



**ELECTRONICS, INC.**  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
 http://www.nteinc.com

## 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-RESETTABLE temperature sensitive devices designed to prevent appliances and electronic equipment from over-heating. 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
- Refrigerators
- Battery Chargers
- Toasters
- Irons
- Hot Plates
- Glue Guns
- UPS
- Electric Motors
- Window Fans
- Coffee Makers
- And hundreds of others
- Microwave Ovens
- Popcorn Poppers
- Dishwashers

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.	UL / VDE	Diag. No.	Functioning Temperature		Holding Temperature	
			°C	°F	°C	°F
8065	B	193	66	151	42	108
8070	C	193	72	162	50	122
8076	B	193	77	171	48	119
8081	C	193	84	184	60	140
8085	B	193	87	189	52	126
8090	A	193	93	199	78	173
8096	C	193	98	209	76	169
8098	C	193	100	212	78	173
8103	C	193	104	220	80	176
8108	A	193	109	228	94	190
8115	B	193	116	243	83	182

NTE Type No.	UL / VDE	Diag. No.	Functioning Temperature		Holding Temperature	
			°C	°F	°C	°F
8118	B	193	121	250	86	201
8125	B	193	128	263	100	223
8139	B	193	142	287	110	230
8149	B	193	152	306	122	262
8167	B	193	169	338	139	295
8181	B	193	184	364	154	320
8182	C	193	192	378	167	324
8213	C	193	216	421	186	376
8226	B	193	228	443	193	380
8242	B	193	240	464	200	392

Functioning Temperature: temperature at which the Thermal Cutoff will open + tolerances.

Holding Temperature: The maximum temperature at which the thermal cut-off can be maintained while conducting the rated current for 168 hours which will not cause a change in the state of conductivity to open the circuit.

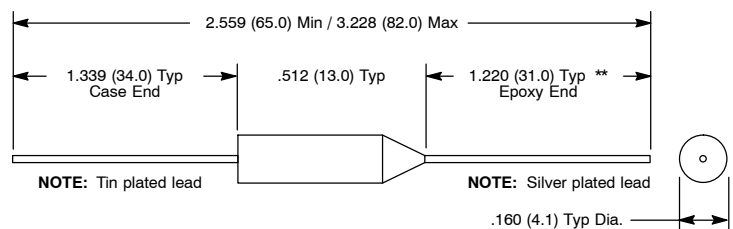
Electrical Rating Volts	Interrupting	Continuous
120/250 VAC	15A	10A
240 VAC	25A RES	16.7 RES
277 VAC	20A RES	15A RES

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 and VDE:
  - A: UL: E126429
  - B: UL & cRU: E212625; VDE: 40005865
  - C: UL & cUL: E117626; VDE: 40017388
- Each device comes packaged with 2 crimp splices, TCO-SPLICE, for solderless connection. Additional quantities of part number TCO-SPLICE may be purchased separately.

Diagram 193



\*\* NTE8065 and NTE8085 have a min lead length of .669 (17.0)

**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.