Model BEAM200(S)
Single-ended Reflected Type
Beam Smoke Detector
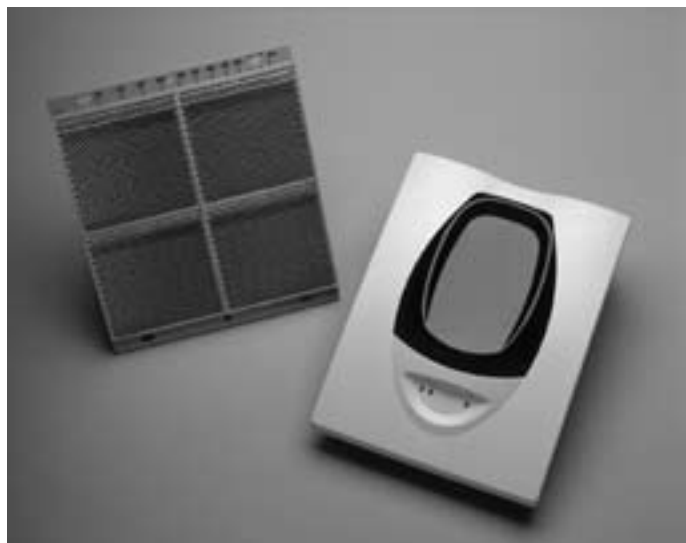
SYSTEM SENSOR®

Models Available

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 (Required for applications in excess of 230 ft. [70m])
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
RTS451	Remote test station – used to initiate the NFPA sensitivity test function
RTS451KEY	Remote test station with key lock
BEAMHK	Heater kit for transmitter/receiver unit (See electrical requirements on back)
BEAMHKR	Heater kit for reflector (See electrical requirements on back)

Product Overview

16 to 328 foot protection range

Single-ended, reflective design

User friendly alignment procedure

6 user selectable sensitivity levels

Optional integral NFPA 72 sensitivity test feature

Removable plug-in terminal blocks

Digital display for easy alignment

Built-in automatic gain control compensates for signal deterioration from dust build-up

Remote test station optional

Paintable cover

Easiest alignment in the industry

System Sensor Model BEAM200 is an intelligent projected beam smoke detector. It is uniquely suited for protecting open areas with high ceilings where other methods of smoke detection are difficult to install and maintain. It is to be used with UL Listed compatible control panels only. Installation of the single-ended reflective design is much easier than dual ended projected beam detectors. Alignment is quickly accomplished via an optical sight and a 2-digit signal strength meter incorporated into the product. Listed for operation from –22°F to 131°F, BEAM200 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.

BEAM200 consists of 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 and, when the smoke level reaches the predetermined threshold, an alarm is activated.

BEAM200 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 advanced software algorithms to select the optimum sensitivity for the specific environment.

BEAM200S is equipped with an integral sensitivity test feature that consists of 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.

UL LISTED S911   FM APPROVED 3017888   7260-1209:229   MEA approved 53-04-E   MSFM approved 2165

Operational Specifications

Protection Range
16 ft. to 328 ft.
(5m to 100m)

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 – 30–50%
Acclimate Level 2 – 40–50%

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

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, 30–60 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
10–93% RH Noncondensing

Electrical Specifications

Voltage
15 to 32 VDC

Avg. Standby Current (24VDC)
2mA Max

Avg. Current During Testing
500mA Max

Alarm Current (24VDC)
8.5mA Max

Fault Current (24VDC)
4.5mA Max

Alignment Mode Current (24VDC)
20mA Max

Mechanical Specifications

Detector Dimensions
10″H × 7.5″W × 3.3″D
(254mmH × 191mmW × 84mmD)

Reflector Dimensions (16′ to 230′)
7.9″ × 9.1″ (200 × 230mm)

Reflector Dimensions for (beyond 230′)
15.7″ × 18.1″ (400 × 460mm)

Electrical Specifications (BEAMHKR)

Voltage
15 to 32V

Current
450mA Max at 32V (per reflector)

Power Consumption (Per reflector)
7.7W @ 24V; 15W @ 32V

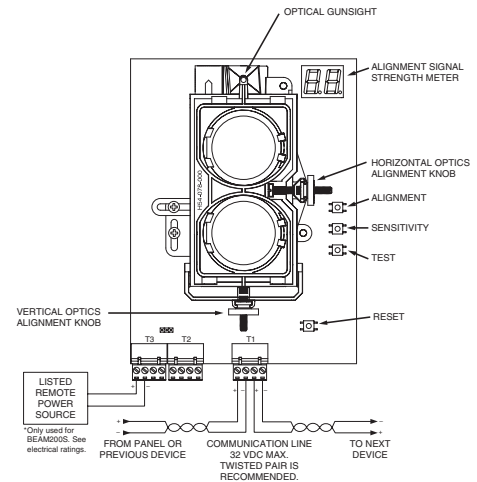## Electrical Specifications (BEAMHK)
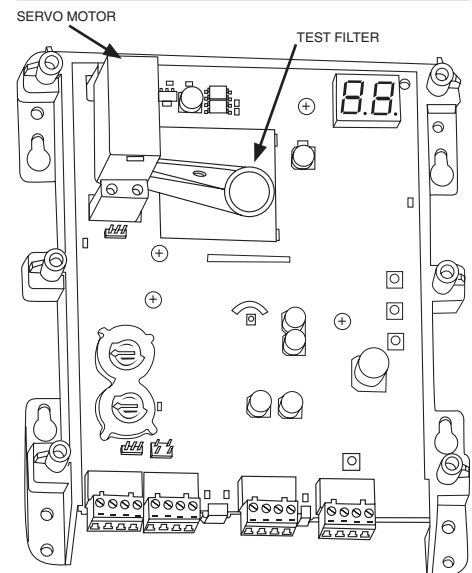
Voltage
15 to 32V

Current
92mA at 32V

Power Consumption
1.6W @ 24V; 3W @ 32V

C0382-00

Activated Test Feature (BEAM200S ONLY)

BEAMMMK
(detector and surface mount kit not included)