

Addressable Loop Powered Beam Detector Specification

Compliance with standards

The Beam Smoke Detector shall be third party approved to EN54 part 12.

Functionality

The Beam Smoke Detector shall consist of a transmitter and receiver unit in the same housing which projects an IR signal, which is reflected by use of a suitable reflector.

The Beam Smoke Detector shall be intelligent and addressable, and shall connect with two wires to one of the C.I.E. Signalling Line Circuits. Additional connections for power are not acceptable.

Mounting brackets capable of ceiling or wall mounting shall be available.

The unit shall have automatic drift compensation to adjust for signal deterioration from dust and dirt.

Test functions

A servo test function shall be available whereby activation of a low level test switch shall operate a servo motor that moves a calibrated test filter in to the path of the beam. A temporary 24 Vdc source is acceptable for this purpose.

The Beam Smoke Detector shall provide a means of test whereby they will simulate an alarm condition and report that condition to the C.I.E.

Such a test may be initiated at the Detector itself (by activating a low level test switch) or may be activated remotely on command from the C.I.E.

Address setting

The Beam Smoke Detector shall provide address setting on the Detector head using decimal switches.

Addressable Beam Smoke Detectors that use binary address setting methods, such as a dip switch, code cards or soft addressing are not acceptable.

The Beam Smoke Detectors shall also feature an internal identifying code that the control panel shall use to identify the type of Detector.

Visual indication

The Detector shall provide fire, fault and normal LED's.

The normal LED shall flash green under normal conditions, indicating that the Detector is operational and in regular communication with the C.I.E.

The flashing mode operation of the Detector LED shall be controlled through the system field program

The fire LED may be placed into steady illumination by the C.I.E, indicating that an alarm condition has been detected.

An output connection shall also be provided to connect an external remote alarm LED.

The fault LED shall be used to indicate all fault conditions detected by the unit including alignment or drift compensation faults.

Sensitivity settings

The Detector sensitivity shall be adjustable in the field with four fixed settings of 25%, 30%, 40% and 50% obscuration.

In addition the detector shall also be capable of being set to one of two self-optimising sensitivity settings being 30-50% or 40-50% obscuration.

Drift compensation

The Detector may automatically compensate for dust accumulation and other slow environmental changes that may affect their performance.

The use of this function shall not contravene EN54 part 12.

Additional requirements

In order to aid alignment, a side 'gun sight' shall be provided allowing direct visibility of the reflector from the transmitter / receiver unit.

Optional in built loop isolation shall be included in each unit.

Up to 159, intelligent Detectors may connect to one SLC loop.

The C.I.E software, not the detector, shall make the alarm decision.

The system operator shall be able to view the current analogue or digital value of each detector at the C.I.E.