ANALOGUE - Optical Smoke Beam Detector
Model 6500 and 6500S

Overview

Features

- Unique servo-operated test filter
- Combined transmitter and receiver unit
- Range 5 – 100 metres
- 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
- ±10° horizontal and vertical beam alignment
- Automatic drift compensation
- Uses the Series 200 Advanced 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° vertically and horizontally for alignment. Where greater angular adjustment is required, the multi-mount accessory enables the detector to move through 28° vertically and 360° horizontally when ceiling mounted or up to 23° vertically and 90° horizontally when wall mounted.

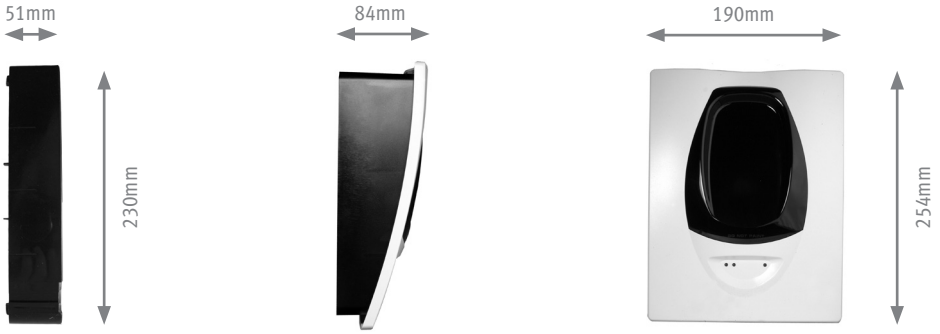
The 6500S and 6500 are using the Series 200 Advanced Protocol and are electrically and mechanically backwards compatible with previous generations of the 6500 family, providing support for existing installations where retrofits and system extensions regularly take place. For new systems, the fully digital Series 200 Advanced Protocol delivers up to 159 detectors and 159 modules on each loop, allows a fully integrated and controllable isolation for system mapping and group polling. Moreover the sensitivity in the devices can be configured through the new protocol.

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

SYSTEM SENSOR®

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 installation are met.

Electrical Specifications

Operating Voltage Range	15 to 32VDC (24VDC nominal)	15 to 29VDC 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	-30°C to +55°C
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^2
Colour	White trim, black box
Material	Trim - Bayblend FR110, Lens cover - Lexan, Backbox - Noryl
Reflector	200 x 230mm (5 – 70m range, supplied as standard)

Product Range

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	Heater Kit for the beam
BEAMHKR	Heater Kit for the reflector

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Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.