

[1]

## EC-TYPE EXAMINATION CERTIFICATE

[2]

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



[3]

EC-Type Examination Certificate Number: DEMKO 03 ATEX 0321968

[4]

Equipment or Protective System: **GasAlertClip Extreme Series**  
**Models GA24XT-H, GA24XT-M,**  
**GA24XT-S and GA24XT-X**

[5]

Manufacturer: **BW Technologies**

[6]

Address: **2840-2<sup>nd</sup> Ave SE**  
**Calgary, Alberta**  
**Canada T2A 7X9**

[7]

This equipment or protective system and any acceptable variation there to is 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. 0321968

[9]

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

**EN 50014: 1997 E incl. A1+A2**

**EN 50020:2002**

**EN 50284:1999**

[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:

**Ⓔ II 1G EEx ia IIC T4**

On behalf of UL International Demko A/S

Herlev, 2005-03-02

  
Karina Christiansen  
Certification Manager

### UL International Demko A/S

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Certificate: 03 ATEX 0321968

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[13]

## Schedule

[14]

### EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 03 ATEX 0321968

[15]

#### Description of Equipment or protective system

The Series GasAlertClip Extreme are portable, disposable, battery operated, single gas monitors. They are intended for the detection of hydrogen sulfide, carbon monoxide, sulfur dioxide and oxygen depletion. The devices contain audible and visual alarms that are activated when conditions exceed preset limits.

Model Numbers:

| Standard Model | Gas Monitored                       |
|----------------|-------------------------------------|
| GA24XT-H       | Hydrogen Sulfide (H <sub>2</sub> S) |
| GA24XT-M       | Carbon Monoxide (CO)                |
| GA24XT-S       | Sulfur Dioxide (SO <sub>2</sub> )   |
| GA24XT-X       | Oxygen (O <sub>2</sub> )            |

The removal of the letters 'A' and/or 'DL' indicates version without the internal vibrator and/or the Infrared LED option respectively.

Temperature range

| Ambient temperature range | Temperature class |
|---------------------------|-------------------|
| -40°C to +50 °C           | T4                |

#### Electrical data:

One 3.6V lithium battery, nonreplaceable

The devices have been evaluated to EN50020 when used with the following electrochemical sensors:

| Gas Detected                        | Part No.     | Manufacturer    |
|-------------------------------------|--------------|-----------------|
| Oxygen (O <sub>2</sub> )            | 4OX(2)       | City Technology |
| Oxygen (O <sub>2</sub> )            | 2-A2         | Alphasense      |
| Sulfur Dioxide (SO <sub>2</sub> )   | AD200-801-M3 | Citcel Minitox  |
| Hydrogen Sulfide (H <sub>2</sub> S) | 000-OH2S-A2  | Alphasense      |
| Hydrogen Sulfide (H <sub>2</sub> S) | AC220-800-M8 | City Technology |
| Hydrogen Sulfide (H <sub>2</sub> S) | BW20-3H2S    | BW Europe       |
| Carbon Monoxide (CO)                | AB200-801-M1 | Minitox City    |
| Carbon Monoxide (CO)                | BW20-3CO     | BW Europe       |
| Carbon Monoxide (CO)                | CO-AF        | Alphasense      |

[16] Report No.

Project Report No.: 0321968 (Hazardous Location Testing)  
0427774 (Hazardous Location Testing)

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Report: 0427774

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# Schedule

## EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 03 ATEX 0321968

### Drawings:

| Number               | Date/Rev   | Description                             |
|----------------------|------------|---|
| GEUD-06A             | 2003-06-11 | GasAlertClip Extreme Enclosure          |
| GEUD-05A             | 2003-06-11 | GasAlertClip Extreme Assembly           |
| GEUW-10B.SCH         | 2003-07-02 | Power supply, CPU and LCD generators    |
| GEUW-20B.SCH         | 2003-07-02 | Battery test, EEPROM, voltage reference |
| GEUW-30B.SCH         | 2003-07-02 | Universal Sensor Circuitry              |
| GEUW-40B.SCH         | 2003-07-02 | Alarm buzzer and vibrator               |
| GEUW-50B.SCH         | 2003-07-02 | Alarm indicators                        |
| GEUW-60B.SCH         | 2003-07-02 | Setup jumpers and input button          |
| GEUE-01B.PCB         | 2003-07-02 | Component/Trace Layout                  |
| GEUD-07B             | 2003-06-11 | GAClip Extreme Fuse Encapsulation       |
| GasAlertClip Extreme | 112993     | Parts List                              |
| GEUA-07B             | 2004-10-07 | GasAlertClip Extreme Label              |
| D2139-4              | 2004       | Instruction Sheet                       |

[17] Special conditions for safe use:  
None

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

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.

On behalf of UL International Demko A/S

Herlev, 2005-03-02

Karina Christiansen  
Certification Manager

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