



System Sensor BEAM 1224 Series

by Honeywell

Description

The System Sensor BEAM1224 Series 4-wire projected beam smoke detector is uniquely suited to sense smoke in open areas with high ceilings where spot-type detectors are difficult to install and maintain. It is suitable for use with any UL® Listed fire alarm control panel providing a 15-32 VDC power source.

The single-ended reflective design offers a simpler installation than the traditional transmitter and receiver types of beam detectors.

Alignment is swiftly accomplished via an optical sight and a 2-digit signal strength meter integral with the product.

Listed for operation from -22° F to 131° F, the BEAM1224 can be installed in garages, warehouses and other harsh environments where the temperature extremes exceed the capability of spot-type detectors.

The BEAM1224 consists of a combination transmitter/receiver unit and a reflector. When the smoke enters the path between the unit and the reflector, it causes a reduction in the signal, and when the smoke level reaches the predetermined threshold, an alarm results.

The unit has four standard sensitivity selections along with two Acclimate settings. When either of the two Acclimate settings are selected, the detector will automatically adjust its sensitivity using the advanced software algorithms to select the optimum sensitivity for the specific environment.

The BEAM1224S is equipped with an integral sensitivity test feature consisting of a test filter attached to a servo motor inside the detector optics. Using the remote test station Model RTS451, the motor moves the filter in the path of the light beam, thereby serving as an accurate test of the receiver sensitivity. This test feature allows the user to quickly and easily comply with the annual maintenance and test requirements of NFPA 72.

Single-Ended Reflected Type Beam Smoke Detector



BEAM1224 WITH REFLECTOR

Features

- Listed to UL® Standard 268.
- Offers a single-ended, reflective design.
- Includes six user-selectable sensitivity levels.
- Projects a 16ft. to 328 ft. (4.9 to 9.10 m) detection range.
- Compatible with UL Listed 24 VDC control panels.
- Provides an integral sensitivity test feature (BEAM1224S).
- Has a digital display - no special tools required.
- Contains a user-friendly alignment procedure.
- Operates with an integral automatic gain control that compensates for signal deterioration from dust build-up.
- Uses a remote test station (optional).

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Figure 1 BEAM1224 with BEAMMK-1 Multi-Mount Kit

Electrical Specifications

Operating Voltage:	10.2 to 32 VDC (BEAM1224) 15 to 32 VDC (BEAM1224S)
Standby Current:	.017 A (max. @ 24 VDC)
Alarm Current:	.0385 A (max. @ 24 VDC)
Fault Current:	.0085 A (max. @ 24 VDC)
Alignment Mode Current:	.028 A (max. @ 24 VDC)

Environmental Specifications

Operating Temperature:	-22° to 131° F (-30° to 55° C)
Humidity:	10 - 93% (non-condensing)

Dimensions

Detector:	10" H x 7.5" W x 3.3" D (254 mm x 191 mm x 84 mm)
Reflector (16 to 230'):	7.9" x 9.1" (200 x 230 mm)
Reflector (over 230'):	15.7" x 18.1" (400 x 600 mm)

LED Indicators:

- Red - Alarm
- Yellow - Trouble
- Green - Normal (flashing)

Switches:

- Local Test
- Local Reset
- Remote test and reset (Compatible with RTS451 and RTS151KEY test station).



Figure 2 RTS-452KEY

Operating Specifications

Protection Range:	16 to 328 Ft. (5 to 100 m)
Adjustment Angle:	+/- 10 Degrees horizontal & vertical
Sensitivity - 6 Levels:	Level 1 - 25% Level 2 - 30% Level 3 - 40% Level 4 - 50% Acclimate Level 1 - 30-50% Acclimate Level 2 - 40-50%
Fault Condition:	(Trouble) 96% or higher obscuration In alignment mode: Improper initial alignment, self-compensation limit reached.
Alignment Aid:	Optical gunsight, integral signal strength indication, 2-digit display.
Spacing:	On smooth ceilings, 0 - 60 feet max. between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on the ceiling height, air-flow characteristics, and response requirements. See NFPA 72.

Ordering Information

Part Number	Description
BEAM1224	Beam Detector
BEAM1224S	Beam Detector w/sensitivity Test
BEAMLRK	Long Range for applications with range over 230 ft. (70m)
BEAMMMK	Multi-mount Kit
BEAMSMK	Surf. Mount Kit
RTS151	Remote Test Station
RTS151KEY	Remote Test Station w/ Key lock

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