# 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 09.0122U

Issue No: 4

Certificate history:
Issue No. 4 (2018-02-06)
Issue No. 3 (2014-08-06)
Issue No. 2 (2012-09-12)
Issue No. 1 (2010-10-28)
Issue No. 0 (2009-12-08)



Status: **Current**

Date of Issue: **2018-02-06**

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

Equipment: **IREX Spigot Assembly**
*Optional accessory:*

Type of Protection: **Flameproof (Ex d)**

Marking:
**Ex db I Mb and/or**

**Ex db IIC Gb**

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

*Position:* Technical Manager

*Signature:*
*(for printed version)*

*Date:*

M Powney
CERTIFICATION MANAGER
p.p. M Powney
6/2/18

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 09.0122U | Issue No: 4 |
| Date of Issue: | **2018-02-06** | Page 2 of 4 |
| Manufacturer: | **Crowcon Detection Instruments Limited**<br>172 Brook Drive<br>Milton Park<br>Abingdon<br>Oxfordshire<br>OX14 4SD<br>**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**<br>Edition:6.0 | Explosive atmospheres - Part 0: General requirements |
| **IEC 60079-1 : 2014-06**<br>Edition:7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |

*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*

Test Report:

GB/BAS/ExTR09.0160/00 GB/BAS/ExTR10.0244/00 GB/BAS/ExTR12.0224/00
GB/BAS/ExTR16.0247/00

Quality Assessment Report:

GB/BAS/QAR06.0070/06

# IECEx Certificate of Conformity

Certificate No: IECEx BAS 09.0122U Issue No: 4

Date of Issue: **2018-02-06** 

**Schedule**

**EQUIPMENT:**

*Equipment and systems covered by this certificate are as follows:*

Type IREX/IRMAX Spigot Assembly, comprising a cylindrical stainless steel housing assembly with 3 or 5 insulated conductor wires of 0.28mm$^2$ cross sectional area, encapsulated in place with epoxy sealing compound. The maximum rating of the spigot assembly is 1.12A. The individual cables are each rated at up to 4.0A/mm$^2$ and are located and separated by the machined holes in the assembly. The interior wall is threaded to assist retention of the potting.

The bushing may be mounted by the external thread at the top or the bottom. The interface spigot thread may be sized M20 or ½" NPT and the connection spigot thread is M20.

**Schedule of Limitations**

1. When the spigot assembly is mounted in the wall of a IIC enclosure, using the interface spigot thread (end with locking ring), it must be subjected to an appropriate flame transmission test as part of the enclosure.

2. When the unit is used in the wall of a IIC enclosure with a volume ≥ 2000 cm$^3$, it must only be mounted using the connection spigot thread (end opposite locking ring).

3. The service temperature of the bushings must be between -40°C and +75°C.

4. The wires must be appropriately supported to prevent any tensile force.

5. The bushings must be protected from light.

6. For Group I use the bushings must be protected from chemical contamination.

**SPECIFIC CONDITIONS OF USE: NO**

# IECEx Certificate of Conformity

Certificate No: IECEx BAS 09.0122U Issue No: 4

Date of Issue: **2018-02-06** Page 4 of 4

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

**Variation 4.1**

To confirm the equipment meets the updated requirements of IEC 60079-0 and IEC 60079-1 and associated marking changes.

| | |
|---|---|
| ExTR: **GB/BAS/ExTR16.0247/00** | File Reference: **16/0616** |

# 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 09.0122U issue No.:3 | Certificate history: Issue No. 3 (2014-8-6) Issue No. 2 (2012-9-12) Issue No. 1 (2010-10-28) Issue No. 0 (2009-12-8) |
| Status: | **Current** | |
| Date of Issue: | **2014-08-06** Page 1 of 4 | |

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

Electrical Apparatus: **IREX Spigot Assembly**
*Optional accessory:*

Type of Protection: **Flameproof (Ex d)**

Marking: **Ex d I Mb and/or Ex d IIC Gb**

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

*Position:* General Manager

*Signature:*
*(for printed version)*

*Date:* 6/8/14

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 09.0122U

Date of Issue: **2014-08-06** Issue No.: **3**



Manufacturer: **Crowcon Detection Instruments Limited**
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 : 2007-10** Edition: 5 | Explosive atmospheres - Part 0:Equipment - General requirements |
| **IEC 60079-1 : 2007-04** Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |

*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*

Test Report:
GB/BAS/ExTR09.0160/00 GB/BAS/ExTR10.0244/00 GB/BAS/ExTR12.0224/00

Quality Assessment Report:

GB/BAS/QAR06.0070/03

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2014-08-06** Issue No.: **3**



**Schedule**

**EQUIPMENT:**
*Equipment and systems covered by this certificate are as follows:*

Type IREX/IRMAX Spigot Assembly, comprising a cylindrical stainless steel housing assembly with 3 or 5 insulated conductor wires of 0.28mm$^2$ cross sectional area, encapsulated in place with epoxy sealing compound. The maximum rating of the spigot assembly is 1.12A. The individual cables are each rated at up to 4.0A/mm$^2$ and are located and separated by the machined holes in the assembly. The interior wall is threaded to assist retention of the potting.

The bushing may be mounted by the external thread at the top or the bottom. The interface spigot thread may be sized M20 or ½" NPT and the connection spigot thread is M20.

**Schedule of Limitations**

1. When the spigot assembly is mounted in the wall of a IIC enclosure, using the interface spigot thread (end with locking ring), it must be subjected to an appropriate flame transmission test as part of the enclosure.

2. When the unit is used in the wall of a IIC enclosure with a volume ≥ 2000 cm$^3$, it must only be mounted using the connection spigot thread (end opposite locking ring).

3. The service temperature of the bushings must be between -40°C and +75°C.

4. The wires must be appropriately supported to prevent any tensile force.

5. The bushings must be protected from light.

6. For Group I use the bushings must be protected from chemical contamination.

**CONDITIONS OF CERTIFICATION: NO**

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2014-08-06** Issue No.: **3**



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

**Variation 3.1**

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 09.0122U issue No.:2

Status: **Current**

Date of Issue: **2012-09-12** Page 1 of 4

Certificate history:
Issue No. 2 (2012-9-12)
Issue No. 1 (2010-10-28)
Issue No. 0 (2009-12-8)

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

Electrical Apparatus: **IREX Spigot Assembly**
*Optional accessory:*

Type of Protection: **Flameproof (Ex d)**

Marking: **Ex d I Mb and/or Ex d IIC Gb**

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

*Position:* General Manager

*Signature:*
*(for printed version)*

*Date:* 12/9/12

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 09.0122U

Date of Issue: **2012-09-12** Issue No.: **2**



Manufacturer: **Crowcon Detection Instruments Limited**
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 : 2007-10**<br>Edition: 5 | Explosive atmospheres - Part 0:Equipment - General requirements |
| **IEC 60079-1 : 2007-04**<br>Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |

*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*

Test Report:
GB/BAS/ExTR09.0160/00 GB/BAS/ExTR10.0244/00 GB/BAS/ExTR12.0224/00

Quality Assessment Report:

GB/BAS/QAR06.0070/03

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2012-09-12** Issue No.: **2**



**Schedule**

**EQUIPMENT:**
*Equipment and systems covered by this certificate are as follows:*

Type IREX/IRMAX Spigot Assembly, comprising a cylindrical stainless steel housing assembly with 3 or 5 insulated conductor wires of 0.28mm$^2$ cross sectional area, encapsulated in place with epoxy sealing compound. The maximum rating of the spigot assembly is 1.12A. The individual cables are each rated at up to 4.0A/mm$^2$ and are located and separated by the machined holes in the assembly. The interior wall is threaded to assist retention of the potting.

The bushing may be mounted by the external thread at the top or the bottom. The interface spigot thread may be sized M20 or ½" NPT and the connection spigot thread is M20.

**Schedule of Limitations**

1. When the spigot assembly is mounted in the wall of a IIC enclosure, using the interface spigot thread (end with locking ring), it must be subjected to an appropriate flame transmission test as part of the enclosure.

2. When the unit is used in the wall of a IIC enclosure with a volume ≥ 2000 cm$^3$, it must only be mounted using the connection spigot thread (end opposite locking ring).

3. The service temperature of the bushings must be between -40°C and +75°C.

4. The wires must be appropriately supported to prevent any tensile force.

5. The bushings must be protected from light.

6. For Group I use the bushings must be protected from chemical contamination.

**CONDITIONS OF CERTIFICATION: NO**

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2012-09-12** Issue No.: **2**



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

**Variation 2.1**

To allow the use of a sealing washer on the M20 thread on the IREX Spigot Assembly

| | |
|---|---|
| ExTR: **GB/BAS/12.0224/00** | File Reference:**12/0687** |

# 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 09.0122U issue No.:1

Status: **Current**

Date of Issue: **2010-10-28** Page 1 of 4

Certificate history:
Issue No. 1 (2010-10-28)
Issue No. 0 (2009-12-8)

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

Electrical Apparatus: **IREX Spigot Assembly**
*Optional accessory:*

Type of Protection: **Flameproof (Ex d)**

Marking: **Ex d I Mb and/or Ex d IIC Gb**

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

*Position:* Managing Director

*Signature:*
*(for printed version)*

*Date:* 28/10/10

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**

Baseefa

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2010-10-28** Issue No.: **1**



Manufacturer: **Crowcon Detection Instruments Limited**
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 : 2007-10**<br>Edition: 5 | Explosive atmospheres - Part 0:Equipment - General requirements |
| **IEC 60079-1 : 2007-04**<br>Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |

*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*

Test Report:

GB/BAS/ExTR09.0160/00
GB/BAS/ExTR10.0244/00

Quality Assessment Report:
GB/BAS/QAR06.0070/01

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2010-10-28** Issue No.: **1**



**Schedule**

**EQUIPMENT:**
*Equipment and systems covered by this certificate are as follows:*

Type IREX/IRMAX Spigot Assembly, comprising a cylindrical stainless steel housing assembly with 3 or 5 insulated conductor wires of 0.28mm$^2$ cross sectional area, encapsulated in place with epoxy sealing compound. The maximum rating of the spigot assembly is 1.12A. The individual cables are each rated at up to 4.0A/mm$^2$ and are located and separated by the machined holes in the assembly. The interior wall is threaded to assist retention of the potting.

The bushing may be mounted by the external thread at the top or the bottom. The interface spigot thread may be sized M20 or ½" NPT and the connection spigot thread is M20.

**Schedule of Limitations**

1. When the spigot assembly is mounted in the wall of a IIC enclosure, using the interface spigot thread (end with locking ring), it must be subjected to an appropriate flame transmission test as part of the enclosure.

2. When the unit is used in the wall of a IIC enclosure with a volume ≥ 2000 cm$^3$, it must only be mounted using the connection spigot thread (end opposite locking ring).

3. The service temperature of the bushings must be between -40°C and +75°C.

4. The wires must be appropriately supported to prevent any tensile force.

5. The bushings must be protected from light.

6. For Group I use the bushings must be protected from chemical contamination.

**CONDITIONS OF CERTIFICATION: NO**

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2010-10-28** Issue No.: **1**



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

**Variation 1.1**

To permit the reformatting, and therefore up-issue, of the certification drawings. The physical design of the IREX/IRMAX Spigot Gland Assembly is not altered in any way.

| ExTR: **GB/BAS/ExTR10.0244/00** | File Reference: **10/0789** |
|---|---|

# 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 09.0122U | issue No.:0 | Certificate history: |
| Status: | **Current** | | |
| Date of Issue: | **2009-12-08** | Page 1 of 3 | |

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

Electrical Apparatus: **IREX Spigot Assembly**
*Optional accessory:*

Type of Protection: **Flameproof (Ex d)**

Marking: **Ex d I Mb and/or Ex d IIC Gb**

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

*Position:* Managing Director

*Signature:*
*(for printed version)*

*Date:* 8-12-09

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**

Baseefa

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2009-12-08** Issue No.: **0**



Manufacturer: **Crowcon Detection Instruments Limited**
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 : 2007-10**<br>Edition: 5 | Explosive atmospheres - Part 0:Equipment - General requirements |
| **IEC 60079-1 : 2007-04**<br>Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |

*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*

Test Report:

GB/BAS/ExTR09.0160/00

Quality Assessment Report:
GB/BAS/QAR06.0070/01

# IECEx Certificate of Conformity

Certificate No.: IECEx BAS 09.0122U

Date of Issue: **2009-12-08** Issue No.: **0**



**Schedule**

**EQUIPMENT:**
*Equipment and systems covered by this certificate are as follows:*

Type IREX/IRMAX Spigot Assembly, comprising a cylindrical stainless steel housing assembly with 3 or 5 insulated conductor wires of 0.28mm$^2$ cross sectional area, encapsulated in place with epoxy sealing compound. The maximum rating of the spigot assembly is 1.12A. The individual cables are each rated at up to 4.0A/mm$^2$ and are located and separated by the machined holes in the assembly. The interior wall is threaded to assist retention of the potting.

The bushing may be mounted by the external thread at the top or the bottom. The interface spigot thread may be sized M20 or ½" NPT and the connection spigot thread is M20.

**Schedule of Limitations**

1. When the spigot assembly is mounted in the wall of a IIC enclosure, using the interface spigot thread (end with locking ring), it must be subjected to an appropriate flame transmission test as part of the enclosure.

2. When the unit is used in the wall of a IIC enclosure with a volume ≥ 2000 cm$^3$, it must only be mounted using the connection spigot thread (end opposite locking ring).

3. The service temperature of the bushings must be between -40°C and +75°C.

4. The wires must be appropriately supported to prevent any tensile force.

5. The bushings must be protected from light.

6. For Group I use the bushings must be protected from chemical contamination.

**CONDITIONS OF CERTIFICATION: NO**