

1 EC-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 94/9/EC

3 EC-Type Examination Certificate No: FM12ATEX0091X

4 Equipment or protective system: RFD-2000X Flame Detectors
(Type Reference and Name)

5 Name of Applicant: Rezontech Co. LTD

6 Address of Applicant: 805, Mega Valley
Gwanyang-dong
Dongan-gu Anyang-si,
Gyeonggido 431-060
Korea, Republic of

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

8 FM Approvals Ltd, notified body number 1725 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 confidential report number:

0003040396 dated 28 December 2012

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0: 2009, EN 60079-1: 2007, EN 60529: 1991 + A1: 2000

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, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II 2 G Ex db IIB+H₂ T6 Ta=-40°C to 75°C

Mick Gower
Certification Manager, FM Approvals Ltd.

Issue date: 14th January 2013

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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SCHEDULE

to EC-Type Examination Certificate No. FM12ATEX0091X

13 Description of Equipment or Protective System:

RFD-2000X-a/ST/b/FM. UV/IR Flame Detector.

a = Detection Type: H (for Hydrogen) or Blank (for Heptane)

b = Field Entry Type: 2N or 2M

The RFD-2000X and RFD-2000X-H (herein referred to as the RFD-2000X Flame Detectors) from Rezontech Co., Ltd. are UV/IR type flame detectors designed for use in hazardous locations. These flame detectors are used for detecting hydrogen flame and hydrocarbon (-H) or hydrocarbon flame only. These flame detectors activate an alarm signaling system or fire extinguishing system directly from relay output terminals of the detector or via connected control circuit.

Mechanical - The RFD-2000X flame detectors consist of a single compartment enclosure / housing. The housing comes fabricated with (2) ½ inch-14 NPT or (2) M20 openings for cable or conduit connection. The housing is constructed from stainless steel for resistance against corrosion. The RFD-2000X flame detectors housing is environmentally protected (Type 4X/IP67).

Operation Temperature Ranges: The ambient operating temperature range of the RFD-2000X Flame Detectors is -40°C to 75°C.

Electrical data: The RFD-2000X Flame Detectors are 24 Vdc rated (17V to 32 Volts dc) with a maximum power consumption of 1.8 Watts. The detectors provide for three output methods, Dry contact Relays (for Fire, Fault, Warning rated 2 Amperes at 28Vdc, 4 Amperes at 125 Vac or 2 Amperes at 250 Vac), 4-20mA Current Output and RS-485 Communication.

14 Specific Conditions of Use:

Consult the manufacturer for dimensional information on the flameproof joints for repair.

15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EC-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's ATEX Certification Scheme.

17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

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18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
14 January 2013	Original Issue.



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Blueprint Report

Rezontech (127413)

Class No 3260

Original Project I.D. 3037260

Certificate I.D. FM12ATEX0091X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
ASM_2000X-001-01	1	Assembly 2000X	3040396	Yes (pdf)
BOM-2000X-000-01	1	Bill of Materials 2000X	3040396	Yes (pdf)
DS-2000X	2	datasheet 2000X	3040396	Yes (pdf)
Ex-2000X-000-01	4	Assembly	3040396	Yes (pdf)
Ex-2000X-001-01	4	Body	3040396	Yes (pdf)
Ex-2000X-002-01	4	Cover	3040396	Yes (pdf)
Ex-2000X-003-01	3	Glass1	3040396	Yes (pdf)
Ex-2000X-004-01	3	Glass2	3040396	Yes (pdf)
Ex-2000X-005-01	3	Teflon Cover	3040396	Yes (pdf)
Ex-2000X-006-01	3	Window Cover	3040396	Yes (pdf)
Ex-2000X-007-01	3	PCB Support	3040396	Yes (pdf)
Ex-2000X-008-01	5	Name Plate UV/IR	3040396	Yes (pdf)
Ex-2000X-008-02	1	Name Plate Hydrogen UV/IR	3040396	Yes (pdf)
Ex-2000X-009-01	3	Bolt	3040396	Yes (pdf)
Ex-2000X-010-01	3	Oring	3040396	Yes (pdf)
Ex-2000X-011-01	3	Label 1	3040396	Yes (pdf)
Ex-2000X-012-01	3	Label 2	3040396	Yes (pdf)
Ex-2000X-013-01	3	Label 3	3040396	Yes (pdf)
Ex-2000X-015-01	3	Label 5 (English)	3040396	Yes (pdf)
Ex-2000X-016-01	3	Label 5 (Metric)	3040396	Yes (pdf)
MCODE-2000X	0	RFD-2000 Series Model Code Matrix	3040396	Yes (pdf)
Manual-2000X	1	Manual-2000X	3040396	Yes (pdf)
PM-2000X-000-01	1	List	3040396	Yes (pdf)
PM-2000X-001-01	1	Board01	3040396	Yes (pdf)
PM-2000X-001-02	1	Board01	3040396	Yes (pdf)
PM-2000X-002-01	1	Board02	3040396	Yes (pdf)
PM-2000X-002-02	1	Board02	3040396	Yes (pdf)
PM-2000X-003-01	1	Board03	3040396	Yes (pdf)
PM-2000X-003-02	1	Board03	3040396	Yes (pdf)
PM-2000X-004-01	1	Board04	3040396	Yes (pdf)
PM-2000X-004-02	1	Board04	3040396	Yes (pdf)
SCH-2000X-000-01	1	List	3040396	Yes (pdf)
SCH-2000X-0004-02	1	RFD-2000X	3040396	Yes (pdf)
SCH-2000X-001-01	1	RFD-2000X	3040396	Yes (pdf)
SCH-2000X-002-01	1	RFD-2000X	3040396	Yes (pdf)
SCH-2000X-003-01	1	RFD-2000X	3040396	Yes (pdf)
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