XP95

DUAL IR FLAME DETECTOR

Part no: 55000-280

- Analogue Addressable
- Open, digital protocol
- Loop-powered
- 2 Infra-red sensors
- Solar blind
- Detects through oil, dust, water & ice films
- Remote optical self test function
- Local and remote alarm LEDs

apollo
FIRE DETECTORS LIMITED

XP95

DUAL IR FLAME DETECTOR

The Dual IR Flame Detector

Flame detectors are designed to detect either the ultraviolet (UV) or the infra-red (IR) radiation emitted by a fire. The Apollo XP95 Dual Infra-red (IR) Flame Detector detects infra-red radiation by using 2 different IR radiation sensors which respond to different infra-red wavelengths at the upper end of the spectrum. This allows the XP95 Flame Detector to distinguish between flames and spurious sources of radiation, for example sunlight.

All flames emit light in this spectrum which can be detected by flame detectors responding to light in this range. Even gas fires which are not visible to the naked eye can be detected, eg, those emitted by hydrogen fires.

Operating Principles

The XP95 Dual IR Flame Detector is sensitive to low-frequency (1 to 15Hz, 1 to 2.7µm), flickering infra-red radiation emitted by flames during combustion. Since it responds to flickering radiation, the XP95 Dual IR Flame Detector can operate even if the lens is contaminated by a layer of oil, dust, water-vapour or ice. False alarms due to such factors as flickering sunlight are avoided by a combination of filters and signal processing techniques.

The response of the XP95 Flame Detector depends on the size of the flame and the position of the detector. It is essential that the detector is situated correctly as the further away the flame is from the flame detector, the larger the fire has to be to be reliably detected.

The IR Flame Detector is insensitive to artificial light and electric arcs (eg, lightning from electric storms) making it suitable for use outdoors. However, it is advisable that exposure to severe rain or ice and direct sunlight be avoided.

Electrical Considerations

The XP95 Dual IR Flame Detector is loop powered and needs no external supply. It is controlled by a control panel using either the XP95 or Discovery protocol. A remote LED alarm indicator may be connected to the flame detector. The IR Flame Detector conforms to EN54: part 10 and can be tested either manually, using a Flame Sensor Test Unit (Part no: 29600-226) or automatically via the control panel (depending on the panel features). This feature internally tests both the optics as well as the electronics.

Accessories

A range of accessories and test equipment is available for the XP95 Dual IR Flame Detector:

Weathershield, part no. 29600-206
Flame Sensor Test Unit and case, part no. 29600-226
*Stainless steel 2 axis adjustable mounting bracket, part no. 29600-203

Part no: 55000-280 *(Shown with optional stainless steel bracket).

Where to use the Flame Detector...

The XP95 Dual Infra-red (IR) Flame Detector is designed to protect areas where open flaming fires may be expected or when detection is required to be unaffected by air currents, tolerant of fumes, vapours, steams and dust whilst still reacting fast to a flame more than 25 metres away. Such buildings include:

- factories producing hazardous materials such as black powder
- oil refineries
- power plants
- transformer stations
- aircraft hangars
- agricultural factories
- paper manufacturers
- textile factories
- car factories
- chipboard and MDF factories
- fume cupboards

...and where not

- areas with ambient temperatures of 55°C or above
- where the detector may view flickering or moving hot objects
- where sunlight can fall directly onto the IR sensor
- where flood or spot lights are aimed directly onto the sensor
- areas where large amounts of flickering reflections occur
- where there is exposure to severe weather
- areas where there is close proximity to radio frequency sources (eg, mobile phone and CB transmitters)
- near microwave ovens and dryers
- where there are obstructions to the field of view

apollo FIRE DETECTORS LIMITED

INVESTOR IN PEOPLE

Assessed to ISO 9001: 2000
Certificate number 010

A HALMA GROUP COMPANY

36 Brookside Road, Havant, Hampshire PO9 1JR, England. Tel: +44 (0)23 9249 2412. Fax: +44 (0)23 9249 2754.
Email: sales@apollo-fire.co.uk Website: www.apollo-fire.co.uk

Apollo GmbH, Am Anger 31, 33332 Gütersloh, Germany. Tel: +49 5241 33060. Fax: +49 5241 330629.
Air Products and Controls Inc., 1749 E Highwood, Pontiac, MI 48340, USA. Tel: +1 248 332 3900. Fax: +1 248 332 8807.