

**SERIES 200 plus**

Optical Smoke Beam Detector  
Model 6500 and 6500S

**Product Overview****Features**

- Unique servo-operated test filter
- Combined transmitter and receiver unit
- Range 5 – 100 metres (6500S)
- 4 x fixed sensitivity/threshold levels
- 2 x automatic variable sensitivity modes
- Operates in the Infra-Red light spectrum
- Numerical indicators to aid beam alignment
- Standby, fault and alarm LED indicators visible from the front and bottom
- $\pm 10^\circ$  horizontal and vertical beam alignment
- Automatic drift compensation
- Uses the Series 200 plus protocol
- Loop powered
- Complies to EN54 – 12:2002 (Amendment 1)
- Extended Warranty

**Description**

The 6500S and 6500 are addressable reflector-type linear optical beam smoke detectors designed to operate as a component of an intelligent fire alarm system. They operate primarily on the principle of light obscuration utilising an Infra-Red beam. Optical beam smoke detectors are particularly appropriate for protecting buildings with large open spaces such as warehouses, atriums etc.

The 6500S and 6500 detectors are combined transmitter/receiver units that can be directly connected to an analogue loop circuit. The Infra-Red transmitter generates a beam of light towards a high efficiency reflector. The reflector returns the beam to the receiver where an analysis of the received signal is made. The change in the strength of the received signal is used to determine the alarm condition. The 6500S features a unique remote test capability that fully tests both the optics and the electronics of the device. An optical filter is automatically introduced in front of the optics, attenuating the returned beam and causing the unit to go into alarm.

Alignment of the detector is simplified with the aid of the detector's "gunsight" targeting device. Alignment of the detector with the reflector can then be "fine tuned" with the aid of a numerical signal strength indicator.

The sensitivity of the detector can be set to between 25% and 50% obscuration, providing application flexibility to suit the environment in which the detector will be installed. In addition to the four fixed value alarm thresholds, there are two variable thresholds that automatically compensate for changes in the environment which could otherwise result in unwanted alarms while remaining within a known sensitivity range.

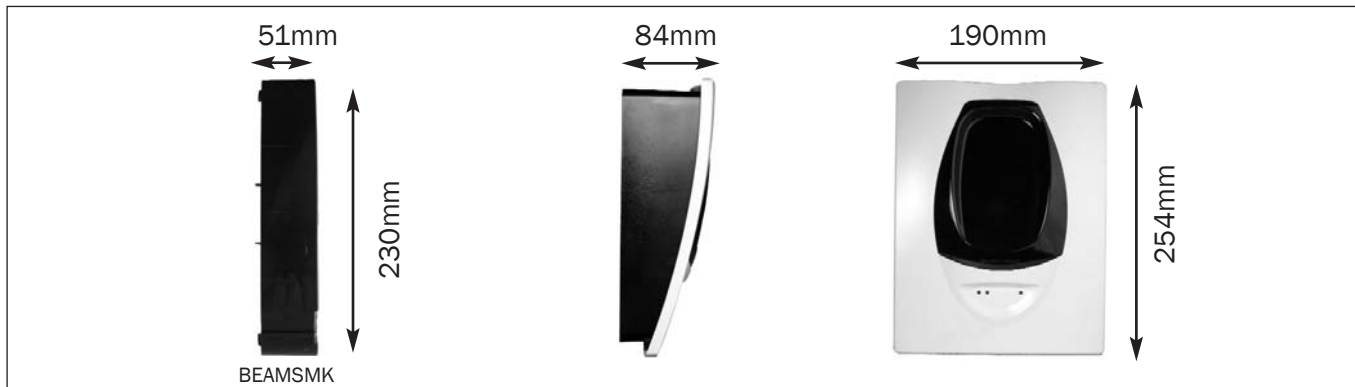
The detector incorporates automatic drift compensation, whereby the detector will adjust its detection thresholds in line with any long term signal reduction of the beam caused by contamination of the optical surface.

The detector can be adjusted up to  $10^\circ$  vertically and horizontally for alignment. Where greater angular adjustment is required, the multi-mount accessory enables the detector to move through  $28^\circ$  vertically and  $360^\circ$  horizontally when ceiling mounted or up to  $23^\circ$  vertically and  $90^\circ$  horizontally when wall mounted.

All System Sensor products are covered by our extended 3 year warranty.

## Architect/Engineer Specifications

### 6500 and 6500S Addressable Optical Beam Smoke Detector



### Installation Recommendations

Installation should be undertaken in accordance with recognised national or international standards and codes of practice. The recommendations detailed in our “Application Guide for Projected Beam Smoke Detectors”(A05-0095) should also be taken into consideration.

We would also recommend that simulated fire tests are conducted to ensure that the desired response time for a given

### Electrical Specifications

#### Operating Voltage Range

15 to 32VDC (24VDC nominal)  
15 to 28.5VDC if using built-in isolators

#### Typical Standby Current

2mA @ 24VDC (No communications,  
LED off)

#### Maximum Alarm Current (LED on)

8.5mA

### Environmental Specifications

#### Application Temperature Range

-30PC to +55PC

#### Humidity

Humidity 0 to 95% Relative Humidity  
(non condensing)

#### IP Rating

IP54

### Mechanical Information

#### Height

254mm, BEAMSMK backbox 230mm

#### Depth

84mm

#### Width

Detector 190mm,  
BEAMSMK backbox 178mm

#### Weight

1.77kg

#### Max Wire Gauge for Terminals

2.0mm<sup>2</sup>

#### Colour

White trim, black box

#### Material

Trim - Bayblend FR110,  
Lens cover - Lexan, Backbox - Noryl

#### Reflector

200 x 230mm (5 – 70m range,  
supplied as standard)

### Accessories

BEAMLRK	Long Range reflector kit (70 – 100m range). 3 off 200 x 230mm.
BEAMMMK	Multi-mount accessory for ceiling or wall mounting with additional mounting adjustment. BEAMSMK also required
BEAMSMK	Surface Mount accessory
BEAMHK	Header Kit for the beam
BEAMHKR	Header Kit for the reflector

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