



1 **EC TYPE EXAMINATION CERTIFICATE**

2 Equipment or protective system intended for use in potentially explosive atmospheres –
Directive 94/9/EC – Annex III

3 EC Type Examination **TRAC12ATEX0019U (incorporating variations V1 to V2)**
Certificate No.:

4 Component: **Flameproof Enclosures, EJB Series Component Enclosures**

5 Manufacturer: **JCE (Europe) Ltd.,**

6 Address: **East Way, Lee Mill Industrial Estate, Ivybridge, Devon, PL21 9LL,
United Kingdom**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 TRaC Global Ltd, Notified Body number 0891 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report **TES-004531-33-00A, TES-004531-33-04A & TRA-0012088-33-00A.**

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in section 18 of the schedule to this certificate, has been assured by compliance with:

EN 60079-0:2009

EN 60079-1:2007

EN 60079-31:2008

10 The sign "U" placed after the certificate number indicates that this certificate describes components and must not be mistaken for a certificate intended for an equipment or protective system. This EC-Type Examination certificate may be used as the basis for certification for an equipment or protective system.

11 This EC-Type Examination certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of this equipment or protective system shall include the following:

 **II 2 G Ex d IIB Gb**

 **II 2 G Ex d IIB+H₂ Gb**

 **II 2 D Ex tb IIIC Db**

See table in section 15 for details of ambient temperature ranges.

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the TRaC Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Manager

Issue date: 2015-06-18

Copy No.: 1e

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13 **SCHEDULE TO EC TYPE EXAMINATION CERTIFICATE**

14 **TRAC12ATEX0019U (incorporating variation V2)**

15 **General description of equipment or protective system included within the scope of this certificate**

The EJB Series enclosures are component certified flameproof enclosures designed for use with a variety of internal equipment. They consist of a rectangular body and a lid which is secured by socket cap screws. On certain versions the lid may incorporate a hinge.

The enclosures are manufactured from LM25 aluminium alloy which may be painted or power coated.

The lid can be provided with a square or circular window of various sizes as detailed in the schedule below. The circular windows which may be fitted are identical to the lids fitted to the GUB1 (60mm dia.) and GUB3 (86mm dia.) enclosures.

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 defined in the Installation, Operation and Maintenance manual.

The enclosures were evaluated for use with the following gas / dust groups and temperature ranges:

Model Designation	Gas Group	Dust Group	Ambient Temperature Range
EJB10, EJB15, EJBS1	IIB+H ₂	IIIC	-40°C to +60°C
EJB2, EJBS2, EJB3, EJB4, EJB5, EJB60	IIB or IIB+H ₂	IIIC	-20°C to +40°C -20°C to +60°C.



EJB SERIES ENCLOSURE – CATALOGUE NUMBERS

	Plain Cover		Ø60 Window		Ø86 Window		75 x 75 Window		125 x 60 Window		220 x 80 Window		247 x 199 Window		299 x 199 Window	
	Full Ht	Red'd Ht	Full Ht	Red'd Ht	Full Ht	Red'd Ht	Full Ht	Red'd Ht	Full Ht	Red'd Ht	Full Ht	Red'd Ht	Full Ht	Red'd Ht	Full Ht	Red'd Ht
EJB2 SERIES	EJB2															
EJB3 SERIES	EJB3A	EJB3RA	EJBH3A	EJBH3RA	EJBH31A	EJBH31RA	EJBWH3A	EJBWH3RA								
EJB4 SERIES	EJB4A	EJB4RA	EJBH4A	EJBH4RA					EJBWV4A	EJBWV4RA	EJBWH4A	EJBWH4RA	EJBWM4A	EJBWM4RA	EJBWL4A	EJBWL4RA
EJB5 SERIES	EJB5A	EJB5RA	EJBH5A	EJBH5RA					EJBWV5A	EJBWV5RA						
EJBS1 SERIES	EJBS1		EJBH1													
EJBS2 SERIES	EJBS2		EJBH2													
EJB10 SERIES	EJB10															
EJB15 SERIES	EJB15															
EJB60 SERIES	EJB60										EJBW60					



CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0019U V2

The EJB4 enclosures are now to include the following additional windowed cover variant designations for the EJB series size 4 enclosures only.

EJBWM4 -Flat cover with window.

EJBWL4 - Flat cover with window.

A list of controlled Manufacturer's Documents is given in Appendix A to this schedule.

16 **Test report No.:** **TES-004531-33-00A, TES-004531-33-04A & TRA-0012088-33-00A.**

17 **“Schedule of Limitations” for Ex Components, if any:**

1. No holes, whether blind or clear may be drilled in the Ex component enclosure other than those permitted by JCE drawing number A3C-3000 Sheet 9 and detailed in the Installation, Operation and Maintenance 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 limiting temperature for the window cement material is +100°C.
6. The content of the Ex component enclosure maybe placed in any arrangement providing that an area of at least 20% (IIB applications) or 40% (IIB+H₂ applications) 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.
7. Yield strength of screws shall be 700N/mm² minimum. All cover screws shall be tightened to the minimum torque listed for the relevant torque listed for the enclosure version.
8. Only suitably IECEx or ATEX certified cable glands and blanking elements (as appropriate to the equipment application) shall be used.
9. When evaluating the component enclosure as equipment, the requirements of EN/IEC 60079-1 Annex D.4 must be applied.
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. Flamepath lengths are in excess of that required by EN/IEC 60079-1. No modification or refurbishment to flamepaths shall be made without reference to the manufacturer.
12. Minimum distance between flanged joints and any obstructions shall be in accordance with EN/IEC 60079-1 Table 8 (30mm for gas group IIB, 40mm for gas group IIB+H₂).
13. 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.

18 **Essential health and safety requirements**

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report listed in section 16 of this certificate.

19 **Additional information**

“Routine tests”, if any:

1. The manufacturer shall perform a 1.5x routine pressure test in accordance with EN/IEC60079-1 Clause 16.1 at the following pressures. There shall be no permanent deformation or damage which would affect the type of protection, and the flameproof joints shall in no place have been permanently enlarged.

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0019U V2

EJBS1	14.7 bar
EJB2/S2	12.3 bar
EJB3/4	11.1 bar
EJB5	9.0 bar (IIB)
EJB5	12.2 bar (IIB + H ₂)
EJB10/15	14.3 bar
EJB60	10.5 bar

“Special conditions for manufacture”, if any:

None.

Other information, if any:

None.

Photographs



EJB10



EJB15

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0019U V2



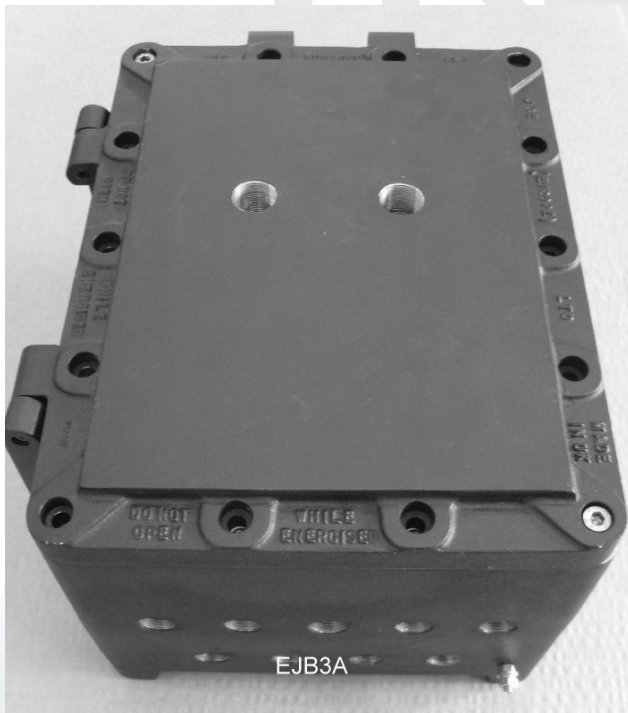
EJB31



EJB32

EJB31

EJB32



EJB3A

EJB3A



EJBWH4

EJBWH4

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0019U V2



EJBWV5



EJBW60



EJBWM4A

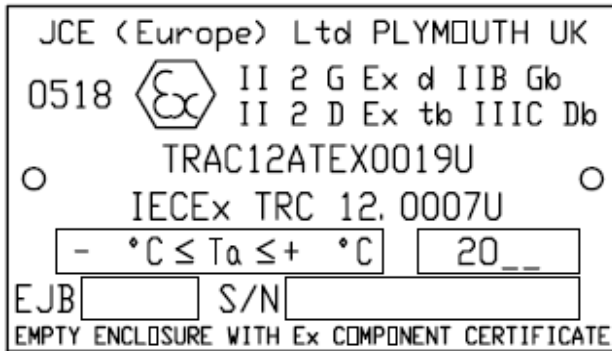


EJBWL4A

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0019U V2

Details of markings

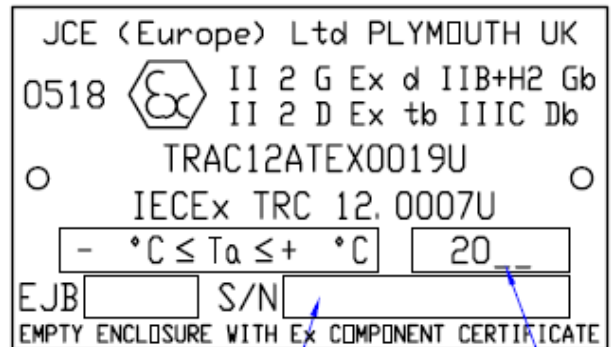
IIB



IIB only marking

(EJBS2, EJB2, EJB3, EJB4, EJB5, EJB60)

IIB+H2

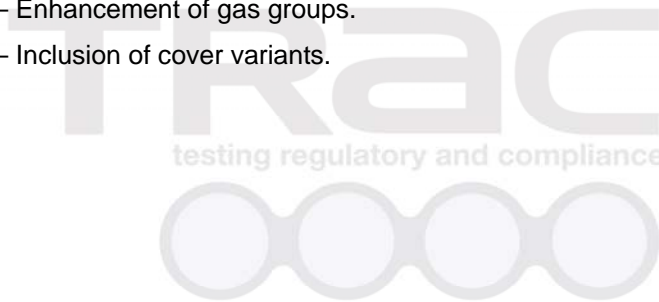


IIB+H₂ marking

Details of variations to this certificate

This certificate is a consolidated certificate and reflects the latest status of the certification, including the following variations:

- Variation V1 – Enhancement of gas groups.
- Variation V2 – Inclusion of cover variants.



Notes to CE marking

In respect of CE Marking, TRaC Global Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

Notes to this certificate

TRaC certification reference: **TRA-012088-32-00**.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations.



APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Certification Drawing EJB Series Enclosures to Exd IIB & Exd IIB + H ₂ (20 pages)	A3C-3000	3	2013-07-24
Installation, Operation and Maintenance Manual	*	2	2012-07
Datasheet – Adhesive	10-1096G-01	*	2008-11-21

* no information provided

