

1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa12ATEX0248X – Issue 4**

4 Equipment or Protective System: **VSP01A Accelerometer**

5 This Certificate is held by: **ifm electronic GmbH**

6 Address: **Friedrichstrasse 1, 45128 Essen, Germany**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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's. **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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

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

12 The marking of the equipment or protective system shall include the following :

⊕ II 1G Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +90°C)

⊕ II 1D Ex ia IIIC T110°C IP65 Da (-55°C ≤ Ta ≤ +90°C)

⊕ II 1G Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +60°C)

⊕ II 1D Ex ia IIIC T80°C IP65 Da (-55°C ≤ Ta ≤ +60°C)

Baseefa Customer Reference No. **7032**

Project File No. **16/0137**

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R S SINCLAIR *pp Alan Owen*
GENERAL MANAGER

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa12ATEX0248X – Issue 4**

15 **Description of Equipment or Protective System**

The VSP01A 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 25cm³. 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.

The apparatus has the following terminal parameters:

Connector only	10m of Cable	92m of Cable
U _i = 28V	U _i = 28V	U _i = 28V
I _i = 93mA	I _i = 93mA	I _i = 93mA
P _i = 0.65W	P _i = 0.65W	P _i = 0.65W
C _i = 1.0nF	C _i = 9.9nF	C _i = 83nF
L _i = negligible	L _i = 7μH or L _i /R _i = 15.4μH/Ω	L _i /R _i = 15.4μH/Ω

16 **Report Number**

See Certificate History

17 **Specific Conditions of Use**

- 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.

18 **Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

As follows, in addition to those covered by the standards at item 9.

Clause	Subject	Compliance
1.2.7	LVD type requirements	Standards require manufacturer's declaration, supplied.
1.2.8	Overloading of equipment (protection relays, etc.)	Covered by installation rules and manufacturer's instructions
1.4.1	External effects	The Purchaser should make the manufacturer aware of such issues. Covered in Instructions
1.4.2	Aggressive substances, etc.	The Purchaser should make the manufacturer aware of such issues. Covered in Instructions

19 **Drawings and Documents**

New drawings submitted for this issue of certificate.

None.

Current drawings also associated with this certificate.

Number	Sheet	Issue	Date	Description
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Documents as listed in Certificate Baseefa07ATEX0144X

M06-044-B	1 of 2	B	18/11/13	VSP01A Series Product Information For Group II Accelerometer
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This drawing is also associated and held with IECEX BAS 12.0133X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa12ATEX0248X	10 January 2013	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0319/00 held on technical file IECEX BAS 12.0132.
Baseefa12ATEX0248X Issue 1	29 April 2013	This issue of the certificate incorporates previously issued primary certificate into one certificate and permits the accelerometer to be supplied with 10m of cable with a resultant change to the entity parameters. Intrinsic safety is not affected. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR13.0102/00 held on technical file IECEX BAS 12.0132.
Baseefa12ATEX0248X Issue 2	25 November 2013	To permit the maximum operating ambient temperature range to be reduced from 110°C to 90°C. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR13.0280/00 held on technical file IECEX BAS 12.0132.
Baseefa12ATEX0248X Issue 3	9 January 2015	To permit additional terminal parameters to be added for connector only variants (no cable included). A test and assessment report was not required for this change.
Baseefa12ATEX0248X Issue 4	22 March 2016	To permit the use of an alternative cable type and the use of an alternative catalyst with the encapsulant. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR16.0099/00 held on technical file IECEX BAS 12.0132
For drawings applicable to each issue, see original of that issue.		

1 **EG-BAUMUSTERPRÜFBESCHEINIGUNG**

2 **Gerät oder Schutzsystem zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen
Richtlinie 94/9/EG**

3 EG-Baumusterprüf- **Baseefa12ATEX0248X – Ausgabe 3**
bescheinigungsnummer:
4 Gerät oder Schutzsystem: **VSP01A Beschleunigungssensor**
5 Diese Bescheinigung gilt für: **ifm electronic GmbH**
6 Anschrift: **Friedrichstraße 1, 45128 Essen, Deutschland**

7 Das Gerät oder Schutzsystem und alle zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung und den Dokumenten, auf die darin Bezug genommen wird, beschrieben.

8 Die Prüf- und Zertifizierungsstelle Baseefa bescheinigt als benannte Stelle Nr. 1180 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaft vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Ergebnisse der Prüfung sind in den vertraulichen Prüfberichten Nr. **Siehe Bescheinigungsgeschichte** festgehalten.

9 Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

EN 60079-0: 2012 EN 60079-11: 2012

mit Ausnahme der Anforderungen, die in der Anlage unter Punkt 18 aufgeführt sind.

10 Falls ein „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes oder Schutzsystems in der Anlage zu dieser Bescheinigung hingewiesen.

11 Diese EG-BAUMUSTERPRÜFBESCHEINIGUNG bezieht sich nur auf Konzeption und Bau des festgelegten Gerätes oder Schutzsystems. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes oder Schutzsystems. Diese sind von dieser Baumusterprüfbescheinigung nicht abgedeckt.

12 Die Kennzeichnung des Gerätes oder Schutzsystems muss die folgenden Angaben enthalten:

⊕ II 1G Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +90°C)

⊕ II 1D Ex ia IIIC T110°C IP65 Da (-55°C ≤ Ta ≤ +90°C)

⊕ II 1G Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +60°C)

⊕ II 1D Ex ia IIIC T80°C IP65 Da (-55°C ≤ Ta ≤ +60°C)

Baseefa Kundenzeichen 7032

Projektdateinummer 14/1001

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PP *M. Powney*
R S SINCLAIR *M. Powney*

HAUPTGESCHÄFTSFÜHRER

Im Auftrag von SGS Baseefa Limited

13 Anlage

14 Bescheinigungsnummer Baseefa12ATEX0248X – Ausgabe 3

15 Beschreibung des Gerätes oder Schutzsystems

Der VSP01A Beschleunigungssensor wurde zur Messung von Beschleunigungen, Stößen oder Vibrationen konzipiert. Dies geschieht durch die Umwandlung des Signals, welches durch die Kompression eines piezoelektrischen Kristalls durch eine gegebene seismische Masse erzeugt wird, und Ausgabe eines Breitband-Wechselstromsignals an Überwachungsgerät.

Der Beschleunigungssensor besteht aus einem mit einer Signalverarbeitungsplatine verbundenem piezoelektrischen Kristall, die zusammen in Edelstahlgehäusen verschiedener Formen mit Volumen von etwa 25 cm³ eingeschlossen sind. Das Gehäuse ist vollständig verschweißt.

Die elektrischen Verbindungen zum Gerät werden entweder über einen Stecker Schutzart IP65 oder ein integriertes Kabel, welches an einem Ende des Geräts eingekapselt ist, hergestellt.

Das Gerät hat die folgenden Anschlussparameter:

Nur Stecker	10 m langes Kabel	92 m langes Kabel
U _i = 28 V	U _i = 28 V	U _i = 28 V
I _i = 93 mA	I _i = 93 mA	I _i = 93 mA
P _i = 0,65 W	P _i = 0,65 W	P _i = 0,65 W
C _i = 1,0 nF	C _i = 9,9 nF	C _i = 82 nF
Li = vernachlässigbar	Li = 6 µH oder Li/Ri = 15,4µH/Ω	Li/Ri = 15,4µH/Ω

16 Berichtsnummer

Siehe Bescheinigungsgeschichte

17 Besondere Bedingungen für die sichere Verwendung

- Bei Geräten mit integriertem Kabel muss das freie Ende des Kabels in einem entsprechend zertifizierten staubdichten Gehäuse angeschlossen werden, wenn Staubschutz erforderlich ist.

18 Grundlegende Sicherheits- und Gesundheitsanforderungen

Alle grundlegenden Sicherheits- und Gesundheitsanforderungen werden durch die unter Punkt 9 aufgeführten Standards und Normen abgedeckt.

19 Zeichnungen und Unterlagen

Neue, für diese Ausgabe der Bescheinigung eingereichte Zeichnungen.

Keine.

Gegenwärtige Zeichnungen, die auch mit dieser Bescheinigung assoziiert sind.

Nummer	Blatt	Ausgabe	Datum	Beschreibung
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Unterlagen wie in Bescheinigung Baseefa07ATEX0144X aufgeführt

M06-044-B	1 von 2	B	18/11/13	VSP01A Serie Produktinformationen für Gruppe II Beschleunigungssensor
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Diese Zeichnung ist auch verbunden mit IECEx BAS 12.0133X und wird mit diesem aufbewahrt.

20 Bescheinigungsgeschichte

Bescheinigungs-Nr.	Datum	Kommentare
Baseefa12ATEX0248X	10. Januar 2013	Ausgabe der ersten Bescheinigung. Die damit verbundenen Prüfungen und Bewertungen wurden in Prüfungsbericht-Nr. GB/BAS/ExTR12.0319/00 dokumentiert und werden in der technischen Dokumentation IECEx BAS 12.0132 aufbewahrt.
Baseefa12ATEX0248X Ausgabe 1	29. April 2013	Diese Ausgabe der Bescheinigung inkorporiert die zuvor ausgegebene erste Bescheinigung in einer Bescheinigung und gestattet die Lieferung des Beschleunigungssensors mit einem 10 m langen Kabel mit den sich daraus ergebenden geänderten Eingangsparametern. Die Eigensicherheit wird nicht beeinflusst. Die damit verbundenen Prüfungen und Bewertungen wurden in Prüfungsbericht-Nr. GB/BAS/ExTR13.0102/00 dokumentiert und werden in der technischen Dokumentation IECEx BAS 12.0132 aufbewahrt.
Baseefa12ATEX0248X Ausgabe 2	25. November 2013	Zur Genehmigung der Reduktion der maximalen Betriebsumgebungstemperatur von 110 °C auf 90 °C. Die damit verbundenen Prüfungen und Bewertungen wurden in Prüfungsbericht-Nr. GB/BAS/ExTR13.0280/00 dokumentiert und werden in der technischen Dokumentation IECEx BAS 12.0132 aufbewahrt.
Baseefa12ATEX0248X Ausgabe 3	9. Januar 2015	Zur Genehmigung des Hinzufügens zusätzlicher Anschlussparameter für Varianten „nur Stecker“ (Kabel nicht enthalten). Für diese Änderung waren keine Prüfungen und Bewertungen erforderlich.
Für die für die jeweilige Ausgabe zutreffenden Zeichnungen, bitte die Originale dieser Ausgaben einsehen.		

1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa12ATEX0248X – Issue 3**

4 Equipment or Protective System: **VSP01A Accelerometer**

5 This Certificate is held by: **ifm electronic GmbH**

6 Address: **Friedrichstrasse 1, 45128 Essen, Germany**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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's. **See Certificate History**

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

EN 60079-0: 2012 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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

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

12 The marking of the equipment or protective system shall include the following :

~~Ex~~ II 1G Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +90°C)

~~Ex~~ II 1D Ex ia IIIC T110°C IP65 Da (-55°C ≤ Ta ≤ +90°C)

~~Ex~~ II 1G Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +60°C)

~~Ex~~ II 1D Ex ia IIIC T80°C IP65 Da (-55°C ≤ Ta ≤ +60°C)

Baseefa Customer Reference No. **7032**

Project File No. **14/1001**

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R S SINCLAIR

GENERAL MANAGER

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa12ATEX0248X – Issue 3**

15 **Description of Equipment or Protective System**

The VSP01A 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 25cm³. 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.

The apparatus has the following terminal parameters:

Connector only	10m of Cable	92m of Cable
U _i = 28V	U _i = 28V	U _i = 28V
I _i = 93mA	I _i = 93mA	I _i = 93mA
P _i = 0.65W	P _i = 0.65W	P _i = 0.65W
C _i = 1.0nF	C _i = 9.9nF	C _i = 82nF
L _i = negligible	L _i = 6μH or L _i /R _i = 15.4μH/Ω	L _i /R _i = 15.4μH/Ω

16 **Report Number**

See Certificate History

17 **Specific Conditions of Use**

- 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.

18 **Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 **Drawings and Documents**

New drawings submitted for this issue of certificate.

None.

Current drawings also associated with this certificate.

Number	Sheet	Issue	Date	Description
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Documents as listed in Certificate Baseefa07ATEX0144X

M06-044-B	1 of 2	B	18/11/13	VSP01A Series Product Information For Group II Accelerometer
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This drawing is also associated and held with IECEX BAS 12.0133X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa12ATEX0248X	10 January 2013	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0319/00 held on technical file IECEx BAS 12.0132.
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Baseefa12ATEX0248X Issue 2	25 November 2013	To permit the maximum operating ambient temperature range to be reduced from 110°C to 90°C. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR13.0280/00 held on technical file IECEx BAS 12.0132.
Baseefa12ATEX0248X Issue 3	9 January 2015	To permit additional terminal parameters to be added for connector only variants (no cable included). A test and assessment report was not required for this change.
For drawings applicable to each issue, see original of that issue.		



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2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa12ATEX0248X – Issue 2**

4 Equipment or Protective System: **VSP01A Accelerometer**

5 This Certificate is held by: **ifm electronic GmbH**

6 Address: **Friedrichstrasse 1, 45128 Essen, Germany**

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⊕ Ex II 1D Ex ia IIC T80°C IP65 Da (-55°C ≤ Ta ≤ +60°C)

Baseefa Customer Reference No. **7032**

Project File No. **13/0954**

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Schedule

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Certificate Number Baseefa12ATEX0248X – Issue 2

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The VSP01A 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 25cm³. 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.

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

$$U_i = 28V$$

$$I_i = 93mA$$

$$P_i = 0.65W$$

$$C_i = 82nF$$

$$L_i/R_i = 15.4\mu H/\Omega$$

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

$$U_i = 28V$$

$$I_i = 93mA$$

$$P_i = 0.65W$$

$$C_i = 9.9nF$$

$$L_i/R_i = 15.4\mu H/\Omega \quad \text{OR} \quad L_i = 6\mu H$$

16 Report Number

See Certificate History

17 Specific Conditions of Use

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.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

New drawings submitted for this issue of certificate.

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Documents as listed in Certificate Baseefa07ATEX0144X

M06-044-B	1 of 2	B	18/11/13	VSP01A Series Product Information For Group II Accelerometer
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This drawing is also associated and held with IECEx BAS 12.0133X.

Current drawings also associated with this certificate.

None.

20 Certificate History

Certificate No.	Date	Comments
Baseefa12ATEX0248X	10 January 2013	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0319/00 held on technical file IECEX BAS 12.0132.
Baseefa12ATEX0248X Issue 1	29 April 2013	This issue of the certificate incorporates previously issued primary certificate into one certificate and permits the accelerometer to be supplied with 10m of cable with a resultant change to the entity parameters. Intrinsic safety is not affected. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR13.0102/00 held on technical file IECEX BAS 12.0132.
Baseefa12ATEX0248X Issue 2	25 November 2013	To permit the maximum operating ambient temperature range to be reduced from 110°C to 90°C. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR13.0280/00 held on technical file IECEX BAS 12.0132.
For drawings applicable to each issue, see original of that issue.		

1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa12ATEX0248X – Issue 1**

4 Equipment or Protective System: **VSP01A Accelerometer**

5 This Certificate is held by: **ifm electronic GmbH**

6 Address: **Friedrichstrasse 1, 45128 Essen, Germany**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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's. **GB/BAS/ExTR13.0102/00**

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

EN 60079-0: 2012 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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

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

12 The marking of the equipment or protective system shall include the following :

⊕ II 1G Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +110°C)

⊕ II 1D Ex ia IIIC T130°C IP65 Da (-55°C ≤ Ta ≤ +110°C)

⊕ II 1G Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +60°C)

⊕ II 1D Ex ia IIIC T80°C IP65 Da (-55°C ≤ Ta ≤ +60°C)

Baseefa Customer Reference No. **7032**

Project File No. **13/0342**

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R S SINCLAIR

GENERAL MANAGER

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa12ATEX0248X – Issue 1**

15 **Description of Equipment or Protective System**

The VSP01A 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 25cm³. 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.

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

$U_i = 28V$
 $I_i = 93mA$
 $P_i = 0.65W$
 $C_i = 82nF$

$L_i/R_i = 15.4\mu H/\Omega$

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

$U_i = 28V$
 $I_i = 93mA$
 $P_i = 0.65W$
 $C_i = 9.9nF$

$L_i/R_i = 15.4\mu H/\Omega$ OR $L_i = 6\mu H$

16 **Report Number**

GB/BAS/ExTR13.0102/00

17 **Specific Conditions of Use**

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.

18 **Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 **Drawings and Documents**

New drawings submitted for this issue of certificate.

None.

Current drawings also associated with this certificate.

Number	Sheet	Issue	Date	Description
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Documents as listed in Certificate Baseefa07ATEX0144X

M06-044-A	1 of 2	A	27/11/12	VSP01A Series Product Information For Group II Accelerometer
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This drawing is also associated and held with IECEx BAS 12.0132X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa12ATEX0248X	10 January 2013	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0319/00 held on technical file IECEX BAS 12.0132.
Baseefa12ATEX0248X Issue 1	29 April 2013	This issue of the certificate incorporates previously issued primary certificate into one certificate and permits the accelerometer to be supplied with 10m of cable with a resultant change to the entity parameters. Intrinsic safety is not affected. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR13.0102/00 held on technical file IECEX BAS 12.0132.
For drawings applicable to each issue, see original of that issue.		



1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa12ATEX0248X**

4 Equipment or Protective System: **VSP01A Accelerometer**

5 This certificate is held by: **ifm electronic GmbH**

6 Address: **Friedrichstrasse 1, 45128 Essen, Germany**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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. **GB/BAS/ExTR12.0319/00**

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

EN 60079-0: 2012 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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

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

12 The marking of the equipment or protective system shall include the following :

See schedule

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **7032**

Project File No. **12/0978**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa

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Baseefa is a trading name of Baseefa Ltd

Registered in England No. 4305578. Registered address as above.

R S SINCLAIR

DIRECTOR

On behalf of

Baseefa



13

Schedule

14

Certificate Number Baseefa12ATEX0248X

15 Description of Equipment or Protective System

The VSP01A 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 25cm³. 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.

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

$$\begin{aligned}U_i &= 28V \\I_i &= 93mA \\P_i &= 0.65W \\C_i &= 83nF \\L_i/R_i &= 15.4\mu H/\Omega\end{aligned}$$

The marking of the equipment shall include the following:

⊕ II 1GD
Ex ia IIC T4 Ga (-55°C ≤Ta ≤+110°C)
Ex ia IIIC T130°C IP65 Da (-55°C ≤Ta ≤+110°C)
or
⊕ II 1GD
Ex ia IIC T6 Ga (-55°C ≤Ta ≤+60°C)
Ex ia IIIC T80°C IP65 Da (-55°C ≤Ta ≤+60°C)

16 Report Number

GB/BAS/ExTR12.0319/00

17 Specific Conditions of Use

1. The free end of the cable on the integral cable version of the equipment must be terminated in an appropriately certified dust proof enclosure when dust protection is required.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
Documents as listed in Certificate Baseefa07ATEX0144X				
M06-044-A	1 of 2	A	27/11/12	VSP01A Series Product Information For Group II Accelerometer

This drawing is also associated and held with IECEx BAS 12.0133X.