



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 BAS 16.0032X issue No.:2

Status: Current

Certificate history:
~~Issue No. 2 (2017-7-5)~~
~~Issue No. 1 (2016-6-10)~~
~~Issue No. 0 (2016-4-7)~~

Date of Issue: 2017-07-05 Page 1 of 5

Applicant: **Hawke International**
A Division of Hubbell Limited
A Member of the Hubbell Group of Companies
Oxford Street West, Ashton-under-Lyne
Lancashire, OL7 0NA
United Kingdom

Equipment: A Range of Fibre-Optic Connectors
Optional accessory:

Type of Protection: Protected Optical Radiation

Marking: Ex op pr IIC T6 Gb
Ex tb III C T85°C Db
(T_{amb} = -40°C to +60°C)

Alternative markings include (see schedule):-

Ex [dbe] op pr IIC T6 Gb – for bulkhead/box mount version
Ex [op is] IIC T* Ga - with seperately certified 'op is' source

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Technical Manager

Signature:
(for printed version)


18 July 2017

Date:

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:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom





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A Division of Hubbell Limited
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Lancashire, OL7 0NA
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Additional Manufacturing location(s):

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 electrical 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 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-28 : 2015 Edition: 2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	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/BAS/ExTR17.0199/00

GB/BAS/ExTR16.0066/00

GB/BAS/ExTR16.0066/01

Quality Assessment Report:

GB/BAS/QAR06.0061/06



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Fibre^{Ex} Range of Fibre-Optic Connectors may be manufactured in brass, steel, stainless steel or bronze, 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.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The protective caps shall be fitted immediately following separation.
2. The Type BR bulkhead connectors may be fitted to Ex d or Ex e enclosures, where the interface temperature does not exceed 80°C. The integral cables shall be mechanically protected by the enclosure, or equally effective means.
3. The Type CP/CR In-line connectors are intended for use with resilient cables only, capable of withstanding axial loads in excess of 30N without damage.
4. When used in dust environments, or fitted to increased safety enclosures, the Type BR bulkhead mounting thread shall be sealed in accordance with the installation code of practice to ensure that an ingress protection level of IP6X is maintained.
5. Units coded Ex [op is] shall only be supplied from a 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).



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EQUIPMENT(continued):

Variation One

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 1/2", 3/4" or 1" NPT entry threads may be provided.

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

Variation Two

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



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 2.1

Introduction of alternative 8 way fibre-optic seal into the 8 Way Fibre Optic BR Assembly and the 4 way Instrumex BR Seal sizes A to D in to the 4 Way Fibre Optic BR Assembly

ExTR: GB/BAS/ExTR17.0199/00

File Reference: 17/0484