IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx TSA 11.0029X

Issue No: 2

Certificate history:
Issue No. 2 (2018-07-19)
Issue No. 1 (2017-06-22)
Issue No. 0 (2011-07-11)

Status: **Current**

Date of Issue: **2018-07-19**

Applicant: **Trolex Limited**
10a Newby Road
Hazel Grove
Stockport
Cheshire SK7 5DY
United Kingdom

Equipment: **P5557 Pump Controller**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking:

Trolex Limited
P5557 Pump Controller
IECEx TSA 11.0029X
Ex ia I Ma (-20 °C ≤ Ta ≤ +60 °C)
and
Ex ia IIA T1 Ga (-20 °C ≤ Ta ≤ +60 °C)
S/N _____

Approved for issue on behalf of the IECEx Certification Body: Debbie Wouters

Position: Acting Quality & Certification Manager

Signature:
(for printed version)

Date: 19 JULY 2018.

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia

Test Safe AUSTRALIA

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Certificate No: IECEx TSA 11.0029X Issue No: 2

Date of Issue: **2018-07-19** Page 2 of 4

Manufacturer: **Trolex Limited**
10a Newby Road
Hazel Grove
Stockport
Cheshire SK7 5DY
United Kingdom

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

AU/TSA/ExTR17.0010/00 AU/TSA/ExTR17.0010/01 GB/BAS/ExTR10.0019/00
GB/BAS/ExTR10.0033/00

Quality Assessment Report:

GB/SIR/QAR07.0017/07

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Certificate No:	IECEx TSA 11.0029X	Issue No: 2
Date of Issue:	**2018-07-19**	Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The P5557 Pump Controller is designed to control a pair of pumps which draw methane off the methane drainage system in a coal mine.

The equipment comprises of two PCBs mounted in a plastic enclosure offering a degree of ingress protection of at least IP20. On the front of the enclosure are two toggle switches and two tri-coloured LED indicators used to indicate the status of the pump motor current. The enclosure measure approximately 110mm x 65mm x 75mm high (including toggle switches).

The incoming supply is connected to terminals 5 & 6 on one side of the enclosure whilst the pump motors are connected to terminals 7 & 8 and terminals 11 & 12 on the other side.

The pump controller must be mounted within a separate enclosure offering a degree of ingress protection of at least IP54.

The standards used in support of this certificate, and listed on the front sheet, are restricted in scope to atmospheres at normal atmospheric pressure and normal oxygen concentration. In considering the intended use of this equipment, where the pump and pump motors may be located in a sealed enclosure and subjected to pressures typically between 0.3 bar and 1.1 bar absolute and an oxygen concentration substantially below 21%. It is considered that no additional safety factors need to be applied to these parts.

The installation manual is provided in Document No. TX6400-UM-EN

SPECIFIC CONDITIONS OF USE: YES as shown below:

Please refer to Annexe of the certificate.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

For Issue 2:

1. Increase the maximum ambient temperature from 40 °C to 60 °C.

2. Change encapsulation material to Tecbond 7786FR or Powerbond 861, 865 or 869.

3. Change diodes D1-D3 from RB051L-40 to MBRA340T3G, same rating 3 A, 40 V.

Annex:

Annexe_IECEx TSA 11.0029X-2.pdf

IECEx Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEx TSA 11.0029X	Issue No.:	2

Specific Conditions of use pertaining to Issue 2 of this Certificate:

1. It is a condition of safe use that the pump controller and pump must be mounted inside an enclosure that offers a degree of ingress protection of at least IP54 according to IEC 60529 and be suitable for Group I and Group IIA.

2. It is a condition of safe use that the following parameters shall be taken into account during installation:

	For Group I	For Group IIA
Input:		
Power Connections: T5 w.r.t. T6 (0V)		
Ui	14.4 V	12.6 V
Ci	0 µF	0 µF
Li	0 µH	0 µH
Output:		
Pump Motor 1 Connections: T7 w.r.t. T8 (0V)		
Uo	14.4 V	12.6 V
Io	615 mA	549 mA
Po	2.22 W	1.73 W
Ci	10.34 µF	10.34 µF
Li	0 µH	0 µH
Pump Motor 2 Connections: T11 w.r.t. T12 (0V)		
Uo	14.4 V	12.6 V
Io	615 mA	549 mA
Po	2.22 W	1.73 W
Ci	10.34 µF	10.34 µF
Li	0 µH	0 µH

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IECEx Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEx TSA 11.0029X	Issue No.:	2

Drawing list pertaining to Issue 2 of this Certificate:

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
P5557.11.IECANZ	1	*General Arrangement	A	2018-07-02
P5557.43.IECANZ	2	*Certified Circuit Diagram (Schematic & BOM)	A	2018-07-06
P5557.44	1	PCB, Dual Controller	B	2010-01-14
P5557.45	1	PCB, LED	A	2010-01-20
P5557.60.IECANZ	1	*Methane drainage system	A	2018-07-02

*Note: An * is included before the title of documents that are new or revised.*

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