

# INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ce	4:5	inn	+-	NI	_	
r.e	ш	ıca	ιe	IN	O.	0

IECEx BAS 05.0059

issue No.:10

Certificate history: Issue No. 10 (2013-2-6) Issue No. 9 (2009-11-

30) Issue No. 8 (2008-6-13) Issue No. 7 (2007-7-5) Issue No. 6 (2006-12-

20)

Status:

Current

Date of Issue:

2013-02-06

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon

Oxfordshire, OX14 1DY United Kingdom

Electrical Apparatus:

Tetra 3

Optional accessory:

Type of Protection:

Intrinsic Safety and Flameproof

Marking:

Ex ia d IIC T4 Gb (-20°C ≤Ta ≤+55°C)

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

n ...

Position:

General Manager

Signature:

(for printed version)

Date:

This certificate and schedule may only be reproduced in full.
 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.

Certificate issued by:

SGS Baseefa Limited Rockhead Business Park Staden Lane Buxton Derbyshire SK17 9RZ United Kingdom





Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2013-02-06

Issue No.: 10

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way

Abingdon Business Park

Abingdon Oxfordshire OX14 1DY

**United Kingdom** 

Additional 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: 2011

Explosive atmospheres - Part 0: General requirements

Edition: 6.0

IEC 60079-1: 2007-04

Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition: 6

IEC 60079-11: 2011

Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition: 6.0

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

IECEx ATR: UK/BAS/05/0554 GB/BAS/ExTR09.0168/00

GB/BAS/ExTR09.0168/00 GB/BAS/ExTR13.0035/00 File Reference:

05/0554 09/0552



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2013-02-06

Issue No.: 10

Page 3 of 4

#### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.

CONDITIONS OF CERTIFICATION: NO					



File Reference: 12/1031

Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2013-02-06

Issue No.: 10

Page 4 of 4

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

#### Variation 10.1

To permit: -

The fitting of an alternative battery in the equipment.

ii) Minor changes to the main PCB not affecting the original assessment.

Minor component changes to the i-Modules not affecting the original assessment.

iv) Minor drawing changes not affecting the original assessment.

#### Variation 10.2

To confirm the current design of Tetra 3 has been reviewed against the requirements of IEC 60079-0: 2011 Edition 6 and IEC 60079-11: 2011 Edition 6 in respect of the differences from IEC 60079-0: 2007 Edition 5 and IEC 60079-11: 2006 Edition 5 and none of the differences affect this equipment.

The standards listed on page 2 of the certificate have been updated.

ExTR: GB/BAS/ExTR13.0035/00

	İ
	ĺ
	ì
į	1
	ŀ
	-
	į
	1
	1
	3
	-



## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

IECEx BAS 05.0059

issue No.:9

Page 1 of 4

Certificate history:

Status:

Current

Issue No. 9 (2009-11-

30)

Date of Issue:

2009-11-30

Issue No. 8 (2008-6-13) Issue No. 7 (2007-7-5) Issue No. 6 (2006-12-20)

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way

Abingdon Business Park Abingdon

Oxfordshire, OX14 1DY **United Kingdom** 

Electrical Apparatus:

Optional accessory:

Tetra 3

Type of Protection:

Intrinsic Safety and Flameproof

Marking:

IECEX BAS 05.0059

Ex ia d IIC T4 Gb (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

Position:

Signature: (for printed version)

Date:

Managing Director

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.

Certificate issued by:

Baseefa Rockhead Business Park Staden Lane Buxton Derbyshire **SK17 9RZ United Kingdom** 





Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2009-11-30

Issue No.: 9

Page 2 of 4

Manufacturer:

Crowcon Detection Instruments Ltd

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire **OX14 1DY** 

**United Kingdom** 

#### 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 60079-0: 2007-10

Explosive atmospheres - Part 0: Equipment - General requirements

Edition: 5

IEC 60079-1: 2007-04

Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition: 6

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

IECEX ATR: UK/BAS/05/0554 GB/BAS/ExTR09.0168/00 File Reference: 05/0554 09/0552



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2009-11-30

Issue No.: 9

Page 3 of 4

#### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2009-11-30

Issue No.: 9

Page 4 of 4

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

To permit minor drawing changes not affecting the original assessment. To permit the introduction of the Hybrid 3 as an alternative Hybrid module.

#### Variation 9.2

To confirm that the Tetra 3 has been reviewed against the requirements of IEC 60079-0:2004 Edition 4 and IEC 60079-11:2006 Edition 5 in respect of the differences from IEC 60079-0:2000 Edition 3.1 and IEC 60079-11:1999 Edition 4 and none of the differences affect the equipment.

The flameproof component certificates associated with the equipment have been updated to IEC 60079-0:2007 Edition 5 and IEC 60079-1:2006 Edition 6.

The list of Standards on Page 2 of the certificate has been updated to show IEC 60079-0:2004 Edition 4, IEC 60079-0:2007 Edition 5, IEC 60079-1:2006 Edition 6 and IEC 60079-11:2006 Edition 5.

ExTR: GB/BAS/ExTR09.0168/00

File Reference: 09/0552



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.lecex.com

Certificate No.:

IECEx BAS 05.0059

issue No.:8

Certificate history:

Status:

Current

Issue No. 8 (2008-6-13) Issue No. 7 (2007-7-5) Issue No. 6 (2006-12-

20)

Date of Issue:

2008-06-13

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park

Abingdon

Oxfordshire, OX14 1DY **United Kingdom** 

Electrical Apparatus:

Tetra 3

Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

IECEX BAS05.0059

Ex lad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

Position:

Managing Director

Signature:

(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.

This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa Rockhead Business Park Staden Lane Buxton Derbyshire SK17 9RZ **United Kingdom** 





Certificate No.: IECEx BAS 05,0059

Date of Issue: 2008-06-13 Issue No.: 8

Page 2 of 4

**Crowcon Detection Instruments Ltd** Manufacturer:

2 Blacklands Way Abingdon Business Park Abingdon

Oxfordshire **OX14 1DY United Kingdom** 

#### 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

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: 2000 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements

Edition: 3.1

IEC 60079-1: 2001

Edition: 4

IEC 60079-11: 1999

Edition: 4

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Electrical apparatus for explosive gas atmospheres - Part 11; Intrinsic safety "i"

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

IECEx ATR: UK/BAS/05/0554 File Reference: 05/0554



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2008-06-13

Issue No.: 8

Page 3 of 4

#### Schedule

#### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEx BAS 05,0059

Date of Issue:

2008-06-13

Issue No.: 8

Page 4 of 4

### DETAILS OF CERTIFICATE CHANGES (for issues 1 and above);

Variation 8.1

To permit the use of alternative encapsulants in the hybrids as listed on the appropriate parts lists.

ExTR: GB/BAS/ExTR07.0191/00

File Reference: 07/1070



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No :

IECEx BAS 05.0059

issue No.:7

History:

Status:

Current

Issue No. 7 (2007-7-5) Issue No. 6 (2006-12-

20)

Date of Issue:

2007-07-05

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way

Abingdon Business Park

Abingdon

Oxfordshire, OX14 1DY **United Kingdom** 

**Electrical Apparatus:** Optional accessory:

Tetra 3

Type of Protection:

intrinsic safety and flameproof

Marking:

IECEX BAS05.0059

Ex lad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

Position:

Managing Director

Signature:

(for printed version)

Date:

This certificate and schedule may only be reproduced in full.
 This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa (2001) Ltd. Rockhead Business Park Staden Lane **Buxton** Derbyshire SK17 9RZ United Kingdom





Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2007-07-05

Issue No.: 7

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon

Oxfordshire OX14 1DY United Kingdom

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 manufacture're 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: 2000

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

Edition: 3.1

IEC 60079-1 : 2001

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Edition: 4

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 5'

Edition: 4

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

IECEX ATR: UK/BAS/05/0554 File Reference:



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2007-07-05

Issue No.: 7

Page 3 of 4

#### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2007-07-05

Issue No.: 7

Page 4 of 4

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

To permit changes to documents to enable the IR i-module to be listed separately from the Flammable i-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

IECEX ATR: UK/BAS/05/0256/4

File Reference:

Variation 2.1

To permit a change of encapsulant in the hybrid circuits.

IECEX ATR: GB/BAS/ExTR06.0029/00

File Reference:

06/0285

Variation 3.1

To permit the use of an alternative model name Combi-Mate 3, minor additions to the list of Oxygen and Toxic i-Modules which may be used, and minor changes to the GA, Hybrid 1A and the charger PCB.

IECEX ATR: GB/BAS/EXTR06.0058/00

File Reference: 06/0425

Variation 4.1

To permit minor changes to drawings, the use of alternative sounders, and the use of an optional alternative CO2 chemical imodule.

Ex TR: GB/BAS/ExTR08.0104/00

File Reference: 06/0673

To permit changes to the display PCB to form an Issue 2 version, and to permit the addition of a conformal coating in a localised area of existing issue 1 PCBs.

Ex TR: GB/BAS/ExTR06.0162/00

File Reference: 06/0926

To permit minor changes to the desktop charger units with part number C011018 and C011019.

When only charging of the apparatus is required, the desktop charger part number C01941 may be replaced by any Crowcon charger with an output  $(U_m)$  of 9V.

When both charging and data communication are required, only charger / interface part number C011019 must be used.

Ex TR: GB/BAS/ExTR06.0172/00

File Reference: 06/1022

Variation 7.1

To permit minor changes to circuits and various documents.

Ex TR: GB/BAS/ExTR06.0177/00

File Reference:



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres for rules and details of the IECEx Scheme visit www.lecex.com

Certificate No.:

**IECEX BAS 05.0059** 

Issue No.: 6

Status:

Current

Date of Issue:

2006-12-20

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon Oxfordshire, OX14 1DY **United Kingdom** 

Electrical Apparatus: Tetra 3

Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

**IECEX BAS05.0059** 

Ex iad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx Certification Body:

R S Sinclair

Position:

Managing Director

Signature: (for printed version)

Date:

This certificate and schedule may only be reproduced in full.
 This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa (2001) Ltd.

Rockhead Business Park Staden Lane Buxton Derbyshire SK17 9RZ **United Kingdom** 





Certificate No.:

**IECEX BAS 05.0059** 

Date of Issue:

2006-12-20

Issue No.: 6

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire **OX14 1DY United Kingdom** 

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 manufacture're 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: 2000

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

Edition: 3.1

IEC 60079-1: 2001

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Edition: 4

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 7

Edition: 4

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

IECEX ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

**IECEX BAS 05.0059** 

Date of Issue:

2006-12-20

Issue No.: 6

Page 3 of 4

### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

**IECEX BAS 05.0059** 

Date of Issue:

2006-12-20

Issue No.: 6

Page 4 of 4

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

#### Variation 1.1

To permit changes to documents to enable the IR i-module to be listed separately from the Flammable i-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

UK/BAS/05/0256/4

File Reference: 05/0554

#### Variation 2.1

To permit a change of encapsulant in the hybrid circuits.

GB/BAS/ExTR06.0029/00

File Reference: 06/0285

#### Variation 3.1

To permit the use of an alternative model name Combi-Mate 3, minor additions to the list of Oxygen and Toxic i-Modules which may be used, and minor changes to the GA, Hybrid 1A and the charger PCB.

IECEY ATR GB/BAS/ExTR06.0068/00 File Reference:

06/0425

#### Variation 4.1

To permit minor changes to drawings, the use of alternative sounders, and the use of an optional alternative CO2 chemical imodule.

Ex TR: GB/BAS/ExTR06.0104/00

File Reference: 06/0673

#### Variation 5.1

To permit changes to the display PCB to form an issue 2 version, and to permit the addition of a conformal coating in a localised area of existing issue 1 PCBs.

Ex TR: GB/BAS/ExTR06.0162/00

File Reference: 06/0926

#### Variation 6.1

To permit minor changes to the desktop charger units with part number C011018 and C011019.

When only charging of the apparatus is required, the desktop charger part number C01941 may be replaced by any Crowcon charger with an output (Um) of 9V.

When both charging and data communication are required, only charger / interface part number C011019 must be used.

Ex TR: GB/BAS/ExTR06.0172/00

File Reference: 06/1022



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

**IECEX BAS 05.0059** 

Issue No.: 5

Current

Date of Issue:

2006-11-20

Page 1 of 4

Applicant:

Crowcon Detection Instruments Ltd

2 Blacklands Way Abingdon Business Park Abingdon Oxfordshire, OX14 1DY

**United Kingdom** 

Electrical Apparatus: Tetra 3 Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

**IECEx BAS05.0059** 

Ex iad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx

Certification Body:

Position:

Signature: (for printed version)

R S Sinclair

This certificate and schedule may only be reproduced in full.
 This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa (2001) Ltd.
Rockhead Business Park

Staden Lane **Buxton** Derbyshire SK17 9RZ **United Kingdom** 





Certificate No.:

IECE<sub>x</sub> BAS 05.0059

Date of Issue:

2006-11-20

Issue No.: 5

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon

Oxfordshire **OX14 1DY United Kingdom** 

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 manufacture'rs 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: 2000

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

Edition: 3.1

IEC 60079-1: 2001

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Edition: 4

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 1'

Edition: 4

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

IECEX ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

IECEX BAS 05.0059

Date of Issue:

2006-11-20

Issue No.: 5

Page 3 of 4

### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

**IECEx BAS 05.0059** 

Date of Issue:

2006-11-20

Issue No.: 5

Page 4 of 4

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

#### Variation 1.1

To permit changes to documents to enable the IR I-module to be listed separately from the Flammable i-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

IECEX ATR: UK/BAS/05/0256/4 File Reference:

#### Variation 2.1

To permit a change of encapsulant in the hybrid circuits,

IECEx ATR: GB/BAS/ExTR06,0029/00 File Reference:

06/0285

#### Variation 3.1

To permit the use of an alternative model name Combi-Mate 3, minor additions to the list of Oxygen and Toxic i-Modules which may be used, and minor changes to the GA, Hybrid 1A and the charger PCB.

File Reference: 06/0425

IECEX ATR: GB/BAS/EXTR06.0058/00

#### Variation 4.1

To permit minor changes to drawings, the use of alternative sounders, and the use of an optional alternative CO2 chemical imodule.

Ex TR: GB/BAS/ExTR06,0104/00

File Reference: 06/0673

#### Variation 5.1

To permit changes to the display PCB to form an issue 2 version, and to permit the addition of a conformal coating in a localised area of existing issue 1 PCBs.

Ex TR: GB/BAS/ExTR06.0162/00

File Reference: 06/0926



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No .:

IECEX BAS 05.0059

Issue No.: 4

Status:

Current

Date of Issue:

2006-09-18

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon

Oxfordshire, OX14 1DY **United Kingdom** 

Electrical Apparatus: Tetra 3

Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

**IECEx BAS05.0059** 

Ex lad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx Certification Body:

R S Sinclair

Position:

Signature:

(for printed version)

This certificate and schedule may only be reproduced in full.
 This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa (2001) Ltd.
Rockhead Business Park

Staden Lane Buxton Derbyshire SK17 9RZ **United Kingdom** 





Certificate No.:

IECEx BAS 05,0059

Date of Issue:

2006-09-18

Issue No. 4

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon

Oxfordshire **OX14 1DY United Kingdom** 

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 manufacture'rs 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: 2000

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

Edition: 3.1

IEC 60079-1: 2001

Edition: 4

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety "i"

Edition: 4

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

IECEX ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2006-09-18

Issue No.: 4

Page 3 of 4

### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEX BAS 05.0059

Date of Issue:

2006-09-18

Issue No.: 4

Page 4 of 4

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

#### Variation 1.1

To permit changes to documents to enable the IR i-module to be listed separately from the Flammable I-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

UK/BAS/05/0256/4

#### Variation 2.1

To permit a change of encapsulant in the hybrid circuits.

GB/BAS/ExTR08.0029/00

File Reference:

06/0285

#### Variation 3.1

To permit the use of an alternative model name Combi-Mate 3, minor additions to the list of Oxygen and Toxic i-Modules which may be used, and minor changes to the GA, Hybrid 1A and the charger PCB.

IECEX ATR: GB/BAS/EXTR06.0058/00

File Reference: 06/0425

Variation 4.1

To permit minor changes to drawings, the use of alternative sounders, and the use of an optional alternative CO<sub>2</sub> chemical imodule.

Ex TR: GB/BAS/ExTR06,0104/00

File Reference: 06/0673



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

**IECEX BAS 05.0059** 

Issue No.: 3

Status:

Current

Date of Issue:

2006-07-13

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon Oxfordshire, OX14 1DY

**United Kingdom** 

Electrical Apparatus: Tetra 3

Optional accessory:

Type of Protection:

Marking:

**IECEx BAS05.0059** 

Ex iad IIC T4 (-20°C ≤ Ta ≤ +55°C)

intrinsic safety and flameproof

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

Position:

Signature: (for printed version)

Date:

Managing Director

This certificate and schedule may only be reproduced in full.
 This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa (2001) Ltd.
Rockhead Business Park

Staden Lane **Buxton** Derbyshire **SK17 9RZ United Kingdom** 



culo



Certificate No.:

IECEX BAS 05.0059

Date of Issue:

2008-07-13

Issue No.: 3

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire **OX14 1DY United Kingdom** 

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 manufacture'rs 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 80079-0: 2000

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

Electrical apparatus for explosive gas atmospheres - Part 1; Flameproof enclosures 'd'

Edition: 3.1

IEC 60079-1: 2001

Edition: 4

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 5

Edition: 4

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

IECEX ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

**IECEX BAS 05.0059** 

Date of Issue:

2006-07-13

Issue No.: 3

Page 3 of 4

### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2006-07-13

Issue No.: 3

Page 4 of 4

### DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

#### Variation 1.1

To permit changes to documents to enable the IR i-module to be listed separately from the Flammable i-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

IECEX ATR:	File Reference:	
UK/BAS/05/0256/4	05/0554	
	33,3337	

#### Variation 2.1

To permit a change of encapsulant in the hybrid circuits.

I IECEX ATR:	File Reference:	
GB/BAS/ExTR06.0029/00	06/0285	

#### Variation 3.1

To permit the use of an atternative model name Combi-Mate 3, minor additions to the list of Oxygen and Toxic i-Modules which may be used, and minor changes to the GA, Hybrid 1A and the charger PCB.

IECEx ATR:	File Deference	
	File Reference:	
GB/BAS/ExTR06.0058/00	06/0425	



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

IECEX BAS 05.0059

Issue No.: 2

Status:

Current

Date of Issue:

2006-04-26

Page 1 of 4

Applicant:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon Oxfordshire, OX14 1DY **United Kingdom** 

Electrical Apparatus: Tetra 3

Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

**IECEX BAS05.0059** 

Ex iad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

Position:

Signature: (for printed version)

Managing Director

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.

Certificate issued by:

Baseefa (2001) Ltd.

Rockhead Business Park Staden Lane **Buxton** Derbyshire **SK17 9RZ United Kingdom** 





Certificate No.:

IECEX BAS 05,0059

Date of Issue:

2006-04-26

Issue No.: 2

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire OX14 1DY United Kingdom

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 manufacture'rs 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: 2000

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

Edition: 3.1

IEC 60079-1:2001

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Edition: 4

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety "

Edition: 4

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

IECEx ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2006-04-26

Issue No.: 2

Page 3 of 4

### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2006-04-26

Issue No.: 2

Page 4 of 4

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

#### Variation 1.1

To permit changes to documents to enable the IR i-module to be listed separately from the Flammable i-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

IECEx ATR:	File Reference:	
UK/BAS/05/0256/4	05/0554	

#### Variation 2.1

To permit a change of encapsulant in the hybrid circuits.

IECEx ATR:	File Reference:	
	i ne ivelerence.	
GB/BAS/ExTR06.0029/00	06/0285	
	70/0200	



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.lecex.com

Certificate No.:

IECEX BAS 05.0059

Issue No.: 1

Status:

Current

Date of Issue:

2006-03-01

Page 1 of 4

Applicant;

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park Abingdon Oxfordshire, OX14 1DY

**United Kingdom** 

Electrical Apparatus: Tetra 3 Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

IECEx BAS05,0059

Ex lad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx Certification Body:

R S Sinclair

Position:

Signature: (for printed version)

This certificate and schedule may only be reproduced in full.
 This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa (2001) Ltd. Rockhead Business Park

Staden Lane **Buxton** Derbyshire SK17 9RZ **United Kingdom** 





Certificate No.:

**IECEx BAS 05.0059** 

Date of Issue:

2006-03-01

Issue No.: 1

Page 2 of 4

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire OX14 1DY United Kingdom

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 manufacture'rs 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: 2000

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

Edition: 3.1

IEC 60079-1: 2001

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Edition: 4

IEC 60079-11 : 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety "i

Edition: 4

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

IECEX ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

**IECEx BAS 05.0059** 

Date of Issue

2006-03-01

Issue No.: 1

Page 3 of 4

### Schedule

#### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.



Certificate No.:

IECEx BAS 05.0059

Date of Issue:

2006-03-01

Issue No.: 1

Page 4 of 4

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

#### Variation 1.1

To permit changes to documents to enable the IR i-module to be listed separately from the Flammable i-module. This is a documentation change, and does not affect the safety assessment of the apparatus.

IECEX ATR		
IECEx ATR: UK/BAS/05/0256/4	File Reference; 05/0554	

Annexe:



### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No :

IECEX BAS 05.0059

Issue No.: 0

Status:

Current

Date of Issue:

2005-12-21

Page 1 of 3

Applicant:

Crowcon Detection Instruments Ltd

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire, OX14 1DY **United Kingdom** 

Electrical Apparatus: Tetra 3

Optional accessory:

Type of Protection:

intrinsic safety and flameproof

Marking:

**IECEx BAS05.0059** 

Ex iad IIC T4 (-20°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx

Certification Body:

R S Sinclair

Position:

Signature:

(for printed version)

Managing Director

23

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.

Certificate issued by:

Baseefa (2001) Ltd.

Rockhead Business Park Staden Lane Buxton Derbyshire **SK17 9RZ United Kingdom** 





Certificate No.:

**IECEx BAS 05.0059** 

Date of Issue:

2005-12-21

Issue No.: 0

Page 2 of 3

Manufacturer:

**Crowcon Detection Instruments Ltd** 

2 Blacklands Way Abingdon Business Park

Abingdon Oxfordshire OX14 1DY United Kingdom

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 manufacture'rs 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: 2000

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

Edition: 3.1

IEC 60079-1 : 2001

Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'

Edition: 4

IEC 60079-11: 1999

Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 7

Edition: 4

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

IECEX ATR:

File Reference:

UK/BAS/05/0554



Certificate No.:

**IECEX BAS 05,0059** 

Date of Issue:

2005-12-21

Issue No.: 0

Page 3 of 3

### Schedule

#### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Tetra 3 is a three bay four gas monitor, designed to monitor the concentration of oxygen (deficiency), toxic or flammable gas, and provide visual, audible and physical (vibrator) warnings if preset limits are exceeded. The presence of any sensor (known as an i-module) is optional and the maximum possible is one flammable i-module, one oxygen i-module and one toxic i-module. The toxic i-module may contain a dual sensor to measure two toxic gases.

The Tetra 3 comprises electronic circuits on printed circuit boards, a display, various LED indicators, a pump, a vibrator, a sounder and a rechargeable lithium-ion battery, all contained in a plastic enclosure providing a degree of protection of at least IP20.

The permitted sensors used in the i-modules are specified in the Crowcon documentation.

The apparatus must only be recharged or connected to serial data communications in a non-hazardous area, using a Crowcon desktop charger or charger / interface, part number C011018 or C011019.

The apparatus is not designed for use in oxygen enriched atmospheres.

CONDITIONS OF CERTIFICATION: NO

Annexe: