

# THERMOTECH

## AUTOMATIC HEAT DETECTORS

2900 N. 1000 W.  
 OGDEN, UTAH 84414  
 (801) 782-2233  
 FAX: (801) 782-1746  
 www.thermotechheatdetectors.com

### Four Basic Models

MODEL	DESCRIPTION	REFER TO:
302-135 302-194	135°F - Interior Vertical Mounting FM & UL 194°F - Interior Vertical Mounting FM & UL	Fig. 1
302-ET-135 302-ET-194	135°F - All Weather Vertical Mounting FM & UL 194°F - All Weather Vertical Mounting FM & UL	Fig. 2
302-AW-135 302-AW-194	135°F - All Weather Vertical Mounting FM & UL 194°F - All Weather Vertical Mounting FM & UL	Fig. 3
302-EPM-135 302-EPM-194	135°F - Explosion Proof Mounting UL 194°F - Explosion Proof Mounting UL	Fig. 4
AP-P	Decorative white plastic adapter plate for mounting 302, 302ET and 302AW to any 3" outlet box or 4" octagon outlet box.	Fig. 5



**Fig. 1 MODEL 302**  
 For interior mounting in any atmosphere that is compatible with terminal screw type connections.

**Fig. 2 MODEL 302-ET**

Hermetically sealed for moisture proof or dust proof installations. Requires no special back box. Has plastic hexagonal grip bushing with 1/2" conduit threads for attachment to threaded hub cover, or any outlet box. Must be hand tightened only. For indoor and outdoor use. Protect from direct sunlight and adverse weather conditions.



**Fig. 3 MODEL 302-AW**

Hermetically sealed for moisture proof or dust proof installations. Requires no special back box. For indoor and outdoor use. Protect from direct sunlight and adverse weather conditions.



**Fig. 4 MODEL 302-EPM**

Explosion proof for installation in hazardous locations. Has hexagonal grip bushing with 1/2" conduit threads for attachment to threaded hub cover of series JL fixture fitting as manufactured by Killark Electric Co., or equal. Must be hand tightened only. For Interior use.



**Fig. 5 AP-P**

Decorative white plastic adapter plate for mounting 302, 302-AW and 302-ET detectors only.



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### General

Each model is a normally open device designed especially for fire detection and alarm systems. These rate compensation type detectors are available in either 135° F. or 194° F. ratings. All four basic models are self restoring, hermetically sealed, shock and corrosion resistant, and are tamper proof. Refer to NFPA STANDARD 72, STANDARD FOR AUTOMATIC FIRE DETECTORS for application requirements, testing and maintenance.

### Principal of Operation

All models operate on the principles of a rate compensation detector. The detector consists of a high expansion aluminum tube which encases two insulation struts with opposing open constant points (see cut-away view). The high expansion sensing shell and the expansion struts have a different coefficient of expansion. A slow rate of temperature rise allows the heat to penetrate the inner expansion struts. Therefore, the tubular shell and the struts expand slowly until the total device has been heated to its rated temperature level of 135° F./194° F. At this point, the silver contact points close which initiates the alarm. When subjected to a rapid rate temperature rise there is not as much time for heat to penetrate the inner strut. The rapid lengthening of the shell allows the struts to come together at a lower level which compensates for thermal lag inherent in conventional fixed temperature detectors. When the surrounding air temperatures goes below the rated temperature level, the shell contracts which forces contacts to open, thus automatically resetting the detector.

### Special Considerations

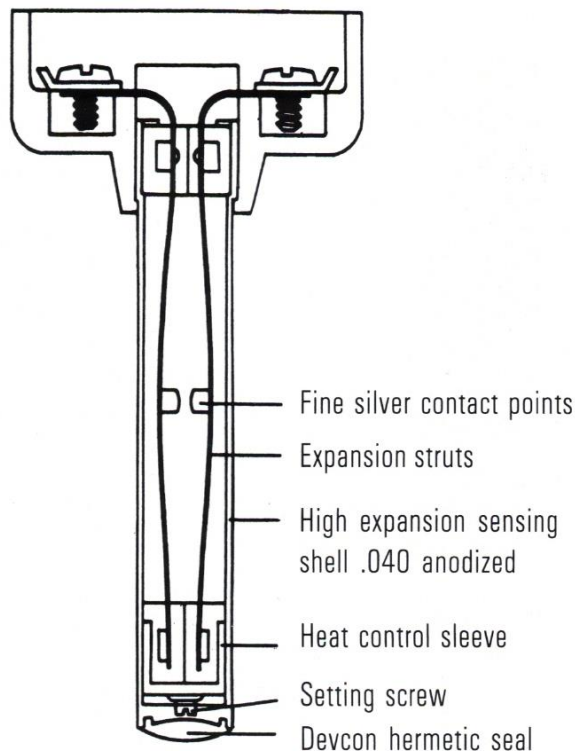
Temp. Rating °F.	Max Ceiling Temp. °F.
135	100
194	150

Detectors are not directionally effected, can be mounted horizontally or vertically. Detectors have a smooth ceiling UL rating of 50' x 50' (2500 sq. ft.) on 8 to 10 ft. ceilings. Detectors, hub covers, or outlet boxes must never be installed in direct sunlight. Refer to NFPA STANDARD 72 for spacing and other considerations. For further information refer to [www.thermotechheatdetectors.com](http://www.thermotechheatdetectors.com)

### Electrical Rating

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

(actual size)



Dimensions (Model 302): Total overall length 4 1/8".  
 Base Diameter: 2".

### Approvals/Listings



Underwriters' Laboratories



Factory Mutual



California State Fire Marshall. Listing No. 7270-0021-001



MEA Acceptance # 193-03-E