

## Product Bulletin

# Klixon

## 7AM Thermal Protectors

### *Reliable. Compact. Economical.*

#### General Description

The Klixon 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 Klixon 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.

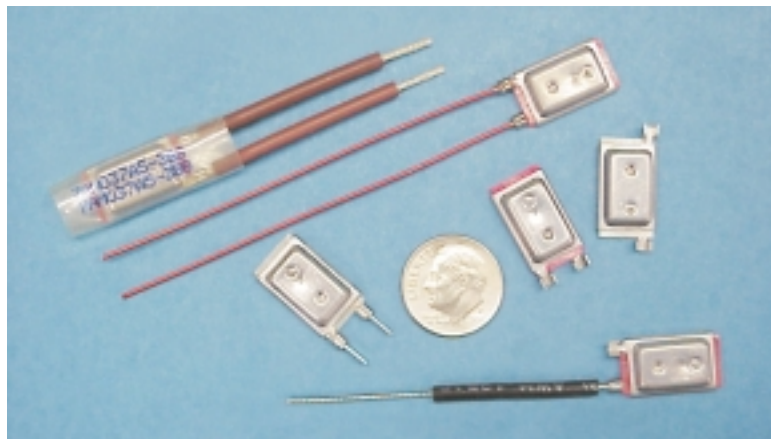
**Quality:** Each 7AM rating has a bimetal disc designed and manufactured for that specific temperature rating. Each individual device is then calibrated and checked for opening temperature. This results in precise operating characteristics necessary to achieve consistent, reliable performance over the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

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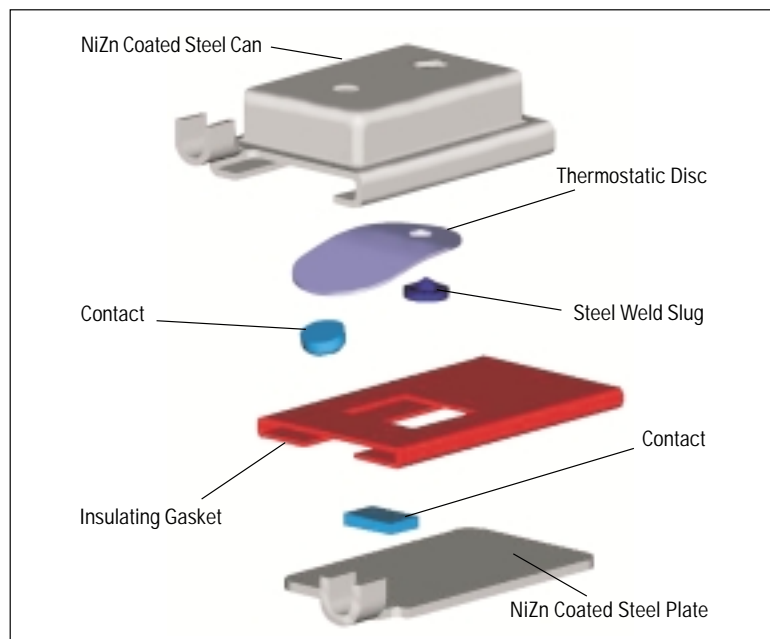
#### Features

- 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



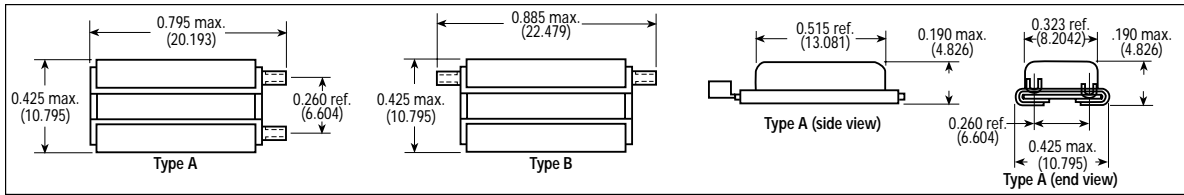
#### Common Applications

- 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

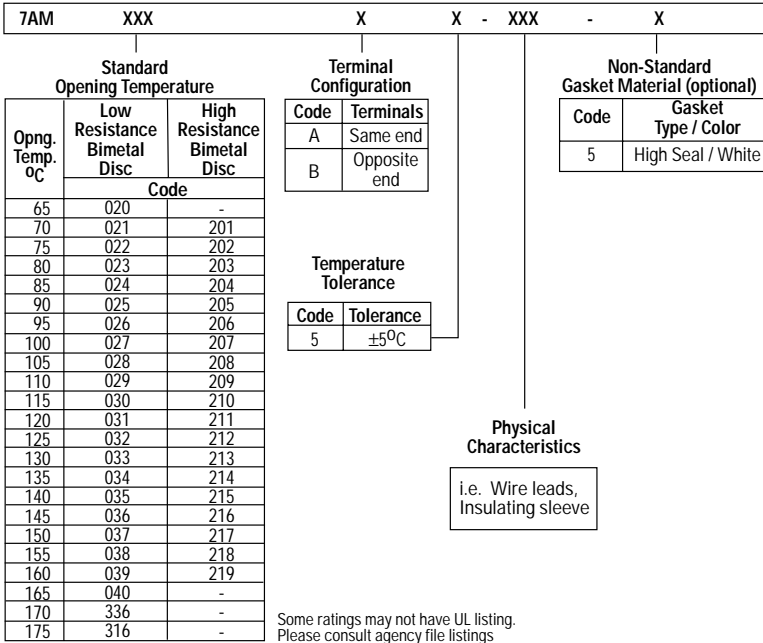


# KLIXON 7AM Thermal Protectors

## Dimensions Inches (Millimeters)

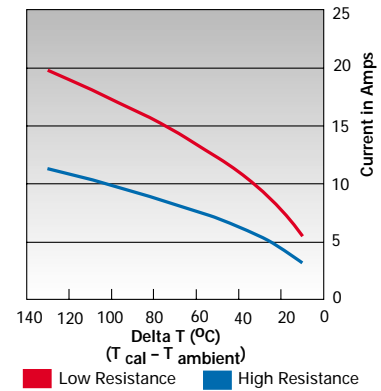


## Numbering System



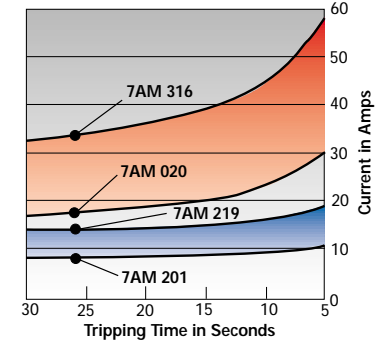
## Ultimate Trip Current vs. Delta Temperature

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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## 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](http://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

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