



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

Certificate No.: IECEx SP 07.0002X issue No.:3

Status: **Current**

Date of Issue: 2012-04-17

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**Certificate history:**

Issue No. 3 (2012-4-17)  
Issue No. 2 (2010-12-10)  
Issue No. 1 (2010-6-7)  
Issue No. 0 (2007-9-21)

Applicant: **INFICON AB**  
Westmansgatan 49  
Box 76  
SE-581 02 Linköping  
Sweden

Electrical Apparatus: **Hydrogen Leak Detector type Extrima**  
*Optional accessory:*

Type of Protection: **Intrinsic safety "ia"**

Marking: Ex ia IIC T3  
Ta: -20 °C to +50 °C

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

Peter Bremer

*Position:*

Certification Officer

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:

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





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Manufacturer: **INFICON AB**  
Westmansgatan 49  
Box 76  
SE-581 02 Linköping  
**Sweden**

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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2006</b> Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"
<b>IEC 60079-26 : 2006</b> Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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/SIR/ExTR07.0085/00  
GB/SIR/ExTR12.0063/00

GB/SIR/ExTR09.0206/01  
SE/SP/ExTR07.0001/00

GB/SIR/ExTR10.0252/00

#### Quality Assessment Report:

SE/SP/QAR07.0002/00



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## Schedule

### EQUIPMENT:

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

The detector is a hand held device used to detect hydrogen leaks and is powered by a rechargeable Lithium ion battery. The device consists of a main unit interconnected by a pluggable cable to a PX50 series probe unit.

The housing of the main unit is made from aluminium which is anodized and protected by conductive rubber face seals fitted to the front and rear panels. The side panels and corners of the enclosure are fitted with protective rubber ribs. The back panel has a Gortex seal and a socket intended to be used outside hazardous areas, for connecting to the battery charger/barcode reader. The battery charger has the following maximum parameters, 12.6 V, 770 mA.

The probe has a conductive plastic enclosure and a nozzle which varies in length and type. Inside the nozzle fits a hydrogen sensor (Ex component according to ExTR SE/SP/ExTR07.0001/00 and ATEX certificate SP07ATEX3636U). The probe is fully encapsulated, however, a switch, two LEDs and the hydrogen sensor are located outside the encapsulation.

The detector has an ingress protection rating of IP67.

### CONDITIONS OF CERTIFICATION: YES as shown below:

#### Conditions of Certificate and Manufacture

The applicant (manufacturer) shall note the following:

1. The permitted battery pack is constructed from 3 series connected SAFT type MP174865IS or type MP174865 Lithium ion rechargeable cells all encapsulated in Wacker Elastosil RT675.
2. The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform SP of any modifications of the devices that may impinge upon the explosion safety design of their products.
3. The IECEx certificate number referred to in the Manufacturer's Documents and in the Marking Plate, according to ExTR GB/SIR/ExTR07.0085/00, shall be "IECEx SP 07.0002X".

#### Conditions for Safe Use

As aluminium is used at the accessible surface of this equipment, in the event of rare incidents, ignition sources due to impact and friction sparks could occur. This shall be considered when the detector is being installed or used in locations that specifically require level of protection Ga (see IEC 60079-26).



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

### Issue 1 of the certificate

This issue of the certificate, introduces variation 1 of the Detector Unit and the Probe. The following modifications are introduced by this variation:

To prolong the battery life, the probe power generation and protection circuit on the MAIN PCB in the Detector Unit has been redesigned. The circuit contains voltage enhancement and controlled semiconductor voltage shunts. These changes give increased output parameters to the probe.

PX50x Series Probe Assembly now uses a housing made from an alternative plastic material. The circuit has been modified to provide increased power to the sensor to improve its sensitivity.

The name of the applicant and manufacturer, has been changed from Adixen Sensistor AB to Adixen Scandinavia AB. The introduced modifications have been assessed and tested according to ExTR GB/SIR/ExTR09.0206/01, which also include assessment and test of the HS85 sensor.

### Issue 2 of the certificate

This variation - variation 2 - introduces the following modifications:

The LCD module has been modified and the bill of material drawings has been amended. New components on the LCD module, have affected the original thermal assessment. The modifications have been assessed according to ExTR GB/SIR/ExTR10.0252/00, which also introduces and confirm compliance with IEC 60079-26:2006 (ed 2).

### Issue 3 of the certificate

The name of the applicant and manufacturer is changed from "Adixen Scandinavia AB" to "INFICON AB". The outline of the hand probe and the track layout of the probe PCB has been amended. The material of the hand probe has been changed from plastic to aluminium. The changes have been assessed according to ExTR GB/SIR/ExTR12.0063/00.