



# 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 BAS 07.0035X issue No.:2

Status: **Current**

Date of Issue: **2011-03-11**

Page 1 of 4

Certificate history:  
Issue No. 2 (2011-3-11)  
Issue No. 1 (2009-11-30)  
Issue No. 0 (2007-7-16)

Applicant: **Hansford Sensors Ltd**  
Artisan  
Hillbottom Road  
Sands Industrial Estate  
Bucks  
HP12 4HJ  
United Kingdom

Electrical Apparatus: **HS-100 Series Accelerometer**  
Optional accessory:

Type of Protection: **Intrinsic safety, Dust ingress protection**

Marking: **IECEX BAS 07.0035X**  
**Ex ia IIC T4 (-55°C ≤ Ta ≤ +110°C) +**  
**Ex tD A20 IP60 T130 (-55°C ≤ Ta ≤ +110°C)**  
**Ex ia IIC T6 (-55°C ≤ Ta ≤ +60°C) +**  
**Ex tD A20 IP60 T80 (-55°C ≤ Ta ≤ +60°C)**


Approved for issue on behalf of the IECEx  
Certification Body:

R S Sinclair

Position:

Managing Director

Signature:  
(for printed version)

  
18-3-11

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**





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Page 2 of 4

Manufacturer: **Hansford Sensors Ltd**  
Artisan  
Hillbottom Road  
Sands Industrial Estate  
Bucks  
HP12 4HJ  
**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:

|   |  |
|---|--|
| <b>IEC 60079-0 : 2004</b><br>Edition: 4.0 | Electrical apparatus for explosive gas atmospheres - Part 0: General requirements                        |
| <b>IEC 60079-11 : 2006</b><br>Edition: 5  | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"                            |
| <b>IEC 61241-0 : 2004</b><br>Edition: 1   | Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements          |
| <b>IEC 61241-1 : 2004</b><br>Edition: 1   | Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD" |

*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/ExTR07.0076/00  
GB/BAS/ExTR11.0045/00

### Quality Assessment Report:

GB/BAS/QAR07.0040/01



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Certificate No.: IECEx BAS 07.0035X

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Issue No.: 2

Page 3 of 4

## Schedule

### EQUIPMENT:

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

The HS-100 Series Accelerometer is designed to measure acceleration, shock or vibration by converting the signal generated by the compression of a Piezo Electric Crystal by a given seismic mass and outputting a broadband ac signal to the monitoring equipment.

The accelerometer comprises a piezo electric crystal connected to a signal conditioning board all contained within a stainless steel enclosure of various shapes measuring approximately 25cm<sup>3</sup>. The enclosure is a fully welded construction.

Electrical connections are made to the apparatus either via an IP65 rated connector or via an integral cable which is encapsulated in the end of the apparatus.

Terminal parameters are given in the Annex.

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

1. The free end of the cable on the integral cable version of the apparatus must be terminated in an appropriately certified dust proof enclosure when dust protection is required.
2. The Ci of the equipment when fitted with 92m of cable has been increased from 41nF to 83nF.



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Certificate No.: IECEx BAS 07.0035X

Date of Issue: 2011-03-11

Issue No.: 2

Page 4 of 4

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

### Variation 2.1

To permit the use of a different type of cable.

### Variation 2.2

To show the new address of the manufacturer on the marking drawings.

### Variation 2.3

Addition of Special Condition of Safe Use No. 2.

ExTR: GB/BAS/ExTR11.0045/00

File Reference: 11/0015

**Baseefa**

Rockhead Business Park  
Staden lane, Buxton, Derbyshire  
SK17 9RZ  
United Kingdom



ANNEX to IECEx BAS 07.0035X

Issue No. 0

Date: 2011/03/10

The apparatus with 92m of integral cable has the following terminal parameters:

$U_i = 28V$   
 $I_i = 93mA$   
 $P_i = 0.65W$   
 $C_i = 83nF$   
 $L_i/R_i = 15.4\mu H/\Omega$