RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 06/19/13

SIEMENS

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Fire Safety & Securi

Conventional Fire Detecto

Thermal Fire Detectors
Models DT-135R, DT-135F, DT-200R and DT-200F

ARCHITECT AND ENGINEER SPECIFICATIONS

- UL Listed
- FM Approved

Product Overview

The Siemens Building Technologies — Fire Safety Division Thermal Fire Detectors are fixed temperature or a combination of fixed-temperature / rate-of-rise type. The combination detectors consist of two, independently operated thermal elements. The rate-of-rise element is self-restoring. However, the fixed temperature is of the non-restoring type.

Underwriter's Laboratories, Inc., recommends the combination-type thermal detector be used to protect a maximum of 2,500 square feet (50-foot spacing), and the fixed-temperature type be used to protect a maximum of 625 square feet (25-foot spacing). However, job conditions and engineering judgment often dictate closer spacing to provide faster detection.

The thermal fire detector shall be Fire Safety Model ____ (insert number), and shall operate at a temperature of ____°F (insert temperature). The detectors shall be listed by Underwriters' Laboratories, Inc. and Factory Mutual for use with Siemens Building Technologies, — Fire Safety Division systems.

Specifications

Rate-of-Rise Principle of Operation

The rate-of-rise element consists of an air chamber; a flexible, metal diaphragm and a moisture-proof, trouble-free vent that is carefully calibrated.

It is well known air expands as it is heated, and will contract as it is cooled. For normal, day-to-day fluctuations of temperature, the expansion and contraction of the air within the chamber is automatically compensated by the 'breathing' action of the vent.

However, when a fire occurs, air temperatures rise very rapidly and the air in the chamber expands faster than it can be vented. This creates a pressure which distends the diaphragm and closes electrical contacts.

The rate-of-rise action is not related to any fixed temperature level, but responds with the utmost promptness when the rate of temperature rise exceeds 15°F per minute. If the heat is removed, the air within the chamber contracts and the switch moves to a normally open circuit position.

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Specifications — (continued)

Fixed Temperature Principle of Operation

In a slow-developing fire, the temperature may not increase rapidly enough to operate a rate-of-rise element. Therefore, a fixed-temperature principle of operation is needed.

The detector utilizes a fixed-temperature element made of fusible alloy and is of the non-restorable type.

The fusible alloy will melt and activate the detector when the surrounding air rises above the preset level of 135°F or 194°F.

The external heat collector drops away when the detector is activated therefore giving a quick visual confirmation that the detector has alarmed.

Installation

Each detector includes a therm
mounting plate. In one position
a 4" octagon junction box, 3" c
plaster ring.

In reverse, the plate can be us
without a junction box. A 1/4" space between
detector and mounting surface allows for wire connections. All mounting screws are concealed.

The detector simply attaches to the mounting plate with a push-and-twist motion — no tools are required.

Details for Ordering

Model Number	DT-135R	DT-200R	DT-135F	DT-200F
Description	Rate-of-rise and fixed temperature 135°F	Rate-of-rise and fixed temperature 194°F	Fixed temperature only, 135°F	Fixed temperature only, 194°F
Applications	Normal temperature fluctuations and ceiling temperatures not exceeding 100°F	Normal temperature fluctuations and ceiling temperatures exceeding 100°F but not 150°F	Unusually violent temperature fluctuations and ceiling temperatures not exceeding 100°F	Unusually violent temperature fluctuations and ceiling temperatures exceeding 100°F but not 150°F
Identification on Heat Collector				

Notice: This marketing data sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

SIEMENS Industry, Inc.
Building Technologies Division

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (908) 547-6877
URL: www.SBT.Siemens.com/FIS

[SII-FS]
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Fire Safety
2 Kenview Boulevard
Brampton, Ontario
L6T 5E4 / Canada
Tel: (905) 799-9937
FAX: (905) 799-9858

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