



# CESI

# CERTIFICATE



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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 99 ATEX 034 U/06**

[4] Component: **Three-pieces connection fittings Type R., B. and RB...**

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

[6] Address: **Via Aquileia, 12 - 34070 Villesse (GO) - Italy**

[7] This supplementary certificate extends EC-Type Examination Certificate CESI 99 ATEX 034 U, 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-B6015923.

[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 2GD Ex db IIB Gb or Ex db IIC Gb  
Ex tb IIC Db**

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 26.07.2016 - Translation issued the <26<sup>th</sup>.07.2016

Prepared  
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Verified  
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Approved  
Roberto Piccin

**CESI S.p.A.**  
 Testing & Certification Division  
 Business Area Certification  
 Il Responsabile  
 (Roberto Piccin)



[13]

## Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 99 ATEX 034 U/06


[15] **Description of the variation to the component**


- Variation 1 - Upgrade to ATEX directive 2014/34/EU;
- Variation 2 – Conformity to standards EN 60079-0:2012 + A11:2013, EN 60079-1:2014, EN 60079- 31:2014;
- Variation 3 - Update of marking;
- Variation 4 - Upgrade minimum ambient temperature from -50°C to -60°C;
- Variation 5 - Added additional marking with CORTEM GROUP brand.


**Description of equipment...**


The Three-pieces connection fittings series R., B.. and RB.. are unions composed of three elements that screw on and turn independently thus allowing the connection of rigid parts (flameproof enclosure, metallic conduit and dust-tight enclosures).


- The fittings three-piece type B, R and RB are marked as follow:


ELFIT B...  0722 II 2GD Ex db IIB Gb  
Ex tb IIIC Db - IP66/67 CESI 99 ATEX 034U  
Ta -20°C + 60°C

ELFIT B...  0722 II 2GD Ex db IIB Gb  
Ex tb IIIC Db - IP66/67 CESI 99 ATEX 034U  
Ta -60°C + 60°C

ELFIT RB...  0722 II 2GD Ex db IIB Gb  
Ex tb IIIC Db - IP66/67 CESI 99 ATEX 034U  
Ta -20°C + 150°C

ELFIT RB...  0722 II 2GD Ex db IIB Gb  
Ex tb IIIC Db - IP66/67 CESI 99 ATEX 034U  
Ta -60°C + 150°C

ELFIT R...  0722 II 2GD Ex db IIC Gb  
Ex tb IIIC Db - IP66/67 CESI 99 ATEX 034U  
Ta -20°C + 60°C

ELFIT R...  0722 II 2GD Ex db IIC Gb  
Ex tb IIIC Db - IP66/67 CESI 99 ATEX 034U  
Ta -60°C + 60°C

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[13]

## Schedule



[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 99 ATEX 034 U/06**



The property of this certificate is ELFIT S.p.A. which it is the manufacturer that normally put in the market the product with ATEX certificate.

The same product is IECEx certified in the name of CORTEM SpA.

ELFIT and CORTEM are members of brand CORTEM GROUP.

When the product is marked with both numbers of certificate, then the identification of manufacturer is made from trademark of brand "CORTEM GROUP".

 **CORTEM GROUP B...**  0722 II 2GD CESI 99 ATEX 034U  
Ex db IIB Gb Ex tb IIIC Db IP66/67 IECEx CES 10.0002U

 **CORTEM GROUP R...**  0722 II 2GD CESI 99 ATEX 034U  
Ex db IIC Gb Ex tb IIIC Db IP66/67 IECEx CES 10.0002U

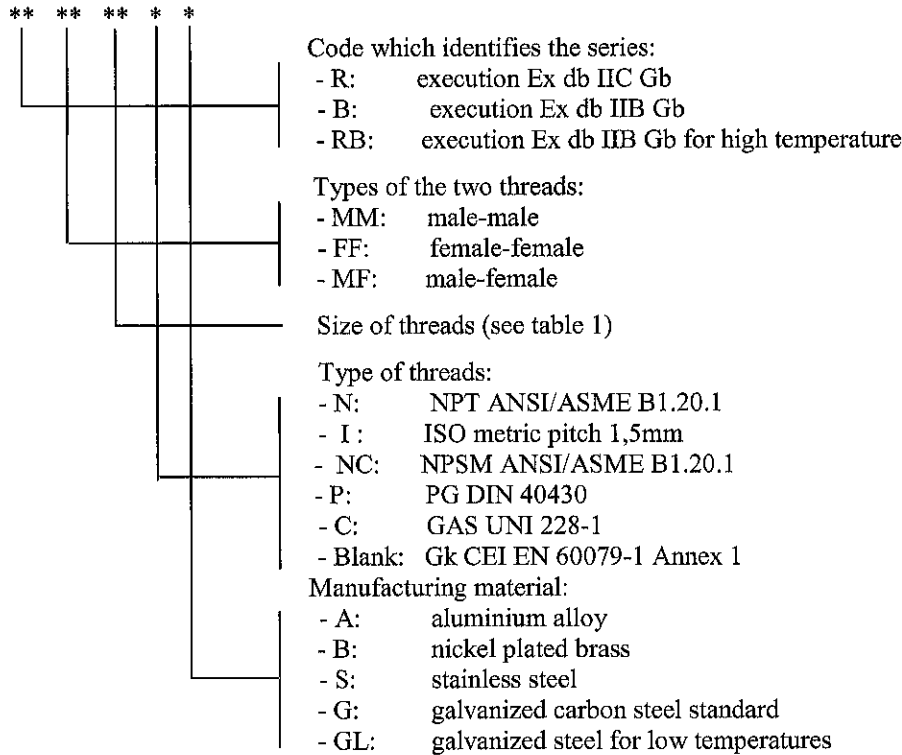
- The coupling between the Three-pieces connection fittings and the apparatus enclosures is made by means of threaded joints. The unions can be male-male (male ring, nut, male body), male-female (female ring, nut, male body) or female-female (female ring, nut, female body).
- The above-mentioned Three-pieces connection fittings can be made in Stainless Steel, Galvanized carbon steel (A 105), Low temperature Steel (A 203), Aluminium alloy and Nickel plated brass.
- The Three-pieces connection fittings standard threads types are NPT ANSI/ASME B1.20.1 from 1/2" up to 4" and cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M100x1.5. Other different types of thread are admitted as indicated on drawings A4-4952 (for tapered threads) and A4-5404 (for cylindrical threads).
- To guarantee the IP 66/67 degree of protection the Three-pieces connection fittings series R.., B.. and RB.. have a mechanical protection in-between the body and the ring, obtained by inserting an O-ring or plain gasket made of silicon rubber, while for external male cylindrical threads have a sealing edge machined for fitting a silicon gasket and for all other threads the IP 66/67 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

[13]

## Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 99 ATEX 034 U/06

Identification of Three-pieces connection fittings:



Types, sizes and threads of Three-pieces connection fittings are listed on the following Table 1:

Table 1:

Three-pieces connection fittings type		Size code	NPT Thread	ISO pitch 1,5 Thread
Ex db IIB	Ex db IIC			
B.. or RB..	R..	1	1/2"	M 20
B.. or RB..	R..	2	3/4"	M 25
B.. or RB..	R..	3	1"	M 32
B.. or RB..	R..	4	1 1/4"	M 40
B.. or RB..	R..	5	1 1/2"	M 50
B.. or RB..	R..	6	2"	M 63
B.. or RB..	R..	7	2 1/2"	M 75
B.. or RB..	R..	8	3"	M 90
B.. or RB..	R..	9	3 1/2"	--
B.. or RB..	R..	10	4"	M 100

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[13]

## Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 99 ATEX 034 U/06**

[16] **Report n. EX-B6015923**

### Routine tests

None

[17] **Schedule of limitations**

- The coupling of the Three-pieces connection fittings with the enclosures shall be made as indicated by the manufacturer in the documents annexed to this certificate in order to respect the type of protection of the electrical apparatus on which Three-pieces connection fittings are mounted.
- The Three-pieces connection fittings shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.

The Three-pieces connection fittings shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:

Three-pieces connection fittings type	Materials	Gasket	Ambient Temperature
R.. or B..	Galvanised steel (ASTM A105 or A203), Stainless steel, Nickel plated brass, Aluminium alloy	Silicon	-20°C ÷ +60°C
RB..	Galvanised steel (ASTM A105 or A203), Stainless steel, Nickel plated brass, Aluminium alloy	Silicon	-20°C ÷ +150°C
R.. or B..	Stainless steel	Silicon	-60°C ÷ +60°C
RB..	Stainless steel	Silicon	-60°C ÷ +150°C

- The maximum current for each conductor which cross-through the Three-pieces connection fittings shall be established taking into account the heating caused by the current flowing through it, the heating of the enclosure on which the Three-pieces connection fittings are mounted and the maximum permissible ambient temperature.
- If the Three-pieces connection fittings series R.. and B.. are intended for use with dust protection "Ex tb" the holes into which Three-piece connection fittings are mounted shall maintain the ingress protection rating of the enclosure. To this scope the correct positioning of the gaskets (for cylindrical threads) or the application of sealant on the threads (for tapered threads), shall be done as indicated in the manufacturer instruction.
- The IP 66/67 mechanical protection of the Three-pieces connection fittings is obtained by inserting an O-ring or plain gasket made of silicon rubber, in-between the body and the ring as shown into the safety instruction.
- It is the final assemblers/users responsibility to ensure the threaded joint between the Three-pieces connection fittings and the associated enclosure meet all the requirements of the applicable standards for the assembly

[13]

## Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 99 ATEX 034 U/06**

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

The Essential Health and Safety Requirements are assured by compliance to the following standards:

- EN 60079-0: 2012 + A11:2013 – General requirements
- EN 60079-1: 2014 – Equipment protection by flameproof enclosures ‘d’
- EN 60079-31: 2014 – Equipment dust ignition protection by enclosure ‘t’

[19] **Descriptive documents (prot. EX-B6015926)**

- |  |        |       |            |
|--|--------|-------|------------|
| - n. A4-1134 Technical note (5 sheets)         | Rev. 1 | dated | 07.07.2016 |
| - n. A1 Mounting instructions (8 sheets)       | Rev. 5 | dated | 07.07.2016 |
| - n. 0138 Fac simile Attestation of conformity |        | dated | 07.07.2016 |
| - n. A3-5360 drawing (8 sheets)                | Rev. 2 | dated | 24.02.2016 |

One copy of all documents is kept in CESI files.

### Certificate history

Issue N°	Issue Date	Summary description of variation
06	26.07.2016	Upgrade to ATEX directive 2014/34/EU; Conformity to standards EN 60079-0:2012 + A11:2013, EN 60079-1:2014, EN 60079-31:2014; Update of marking; Upgrade minimum ambient temperature from -50°C to -60°C; Added additional marking with CORTEM GROUP brand.
05	18.12.2013	Update to new edition of EN 60079-0:2012, EN 60079-1:2007, EN 60079-31:2009; Update of marking.
04	15.01.2008	Update of nameplate; New maximum operating temperature Ta= + 150°C.
03	22.05.2007	Conformity to EN 60079-0:2006, EN 60079-1:2004, EN 61241-0:2006, EN 61241-1:2004; Update of nameplate; New size .9 with threads 3 ½"; New operative range -55°C ÷ + 110°C.
02	22.12.2005	New category II2 GD (added protection against the risk of explosion from combustible dusts in conformità with the standard EN 50281-1-1).
01	22.12.2000	Constructional modification: new material for models R1, R2, R3, B1, B2, B3.
00	30.04.1999	First Issue of the Certificate