



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 NEP 19.0020X Issue No: 0 Certificate history:
Issue No. 0 (2019-08-02)

Status: Current Page 1 of 3

Date of Issue: 2019-08-02

Applicant: RAE Systems (Shanghai) Inc.
No. 990 E. Huiwang Road, JIADING DISTRICT, Shanghai 201815
China

Equipment: Fixed Gas Detector, Model FGM-6*00*
Optional accessory:

Type of Protection: Ex db, ia

Marking: Ex db IIC T6 Gb (Ta: -40°C~+65°C)
Ex db ia IIC T6 Gb (Ta: -20°C~+55°C)

Approved for issue on behalf of the IECEX
Certification Body:

Xu Jianping

Position:

Managing Director

Signature:
(for printed version)

Date:

2 August, 2019

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:

Shanghai Inspection and Testing Institute of Instruments and
Automatic Systems Co., Ltd. (SITI/IAS) / National Supervision and
Inspection Center for Explosion Protection and Safety of
Instrumentation (NEPSI)
103 Cao Bao Road
Shanghai 200233
China



SITI/IAS
Worldwide Access



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Manufacturer: RAE Systems (Shanghai) Inc.
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China

Additional Manufacturing location(s):

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 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 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	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:

CN/NEP/ExTR19.0026/00

Quality Assessment Report:

NO/PRE/QAR16.0006/01



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Type Designation:

FGM-6 a 00 b

a indicates sensor type, includes 1 (LEL), 2 (NDIR) and 3 (EC);

b indicates material of main housing, includes S (stainless steel) and blank (aluminum alloy).

Fixed Gas Detector comprises a cylindrical main housing and a gas sensing head. The main housing, which contains the electronics and an LED display, comprises a threaded window cover and a base with mounting lugs. The base has two 3/4 NPT cable entries to connect separately certified cable glands and one M25*1.5 threaded hole, which is used to mount the sensing head.

Product with different sensor type has the same structure for the sensing head. It is made of stainless steel and comprises two parts, cylindrical jointed and fastened with a threaded nut. For LEL/NDIR type, the sensing end has an 80um sinter fused into the enclosure to allow gas penetration to be detected by the internal equipment, the mounting end contains a setting compound through which the equipment wiring passes. For EC type, additional safety barrier board is located in the sensor head and encapsulated. The sensor PCB and replaceable gas sensor are located behind a removable chromium plated sensor cover.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Repairs of the flameproof joints may only be made by the manufacturer or on behalf of the manufacturer and on his own responsibility. Repair in compliance with the values in IEC 60079-1 is not accepted.
2. The cable entries have to be connected by means of suitable cable glands or blanking elements with type of protection of Ex d IIC Gb. The cable entry device shall be approved in accordance with IEC 60079-0:2017 and IEC 60079-1:2014, and which are covered by a separate conformity certificate.
3. This product shall be connected to the equipotential bonding system. Refer to the manual.