

The manufacturer
may use the mark:



Reports:

DET 0402-24 R001 FMEDA
Report V1 R2

DET 0902-04 R002
Assessment Report V1 R1

Validity:

This assessment is valid for
the Pointwatch Eclipse IR
Gas Detector.

This assessment is valid until
July 30, 2010.

Revision 2.2 April 15, 2009



Certificate / Certificat Zertifikat / 合格証

DET 090204 C001

exida hereby confirms that the:

Pointwatch Eclipse

Models PIRECL and HC200

Infrared Hydrocarbon Gas Detector

**Detector Electronics Corporation
Minneapolis, MN USA**

Has been assessed per the relevant requirements of:

IEC 61508 Parts 1, 2, 3

and meets requirements providing a level of integrity to:

Systematic Integrity: SIL 2 Capable

Random Integrity for Type B Device:

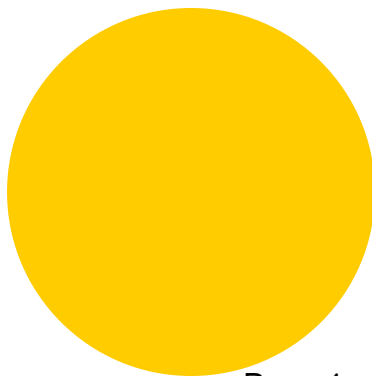
SIL 2 @ HFT=0

Safety Function:

The Pointwatch Eclipse IR detector will sense hydrocarbon gas and signal the 4 – 20 mA. output to indicate the potentially dangerous condition.

Application Restrictions:

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



Michael Medoff
Product Assessor

William M. Goble
Auditor

DET 090204 C001

Systematic Integrity: SIL 2 Capable

**Random Integrity for Type B Device:
SIL 2 @ HFT=0**

Pointwatch Eclipse
Infrared Hydrocarbon
Gas Detector

Detector Electronics
Corporation
Minneapolis, MN USA

SIL 2 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 without "prior use" justification by end user or diverse technology redundancy in the design.

IEC 61508 Failure Rates in FIT

Failure category		Failure rate (in FITs)	
Fail Safe Detected		118	
Fail Safe Undetected		209	
Fail Dangerous Detected		1537	
	Fail Detected (int. diag.)	1324	
	Fail Low (detected by the logic solver)	188	
	Fail High (detected by the logic solver)	25	
Fail Dangerous Undetected		123	
No Effect		436	
Annunciation Undetected		0	

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of 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 subsystem must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

* FIT = 1 failure / 10^9 hours



Form	Version	Date
C61508	2.03	Mar 2009