



General Monitors
16782 Von Karman Ave, Unit 14
Irvine, CA 92606
United States of America



Certificate of Compliance to IEC 61508

FM Approvals
Certifies herewith that the

IR5500 Infrared Open Path Hydrocarbon Gas Monitoring System
(Safety Manual MANOPIRSAFETY)

Complies with the relevant requirements of standards listed below:

| Standards | Description | Compliance |
|-------------------|---|------------|
| IEC 61508-1: 2010 | Functional Safety of Electrical/Electronic/Programmable Electronic Safety-Related Systems – General Requirements | Part 1 |
| IEC 61508-2: 2010 | Functional Safety of Electrical/Electronic/Programmable Electronic Safety-Related Systems | Part 2 |
| IEC 61508-3: 2010 | Functional Safety of Electrical/Electronic/Programmable Electronic Safety-Related Systems – Software Requirements | Part 3 |

And therefore


**IS DECLARED “FIT FOR USE” IN A
Low Demand SAFETY APPLICATION**

| Models | SIL | HFT | SFF | PFD | λ_{SD}^* | λ_{SU}^* | λ_{DD}^* | λ_{DU}^* |
|---------------|-----|-----|--------|----------|------------------|------------------|------------------|------------------|
| Analog Output | 3 | 0 | 99.53% | 1.69E-04 | 457 | 6414 | 14.6E3 | 102 |
| Relay Output | 2 | 0 | 98.18% | 5.00E-04 | 479 | 6818 | 14.6E3 | 407 |

* FIT = 1×10^{-9}

1oo1 Low-demand configuration; Proof test interval: 90 days; Repair time: 4 hours; Installation and operation per manufacturer's Safety Manual; IR5500 Transmitter flash lamp typical life: 3-4 years.

*This certificate is subject to conditions of use presented in FM Approval Report
Project ID # PR467165*


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19 June 2024

Date