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 SIR 10.0109X issue No.:0 Certificate history:

Status: **Current**

Date of Issue: **2010-10-18** Page 1 of 3

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

Electrical Apparatus: **TX6649 25Ah UPS Power Supply**
Optional accessory:

Type of Protection: **Intrinsic Safety, Increased Safety and Powder Filled**

Marking: **Ex eq[ia Ma]Mb I ***
Ex ia Ma I **
Ta = -20°C≤Ta≤+55°C
*** applies when the equipment is operating on mains power.**
**** applies when the equipment is operating on battery back-up.**

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings BA MIET

Position: Certification Manager

Signature:
(for printed version)

Date: 2010-10-18

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:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira CERTIFICATION

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Date of Issue: **2010-10-18** Issue No.: **0**

Manufacturer:

Trolex Limited
Newby Road
Hazel Grove
Stockport
Cheshire
SK7 5DY
United Kingdom

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 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-5 : 2007-03 Edition: 3	Explosive atmospheres - Part 5: Equipment protection by powder filling "q"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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:

GB/SIR/ExTR10.0219/00

Quality Assessment Report:
GB/SIR/QAR07.0017/02

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The TX6649 un-interruptible Power Supply (UPS) incorporates a modified TX6641 Intrinsically Safe Power Supply Chassis (certificate no. Sira 01ATEX2229X and IECEx SIR 10.0107X) housed inside a metal enclosure that is powder filled and sealed, it also features a larger enclosure that includes a battery compartment. The battery compartment is a totally separate part of the main enclosure and is not powder filled. A battery timer switch circuit board is located in the powder filled part of the enclosure. The battery timer switch circuit detects if the battery is being used to supply power and can switch off the power after a pre-determined length of time

Refer to the Certificate Annexe for a full decription including Safety Parameters

The Manufacturer shall comply with the following condition of manufacture:

1. The mains transformer shall be subjected to routine tests and be able to withstand a test voltage of at least 2500Vrms applied between primary and secondary windings and at least 1500Vrms applied between all windings and the core or screen.

CONDITIONS OF CERTIFICATION: YES as shown below:

1 All cables used for external connections shall be made by use of suitably certified Ex e cable glands. The use of conduit is not permitted.

Annexe: IECEx SIR 10.0109X Annexe Issue 0.pdf

The full description is here for completeness.

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Only the 0.5A and 1.0A versions of the TX6641 Chassis are used for the UPSs. The TX6649 uses two 25Ah batteries, these provide power to equipment located in a hazardous area if the mains power supply fails or is turned off for safety reasons.

When mains powered, this equipment is deemed to be Category M2(M1) or Mb(Ma) equipment, when battery powered, this equipment is deemed to be Category M1 or Ma equipment, however, overall the equipment is deemed to be Category M1 or Ma.

The electrical output parameters are as follows:

Current output options - 0.5A, 1.0A
Voltage output options - 7.5V and 12V
Input supply options Um - 230 Vrms, 110 Vrms, 55 Vrms or 24 Vrms

I.S. Output Terminals +V and 0 V

7.5 V PSU (Uo = 8.5V o/p crowbar)	Short circuit current, Io in A	Max output Power, Po in W	Lo/Ro Ratio in µH/Ω	Capacitance, Co in µF
0.5 A	0.873	5.28	72.69	646
1.0 A	1.76	10.63	36.17	560

12.0 V PSU (Uo = 13.0 V o/p crowbar)	Short circuit current, Io in A	Max output Power, Po in W	Lo/Ro Ratio in µH/Ω	Capacitance, Co in µF
0.5 A	0.873	6.33	72.6	32.0
1.0 A	1.76	12.73	36.17	30.29

Output terminals C1 (V_sig) and C2 (0 V)

Ui	=	16.5 V	Co	=	10 µF
Uo	=	13.65 V	Lo	=	700 mH
Io	=	25mA	Lo/Ro	=	5470 µH/ohm
Po	=	85.2 mW			
Ci	=	12 nF			
Li	=	0			

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Output terminals C3 (I_sig) and C2 (0 V)

Ui	=	16.5 V	Ci	=	12 nF
Pi	=	0.3 W	Li	=	0
Uo	=	13.65 V	Co	=	10 µF
Io	=	213.6 mA, transient	Lo	=	9.4 mH
Io	=	105.4 mA, continuous	Lo/Ro	=	312 µH/ohm
Po	=	1.25 W			

Relay contact terminals P1 (common), P2 (Normally closed) and P3 (Normally open)

Ui	=	90 V
Ii	=	0.25 A
Pi	=	3.0 W

Switch terminals T1 and T2

Connect to a volt free switch

Ui	=	0 V
Ii	=	0 A
Pi	=	0 W

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