CESI

CERTIFICATE

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Schema di certificazione CESI-ATEX

[1] EC-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in potentially explosive atmospheres Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

CESI 13 ATEX 019 X

[4] Equipment: Cable gland series REV... for non armoured cables and Cable gland series REVD... for armoured cables

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

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

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

[8] CESI, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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- B3013179.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2012; EN 60079-1: 2007; EN 60079-7: 2007 ; EN 60079-31 : 2009

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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

II 2 GD Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
IP 66/67

Date 26/06/2013 Translation issued the 26/06/2013

Prepared	**Verified**	**Approved**
Sergio Mezzetti	Mirko Balaz	Fiorenzo Bregani

CESI S.p.A.
Testing & Certification Division
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[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 019X**

[15] **Description of equipment**

The cable glands types REV, REVD, are suitable for inserting circular cables into "Ex d" enclosures having threaded entries and into "Ex e" or "Ex tb" enclosures having either threaded or plain entries.
The glands may also be used with intrinsically safe circuits, in which case the glands will have specific parts painted in light blue.
Attachment of the glands to an enclosure or a terminal box is by means of the male threaded portion on the male body. All metallic details of cable glands are made of the same material: generally brass, but in alternative galvanized steel (A203) or stainless steel materials can be used.
The cable glands types REV... are designed for non-armoured cables and are essentially comprised of a metallic male body, a lower gasket, a non metallic ring made in Ryton R4 and a metallic clamping nut. When the nut is screwed, into the male threaded body, the gasket is compressed onto the outer sheath of the cable.
The cable glands types REVD... are designed for armoured cable and are comprise of a main metallic body, a lower gasket, an armoured tightening ring, a ring nut, an intermediate body, an upper gasket and clamping nut.
The REV.. cable gland types can be furnished with the following variations:
- REVN.., with metallic ring nut with male hub,
- REVF.., with metallic ring nut with female hub.

In both cases the metallic ring (male or female hu b) are specially designed to have a threaded gland to allow the connection of a conduit, or flexible, or similar.

The various types of cable glands are identified by a code as follows:

REV ..

Cable gland type

REV	Cable gland for non armoured cable
REVD	Cable gland for armoured cable

Size

NPT	*METRIC*
01- 3/8"	M16x1,5
L1- 1/2"	M20x1,5
1- 1/2"	M20x1,5
2- 3/4"	M25x1,5
3- 1"	M32x1,5
4- 1" ¼	M40x1,5
5- 1" ½	M50x1,5
6- 2"	M63x1,5

Other suffix can be added on the code for particular configurations: REVN… – REFV… (*)

(*) = REVN.. ; variation to REV .. with metallic ring male hub
REVF.. ; variation to REV.. with metallic ring female hub

[13] # Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 019X**

[15] **Description of equipment (follows)**

The cable glands are provide with the following main mounting threads types:
- NPT ANSI ASME B1.20.1
- ISO metric pitch 1.5

Range of cable passage for size of the single "ELFIT" cable glands type REV..

Tipo pressacavo Cable gland type	Filettatura Thread	Range Ø d min-max Range Ø d min-max
REV 01	3/8" NPT	5 - 10
REVL 1	1/2" NPT	5 - 10
REV 1	1/2" NPT	7 - 12
REV 2	3/4"NPT	12 - 18
REV 3	1" NPT	18 - 24
REV 4	1" 1/4 NPT	24 - 30
REV 5	1" 1/2 NPT	30 - 35
REV 6	2" NPT	35 - 45

Range of cable passage for size of the single "ELFIT" cable glands type REVD..

Tipo pressacavo Cable gland type	Filettatura * Thread	Range Ø d min-max Range Ø d min-max	Range Ø D min-max Range Ø D min-max
REVD 01	3/8" NPT	5 - 10	8 - 15
REVDL 1	1/2" NPT	5 - 10	8 - 15
REVD 1	1/2" NPT	7 - 12	11 - 16
REVD 2	3/4"NPT	12 - 18	16 - 24
REVD 3	1" NPT	18 - 24	24 - 31
REVD 4	1" 1/4 NPT	24 - 30	31 - 37
REVD 5	1" 1/2 NPT	30 - 35	37 - 43
REVD 6	2" NPT	35 - 45	43 - 53

In alternative the following threads can be requested
- UNI ISO 7/1 GAS; ISO metric pitch 2; PG DIN 40430; UNI ISO 228/1; N.P.S.M

Service temperature

The service temperature of the cable glands is in the range – 40 °C ÷ + 110 °C.

[16] **Report n.** EX- B3013179

Routine tests

Not applicable

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 019X**

Descriptive documents (prot. EX- B3013182)

- Technical Note A4-5914 (10 sheets)	Rev. 0	dated	06/11/2012
- Drawing A4-4952	Rev. 1	dated	27/01/2010
- Drawing A3-5902 (2 sheets)	Rev. 0	dated	06/11/2012
- Drawing A3-5903	Rev. 0	dated	06/11/2012
- Drawing A3-5904	Rev. 0	dated	06/11/2012
- Drawing A4-5404	Rev. 0	dated	20/01/2010
- Drawing A4-5905	Rev. 0	dated	06/11/2012
- Drawing A4-5906	Rev. 0	dated	06/11/2012
- Drawing A4-5907	Rev. 0	dated	06/11/2012
- Drawing A4-5908	Rev. 0	dated	06/11/2012
- Drawing A4-5909	Rev. 0	dated	06/11/2012
- Drawing A4-5910	Rev. 0	dated	06/11/2012
- Drawing A4-5911	Rev. 0	dated	06/11/2012
- Drawing A4-5912	Rev. 0	dated	06/11/2012
- Drawing A4-5913	Rev. 0	dated	06/11/2012
- Drawing A4-5963	Rev. 0	dated	06/11/2012
- Drawing A4-5964	Rev. 0	dated	06/11/2012
- Drawing A4-5965	Rev. 0	dated	06/11/2012
- Fac-simile of CE Declaration of Conformity 0145		dated	06/11/2012
- Safety Instructions F-382 (11sheets)		dated	06/11/2012
- Data sheets of materials (20 sheets)			

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use (X)**

- The coupling of the cable glands with the enclosures shall be made as indicated by the manufacturer in order to respect the type of protection of the electrical apparatus on which cable glands are mounted. The cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The cable glands shall be installed in order to respect the temperature at the mounting point within the foreseen service temperature range (- 40 ÷ +110 °C)
- The degree of protection IP 66/67 according to the IEC 60529 standard will be guaranteed for the cable glands if the holes into which cable glands are mounted are suitably sealed. 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 strictly respecting the manufacturer instruction.

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

The Health and Safety Requirements has been assured by compliance with the following standards:

- EN 60079-0 : 2012 – Part 0 : Electrical apparatus - General requirements
- EN 60079-1 : 2007 - Part 1 : Flameproof enclosure "d"
- EN 60079-7 : 2007 - Part 7 : Increased safety "e"
- EN 60079-31: 2009- Patr 31: Dust ignition protection by enclosure "t"

EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 13 ATEX 019X

Equipment: Cable gland series REV… for non armoured cables
and Cable gland series REVD… for armoured cables

Manufacturer: **ELFIT S.p.a.**

Address: via Aquileia 12 , 34070 Villesse (GO) - Italia

Admitted variation

- New cable glands for non armoured cables type REVL… with thread from ½" to 2" with reduced cable range passage
- New cable glands for armoured cables type REVDL… with thread from ½" to 2" with reduced cable range passage
- New cable glands for non armoured cables type REV… and type REVS with thread from 2"1/2 to 4"
- New cable glands for armoured cables type REVD… and type REVDS with thread from 2"1/2 to 4"
- New gasket material black color

Marking

The cable glands shall include the following markings:

II 2GD Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db
IP 66/67

Service temperature

The service temperature of the cable glands is in the range – 40 °C ÷ + 110 °C.

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 13 ATEX 019X.

Date 14/03/2014 - translation issued the 14/03/2014

Prepared	**Verified**	**Approved**
Sergio Mezzetti	Mirko Balaz	Fiorenzo Bregani

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EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 13 ATEX 019X

Description of equipment

The new cable glands are suitable for inserting circular cables into "Ex d" enclosures having threaded entries and into "Ex e" or "Ex tb" enclosures having either threaded or plain entries. Attachment of the glands to an enclosure or a terminal box is by means of the male threaded portion on the male body. All metallic details of cable glands are made of the same material: generally brass, but in alternative galvanized steel (A203) or stainless steel materials can be used.

The glands may also be used with intrinsically safe circuits, in which case the glands will have specific parts painted in light blue.

The different types of cable gland REV.., REVD.., REVS.., REVDS.., REVL.., REVDL are supplied with threads NPT / ANSI ASME B1.20.1 – ISO metric thread pitch 1.5; on request, the following types of alternative threads can be delivered: PG DIN 40430; UNI ISO 228/1; N.P.S.M

The cable glands, with reduced cable range passage, type REVL ... and type REVDL ... size from 1 to 6 (thread from ½" to 2") are identified by the following code:

REV.. .. ..

Cable gland type

REVL Cable glands for non-armoured cables

REVDL Cable glands for armoured cables

Size

	NPT	*METRIC*
1-	½"	M20x1,5
2-	¾"	M25x1,5
3-	1"	M32x1,5
4-	1" ¼	M40x1,5
5-	1" ½	M50x1,5
6-	2"	M63x1,5

Other codes

Range of non-armoured cable passage of the cable glands "ELFIT" type REVL... size from 1 to 6.

Tipo pressa cavo Cable gland type	Filettatura thread	Range Φ d min-max Range Φ d min-max
REVL 1	1/2" NPT	5 – 10
REVL 2	3/4" NPT	7 - 12
REVL 3	1" NPT	12 - 18
REVL 4	1"1/4 NPT	18 - 24
REVL 5	1"1/2 NPT	24 - 30
REVL 6	2" NPT	30 - 35

EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 13 ATEX 019X

Description of equipment (follows)

Range of armoured cable passage of the cable glands "ELFIT" type REVDL… size from 1 to 6.

Tipo pressa cavo Cable gland type	Filettatura thread	Range Φ d min-max Range Φ d min-max	Range Φ D min-max Range Φ D min-max
REV DL1	1/2" NPT	5 – 10	8 – 15
REVDL 2	3/4" NPT	7 - 12	11 – 16
REVDL 3	1" NPT	12 - 18	16 – 24
REV DL4	1"1/4 NPT	18 - 24	24 - 31
REVDL 5	1"1/2 NPT	24 - 30	31 – 37
REVDL 6	2" NPT	30 - 35	37 - 43

The cable glands type REV…, and REVS… (for non armoured cables) and type REVD…, e REVDS (for armoured cables), with thread from 2" ½ to 4" (sizes from 7 ÷ to 10) are identified by the following code:

REV.. .. ..

Cable gland type

REV…, REVS… Cable glands for non-armoured cables
REVD…, REVDS… Cable glands for armoured cables

Size

	NPT	*METRIC*
7-	2 ½"	M75x1,5
8-	3"	M90x1.5
9-	3 ½"	
10-	4"	M100x1,5

Other codes

Range of non-armoured cable passage of the cable glands "ELFIT" type REV.., REVS size 7 ÷ 10

Tipo pressacavo Cable gland type	Filettatura * Thread	Range Ø d min-max Range Ø d min-max
REV 7	2" 1/2 NPT	46 - 55
REVS 7	2" 1/2 NPT	55 - 62
REV 8	3" NPT	62 - 70
REVS 8	3" NPT	70 - 78
REV 9	3" 1/2 NPT	76 - 84
REVS 9	3" 1/2 NPT	84 - 92
REV 10	4" NPT	76 - 84
REVS 10	4" NPT	84 - 92

EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 13 ATEX 019X

Description of equipment (follows)

Range of armoured cable passage of the cable glands "ELFIT" type REVD.., REVDS size 7 ÷ 10

Tipo pressacavo Cable gland type	Filettatura * Thread	Range Ø d min-max Range Ø d min-max	Range Ø D min-max Range Ø D min-max
REVD 7	2" 1/2 NPT	46 - 56	54 - 78
REVDS 7	2" 1/2 NPT	56 - 62	
REVD 8	3" NPT	62 - 70	64 - 90
REVDS 8	3" NPT	70 - 78	
REVD 9	3" 1/2 NPT	76 - 84	88 - 104
REVDS 9	3" 1/2 NPT	84 - 92	
REVD 10	4" NPT	76 - 84	88 - 104
REVDS 10	4" NPT	84 - 92	

Report n. EX- B4007840

Routine tests
Not applicable

Descriptive documents (Prot. EX- B4007850)

- Technical Note Nr. A4-6080 (16 pg.)	Rev. 0	dated	18/07/2013
- Drawing n. A4-4952	Rev.2	dated	29/01/2013
- Drawing n. A4-5404	Rev. 1	dated	29/01/2013
- Drawing n. A3-5904	Rev. 0	dated	06/11/2012
- Drawing n. A3-6081	Rev. 0	dated	18/07/2013
- Drawing n. A3-6082	Rev. 0	dated	18/07/2013
- Drawing n. A3-6083	Rev. 0	dated	18/07/2013
- Drawing n. A4-6084	Rev. 0	dated	18/07/2013
- Drawing n. A4-6085	Rev. 0	dated	18/07/2013
- Drawing n. A4-6086	Rev. 0	dated	18/07/2013
- Drawing n. A4-6087	Rev. 0	dated	18/07/2013
- Drawing n. A4-6088	Rev. 0	dated	18/07/2013
- Drawing n. A4-6089	Rev. 0	dated	18/07/2013
- Drawing n. A4-6090	Rev. 0	dated	18/07/2013
- Drawing n. A4-6091	Rev. 0	dated	18/07/2013
- Drawing n. A4-6092	Rev. 0	dated	18/07/2013
- Disegno n. A4-6093	Rev. 0	dated	18/07/2013
- Drawing n. A4-6094	Rev. 0	dated	18/07/2013
- Fac-simile CE Declaration of Conformity 0145		dated	18/07/2013
- Safety Instruction F-382 (19 pg.)	Rev. 1	dated	18/07/2013
- Data sheet TV8LVZ (3 pg.)		dated	08/11/2013

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

EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 13 ATEX 019X

Special conditions for safe use (X)

- The coupling of the cable glands with the enclosures shall be made as indicated by the manufacturer in order to respect the type of protection of the electrical apparatus on which cable glands are mounted. The cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The cable glands shall be installed in order to respect the temperature at the mounting point within the foreseen service temperature range (- 40 ÷ +110 °C)
- The degree of protection IP 66/67 according to the IEC 60529 standard will be guaranteed for the cable glands if the holes into which cable glands are mounted are suitably sealed. 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 strictly respecting the manufacturer instruction.
- The cable glands series REV.. and REVD.. with sizes 7 ÷ 10 are only suitable for fixed installations. The cable for the sizes 7 ÷ 10 must be effectively clamped to prevent pulling and twisting.

Essential Health and Safety Requirements

Covered by compliance to the following standards:

EN 60079-0 : 2012-	Part 0: Explosive atmospheres - General requirements
EN 60079-1 : 2007-	Part 1: Explosive atmospheres: Flameproof enclosures "d"
EN 60079-7: 2007-	Part 7: Explosive atmospheres: increased safety "e"
EN 60079-31: 2009-	Part 31: Explosive atmospheres : dust ignition protection by enclosure "t"