



EU Type Examination Certificate CML 23ATEX1012X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **TX6642.35(.xx...) Power Supply**
- 3 Manufacturer **Trolex Ltd.**
- 4 Address **Trolex Limited
10 Newby Road
Hazel Grove, Stockport
Cheshire SK7 5DY
United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 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 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN 60079-11:2012
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- 10 The equipment shall be marked with the following:



I M2 (M1)

Ex db [ia Ma] I Mb

Ta=-20°C to +55°C





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11 Description

TX6642.35(.xx...) is a Power supply unit and it comprises the separately certified intrinsically safe TX6641.35(.xx...) Power Supply Chassis . The units are housed in a flameproof enclosure.

TX6641.35(.xx...) Intrinsically Safe Power Supply Chassis is designed to provide an intrinsically safe supply to intrinsically safe equipment. It comprises a printed circuit board (PCB) that accommodates an intrinsically safe transformer, voltage clamping components, current and power limiting circuitry.

The following options are available:

Input supply options: 24 V rms, 110 V rms or 230 V rms

Um 26.4 V rms, 121 V rms or 253 V rms

Output options: 7.5 Vdc, 500 mA or 12 Vdc, 900 mA

The connection to external hazardous area equipment is made via connector J7 and the entity parameters are as follows :

Variant	Uo	Io	Po	Co	Lo/Ro
7.5 Vdc, 500 mA	8.5 V	0.873 A	5.28 W	646 µF	72.69 µH/Ω
12 Vdc, 900 mA	13 V	1.76 A	12.73 W	30.29 µF	36.17 µH/Ω

The TX6641.35(.xx...) may optionally be fitted with two relay boards providing four relay interfaces that have the following entity parameters:

Option1		I.S. circuit terminals 3,5,7,9 wrt 0 V	Non I.S. circuit to relay contact terminals a, b and c of Relays 1-4	
Variant	Relay type	Ui	Um	Im
7.5 Vdc, 500 mA	9V	8.5 V	375 V Peak	5 A
12 Vdc, 900 mA	12 V	13 V		

Option2		Non-I.S. circuit terminals 3,5,7,9 wrt 0 V	I.S. circuit to relay contact terminals a, b and c of Relays 1-4	
Variant	Relay type	Um	Ui	Ii
7.5 Vdc, 500 mA	9 V	8.5 V	30 V Peak	5 A
12 Vdc, 900 mA	12 V	13 V		

The enclosure comprises two fabricated steel chambers, a main chamber and an I.S. connection chamber, each with bolt-on covers. Power cabling is via up to five threaded apertures for the fitting of suitably certified and dimensioned cable glands. Cabling between the two chambers is by means of a threaded aperture for the fitting of a suitably certified and dimensioned multi-core bushing.



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The TX6642.35(.xx...) was previously certified as TX6642 under certificate number SIRA 01ATEX1230.

Component	Certificate Numbers	Standards Applied
Bartec GmbH Line Bushing 07-9102	EPS 13 ATEX 1 619 U	EN IEC 60079-0:2018 EN 60079-1:2014

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	07 Apr 2023	R16053A/00	Prime Release

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

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

- Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.
- Each unit shall be subjected to a routine overpressure test in accordance with EN 60079-1 clause 16.1 at 10 bar for at least 10 s. There shall be no permanent deformation or damage to the enclosure.
- The equipment is fitted with Line Bushing 07-9102 of Bartec GmbH manufacture. When mounting the line bushing, the manufacturer and/or installer shall observe all relevant installation requirements listed in the design specification of the equipment (i.e. TX6642.35(.xx...) power supply unit) and in the Operating Manual of the Line bushing, and shall ensure that the line bushings are secured against twisting or loosening.

14 Specific Conditions of Use (Special Conditions)

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

- A means of electrical isolation shall be provided on the supply side of the enclosure.
- The cover fixings shall be of grade A2-70 stainless steel or stronger.
- In accordance with clause 5.1 of EN 60079-1, the flameproof joints shall not be repaired; for maintenance or repairs contact the manufacturer.
- Only suitably certified cable gland, blanking elements and line bushings shall be used.
- The equipment is fitted internally with a line bushing that is not serviceable or replaceable by the end user. For repairs and maintenance contact the manufacture."

Certificate Annex

Certificate Number CML 23ATEX1012X
Equipment TX6642.35(.xx...) Power Supply
Manufacturer Trolex Ltd.



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
P5111-89	1 of 1	A	07 Apr 2023	PCB Artwork
P5111.23	1 of 1	B	07 Apr 2023	Cover
P5111.24	1 of 1	-	07 Apr 2023	Terminal Enclosure Lid
P5111.43	1 of 1	E	07 Apr 2023	Housing
P5531.01	1 to 2	G	07 Apr 2023	Power Supply Certified Circuit Diagram
P5531-02-01	1 of 1	C	07 Apr 2023	General Arrangement (TX6641 Power Supply Chassis)
P5531.03.01	1 of 1	A	07 Apr 2023	PCB Bottom Layer
P5531.03.02	1 of 1	A	07 Apr 2023	PCB Bottom Overlay
P5531.03.03	1 of 1	A	07 Apr 2023	PCB Inner Layer 1
P5531.03.04	1 of 1	A	07 Apr 2023	PCB Inner Layer 2
P5531.03.05	1 of 1	A	07 Apr 2023	PCB Top Layer
P5531.03.06	1 of 1	A	07 Apr 2023	PCB Top Overlay
P5531.04.01	1 of 1	C	07 Apr 2023	Transformer (24VAC) (Certification Details)
P5531.04	1 of 1	C	07 Apr 2023	Transformer (Certification Details)
P5531.06	1 of 1	A	07 Apr 2023	Relay PCB Connections
P5531.106	1 of 1	B	07 Apr 2023	Regulator Reset PCB
P5531.107	1 to 2	C	07 Apr 2023	Input Regulator and Reset PCB Certified circuit diagram
P5531-108	1 of 1	B	07 Apr 2023	Fuse, Potted
P5531.02.02.ATEX	1 of 1	A	07 Apr 2023	General Arrangement -TX6642.35 PSU
P5531.2038	1 of 1	A	07 Apr 2023	ATEX Label Drawing – TX6642.35