SIEMENS

Data Sheet
Fire Safety Products

Specialized Detection Devices

F5000 Reflective Optical Beam Smoke Detector

ARCHITECT AND ENGINEER SPECIFICATIONS

- **Range of 26.25 ft. to 330 ft.** (8.0 to 101 meters)
- **Modular design**
- **Easy-fit mounting system**
- **Ground-level system controller**
- **LASER-assisted prism mounting**
- ***AutOptimise* beam alignment**
- **Electronic-obscuration test**
- **Remote display and control unit with liquid-crystal display (LCD) backlight**
- **Contamination compensation**
- **Building-shift compensation**
- **Separate *alarm* and *trouble* contacts**
- **Password-protected settings**

- **Current monitoring for gimbals motor position**
- **User feedback of operating parameters**
- **ULUL268 Listed; CSFM (#7260-1508:0104) Approved**

Product Overview

The Reflective Beam Detector System (Model F5000) from Siemens — Fire Safety is an auto-aligning, infrared-beam smoke detector. Once the detector head is installed, an integral LASER can be activated — via the easy-fit mounting system — that is aligned along the optical path of the infrared beam. The LASER allows the reflective prism to be quickly located.

The *AutOptimise* beam alignment system then takes over, automatically steering and maintaining the beam in the optimum position for reliable performance. The signal that is generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an *Alarm* condition when a pre-determined level is reached.

The Projected Beam Smoke Detector is designed to be mounted in a manner that allows the beam to project between 1ft. (0.3m.) and 2ft. (0.61m.) below, as well as project parallel to the ceiling.

Lateral detection may be up to 30ft. (9.14m.) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60 ft. [18.3m.] –**x**– 330 ft. [101m.]) Model F5000 can interface with Siemens 50-point, 252-point and 504-point addressable systems, as well as FireFinder® XLS/XLSV Fire-Alarm Control Panels (FACPs), via the use of the following Siemens modules: Models FDCIO422, HTRI, or HZM.

Specifications

The projected beam-type smoke detector is a 4-wire, 24 VDC device to be used with a ULUL Listed and separately supplied, (4) four-wire FACP. Model F5000 receives operating power by any ULUL category 'UTRZ' power supply, such as the Siemens PAD-series NAC extenders. Model F5000 is ULUL268 Listed, and consists of an integrated transmitter, receiver and remote control unit. Model F5000 operates between 26.25 ft. to 330 ft. (8.0 to 101 meters).

Each unit includes a wall-mount remote display and controller with LCD backlight.

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Specifications — (continued)

The beam detector features automatic gain control, which will compensate for gradual signal deterioration from dirt accumulation on the lenses of Model F5000.

Model F5000 includes the *AutoOptimise* Beam Alignment feature to ensure maximum-signal availability, and is capable to compensate for any shift of a building's structure.

A ®UL Listed, internal-obscuration test must be utilized for testing Model F5000. The Reflective Optical Beam Smoke Detector must be a Fire Fighting Enterprises Fireray 5000, Model F5000.

Temperature Range

Model F5000 is able to operate between -4°F and 131°F (-20°C and 55°C).

Technical Data

Physical Properties

Housing:	Flame Retardant ABS
Finish:	Light Grey / Black
Weight:	Head & Controller 3.24 Lbs (1.47 kg)
Dimensions: [Head]	5.28" [H] –***x***– 5.28" [L] –***x***– 5.16" [W] (13.4 cm. [H] –***x***– 13.4 cm. [L] –***x***– 13.1cm [W])
Dimensions: [Controller]	3.43" [H] –***x***– 9.06" [L] –***x***– 7.95" [W] (8.71 cm. [H] –***x***– 23.0 cm. [L] –***x***– 20.2 cm. [W])
Dimensions: [Prism]	0.37" [H] –***x***– 4.13" [L] –***x***– 3.94" [W] (0.94 cm. [H] –***x***– 10.5 cm. [L] –***x***– 10 cm [W])

Electrical Ratings

Primary Input Power:	14 to 36 VDC
Standby Current Draw:	**Low Current Mode**: 5 - 8.5 mA @ 24VDC (depending on the quantity of detector heads used) **High Current Mode**: 37mA @ 24VDC
Alarm Current:	5 - 8.5 mA @ 24VDC (depending on the quantity of detector heads used)
Relay Contacts:	1A @ 30 VDC, resistive
Reset Time:	:05 seconds, maximum
Start-Up Time:	:45 seconds
Optical Wavelength:	850nm.
Sensitivity:	10% - 60% obscuration (% per foot) Default value = 35% obscuration (per foot)
Temperature Range:	-4°F to 131°F (-20°C to +55°C) For ®UL Listed installations: 32°F to 100°F (0°C to 37.8°C)
Relative Humidity:	0% to 93%, non-condensing
Range:	26.25ft. to 330ft. (8.0m. to 101m.)

Details for Ordering

Model	Part Number	Description
F5000*	500-050261	Reflective beam smoke detector
5000-031	S54331-Z1-A1	(1) one prism and one (1) detector head for use with Model F5000
23901	500-050269	Replacement prism for Model F5000
5000-004	500-050270	Long-range prism kit
5000-005	500-050273	Surface-mount universal bracket for Model F5000
5000-006	500-050274	Surface-mount wall bracket for prisms
5000-007	500-050275	(4) four-prism alignment adaptor for use with Model 5000-005
5000-008	500-050276	(1) one-prism alignment adaptor for use with Model 5000-005
5000-009	500-050277	Model F5000 controller back box
5000-010	500-050278	Semi-flush trim plate for controller back box
5000-011	500-050279	Model F5000 detector back box
5000-012	500-050280	Cover plate for Model 5000-011 detector back box
5000-014	500-050281	Ceiling-pendant mount (universal bracket) for Model F5000
5000-017	500-050282	Model F5000 detector-wire cage

***NOTE**: Each Model F5000 project beam smoke detector includes one (1) controller, one (1) detector head, and one (1) prism.

NOTE: Each controller supports two (2) detector heads, max.

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.

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