

BEAM 1224 & BEAM 1224S

Single-Ended, Reflected-Type Conventional Beam Smoke Detector



Conventional Initiating Devices

General

The Notifier BEAM1224 and BEAM1224S are four-wire conventional projected beam smoke detectors. They are uniquely suited for protecting open areas with high ceilings where spot-type smoke detectors are difficult to install and maintain. Installation of the single-ended reflective design is much quicker than a dual ended projected beam detector.

Alignment is easily accomplished with an optical sight and a two-digit signal strength meter incorporated into the beam detector. Listed for operation from -30°C to 55°C , the BEAM1224 and BEAM1224S can be used in open area applications to provide early warning in environments where temperature extremes exceed the design limits for other types of smoke detection.

The BEAM1224 and BEAM1224S are a transmitter/receiver unit and a reflector. When smoke enters the area between the unit and the reflector, it causes a reduction in the signal strength. When the smoke level (signal strength) reaches the predetermined threshold, an alarm is activated. The detectors have four standard sensitivity selections as well as two Acclimate™ settings. When either Acclimate™ setting is selected, the detector will automatically adjust its sensitivity using advanced software algorithms to select the optimum sensitivity for the specific environment.

The BEAM1224S has an integral sensitivity test feature of a filter attached to a servomotor inside the detector optics. Activation of the RTS451 remote test station moves the filter into the pathway of the light beam, testing the detector's sensitivity. This sensitivity test feature allows the user to quickly and easily meet annual maintenance and test requirements, without physical access to the detector.



Features

- Transmitter/receiver built into same unit.
- Six user-selectable sensitivity levels.
- 5m to 70m (use BEAMLRK beyond 70m) protection range.
- Removable plug-in terminal blocks.
- Digital display - no special tools required.
- Built-in automatic gain control compensates for signal deterioration from dust buildup.
- Optional remote test station.
- Optional long-range kit (BEAMLRK) for applications in excess of 70 m.
- Optional multi-mount kit (BEAMMMK) providing ceiling or wall mount capability with increased angular adjustment.
- Optional heater kits (BEAMHK and BEAMHKR) for prevention of condensation (not intended to increase or reduce the specified operating temperature).

Approvals

CSIRO ActivFire listed to AS 1603.7 - 1996 (afp-2082)

Specifications:

Range:	5 to 70m 70 to 100m using optional accessory BEAMLRK												
Sensitivity:	25% to 50% Total Obscuration in 6 levels Level 1 = 25% Level 2 = 30% Level 3 = 40% Level 4 = 50% Level 5 = 30% to 50% (Acclimate) Level 6 = 40% to 50% (Acclimate)												
Response Time:	Alarm: 20 seconds typical Trouble: 30 seconds typical												
Trouble Conditions:	Beam Blockage (96% or more obscuration) Improper Initial Alignment Self-compensation limit reached (service needed) In Alignment mode												
Test/Reset Features:	Integral Sensitivity Test Filter (BEAM1224S only) Sensitivity Filter (Incremental scale on reflector) Local Alarm Test Switch Local Alarm Reset Switch Remote Test and Reset Switch Capability (compatible with RTS451/RTS451KEY)												
Indicators:	<table><tr><td>Alarm:</td><td>Remote Output, Local LED (red)</td></tr><tr><td>Trouble:</td><td>Remote Output, Local LED (yellow) Blink Pattern Indicates Trouble Diagnostics</td></tr><tr><td>Normal Operation:</td><td>Local LED (flashing green once every 5 sec)</td></tr><tr><td>Alignment Aids:</td><td>Optical Gunsight (coarse adjustment) 00 to 99 Digital Display (fine adjustment)</td></tr><tr><td>Relays:</td><td>Alarm, Trouble</td></tr><tr><td>Sensitivity:</td><td>Digital Display Readout in Percent Obscuration</td></tr></table>	Alarm:	Remote Output, Local LED (red)	Trouble:	Remote Output, Local LED (yellow) Blink Pattern Indicates Trouble Diagnostics	Normal Operation:	Local LED (flashing green once every 5 sec)	Alignment Aids:	Optical Gunsight (coarse adjustment) 00 to 99 Digital Display (fine adjustment)	Relays:	Alarm, Trouble	Sensitivity:	Digital Display Readout in Percent Obscuration
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Product Line Information

BEAMLRK:	Long range accessory kit (required for applications in excess of 230 ft/70 m).
BEAMMMK:	Multi-mount kit (provides ceiling or wall mount capability with increased angular adjustment).
BEAMSMK:	Surface-mount kit.
RTS451KEY:	Remote test station with key lock.

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