

CITY OF NEW YORK
DEPARTMENT OF BUILDINGS

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use in accordance with the Report of Materials and Equipment Acceptance (MEA) Division.

Patricia J. Lancaster, A.I.A., Commissioner

MEA 193-03-E (Correction)
Report of Material and Equipment Acceptance Division

Note: This publication reflects a correction from Bureau of Electrical Prevention to state Bureau of Fire Prevention .

Manufacturer – Thermotech, Inc., 2900 N. 1000 W. Ogden, UT 84414.

Trade Name(s) – Thermotech, Inc., 302 Series Heat Detectors.

Product – Automatic Heat Detectors/Thermostats.

Pertinent Code Section(s) – NFPA 72, Sec. 2-2, Reference Standard RS 17-3.

Prescribed Test(s) – UL Standards 521 and 1203.

Laboratory – Underwriters Laboratories, Inc.

Test Report(s) – UL File S539, Project No. 86NK13410 issued August 22, 1986, revised February 12, 2003. UL letter dated September 27, 2002.

Description – Automatic Heat Detectors/Thermostats – Model 302 Series:

1. General – The 302 Series automatic heat detector is designed for fire detection with alarm systems. Thermotech detectors are normally open devices and are “rate compensation type” detectors. All five models are self-restoring, hermetically sealed, chock and corrosion resistant, nonferrous, and tamperproof.
2. Principles of Operation – The Model 302 operates on the principles of a rate compensation detector. The detector consists of a high expansion aluminum tube that encases two insulated struts with opposing open contact points. The high expansion sensing shall and the expansion struts have a different coefficient of expansion. This allows the detectors to react to changes in temperature in the following two ways:
 - (a) Slow Rate of Temperature Rise – A slow rate of temperature rise allows the heat to penetrate the inner expansion 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 points close; which initiates the alarm.

- (b) **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 strut. The rapid lengthening of the shell along with the slower reaction of the struts allow 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.

When the ambient air temperature drops below the detector’s rated temperature, the shell contracts which forces the contacts to open and the detector to reset itself.

3. **Specific Model Descriptions** – Thermotech 302 Series Models include Models 302, 302-H, 302 AW, 302 ET, and 302 EPM. All models are available in either 135°F or 194°F ratings.

Pursuant to “Promulgation of the Rules relating to Material and Equipment Application Procedures” dated November 5, 1992, the Bureau of Fire Prevention has no objections letter dated July 18, 2003, F.P. Index #0307004.

Recommendation – That the above units be accepted provided that all uses, locations, and installations shall comply with the New York City Building Code, specifically Subchapter 17, and with the Reference Standards RS 17-3 through 17-3C, inclusive as applicable including the NFPA as appropriate, the UL Listing, manufacturer’s instructions, the Fire Department Directives, and with the Electrical Code of the City of New York.

All shipments and deliveries of such equipment shall be provided with a metal tag, suitably placed, certifying that the equipment shipped or delivered is equivalent to that tested and acceptable for use as provided for in Section 27-131 of the Building Code.

Final Acceptance September 9, 2003

Examined by Donald [Signature]