

Overview

The GE 770 series projected beam smoke detector is intended for industrial and commercial applications. It consists of an optical transmitter that projects a pulsing infrared light beam to a receiver unit. The beam is then continuously analyzed for smoke by the 770 series control panel located at ground level. The control panel connects to a UL Listed FACP. The beam covers an area up to 330 feet by 50 feet.

The 770 series smoke detector allows the installation of just one smoke detector in applications where two or more spot sensors would normally be required, such as a hallway or atrium. When smoke is present in the beam path for a period of 8 to 10 seconds, a fire relay is activated. The smoke sensitivity level can be selected to suit different environmental needs. Settings of 25%, 35% and 50% are available. The 770 series smoke detector automatically resets once a trouble condition is no longer present and built-in drift compensation provides advanced immunity to nuisance alarms.

Standard Features

- Low-profile blends in with any environment
- Selectable sensitivity reduces installation costs
- Drift compensation reduces the chance of a nuisance alarm
- Adjustable mounting brackets and test filter included for fast, easy installation
- Detects smoke within a 33-330 foot range, reducing the installation costs
- Ground level electronics accommodate easy servicing

Projected Beam Smoke Detector

770 Series



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Technical Description

The 770 series optical beam smoke detector projects an infrared signal from the transmitter via an optical system. At 330 feet, the diameter of the beam is approximately 10 feet which simplifies alignment and provides stability.

The maximum detection coverage on either side of the beam is 25 feet, providing a maximum total area coverage of 16,500 square feet (50 ft. x 330 ft.). Long term degradation of the signal strength from component aging or the build up of dirt on optical surfaces will not generate a false alarm because of drift compensation provided by an automatic gain control (AGC) circuit. The AGC circuit compares the received signal to a standard at predetermined time intervals. Differences of more than 7% are corrected by the automatic selection of gain stages.

Note: If the beam is blocked 100%, a trouble condition is triggered instead of an alarm condition.

Technical Specifications

Operating Voltage	13.5 – 28 VDC
Typical average standby current	13mA
Typical average alarm current	20mA
Relay contacts	1 A @ 24VDC
Sensitivity	Photoelectric 25%, 35%, 50%
Beam tolerance to misalignment	Transmitter: +/- 1° at 35%; Receiver: +/- 4° at 35%
Operating Range	33 to 330 feet
Operating temperature	-4°F to 131°F (0° to 37°C)
Operating humidity	0 to 93% non-condensing
RFI Immunity	10 V/M @Khz-1 Ghz
Color	White
Field wiring size	14-24 AWG
Detector packaging	1 beam set/package and 1 control/package
Beam sets/control	1
Weight	Transmitter w/bracket: 12 oz Receiver w/bracket: 12 oz Control panel: 2.3 lbs.
Dimensions (w x h x d)	Transmitter head w/brackets: 4" x 3.25" x 3.75" Receiver head w/brackets: 4" x 3.25" x 3.75" Control panel: 8.5" x 10.5" x 3.5"
Reset time	<5 second
Warranty	3 years
Listing	UL

Ordering Information

Model Number	Description
771-Kit	4-wire, projected beam type detector, transmitter, receiver and control, UL listed
Accessories	
770-Meter	LED alignment meter