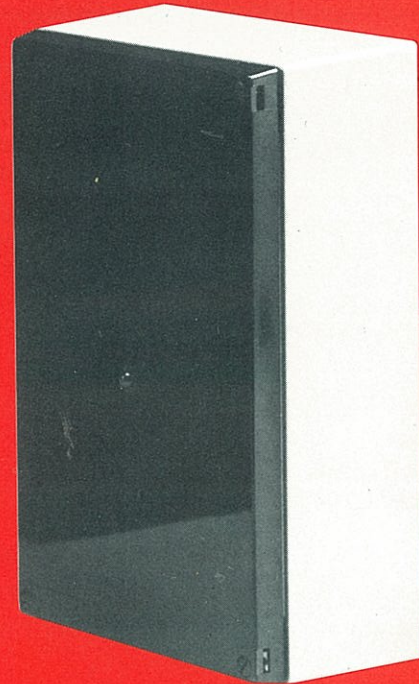
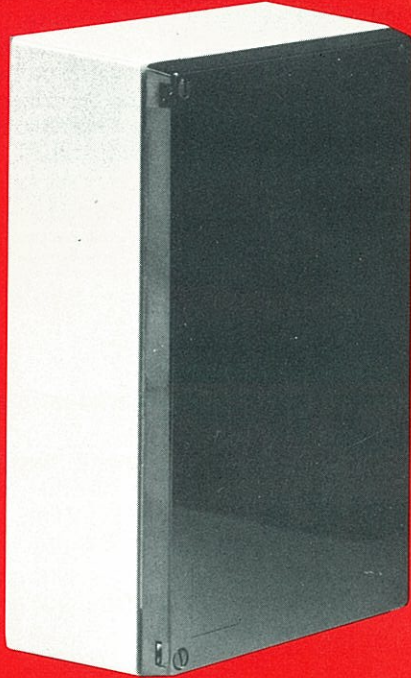


DATA SHEET 4080



Linear Beam Smoke Detector



Features

- Provides linear detection of light and dark smoke over distances ranging from 35 to 300 feet.
- Unobtrusive design; ideally suited for churches, museums, hotel atriums, etc.
- Unique operating principle solves many difficult installation and application problems.
- 2-wire operation.
- Exceptional long-term stability.
- Automatic compensation for slow dust accumulation, component aging, and temperature changes.
- Factory calibrated, field selectable sensitivity adjustments.
- Discriminates between smoke build-up and beam blockage.
- U.L. 268 Listed.

General

The A2400 Linear Beam Detector is capable of monitoring over long distances to provide reliable, early responses to smoke produced from a wide spectrum of fires. It consists of separate transmitter and receiver units mounted on opposite walls within the

detection area. Together they detect light or dark smoke build-up between distances ranging from 35' (11 m) to 300' (92 m).

Applications

Designed to supplement and/or in some cases replace conventional smoke detectors, the A2400 was developed to solve many difficult applications. It is ideal for large or narrow rooms such as corridors, storerooms, factories, aircraft hangars, high rack storage areas, and rooms with high air turbulence.

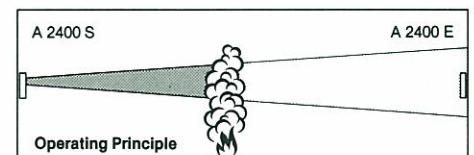
The aesthetically designed, wall-mounted A2400 is also ideally suited for churches, museums, hotel atriums, and other prestigious buildings where ceilings are inaccessible; or in applications where the architectural beauty cannot be blemished by installing conventional ceiling mounted detectors.

Other applications include small rooms divided by glass panels and high security areas such as correction institutions and psychiatric facilities.

Operation

The A2400 Linear Beam Detector consists of a light transmitter (A2400S),

which emits an invisible modulated infrared beam, and a light receiver (A2400E) that evaluates various beam conditions. Under normal (no smoke) conditions the receiver senses the beam at a specific signal level. When smoke passes through the beam, the infrared light is attenuated. If the received signal falls below a field programmable sensitivity level the receiver will actuate an alarm condition. A latching alarm LED is built into the cover of the receiver. Long-term changes to the received signal caused by environmental variations are offset by the receiver's compensation circuit. If the beam is obstructed, the limits of the compensation circuit is reached, or the housing cover is removed, the receiver will signal a trouble condition.



DATA SHEET 4080

Self-Monitoring

The A2400 is self-monitoring to provide exceptional long-term stability. An automatic digital compensation circuit adjusts smoke detection circuitry to allow for slow dust accumulation, component aging and temperature changes. The unit is also capable of discriminating between smoke obscuration patterns vs. temporary beam interruption.

System Compatibility

The A2400 is designed to operate with Gamewell Flexalarm control panels utilizing 2-wire alarm initiating circuits. A 16-pin compression-type terminal block in each unit provides easy connection of system wiring, end-of-line devices, and a remote indicator. Internally connected input/output terminals allow flexible system interconnect configurations. Due to current consumption, only two units per zone may be connected to the system (i.e., 1 transmitter and 1 receiver, or 2 receivers with their transmitters powered by an auxiliary supply).

Mixing A2400's with other types of smoke detectors and shorting type alarm initiating devices within the same zone is not recommended.

Installation

Easily installed in new or existing buildings, the A2400 is designed for surface, semiflush, or recessed mounting on parallel walls slightly below ceiling level. The mounting surface must be vibration free (preferably concrete or brick) and not be subject to thermal expansion. The detector housing has provisions for direct conduit connections (1/2 inch) for surface-mounting applications. An adaptor plate (69197) is available for concealed conduit-mounting applications using any standard electrical box.

The infrared beam can be adjusted up to 10% in any direction around the principal axis to allow optimum mounting location.

Accessories

Adjustment Lamp

An adjustable lamp (69200) is available to facilitate lens alignment during installation. The lamp mounts directly in front of the lens and projects a steady or flashing (for greater visibility at long distances) visible light beam towards the opposite unit.

Test Filters

A kit containing three alarm test filters is optionally available to facilitate installation and servicing. The test filters simulate 25, 40, and 65% smoke obscurations to verify proper systems operation of each programmable alarm sensitivity level. One 65% test filter is shipped with each unit.

Electrical Characteristics

Operating Voltage	18-30 Vdc
Standby Current (Typical)	
A2400E (depending on distance)	0.7-1.3 mA
A2400S	1.2 mA
Alarm Current	60 mA at 24 Vdc
Operating Distance	35' to 300' (11-91 m)
Operating Temperature	13° to 140° F (- 10 to + 60° C)

Physical Characteristics

Dimensions:

A2400 (Transmitter & Receiver)

Height: 7.1" (18 cm)

Width: 4.4" (11.2 cm)

Depth: 2.7" (6.8 cm)

Weight: 2400S 2 lbs. (900 grams)

2400E 2 lbs. (900 grams)

Ordering Information

Supplied	Part Number	Description
<input type="checkbox"/>	69121	A2400S (Transmitter).
<input type="checkbox"/>	69124	A2400E (Receiver).
<input type="checkbox"/>	69197	Universal mounting plate for installations using any standard electrical box.
<input type="checkbox"/>	69200	Adjustment lamp used for lens alignment.
<input type="checkbox"/>	30464	Kit containing three alarm test filters that simulate 25, 40, and 65% smoke obscuration to verify proper operation.



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