



# 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](http://www.iecex.com)

Certificate No.: IECEx TRC 12.0005X issue No.:1

Certificate history:  
Issue No. 1 (2012-10-5)  
Issue No. 0 (2012-6-1)

Status: **Current**

Date of Issue: **2012-10-05** Page 1 of 4

Applicant: **JCE Group**  
East Way  
Lee Mill Industrial Estate  
Ivybridge  
Devon  
PL21 9LL  
**United Kingdom**

Electrical Apparatus: **Flameproof Enclosures - GUBC, GUBT, GUBHC, GUF2C and GUF2T Series Enclosures**  
*Optional accessory:*

Type of Protection: **Flameproof**

Marking: Ex d IIC T4 / T5 / T6 Gb  
Ex tb IIIC T130°C / T95°C / T80°C Db

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

*Position:* Certification Officer

*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](http://www.iecex.com).

Certificate issued by:

**TRaC Global Ltd.**  
Unit 1 Pendle Place  
Skelmersdale  
West Lancashire  
WN8 9PN  
United Kingdom





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Manufacturer: **JCE Group**  
East Way  
Lee Mill Industrial Estate  
Ivybridge  
Devon  
PL21 9LL  
**United Kingdom**

Manufacturing location(s):  
**JCE (Europe) Ltd**  
East Way,  
Lee Mill Industrial Estate,  
Ivybridge,  
Devon,  
PL21 9LL  
United Kingdom  
**JCE (Aberdeen) Ltd**  
Blackburn Business Park,  
Aberdeen,  
AB21 0PS  
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 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** Explosive atmospheres - Part 0: General requirements  
Edition: 6.0  
**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6  
**IEC 60079-31 : 2008** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'  
Edition: 1

*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/TRC/ExTR12.0005/00

GB/TRC/ExTR12.0005/01

##### Quality Assessment Report:

GB/ITS/QAR11.0014/00

GB/SIR/QAR10.0001/01



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The GUB Series enclosures are flameproof enclosures designed to be fitted with a variety of internal equipment. Typical equipment fitted is detailed on drawing A3C-3003.

The equipment model designations are as follows:

GUB (H) (S) (T) (C) 1-5

Where:

H - Windowed Lid (not present – solid lid).

S - Stainless Steel enclosure (GUBS3/GUBHS3 only).

T - Terminal enclosure.

C - Equipment enclosure.

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 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 GUF2 enclosure is a flameproof enclosure designed for use with a variety of internal equipment (GUF2C) or terminals (GUF2T). The enclosure is manufactured from LM25 aluminium alloy. The enclosure is fitted with a solid aluminium threaded lid. Typical equipment fitted is detailed on drawing A3C-3005.

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.

For both the GUB Series and the GUF2 enclosures, the equipment was evaluated for use with gas group IIC and dust group IIIC within a temperature range of -40°C to +40°C and -40°C to +60°C (or any temperature within these limits).

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. Where painted or powder coated, the enclosures could present an electrostatic hazard. Clean only with a damp or anti-static cloth.
2. Only suitably IECEx certified cable glands and blanking elements shall be used.
3. As part of the routine maintenance schedule, the condition of the window cement shall be periodically inspected for any degradation or discolouration of the cement that may compromise the explosion protection.
4. The enclosure is also to be earthed externally using the earth point provided.
5. Where internal intrinsically safe equipment is fitted, refer to the instructions for permitted category, equipment protection level and gas group.



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

GUF2C and GUF2T addition.

**Annexe:** [Annex to IECEx TRC 12.0005X issue 1.pdf](#)



**Annex to IECEx Certificate of Conformity**  
**CoC Ref. No. IECEx TRC 12.0005X issue No.:1**

<b>Special conditions for manufacture:</b>	
1.	Sources of ultrasonic radiation may not be fitted.
2.	Sources of optical radiation may only be fitted in non-window versions where the optical energy is completely contained within the enclosure.
3.	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.
4.	Where fuses are fitted, the enclosure shall be marked with the warning "DO NOT OPEN WHEN ENERGISED".
5.	Where switchgear is fitted to the GUBC equipment the conditions stated on drawing A3C-3003 Sheet 1 Note 2 shall be adhered to.
6.	Where power supply conductors for GUBC equipment are greater than 16mm <sup>2</sup> , a dedicated earth terminal with dimensions equal to or greater than the terminals for connection of supply conductors shall be fitted. The corresponding earth conductor shall also be of an equivalent or greater size as the incoming power conductors.
7.	Where Intrinsically Safe equipment is fitted internally to the enclosures, the maximum power dissipation is limited to 1/3rd of the lowest values listed in Table 1 and the maximum permitted ambient temperature of the overall equipment is limited to +40°C. The manufacturer shall perform a thermal test to ensure that in the location where the Intrinsically Safe equipment is fitted, the internal ambient temperature does not exceed the maximum permitted ambient temperature of the Intrinsically Safe equipment.
8.	The GUBT series equipment shall include a dedicated earth terminal with dimensions equal to or greater than the terminals for connection of supply conductors.
9.	Earth wiring shall have a cross sectional area in accordance with IEC 60079-0:2011 Table 10.
10.	Separations between bare live parts of intrinsically safe equipment and non-intrinsically safe equipment shall conform to the requirements of IEC 60079-11:2011 Clause 6.2.
11.	Maximum number of terminals for GUBT shall be calculated as defined on JCE Drawing no. A3C-3011. The manufacturer shall ensure that the power dissipation for the relevant temperature class / ambient temperature does not exceed that permitted.





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**Thermal Data**

Enclosure Type	Power Dissipation (W)	Temperature Class	
		Ambient Temperature (°C)	
		+40	+60
GUB1/ GUBH1	15	T6	T5
	30	T5	T4
GUB2	15	T6	T5
	30	T5	T4
GUB3/ GUBH3	20	T6	T5
	40	T6	T5
	50	T5	T4
GUB4/ GUBH4	20	T6	T5
	40	T6	T5
	50	T5	T4
GUB5/ GUBH5	40	T6	T6
	80	T6	T5
GUF2	10	T6	T6



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<b>Nameplate</b>	
1.	The manufacturer address marked on the nameplate, may be replaced by the following in accordance with the manufacturer's IECEx accreditations:  JCE (Europe) Ltd., Plymouth UK.  JCE (Aberdeen) Ltd., Aberdeen, UK





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<b>Manufacturer's Documents</b>			
<b>Title:</b>	<b>Drawing No.:</b>	<b>Rev. Level:</b>	<b>Date:</b>
Certification Drawings – GUB Series Equipment Enclosures (Sheets 1-6)	A3C-3003	2	2012-09-27
Installation, Operation and Maintenance Manual (Sheets 1-3)	*	1	2012-05
Terminal Calculation Spreadsheet	A3C-3011	1	2012-05-23
Adhesive Datasheet	10-1096G-01	*	2008-11-21
Certification Drawings – GUF2 Enclosures to Exd IIC (Sheets 1-2)	A3C-3005	1	2012-09-12
Installation, Operation and Maintenance Manual	*	1	2012-06

\* information not provided.