



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 SIM 08.0012 issue No.:1

Status: **Current**

Certificate history:
Issue No. 1 (2009-7-14)
Issue No. 0 (2008-11-5)

Date of Issue: **2009-07-14** Page 1 of 5

Applicant: **Quest Technologies, Inc. a 3M Company**
1060 Corporate Center Drive
OCONOMOWOC, WI 53066
United States of America

Electrical Apparatus: **eg5 Dosimeter**
Optional accessory:

Type of Protection: **ia**

Marking: **Ex ia I/IC 143°C IP65**
Tamb = -10°C to +50°C
or,
Ex ia I/IC T4 IP65
Tamb = -10°C to +40°C

Approved for issue on behalf of the IECEx Certification Body: Ashraf Chowdhury

Position: Principal Engineer - Certification

Signature:
(for printed version)

Date:

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:

Safety in Mines Testing and Research Station (Simtars)
2 Smith Street
REDBANK QLD 4301
Australia





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Manufacturer: **Quest Technologies, Inc. a 3M Company**
1060 Corporate Center Drive
OCONOMOWOC, WI 53066
United States of America

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 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 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition: 4.0

IEC 60079-11 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 5

*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/SIM/ExTR08.0016/01](#)

Quality Assessment Report:

[US/UL/QAR08.0004/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The eg5 Edge Dosimeter is a handheld instrument for measuring and logging exposure to noise. The device is powered by a single rechargeable lithium-polymer cell (350 mAh / 3.7 V nominal) encapsulated in a battery pack assembly with a PCB-mounted fuse and current-limiting resistor. The battery pack remains installed in the equipment while charging in a safe area and is not user-replaceable. The device comprises a membrane keypad and liquid crystal display, charging pins and infrared window for uploading data.

CONDITIONS OF CERTIFICATION: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1:

Addition of insulating plate over the rear PCB for improved segregation.

Addition of a voltage booster circuit and shunt voltage limiters to the display circuitry to limit potential stepped up voltages from the booster circuit and display driver.

Addition of current limiting resistor ISR174.

Increased power rating and values of current limiting resistors ISR52, ISR53 and ISR54.

Reduction in installed capacitance.

PCB track layout changed to accommodate new components and improve segregation.



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Additional information:

The maximum battery charging voltage (U_m) is 5.6 V. Charging can only be carried out in a safe area.