# EU Type Examination Certificate CML 23ATEX2011X Issue 0

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **TX6641.35(.xx…) Intrinsically Safe Power Supply Chassis**

3 Manufacturer **Trolex Ltd.**

4 Address **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 60079-11:2012

10 The equipment shall be marked with the following:

Ex I (M1)

[Ex ia Ma] I

Ta= -20°C to +55°C

## 11 Description

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 TX6641.35(.xx…) was previously certified as TX6641 under certificate number SIRA 01ATEX2229X and IECEx SIR 10.0107X.

## 12 Certificate history and evaluation reports

| Issue | Date | Associated report | Notes |
|---|---|---|---|
| 0 | 07 Apr 2023 | R16052A/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.

i. 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.

ii. All Mains Transformers shall satisfy the following routine Dielectric Strength test requirements of EN/IEC 60079-11 CL 11.2:

- 2,500 Vrms between primary and secondary windings;1,000 Vrms between all windings and screen or core.

## 14 Specific Conditions of Use (Special Conditions)

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

i. When the apparatus is installed within a potentially explosive atmosphere, an additional alternative type of protection as listed in EN IEC/IEC 60079-0 must be provided and installed in accordance with the requirements of EN/IEC 60079-25.

ii. When the equipment is installed in the safe area, it must be installed in an enclosure providing a degree of protection of not less than IP 20 and installed in accordance with the requirements of EN/IEC 60079-25.

# Certificate Annex

| | |
|---|---|
| **Certificate Number** | **CML 23ATEX2011X** |
| **Equipment** | **TX6641.35(.xx…) Intrinsically Safe Power Supply Chassis** |
| **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 |
| 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 |
| P5531.2037 | 1 of 1 | A | 07 Apr 2023 | ATEX/IECEx Label Drawing – TX6641.35 |