OPTICAL SMOKE BARRIER ISSUER-RECEIVER 100m

AE/BO100

Description

AE/BO100, is an infrared smoke detection system capable of protecting interiors of large areas of up to 1500 m2.

The system consists of a transmitter that projects a modulated infrared ray over the area to the receiver, which takes the signal to the Control Unit for its analysis. The system can detect smoke particles that obstruct the infrared ray. When a higher level of darkening is reached than defined in the system, the Control Unit will generate an alarm.

Characteristics

Smoke detection

When the smoke crosses the infrared ray, the signal received by the Receiver decreases in relation to the density of the smoke. If the smoke density reduces the signal more than defined for a period of 10 seconds, the alarm relay will be activated.

There are three levels of darkening allowed: 25%, 35%, and 50%. (25% is the highest sensitivity).

Auto Reset

The alarm relay can be configured so that once activated it is set to alarm or returns to its initial position. If the fixed mode is deactivated the alarm relay will be reset returning to its initial position after 5 seconds to clear the smoke area. If the fixed mode is activated, the alarm relay will maintain the alarm status until the equipment is turned off or the Control Unit receives an external reset.

Automatic Gain Control

The Control Unit contains an Automatic Gain Control circuit. Dust and dirt deposited over time in the lens will not cause an alarm because the compensation between degradation and gain will be performed by the Automatic Gain Control.

It works by comparing the received signal during predefined intervals of 1.5 hours, if the strength of the signal would be seen more than 7% the CAG will adjust the receiver to compensate for it.

Breakdown Detection

The Control Unit is able to detect failures in the system. When it detects a fault, the fault relay will be activated. System failures can be caused by:

- That the TEST / RESET switch of the Control Unit is in the ON position.
- The power of the Control Unit has been disconnected.
- That the system is unable to activate the CAG stabilization period (Automatic Gain Control)
- That the AGC system has reached its compensation limit.
- That the signal has been reduced by more than 93% for approximately 10 seconds.
- That the beam has been completely blocked.
- That there is a fault in the Transmitter.
- The power in the Transmitter has been lost.
- That there is a fault in the Receiver.
- That the alignment of the Transmitter to the Receiver has varied and receives a signal with losses greater than 93 percent.

TECHNICAL CHARACTERISTICS

Operating temperature range: -20 ° C to + 55 ° C
Operating Voltage: 11.5 to 28 Vdc
Current Consumption: <1.6 - 5.6mA
Control Unit (including Receiver):
Standby consumption: <8.5mA
Alarm Consumption: <16.5mA
Fault Consumption: <16.5mA
Barrier tolerance Misalignment receiver: ± 4 °
Misalignment tolerance (Transmitter): ± 1 °
Fire Alarm Levels 1.25dB (25%), 1.87dB (35%), 3dB (50%)