



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.:	IECEX CML 26.0021X	Page 1 of 3	Certificate history:
Status:	Current	Issue No: 0	
Date of Issue:	2026-04-28		
Applicant:	Trolex Limited Newby Road Hazel Grove Stockport Cheshire SK7 5DY United Kingdom		
Equipment:	TX6648.40(xx...) 3.5 Ah UPS Power Supply		
Optional accessory:			
Type of Protection:	Powder Filled Ex "q", Increased Safety Ex "eb", Intrinsic Safety Ex "ia" / "[ia]"		
Marking:	Ex eb q [ia Ma] I Mb * Ex ia I Ma ** Ta = -20°C to +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:

Stelios Rumbedakis

Position:

Certification Manager

Signature:
(for printed version)

S. Rumbedakis

Date:
(for printed version)

2026-04-28

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Manufacturer: **Trolex Limited**
Newby Rd
Hazel Grove
Stockport
Cheshire SK7 5DY
United Kingdom

Manufacturing locations: **Trolex Limited**
Newby Rd
Hazel Grove
Stockport
Cheshire SK7 5DY
United Kingdom

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2023](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

[IEC 60079-5:2015](#) Explosive atmospheres –Part 5: Equipment protection by powder filling "q"
Edition:4.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with 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/CML/ExTR26.0080/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0017/14](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The TX6648.40(x...) Un-Interruptible Power Supply (UPS) incorporates a modified TX6641 Intrinsically safe power supply chassis housed inside a metal enclosure which is powder filled and sealed. It also incorporates a separate battery compartment, attached to the main enclosure which 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 Certificate Annex for full Product Description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Certificate Annex

Annex:

[Certificate Annex IECEx CML 26.0021X Issue 0.pdf](#)

Annexe to: IECEx CML 26.0021X Issue 0
Apparatus: TX6648.40(.x...) 3.5Ah UPS Power Supply
Applicant: Trolex Limited



Description

The TX6648.40(.x...) Un-Interruptible Power Supply (UPS) incorporates a modified TX6641 Intrinsically safe power supply chassis housed inside a metal enclosure which is powder filled and sealed. It also incorporates a separate battery compartment, attached to the main enclosure which 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.

Only the 0.5A and 1.0A versions of the TX6641 Chassis are used for the UPS. The TX6648 uses two 3.5 Ah batteries. These provide power to equipment located in the 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) EPL Mb (Ma) equipment. When battery powered, this equipment is deemed to be Category M1 EPL Ma Equipment.

The Electrical output parameters are as follows:

Current output options	-	0.5A or 1.0 A
Voltage output options	-	7.5 V or 12 V
Input Supply options Um	-	230 rms, 110 Vrms, 55 Vrms, 42 Vrms or 24 Vrms

I.S. Output Terminals +V and 0 V

7.5 PSU (Uo = 8.5 V o/p crowbar)	Short Circuit Current, Io in A	Max Output Power, Po in W	Lo/Ro Ratio in $\mu\text{H}/\Omega$	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 $\mu\text{H}/\Omega$	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 terminal C1 (V_sig) and C2 (0V)

Ui	=	16.5 V	Co	=	10 μF
Uo	=	13.65 V	Lo	=	700 mH
Io	=	25 mA	Lo/Ro	=	5470 $\mu\text{H}/\text{ohm}$
Po	=	85.2 mW			
Ci	=	12 nF			
Li	=	0			



Certificate Annex IECEX
Version: 12.0 Approval: Approved



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

U_i	=	16.5 V	C_i	=	12 nF
P_i	=	0.3 W	L_i	=	0
U_o	=	13.65 V	C_o	=	10 μ F
I_o	=	213.6 mA, Transient	L_o	=	9.4 mH
I_o	=	105.4 mA, continuous	L_o/R_o	=	312 μ H/ohm
P_o	=	1.25 W			

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

U_i	=	90 V
I_i	=	0.25 A
P_i	=	3.0 W

Switch terminals T1 and T2

Connect to a volt free switch:

U_i	=	0 V
I_i	=	0 A
P_i	=	0 W

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. The mains transformer shall be subjected to routine tests and be able to withstand a test voltage of at least 2500 Vrms applied between primary and secondary windings and at least 1000 Vrms applied between all windings and the core or screen.
- ii. The routine Electric strength test of the filling material shall be carried out prior to the filling process.
- iii. The equipment shall be subjected to routine verification. No damage shall be evident to the conformal coating or encapsulation, this includes but is not limited to;
 - Cracks;
 - non-homogeneous covering of the encapsulated or coated parts;
 - inadmissible shrinkage;
 - swelling;
 - decomposition;
 - failure of adhesion (separation of any adhered parts) or flaking; and
 - softening.



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Specific Conditions of Use

The following relate to the installation and/or safe use of the equipment:

- i. All cable entries shall be made using suitably certified Ex e cable glands.
- ii. The use of conduit is not permitted.



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