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Schema di certificazione

CESI-ATEX

[1] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE**

[2] **Component intended for use on/in equipment or protective system intended for use in potentially explosive atmospheres Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:
CESI 00 ATEX 036U /08

[4] Component: **Empty enclosures series EJB.. and AQS-1 model for control and signalling equipment**

[5] Manufacturer: **CORTEM S.p.A**

[6] Address: **Via Aquileia, 10 - 34070 Villesse (Gorizia) - Italia**

[7] This supplementary certificate extends EC-Type Examination Certificate **CESI 00 ATEX 036U** to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

[8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the Parliament and Council of 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in confidential report n. **EX-C1005305**.

[9] 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. Supplementary 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

[10] The sign "U" placed after the certificate number 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 a basis for certification of an equipment or protective system.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified component in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

[12] The marking of the component shall include the following:

- II 2G Ex db IIB Gb or Ex db IIB+H₂ Gb
- I M2 Ex db I Mb (stainless steel enclosures only)
- II 2GD Ex db IIB Gb or Ex db IIB+H₂ Gb
Ex tb IIIC Db Ex tb IIIC Db
IP66/67 IP66/67

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Date 31/05/2022 - Translation issued the 31/05/2022

Prepared
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PRD N. 018B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

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Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 036U /08**

[15] **Description of the variation**

Variation 8.1:

The Empty enclosures series previously assessed in compliance with EN 60079-0:2012+A11:2013 have been re-assessed on the basis of the new edition of EN IEC 60079-0:2018 Standard.

Variation 8.2:

Extended the maximum ambient temperature up to +70°C.

Variation 8.3:

Extended the minimum ambient temperature to -20°C, -40°C, -60°C; the Routine Tests pressures have been changed.

Variation 8.4:

Added explanation that boxes can be supplied with external/internal painting and valves ECD-2 series.

Variation 8.5:

Minor mechanical changes to Empty enclosures **EJB-..** series.

Variation 8.6:

The Empty enclosure series previously named “CCF and EJB” have been renamed as “EJB... and AQS-1 model”.

Description of component

The Empty enclosures **EJB..** have the body and the cover made in aluminium alloy or stainless steel and are in Ex db I (stainless steel only), Ex db IIB, Ex db IIB+H₂ and Ex tb IIIC execution.

The **EJB-..** series is available in two particular execution:

- with external flange for series **EJB-..**;
- with internal flange for model **AQS-1**.

They can be equipped with control-signal operators series **M-0..** certified as components with separate certificate, mounted on the cover or on the enclosure wall and with circular or rectangular transparent tempered glass windows sealed on the cover.

Gaskets between cover and body flanged joint and for all other accessories are made in silicon and they guarantee the protection degree IP66 while IP67 for enclosures without control-signal operators only. The flanged joint between the body of **EJB-..** empty enclosures series and the cover is fixed with quality A2-70 stainless steel screws.

The walls of the enclosures can be drilled and threaded with maximum size and maximum number of hubs as specified in the manufacturer documents annexed. Each enclosure is provided with internal and external earthing screw or bolt and an internal bottom plate for equipment mounting.

Models identification

Aluminium alloy enclosures		Stainless steel enclosures
EJB series	EJBT series	EJBX series
AQS-1	-	-
EJB-01	EJBT0	EJBX-01
-	-	EJBX-01B
EJB-1	EJBT1	EJBX-1
EJB-2	EJBT2	EJBX-2
-	EJBT2CB	-

continues...

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Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 036U /08

...follows

Aluminium alloy enclosures		Stainless steel enclosures
EJB series	EJBT series	EJBX series
-	EJBT2C	-
EJB-3	EJBT3	EJBX-3
EJB-3B	EJBT3B	EJBX-3B
EJB-4	EJBT4	EJBX-4
EJB-4B	EJBT4B	EJBX-4B
EJB-45	EJBT45	EJBX-45
EJB-45B	EJBT45B	EJBX-45B
EJB-48BA	-	-
EJB-5	EJBT5	EJBX-5
EJB-5B	EJBT5B	EJBX-5B
EJB-55	EJBT55	EJBX-55
EJB-55B	EJBT55B	EJBX-55B
EJB-503	-	-
EJB-55C	-	-
EJB-6	EJBT6	EJBX-6
EJB-6B	EJBT6B	EJBX-6B
EJB-7	EJBT7	EJBX-7
EJB-7B	-	-

Ambient temperature

The Empty enclosures series **EJB-...**, **EJBX-...**, **EJBT-...**, **AQS-1** for control and signalling equipment have the following temperature ranges:

- -20°C ÷ +60°C: All versions of empty enclosures for Group I (made in stainless steel only), Group IIB, IIB+H₂ and Group IIIC;
- -40°C ÷ +70°C: All versions of empty enclosures for Group IIB, IIB+H₂ and Group IIIC with polycarbonate pilot lights;
- -60°C ÷ +70°C: All versions of empty enclosures for Group IIB, IIB+H₂ and Group IIIC without polycarbonate pilot lights;
- -60°C ÷ +100°C: All versions of empty enclosures (EJB-01 and ACQ-1 types excluded) for Group IIB and Group IIIC with or without glass windows sealed on the cover and without control-signal operators.

In all cases, if control-signal operators are installed, they must be suitable for the temperature assigned to the enclosure.

Installation conditions

The accessories used for the cable entries and to close the unused holes, shall be subject of a separate certification, shall be used according to the Safety Instructions reported in the relevant certificate and shall guarantee the same type/degree of protection assigned to the Ex Component. Moreover, the accessories shall be suitable to be use in the ambient temperature range assigned to the Ex Component.

In case of cylindrical threads, the coupling shall be locked against loosening using thread-lock compound.

Warning labels

For products complete with external coating in non-metallic material with a thickness:

- > 0.2 mm for IIB+H₂ execution *or*
- > 2 mm for IIB execution.

“Warning – Potential electrostatic charging hazard – for cleaning use only a damp cloth”

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 036U /08**

[16] **Report n. EX-C1005305.**

Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 16 of the EN 60079-1:2014 standard. The routine overpressure test shall be carried out with the static method (paragraph 15.2.3 of the EN 60079-1:2014 standard) with the following pressure values.

- 12.3 bar on all EJB enclosures for minimum ambient temperature until -20 °C;
- 12.3 bar on all EJBX enclosures for minimum ambient temperature until -20 °C;
- 14.9 bar on all EJB enclosures for minimum ambient temperature until -40 °C;
- 15.2 bar on all EJBX enclosures for minimum ambient temperature until -40 °C;
- 16.4 bar on all EJB enclosures for minimum ambient temperature until -60 °C;
- 17.0 bar on all EJBX enclosures for minimum ambient temperature until -60 °C.

[17] **Schedule of limitations**

- The accessories used for cable entries and for closing unused openings shall be certified according to EN IEC 60079-0, EN 60079-1 and EN 60079-31. A minimum degree of protection IP66/67 shall be guaranteed according to EN 60529 standard.
- The empty enclosures shall be used in the following ambient temperature range:
 - o from -20°C up to +60°C: all versions of empty enclosures for Group I (made in stainless steel only), Group IIB, IIB+H₂ and Group IIIC;
 - o from -40°C up to +70°C: all versions of empty enclosures for Group IIB, IIB+H₂ and Group IIIC with polycarbonate pilot lights;
 - o from -60°C up to +70°C all versions of empty enclosures for Group IIB, IIB+H₂ and Group IIIC without polycarbonate pilot lights.
 - o from -60°C up to +100°C: all versions of empty enclosures (types EJB-01 and AQS-1 excluded) for Group IIB and Group IIIC with or without glass windows sealed on the cover and without control-signal operators.
 In all cases, if control-signal operators are installed, they must be suitable for the temperature assigned to the enclosure.
- Maximum service temperature of the empty enclosures:
 - o +100 °C for all versions of empty enclosures.
 - o +150 °C for empty enclosures of Group II and III, without control-signal operators and without windows.
- The service temperature range of the components installed into the enclosures shall be taking into account.
- The minimum distance between flameproof flanged joint of the enclosure and external obstacle should be:
 - o 20 mm for IIB execution.
 - o 30 mm for IIB+H₂ execution.
- According to EN 60079-1 annex D, the content of the Ex component enclosure equipment may be placed in any arrangement, provided that:
 - o for Group I an area of at least 20% of each cross-sectional area remains free;
 - o for Groups IIB and IIB+H₂ an area of at least 40% of each cross-sectional area remains free.

[18] **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is assured by compliance to the following harmonized standards:

EN IEC 60079-0:2018	Explosive atmospheres – Part 0: Equipment - General requirements
EN 60079-1:2014	Part 1: Equipment protection by flameproof enclosure "d"
EN 60079-31:2014	Part 31: Equipment dust ignition protection by enclosure "t"

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 036U /08**

[19] **Descriptive documents (prot. EX-C1005408)**

- *Technical note A4-7609 (pg. 12) rev.0	dated 09/02/2022
- *Safety, maintenance and mounting instructions F-276A (pg. 9) rev.5	dated 16/11/2020
- *Drawing no. A3-6211 (3 sheets) rev.2	dated 16/11/2020
- *Drawing no. A3-5604 (3 sheets) rev.2	dated 16/11/2020
- Drawing no. A2-4137 (2 sheets) rev.4	dated 01/06/2015
- Drawing no. A3-6355 (3 sheets) rev.0	dated 16/04/2015
- Drawing no. A3-5916 (3 sheets) rev.1	dated 16/04/2015
- Drawing no. A3-5422 rev.2	dated 16/04/2015
- Drawing no. A3-5044 (3 sheets) rev.1	dated 16/04/2015
- Drawing no. A3-5028 (2 sheets) rev.1	dated 16/04/2015
- Drawing no. A3-5025 (4 sheets) rev.2	dated 16/04/2015
- Drawing no. A1-4232 rev.6	dated 16/04/2015
- Drawing no. A1-4098 rev.4	dated 16/04/2015
- Drawing no. A1-4097 rev.4	dated 16/04/2015
- Drawing no. A1-4096 rev.3	dated 16/04/2015
- Drawing no. A1-4095 rev.3	dated 16/04/2015
- Drawing no. A1-4094 rev.4	dated 16/04/2015
- *Drawing no. A4-4952 rev.2	dated 29/01/2013
- Drawing no. A4-4129 (2 sheets) rev.2	dated 25/01/2013
- *Drawing no. A4-4951 rev.1	dated 27/01/2010

*Note: an * is included before the title of documents that are new or revised.*

One copy of all documents mentioned above is kept in CESI files.

Certificate history

Issue nr	Issue Date	Summary description of variation
00	24/07/2000	First Issue of the Certificate.
01	26/06/2002	New CCFE-01 and AQS-1 type were added.
02	26/02/2003	New degree of protection IP65 or IP66/67. New category II2GD for gases and dusts and use of rectangular glass windows.
03	08/10/2003	Use of rectangular glass windows with major dimensions.
04	19/11/2007	Updating to standards EN60079-0:2006, EN60079-1:2004, EN61241-0:2006 and EN61241-1:2004. New models of box type EJB.. and EJBX., new exec. IIB+H ₂ and I M2. New service and ambient temperature ranges.
05	23/07/2009	Updating to standard EN 60079-1: 2007, positioning of O-ring on the cover, new sizes type EJB-7 and EJB-7B were added, new min. ambient temperature ranges for Group II.
06	16/03/2012	Updating to standards EN60079-0:2009, EN60079-1:2007 and EN60079-31:2009. New size EJB-55B was added, updating to EJB-55 and EJB-55C codes.
07	26/09/2016	Updating to standards EN 60079-0: 2012 + A11:2013, EN60079-1:2014 and EN60079-31:2014. New minimum ambient temperature -60°C. Upgrade to EJB design (new 2015 series) and EJBX series. New enclosures type EJBX-01 and EJBT... series were added.
08	31/05/2022	Upgrade to standard EN IEC 60079-0:2018. New ambient temperature up to +70°C. Extended the minimum ambient temperature to -20°C, -40°C and -60°C. Added explanation that boxes can be supplied with external/internal painting and valves ECD-2 series. Minor mechanical changes of Empty enclosures EJB-.. series. The Empty enclosure series previously named "CCF and EJB" have been renamed as "EJB... and AQS-1 model".

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