



FST-851, FST-851R, and FST-851H Thermal Detectors

Features

- State-of-the-art thermistor technology for fast response
- Rate-of-rise model (FST-851R), 15 °F (8.3 °C) per minute
- Factory preset at 135 °F (58 °C) (FST-851, FST-851R)
- High-temperature model FST-851H 190 °F (88 °C)
- Analog-addressable communication
- Direct 01-159* entry of address
- Visible LEDs “blink” every time the unit is addressed
- 360° field viewing angle of the visual alarm indicators (two bicolor LEDs)
- LEDs blink green in Normal condition and turn on steady red in Alarm
- Integral communications and built-in device-type identification
- Compact, stylish design
- Remote test feature from the panel
- Built-in functional test switch activated by external magnet
- Walk test with address display uses a blinking pattern on the detector LED (FlashScan® systems only)
- Low standby current
- Listed UL 521
- Built-in tamper-resistant feature
- Designed for direct-surface or electrical-box mounting
- Sealed against back pressure
- Separate base allows interchange of photoelectric, ionization and thermal sensors
- SEMS screws for wiring of the separate base
- 94-5V plastic flammability rating
- Remote LED output connection to optional RA400Z remote LED annunciator
- Optional sounder, relay, and isolator bases
- FlashScan® communication protocol

Applications

The FST-851, FST-851R, and FST-851H intelligent thermal detectors are used with the AUTOPULSE IQ-301 and IQ-396X Fire Alarm Systems to measure thermal levels caused by a fire and report the analog level of the thermal measurement to the control panel. The use of analog information provides significant benefits to the end user, installer, and service personnel in ways that are not possible with a conventional type system. Since this detector is addressable, it helps firefighters quickly locate a fire in its early stages.

The detectors are intended for use in commercial, industrial, and institutional buildings. Areas with relatively stable temperatures (no rapid changes) can use the FST-851R with the rate-of-rise feature for a quicker response.

Description

Each FST detector uses one of 159* possible addresses on a control panel SLC loop. It responds to regular polls from the control panel and it reports its type and status, including the analog level of its heat-sensing elements. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm analog level. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel (detector blink is optional). The FST detectors offer features and performance that represent the latest in thermal detector technology. The FST-851 and FST-851R can be used to replace the FDX-551, FDX-551R, FST-751, and FST-751R detectors in existing systems.

- ▶ FlashScan (U.S. Patent 5,539,389) is a new communication protocol that greatly enhances the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel’s CPU stops the group poll and concentrates on single points. The net effect is response speed **greater than five times** that of earlier designs.

The detectors are constructed of Bayblend® in an off-white color. The detector is designed to commercial standards and offers an attractive appearance.

The FST-851, FST-851R, and FST-851H plug-in intelligent thermal detectors use a separate base to simplify installation, service, and maintenance. Installation instructions are shipped with each detector. Mount base on box which is at least 1.5 in. (38.1 mm) deep.



FST-851 with B710LP Base

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Technical Information

- Operating Temperature: -4 °F to 100 °F (FST-851, FST-851R) (-20 °C to 38 °C)
- Operating Temperature (FST-851H): -4 °F to 150 °F (-20 °C to 66 °C)
- Operating Humidity Range: 10 to 93% relative humidity, noncondensing
- Operating Voltage/Current Range: 15 – 28 V (Peak DC), 5 mA current for visible LEDs latched on
- Detector Standby Current: 300 µA @ 24 VDC (one communication every 5 seconds with LED blink enabled)
- For bases B224RB or B224BI: <700 µA @ 24 VDC (includes detector)

* 01-99 with AUTOPULSE IQ-301 and IQ-396X

