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UNITED KINGDOM CONFORMITY ASSESSMENT

UK-TYPE EXAMINATION CERTIFICATE



2 **Component intended for use in Potentially Explosive Atmospheres –**
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 **UK-Type Examination Certificate No:** FM21UKEX0159U

4 **Component:** MPS S4 Combustible Gas Sensors
(Type Reference and Name)

5 **Name of Applicant:** Nevada Nanotech Systems Inc.

6 **Address of Applicant:** 1395 Greg St Suite 102
Sparks, NV 89431
United States of America

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Ltd, Approved Body number 1725, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in confidential report number:

PR452569_RR229254 dated 25th October 2021

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 IEC 60079-0:2018 and EN 60079-11:2012

10 The sign 'U' placed after the certificate number indicates that this certificate must not be mistaken for a certificate for equipment or a protective system. This certificate may only be used as the basis for the certification of equipment or a protective system.

11 This UK-Type Examination certificate relates only to the design, examination and tests of the specified component in accordance with the Regulations. Further requirements of the Regulations apply to the manufacturing process and supply of this component. These are not covered by this certificate.

12 The marking of the component shall include:



II 1 G Ex ia IIC Ga Ta = -40°C to +75°C

II 1 D Ex ia IIIC Da Ta = -40°C to +75°C



Digitally signed by Victor Aluko-Oginni
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Foxit PhantomPDF Version: 10.1.5

Victor Aluko-Oginni
Certification Manager, FM Approvals Ltd.

Issue date: 22nd June 2022

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

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F UKEX 027 (Jan/21)



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SCHEDULE



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to UK-Type Examination Certificate No. FM21UKEX0159U

13 Description of Component:

General - The MPS S4 Combustible Gas Sensors are 3, 4, or 5 pin components for use in gas detection. The sensors are designed to detect multiple gases and gas mixtures. The sensors are components installed in a gas detection system.

Ratings - The ambient operating temperature range is -40°C to +75°C. The MPS S4 Gas Sensors have the following Energy Limiting Parameters:

Hardware Configuration: 03, 04, or 05:
U_i = 6V; I_i = 1.8A; C_i = 19.5 μF; L_i = 0; P_i = 870mW.

Hardware Configuration: 23, 24, or 25:
U_i = 6V; I_i = 1.8A; C_i = 8.3 μF; L_i = 0; P_i = 870mW.

MPSaaa-bbccdd-ef Combustible Gas Sensor.

aaa = Product Family: Any 3 alphanumeric combination

bb = Form/Size: S4

cc = Hardware Configuration: 03, 04, 05, 23, 24, or 25

dd = Software Configuration: Any 2 alphanumeric combination

e = Certification: E

f = Production Classification: Any alphanumeric combination

14 Schedule of Limitations:

1. The functionality of the sensor shall be verified as necessary in accordance with the appropriate performance standard.
2. The sensor shall be installed within an enclosure with a minimum ingress protection rating of IP20.
3. The intrinsically safe parameters for the sensor shall be applied to the intrinsically safe device to which the sensor is connected.

15 Essential Health and Safety Requirements:

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This UK-Type Examination Certificate is the result of testing of a sample of the component 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 UKCA Marking, FM Approvals Ltd accepts no responsibility for the compliance of the component against all applicable Regulations in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's UKCA 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 Approved Body.

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18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
7 th December 2021	Original Issue.
22 nd June 2022	Supplement 1: Report Reference: – RR232855 dated 17 th June 2022. Description of the Change: Minor documentation updates and additions related to alternate component bills of material. Correction of the report reference number on the original issue of this certificate.

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