DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

[2] **EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**

[3] EC-Type Examination Certificate Number: **DNV 10 ATEX 83388X** Rev 1

[4] Equipment or Protective System: **FMC-400, Wireless Communication Instrument**

[5] Applicant – Manufacturer or Authorized representative: **RAE Systems**

[6] Address: **3775 North First Street, San Jose**
California 95134, USA

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

[8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential reports listed in section 14.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2006 and EN 60079-11: 2007

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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 or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.

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

II 1 G **Ex ia IIC T4 (-40ºC ≤ Ta ≤ + 50ºC)**
I M1 **Ex ia I**

Høvik, 2012-11-29
for Det Norske Veritas AS

Geir Hørthe
Certification Manager

NORSK AKKREDITERING
PROD 019

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The digitally signed and electronically distributed document is the original and valid certificate. Ref.: www.dnv.com/digitalsignatures

[13] # Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV 10 ATEX 83388X Rev 1

Certificate History

Revision	Description	Report no.	Issue date
-	Original certificate	2010-3444	2010-09-23
1	Minor design changes, updated descritptive documents	2010-3444 r2	2012-11-29

[15] **Description of Equipment or Protective System**

FMC-400 Wireless Communication Instrument is a wireless mesh network enabled transmission radio module. FMC-400 is a member of the MeshGuard family. The equipment does not include gas sensors. 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

Type Identification: FMC-400

Electrical Data: Refer to Condtitions for safe use.

Degrees of protection (IP Code): IP 55

[16] **Project No.:** PRJC-255164-2010-PRC-NOR

Descriptive Documents

Number	Title	Rev.	Date
F04-1011-SCH	FMC-400 Main Board *(Schematic), (*6 sheets)	7	1226
F04-1001-000	FMC-400 Main PCB, (10 sheets)	D	2012-08-01
F04-1011-BOM	FMC-400 Main Board BOM, (3 sheets)	8	2012-08-06
F04-4004-LBL-ATX	Label, FMC400	1	2010-08-19

[17] **Special Conditions for Safe Use**

1. It is a condition of safe use that the apparatus must be powered by one ofthe 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
   Ui = 3.6 V
   Ci = 78 µF
   Li/Ri = 3.5 µH/ Ω

[18] **Essential Health and Safety Requirements**

See part 9 of this certificate

END OF CERTIFICATE