

Safety Integrity Level [S.I.L.] Declaration

In accordance with ISO / IEC 17050-1:2004

We the undersigned declare under our sole responsibility that the product to which this declaration relates have been independently assessed and found to conform to the requirements of IEC 61508:2005.

Conformity has been derived from a combination of failure mode and effect analysis [FMEA] and proven in use returns data, in respect of Safe Failure Fraction (SFF) the unit has been judged to be suitable for use, as specified below:

Reference No / Version

SIL 13-001

Product Description

Xgard Type 5, Type 6 and Xgard IR

Specific Standards

IEC61508

S.I.L. Level

2

Safety Manner: Simplex

Assessment Results

Xgard Type 5 (Pellistor type sensor)

	Failure Rate ¹	PFD ²	SFF ³ %	S.I.L.
Failure to respond to high gas level	1	8.0 10 ⁻⁴	67	2
Spurious indication of a high gas level	0.05	-	-	-
Total Failure Rate	1.1	-	-	-

Xgard Type 6 (Thermal Conductivity type sensor)

	Failure Rate ¹	PFD ²	SFF ³ %	S.I.L.
Failure to respond to high gas level	0.35	1.1 10 ⁻⁴	95	3
Spurious indication of a high gas level	0.4	-	-	-
Total Failure Rate	1.1	-	-	-

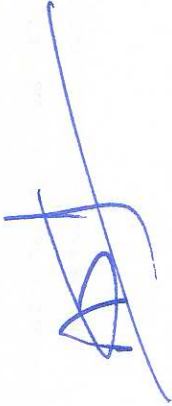
Xgard IR (Infrared type sensor)

	Failure Rate ¹	PFD ²	SFF ³ %	S.I.L.
Failure to respond to high gas level	0.7	1.3 10 ⁻⁴	95	2
Spurious indication of a high gas level	0.05	-	-	-
Total Failure Rate	1.1	-	-	-

1. - Per Million Hours
2. - Probability of Failure on Demand
3. - Safe Failure Fraction

Assessment Body

Technis
26 Orchard Drive
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Report number: T387 Issue 2.0
Issue date: 9th Nov 2012



**Signatory
Signature:**

Name & Position: Mark Osborne, Product Development Director
Date: 7th July 2013

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