



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX TSA 10.0016X** issue No.:0 Certificate history:.....

Status: **Current**

Date of Issue: **2010-07-30** Page 1 of 3

Applicant: **RAE Systems**
3775 North First Street
San Jose, California 95134
United States of America

Electrical Apparatus: **FMC-400, Wireless Communication Instrument**
Optional accessory:

Type of Protection: **Intrinsic Safety 'ia'**

Marking: **RAE Systems**
FMC-400, Wireless Communication Instrument
Ex ia I
Ex ia IIC T4
IECEX TSA 10.0016X
S/N _____

*Approved for issue on behalf of the IECEx
Certification Body:*

Ujen Singh

Position:

Quality and Certification Manager

*Signature:
(for printed version)*

Date:

20 JULY 2010

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





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Manufacturer: **RAE Systems**
3775 North First Street
San Jose, California 95134
United States of America

Manufacturing location(s):
RAE Systems **RAE Systems (Shanghai)**
3775 North First Street No. 788 Zhaoxian Road
San Jose, California 95134 JianDing, Shanghai
United States of America China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

AU/TSA/ExTR10.0004/00

Quality Assessment Report:

NO/DNV/QAR06.0003/02

NO/DNV/QAR06.0004/02



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

FMC-400 Wireless Communication Instrument is a wireless mesh network enabled transmission radio module. The Instrument is similar as FTD-3000 Wireless Gas Detector. The enclosure is identical only without gas detect head. It has a LCD display, three push buttons and an opening for the buzzer sound output. On the top of the enclosure there is a threaded connector for the antenna and at the bottom of the enclosure there is one opening covered with threaded cap. The opening is for the D size cell replacement. The FMC-400 is powered by a single D size Lithium-thionyl Chloride non-rechargeable cell or by an external 3.6 V power source through the adaptor.

CONDITIONS OF CERTIFICATION: YES as shown below:

Refer to Annexe of the Certificate.



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0016X	Issue No.:	0
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Conditions of safe use pertaining to Issue 0 of this certificate:

1. It is a condition of safe use that the apparatus must be powered by one of the two types of non-rechargeable cells.

EVE ER34615 Lithium-thionyl Chloride Size D, 3.6 V.
Xeno XL-205F Thionyl Chloride Lithium, Size D, 3.6 V.

2. It is a condition of safe use that the apparatus must be powered by a galvanically isolated external power supply. The following input parameters must be taken into account when external source is used

$U_i = 3.6 \text{ V}$
 $C_i = 78 \text{ } \mu\text{F}$
 $L_i/R_i = 3.5 \text{ } \mu\text{H}/\Omega$

Drawing list pertaining to Issue 0 of this Certificate:

Document No.	Sheets	Document Title	Issue	Date
F04-1001-SCH	6	FMC-400 Main Board (<i>Schematic</i>)	6	2010/06/04
F04-1001-000	10	FMC-400 Main PCB	C	2010/06/04
F04-1011-BOM	3	FMC-400 Main Board BOM	7	2010/06/24
F04-4004-LBL	1	Label, FMC400	1	2010/06/28

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	TestSafe Australia 919 Londonderry Road Londonderry NSW 2753 Australia
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