

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 06ATEX2153 X** Issue Number: **1**

(4) Equipment: **DM-700 – Toxic Gas or Oxygen Deficiency Sensor**

(5) Manufacturer: **Detcon Inc.**

(6) Address: **3200 Research Forest Drive, The Woodlands, TX 77381, USA**

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

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 test report number 2085725.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2004

EN 60079-1 : 2004

EN 50020 : 2002

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:



II 2 G Ex d [ib] ib IIC T4

This certificate is issued on 27 September 2006 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



T. Pijpker
Certification Manager

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 06ATEX2153 X Issue No. 1**

(15) **Description**

DM-700 Toxic Gas or Oxygen Deficiency Sensor, for fixed installation, designed to detect and monitor toxic gases or O₂ concentration in air.

Ambient temperature range -40 °C to +50 °C.

Electrical data

Input rating: 11 to 30 Vdc, 50 mA max.

Output: 4 – 20 mA, RS-485 ModBus.

U_m = 250 V

Installation instructions

The instructions of the manufacturer as provided with the equipment shall be followed in detail in order to assure safe and proper functioning of the equipment.

Routine tests

Routine tests are not required since the Ex d overpressure tests have been conducted based on 4 times maximum reference pressure and the Ex ib barrier contains properly rated, redundant zener diodes.

(16) **Test Report**

KEMA No. 2085725.

(17) **Special conditions for safe use**

The sensor shall be installed on a metallic grounded structure such as the final assembly assures that sensor enclosure is bonded to ground.

The sensor common plane wire (black) shall be connected to ground in the final assembly.

Proper precautions shall be taken during installation, operation, maintenance and service of the product in order to avoid the build-up of static charges on the plastic splashguard.

(18) **Essential Health and Safety Requirements**

Assured by compliance with the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 2085725.