

HARRINGTON

MODEL 30-2021 & MODEL 30-2021E Ultraviolet Flame Detector

Harrington Signal Inc.
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**ISO 9001
Certified
Management
System**

APPLICATION

The Harrington Model 30-2021 and Model 30-2021E Ultraviolet (UV) Flame Detectors are highly sensitive to the ultraviolet radiation given off by all types of flames, including those produced by flammable liquids and gases. Since the detector does not respond to normal ambient light conditions such as sunlight, incandescent or fluorescent lighting, it is ideally suited for use as a flame detector in a variety of areas.



DESCRIPTION

The detector is a compact unitized package consisting of a detection tube, encapsulated solid state electronic circuitry, and a dry contact Form C (SPDT) alarm relay. In the event of an alarm, the relay latches on and an alarm light is illuminated for easy identification of the unit in the alarm state. The relay is reset by momentarily interrupting power to the unit.

A three second time delay is built in to minimize false alarms cause by the presence of sparks, lighting, etc.

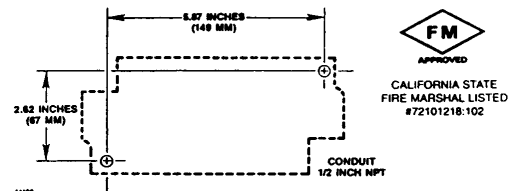
The Model 30-2021 is contained in a general purpose enclosure and is intended for indoor use only. It mounts on a standard four inch octagonal electrical junction box (not included).

The Model 30-2021E is intended for indoor use and is contained in an explosion proof enclosure that meets all requirements for NEC Class I Groups C and D, Class II Groups E, F, and G and Class III hazardous locations.

Models can be ordered to operate on either 12 or 24 volts dc.

DETECTOR SENSITIVITY

The response time of the detector is a function of the size of the fire, fuel type, and the distance from the detector to the fire. Smaller fires and greater distances normally require greater response times. Figure 1 illustrates the relative sensitivity of the Model 30-2021 Detector to gasoline fires. Figure 2 shows the relative sensitivity of the Model 30-2021E.



—Model 30-2021E Mounting Holes

SPECIFICATIONS

OPERATING VOLTAGE —
12 to 16 vdc for 12 vdc unit.
22 to 27 vdc for 24 vdc unit.

OPERATING CURRENT —
Standby: 10 milliamperes maximum at 12 vdc.
12 milliamperes maximum at 24 vdc.
Alarm: 125 milliamperes maximum at 12 vdc.
100 milliamperes maximum at 24 vdc.

RELAY CONTACT RATING —
1.0 ampere at 26 vdc.

SPECTRAL SENSITIVITY RANGE —
1700 to 2900 angstroms, with peak response at 2100 angstroms.

TEMPERATURE RANGE —
-13°F to +140°F (-25°C to +65°C).

WEIGHT —
30-2021: 0.75 pound.
30-2021E: 3.75 pounds.

ENGINEERING SPECIFICATIONS

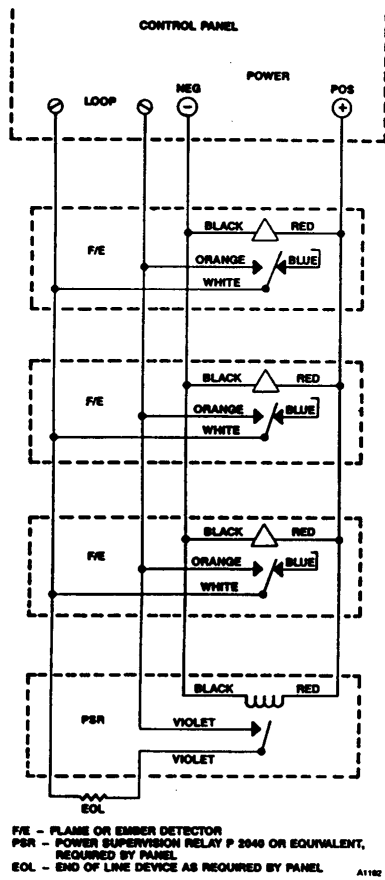
The unit shall be an Open Area Ultraviolet Flame Detector designed to operate on 12vdc or 24 vdc.

It shall have encapsulated electronic circuitry and Form C alarm relay contacts. The unit shall have built-in alarm indication from the front of the detector. It shall respond to a 12 inch diameter gasoline fire in 6 seconds when viewed head-on from a distance of 30 feet. The detector shall not respond to normal ambient light conditions such as sunlight, incandescent, or fluorescent light.

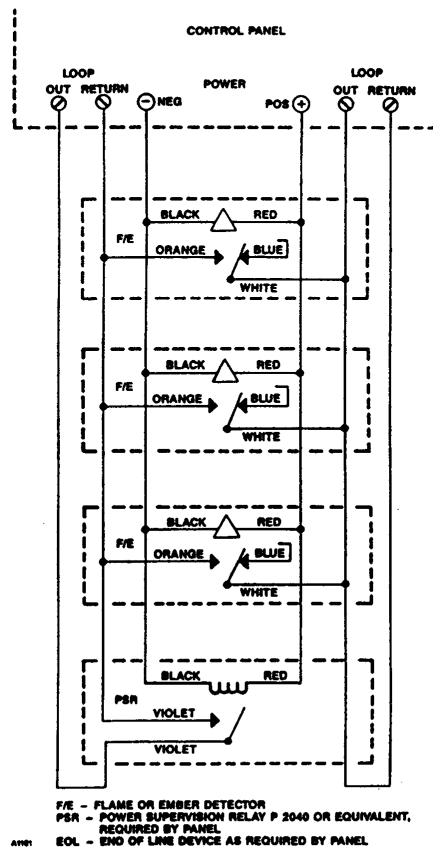
The detector shall have a 3 second time delay to spurious responses. The Model 30-2021 shall have a 180 degree cone of vision with the greatest sensitivity at 45 degrees either side of the central axis. The Model 30-2021E shall have a 60 degree cone of vision.

Explosion proof units shall meet NEC Class I, Groups C and D; Class II Groups E, F, and G; and Class III.

Units shall be Factory Mutual approved.



—Single Loop Panel Wiring



—Double Loop Panel Wiring

Manufactured by Pyrotector

Harrington Signal Inc. reserves the right to change specifications without notice.