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 23.0023X**

Certificate history:
Issue 0 (2024-01-09)

Status: **Current**

Issue No: 1

Date of Issue: 2024-12-11

Applicant: **Hubbell Limited t/a Hawke International**
Ashton Road
Bredbury Park Industrial Estate
Bredbury
Stockport SK6 2QN
United Kingdom

Equipment: **A Range of Fibre-Optic Connectors**

Optional accessory:

Type of Protection: **Flameproof Ex "db", Increased Safety Ex "eb", Optical Radiation Ex "op is" & "op pr" and Dust Igntion Ex "tb"**

Marking: For CP/CR

Ex op pr IIC T6 Gb
Ex tb IIIC T85°C Db

For bulkhead/box mount version:

Ex [db eb] op pr IIC T6 Gb
Ex tb IIIC T85°C Db

With separately certified ‘op is’ source:

Ex [op is] IIC T* Ga
Ex tb IIIC T85°C Db

Ta = -40°C to +60°C

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

Position: **Assistant Certification Manager**

Signature: (for printed version)

Date: (for printed version) 11 Dec 2024

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

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Manufacturing locations: **Hubbell Limited t/a Hawke International**
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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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

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 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/ExTR23.0024/00 GB/CML/ExTR24.0241/00

Quality Assessment Report:

GB/SGS/QAR24.0002/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Fibre-Ex Range of Fibre-Optic Connectors may be manufactured in brass, nickel plated brass, stainless steel, and each comprise a cylindrical body section which may take the form of a Type CP In-line Connector with male mating parts (plug), or a Type CR In-line Connector with female mating parts (socket).

Refer to Certificate Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Certificate Annex for Specific Conditions of Use.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1
This issue introduces the following change:

1. To recognise a change to the applicant's and manufacturer's name and address.

Annex:

Certificate Annex IECEx CML 23.0023X, Iss 1_1.pdf

Annexe to:	**IECEx CML 23.0023X Issue 1**
Apparatus:	**A Range of Fibre-Optic Connectors**
Applicant:	**Hubbell Limited t/a Hawke International**

Description

The Fibre-Ex Range of Fibre-Optic Connectors may be manufactured in brass, nickel plated brass, stainless steel, and each comprise a cylindrical body section which may take the form of a Type CP In-line Connector with male mating parts (plug), or a Type CR In-line Connector with female mating parts (socket).

The male and female parts are joined with a threaded collar which is fixed to the male half. When separated the connection chambers are closed with dust caps which are secured in the same manner. A locking grub screw is provided at the back of the threaded collar.

The cylindrical body sections house a 4 or 8 way plug & socket arrangement which may be keyed into a range of orientations. The plug and socket insert assemblies are mechanically supported from the rear.

An armour/braid clamping arrangement is provided within the rear of the in-line units. This arrangement has two reversible clamping cone options to accommodate armour/braid sizes from 0 to 1.25mm. In addition, the in-line connectors incorporate cable sealing mechanism at the rear.

An outer cable clamp arrangement may also be secured to the rear of the inline connectors with two hexagon socket grub screws.

A Type BR Bulkhead Connector with female mating parts (socket), intended for connection through the bulkhead or walls of flameproof or increased safety enclosures.

At the rear of the bulkhead units is an internal compression/cable sealing element and an M20 or M32 male entry thread. Alternative ½", ¾" or 1" NPT entry threads may be provided.

In this form the coding includes the marking [db eb] to indicate that it may interface with flameproof or increased safety enclosures, without negating the protection concepts.

The Range of connector consists of the following versions CP, CR and BR i.e. Connector Plug, Connector Receptacle and Bulkhead Receptacle respectively. The composition of each version is as follows:

- Cap (CP, CR and BR)
- Continuity Spring Clip (CR and BR)
- Insert Assembly
- O Ring Seals
- Shell
- Engaging nut (CP)
- Snap Ring (CP)
- Deluge Boot (CR and CP)
- Clamping Ring and Spigot (CR and CP)
- Middle nut (CR and CP)
- Back nut (CR and CP)
- Back nut and clamp (CR and CP)
- Compressor assembly (BR)
- Skid washer (BR)
- Flameproof seal (BR)
- Retainer (BR)
- GMC (Gland mounting Clamp) (CR and CP)

An alternative [“op is” or “op pr”] marking option to indicate acceptability for use with an external, separately certified ‘op is’ or ‘op pr’ a limited energy output. A range of temperature classes are permitted to match the energy limitations of the optical source.

Notes:

- IECEx BAS 16.0032X is superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by IECEx BAS 16.0032X.
- Where IECEx BAS 16.0032X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

Conditions of Manufacture

None.

Specific Conditions of Use

The following conditions relate to the safe installation and/or use of the products:

i. Do not disconnect product when energised and in a hazardous area.
ii. In a hazardous area environment, the protective caps are to be fitted immediately on the socket side following separation when the product is energised.
iii. The bulkhead connector is not to be fitted to enclosures/equipment where the interface temperature may exceed 80°C.
iv. The cable shall be effectively clamped to prevent pulling and twisting (does not apply when fitted with rear clamping device or Hawke Gland Mounted Clamp (GMC)).
v. When used in dust environments the cable entry, or bulkhead mounting, shall be sealed in accordance with the installation code of practice to ensure that a minimum ingress protection of level IP6X is maintained.
vi. The Ex [op is] version of the equipment, shall only be supplied from separately certified optical source marked with coding to include “Ex op is”. The marked gas group and “T” rating shall match (or exceed) those marked on the optical source, as limited by the maximum specified radiated power/ irradiance levels (prescribed by Table 2 of IEC 60079-28).
vii. An ignition hazard assessment shall be made to address any optical radiation.

Components used which are covered by Ex Certificates issued to older editions of Standards

None.