)
- C-UL File No. E117626 (Guide # XCMQ8)
- CSA File No. LR43279
- VDE File No. 115369

### Diagram 193



NOTE: Tin plated lead

NOTE: Silver plated lead

\*\* Some devices may have a lead length of .980 (25.0)

**Note 1:** Temperature sensitive devices. **Do not** store above +48°C (+120°F).

**Note 2:** Color Band does not denote temperature group.

**Note 3:** The electrical resistance of the NTE series thermal cut-off is comparable to that found in an equal length of 18 gauge solid copper wire. With proper air flow, heat generation below 15 Amps is minimal, above 15Amps the upper limit on the current capacity will depend on the environment for each specific application.

**Note 4:** A general rule of thumb for continuous operating temperature for thermal cut-offs is 30°C **less** than the Maximum Opening Temperature.