

# 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

CroDoc 09 - 158

## Product Description

**Xgard Type 2 Bias Toxic Fixed Point Gas Detector Head**

## Specific Standards

IEC 61508-1:2002

## S.I.L. Level

1

## Safety Manner

Simplex

## Assessment Results

	Failure Rate <sup>1</sup>	MTBF <sup>2</sup> yrs	Availability %	PFD <sup>3</sup>	SFF <sup>4</sup> %	S.I.L.
Failure to Respond to Lower Limit	1.7				87	1
Spurious Indication	1.5					
Total Failure Rate	3.2	35	99.90%	$9.7 \times 10^{-4}$		

## Assessment Body

Technis  
26 Orchard Drive  
Tonbridge, Kent TN10 4LG  
Report number: T380  
Issue date: 5<sup>th</sup> Feb 2008

## Signatory

## Signature:



**Name & Position:** Stefan Kukula, Technical Director

**Date:** 19<sup>th</sup> January 2009

**Crowcon Detection Instruments Ltd**

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1. - Per Million Hours  
2. - Mean Time Between Failures

