IR - Flame Detector
FL 30

TECHNICAL INFORMATION

APPLICATIONS

- **petrol products storehouses (gasoline, diluents, etc.)**
- **paint storehouses**
- **paper storehouses**
- **wood storehouses**
- **chemical laboratories**
- **flammable gas storehouses**

TECHNICAL ADVANTAGES

- **simple installation**
- **quick response**
- **unfrequent and cheap maintenance**
- **posssibility of a remote working test**
- **high immunity to false alarms**
- **high immunity to electric noise**

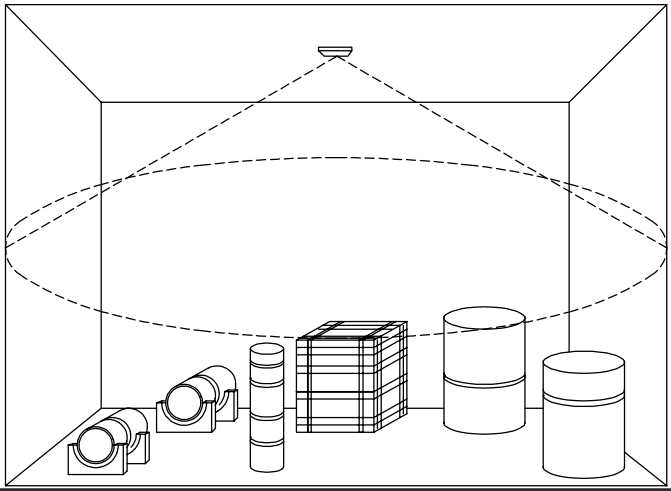
The FL30 detector is able to detect a flame, produced by a fire inside its viewing range, in a few seconds. This detector is particularly used in environments where a fire could quickly grow like for example storehouses of petrol products, paint, plastic materials, alcohols, etc. and where moreover the installation has to be AD-PE in conformity to the norm CEI 64-2 Table IV for environments of Class 1 Division 1. The working principle is based on the detection of the **infrared radiation** emitted by the flame. The advanced circuitry and components utilized, make the detector very efficient and also highly immune to the false alarms produced by natural phenomenons or inside the protected environment. The device container in made of Alluminium light alloy.

FUNCTIONING

The FL30 detector is provided with an optical head that constantly monitors the zone to be protected and it's particularly sensible to the infrared radiation. An inportant fact is that the optical head is composed by **two type of infrared sensors**, each with a different spectral range. In this way a great working safety is achived and an high false alarm immunity too. Some optical filters are present to let the infrared beam pass through and to block all the other light radiation.
So the detector is unsensible to the sun light, to the lamps light, to the ultraviolet rays and to the X and gamma rays. When a flame grow in the environment to be protected, it generates a powerful infrared radiation that is not constant but variable e pulsing.
The electronics of FL30 are able to compute the radiation received in terms of amplitude, frequence and time, and if it is recognised as a real flame, the output relay is activated to command eventual acoustic or optical alarms. The FL30 is provided with an internal sensitivity control, with a regulation of the response delay and it's also endowed with a special circuit that simulates the flame action and permits to remotely perform a working TEST of the detector. The FL30 detector is normally installed on the ceiling so that the material or the zone to be protected is located inside its viewing range. Wall mounting is also possible.
An example of installation is shown in the figure below .

TECHNICAL DATA

- power supply : 12/24 Vcc
- current : 18 mA
- protection against polarity inversion
- max flame detecting distance : 20 m (with a target 20x20 cm flame 20 cm high)
- optical viewing angle : 120 degrees
- regulation of the sensitivity
- regulation of the response delay
- remote test terminals
- output relay : 1 A/ 24 Vcc
- conteiner : light alloy
- sensor's mounth : 3/4" UNI 6125
- execution : EEx-d conforms to EN50014 - EN50018 - IEC 791
- Iniex certification: 83.103.233-83.103.252 GR:IIB-IIC-T6
- certification : ATEX
- immunity to electromagnetic noise : conforms to EN50081-1 EN 50082-1
- dimensions : 230x230x190 mm
- weight : 8 Kg.



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