



ESL

P R O D U C T I N F O R M A T I O N B U L L E T I N



104 SERIES

Rate-of-Rise/ Fixed Temperature Heat Detector



- **Low profile with wide base**
- **Positive fixed temperature**
- **On-site testing of rate of rise**

The **ESL 104 Series spot heat detectors** offer rate-of-rise/fixed temperature and fixed temperature only features for high performance and reliability. The rate-of-rise feature detects intense fires by quickly responding to rapid temperature increases. The fixed temperature feature reacts to fires when a specific temperature is reached.

These high quality heat detectors feature the ultimate in design and decor. The low silhouette and white finish blend with most ceiling designs to make the detector unobtrusive.

Materials for the 104 Series heat detector are carefully selected for strength, corrosion, resistance and integrity at points of hermetic sealing. The detectors require normal periodic testing and no field maintenance. Rate-of-rise operation may be tested by applying heat from a convenient heat source (e.g. a portable heat dryer).

continued

Sentrol 104 Series Rate-of-Rise/Fixed Temperature Heat Detectors

Principle of Operation

For Rate-of-Rise: Air expands when heated and contracts when cooled. The ESL 104 Series of heat detectors consist of an air chamber, a flexible metal diaphragm and a carefully calibrated, moisture-proof, trouble-free vent. For normal day-to-day temperature fluctuations, the "breathing" action of the vent compensates for any expansions or contraction of air in the detector chamber. When a fire occurs, air in the chamber expands faster than it can be vented, causing the diaphragm to distend and close electrical contacts. This feature resets automatically if the fixed temperature element is not activated.

For Fixed Temperature: An actuating spring is held under tension by a eutectic metal. When the detector temperature reaches the melting point of the eutectic metal, the spring releases, causing electrical contacts to close. When activated, the external heat collector drops away to provide quick, visual confirmation that the element has operated and that the detector must be replaced.

Application

The 104 Series automatic heat detector models are equipped with heavy-duty contacts and are designed to provide dependable, trouble-free operation for many years.

The heat detectors should be considered in all areas to provide automatic early warning of fire. They may be used on standard open circuit (supervised or non-supervised) fire alarm systems or in circuits that require current limiting.

Proper selection depends upon the normal temperature ranges to which the detector will be subjected. Use the Ordering Information chart below as a guide.

Approvals

The ESL 104 heat detector is for use in commercial fire protective signaling systems and in household fire warning systems (NFPA 72).

Listed by Underwriters Laboratories, Inc. to Standard 521. FM approved; California State Fire Marshal approved.

Ordering Information

Model	Description	Listings
104-13	135°F (57°C), fixed temperature/rate-of-rise heat detector, single circuit	CSFM, UL 521, MEA
104-14	194°F (90°C), fixed temperature/rate-of-rise heat detector, single circuit	CSFM, UL 521, MEA
104-15	135°F (57°C), fixed temperature heat detector, single circuit	CSFM, UL 521, MEA
104-16	194°F (90°C), fixed temperature heat detector, single circuit	CSFM, UL 521, MEA



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