



# 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](http://www.iecex.com)

Certificate No.: IECEX ExTC 18.0028X

Issue No: 0

Certificate history:

Issue No. 0 (2019-03-26)

Status: **Current**

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Date of Issue: **2019-03-26**

Applicant: **Trolex Ltd**  
Unit 10A, Newby Road, Hazel Grove,  
Stockport, Cheshire SK7 5DY  
**United Kingdom**

Equipment: **TX3706 Falcon 25 Series Connector**

Optional accessory:

Type of Protection: **Flameproof & Optical Radiation**

Marking:  
Ex db I Mb  
Tamb = (-50 °C ≤ Ta ≤ +60 °C)  
For Optical Marking - Refer to Description in Annex

Approved for issue on behalf of the IECEX  
Certification Body:

Ajay Maira

Position:

Certification Authority

Signature:  
(for printed version)

Date:

2019-03-26

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](http://www.iecex.com).

Certificate issued by:

**Ex Testing and Certification Pty Ltd**  
1/30 Kennington Drive  
Tomago NSW 2322  
Australia



TESTING & CERTIFICATION



# IECEX Certificate of Conformity

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Manufacturer: **Trolex Ltd**  
Newby Road, Hazel Grove,  
Stockport, Cheshire SK7 5DY  
**United Kingdom**

Additional Manufacturing location(s):

**PEI-Genesis UK Ltd**  
George Curl Way,  
Southampton, SO18 2RZ  
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 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:

- |   |   |
|---|---|
| <b>IEC 60079-0 : 2011</b><br>Edition:6.0    | Explosive atmospheres - Part 0: General requirements  |
| <b>IEC 60079-1 : 2014-06</b><br>Edition:7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"                         |
| <b>IEC 60079-28 : 2015</b><br>Edition:2     | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation |

*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:

<a href="#">GB/CML/ExTR15.0097/00</a>	<a href="#">GB/CML/ExTR16.0018/00</a>	<a href="#">GB/CML/ExTR16.0072/00</a>
<a href="#">GB/CML/ExTR17.0056/00</a>	<a href="#">GB/CML/ExTR18.0043/00</a>	

### Quality Assessment Report:

[GB/SIR/QAR07.0017/07](#)



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## Schedule

### EQUIPMENT:

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

The TX3706 Falcon 25 Series connectors are a range of plug and socket arrangements that consist of the following options:

- TX3706.1 – Falcon 25 Line Plug
- TX3706.2 – Falcon 25 Line Receptacle
- TX3706.3 – Falcon 25 Fixed Receptacle
- TX3706.4 – Falcon 25 Flash Line Plug
- TX3706.6 – Falcon 25 Fibre Line Plug
- TX3706.7 – Falcon 25 Fibre Line Receptacle
- TX3706.8 – Falcon 25 Fibre Fixed Receptacle
- TX3706.(41, 42, 43, 44) – Ex d Metallic Cap



Refer to Annex for additional information.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annex

### Annex:

[IECEX ExTC 18.0028X Annex Final.pdf](#)

<h1>IECEX Certificate of Conformity</h1>  <h2>Annexe</h2>		
Annexe for Certificate No.:	IECEX ExTC 18.0028X	Issue No.: 0

**Description “continued from certificate”:**

Internally the TX3706 Falcon 25 Series Connectors can contain pin and socket inserts (4 to 10 way), USB flash drive connections, and fibre optic connections, they can also be fitted with nylon insulators. The connectors also allow the connection of cables via separately certified cable glands. In the case of the fixed receptacles, a potted cable entry is incorporated.

The enclosures contain ingress protection seals at the base of the Line Plugs, around the bayonet and bayonet track (full engagement rated IP66) which is an extension of the housing which contains an inner insulator tube with further connection to an internal earth connection. The end caps have threaded cable entries (where used) and incorporate an internal earth connection. Two cable entry sizes are available; M20 x 1.5 and M25 x 1.5 and the end cap is secured in place by two screws. The connectors further utilise an interlocking mechanism to create a flameproof enclosure during disconnection of the pins and sockets. During this period the pilot pin if provided disengages, which de-energises the socket connector. The connectors also incorporate the use of rubber cover end caps on the sockets and plugs to help protect the enclosures from ingress of dust and moisture to provide an IP65 rating.

When the TX3706 Falcon 25 Fibre connectors are used, the following optical power limits apply:

**Underground mines**

**Line Plug and Line Receptacle**

Product Code:	Ex Certificate Number:	Ex Certification Code:	Optical radiated power limit:
TX3706.6.06 TX3706.7.06	IECEX ExTC 18.0028X	Ex op is I Ma -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
		Ex db op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
		Ex db op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W

**Fixed Receptacle** (low risk of mechanical danger only – refer to conditions of use)

Product Code:	Ex Certificate Number:	Ex Certification Code:	Optical radiated power limit:
TX3706.8.06	IECEX ExTC 18.0028X	Ex op is I Ma -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
		Ex db op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
		Ex db op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W

# IECEX Certificate of Conformity



## Annexe



Annexe for Certificate No.:

IECEX ExTC 18.0028X

Issue No.: 0

### Specific Conditions of Use pertaining to Issue 0 of this Certificate:

1. When included, the total capacity of all pin options shall not exceed 100 A, with a maximum rating per pin of 25 A.
2. The cable entries and cable used with the TX3706 Falcon 25 Connectors may reach 60°C above ambient temperatures, therefore, shall be selected accordingly for these temperatures.
3. The TX3706 Falcon 25 fixed receptacles must not be used on enclosures where the entry point temperature exceeds 119 °C.
4. The connector arrangement remains flameproof through the first stage of disconnection which fully disconnects the pins, however, this only applies to circuits with a power factor of between 0.6 and 1.0. For circuits outside this range, unless for resistive loads only, additional time delays shall be considered before fully disconnecting the connector even when de-energised.
5. The stainless steel fixed receptacle, when used in Group I areas, shall only be used in areas considered to be low risk of mechanical danger or shall be additionally protected from mechanical impact by installation.
6. The optical source shall be assessed for suitability of use with the TX3706 Falcon 25 Fibre Connectors. The optical power limits shall not exceed the values shown in the description.
7. For TX3706 Falcon 25 Fibre connectors, live disconnection is only permitted when used with an "op is" optical source.

### Drawing list pertaining to Issue 0 of this Certificate:

Manufacturer's Documents				
Title:	Drawing No.:	Pages	Rev. Level:	Date:
General Arrangement, IECEX	P5609.01.10	1 of 1	A	2019-02-25
General Arrangement, IECEX	P5609.01.11	1 of 1	A	2019-02-25
Certification Marking Details, IECEX Aus	P5609.01.12	1 of 1	A	2019-02-22
Exd Cap Arrangement, IECEX Aus	P5609.01.13	1 of 1	A	2019-02-22
General Arrangement, IECEX Aus	P5609.01.14	1 of 1	A	2019-02-22
General Arrangement, IECEX of Fixed Receptacle - Fibre	P5609.01.15	1 of 1	A	2019-02-22
Marking, TX3706.1 IECEX Aus Group I	P5609.2028	1 of 1	A	2019-02-22
Marking, TX3706.2 IECEX Aus Group I	P5609.2029	1 of 1	A	2019-02-22
Marking, TX3706.3 IECEX Aus Group I	P5609.2030	1 of 1	A	2019-02-22
Marking, TX3706.4 IECEX Aus Group I	P5609.2031	1 of 1	A	2019-02-22
Marking, TX3706.6 IECEX Aus Group I	P5609.2032	1 of 1	A	2019-02-22
Marking, TX3706.7 IECEX Aus Group I	P5609.2033	1 of 1	A	2019-02-22
Marking, TX3706.8 IECEX Aus Group I	P5609.2034	1 of 1	A	2019-02-22
Marking, TX3706.42 IECEX Aus Group I	P5609.2035	1 of 1	A	2019-02-22
Marking, TX3706.44 IECEX Aus Group I	P5609.2036	1 of 1	A	2019-02-22

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## Annexe



**Annexe for Certificate No.:**

**IECEX ExTC 18.0028X**

**Issue No.:**

**0**

Title:	Drawing No.:	Pages	Rev. Level:	Date:
Label Certificate Number, IECEX Aus	P5609.2037	1 of 1	A	2019-02-22
Label TX Number, IECEX Aus	P5609.2038	1 of 1	A	2019-02-22
Label Grpl, IECEX Aus	P5609.2039	1 of 1	A	2019-02-22
Certification Information for User Manual (Australia) TX3706 Falcon 25 Connector	P5609.1801	3	A2	2019-03-22
Certification Information for User Manual (Australia) TX3706 Falcon 25 Fibre Connector	P5609.1802	3	A2	2019-03-22