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 07.0035X issue No.:4
Status:	**Current**
Date of Issue:	**2013-05-08** Page 1 of 4

Certificate history:
Issue No. 4 (2013-5-8)
Issue No. 3 (2012-10-12)
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, gas and dust**

Marking: **Ex ia IIC T4 Ga (-55°C ≤Ta ≤+110°C)**
Ex ia IIIC T130°C IP65 Da (-55°C ≤Ta ≤+110°C)
Ex ia IIC T6 Ga (-55°C ≤Ta ≤+60°C)
Ex ia IIIC T80°C IP65 Da (-55°C ≤Ta ≤+60°C)

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

Position: General Manager

Signature:
(for printed version)

Date: 8-5-13

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 07.0035X

Date of Issue: **2013-05-08** Issue No.: **4**

Manufacturer: **Hansford Sensors Ltd**
Artisan
Hillbottom Road
Sands Industrial Estate
Bucks
HP12 4HJ
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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	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

Test Report:
GB/BAS/ExTR07.0076/00 GB/BAS/ExTR11.0045/00 GB/BAS/ExTR12.0254/00
GB/BAS/ExTR13.0101/00

Quality Assessment Report:

GB/BAS/QAR07.0040/04

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 07.0035X

Date of Issue: **2013-05-08** Issue No.: **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^3. 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.

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 07.0035X

Date of Issue: **2013-05-08** Issue No.: **4**

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

Variation 4.1

To permit the accelerometer to be supplied with 10m of cable with a resultant change to the entity parameters. See annex for revised entity parameters.

ExTR: **GB/BAS/ExTR13.0101/00** File Reference: **13/0342**

Annexe: IECEx BAS 07.0035X Annex - Issue 1.pdf

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

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

U_i = 28V
I_i = 93mA
P_i = 0.65W
C_i = 82nF
L_i/R_i = 15.4µH/Ω

The apparatus with 10m of integral cable has the following terminal parameters:

U_i = 28V
I_i = 93mA
P_i = 0.65W
C_i = 9.9nF
L_i/R_i = 15.4µH/Ω OR L_i = 6µH