



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	$\lambda_{SD}^*$	$\lambda_{SU}^*$	$\lambda_{DD}^*$	$\lambda_{DU}^*$
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 =  $1 \times 10^{-9}$

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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Date