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

Ex COMPONENT CERTIFICATE

Certificate No.: IECEx TRC 12.0002U

Issue No: 4

Status: **Current**

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Date of Issue: **2019-07-23**

Certificate history:
Issue No. 4 (2019-07-23)
Issue No. 3 (2014-12-19)
Issue No. 2 (2014-10-16)
Issue No. 1 (2012-10-05)
Issue No. 0 (2012-03-29)

Applicant: **JCE (Europe) Ltd**
East Way,
Lee Mill Industrial Estate,
Ivybridge,
Devon,
PL21 9LL
United Kingdom

Ex Component: **Component Enclosures, GUB / GUBH Series Enclosures and GUFX2 Enclosure**

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Flameproof "d", Equipment dust ignition protection by enclosure "t"**

Marking:

Ex db IIC Gb Ex tb IIIC Db

Approved for issue on behalf of the IECEx Certification Body: Stephen Winsor

Position: Certification Manager

Signature:
(for printed version)

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.

Certificate issued by:

Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire

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Manufacturer:	**JCE (Europe) Ltd** East Way, Lee Mill Industrial Estate, Ivybridge, Devon, PL21 9LL **United Kingdom**	

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 Component 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 Ex Component 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"

*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 Ex Component listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/TRC/ExTR12.0002/04

Quality Assessment Report:

GB/SIR/QAR10.0001/06

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Schedule

Ex Component(s) covered by this certificate is described below:

GUB series enclosures

The GUB series enclosures are component certified enclosures designed for use with a variety of internal equipment.

GUFX2 enclosure

The GUFX2 enclosure is a component certified enclosure designed for use with a variety of internal equipment.

See Annex for full description.

SCHEDULE OF LIMITATIONS:

1. No holes, whether blind or clear may be drilled in the Ex component enclosure other than those permitted and detailed on sheet two of the manual.
2. All blind holes shall have at least one thread remaining when screws are fully tightened without washers.
3. Rotating electrical machines or other devices which create turbulence shall not be incorporated.
4. Oil-filled circuit breakers and contactors shall not be used.
5. The enclosures are designed to be used in an ambient temperature range of -40°C to +60°C and -20 °C to +60 °C.
6. The limiting temperature for the window cement material is +100°C.
7. The content of the Ex component enclosure maybe placed in any arrangement providing that an area of at least 40% of each cross-sectional area remains free to permit unimpeded gas flow and unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5mm.
8. Only suitably ATEX/IECEx certified cable glands, conduit sealing devices and blanking elements shall be used.
9. When evaluating the component enclosure as equipment, apply the requirements of IEC 60079-1 Annex D.4.
10. Painted or powder coated versions may present an electrostatic hazard. These units should only be cleaned with a damp or anti-static cloth.
11. Where the GUBH3 / GUBHS3 is fitted with Patrol glass, a guard must be in place.
12. Flame path repair must not be carried out by the end user.

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

Issue 1 - Addition of GUFX2 Enclosure.

Issue 2 - To add new window configuration with guard.

Issue 3 - Changes to routine overpressure testing.

Issue 4 - Update to latest standards.

Annex:

Annex to IECEx TRC 120002U issue 4 r.pdf

Element Materials Technology,
Unit 1, Pendle Place,
Skelmersdale,
West Lancashire, WN8 9PN,
United Kingdom

Annex to IECEx Certificate of Conformity IECEx TRC.0002U issue No.: 4

General product information

GUB series enclosures

The GUB series enclosures are component certified flameproof enclosures designed for use with a variety of internal equipment. They consist of a range of enclosures of varying sizes manufactured from LM25 aluminium alloy. The GUB designation denotes that the enclosures are fitted with solid aluminium threaded lids.

The GUBH designation denotes the use of lids with a cemented viewing window. These are designed to accommodate instrument type equipment.

The GUB3 / GUBH3 size enclosure can also be manufactured from stainless steel. This version enclosure is designated GUBS3 / GUBHS3. The enclosures may also be painted or powder coated.

Holes for cable entries in the size range M20 to M90 and 1/2" to 3" NPT may be drilled in the enclosure in the areas marked by the manufacturer and defined in the Installation, Operation and Maintenance manual.

The equipment was evaluated for use with gas group IIC and dust group IIIC within a temperature range of -40 °C to +60 °C.

The GUBH3 / GUBHS3 can include a cover fitted with a Patol glazed window which is protected from impact by an aluminium guard that includes eight window apertures. The guard is secured to the front face of the GUBH3 cover with four M4 socket cap set screws.

The routine overpressure test requirements are a function of model, ambient temperature range and window glass material. See routine tests and table in manual for full details.

The range consists of the following

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUB1	125x125x120	Aluminium LM25	Solid
GUB2	155x155x134	Aluminium LM25	Solid
GUB3	176x176x135	Aluminium LM25	Solid
GUB4	253x233x156	Aluminium LM25	Solid
GUB5	310x285x223	Aluminium LM25	Solid

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUBH1	125x125x120	Aluminium LM25	Windowed
GUBH3	176x176x130	Aluminium LM25	Windowed
GUBH4	253x233x175	Aluminium LM25	Windowed
GUBH5	310x285x240	Aluminium LM25	Windowed

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUBS3	176x176x135	Stainless Steel	Solid
GUBHS3	176x176x135	Stainless Steel	Windowed

GUFX2 enclosure

The GUFX2 enclosure is a component certified flameproof enclosure designed for use with a variety of internal equipment. The enclosures is made of LM25 aluminium alloy. The enclosures are fitted with a solid aluminium threaded lid.

Up to 4 holes for cable entries in the size range M20, M25, 1/2" NPT or 3/4" NPT may be drilled in the enclosure in the areas marked by the manufacturer and defined in the Installation, Operation and Maintenance manual.

The equipment was evaluated for use with gas group IIC and dust group IIIC within a temperature range of -40 °C to +60 °C.

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUFX2	127x127x76	Aluminium LM25	Solid

Routine Tests

1. The manufacturer shall perform a 1.5 x Routine Pressure Test in accordance with EN/IEC 60079-1 clause 16.1 at the following pressures:

   GUB4 / GUBH4 / GUB5 / GUBH5 – 17.5 bar.

   GUBH3 & GUBHS3 (for -40°C ambient rated types only).

   The GUB1, GUBH1, GUB2, GUB3 and GUFX units are exempt from routine pressure testing.

   The GUBH3 & GUBHS3 (-20 °C ambient rated types only) units are exempt from routine pressure testing.

2. The manufacturer shall perform a 1.5 x Routine Pressure Test in accordance with EN/IEC 60079-1 clause 16.1 on the GUBH3 / GUBHS3 cover with Patol window glass and guard at a pressure of 17.5 bar for the -40 °C ambient rated models and 11.25 bar for the -20 °C ambient models.

Annex to IECEx Certificate of Conformity **IECEx TRC.0002U issue No.: 4**

Manufacturer's Documents			
Title:	Drawing No.:	Rev. Level:	Date:
Certification Drawing GUB Series Enclosures To Ex db IIC (9 pages)	A3C-3002	4	2019-05-31
Certification Drawing GUFX2 Series Enclosures To Ex db IIC (2 pages)	A3C-3004	2	2019-05-31
GUB(S) & GUBH(S) GUFX Series Empty Flameproof Enclosures Installation, Operation and Maintenance Manual (2 pages)	-	4	2019-06

" – " Denotes information not provided by manufacturer

Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.