Sentinel Ultraviolet Monitors (CEMs)


Sentinel Pilot Monitor

Advantages

- Instantaneous response time
- Ease of maintenance-located at grade
- Durability-not located in flame impingement zone
- Ultraviolet detection (not affected by the sun)
- Penetrates fog, rain, sleet, smog or smoke

Description

The Sentinel pilot monitor was designed and developed in order to satisfy several objectives: remote flame detection, reliability, durability, ease of maintenance, and rapid response time. The result is an extremely reliable, durable and inexpensive pilot monitoring device. The Sentinel is used to detect the presence of a pilot flame at distances of up to 550 feet. If the monitor detects the absence of flame or "flame failure" for an adjustable amount of time, a set of dry form C contacts are activated and the pilot re-ignition system is set into motion. The response time is much quicker than when using a standard thermocouple because the Sentinel reacts instantaneously. A standard thermocouple goes into alarm only after it has cooled down below the set temperature of the thermocouple controller, whereas the monitor can immediately sense the loss of flame.

The Sentinel measures a specific narrow band of ultraviolet radiation that is common only to burning hydrocarbons. The sensitivity of the monitor is such that it can detect radiation from an 8 inch flame at a distance of 500 feet. The ultraviolet wave length can be sensed through a veritable barrage of fog, rain, sleet, smog, or even smoke. The Sentinel can be located at any position (full 360 degrees) relative to the flare stack since solar ultraviolet rays have no effect on the monitor. Most infrared detectors cannot be positioned so that they face east or west due to false readings and interference from the sun. The Sentinel is technologically superior to infrared pilot monitors and is a more economical option. Another obvious advantage is ease of maintenance given that the monitor is located at grade.

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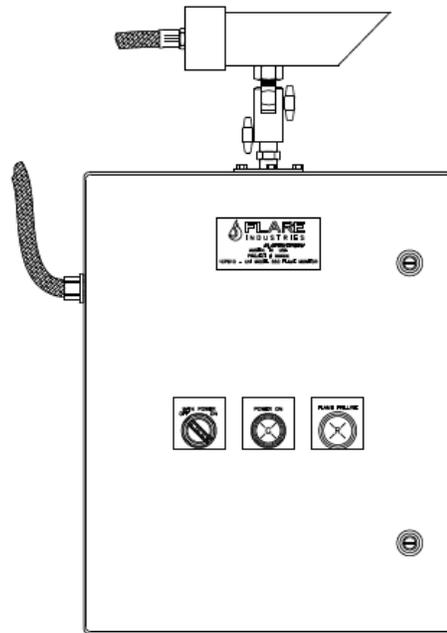
Specifications

- Length: 23" high x 11" wide x 9" deep
- Weight: 44 lbs.
- Electrical classifications: NEMA 4X(standard)

  NEMA 7 (optional)
  CENELEC (optional)
- Power: 3.5 amps- 120 Volts AC 12 Volts DC
- Alarm Contact: 10 amp form "C" dry contacts
- Range: 550 feet Max

Design Features

- Alarm for flame out
- Monitor for auto-ignition control systems
- Monitor for safely flaring toxic gases