



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

Certificate No.: IECEx CML 18.0047X

Issue No: 0

Certificate history:

[Issue No. 0 \(2018-11-21\)](#)

Status: **Current**

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Date of Issue: **2018-11-21**

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

Equipment: **TX3740 Falcon 40 Series Connector**

Optional accessory:

Type of Protection: **Flameproof (db), Increased Safety (eb), Dust Ignition (tb)**

Marking:

Ex db I Mb
Ex db eb I Mb
Ex db IIC T4 Gb
Ex db eb IIC T4 Gb
Ex tb IIIC T135°C Db

Ta= -50°C to +60°C

*Approved for issue on behalf of the IECEx
Certification Body:*

H M Amos MIET

Position:

Technical Manager

*Signature:
(for printed version)*

Date:

2018-11-21

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](#).

Certificate issued by:

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





IECEX Certificate of Conformity

Certificate No: IECEX CML 18.0047X Issue No: 0

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

Additional Manufacturing location(s):

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 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:

- | | |
|---|--|
| IEC 60079-0 : 2017
Edition:7.0 | Explosive atmospheres - Part 0: Equipment - General requirements |
| IEC 60079-1 : 2014-06
Edition:7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |
| IEC 60079-31 : 2013
Edition:2 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t" |
| IEC 60079-7 : 2015
Edition:5.0 | Explosive atmospheres – Part 7: Equipment protection by increased safety "e" |

*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:

[GB/CML/ExTR18.0057/00](#)

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 TX3740 Falcon 40 Series Connectors are a range of plug and socket arrangements that consist of the following options:

- TX3740.1 – Falcon 40 Line Plug
- TX3740.2 – Falcon 40 Line Receptacle
- TX3740.3 – Falcon 40 Fixed Receptacle
- TX3740.4 – Falcon 40 Line Plug Ex d Cap
- TX3740.5 – Falcon 40 Receptacle Ex d Cap

Internally the TX3740 Falcon 40 Series Connectors can contain pin and socket inserts (up to 37 way). 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.

Refer to Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annex for Specific Conditions of Use.

Annex:

[IECEX CML 18.0047X Iss. 0 Certificate Annex.pdf](#)

Annexe to: IECEx CML 18.0047X Issue 0
Applicant: Trolex Ltd
Apparatus: TX3740 Falcon 40 Series Connector



Product Description

The TX3740 Falcon 40 Series Connectors are a range of plug and socket arrangements that consist of the following options:

- TX3740.1 – Falcon 40 Line Plug
- TX3740.2 – Falcon 40 Line Receptacle
- TX3740.3 – Falcon 40 Fixed Receptacle
- TX3740.4 – Falcon 40 Line Plug Ex d Cap
- TX3740.5 – Falcon 40 Receptacle Ex d Cap

Internally the TX3740 Falcon 40 Series Connectors can contain pin and socket inserts (up to 37 way). 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; M32 x 1.5 and M40 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.

All securing screws are M5 x 16 long socket cap head screws, stainless steel Grade A2-70 with hex socket cap heads in accordance with ISO4762.

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.

The ratings of the Falcon 40 Series Connectors are as follows:

Contact Size (mm ²)	Max Ambient Temp (°C)	Max Current Per Contact (A)	Max Current Per Connector (all contacts) (A)
0.75	60	6.4	140
	55	6.9	151
	50	7.4	163
	45	8	175
	40	8.5	187

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Contact Size (mm ²)	Max Ambient Temp (°C)	Max Current Per Contact (A)	Max Current Per Connector (all contacts) (A)
1.5	60	13.3	291
	55	14.4	316
	50	15.5	341
	45	16.6	366
	40	17.8	390
2.5	60	16	350
	55	17.3	379
	50	18.7	409
	45	20	438
	40	21.4	468
4	60	18.6	408
	55	20.1	443
	50	21.7	447
	45	23.3	512
	40	24.9	547

Conditions of Manufacture

The following are conditions of manufacture:

- 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 clause 7.1 following installation of the cable and application of the potting compound.

Specific Conditions of Use

The following are conditions of certification:

- i. The capacity of the contacts shall not exceed the limits as shown in the description.
- ii. The cable entries and cable used with the TX3740 Falcon 40 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.