Australian/New Zealand
Certification Scheme for
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT
ANZEx Scheme

Certificate of Conformity

Certificate No.: **ANZEx 14.3006X** Issue No.: **0** Date of Issue: **20/02/2014**

Applicant:
Trolex Limited
Newby Road, Hazel Grove
Stockport SK7 5DY
United Kingdom

Electrical Apparatus:
TX6641 Intrinsically Safe Power Supply Chassis

Type of Protection:
[Ex ia]

Marking Code:
Trolex Limited
TX6641 Intrinsically Safe Power Supply Chassis
[Ex ia] I (-20 °C ≤ T_{amb} ≤ +55 °C)
ANZEx 14.3006X
S/N _____

Manufacturer:
Trolex Limited
Newby Road, Hazel Grove
Stockport SK7 5DY
United Kingdom

Manufacturing Location(s):
As above

*The EPEE certification database located at **http://www.anzex.com.au** shows the validity of this Certificate.*

Certificate issued by:

TestSafe Australia
919 Londonderry Road, Londonderry NSW 2753
Australia
Phone: +61 2 4724 4900 Fax: +61 2 4724 4999
http://www.testsafe.com.au

www.jas-anz.org/register

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*This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication **MP87.1:2008**.*

STANDARDS:

The electrical 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: Equipment – General requirements
IEC 60079-11:2011	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"

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

ASSESSMENT & TEST REPORTS:

The equipment listed has successfully met the assessment and test requirements as recorded in:

Test Report No. and Issuing Body: **34540, TestSafe**
Quality Assessment Report No. and Issuing Body: **GB/SIR/QAR07.0017/04**

File Reference: **2013/002568**

Ujen Singh — *Signed for and on behalf of issuing body*

20/02/2014 — *Date of Issue*

Quality & Certification Manager — *Position*

This certificate is not transferable and remains the property of the issuing body and must be returned in the event of it being revoked or not renewed.

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Schedule

EQUIPMENT:

The TX6641 Power Supply Chassis is designed to provide an intrinsically safe supply primarily to intrinsically safe equipment. The power supply chassis comprises a printed circuit board (PCB) that accommodates an intrinsically safe transformer, voltage clamping components, current and power limiting circuitry.

The Power Supply TX6641 must be housed in a suitably certified Ex d enclosure when used in a hazardous area. When used in a non-hazardous area it must be housed inside an enclosure that affords a degree of protection of at least IP20.

The connection to external hazardous area apparatus is made via connector J7.

The Power Supply is available in various options providing differing output voltages, currents, input voltages, and optionally fitted with up to two relay boards providing up to 4 relay interfaces.

CONDITIONS OF CERTIFICATION:

1. It is a condition of manufacture that the mains transformer shall be subjected to routine tests and be able to withstand a test voltage of at least 2500 V applied between primary and secondary windings, and at least 1500 V applied between all windings and the core or screen.
2. It is a condition of safe use that the Power Supply TX6641 must be housed in a suitably certified Ex d enclosure when used in a hazardous area. When used in a non-hazardous area it must be housed inside an enclosure that affords a degree of protection of at least IP20.
3. It is a condition of safe use that the TX6641 circuits must have infallible creepage and clearance distances to the enclosure walls, as defined by clause 6.3 of IEC 60079-11.
4. It is a condition of safe use that the connections to the relay boards must both be configured as either to IS circuits or non-IS circuits. It is not permitted to mix the connection of IS and non-IS circuits to these relays.
5. It is a condition of safe use that the wiring carrying non-hazardous area circuits to the relays must be routed to ensure that they are segregated from hazardous area circuits, maintaining compliance with Table 5 of IEC 60079-11:2011, namely 6 mm of clearance through air and/or 1 mm clearance through solid insulation.
6. It is a condition of safe use that the following parameters are taken into account in the installation:

Product Code	PSU Type	Uo	Io	Po	Co	Lo/Ro
109.1205	7.7 V 0.5 A	8.5 V	0.873 A	5.28 W	646 µF	72.69 µH/Ω
109.1204	7.7 V 1.0 A	8.5 V	1.76 A	10.63 W	560 µF	36.17 µH/Ω
109.1203	7.7 V 1.4 A	8.5 V	1.76 A	10.63 W	560 µF	36.17 µH/Ω

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Product Code	PSU Type	Uo	Io	Po	Co	Lo/Ro
109.1202	7.7 V 1.8 A	8.5 V	1.76 A	10.63 W	560 µF	36.17 µH/Ω
101.1205	12.35 V 0.5 A	13.0 V	0.873 A	6.33 W	32 µF	72.69 µH/Ω
101.1204	12.35 V 1.0 A	13.0 V	1.76 A	12.73 W	30.29 µF	36.17 µH/Ω
101.1203	12.35 V 1.4 A	13.0 V	2.38 A	17.23 W	19.46 µF	26.72 µH/Ω
101.1202	12.35 V 1.8 A	13.0 V	2.38 A	17.23 W	19.46 µF	26.72 µH/Ω
101.1204 (alt)	12.35 V 1.0 A	12.35 V	1.8 A	10.45 W	30 µF	44.63 µH/Ω

Product Code	PSU Type	Um (Terminals marked ‘ac Supply’)
103	24 V rms supply	24 V rms
105	110 V rms supply	110 V rms
106	230 V mains supply	230 V rms

Product Code	PSU Type	Terminals marked R1, R2, R3, R4	
19	Fitted with Relay board	Um: 375 V rms	Im: 5 A rms
		or	
		Ui: 30 V	Ii: 5 A

DOCUMENTS:

Document Number	Document Title	Revision	Date
P5531.01 2 Shts.	Power Supply Certified Circuit Diagram	E	2003-03-11
P5531.01 2 Shts.	Power Supply Certified Circuit Diagram	F	2004-07-26
P5531-02-01	General Arrangement (TX6641 Power Supply Chassis)	C	2003-06-16
P5531.03.01	PCB Bottom Layer	A	2001-09-21
P5531.03.02	PCB Bottom Overlay	A	2001-09-21

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Document Number	Document Title	Revision	Date
P5531.03.03	PCB Inner Layer 1	A	2001-09-21
P5531.03.04	PCB Inner Layer 2	A	2001-09-21
P5531.03.05	PCB Top Layer	A	2001-09-21
P5531.03.06	PCB Top Overlay	A	2001-09-21
P5531.04	Transformer (Certification Details)	C	2002-01-16
P5531.04.01	Transformer (24Vac) (Certification Details)	C	2002-01-16
P5531.06	Relay PCB Connections	A	2001-10-10
P5531-99	Certification Labelling - Australia	B	2014-02-05
P5111.89	PCB Artwork	A	1996-12-11
P5531.107 2 shts.	Input regulator and reset PCB Certified circuit diagram	A	2003-03-06
P5531.107 2 shts.	Input regulator and reset PCB Certified circuit diagram and parts list	C	2003-11-20
P5531.106	Regulator Reset PCB	A	2003-06-04
P5531.106	Regulator Reset PCB	B	2004-01-15
P5531-108	Fuse, potted.	B	2003-06-12