BEAM200 and BEAM200S Single-ended Reflected Type Beam Smoke Detectors



The BEAM200 and BEAM200S single-ended reflected beam smoke detectors are uniquely suited for protecting open areas with high ceilings where other methods of smoke detection are difficult to install and maintain.

Features

- 16 to 328 foot protection range
- Single-ended, reflective design
- Easiest alignment in the industry with digital display
- 6 field selectable sensitivity levels
- Optional integral NFPA 72 sensitivity test feature
- Removable plug-in terminal blocks
- Built-in automatic gain control compensates for signal deterioration from dust build-up
- Remote test station available
- Paintable cover
- Optional heater kits available

Agency Listings

UL LISTED S911

FM APPROVED 3017888

7260-1209:229

MEA approved 53-04-E

MSFM approved 2165

The System Sensor BEAM200 and BEAM200S intelligent reflected beam smoke detectors are designed to be used with UL Listed compatible control panels only. Since all of the wiring is connected to one side, the installation of the single-ended reflective design is much easier than dual-ended projected beam detectors. Alignment is accomplished quickly via an optical sight and a 2 digit signal strength meter incorporated into the product. Listed for operation from −22°F to 131°F, the BEAM200 detector can be used in open area applications to provide early warning in environments where temperature extremes exceed the capability of other types of smoke detection.

The BEAM200 smoke detector includes one wired transmitter/receiver unit and one reflector. When smoke enters the area between the unit and the reflector it causes a reduction in the signal. The alarm is activated when the smoke level reaches the predetermined threshold.

The BEAM200 device has four standard sensitivity selections along with two Acclimate™ settings. When either of the two Acclimate settings are selected, the detector automatically adjusts its sensitivity using advanced software algorithms to select the optimum sensitivity for the specific environment.

The BEAM200S model is equipped with an added feature, an integral sensitivity test feature that uses a test filter attached to a Servo motor inside the detector optics. Using the remote test station RTS451, the motor is activated and moves the filter in the pathway of the light beam, thereby testing detector sensitivity. This integral sensitivity test feature allows the user to quickly and easily meet the annual maintenance and test requirements of NFPA 72.

BEAM200 and BEAM200S Specifications

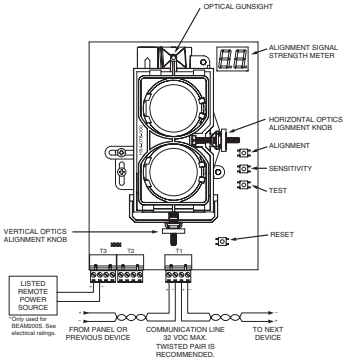
Operational Specifications	
Protection Range	16 ft to 328 ft (5 m to 100 m)
Adjustment Angle	±10 Degrees horizontal & vertical (The optics move independent of the unit)
Sensitivity Levels	Level 1 – 25% Level 2 – 30% Level 3 – 40% Level 4 – 50% Acclimate™ Level 1 – 30 to 50% Acclimate Level 2 – 40 to 50%
Fault Condition (Trouble)	96% or more obscuration blockage In alignment mode Improper initial alignment Self-compensation limit reached
Alignment Aid	Optical gunsight Integral signal strength indication 2 digit display
Alarm Indicator	Local red LED and remote alarm
Trouble Indicator	Local yellow LED and remote trouble
Normal Indicator	Local flashing green LED
Test/Reset Features	Integral Sensitivity Test Filter (BEAM200S only, requires additional external power supply) Sensitivity filter (Incremental scale on reflector) Local test switch Local reset switch Remote test and reset switch (Compatible with RTS451 and RTS451KEY test station)
Smoke Detector Spacing	On smooth ceilings, 30 to 60 feet 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 ceiling height, airflow characteristics, and response requirements. See NFPA 72.

Environmental Specifications	
Temperature	–22°F to 131°F (–30°C to 55°C)
Humidity	10 to 93% RH Noncondensing
Electrical Specifications	
Voltage	15 to 32 VDC
Avg. Standby Current (24VDC)	2 mA Max
Avg. Current During Testing	500 mA Max
Alarm Current (24VDC)	8.5 mA Max
Fault Current (24VDC)	4.5 mA Max
Alignment Mode Current (24VDC)	20 mA Max
Mechanical Specifications	
Detector Dimensions	10 in H × 7.5 in W × 3.3 in D (254 mm H × 191 mm W × 84 mm D)
Reflector Dimensions (16′ to 230′)	7.9 in × 9.1 in (200 mm × 230 mm)
Reflector Dimensions (beyond 230′)	15.7 in × 18.1 in (400 mm × 460 mm)

Electrical Specifications (BEAMHK)	
Voltage	15 to 32 V
Current	92 mA at 32 V
Power Consumption	1.6 W at 24 V; 3 W at 32 V

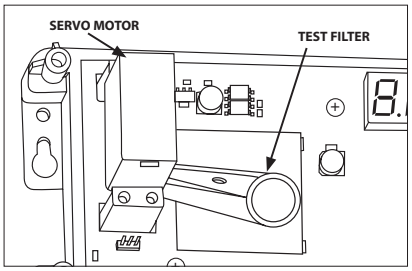
Electrical Specifications (BEAMHKR)	
Voltage	15 to 32 V
Current	450 mA Max at 32 V (per reflector)
Power Consumption	7.7 W at 24 V; 15 W at 32 V (per reflector)

BEAM200(S) Parts



Activated Test Feature

(BEAM200S only)



Ordering Information

Part No.	Description
BEAM200	Intelligent beam smoke detector with 8˝ reflector
BEAM200S	Intelligent beam smoke detector with 8˝ reflector and integral sensitivity test
Accessories	
BEAMLRK	Long range accessory kit (3) additional reflectors (Required for applications in excess of 230 ft [70 m])
BEAMMMK	Multi-mount kit (Provides ceiling or wall mount capability with increased angular adjustment for either the beam or the reflector. When installed with the transmitter/receiver unit, BEAMSMK must be used as well)
BEAMSMK	Surface mount kit for use with BEAMMMK
6500-MMK	Heavy duty multi-mount kit (for installations prone to vibration or where there is difficulty in maintaining the set angle. When installed with the transmitter/receiver unit, 6500-SMK must be used as well)
6500-SMK	Surface mount kit for use with the 6500-MMK
BEAMHK	Heater kit for transmitter/receiver unit (See electrical requirements above)
BEAMHKR	Heater kit for reflector (See electrical requirements above)
RTS451KEY	Remote test station with key lock
RTS451	Remote test station used to initiate the NFPA sensitivity test function

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