



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 06ATEX1174X** Issue: **7**

4 Equipment: **FPD Model**

5 Applicant: **Rosemount Analytical Inc. Emerson Process Management Limited**

6 Address: **10241 West Little York Suite 200 Houston Texas 77040 USA** **Unit 5 Block 2 Dumyat Business Park Tullibody Clackmannanshire FK10 2PB 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 60079-0:2004

EN 60079-1:2004

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 2 G

Ex d IIC T4 Ta = 60°C

Project Number 70049764

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A G Boyes
Certification Support Officer

Sira Certification Service
Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



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13 DESCRIPTION OF EQUIPMENT

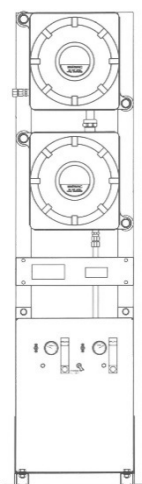


Figure 1: Drawing of an FPD Module

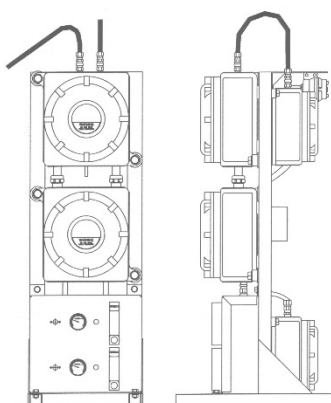


Figure 2: Drawing of an FPD Module with Temperature Controller Enclosure

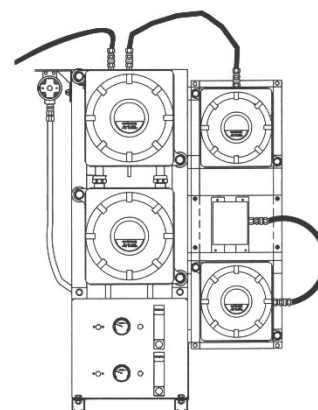


Figure 3: Drawing of the alternative front entry layout

The FPD Module, as shown in Figure 1, is intended to detect the presence of flammable gases when used with suitable analyser controllers. It comprises the following main parts:

Detector Module: The Detector Module (DM) comprises a Flame Photometric Detector (FPD) mounted within a component approved, GUB5 Enclosure manufactured by JCE (Europe) Ltd, as detailed in Certificate No. ISSeP 03ATEX004U. Process pipes and the FPD fuel gas pipe enter and exit the enclosure via Gas Inlet/Outlet Glands (GI/OGs). The fuel gas for the FPD vents from the enclosure via a component approved sintered metal flame arrestor manufactured by M & C Products as detailed in Certificate No. KEMA 03ATEX2114U.

Detector Control Module: The Detector Control Module (DCM) comprises a GUB5 Enclosure as detailed in Certificate No. ISSeP 03ATEX004U containing the FPDs associated electronics circuitry. The DCM is connected to the DM via an M20 Union Connector.

Transformer Assembly: The Transformer Assembly (TA) comprises a GUB4 Enclosure, as detailed in Certificate No. ISSeP 03ATEX004U, and contain a mains supply transformer for the DM & DCM.

Union Connector: The Union Connector (UC) has a male and female section. The male section comprises a hollow cylindrical brass body with an M20 male threaded portion, which is intended to screw into an entry point on its associated enclosure, at one end and a male spigot portion at the other. The female section comprises a hollow cylindrical brass body with an M20 male threaded portion, which is intended to screw into an entry point of its associated enclosure, at one end and a female threaded portion at the other. The male section spigot interfaces with the female section and is secured by a hexagonal-profile locking nut that tightens onto the female thread. The internal bore is filled with a setting compound, which is keyed by way of two circlips, within the male section.

Gas Inlet/Outlet Glands: The Gas Inlet/Outlet Glands (GI/OGs) comprise a cylindrical stainless steel body with an M16 male thread along its length with the exception of a hexagonal head at one end. The



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body has a central bore to allow the passage of the process pipes and the hexagonal head contains an M3 threaded hole for the fitting of a hexagon socket head grub screw.

Variation 1 - This variation introduced the following changes:

- i. The introduction of a Temperature Controller Enclosure and a shorter frame to facilitate use with a Model 700 gas chromatograph, see Figure 2.

Variation 2 - This variation introduced the following changes:

- i. The address of the applicant was changed from Unit 3B, Dumyat Business Park, Tullibody, Clackmannanshire, FK10 2PB.
- ii. The label was amended to recognise that the number of the notified body involved with the quality phase has been changed.

Variation 3 - This variation introduced the following changes:

- i. The removal of explicit reference to Hawke Type ICG Universal Cable Glands was recognised.
- ii. The option to replace the Alcon Solenoid Coil with an Asco Solenoid Valve was sanctioned.
- iii. The optional alternative front entry layout of the enclosures was introduced, as detailed in Figure 3.

Variation 4 - This variation introduced the following changes:

- i. The positioning of the GUB5 Enclosures was reversed to put the FPD Exhaust at the bottom of the analyser.
- ii. The Gas Inlet/Outlet Glands were replaced by the Tube Adaptors that are detailed in certificate no. Sira 04ATEX1055X Issue 7.
- iii. Drawing notes were changed to update the references to the certifying standards.

Variation 5 - This variation introduced the following changes:

- i. It was recognised that the JCE Component certified enclosures used in the construction of these products, previously covered by certificate number ISSeP03ATEX004U, are now certified under TRAC 12ATEX0008U; the design of the enclosure is unchanged. A special condition regarding static hazards was introduced based on the Schedule of Limitations from the TRAC certificate. As such the certificate number was updated to include an X and the marking of the equipment revised accordingly.
- ii. The revision of the drawings to show new certificate numbers for component certified, JCE enclosures.
- iii. The revision of drawings to change references from EN 50014 and EN 50018 to EN 60079-0 and EN 60079-1.
- iv. The revision of drawing templates from Daniel to the Emerson Process Management template.
- v. The inclusion of an alarm relay for the FPD module for the 700XA GC.

Variation 6 - This variation introduced the following changes:

- i. The introduction of a new Special Condition For Safe Use and Condition Of Manufacture to give clarification on the use of appropriate certified right angle cable adaptors with the equipment.

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Hawarden, CH5 3US, United Kingdom

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Variation 7 - This variation introduced the following change:

- i. The Prime holder of the certificate was transferred to Rosemount Analytical Inc., 10241 West Little York, Suite 200, Houston, Texas 77040, USA, The Site in Tullibody was retained as a subsidiary location.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	31 October 2006	R51A15279A	The release of the prime certificate.
1	18 September 2007	R51A16935A	This Issue covers the following changes: <ul style="list-style-type: none">• 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.• The introduction of Variation 1.
2	03 July 2008	R51A18574A	The introduction of Variation 2.
3	5 February 2009	R51A19581A	The introduction of Variation 3.
4	26 June 2009	R51A20364A	The introduction of Variation 4.
5	29 November 2012	R27814A/00	This Issue covers the following changes: <ul style="list-style-type: none">• Certificate Annexe, Issue 2, a typographical error of the drawing number was corrected.• The introduction of Variation 5.
6	12 February 2014	R32490A/00	The introduction of Variation 6.
7	13 October 2015	R70049764A	The introduction of Variation 7.

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

- 15.1 The enclosure has a non-conducting surface coating and, under certain extreme conditions, may generate an ignition-capable level of electrostatic charges. The user shall ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.

- 15.2 Where right angle bend cable adaptors are used they shall be appropriately certified and shall interface with enclosures via appropriate certified barrier glands.

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.

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- 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 Modules 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 the Modules.
- 17.4 Where right angle bend cable adaptors are used they shall be appropriately certified and shall interface with enclosures via appropriate certified barrier glands.

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Certificate Annexe



Certificate Number: Sira 06ATEX1174X

Equipment: FPD Model

Applicant: Rosemount Analytical Inc.

Issue 0

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
DUK7233/003/1	1 of 1	1	07 Jul 06	FPD Module Top Housing Assembly
DUK7233/004/1	1 of 1	1	07 Jul 06	FPD Module Bottom Housing Assembly
DUK7233/010/1	1 of 1	1	07 Jul 06	M20 Union Connection
DUK7233/011/1	1 of 1	1	07 Jul 06	Gas Inlet/Outlet Gland
DUK7233/013/1	1 of 1	0	07 Jul 06	FPD Module General Arrangement
DUK7233/015/3	1 of 1	2	31 Oct 06	FPD Module ATEX Certification Label

Issue 1

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
DUK7204/100/1	1 of 1	0	16 Aug 07	Model 700 FPD Module G/A
DUK7233/101/1	1 of 1	0	16 Aug 07	Model 700 FPD Module Temperature Controller Enclosure

Issue 2

Drawing No	Sheet	Rev.	Date	Description
DUK7233/015/3	1 of 1	3	27 Mar 08	FPD Module ATEX Certification Label

Issue 3

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
DUK7204/100/1	1 of 1	1	30 Jan 09	Model 700 FPD Module G/A
DUK7204/156/1	1 of 1	0	30 Jan 09	G/A FPD Module Front Access
DUK7233/013/1	1 of 1	1	30 Jan 09	G/A Model 500 FPD Module

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
DUK7204/100/1	1 of 1	2	10 Jun 09	GA 700 FPD Module
DUK7204/156/1	1 of 1	1	10 Jun 09	GA 700 FPD Module Front Entry
DUK7233/013/1	1 of 1	2	10 Jun 09	GA 500 FPD Module
DUK7233/060/1	1 of 1	0	10 Jun 09	FPD Module Bottom Housing Assembly
DUK7233/061/1	1 of 1	0	10 Jun 09	FPD Module Top Housing Assembly
BE20878	1 of 1	G	10 Jun 09	Fitting Tube Taper Enclosures Model 700 GC
BE20879	1 of 1	C	10 Jun 09	Tube Fitting Nut Enclosures Model 700 GC
BE20908	1 of 1	C	10 Jun 09	Fitting Tube Adaptor Enclosures Model 700 GC

Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
DUK7233/060/3	1 of 1	1	01 Oct 12	FPD Module Bottom Housing Assembly
DUK7233/061/3	1 of 1	1	01 Oct 12	FPD Module Top Housing Assembly
DUK7204/101/3	1 of 1	1	01 Oct 12	Model 700 FPD Module Temperature/controller Enclosure
DUK7233/013/1	1 of 1	3	01 Oct 12	GA : Model 500 FPD Module
DUK7223/015/3	1 of 1	4	21 Nov 12	FPD Module ATEX certification Label
DUK7204/100/3	1 of 1	3	01 Oct 12	Model 700 FPD Module G/A
DUK7204/156/3	1 of 1	2	01 Oct 12	GA : FPD Module Front Access
DUK7342/052/3	1 of 1	0	01 Oct 12	Analyser Model XA FPD General Arrangement
DUK7342/053/3	1 of 1	0	01 Oct 12	FPD Module Top Housing Assembly For 700XA GC Only

Issue 6 No new drawings were introduced.

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Certificate Annexe



Certificate Number: Sira 06ATEX1174X
Equipment: FPD Model
Applicant: Rosemount Analytical Inc.

Issue 7

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
DUK7233/015/3	1 of 1	7	12 Oct 15	FPD Module ATEX Certification Label

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Hawarden, CH5 3US, United Kingdom

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Web: www.csagroupuk.org