

1 **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: **Baseefa03ATEX0711 – Issue 1**

4 Equipment or Protective System: **Vibration Transducer type SA6350**

5 Manufacturer: **Metrix Instrument Co.**

6 Address: **8824 Fallbrook, Houston, Texas, 77064, USA**

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 certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment of Category 3 intended for use in potentially explosive atmospheres given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in confidential Report No's: **13(C)0314**

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

EN 60079 0: 2012 EN 60079 15: 2010

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 TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured.

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

⊕ II 3G Ex nA IIC Gc (See schedule for T Class and operating ambient temperature range)

Baseefa Customer Reference No. **0708**

Project File No. **13/0314**

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R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

**METRIX DOC NO: 1159684
REV: B**

13 **Schedule**

14 **Certificate Number Baseefa03ATEX0711 – Issue 1**

15 **Description of Equipment or Protective System**

The Vibration Transducer Type SA6350 comprises an Accelerometer and a Charge Amplifier connected together by electrical cable protected by flexible metal tubing and is designed to monitor mechanical vibration and convert it into an electrical alternating current signal. Both the Accelerometer and the Charge Amplifier are housed in stainless steel enclosures.

One end of a piezoelectric crystal assembly in the Accelerometer is rigidly mounted to the case of the Accelerometer, which in turn is rigidly mounted to the equipment being monitored for vibration. The other end of the piezoelectric crystal assembly is fitted with a weight to give it inertia. As the Accelerometer moves with the vibration, the piezoelectric transducer is compressed and decompressed which in turn produces a piezoelectric voltage. This alternating current signal is amplified by the Charge Amplifier and re-imposed on the supply signals so that it can be externally monitored.

Rated Voltage = 30V

T Class	Accelerometer	Charge Amplifier
T1	Ex nA IIC T1 Gc ($-40^{\circ}\text{C} \leq T_a \leq +325^{\circ}\text{C}$)	Ex nA IIC T4 ($-40^{\circ}\text{C} \leq T_a \leq +120^{\circ}\text{C}$)
T2	Ex nA IIC T2 Gc ($-40^{\circ}\text{C} \leq T_a \leq +280^{\circ}\text{C}$)	
T3	Ex nA IIC T3 Gc ($-40^{\circ}\text{C} \leq T_a \leq +175^{\circ}\text{C}$)	
T4	Ex nA IIC T4 Gc ($-40^{\circ}\text{C} \leq T_a \leq +120^{\circ}\text{C}$)	
T5	Ex nA IIC T5 Gc ($-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$)	

16 **Report Number**

13(C)0314

17 **Specific Conditions of Use**

None

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.

Number	Sheet	Issue	Date	Description
SA6350-XXX	1 of 1	B	05-22-03	Assembly, Accelerometer
SA6350-00-00-000	1 of 1	B	05-22-03	Assembly, Vibration Transducer SA6350-4-050-4-050-0
SA6350-00-00-000-01	1 of 1	B	05-22-03	Assembly, Vibration Transducer SA6350-4-050-6-000-0
SA6350-00-00-000-02	1 of 1	B	05-22-03	Assembly, Vibration Transducer SA6350-3-050-4-050-0
SA6350-00-00-000-03	1 of 1	B	05-22-03	Assembly, Vibration Transducer SA6350-3-050-6-050-0
SA6350-01-00-000	1 of 1	B	05-15-03	Assembly, Piezoelectric Transducer SA6350-4
SA6350-01-00-000-01	1 of 1	B	05-15-03	Assembly, Piezoelectric Transducer SA6350-3
SA6350-02-01-000-ASSY	1 of 1	B	05-22-03	Assembly, Board of Amp. VC-1
SA6350-02-01-000-PL	1 of 1	B	05-22-03	Parts List, PCB, Amplifier VC-1
SA6350-02-01-000-SCH	1 of 1	B	05-22-03	Schematic, Board of Amp VC-1



Number	Sheet	Issue	Date	Description
SA6350-01-00-000-SCH	1 of 1	A	04-21-03	Schematic, Piezoelectric Transducer
9458-XXX	1 to 4	D	05-22-03	Stencil, Marking Accelerometer Housing

Current drawings also associated with this certificate.

None.

20 Certificate History

Certificate No.	Date	Comments
Baseefa03ATEX0711	24 March 2004	The release of the prime certificate. The associated test and assessment is documented in Test Report No. 03(C)0849.
Baseefa03ATEX0711 Issue 1	19 July 2013	This issue of the certificate incorporates previously issued primary certificate into one certificate and confirms the current design meets the requirements of EN 60079-0: 2012 & EN 60079-15: 2012 including the revision of the marking in accordance with these standards.

For drawings applicable to each issue, see original of that issue.

The following pages are the prior revisions of this certificate.



1 **TYPE EXAMINATION CERTIFICATE**

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

3 Type Examination Certificate Number: **Baseefa03ATEX0711**

4 Equipment: **Vibration Transducer type SA6350**

5 Manufacturer: **Metrix Instrument Company**

6 Address: **1711 Townhurst Drive, Houston, Texas, USA**

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

8 Baseefa (2001) Ltd. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment of Category 3 intended for use in potentially explosive atmospheres given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in confidential Report No. **03(C)0849**

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

EN 50021: 1999 EN 60079-15: 2003

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 is subject to special conditions for safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured.

12 The marking of the equipment shall include the following :

⊕ II 3G EEx nA II (For temperature class and ambient temperatures, see schedule).

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

Baseefa (2001) Ltd. Customer Reference No. 0708

Project File No. 03/0849

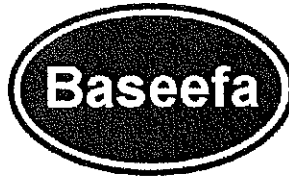
This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa (2001) Ltd.

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R S SINCLAIR
DIRECTOR
On behalf of
Baseefa (2001) Ltd.

METRIX DOC No:1159684
REV: A



13

Schedule

14

Certificate Number Baseefa03ATEX0711

15 Description of Equipment

The Vibration Transducer Type SA6350 comprises an Accelerometer and a Charge Amplifier connected together by electrical cable protected by flexible metal tubing and is designed to monitor mechanical vibration and convert it into an electrical alternating current signal. Both the Accelerometer and the Charge Amplifier are housed in stainless steel enclosures.

One end of a piezoelectric crystal assembly in the Accelerometer is rigidly mounted to the case of the Accelerometer, which in turn is rigidly mounted to the equipment being monitored for vibration. The other end of the piezoelectric crystal assembly is fitted with a weight to give it inertia. As the Accelerometer moves with the vibration, the piezoelectric transducer is compressed and decompressed which in turn produces a piezoelectric voltage. This alternating current signal is amplified by the Charge Amplifier and re-imposed on the supply signals so that it can be externally monitored.

Rated Voltage = 30V

T Class	Charge Amplifier	Accelerometer
T1	EEx nA II T1 (-40°C ≤ Ta ≤ +325°C)	EEx nA II T4 (-40°C ≤ Ta ≤ +120°C)
T2	EEx nA II T2 (-40°C ≤ Ta ≤ +280°C)	
T3	EEx nA II T3 (-40°C ≤ Ta ≤ +175°C)	
T4	EEx nA II T4 (-40°C ≤ Ta ≤ +120°C)	
T5	EEx nA II T5 (-40°C ≤ Ta ≤ +85°C)	

16 Report Number

03(C)0849

17 Special Conditions for Safe Use

None

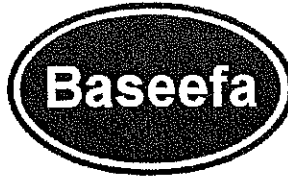
18 Essential Health and Safety Requirements

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
SA6350-00-00-000	1 of 1	A	5-17-04	Assembly Vibration Transducer SA6350-4-050-4-050-0
SA6350-00-00-000-01	1 of 1	A	5-17-04	Assembly Vibration Transducer SA6350-4-050-6-000-0
SA6350-00-00-000-02	1 of 1	A	5-17-04	Assembly Vibration Transducer SA6350-3-050-4-050-0
SA6350-00-00-000-03	1 of 1	A	5-17-04	Assembly Vibration Transducer SA6350-3-050-6-000-0
SA6350-01-00-000	1 of 1	*	05-22-03	Assembly Piezoelectric Transducer SA6350-4
SA6350-01-00-000-01	1 of 1	*	05-22-03	Assembly Piezoelectric Transducer SA6350-3
SA6350-01-00-000-SCH	1 of 1	*	05-22-03	Schematic Piezoelectric Transducer
SA6350-02-01-000-ASSY	1 of 1	A	11-12-03	Assembly Board of Amplifier VC-1

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Number	Sheet	Issue	Date	Description
SA6350-02-01-000-SCH	1 of 1	A	11-12-03	Schematic Board of Amplifier VC-1
SA6350-02-01-000-PL	1 of 1	A	11-12-03	Parts List, PCB, Amplifier VC-1
9458-XXX	1 to 4	A	1-13-04	Stencil, Marking Accelerometer Housing (Certification Label Details)
SA6350-XXX	1 of 1	*	05-22-03	Assembly, Accelerometer

All the above issue * drawings are also associated with certificate Baseefa03ATEX0259.

All the above issue A drawings are also associated with certificate Baseefa03ATEX0259/1.