

1 EU - TYPE EXAMINATION CERTIFICATE

2 Component Intended for use on/in an Product or Protective System Intended for use in Potentially Explosive Atmospheres

Directive 2014/34/EU – Annex III

3 EU - Type Examination Certificate No.: **TRAC12ATEX0019U (incorporating variations V1 to V3)**

4 Product: **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 product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Element Materials Technology, Notified Body number 2812, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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 has been assured by compliance with:

EN 60079-0:2009

EN 60079-1:2007

EN 60079-31:2009

Except in respect of those requirements listed at section 18 of the schedule.

10 The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as the basis for certification of an equipment or protective system.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

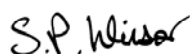
 **II 2 G Ex d IIB Gb**

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 Element Materials Technology Ex Certification Scheme.



S P Winsor, Certification Manager

Issue date: 2019-11-01

Page 1 of 9

CSF355-NL 1.0

13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)

15 Description of Product

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.

A full list of EJB series enclosures covered by this certificate is provided in Appendix B.

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.

16 Test Report No. (as added for this issue of the certificate): N/A

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)

17 Schedule of Limitations

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 may be 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.



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

18 Essential Health and Safety Requirements (Directive Annex II)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)

20 Routine Tests

The manufacturer shall perform a 1.5x routine pressure test in accordance with EN/IEC 60079-1 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.

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

21 Specific Conditions for Manufacture

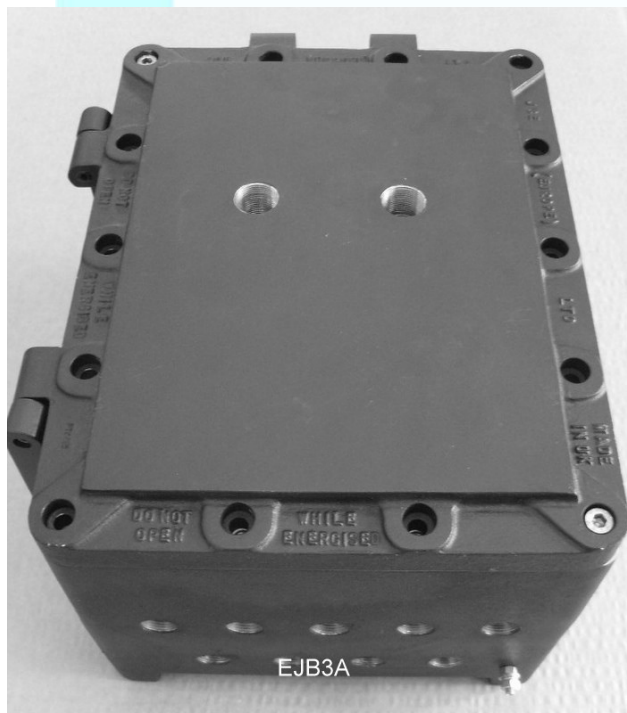
None.

22 Photographs



SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)



SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)



EJBWV5



EJBW60





EJBWM4A



EJBWL4A

23 Details of Markings

JCE (Europe) Ltd PLYMOUTH UK
 XXXX  II 2 G Ex d IIB Gb
 II 2 D Ex tb IIIC Db
 TRAC12ATEX0019U
 IECEX TRC 12. 0007U
 - °C ≤ T_a ≤ + °C 20
 EJB S/N
 EMPTY ENCLOSURE WITH Ex COMPONENT CERTIFICATE

JCE (Europe) Ltd PLYMOUTH UK
 XXXX  II 2 G Ex d IIB+H2 Gb
 II 2 D Ex tb IIIC Db
 TRAC12ATEX0019U
 IECEX TRC 12. 0007U
 - °C ≤ T_a ≤ + °C 20
 EJB S/N
 EMPTY ENCLOSURE WITH Ex COMPONENT CERTIFICATE

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)

24 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.
- Variation V3 - This certificate was originally issued by Notified Body number 0891 under Directive 2014/34/EU. The technical file has been transferred to Element Notified Body number 2812 without further assessment or evaluation.

25 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

26 Notes to this certificate

Element Materials Technology certification reference: JCEQ-0006.

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

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variation certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE**CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)****APPENDIX A - TECHNICAL 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
Component certified label details	A3C-3022	1	2019-10-11

* no information provided

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0019U (incorporating variations V1 to V3)

APPENDIX B - 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					