



# Certificate of Compliance to IEC 61508

**FM Approvals**  
Certifies herewith that the

*Multi-Spectral Infrared Flame Detector*  
Model FlameGard 5  
(Safety Manual [MAN5MSIRSAFETY])

Mine Safety Appliances  
1000 Cranberry Woods Drive  
Cranberry Township, PA 16066

**Complies with the relevant requirements of standards listed below:**

Standards	Description	Compliance
IEC 61508-1 1997	Functional Safety of Electronic/Electrical/Programmable Electronic Safety-Related Systems- General Requirements	Part 1
IEC 61508-2 2000	Functional Safety of Electronic/Electrical/Programmable Electronic Safety-Related Systems	Part 2
IEC 61508-3-2000	Functional Safety of Electronic/Electrical/Programmable Electronic Safety-Related Systems- Software Requirements	Part 3

And therefore

**IS DECLARED "FIT FOR USE" IN A SIL 3, 2 or 1  
1oo1 Low Demand SAFETY APPLICATION**

PFD	SFF	$\lambda S$	$\lambda DD$	$\lambda DU$
2.4E-5	>99%	2.41E-6	2.5E-6	1.28E-8

*This certificate is subject to conditions of use presented in FM Approval Report  
Project ID # 3041816  
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*Member of the FM Global Group*

  
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3041816-FlameGard 5 MSIR