

1 **EU - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa16ATEX0034X – Issue 1**
4 Product: **IRwin SX***
5 Manufacturer: **Inficon AB**
6 Address: **Box 76, 581 02 Linköping, Sweden**

7 This re-issued certificate extends EU Type Examination Certificate No. Baseefa16ATEX0034X to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. See Certificate History

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

EN 60079-0:2012+A11:2013 EN 60079-11:2012

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

Ex II 1 G Ex ia IIC T3 Ga (-20°C ≤ T_a ≤ +50°C)

SGS Baseefa Customer Reference No. 7324

Project File No. 16/0776

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R S SINCLAIR
TECHNICAL MANAGER

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa16ATEX0034X – Issue 1**

15 **Description of Product**

The IRwin SX* is a portable battery powered gas detector intended for detection of various gas types, dependent upon variant, and is fitted with internal pumps for sampling via the hand probe. Measurements are shown via the integrated LCD screen and are additionally stored for later retrieval or may be transmitted via a Bluetooth connection.

The equipment consists of a PCB featuring numerous components, an LCD screen with accompanying buttons for interface purposes, secondary lithium-ion cells with small solenoids and DC pumps for gas sampling all housed within a static dissipative plastic enclosure.

The hand-probe is connected to the sample inlet connector whilst a charger/serial port connector allows for the internal batteries to be recharged or for data retrieval. The charger/serial port is not used in the hazardous area.

The IRwin SX* models covered by this certificate are as follows:

IRwin SX	CH ₄
IRwin SXT	As SX + O ₂ , H ₂ S, CO
IRwin SXG	As SX + gas chromatograph
IRwin SXGT	As SXT + gas chromatograph

16 **Report Number**

GB/BAS/ExTR16.0319/00

17 **Specific Conditions of Use**

1. Battery charging and data transfer may only be performed in the non-hazardous area. Only the *Certified IRwin Charging Adaptor* (P/N-580-604) may be connected to the IRwin SX* for battery charging or data transfer.

18 **Essential Health and Safety Requirements**

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product:

Clause	Subject	Compliance
1.2.7	LVD type requirements	Manufacturer responsibility
1.2.8	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
1.4.1	External effects	User/Installer responsibility
1.4.2	Aggressive substances, etc.	User/Installer responsibility

19 **Drawings and Documents**

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
5552	1 – 4	05E	10-13-16	Bill of Materials, Main PCB

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
5548	1 – 13	05C	16-04-28	IRwin Main PCB

Number	Sheet	Issue	Date	Description
5550	1 – 33	05C	16-05-11	Schematic, Main PCB
5551	1 & 2	05C	16-04-28	Assembly, Main PCB
5553	1 of 1	1	2016-02-08	PCB Specification
5557	1 – 3	3	16-05-11	Encapsulation details
5558	1 of 1	01C	16-05-02	Schematic, Charging Adaptor
5559	1 & 2	A	16-01-28	Plastic Housing, Front
5560	1 of 1	A	16-01-28	Plastic Housing, Back
5562	1 of 1	2	16-05-06	Bill of Materials, Charging Adaptor
5563	1 of 1	A	16-01-28	Front Window
5567	1 of 1	A	16-03-08	IRwin Labels
5574	1 of 1	1	16-03-16	General Assembly
5589	1 & 2	1	2016-03-22	Bill of Materials, IRwin
5591	1 of 1	B	2016-04-14	IRwin Charging Adaptor label
581-210	1 of 1	B	2016-04-14	IRwin Charging Adaptor label
5601	1 of 1	01C	16-05-02	PCB, Charging Adaptor
5654	1 – 6	1	16-05-11	LCD
5655	1 of 1	A	tbc	IRwin Clearances

20 Certificate History

Certificate No.	Date	Comments
Baseefa16ATEX0034X	10 August 2016	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0:2012+A11:2013 & EN 60079-11:2012 is documented in Test Report No. GB/BAS/ExTR16.0156/00. Project File No. 15/0849.
Baseefa16ATEX0034X Issue 1	2 November 2016	To permit minor electrical and mechanical changes. Test Report No. GB/BAS/ExTR16.0319/00. Project File No. 16/0776.
For drawings applicable to each issue, see original of that issue.		



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 SP 16.0001X	Issue No: 0	<u>Certificate history:</u> Issue No. 0 (2016-08-22)
Status:	Current	Page 1 of 3	
Date of Issue:	2016-08-22		
Applicant:	Inficon AB Box 76 SE-581 02 Linköping Sweden		
Equipment:	Gasdetector type IRwin SX*		
<i>Optional accessory:</i>			
Type of Protection:	Intrinsic safety "ia"		
Marking:	Ex ia IIC T3 Ga		

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

Peter Bremer

Position:

Certification Officer

*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:

SP Technical Research Institute of Sweden
Box 857
SE-501 15 Borås
Sweden





IECEX Certificate of Conformity

Certificate No: IECEX SP 16.0001X

Issue No: 0

Date of Issue: **2016-08-22**

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Manufacturer: **Inficon AB**
Westmansgatan 49
SE-582 16 Linköping
Sweden

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

Test Report:

[GB/BAS/ExTR16.0156/00](#)

Quality Assessment Report:

[SE/SP/QAR07.0002/07](#)



IECEX Certificate of Conformity

Certificate No: IECEx SP 16.0001X

Issue No: 0

Date of Issue: 2016-08-22

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The IRwin SX* is a portable battery powered gas detector intended for detection of various gas types, dependent upon variant, and fitted with internal pumps for sampling via the hand probe. Measurements are shown via the integrated LCD screen and are additionally stored for later retrieval or may be transmitted via a Bluetooth connection.

The equipment consists of a PCB featuring numerous components, an LCD screen with accompanying buttons for interface purposes, secondary lithium-ion cells with small solenoids and DC pumps for gas sampling, all housed within a static dissipative plastic enclosure.

The hand-probe is connected to the sample inlet connector. A charger/serial port connector allows for the internal batteries to be recharged or for data retrieval. The charger/serial port is not used in the hazardous area.

The IRwin SX* models covered by this certificate are as follows:

IRwin SX	CH ₄
IRwin SX	As SX + O ₂ , H ₂ S, CO
IRwin SXG	As SX + gas chromatograph
IRwin SXGT	As SXT + gas chromatograph

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Battery charging and data transfer may only be performed in the non-hazardous area. Only the certified IRwin Charging Adaptor (P/N-580-604) may be connected to the IRwin SX* for battery charging or data transfer.



EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert NO.GYJ16.1435X

This is to certify that the product

Gas Detector

manufactured by INFICON AB

(Address:BOX 76, 581 02 Linköping, Sweden)

which model is IRwin SX_a

Ex marking Ex ia IIC T3 Ga

product standard /

drawing number 5574

has been inspected and certified by NEPSI, and that it conforms
to GB 3836.1-2010,GB 3836.4-2010,GB 3836.20-2010

This Approval shall remain in force until 2021.12.12

Remarks 1.Conditions for safe use are specified in the attachment to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use,
which are specified in the attachment to this certificate.

Director



National Supervision and Inspection Centre for
Explosion Protection and Safety of Instrumentation

Issued Date 2016.12.13

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

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防爆合格证

证号: GYJ16.1435X

由 INFICON AB
(地址: BOX 76, 581 02 Linköping, Sweden)

制造的产品:

名称 气体探测器

型号规格 IRwin SXa

防爆标志 Ex ia II C T3 Ga

产品标准 /

图样编号 5574

经图样及技术文件的审查和样品检验, 确认上述产品符合 GB 3836.1-2010、GB 3836.4-2010、GB 3836.20-2010 标准, 特颁发此证。

本证书有效期: 2016年12月13日至2021年12月12日

备注 1. 安全使用注意事项见本证书附件。
2. 证书编号后缀“X”表明产品具有安全使用特殊条件, 内容见本证书附件。

站长

国家级仪器仪表防爆安全监督检验站

颁发日期二〇一六年十二月十三日



本证书仅对与认可文件和样品一致的产品有效。

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国家级仪器仪表防爆安全监督检验站

National Supervision and Inspection Centre for
Explosion Protection and Safety of Instrumentation

(GYJ16.1435X)

(Attachment I)

GYJ16.1435X防爆合格证附件 I

由INFICON AB生产的IRwin SX_a系列气体探测器（以下简称探测器），经国家级仪器仪表防爆安全监督检验站（NEPSI）检验，符合以下国家标准的规定：

GB3836.1-2010 爆炸性环境 第1部分：设备 通用要求

GB3836.4-2010 爆炸性环境 第4部分：由本质安全型“i”保护的的设备

GB3836.20-2010 爆炸性环境 第20部分：设备保护级别（EPL）为Ga级的设备
产品防爆标志为Ex ia II C T3 Ga，防爆合格证号为GYJ16.1435X。

本次认可产品的具体型号规格为IRwin SX_a，其中：

_a代表传感器类型，可为无（CH₄），T（IRwin SX+O₂，H₂S，CO），G（IRwin SX+气相色谱探头）或GT（IRwin SXT+气相色谱探头）。

一、 产品安全使用特殊条件

防爆合格证号后缀“X”表示特殊使用注意事项：

- 产品仅可由6节Panasonic生产的NCR18650A或NCR18650B（每3节并联后再串联）组成的电池组供电。
- 产品电池组的充电及数据传输必须在安全场所进行。
- 产品电池组的充电及数据传输必须采用IRwin生产的充电器（型号：580-604）。

二、 产品使用注意事项

1. 探测器允许的使用环境温度为：-20℃~+50℃。
2. 用户不得自行随意更换产品内部电气零部件，应会同产品制造商共同解决运行中出现的故障，以免影响防爆性能。
3. 产品的安装、使用和维护应同时遵守产品使用说明书、GB3836.13-2013“爆炸性环境 第13部分：设备的修理、检修、修复和改造”、GB3836.15-2000“爆炸性气体环境用电气设备 第15部分：危险场所电气安装（煤矿除外）”、GB3836.16-2006“爆炸性气体环境用电气设备 第16部分：电气装置的检查和维护（煤矿除外）”及



GB50257-2014 “电气装置安装工程 爆炸和火灾危险环境电气装置施工及验收规范”的有关规定。

三、 制造厂责任

1. 产品制造厂必须将上述使用注意事项纳入该产品的使用说明书中。
2. 制造厂必须严格按照NEPSI认可的文件资料生产。

国家级仪器仪表防爆安全监督检验站

二〇一六年十二月十三日



国家级仪器仪表防爆安全监督检验站

National Supervision and Inspection Centre for
Explosion Protection and Safety of Instrumentation

(GYJ16.1435X)

(Attachment I)

Attachment I to GYJ16.1435X

IRwin SX³ series Gas Detector, manufactured by INFICON AB, has been certified by National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI). The Gas Detector accords with following standards:

GB3836.1-2010 Explosive atmospheres-Part 1: Equipment -General requirements

GB3836.4-2010 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

GB3836.20-2010 Explosive atmospheres-Part20: Equipment with equipment protection level (EPL) Ga

Gas Detector has the Ex marking Ex ia II C T3 Ga. The certificate number is GYJ16.1435X.

The certified type codes are:

EJX110 series Gas Detector

IRwin SX³, in which:

■ indicates used sensors, which could be none (CH₄), T (IRwin SX + O₂, H₂S, CO), G (IRwin SX + gas chromatograph) or GT (IRwin SXT + gas chromatograph).

1. Special conditions for safe use

The suffix "X" placed after the certificate number indicates that this product is subject to special conditions for safe use:

- Only battery pack composed of six Panasonic NCR18650A or NCR18650B (2s3p) shall be used as the supply power of the Gas Detector.
- Battery charging and data transfer may only be performed in the non-hazardous area.
- Only IRwin charging adaptor (P/N: 580-604) may be connected to the Gas Detector for battery charging or data transfer.

2. Conditions for safe use

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

2.2 Forbid end user to change the configuration to ensure the equipment's explosion protection performance.



2.3 When installation, use and maintenance of Gas Detector, observe following standards

GB3836.13-2013 "Explosive atmospheres - Part 13: Equipment repair, overhaul and reclamation"

GB3836.15-2000 "Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)"

GB3836.16-2006 "Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)"

GB50257-2014 "Code for construction and acceptance of electric equipment on fire and explosion hazard electrical equipment installation engineering"

3. Manufacturer's Responsibility

3.1 Special condition for safe use specified above should be included in the instruction manual.

3.2 Manufacturing should be done according to the documentation approved by NEPSI.

National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation

2016.12.13

