



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: **Baseefa06ATEX0016X**

4 Equipment or Protective System: **Type TX4730 Slip Ring Collector**

5 Manufacturer: **T.E.L Engineering Limited** also trading as **Trox Engineering**

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

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 (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. **05(C)0737**

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

EN 60079-0: 2004

EN 60079-1: 2004

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 :

 **I M2 Ex d I**

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

Baseefa Customer Reference No. **1428**

Project File No. **05/0737**

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

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

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T.E.L. ENGINEERING LIMITED



13

Schedule

14

Certificate Number Baseefa06ATEX0016X

15 Description of Equipment or Protective System

Type TX4730 Slip Ring Collector rated at up to 1100V a.c., 450A, 3 phase.

The unit is fabricated from mild steel and comprises a rotating cylindrical enclosure. The enclosure is supported on rolling element bearings and has a mounting foot at both ends. Cast zinc alloy bolt-on inspection covers are fitted on both sides and mild steel bolt-on covers are fitted at either end.

The enclosure contains five slip ring assemblies, the stationary parts of which are fastened to a central shaft. The shaft is integral with the stainless steel bearing boss at the incoming end.

The five main incoming cables pass via holes in the bearing boss which is bolted to the support foot, through a cast zinc alloy elbow adaptor.

Cables from the brush gear are connected to a five way terminal assembly which provides facilities for terminating the outgoing cables. The cables pass out via a cast zinc alloy elbow adaptor.

Cable entry holes are provided as specified on the certified drawings for the accommodation of suitable cable entry devices, with or without the interposition of a suitable thread adapter, or suitable stopping plugs. The cable entry devices, thread adapters and stopping plugs must be certified as flameproof Group I Equipment (not a Component) under an EC Type Examination certificate to Directive 94/9/EC.

The cable entry device and cabling methods used in service must be suitable for their intended duty and the special types of cable used in mining.

VARIATION 0.1

Addition of a 'last turns' switch mechanism to the casing. A mounting block is welded to the casing and has a brass bush/retainer assembly screwed through it. An extended arm actuates a through-going shaft via the bush and operates an internally mounted micro switch.

VARIATION 0.2

Recovery of the rotary flamepath by means of a press-fit sleeve.

VARIATION 0.3

Recovery of threaded holes by wire inserts.

VARIATION 0.4

Alternative material of construction for the inspection covers or the cast elbow adaptors comprising SG cast iron.

VARIATION 0.5

Alternative cabling arrangement comprising elbow adaptors with a mounting aperture suitable for fitting a cable gland adaptor as Baseefa02ATEX0173U.

16 Report Number

Baseefa Certification Report No. 05(C)0737

17 Special Conditions for Safe Use

The integral cables, when fitted, must be protected against impact and be terminated in a suitable junction facility.

18 Essential Health and Safety Requirements

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

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19 Drawings and Documents

Number	Sheet	Issue	Date	Description
1/4730/3	1	B	1 MAR 06	General Arrangement
1/4730/3	2	B	1 MAR 06	General Arrangement
1/4730/3	3	B	1 MAR 06	General Arrangement
1/4730/114	-	C	7 APR 06	Recovery Details

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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: **Baseefa06ATEX0016X/1**

4 Equipment or Protective System: **Type TX4730 Slip Ring Collector**

5 Manufacturer: **T.E.L Engineering Limited (Trading as Trolex Engineering)**

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

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7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa06ATEX0016X 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. **11/0498**

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Baseefa

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DIRECTOR
On behalf of
Baseefa



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Schedule

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Certificate Number Baseefa06ATEX0016X/1

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15 Description of the variation to the Equipment or Protective System

Variation 1.1

Reduction in the overall length of the unit with a corresponding reduction in the number of cover fastenings. The contents are also reduced to three phase slip rings and one earth slip ring. The terminal assemblies are also reduced in overall size.

Variation 1.2

Change in construction of the inspection covers and the elbow adaptors to mild steel fabrications.

Variation 1.3

Minor external changes including the label design.

The unit formed by the above variations is designated as the Type TX4730 SANY Slip Ring Collector and is rated at up to 1150V a.c., 450A, 3 phase.

16 Report Number

Baseefa Certification Report 11(C)0498

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
1/4730/200	1	B	20 OCT 11	TX4730 SANY Slip Ring Collector
1/4730/200	3	B	20 OCT 11	TX4730 SANY Slip Ring Collector
1/4730/200	3	B	20 OCT 11	TX4730 SANY Slip Ring Collector
1/4730/201	-	A	30 JUN 11	Duty Cycle

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: **Baseefa06ATEX0016X/2**

4 Equipment or Protective System: **Type TX4730 Slip Ring Collector**

5 Manufacturer: **T.E.L. Engineering Limited (Trading as Trolex Engineering)**

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

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8 Item 9 of the original Certificate is replaced by “Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 EN 60079-1:2007

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

9 The marking of the equipment has changed from the original Certificate and shall include the following:

⊕ I M2 Ex d I Mb T_{amb} -20°C to +40°C

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This certificate shall be held with the original certificate.

Baseefa Customer Reference No. **1428**

Project File No. **13/0416**

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**R S SINCLAIR
GENERAL MANAGER**

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa06ATEX0016X/2**

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

Variation 2.1

To detail a change of material for the O-rings used in the equipment. All O-rings are now made from Silicone compound, which has a temperature range of -60°C to +200°C.

Variation 2.2

To confirm that the equipment covered by this certificate has been reviewed against the requirements of EN 60079-0:2012 and EN 60079-1:2007 in respect of the differences from the standards to which this certificate was issued; none of these differences affect this equipment apart from a change to the marking requirements.

16 **Report Number**

None.

17 **Specific Conditions of 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
1/4730/230	1 of 1	A	01/02/13	TX4730 Name Plates Update Standards
1/4730/3	1 to 3	C	19/11/13	TX4730 (Long) General Arrangement
1/4730/200	1 to 3	C	18/11/13	TX4730 (Short) General Arrangement

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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: **Baseefa06ATEX0016X/3**

4 Equipment or Protective System: **Type TX4730 Slip Ring Collector**

5 Manufacturer: **T.E.L. Engineering Limited (Trading as Trolex Engineering)**

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

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This supplementary certificate shall be held with the original certificate.

Baseefa Customer Reference No. **1428**

Project File No. **14/0206**

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R S SINCLAIR 
GENERAL MANAGER

On behalf of SGS Baseefa Limited

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Schedule

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Certificate Number Baseefa06ATEX0016X/3

15 Description of the variation to the Equipment or Protective System

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Variation 3.1

Minor drawing changes to specify the O-ring silicone compound type designation. This material was assessed as part of the previous supplement to this certificate.

16 Report Number

None.

17 Specific Conditions of 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
1/4730/3	1 of 3	C	19/11/13	TX4730 (Long) General Arrangement
1/4730/200	1 of 3	C	18/11/13	TX4730 (Short) General Arrangement