

# MINERVA® MX Marine

## 811F & 811FEx MXTechnology® Addressable Solar Blind InfraRed Flame Detectors

### Features:

- Unlike UV and UV/IR detection, not blinded by oil mist in machinery spaces
- Reduces cabling, no interface required
- No additional power source required
- Easy installation, uses a common plug in base for smoke and heat detectors
- Can be used on all vessels as fully marine approved



### Standard or Intrinsically Safe ATEX approved

The 811F and 811FEx point type flame detectors are part of the MXTechnology® range of digital addressable fire detectors. MXTechnology® incorporates heat, optical and carbon monoxide detection. The 811F and 811FEx flame detectors present a cost effective solution to providing false alarm free flame detection for enclosed applications.

Both the 811F and the 811FEx are full featured solar blind flame detectors for enclosed use and boast a high degree of false alarm immunity. The standard unit is the 811F and it is designed for direct connection to the MX digital loop, employing the same detector base or functional base as other 800 series fire detectors.

The 811FEx is an intrinsically safe version intended for use in hazardous atmospheres and must be connected via an EXI800 interface and galvanic isolator. The detectors are designed to comply with EN 50 014 and EN50 020 for intrinsically safe apparatus. They are certified: ATEX code: II 1 G Cenelec code: EEx ia IIC T4.

### Ordering Information:

| Stockcode     | Description                                      |
|---------------|--|
| ■ 516.800.007 | 811F MX IR Flame Detector                        |
| ■ 516.800.067 | 811FEx MX IR Flame Detector Intrinsically Safe   |
| ■ 517.050.017 | 5B 5" Universal Base                             |
| ■ 516.800.903 | 801IB Isolator Base                              |
| ■ 517.050.610 | MUBEx Base for 600/800Ex                         |
| ■ 514.001.063 | EXI800 MX I.S. Loop Interface                    |
| ■ 517.001.259 | Pepperl & Fuchs KFDO-CS-Ex1.54 Galvanic Isolator |
| ■ 517.001.247 | DX170 MTL5/7000 Enclosure                        |
| ■ 592.001.012 | T110 IR Test Source                              |
| ■ 592.001.018 | T110 Test Source Adapter                         |

## Mechanical

|                    |                  |
|--------------------|------------------|
| Detector Material: | FR110 'BAYBLEND' |
| Dimensions (mm):   | 108 x 21.2       |
| Weight: - 811F     | 74g              |
| - 811FEx           | 108g             |

## Electrical

|                    |               |
|--------------------|---------------|
| Loop Voltage:      | 20 – 40 V     |
| Quiescent current: | 300 micro Amp |
| Alarm current:     | 3 mA typical  |

## Intrinsic Safety Rating

|                                 |       |
|---------------------------------|-------|
| Maximum Voltage for Safety (Ui) | 28V   |
| Maximum Current for Safety (Ii) | 93mA  |
| Maximum Power Input (Pi)        | 650mW |
| Equivalent Inductance (Li)      | 0     |
| Equivalent Capacitance (Ci)     | 0     |

## Hazardous Area

|            |                                 |
|------------|---------------------------------|
| ATEX code: | ATEX 0422X II 1 G EEx ia IIC T4 |
|------------|---------------------------------|

## Environmental

|                        |                |
|------------------------|----------------|
| Operating temperature: | -20°C to +70°C |
|------------------------|----------------|

Operation below 0°C is not recommended unless steps are taken to eliminate condensation and hence ice formation on the detector.

|                      |   |
|----------------------|---|
| Storage Temperature: | -40°C to +80°C  |
| Relative Humidity:   | 90% RH continuous (non-condensing) and up to 99% RH intermittent (non-condensing) |

## Performance

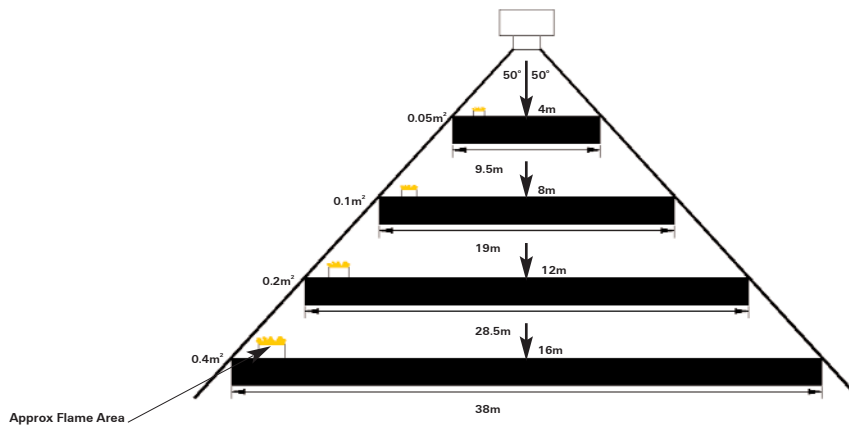
|        |  |
|--------|--|
| Range: | 0.1m <sup>2</sup> n-heptane at 20m<br>0.4m <sup>2</sup> n-heptane at 50m |
|--------|--|

|                |      |
|----------------|------|
| Field of View: | 100° |
|----------------|------|

|                |                     |
|----------------|---------------------|
| Mounting Bases |                     |
| 5B:            | 5" Universal Base   |
| MUBEx:         | I.S. Universal base |

Functional bases that provide relays, sounders and isolation can be used with the 811F but cannot form part of an intrinsically safe circuit.

|              |   |
|--------------|---|
| Connections: | L-VE IN/OUT<br>L1 +VE IN/OUT<br>801F Only R Remove LED-VE |
|--------------|---|



Note 1: When the risk is a hot vibrating body the detector should be mounted securely using a suitably fabricated bracket at an angle or on a vertical surface to view the risk.

Note 2: Diagram not to scale