

Intelligent IR³ Flame Detector



Product overview

Product	Intelligent IR ³ Flame Detector
Part No.	55000-020

Product information

The Intelligent IR³ Flame Detector is designed to protect areas where open flaming fires may be expected.

Features

The Intelligent IR³ Flame Detector is sensitive to low-frequency, flickering infra-red (IR) radiation emitted by flames during combustion. Since it responds to flickering radiation the IR³ Flame Detector can operate even if the lens is contaminated by a layer of oil, dust, water-vapour or ice.

The Intelligent IR³ Flame Detector is set to respond to low-frequency radiation at 1 to 15 Hz (1 to 2.7 µm) in order to detect all flickering flames including those invisible to the naked eye, e.g. those emitted by hydrogen fires.

The Intelligent IR³ Flame Detector has three IR sensors that respond to different IR wavelengths in order to discriminate between flames and spurious sources of radiation. False alarms due to such factors as flickering lighting are avoided by a combination of filters and signal processing techniques.

Protocol compatibility

The Intelligent IR³ Flame Detector operates only with control equipment using Apollo XP95 or Discovery protocols and is CoreProtocol® compatible.

Electrical considerations

The Intelligent IR³ Flame Detector is loop powered and needs no external supply. A remote LED alarm indicator may be connected to the flame detector.

Technical Data

All data is supplied subject to change without notice. Specifications are typical at 24V, 73°F and 50% RH unless otherwise stated.

Supply voltage	14 - 30 V dc
Quiescent current	2.2 mA
Maximum power-up time	4 seconds
Remote LED current	Limited to 2 mA
Range of view	0.1 m ² n-heptane at 25 m 0.2 m ² n-heptane at 35 m 0.4 m ² n-heptane at 45 m
Field of view	90° cone
Spectral response	1.0 to 2.7 µm
Sensitivity (EN 54-10)	High - Class 1 Low - Class 3
Operating temperature	-10°C to 55°C
Storage temperature	-20°C to 65°C
Humidity (no condensing or icing)	0% to 95% RH
IP rating	IP65
Dimensions	108 mm wide x 142 mm high x 82 mm depth
Weight	2 kg
Materials	Die-cast zinc alloy

Protocol usage

Output Bits	
2	Fire LED
1	Test
0	Remote LED
Interrupt	No
Analogue Value	
Quiescent	25
Alarm	55-64
Fault	0
Input Bits	
2	LED confirmed
1	Test confirmed
0	Remote LED confirmed
Flag setting	
XP95 flag	Yes
Alarm flag	Yes