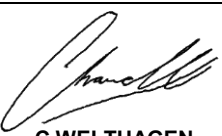
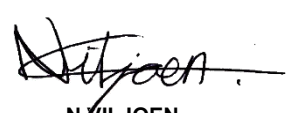




Mining And Surface Certification (Pty) Ltd

2015/021934/07

THIS CERTIFICATE IS ISSUED AS AN I.A. CERTIFICATE IN TERMS OF THE MINE HEALTH AND SAFETY ACT, ACT NO 29 OF 1996 (AND REGULATIONS), THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993) AND REGULATION 17 OF THE ELECTRICAL MACHINERY REGULATIONS

IA CERTIFICATE	MASC M/11-222X	Issue	6
Issue Date	1 March 2022	Expiry Date	1 March 2025
** Based on Certificate No	Sira 99ATEX2152X	Issue / Variations / Amendment	4
Requested by	Trolex Ltd. Hazel Grove, Stockport, Cheshire, SK7 5DY, United Kingdom		
Manufacturer	Trolex Limited Newby Road, Hazel Grove Stockport, SK7 5DY UK		
Description	<p>The TX6831 Audio/Visual Alarm provides a visual and audible indication of a malfunction in an associated sensor to which it is connected. When the sensor output signal is at a normal level, the equipment emits a light pulse every 15 seconds, verifying that the unit is working. If the output exceeds a pre-set limit, the flash rate rises to once per second, indicating that an alarm condition has occurred. There is an optional integral sounder to provide an audible warning. The equipment is housed in an enclosure comprising a base moulding and a lens moulding. The base is manufactured from stainless steel-filled polycarbonate or stainless steel filled Nylon 6 and the lens from anti-static polycarbonate or polycarbonate impregnated with an anti-static coating. The equipment mounts directly on top of the sensor, with a gasket seal to ensure an ingress protection of at least IP54. A labyrinth seal around the sounder maintains the ingress rating. Four wires exit the equipment: two for connection to a suitable power supply and two for connection to the output signal terminals of the sensor.</p> <p>See base certificate for further description.</p>		
Equipment	Audio/Visual Alarm	Type	TX6831
MARKING: Original marking as per certificate ** remains applicable. IA number must be added.	Type: TX6831 Audio/Visual Alarm Ex Marking: Ex ia I Ma Ta = -20°C to +60°C IA Number: MASC M/11-222X (To be additionally marked on equipment) Warnings: See Base Certificate ** (original marking must be applied)		
Quality Assurance report (QAR) / Notification (QAN):	"It is a requirement under ATEX that all equipment for category 1 and 2 areas must have 3rd party quality assurance from a notified body. This is accepted to cover the equipment's quality requirements."		
Compliance: The equipment as described above has been allocated the rating <u>Explosion Protected 'as above'</u> utilizing the SANS/IEC Standards: <ul style="list-style-type: none"> SANS (IEC) 60079-0: 2019 Equipment - General requirements SANS (IEC) 60079-11: 2012 Equipment protection by intrinsic safety "i" <i>Note: This certificate covers only the listed standards and does not imply compliance to any other standard, related or inferred. It is up to the manufacturer to ensure that the product complies to all relevant standards for the application.</i>			
Special conditions of safe use "X": <ul style="list-style-type: none"> Refer to Annex A below for more details. 			
Conditions of manufacture: <ul style="list-style-type: none"> Refer to Annex A below for more details. 			
 C. WELTHAGEN TECHNICAL SPECIALIST		 N. VILJOEN TECHNICAL OFFICER	
<p>This certificate covers all units sold as long as the QAR/QAN remains valid. According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory).</p>			

Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:
SANS 10086 requirements;
Any conditions mentioned in the above certificate:
Any relevant requirements of the MHS Act;
Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).

This certificate may only be reproduced in full
The certificate is not transferable and remains the property of the issuing body.

IA CERTIFICATE: MASC M/11-222X
Equipment: Audio/Visual Alarm
(Expiry date: 1 March 2025)

Page 2 of 2

ANNEX A

This document is based on and must be read in conjunction with certificate Sira 99ATEX2152X.	
Description (According to Base Certificate) **	
"Refer to description in Base Certificate ** (and any applicable schedules/issues/variatioins)."	
Standard compliance	See Base Certificate **
Special conditions of safe use ("X")	<ul style="list-style-type: none"> Under normal or fault conditions, the internal temperature of this equipment may rise above 150°C; therefore, care shall be taken when the enclosure is opened to ensure that no dust enters the equipment. The antistatic coating can be adversely affected by contact with acid or damage to the lens. Suitable precautions shall be taken to avoid such instances and the lens shall be inspected periodically for any damage.
Conditions of manufacture	<ul style="list-style-type: none"> None.
Conditions of Certification	<ul style="list-style-type: none"> This IA Certificate covers all units sold from the date of this document to the expiry date of this certificate. As per ARP 0108 a maximum three yearly review is required on this IA Certificate (expiry is determined as per the QAR/QAN/QMS expiry date). The apparatus must be additionally marked with the MASC marking details above. This approval only covers the equipment as certified above and does not include any scheduled additions or variations / amendments / new issues to the certificate(s), made after the above date. The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by the certificate on which this IA Certificate is based and any other conditions in this IA Certificate. The certification on which this IA Certificate is based must remain valid. The extent of the requirements in the ARP 0108 (or regulations), SANS 10108 and any other applicable regulations on the certification of the equipment must remain unchanged. The Ex quality assurance notification/report for the equipment must remain valid.
Conclusion:	<ul style="list-style-type: none"> From the above and the selective examination of the documentation, nothing contrary to the requirements of the applicable standards was found, provided that the equipment / component is used as described in the above document / certificate and according to the MASC conditions below. A MASC IA certificate is issued based on the work done as per the Base Certificate **. The routine tests for production units according to the Base Certificate ** must be complied with (if applicable).

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment / inspection is representative and accurately performed, and that a report / certificate is accurate in the quoted results and conclusions drawn from the test / assessment / inspection, MASC or its directors/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report / certificate issued pursuant to a test / assessment / inspection.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments / inspections not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer / applicant attests on his own responsibility that the equipment / installation has been designed and constructed in accordance with the applicable requirements of the relevant standards and documentation, that the routine verifications / routine tests have been correctly completed and the equipment / installation complies with the documentation and standard(s).

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practices.

This document may only be reproduced in full.
This certificate is not transferable and remains the property of the issuing body.
This document will not be supported by MASC for certification purposes outside the borders of South Africa.

Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07
Directors: Roelof Viljoen & Francois du Toit
Unit #5, Lelyta Park, 45 Jurg Avenue, Hennopspark Ext 87, Centurion, 0157
P.O. Box 14344, Clubview, 0014
Tel: 012 653 2959 ♦ Fax: 086 605 8568
e-mail: info@masc-ex.co.za



EU-TYPE EXAMINATION CERTIFICATE

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Certificate Number: **Sira 99ATEX2152X** Issue: **4**

Equipment: **TX6831 Audio/Visual Alarm**

Applicant: **Trolex Limited**

Address: Newby Road
Hazel Grove
Stockport
SK7 5DY
UK

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

CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11:2013 EN 60079-11:2012

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:



I M1
Ex ia I Ma
Ta = -20°C to +60°C

Project Number 1590

Signed:

Title: Director of Operations

This certificate and its schedules may only be reproduced in its entirety and without change

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 99ATEX2152X
Issue 4

3 DESCRIPTION OF EQUIPMENT

The TX6831 Audio/Visual Alarm provides a visual and audible indication of a malfunction in an associated sensor to which it is connected. When the sensor output signal is at a normal level, the equipment emits a light pulse every 15 seconds, verifying that the unit is working. If the output exceeds a pre-set limit, the flash rate reases to once per second, indicating that an alarm condition has occurred. There is an optional integral sounder to provide an audible warning.

The equipment is housed in an enclosure comprising a base moulding and a lens moulding. The base is manufactured from stainless steel-filled polycarbonate or stainless steel filled Nylon 6 and the lens from anti-static polycarbonate or polycarbonate impregnated with an anti-static coating.

The equipment mounts directly on top of the sensor, with a gasket seal to ensure an ingress protection of at least IP54. A labyrinth seal around the sounder maintains the ingress rating.

Four wires exit the equipment: two for connection to a suitable power supply and two for connection to the output signal terminals of the sensor.

The nominal voltage range is 7.5V to 16.5V dc. The safety description is as follows:

Power input (Red and Black Wire)

Ui = 16.5 V	Ci = 1.2 nF	Li = 0
-------------	-------------	--------

Input signal (Yellow and Green Wire)

Ui = 16.5 V	Ci = 0	Li = 0
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Monitor trip voltage (Test point)

Ui = 16.5 V	Ci = 0	Li = 0
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The equipment has not been assessed as a 'safety device' as referenced in Directive 94/9/EC, Annex II, clause 1.5.

Variation 1 - This variation introduced the following changes:

- The replacement of R103 and R104 with zero ohm links.
- The lusion of D1, D2, Z101 and Z102 as safety components on drawing number P5459.01.

Variation 2 - This variation introduced the following change:

- The use of 'Faradex' stainless steel filled nylon 6 as an alternative anti-static enclosure material.

Variation 3 - This variation introduced the following change:

- The description was changed due to major changes in the latest edition of the standards, and a Special Condition For Safe Use was added.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 99ATEX2152X
Issue 4

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	08 May 2000	R52X6355A.	The release of the prime certificate.
1	06 July 2001	N/A	The introduction of Variation 1.
2	24 March 2003	R52A9400A	The introduction of Variation 2.
3	02 July 2015	R70028015A	This Issue covers the following changes: <ul style="list-style-type: none">• All previously issued certification was rationalised into a single certificate, Issue 3, Issues 0 to 2 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.• The introduction of Variation 3.
4	31st October 2019	1590	<ul style="list-style-type: none">• Transfer of certificate Sira 99ATEX2152X from Sira Certification Service to CSA Group Netherlands B.V..• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1 Under normal or fault conditions, the internal temperature of this equipment may rise above 150°C; therefore, care shall be taken when the enclosure is opened to ensure that no dust enters the equipment.
- 15.2 The antistatic coating can be adversely affected by contact with acid or damage to the lens. Suitable precautions shall be taken to avoid such instances and the lens shall be inspected periodically for any damage.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

Certificate Annexe



Certificate Number: Sira 99ATEX2152X

Equipment: TX6831 Audio/Visual Alarm

Applicant: Trolex Limited

Issue 0

Drawing No.	Sheet	Rev.	Date	Title
P5459.01	1 to 2	A	05 Apr 00	Certified Circuit Diagram
P5459.02	1 of 1	A	05 Apr 00	General Arrangement
P5459.03	1 of 5	A	04 Apr 00	Power Input P.C.B. Manufacturing Specification
P5459.03	2 of 5	A	04 Apr 00	Power Input P.C.B. Top Overlay
P5459.03	3 of 5	A	04 Apr 00	Power Input P.C.B. Top Layer
P5459.03	4 of 5	A	04 Apr 00	Power Input P.C.B. Bottom Layer
P5459.03	5 of 5	A	04 Apr 00	Power Input P.C.B. Bottom Overlay
P5459.05	1 of 5	A	04 Apr 00	Control P.C.B. Manufacturing Specification
P5459.05	2 of 5	A	04 Apr 00	Control P.C.B. Top Overlay
P5459.05	3 of 5	A	04 Apr 00	Control P.C.B. Top Layer
P5459.05	4 of 5	A	04 Apr 00	Control P.C.B. Bottom Layer
P5459.05	5 of 5	A	04 Apr 00	Control P.C.B. Bottom Overlay
P5459.20	1 of 1	A	05 Apr 00	Certification Printing Details

Issue 1

Drawing No.	Sheets	Rev.	Date	Description
P5459.01	1 to 2	B	09 Apr 01	Certified Circuit Diagram

Issue 2

Drawing No.	Sheets	Rev.	Date	Description
P5459.02	1 of 1	B	04 Feb 03	General arrangement

Issue 3

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
P5459.01	1 to 2	C	05 Jun 15	Certified Circuit diagram
P5459.02	1 of 1	C	05 Jun 15	General Arrangement
P5459.20	1 of 1	B	05 Jun 15	Certification Printing Details

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