



IECEX Certificate of Conformity

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 05.0042X issue No.:6

Status: **Current**

Date of Issue: **2014-08-06** Page 1 of 4

Applicant: **Crowcon Detection Instruments Ltd**
172 Brook Drive
Milton Park
Abingdon
Oxfordshire
OX14 4SD
United Kingdom

Certificate history:
Issue No. 6 (2014-8-6)
Issue No. 5 (2012-12-6)
Issue No. 4 (2011-4-15)
Issue No. 3 (2011-2-17)
Issue No. 2 (2007-11-12)
Issue No. 1 (2006-10-20)

Electrical Apparatus: **Xgard Gas Detector**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +55°C)**

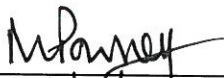
Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair 

Position:

General Manager

Signature:
(for printed version)



6/8/14

Date:

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:

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





IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2014-08-06

Issue No.: 6

Page 2 of 4

Manufacturer: **Crowcon Detection Instruments Ltd**
172 Brook Drive
Milton Park
Abingdon
Oxfordshire
OX14 4SD
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 60079-11 : 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/04/0839
GB/BAS/ExTR11.0029/00
GB/BAS/ExTR11.0097/00

File Reference:
04/089
10/1013
11/0291



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2014-08-06

Issue No.: 6

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within a stainless steel or glass filled nylon enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector, Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector, Terminals + and -

$U_i = 28V$ $C_i = 30.2nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The apparatus has a plastic enclosure (introduced in Issue 2) that constitutes a potential electrostatic hazard. The enclosure must be cleaned only with a damp cloth.

NOTE: This condition does not apply to the stainless steel enclosure version.



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2014-08-06

Issue No.: 6

Page 4 of 4

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

Variation 6.1

This issue permits existing information (for example on Schedule Drawings) to be replaced by the revised certificate holders address. No other changes may be made to the certified design

File Reference: 14/0639



IECEx Certificate of Conformity

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 05.0042X issue No.:5

Status: **Current**

Date of Issue: **2012-12-06** Page 1 of 4

Applicant: **Crowcon Detection Instruments Ltd**
2 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire
OX14 1DY
United Kingdom

Certificate history:

Issue No. 5 (2012-12-6)
Issue No. 4 (2011-4-15)
Issue No. 3 (2011-2-17)
Issue No. 2 (2007-11-12)
Issue No. 1 (2006-10-20)

Electrical Apparatus: **Xgard Gas Detector**
Optional accessory:

Type of Protection: **Intrinsic Safety**

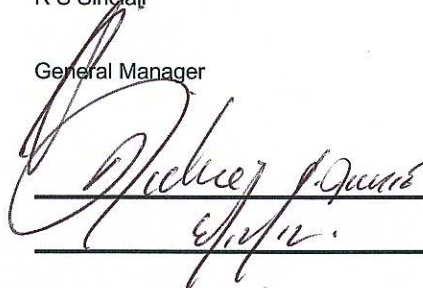
Marking: **Ex ia IIC T4 Ga (-40°C ≤Ta ≤+55°C)**

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: General Manager

Signature:
(for printed version)

Date:



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](http://www.iecex.com).

Certificate issued by:

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





IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2012-12-06

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 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 60079-11 : 2011-06 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/04/0839
GB/BAS/ExTR11.0029/00
GB/BAS/ExTR11.0097/00

File Reference:
04/089
10/1013
11/0291



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2012-12-06

Issue No.: 5

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within a stainless steel or glass filled nylon enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector, Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector, Terminals + and -

$U_i = 28V$ $C_i = 30.2nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The apparatus has a plastic enclosure (introduced in Issue 2) that constitutes a potential electrostatic hazard. The enclosure must be cleaned only with a damp cloth.

NOTE: This condition does not apply to the stainless steel enclosure version.



IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2012-12-06

Issue No.: 5

Page 4 of 4

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

Variation 5.1

To permit a minor label change not affecting the original assessment.

Variation 5.2

To confirm the current designs of the Xgard Gas Detector have 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 the equipment.

ExTR: **GB/BAS/ExTR12.0315/00**

File Reference: **12/0885**



IECEX Certificate of Conformity

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 05.0042X** issue No.: **4**
Status: **Current**
Date of Issue: **2011-04-15** Page 1 of 4

Certificate history:
Issue No. 4 (2011-4-15)
Issue No. 3 (2011-2-17)
Issue No. 2 (2007-11-12)
Issue No. 1 (2006-10-20)

Applicant: **Crowcon Detection Instruments Ltd**
2 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire
OX14 1DY
United Kingdom

Electrical Apparatus: **Xgard Gas Detector**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **IECEX BAS 05.0042**
Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +55°C)


Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Managing Director

Signature:
(for printed version)


P. Dickie
15/4/11

Date:

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





IECEX Certificate of Conformity

Certificate No.: IECEX BAS 05.0042X

Date of Issue: 2011-04-15

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 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 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by 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/04/0839
GB/BAS/ExTR11.0029/00
GB/BAS/ExTR11.0097/00

File Reference:
04/089
10/1013
11/0291



IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2011-04-15

Issue No.: 4

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within a stainless steel or glass filled nylon enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector, Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector, Terminals + and -

$U_i = 28V$ $C_i = 30.2nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The apparatus has a plastic enclosure (introduced in Issue 2) that constitutes a potential electrostatic hazard. The enclosure must be cleaned only with a damp cloth.

NOTE: This condition does not apply to the stainless steel enclosure version.



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2011-04-15

Issue No.: 4

Page 4 of 4

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

Variation 4.1

To permit the the re-introduction of a stainless steel enclosure option. The existing condition of certification referring to the electrostatic ignition hazard only applies to the plastic version; the conditions of certification have been updated to reflect this change.

ExTR: GB/BAS/ExTR11.0096/00

File Reference: 11/0291



IECEX Certificate of Conformity

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 05.0042X issue No.:3
Status: **Current**
Date of Issue: 2011-02-17 Page 1 of 4

Certificate history:
Issue No. 3 (2011-2-17)
Issue No. 2 (2007-11-12)
Issue No. 1 (2006-10-20)

Applicant: **Crowcon Detection Instruments Ltd**
2 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire
OX14 1DY
United Kingdom

Electrical Apparatus: **Xgard Gas Detector**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **IECEX BAS 05.0042**
Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Managing Director

Signature:
(for printed version)


17/2/11

Date:

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





IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2011-02-17

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 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 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by 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:	File Reference:
UK/BAS/04/0839	04/089
GB/BAS/ExTR11.0029/00	10/1013



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2011-02-17

Issue No.: 3

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within an epoxy powder-coated aluminium alloy or stainless steel enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector, Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector, Terminals + and -

$U_i = 28V$ $C_i = 30.2nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The apparatus has a plastic enclosure (introduced at Variation 2.1) that constitutes a potential electrostatic hazard. The enclosure must be cleaned only with a damp cloth.



IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2011-02-17

Issue No.: 3

Page 4 of 4

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

Variation 3.1

To confirm that the Xgard Gas Detector has been reviewed against the requirements of IEC 60079-0:2004 Edition 4, IEC 60079-0:2007 Edition 5 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.

ExTR: GB/BAS/ExTR11.0029/00

File Reference: 10/1013



IECEX Certificate of Conformity

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 05.0042X issue No.:2 Certificate history:
Status: Current
Date of Issue: 2007-11-12 Page 1 of 4

Applicant: **Crowcon Detection Instruments Ltd**
2 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire
OX14 1DY
United Kingdom

Electrical Apparatus: **Xgard Gas Detector**
Optional accessory:


Type of Protection: **Intrinsic Safety**

Marking: **IECEX BAS 05.0042**
Ex ia IIC T4 (-40°C ≤ Ta ≤ +55°C)

Approved for issue on behalf of the IECEx Certification Body: **R S Sinclair**

Position: **Managing Director**

Signature:
(for printed version)



13-11-07

Date:

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



COPY  IS DEC 10



IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2007-11-12

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'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 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	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/04/0839

File Reference:
04/089



IECEX Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2007-11-12

Issue No.: 2

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within an epoxy powder-coated aluminium alloy or stainless steel enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector, Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector, Terminals + and -

$U_i = 28V$ $C_i = 30.2nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The apparatus has a plastic enclosure (introduced at Variation 2.1) that constitutes a potential electrostatic hazard. The enclosure must be cleaned only with a damp cloth.



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042X

Date of Issue: 2007-11-12

Issue No.: 2

Page 4 of 4

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

Variation 2.1

To permit the change of enclosure material to plastic.

Due to the potential electrostatic hazard, suffix 'X' is added to the Certificate number and a Condition of Safe Use added to the certificate to inform the user of the risk.

ExTR: GB/BAS/ExTR07.0158/00

File Reference: 07/0555



IECEX Certificate of Conformity

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 05.0042 Issue No.: 1
Status: Current
Date of Issue: 2006-10-20 Page 1 of 4

Applicant: Crowcon Detection Instruments Ltd
2 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire
OX14 1DY
United Kingdom

Electrical Apparatus: Xgard Gas Detector
Optional accessory:

Type of Protection: Intrinsic Safety

Marking: IECEx BAS 05.0042
Ex Ia IIC T4 (-40°C ≤ Ta ≤ +55°C)

COPY

Approved for issue on behalf of the IECEx
Certification Body:

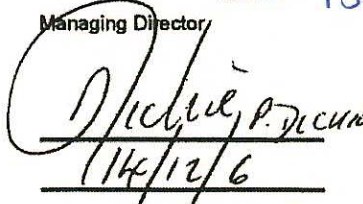
R S Sinclair

Way STOTEL
15 DEC 10

Position:

Managing Director

Signature:
(for printed version)


11/12/6

Date:

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





IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 05.0042**

Date of Issue: **2006-10-20**

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'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 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	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/04/0839

File Reference:
04/089



IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 05.0042**

Date of Issue: **2006-10-20**

Issue No.: **1**

Page **3** of **4**

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within an epoxy powder-coated aluminium alloy or stainless steel enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector. Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

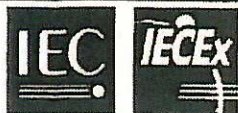
$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector. Terminals + and -

$U_i = 28V$ $C_i = 30.2nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: NO



IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 05.0042**

Date of Issue: **2006-10-20**

Issue No.: **1**

Page **4** of **4**

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

Variation 1.1

To permit changes to various documents, the use of an alternative enclosure base, a reduction of C_i for the oxygen version, and the addition of a value for I_i . All input / output parameters are repeated here.

Input / output parameters:

Toxic Detector, Terminals + & -

U_i = 28V

I_i = 300mA

P_i = 1.2W

C_i = 14.4nF

L_i = 28 μ H

Oxygen Detector, Terminals + & -

U_i = 28V

I_i = 300mA

P_i = 1.2W

C_i = 13.2nF

L_i = 0

ExTR: GB/BAS/ExTR06.0131/00

File Reference: 06/0332



IECEX Certificate of Conformity

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 05.0042** Issue No.: **0**

Status: **Current**

Date of Issue: **2005-09-21** Page 1 of 3

Applicant: **Crowcon Detection Instruments Ltd**
 2 Blacklands Way
 Abingdon Business Park
 Abingdon
 Oxfordshire
 OX14 1DY
 United Kingdom

Electrical Apparatus: **Xgard Gas Detector**
 Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **IECEX BAS 05.0042**
Ex ia IIC T4 (-20°C ≤ Ta ≤ +65°C)

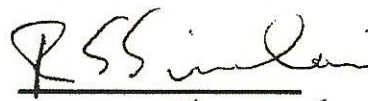
Approved for issue on behalf of the IECEx
 Certification Body:

R S Sinclair

Position:

Managing Director

Signature:
 (for printed version)


 21-9-05

Date:

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





IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 05.0042**

Date of Issue: **2005-09-21**

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'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 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	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/04/0839

File Reference:
04/089



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 05.0042

Date of Issue: 2005-09-21

Issue No.: 0

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Xgard Gas Detector is a loop-powered gas detector which can be used to detect Toxic gases or Oxygen depending upon the circuitry and electrochemical cell used and provide a 4-20mA output signal. It comprises an electrochemical cell (and accompanying sensor PCB) and an amplifier PCB mounted within an epoxy powder-coated aluminium alloy or stainless steel enclosure.

Electrical connections to the amplifier PCB are made to a terminal block with cable access to the enclosure being provided by a threaded entry hole. Access to the terminal block and PCB is gained by a removable threaded lid with an O-ring seal.

Toxic Detector, Terminals + and -

$U_i = 28V$ $C_i = 14.4nF$

$P_i = 1.2W$ $L_i = 28\mu H$

Oxygen Detector, Terminals + and -

$U_i = 28V$ $C_i = 15.6nF$

$P_i = 1.2W$ $L_i = 0$

CONDITIONS OF CERTIFICATION: NO

Annexe: