



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 15.0070X** Page 1 of 4 Certificate history:
Status: **Cancelled** Issue No: 5 Issue 4 (2018-02-06)
Date of Issue: 2018-12-06 Issue 3 (2017-06-22)
Applicant: **Trolex Ltd** Issue 2 (2016-08-10)
Newby Road, Hazel Grove Issue 1 (2016-02-17)
Stockport, Cheshire Issue 0 (2015-12-11)
SK7 5DY
United Kingdom
Equipment: **TX3706 Falcon 25 Series Connector**
Optional accessory:
Type of Protection: **Increased Safety "eb", Flameproof "db", Optical Radiation "op is", Dust Ignition "tb"**
Marking: Non-Optical Marking
Ex db eb I Mb Ex db eb IIC T4 Gb Ex tb IIIC T135°C Db
Ex db I Mb Ex db IIC T4 Gb
Tamb = (-50°C < Ta < +60°C)
Optical Marking - Refer to Description in Annex

Approved for issue on behalf of the IECEx
Certification Body:

A Snowdon MIET

Position:

Certification Officer

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Issue No: 5

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

Manufacturing locations: **PEI Genesis**
George Curl Way, Southampton,
Hampshire, 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 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 60079-0:2011](#) Explosive atmospheres - Part 0: General requirements
Edition:6.0
- [IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0
- [IEC 60079-28:2015](#) Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2
- [IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2
- [IEC 60079-7:2015](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.0

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 Reports:

[GB/CML/ExTR15.0097/00](#)
[GB/CML/ExTR17.0056/00](#)

[GB/CML/ExTR16.0018/00](#)
[GB/CML/ExTR18.0043/00](#)

[GB/CML/ExTR16.0072/00](#)
[GB/CML/ExTR18.0292/00](#)

Quality Assessment Report:

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



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

NOTE: This certificate was CANCELLED on 2024-12-04 at the request of the Applicant following their consultation with the IECEx Certification Body (ExCB). This cancellation does NOT affect products manufactured or installed prior to this date and such equipment is not subject to withdrawal from the market or from the installation site. Any comment may be directed to the Applicant or ExCB.

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
- 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
- TX3706.9 – Falcon 25 Hybrid Line Plug
- TX3706.10 – Falcon 25 Hybrid Line Receptacle
- TX3706.11 – Falcon 25 Hybrid Fixed Receptacle

See Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:

See Annex for Specific Conditions of Use (Special Conditions for Safe Use).

CANCELLED



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 5 (Variation 5)**

Refer to Annex for a description of the modifications for issues 1 to 5.

Annex:

[IECEx CML 15.0070X Iss. 5 Certificate Annex.pdf](#)

CANCELLED

Annexe to: IECEx CML 15.0070X, Issue 5
Applicant: Trolex Ltd.
Apparatus: TX3706 Falcon 25 Series Connector



Product Description

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
- 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
- TX3706.9 – Falcon 25 Hybrid Line Plug
- TX3706.10 – Falcon 25 Hybrid Line Receptacle
- TX3706.11 – Falcon 25 Hybrid Fixed Receptacle

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.

All securing screws are M4 x 16 long socket cap head screws, stainless steel Grade A2-70 with hex socket cap heads in accordance with ISO4762.

The connectors further utilise an interlocking mechanism to create a flameproof enclosure during disconnection of the pins and sockets. During disconnection, 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.

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

Underground Mines

Free Plug and Free Receptacle

Product Code:	Ex Certification Code:	Optical radiated power limit:
TX3706.6.19 TX3706.7.19	I M1 Ex op is I Ma -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	I M2 Ex db op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	I M2 Ex db op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W

Product Code:	Ex Certification Code:	Optical radiated power limit:	Electrical Contacts Rating:
TX3706.9.19 TX3706.10.19	I M2 Ex db op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW	Contact rating: 12.5 A, 250 VAC / 100 VDC
	I M2 Ex db op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W	Max. total current (all contacts): 50 A

Fixed Receptacle (low risk of mechanical danger only)

Product Code:	Ex Certification Code:	Optical radiated power limit:
TX3706.8.19	I M1 Ex op is I Ma -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	I M2 Ex db op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	I M2 Ex eb op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW

	I M2 Ex db op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W
	I M2 Ex db eb op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W

Product Code:	Ex Certification Code:	Optical radiated power limit:	Electrical Contacts Rating:
TX3706.11.19	I M2 Ex db op is I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW	Contact rating: 12.5 A, 250 VAC / 100 VDC Max. total current (all contacts): 50 A
	I M2 Ex db op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W	
	I M2 Ex db eb op pr I Mb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W	

Surface industry with explosive gas and dust atmospheres

Free Plug and Free Receptacle

Product Code:	Ex Certification Code:	Optical radiated power limit:
TX3706.6.20 TX3706.7.20	II 1GD Ex op is IIC T6 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 15 mW
	II 1GD Ex op is IIC T4 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 1GD Ex op is IIB T6 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 1GD Ex op is IIA T3 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	II 1GD Ex op is IIIC T135°C Da -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW

	II 2GD Ex db op is IIC T6 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 15 mW
	II 2GD Ex db op is IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex db op is IIB T6 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex db op is IIA T3 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	II 2GD Ex db op pr IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W
	II 2GD Ex tb op is IIIC T135°C Db -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex tb op pr IIIC T135°C Db -50 °C ≤ Ta ≤ +60 °C	≤ 4 W

Product Code:	Ex Certification Code:	Optical radiated power limit:	Electrical Contacts Rating:
TX3706.9.20 TX3706.10.20	II 2GD Ex db op is IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW	Contact rating: 12.5 A, 250 VAC / 100 VDC Max. total current (all contacts): 50 A

Fixed Receptacle

Product Code:	Ex Certification Code:	Optical radiated power limit:
TX3706.8.20	II 1GD Ex op is IIC T6 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 15 mW
	II 1GD Ex op is IIC T4 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 1GD Ex op is IIB T6 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 1GD Ex op is IIA T3 Ga -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	II 1GD Ex op is IIIC T135°C Da -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex db op is IIC T6 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 15 mW
	II 2GD Ex eb op is IIC T6 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 15 mW
	II 2GD Ex db op is IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex eb op is IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex db op is IIB T6 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex eb op is IIB T6 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex db op is IIA T3 Gb	≤ 150 mW

Product Code:	Ex Certification Code:	Optical radiated power limit:
	-50 °C ≤ Ta ≤ +60 °C	
	II 2GD Ex eb op is IIA T3 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 150 mW
	II 2GD Ex db op pr IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W
	II 2GD Ex db eb op pr IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W
	II 2GD Ex tb op is IIIC T135°C Db -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW
	II 2GD Ex tb op pr IIIC T135°C Db -50 °C ≤ Ta ≤ +60 °C	≤ 4 W

Product Code:	Ex Certification Code:	Optical radiated power limit:	Electrical Contacts Rating:
TX3706.11.20	II 2GD Ex db op is IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW	Contact rating: 12.5 A, 250 VAC / 100 VDC Max. total current (all contacts): 50 A
	II 2GD Ex db op pr IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W	
	II 2GD Ex db eb op pr IIC T4 Gb -50 °C ≤ Ta ≤ +60 °C	≤ 4 W	
	II 2GD Ex tb op is IIIC T135°C Db -50 °C ≤ Ta ≤ +60 °C	≤ 35 mW	
	II 2GD Ex tb op pr IIIC	≤ 4 W	

	T135°C Db $-50\text{ °C} \leq T_a \leq +60\text{ °C}$		
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Variation 1

This variation introduces the following modifications:

- i. To allow the use of Ex d cap covers when the connector is separated.

Variation 2

This variation introduces the following modifications:

- i. Addition of the potted fixed receptacle (TX3706.3) to the certification.
- ii. Addition of the flash drive connector (TX3706.4) to the certification.
- iii. The approval standards, description and the Conditions of Certification/Safe Use have been modified as a result of the above modifications.
- iv. To update the certificate reference to the 2014//34/EU Directive.
- v. To include an additional manufacturer and manufacturing location

Variation 3

This variation introduces the following modifications:

- i. To permit the change of the overall series name from TX3706 Falcon Series to TX3706 Falcon 25 Series Connector.
- ii. To permit the introduction of the TX3706 Falcon 25 Fibre, the product marking and description is amended accordingly.
- iii. To permit the inclusion of optional chamfered locking.
- iv. To permit the inclusion of additional material options for the IP dependant O-rings.
- v. To amend an existing condition of certification.
- vi. To recognise the expansion of the range included in the certification, as a result of the above modifications, to the following:
 - TX3706.1 – Falcon 25 Line Plug
 - TX3706.2 – Falcon 25 Line Receptacle
 - TX3706.3 – Falcon 25 Fixed Receptacle
 - TX3706.4 – Falcon 25 Flash
 - 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

Variation 4

This variation introduces the following modifications:

- i. To amend existing Conditions of Manufacture and Special Conditions for Safe Use.
- ii. To increase the maximum flamepath gap to 0.1 mm. A Special Condition for Safe Use relating to the flamepath dimensions has been removed as it is no longer required.

To change the pin configuration from '4 or 10' pins to '4 to 10' pins

Variation 5

This variation introduces the following modifications:

- i. The inclusion of the Falcon 25 hybrid range with new part numbers and a new description. The new part numbers are:
 - TX3706.9 – Falcon 25 Hybrid Line Plug
 - TX3706.10 – Falcon 25 Hybrid Line Receptacle
 - TX3706.11 – Falcon 25 Hybrid Fixed Receptacle
- ii. Re-addition of an alternate manufacturing location.
- iii. Amendment of the existing Special Conditions for Safe Use/Specific Conditions of Use and addition of a new one.

Conditions of Manufacture

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

- i. When aluminium is utilised as the material of manufacture of the enclosure, the equipment shall be marked for Group II and III applications only.
- ii. The fixed receptacle shall be subjected to a routine electric strength test in accordance with IEC 60079-7:2015 clause 7.1 following installation of the cable and application of the potting compound.

Specific Conditions of Use (Special Conditions)

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

- i. For the full electrical versions, the total capacity of all pin options shall not exceed 100 A, with a maximum rating per pin of 25 A.
- ii. 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.
- iii. 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.
- iv. 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.
- v. 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.
- vi. For the optical versions, live disconnection is only permitted when used with an “op is” optical source.
- vii. For the Falcon 25 Hybrid Versions, the total current rating shall not exceed 50 A, with a maximum rating per pin of 12.5 A.