Marine Intelligent
Stainless Steel IR³ Flame Detector

Product overview

Product	Marine Intelligent Stainless Steel Intelligent IR³ Flame Detector
Part No.	55000-034MAR
Digital communication	XP95 and Discovery compatible

Approvals

Product information

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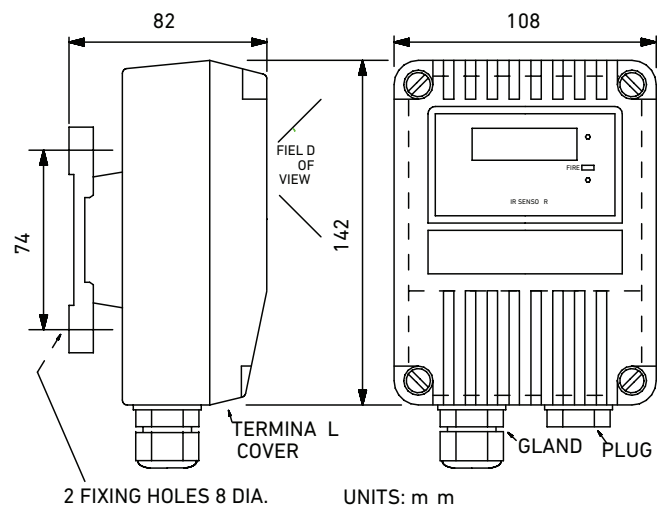
Operation

The Marine 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 Marine 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.

This detector has a heavy duty, stainless steel housing which is highly resistant to corrosion. The housing has been electro-polished to give a natural silver finish and has no need to be painted, making it ideal for marine applications.

Technical Data

All data is supplied subject to change without notice. Specifications are typical at 24V, 23°C and 50% RH unless otherwise stated.

Supply voltage	17 - 28 V dc
Digital communication	XP95 and Discovery compatible
Quiescent current	2.2 mA
Maximum power-up time	4 seconds
Remote LED current	Limited to 2 mA
Range of view (EN 54-10)	0.1 m² n-heptane at 25 m 0.2 m² n-heptane at 35 m 0.4 m² 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
Standards and approvals	EN54-10, LPCB, MED and ABS
Dimensions	108 mm wide x 142 mm high x 82 mm depth
Weight	2.1 kg
Materials	316 Grade Stainless Steel

Dimensional drawing

82

108

FIELD OF VIEW

74

142

TERMINAL COVER

GLAND   PLUG

2 FIXING HOLES 8 DIA.

UNITS: mm

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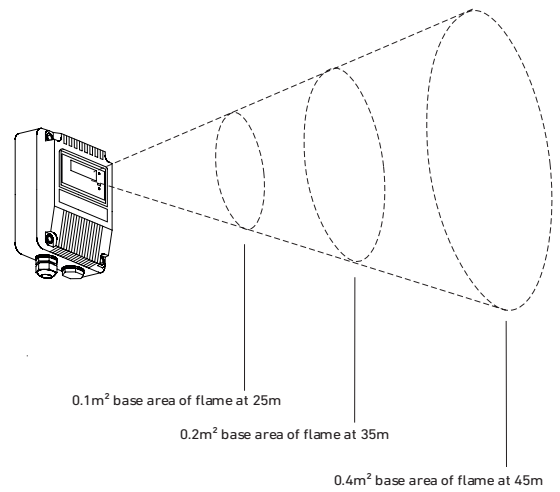
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The Marine Intelligent IR[3] Flame Detector has three IR sensors that respond to different IR wavelengths in order to discriminate between flames and spurious sources of radiation. False alarms due to such factors as flickering lighting are avoided by a combination of

filters and signal processing techniques.

Electrical description

The Marine Intelligent IR[3] Flame Detector is loop powered and needs no external supply. A remote LED alarm indicator may be connected to the flame detector.

Flame detection as a function of flame size and distance from detector

0.1m² base area of flame at 25m

0.2m² base area of flame at 35m

0.4m² base area of flame at 45m

Range of view of a flame detector

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