

MADE IN USA

# Reference Guide

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7 THERMOTECH 302-ET-194 W/Epoxy 3



**WARNING-** failure to comply with the information in this document and on our website may result in property damage and/or serious bodily injury and will eliminate all express and implied warranties.

## DESCRIPTION

**A General-** the 302 series automatic heat detector is designed for fire detection with alarm systems. Thermotech detectors are an open device and a "rate compensation type" detector. All four models are self-restoring, hermetically sealed, shock and corrosion resistant, nonferrous, and tamperproof. All models can be mounted horizontally or vertically.

**B Slow Rate of Temperature Rise-** A slow rate of temperature rise allows the heat to penetrate the inner struts. As the temperature rises, the tubular shell and the struts both expand until the total device has been heated to the rated temperature. At this point, the silver contact point's close which initiates the alarm.

**C Rapid Rate of Temperature Rise-** When subjected to a rapid rise in temperature, there is not as much time for heat to penetrate the inner struts. The rapid lengthening of the shell along with the slower reaction of the struts allows the silver contact points to close at a lower level. The detector reacts almost instantly to the rapid increase in temperature and "compensates" for thermal lag inherent in conventional fixed temperature detectors.

## GENERAL APPLICATION

**A General-** Application of Model 302 Series Automatic Heat Detectors should be based on sound engineering judgment and on industry standards as set forth by the National Fire Protection Association in the NFPA 72 National Fire Alarm Code and/or the local authority having jurisdiction.

**B Whenever a Thermotech Heat Detector is used with an automatic fire suppression system** (including, but not limited to, pre-action and deluge sprinkler systems, carbon dioxide systems, halon systems, and dry chemical systems); Thermotech requires the operation of at least two automatic detectors to initiate the alarm system response. This is commonly referred to as cross-zoning and is necessary to eliminate premature discharge of the system.

**C Temperature Fluctuation Considerations-** Detectors rated at 135 F should not respond to momentary temperature fluctuations less than 30 F per minute between 60 F and 115 F. Detectors rated at 194 F should not respond to momentary temperature fluctuations less than 50 F per minute between 60 F and 155 F.

Thermotech detectors should not be used in environments with temperature fluctuations greater than the above. Do not install Thermotech detectors in air ducts, in front of heaters, in paint booths that use heat to cure paint.

**D Direct Heat Sources-** The aluminum tube acts as a collector of heat when sources of heat radiate directly on the tube. Keep out of direct sunlight and away from radiating heat sources including the direct flow from heaters and heat ducts.

## APPLICATION OF SPECIFIC MODELS

**A General-** Application of model 302 Series Automatic Heat Detectors should be based on sound engineering judgment and on industry standards as set forth by the National Fire Protection Association in the NFPA 72, National Fire Alarm Code and/or the local authority having jurisdiction.

**B Listed Spacing-** Spacing is based on smooth ceilings that are up to 10' high. Refer to NFPA 72 for ceilings that are not considered smooth or are higher than 10'. RTI Classification: 135' = Quick 194 = V Fast

### LISTED SPACING MODEL

Listing	302	302-AW	302-ET	302-EPM
UL	50' X 50'	50' X 50'	50' X 50'	40' X 40'
FM 135	20' X 20'	20' X 20'	20' X 20'	Not Listed
FM 194	30' X 30'	30' X 30'	30' X 30'	Not Listed
Hor. Mount UL	40' X 40'	40' X 40'	40' X 40'	30' X 30'

MODEL 302 EPM CLASSIFICATION  
DIV. I CLASS I GROUPS C&D  
CLASS II GROUPS E,F, &G

## MAINTENANCE

Model 302 series heat detectors are low maintenance. Detectors automatically restore when temperatures drop below their rated temperatures. Accumulation of dust and dirt should not adversely affect detectors. If detectors must be cleaned for aesthetic purposes, turn alarm system OFF and clean detectors with a damp cloth.

Thermotech heat detectors are precision devices that should be handled carefully. DO NOT DROP or expose to excessive vibration.

## TESTING

**A General-** Refer to NFPA 72, National Fire Alarm code and/or the local authority having jurisdiction to determine testing frequency, record keeping, and other testing considerations.

**B Testing methods-** the following methods can be used to test for **OPERATION and SENSITIVITY** by the customer:

1. **OPERATION-** Testing for operation is simple and can be done before or after the detector has been installed. Heat the detector with a common hair dryer. Detectors should operate shortly after the hot air is applied. NFPA requires the device to activate with in one minute. **DO NOT** use any device with an open flame to test detectors.

## WARRANTY

Thermotech warranties model 302 series heat detectors for up to ONE year for any defects in material or workmanship. This warranty is limited to proper maintenance, testing, and installation as set forth herein by the National Fire Protection Agency, National Fire Alarm Code, and/or local authority having jurisdiction.

It is the purchaser's responsibility to test and determine the suitability of the detector for the purchaser's intended use. Purchaser assumes all risk and liability whatsoever regarding such suitability. In no event will Thermotech be obligated to pay damages to purchaser in any amount exceeding the price that the purchaser paid for the detector. Installation costs are the sole responsibility of the purchaser.

### Special Considerations

Temp. Rating F	Max Ceiling Temp. F	Min. Temp. F
135	100-115	-40
194	150-155	-40

### Electrical Rating

Voltage	Current
6-125 VAC	5 amps
6-25 VDC	1 amp
125 VDC	0.5 amp

## APPROVALS/LISTINGS

Underwriters' Laboratories  
Factory Mutual  
California State Fire Marshall Listing No. 7270 0021:001  
New York City Department of Buildings, MEA 193-03-E