



EC - TYPE EXAMINATION CERTIFICATE

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

EC - Type Examination Certificate Number: **Baseefa06ATEX0207**

Equipment or Protective System: **TX4798 Slip Ring Unit**

Manufacturer: **T.E.L. Engineering Limited**

Address: **Hazel Grove, Stockport, Cheshire, SK7 5DA**

**UNCONTROLLED DOCUMENT
THIS DOCUMENT IS NOT
SUBJECT TO AMENDMENTS**

T.E.L. ENGINEERING LIMITED

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

Baseefa (2001) Ltd., 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. **06(C)0394**

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

EN 60079-0: 2004 EN 50020: 2002 EN 60079-26: 2004

except in respect of those requirements listed at item 18 of the Schedule.

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.

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.

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

⊕ II 1G Ex ia IIC T4 (-20°C ≤ Ta ≤ +50°C)

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

Baseefa Customer Reference No. **1428**

Project File No. **06/0394**

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

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



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Schedule

14

Certificate Number Baseefa06ATEX0207

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T.E.L. ENGINEERING LIMITED

15 Description of Equipment or Protective System

The TX4798 Slip Ring Unit is designed to transfer Intrinsically Safe signals across a rotating interface, which allows for continuous rotary motion.

The equipment comprises a hollow shaft fixed to a mounting pedestal with slip rings – isolated from each other and the enclosure - mounted upon the periphery of the shaft. Precision ball bearings are used to allow the box-shaped enclosure to be fitted to the outer bearing races' permitting continuous rotation in both directions. The electrical signals are transferred by spring loaded brush contacts that slide along the periphery of the slip ring surface.

A multi-core cable is fitted through an Ex gland mounted to the shaft bearing boss and the cores are terminated by solder connection to the inner diameter of the slip rings. A second multi-core cable is fitted to the enclosure through an Ex gland and the cores are terminated by solder connection to the brush contact assemblies.

Each slip ring circuit

$$U_i = 375V_{\text{peak}}$$

$$P_i = 1.2W$$

16 Report Number

06(C)0394

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
10391/100	1 to 2	D	12 th June 2006	General Arrangement
10391/37/06	1 of 1	A	1 st June 2006	Connection Diagram



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

3 Supplementary EC - Type Examination Certificate Number: **Baseefa06ATEX0207/1X**

4 Equipment or Protective System: **TX4798 Slip Ring Unit**

5 Manufacturer: **T.E.L. Engineering Limited**

6 Address: **Hazel Grove, Stockport, Cheshire, SK7 5DA**

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7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa06ATEX0207 to apply to equipment or protective systems designed and constructed 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. **1428**

Project File No. **07/1018**

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Baseefa is a trading name of Baseefa (2001) Ltd
Registered in England No. 4305578 at the above address

A handwritten signature in blue ink, appearing to read "P. S. Sinclair".
P. S. SINCLAIR
DIRECTOR
On behalf of
Baseefa (2001) Ltd.



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Schedule

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Certificate Number Baseefa06ATEX0207/1X

15 Description of the variation to the Equipment or Protective System

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Variation 1.1

To permit the inclusion of an Ex e anti-condensation heater mounted inside the apparatus terminated using an Ex e junction box mounted on the outside of the apparatus, thus producing the TX4798.HTR Slip Ring Unit.

Terminal Parameters for the anti-condensation heater:

$$U_{\max} = 254V_{\text{rms}}$$

The marking of the equipment shall include the following:

Ⓔ II 2G Ex e ia IIC T4 (-20°C ≤ Ta ≤ +50°C)

Compliance with the Essential Health and Safety Requirements for the Ex e parts of the apparatus has been assured by compliance with EN 60079-0: 2004, EN 60079-7: 2003 and IEC 60079-7: 2001.

16 Report Number

07(C)1018

17 Special Conditions for Safe Use

The following apply to the Ex e junction box for the anti-condensation heater only:

1. All terminal screws, used and unused, shall be tightened down by the end user.
2. Insulation of conductors must extend to within 1mm of the metal of the terminal throat unless specified otherwise on the terminal certificate.
3. No more than one single or multi-stranded lead shall be connected into either side of any terminal unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated crimped bootlace ferrule, or any method indicated on the terminal certificate.

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
10391/100	1 of 2	E	4 Dec 2007	General Arrangement



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

3 Supplementary EC - Type Examination Certificate Number: **Baseefa06ATEX0207/2X**
4 Equipment or Protective System: **TX4798 Slip Ring Unit**
5 Manufacturer: **T.E.L. Engineering Limited**
6 Address: **Hazel Grove, Stockport, Cheshire, SK7 5DA**

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Baseefa Customer Reference No. **1428**

Project File No. **08/0729**

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DIRECTOR
On behalf of
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Schedule

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Certificate Number Baseefa06ATEX0207/2X

15 **Description of the variation to the Equipment or Protective System**

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Variation 2.1

To permit the unit to be manufactured with fewer slip rings and a corresponding reduction in overall height. The new unit to be identified as TX4798-xx-HTR; where xx = the number of slip rings fitted and HTR = Anti Condensation Heater Fitted.

To permit other minor mechanical changes that do not affect the original intrinsic safety assessment.

16 **Report Number**

None.

17 **Special Conditions for Safe Use**

None additional to those listed previously

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
10391/100 Baseefa	1 to 2	F	26 Aug 2008	General Arrangement