

# Intelligent Flameproof IR<sup>2</sup> Flame Detector



## Product overview

<b>Product</b>	<b>Intelligent Flameproof IR<sup>2</sup> Flame Detector</b>
<b>Part No.</b>	<b>55000-295</b>

## Product information

The Intelligent Flameproof IR<sup>2</sup> Flame Detector is designed to protect areas where open flaming fires may be expected for hazardous environments in indoor applications.

### Features

The Intelligent Flameproof IR<sup>2</sup> Flame Detector is sensitive to low-frequency, flickering infra-red (IR) radiation emitted by flames during combustion. Since it responds to flickering radiation the IR<sup>2</sup> Flame Detector can operate even if the lens is contaminated by a layer of oil, dust, water-vapour or ice.

The Intelligent Flameproof IR<sup>2</sup> 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 Flameproof IR<sup>2</sup> Flame Detector has two 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 Flameproof IR<sup>2</sup> Flame Detector operates only with control equipment using Apollo XP95 or Discovery protocols and is CoreProtocol compatible.

## Technical Data

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

<b>Supply voltage</b>	14 - 30 V dc
<b>Quiescent current</b>	2.2 mA
<b>Maximum power-up time</b>	2 seconds
<b>Remote LED current</b>	Limited to 2 mA
<b>Range of view</b>	0.1 m <sup>2</sup> n-heptane at 25 m 0.2 m <sup>2</sup> n-heptane at 35 m 0.4 m <sup>2</sup> n-heptane at 45 m
<b>Field of view</b>	90° cone
<b>Spectral response</b>	1.0 to 2.7 µm
<b>Sensitivity (EN 54-10)</b>	High - Class 1 Low - Class 3
<b>Operating temperature</b>	-10°C to 55°C
<b>Storage temperature</b>	-20°C to 65°C
<b>Humidity (no condensing or icing)</b>	0% to 95% RH
<b>IP rating</b>	IP66
<b>Use</b>	Indoor use only
<b>Standards and approvals</b>	EN 54-10, ATEX and IECEx
<b>Dimensions</b>	150 mm diameter. x 137 mm deep
<b>Weight</b>	2.5 kg
<b>Materials</b>	Copper-free aluminium alloy LM25

## Electrical considerations

The Intelligent Flameproof IR<sup>2</sup> Flame Detector is loop powered and needs no external supply. A remote LED alarm indicator may be connected to the flame detector.

## Accessories

A range of accessories and test equipment is available for the Intelligent Flameproof IR<sup>2</sup> Flame Detector:

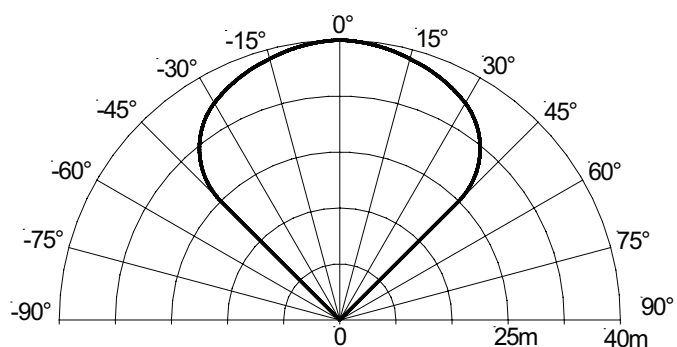
<b>Product</b>	<b>Weathershield</b>
<b>Part No.</b>	<b>29600-228</b>
<b>Product</b>	<b>Stainless steel two axis adjustable mounting bracket</b>
<b>Part No.</b>	<b>29600-203</b>
<b>Product</b>	<b>Flame Sensor Test Unit and case</b>
<b>Part No.</b>	<b>29600-203</b>

# Intelligent Flameproof IR<sup>2</sup> Flame Detector

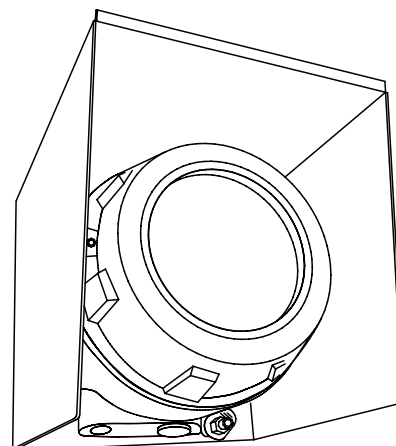
## Protocol Bit usage

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

## Flame Detector angle of view



## Flame detector with Weathershield



## Flame detector on stainless steel mounting

