Certificate / Certificat

Zertifikat / 合格証

CRO 2403025 C003

exida hereby confirms that the:

FGard UVIR Flame Detector

Crowcon

Oxfordshire

UK

Has been assessed per the relevant requirements of:

IEC 61508: 2010 Parts 1-3

and meets requirements providing a level of integrity to:

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; Route 2_H

PFD_{avg} and Architecture Constraints must be verified for each application

Safety Function:

The FGard UVIR complements the FGard series by delivering superior performance in the detection of hydrocarbon fires, which are not detectable in the visible spectrum. The FGard UVIR utilizes the latest flame detection algorithms to ensure maximum false alarm immunity.

Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.

Eman M Hamouda

Evaluating Assessor

Valerie Motto

Certifying Assessor

The manufacturer may use the mark:

Revision 1.0 May 19, 2026
Surveillance Audit Due
Apr 1, 2029

ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17065
PRODUCT CERTIFICATION BODY

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FGard UVIR Flame Detector

Systematic Capability:

The Product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.
A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element. This Device meets *exida* criteria for Route 2_H.

IEC 61508 Failure Rates in FIT*

Product	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
FGard UVIR Flame Detector	146	88	1452	143

* FIT = 1 failure / 10^9 hours

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/PFD_{avg} considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report:

CRO 24-03-025 R005 V1R0 IEC 61508 Assessment Report - FGard UVIR

Safety Manual:

FD-AC-13, Issue 5 G, March 2026

80 N Main St
Sellersville, PA 18960