



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 03ATEX1124X** Issue: **1**

4 Equipment: **Flamgard-Plus & TXgard-Plus Gas Detectors**

5 Applicant: **Crowcon Detection Instruments Ltd**

6 Address: **2 Blacklands Way  
Abingdon Business Park  
Abingdon  
Oxfordshire  
OX14 1DY  
UK**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2009 EN 60079-1:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2G  
Ex d IIC T6 Gb T<sub>amb</sub> -20°C/+55°C

Project Number 24250

D R Stubbings BA MIET  
Certification Manager

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

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#### 13 DESCRIPTION OF EQUIPMENT

The Flamgard-Plus Gas Detector is intended to detect the presence of flammable gases in air and the TXgard-Plus Gas Detector is intended to detect the presence of toxic gases and oxygen in air. They are powered by 10-30 Vdc providing a 4-20 mA signal proportional to the respective gas concentration. They comprise an Adalet-PLM XIHL Junction Box as detailed in Certificate No. Demko 02ATEX0249979U and a Crowcon Detection Instruments Ltd 96HD Gas Sensor as detailed in Certificate No. Sira 02ATEX1283X.

The Junction Box is a two-part enclosure manufactured from cast aluminium comprising a square base and a circular lid. The lid, containing a glass window, threads into the base and is secured by an M4 socket head grub screw. The base has three M20 cable entry points tapped, one per side, into its walls. The two opposing entries are intended to allow connection to external circuits while the other contains the Gas Sensor. The Junction Boxes house the electronics assemblies, a seven-segment display and various status indicators viewed through the glass window.

The Gas Sensor is manufactured from stainless steel and is of two-part construction with both halves being secured together via four M4 x 12 class 70 socket head bolts spaced 90° apart and their heads protected by counter-bores. One half of the main body contains a sintered disc to allow penetration of the surrounding atmosphere, the presence of the relevant gas is then detected by either a pellistor or an electro-chemical sensor, maximum power dissipation 1.1 W, located within the main body. The sintered disc is cemented to the main body and is additionally retained by a threaded end cap. The other half of the main body has an M20 male thread to allow the Gas Sensor to be fitted to the Junction Box and contains a setting compound through which the equipment wiring passes.

#### Design options:

The cable entry points may be of a ½" NPT threadform.

**Variation 1** - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents previously listed in section 9, EN 50014:1997 (Amendments A1 & A2) and EN 50018:2000 (Amendment A1), were replaced by those currently listed, the markings in section 12 were updated accordingly.
- ii. The M4 bolts used to secure the two halves have been clarified.



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**14 DESCRIPTIVE DOCUMENTS**

**14.1 Drawings**

Refer to Certificate Annexe.

**14.2 Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	06 August 2003	R51A9941A	The release of the prime certificate.
1	03 March 2011	R24250A/00	This Issue covers the following changes: <ul style="list-style-type: none"><li>All previously issued certification was rationalised into a single certificate, Issue 1, Issue 0 referenced above is only intended to reflect the history of the previous certification and has not been issued as a document in this format.</li><li>The introduction of Variation 1.</li></ul>

**15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)**

15.1 The Flamgard-Plus and Txgard-Plus Gas Detectors shall not be used as a Safety Related Device as defined by Directive 94/9/EC.

**16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

**17 CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

17.4 Each Flamgard-Plus and Txgard-Plus Gas Detector shall be marked with a unique serial number.

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# Certificate Annexe

Certificate Number: Sira 03ATEX1124X  
Equipment: Flamgard-Plus & TXgard-Plus Gas Detectors  
Applicant: Applicant



## Issue 0

Drawing No.	Sheets	Rev	Date	Title
EXD90P-2963-A1	1 of 1	2	Mar 02	Flamgard Plus & Tx Gard Plus Detector GA
EXD90P-2967-A4	1 of 1	5	Jun 03	EXD90-Plus Certification Label

## Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
EXD90P-2963-A1	1 of 1	03	24 Feb 11	Flamgard Plus & Tx Gard Plus Detector GA
EXD90P-2967-A4	1 of 1	6	24 Feb 11	EXD90-Plus Certification Label

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