Product Bulletin

7AM Thermal Protectors

Reliable. Compact. Economical.

Features

- Over 3 billion sold
- Miniature size
- Individually temperature checked on modern, custom-designed equipment
- Positive make and break with Klixon snap-action disc
- Repeatable temperature performance over life
- Gasketed steel case suitable for most impregnation processes
- Current and temperature sensitivity for maximum design flexibility and application
- Wide selection of leads and insulating sleeves

General Description

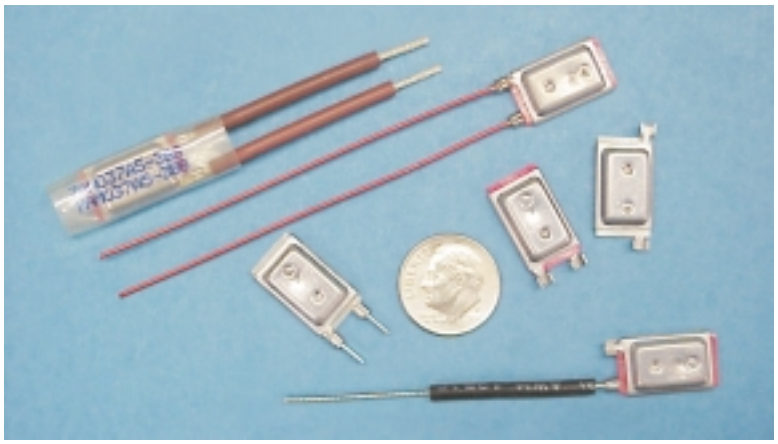
The 7AM Thermal Protector is the market leader, backed by proven innovations in protection technology. The 7AM is a thermally operated snap-action device which delivers the maximum protection in the smallest package at an affordable price.

The 7AM is a proven performer in protection technology with over 35 years of design experience combined with a modern state-of-the-art manufacturing facility.

Operation: The operating principle of the 7AM is both simple and effective. At the heart of the protector is a bimetal snap-action disc. When the temperature of this disc reaches its pre-calibrated temperature it snaps open, resulting in an open circuit. This temperature is reached during a fault condition, caused by either an increase in ambient temperature, an increase in current flowing through the disc, or a combination of both. After the 7AM breaks the circuit, the system cools and the 7AM automatically resets allowing power to be restored to the circuit.

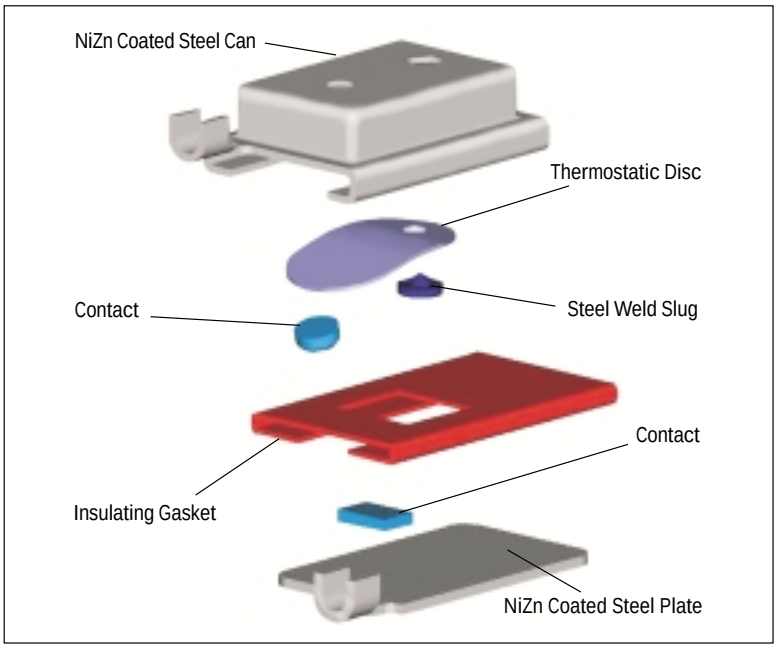
Quality: Each 7AM rating has a bimetal disc designed and manufactured for that specific temperature rating. Each individual device is then calibrated and checked for opening temperature. This results in precise operating characteristics necessary to achieve consistent, reliable performance over the required life cycle.

This high level of performance is obtained through Texas Instruments' traditional emphasis on quality. A corporate-wide thrust, re-emphasizes the supplier's responsibility and integrates modern statistical techniques into the production and quality assurance processes. As continuous inputs to the quality monitoring systems, more than twelve different checks are made during the manufacturing process.



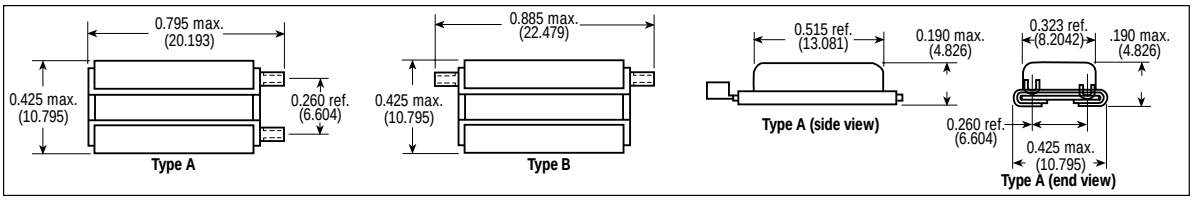
Common Applications

- Shaded pole motors
- Permanent split capacitor motors
- Fluorescent lighting ballasts
- HID ballasts
- Transformers
- Recessed lighting fixtures
- Battery packs
- Vacuum cleaners
- Automotive accessory motors, solenoids, PC boards and other applications



7AM Thermal Protectors

Dimensions Inches (Millimeters)



Numbering System

7AM XXX X X - XXX - X

Standard Opening Temperature

Opng. Temp. °C	Low Resistance Bimetal Disc Code	High Resistance Bimetal Disc Code
65	020	-
70	021	201
75	022	202
80	023	203
85	024	204
90	025	205
95	026	206
100	027	207
105	028	208
110	029	209
115	030	210
120	031	211
125	032	212
130	033	213
135	034	214
140	035	215
145	036	216
150	037	217
155	038	218
160	039	219
165	040	-
170	336	-
175	316	-

Terminal Configuration

Code	Terminals
A	Same end
B	Opposite end

Temperature Tolerance

Code	Tolerance
5	±5°C

Non-Standard Gasket Material (optional)

Code	Gasket Type / Color
5	High Seal / White

Physical Characteristics

i.e. Wire leads, Insulating sleeve

Some ratings may not have UL listing.
Please consult agency file listings

Certifications

Agency	File Number	Standard Number	Application
UL	E 15962	2111	Motor Protection
	E34618	873	Limit and regulating controls
CSA	11372	C22.2, #77	Motor Protection
	24458	C22.2, #74	Limit and regulating controls
KEMA(ENEC)	2014531.03	EN 60730-2-2	Motor Protection
		EN 60730-2-3	Ballast Protection
		EN 60730-2-9	Thermal cut-out

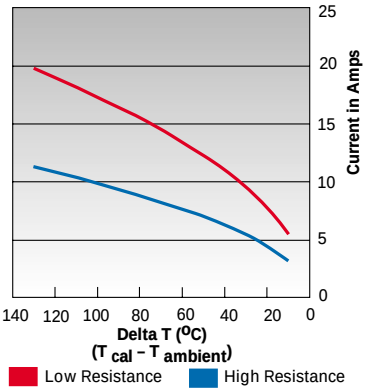
Note: For more detailed information on certifications visit our website at www.ti.com/snc

Maximum Contact Ratings (10,000 Cycles)

Voltage	Current
16 VDC	20 amperes
120 VAC	22 amperes
277 VAC	8 amperes
600 VAC	4 amperes

Ultimate Trip Current vs. Delta Temperature

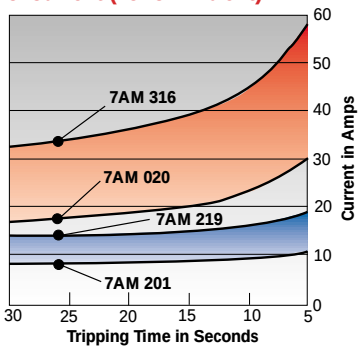
Approximation, to be used only for selecting samples for verification tests.



Note:.

Delta T is the difference between the zero current calibrated opening temperature (T_{cal}) and ambient temperature ($T_{ambient}$) at the protector location.

Average First Cycle Tripping Time vs. Current (25°C Ambient)



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