NO EXCUSES!

FE-F2000 EExd

Explosion Proof Projected Beam

The Fireray 2000 EExd is ideally suited to protect large areas with potentially explosive atmospheres, protection against smoking fires can be provided by this beam. Fireray 2000 EExd includes an infrared transmitter and a receiver, both of which are ATEX-certified for use in Group 2 hazardous areas (comparable to US CSA Certification for use in Class 1, Division 2, Groups A, B, C & D hazardous locations). There is a separate , safe area, wall-mounted remote low level control unit to allow adjustment and testing from a convenient non-hazardous location.

The product is designed for large enclosures with oil rigs, refineries, ordinance stores, waste water treatment plants, and similar premises. It provides an early warning of smoldering smoke-generated fires, some of which may not be picked up by flame detectors installed in many hazardous areas.

Smoke Detection

If smoke is present in the beam's path, the received signal is reduced by a level determined by the density of the smoke. If the smoke reduces the signal strength to between the obscuration threshold and 93% for more than 8 to 10 seconds, the fire alarm relay in the control unit is activated. The alarm threshold may be set to 25%, 35% or 50% to suite the installation.

Standard Features:

- Separate Transmitter and Receiver Units certified to EExd
- Signal Strength indicating LED's
- Range 33ft. to 330ft. (10m to 100m)
- Easy set up and alignment
- Internal test switch
- Conforms to BS5839 Part 5 EExd IIB T6
- 3 selectable alarm thresholds: 25%, 35% or 50%
- Alarm latching or auto reset
- Automatic gain control
- 12 VDC or 24 VDC operation
- Separate alarm and trouble relay contacts
- Ground Level Control Unit
- Alignment by Universal Bracket

Operation:

The infrared signal is sent from the transmitter via an optical system. At 330 ft. (100m) the diameter of this infrared signal is approximately 10 ft. (3.05m). The wide angle beam arrangement simplifies alignment and increases stability.

It is important that the projected beam smoke detector is positioned correctly to minimize the detection time.

A fire alarm condition occurs when the smoke obscures the infrared beam. The time to detect a fire condition depends on the location of the smoke beam within the premises, the volume of smoke produced, the construction of the roof, and ventilation considerations.

NFPA®

NEMA

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SPACE AGE ELECTRONICS, INC.

Specifications:

The projected beam type smoke detector shall be a 4-wire 12/24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. The unit shall consist of an integrated transmitter and receiver. The detector shall operate between the range of 33ft to 330ft (10m to 100m). The temperature range of the beam shall be –4ºF to +131ºF (-20ºCto +55ºC). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lense. The beam detector shall be ATEX Certified, comply with BS5839 Part 5 and meet Eexd IIB T6 temperature range requirments. The unit shall include one wall mount alignment bracket. Testing shall be carried out by using a calibration test filter. The projected beam smoke detector shall be a Space Age Electronics, Inc. Fireray 2000 EExd.

Beam Detector Spacing:

On smooth ceilings, up to 60ft. (18.288m) between projected beams and not more than one-half that spacing between a projected beam and a side wall. Other spacing may be used depending on ceiling height, airflow characteristics and response requirements. See NFPA 72 for further information

Electrical Specifications:

Primary Input Power
11.5 to 30 VDC
Protection:
100ma Fuse in Control unit
Standby Current
8.5mA @ 24VDC
Alarm Current
16.5 mA @ 24 VDC
Relay Contacts
2A at 30 VDC, resistive
Reset Time
5 Seconds maximum
Start Up Time (Automatic)
45 Seconds
Optical Wavelength:
880nm.
Temperature Rating:
-4°F to 131°F (-20°C to +55°C)
Relative Humidity:
0% to 93% RH non-condensing
Operational Range:
33 ft.- 330 ft. (10m - 100m)
RFI Immunity:
10V/m @ KHz-1 GHz
Field wiring size:
14-24 AWG

Sensitivity:
25%, 35%, 50%
Fire Alarm Thresholds:
1.25dB (25%), 1.87dB (35%), 3dB (50%)
Beam tolerance to misalignment at 35%:
Transmitter +/- 1°
Receiver +/- 4°
Weight-Controller:
4.00 lbs (1.8 kg)
Weight-Transmitter/Receiver:
8.8 lbs. (4 kg.)
Dimensions-Controller:
8.5" W x 10.5" H x 3.5" D
(210mm W x 265mm H x 88mm D)
Dimensions-Transmitter/Receiver (including mounting brackets):
4.8" W x 4.8" H x 4.8" D
(120mm W x 120mm H x 120mm D)
Unit shipping weight 18.5 lbs.

Approvals:

ATEX	Group 2
Sira	03ATEX1504
BS5839	Part 5 EExd IIB T6

This Product Manufactured by
Fire Fighting Enterprises

Ordering Information:

Part #	Description
FE-F2000 EExd	Explosion Proof Projected Beam Detector

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