

1 **SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Intrinsically safe System Intended for use in Potentially Explosive Atmospheres**

3 Supplementary Type Examination Certificate Number: **Baseefa05Y0196/2**

4 Equipment: **Proximity Transmitter System**

5 Manufacturer: **Metrix Instrument Company**

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

7 This supplementary certificate extends Type Examination Certificate No. Baseefa05Y0196 to apply only to the design of the specified intrinsically safe system, and not to specific items of equipment therein, in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

Baseefa Customer Reference No. **0708**

Project File No. **13/0134**

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Registered in England No. 4305578.

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A handwritten signature in black ink, appearing to read 'R S Sinclair', with some illegible scribbles below it.

R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

**METRIX DOC NO: 1199433
REV: A**

13

Schedule

14

Certificate Number Baseefa05Y0196/2

15 Description of the variation to the Equipment

Variation 2.1

This issue of the certificate permits the introduction of the TXR5521 variant and confirms the current system design meets the requirements of EN 60079-25: 2010.

16 Report Number

13(C)0134

17 Specific Conditions of Use

None

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
9678	1 of 1	D	07-19-05	Installation (CENELEC) TXA/TXR/TXR5521 Transmitter

The following pages are the prior revisions of this certificate.

Certificate Number
Baseefa05Y0196/1



Issued 23 April 2009
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1 **SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Intrinsically safe System Intended for use in Potentially Explosive Atmospheres**

3 Supplementary Type Examination Certificate Number: **Baseefa05Y0196/1**

4 Equipment: **Proximity Transmitter System**

5 Manufacturer: **Metrix Instrument Company**

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

7 This supplementary certificate extends Type Examination Certificate No. Baseefa05Y0196 to apply only to the design of the specified intrinsically safe system, and not to specific items of equipment therein, in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

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

Baseefa Customer Reference No. 0708

Project File No. 09/0336

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.

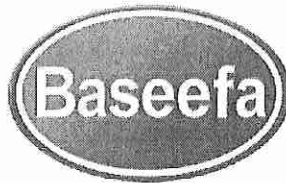
A handwritten signature in black ink, appearing to read "R S Sinclair".

Baseefa

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R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

METRIX DOC NO: 1199433
REV: A



13

Schedule

14

Certificate Number Baseefa05ATEX0196/1

15 **Description of the variation to the Equipment**

Variation 1.1

To permit minor changes to the scheduled drawings that do not affect the original assessment.

16 **Report Number**

None.

17 **Special Conditions for Safe Use**

None

18 **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 **Drawings and Documents**

Number	Sheet	Issue	Date	Description
9678	1 of 1	B	05-18-06	Installation (CENELEC) TXA / TXR Transmitter



1 **TYPE EXAMINATION CERTIFICATE**

2 **Intrinsically Safe System Intended for use in Potentially Explosive Atmospheres**

3 Type Examination Certificate Number: **Baseefa05Y0196**

4 System: **Proximity Transmitter System**

5 Certificate Holder: **Metrix Instrument Company**

6 Address: **Houston, Texas, USA**

7 This system 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 system has been found to comply with the following standards

EN 60079-25: 2004

9 The examination and test results are recorded in confidential Report No. **05(C)0284-1**

10 If the sign "X" is placed after the certificate number, it indicates that the system is subject to special conditions of safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified intrinsically safe system and not to specific items of equipment therein. It is the responsibility of the system certificate holder to supply the relevant documentation to the installer of the intrinsically safe electrical system referred to in this certificate.

The installer has the responsibility to ensure that the system conforms to the specification laid down in the Schedule to this certificate and has satisfied routine verifications and tests specified therein.

12 The marking of the system shall include the following :

SYST Baseefa 05Y0196

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

Baseefa Customer Reference No. **0708**

Project File No. **05/0284**

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

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

METRIX DOC NO: 1199433
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13

Schedule

14

Certificate Number Baseefa05Y0196

15 System Description

The Proximity Transmitter System is designed to monitor the electrical signals generated by either a Metrix, Series 10,000 Probe covered by certificate Baseefa03ATEX0204 or a Bently Nevada Proximity Eddy Current Probe covered by certificate BAS99ATEX1099 when connected to either the Model TXA Non-Contact Position Transmitter and a Model TXR Non-Contact Vibration Transmitter.

1. Apparatus that may be installed in a Non Hazardous Area (Safe Area.)

1.1 Any Dual Channel Diode Return Shunt Zener Diode Safety Barrier certified by any EU Notified Body to [EEx ia] IIC having the following output safety description:

$$U_o \leq 28V, I_o \leq 93mA \quad P_o \leq 0.66W$$

e.g. MTL 7087+

In any Safety Barrier used the output current must be limited by a resistor "R" such that $I_o = U_o/R$. Barriers must be polarised and of like polarity.

1.2 Any Galvanic Isolator certified by any EU Notified Body to [EEx ia] IIC having the following output safety description:

$$U_o \leq 28V, I_o \leq 91mA \quad P_o \leq 0.637W$$

e.g. STAHL 9303/11-22-11

In any Galvanic Isolator used the output current must be limited by a resistor "R" such that $I_o = U_o/R$. Barriers must be polarised and of like polarity.

1.3. The above apparatus is to be supplied from apparatus situated in the safe area which is unspecified except that it must not be supplied from nor contain in normal or abnormal conditions a source of potential with respect to earth in excess of 253 volts r.m.s. or 253 volts d.c.

2. Apparatus that may be installed in a Hazardous Area

2.1 A Model TXA Non-Contact Position Transmitter and a Model TXR Non-Contact Vibration Transmitter to Certificate Number Baseefa05ATEX0195X and coded EEx ia IIC T4 ($-40^\circ C \leq T_a \leq +85^\circ C$), with one of the following probes connected to the PROBE connector:

2.2 A Series 10,000 Probe to certificate number Baseefa03ATEX0204 or an Eddy Current Probe to certificate number BAS99ATEX1099.

3. Permissible Interconnecting Cables

3.1 The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area cables connecting the Model TXA Non-Contact Position Transmitter or a Model TXR Non-Contact Vibration Transmitter to the zener barrier must not exceed the following values:



GROUP	CAPACITANCE (μF)	INDUCTANCE (mH)	OR	L/R RATIO ($\mu\text{H}/\text{ohm}$)
IIC	0.065	4.1		54
IIB	0.231	12.3		162
IIA	0.646	32.8		432

3.2 The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area cables connecting the Model TXA Non-Contact Position Transmitter or a Model TXR Non-Contact Vibration Transmitter to the galvanic isolator must not exceed the following values:

GROUP	CAPACITANCE (μF)	INDUCTANCE (mH)	OR	L/R RATIO ($\mu\text{H}/\text{ohm}$)
IIC	0.065	4.3		56
IIB	0.632	17.72		210
IIA	2.132	36.02		444

3.3 The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area cables connecting the TXA Non-Contact Position Transmitter or Model TXR Non-Contact Vibration Transmitter to the Series 10,000 Probe must not exceed the following values:

GROUP	CAPACITANCE (μF)	INDUCTANCE (mH)	OR	L/R RATIO ($\mu\text{H}/\text{ohm}$)
IIC	32	500		<7,000
IIB	720	1,000		<29,000
IIA	1,000	1,000		<58,000

3.4 The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area cables connecting the TXA Non-Contact Position Transmitter or Model TXR Non-Contact Vibration Transmitter to the Eddy Current Probe must not exceed the following values:

GROUP	CAPACITANCE (μF)	INDUCTANCE (mH)	OR	L/R RATIO ($\mu\text{H}/\text{ohm}$)
IIC	32	500		<7,000
IIB	1,000	1,000		<29,000
IIA	1,000	1,000		<58,000

3.5 Wiring to terminals of the safe area apparatus may be achieved by separate cables or by separate circuits within a Type A or Type B multicore cable (as defined in clause 5.3 of EN50 039) subject to the following:-

- a. The circuit to be individually screened when used within a Type A multicore cable.
- b. The peak voltage of any other circuit within a Type B multicore cable must not exceed 60V.

16 Report

05(C)0284-1

17 Special Conditions for Safe Use

None.

18 Drawings and Documents

Number	Sheet	Issue	Date	Description
9678	1 of 1	*	07-19-05	Installation (CENELEC) TXA / TXR Transmitter