

EC-TYPE EXAMINATION CERTIFICATE



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**Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

[3]

EC-Type Examination Certificate Number: **DEMKO 10 ATEX 1006410**

[4]

Equipment or Protective System: **Gas Detector Ventis MX4**

[5]

Manufacturer: **Industrial Scientific Corporation**

[6]

Address: **1001 Oakdale Road, Oakdale, PA 15071, USA**

[7]

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

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the 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 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 report no. **10NK06410**

[9]

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

**EN 60079-0:2006
EN 60079-11:2007**

**EN 60079-0:2009
EN 60079-1:2007**

[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, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12]

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

 **I M2 / II 2G Ex d ia I Mb / Ex d ia IIC T4 Gb IP66/67**

Certification Manager

Jan-Erik Storgaard

Date of issue: 2011-01-07

Notified Body

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[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 10 ATEX 1006410
Report: 10NK06410

[15] Description of Equipment or protective system

The Ventis MX4 is a portable gas detector intended to be used in the hazardous area. It is capable of simultaneously monitoring 4 gases:

- Oxygen (O2)
- Combustible (LEL or CH4)
- Two interchangeable toxics (CO, H2S, NO2, or H2S)

There are two versions of the Ventis MX4: Diffusion and Aspirated. The Aspirated version is installed with a pump module while the Diffusion version is not. The Diffusion version is to be used with the Part No. 17134453-X1 rechargeable Li-Ion battery pack or 17148313-1 rechargeable Li-Ion extended battery pack or 17150608 replaceable battery pack using Duracell MN2400 or Energizer EN92 "AAA" alkaline cells. The Aspirated version may only be used with Part No. 17148313-1 rechargeable Li-Ion extended battery pack or 17150608 replaceable battery pack using Duracell MN2400 or Energizer EN92 "AAA" alkaline cells. Gas readings are displayed on a LCD. The instrument provides alarms for the following conditions:

- low battery
- low limit (user adjustable)
- high limit (user adjustable)
- STEL (user adjustable)
- TWA (user adjustable)
- overdue for calibration (user selectable)

When alarm conditions are exceeded, the Ventis MX4 has audible, visual, and a standard vibrating alarm to alert the user.

The optional combustible sensor is Part No. 4B-LEL, manufactured by Industrial Scientific Corporation is certified as "Ex db I/IC" by Sira Certification Service under certificate 04 ATEX 1195U.

Temperature range

The ambient temperature range is -20 °C to +50 °C.

Electrical data

The rechargeable Li-ion battery pack must be charged outside of the hazardous locations with a charger meeting the following parameters:

Um = 6.2 Vdc
Ii = 1.3 A

Performance testing

The measuring function of the apparatus for explosion protection, according to Annex II clause 1.5.5, 1.5.6 and 1.5.7 of the Directive 94/9/EC, is not covered in this certificate.

Routine tests

None.

[16]

Report No.

Project Report No.: 10NK06410 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
CERT MARK: VENTIS, UL, ATEX, IECEx	1810A8790-CM1	1	2010-12-16
CERT COMP: VENTIS MX4 Program	1810A8790-050	0	2010-10-08
AGENCY ASSY: VENTIS MX4 Instrument Kit	1810D8790-350	1	2010-11-17
IS SCHM: VENTIS MX4 Program	1810C8790-450	1	2010-09-15
DTL: Board, Main, Asp, MX4	1714A8131-600	1	2010-02-22
DTL: Board, Pump, Asp, MX4	1714A8172-600	4	2010-05-07
DTL: PCB, Analog, MX4	1713A4990-600	13	2009-11-06
DTL: Board, Safety, Li-Ion, Flex, MX4	1714A1953-600	3	2008-11-05
DTL: Board, Safety, Li-Ion, Flex, MX4	1714A8545-600	1	2010-05-25

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 10 ATEX 1006410
Report: 10NK06410

Description:	Drawing No.:	Rev. Level:	Date:
DTL: Board, Safety, Alk,Rigid-Flex,MX4	1715A0574-600	1	2010-04-21
DTL: PCB, Sensor ID, Toxic,MX4	1713A5013-600	6	2010-06-01
DTL: Board,Sensor,ID,LEL,MX4	1713A5054-600	4	2008-01-04
DTL: Board, Sensor ID,Oxygen,MX4	1713A5039-600	8	2009-03-31
User Manual	17152357	1	-

[17] Special conditions for safe use:
None.

[18] Essential Health and Safety Requirements
Concerning ESR this Schedule verifies compliance with the Annex III of ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

The Ventis MX4 multi-gas monitor has in addition passed the tests for Ingress Protection to IP 66 and IP 67 in accordance with EN60529: 1991/A1 2001.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.