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Schema di certificazione CESI-ATEX

CERTIFICATE

[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 048 U/04

[4] Component: Flexible conduits series **SP..**

[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 00 ATEX 048 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-B6015929.

[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 IIIC Db

Date 26.07.2016 - Translation issued the 26 th .07.2016

Prepared	**Verified**	**Approved**
Emanuele Bruno	Mirko Balaz	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 00 ATEX 048 U/04**

[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 flexible conduits are used to connect equipment that is offset, Ex d housing or equipment subject to vibrations such as electrical motors.

They are also preferred for lighting fixtures and as an alternative to rigid conduits when ever handling is difficult.

The flexible conduits are manufactured in agreement to standard ISO 10807:1994 "Corrugated flexible metallic hose assemblies for the protection of electrical cables in explosive atmospheres".

The flexible conduits can be also installed with ambient temperature from -60°C to +150°C.

For temperature -60°C, the fittings must be manufacturing only in stainless steel.

- The flexible conduits series SP.. are marked as follow:

ELFIT SP.. Ex 0722 II 2GD Ex db IIC Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
Ta –20°C +150°C

ELFIT SP.. Ex. 0722 II 2GD Ex db IIC Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
Ta –60°C +150°C

ELFIT SP.. Ex. 0722 II 2GD Ex db IIB Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
Ta -20°C + 60°C

ELFIT SP.. Ex. 0722 II 2GD Ex db IIB Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
Ta –60°C +60°C

ELFIT SPR.. Ex. 0722 II 2GD Ex db IIC Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
Ta -20°C + 60°C

ELFIT SPR... Ex 0722 II 2GD Ex db IIC Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
Ta –60°C +60°C

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 048 U/04**

ELFIT SPR.. Ex 0722 II 2GD Ex db IIB Gb
Ex tb IIIC Db IP66/67 CESI 00 ATEX 048U
- Ta –60°C +150°C

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 SP... Ex 0722 II 2GD CESI 00 ATEX 048U
Ex db IIC Gb Ex tb IIIC Db IP66/67 IECEx CES 14.0011U
Ta –...°C +...°C

CORTEM GROUP SP... Ex 0722 II 2GD CESI 00 ATEX 048U
Ex db IIB Gb Ex tb IIIC Db IP66/67 IECEx CES 14.0011U
Ta –...°C +...°C

The flexible conduits are composed of:
- Continuous wall conduit ribbed with parallel spirals in stainless steel AISI 321 / AISI 316L;
- Stainless steel plait sheath AISI 304;
- Fittings : EN 10025 S355JR (ASTM A105) or stainless steel AISI 303, AISI 304, AISI 316, AISI 316L.

Revolving fittings are already certified CESI 99 ATEX 034U.

Type B... have ambient temperature -20°C +60°C for group IIB
Type B.. . have ambient temperature -60°C +60°C for group IIB (only for stainless steel material).
Type R.. . have ambient temperature -20°C +60°C for group IIC
Type R... have ambient temperature -60°C +60°C for group IIC (only for stainless steel material).
Type RB. .. have ambient temperature -20°C +150°C for group IIB
Type RB... have ambient temperature -60°C +150°C for group IIB (only for stainless steel material).

The male and female fittings are usually threaded NPT ANSI/ASME B1.20.1, in sizes range from 1/2" to 4". Different threads from the above mentioned are admitted, in conformity with the enclosed drawing A4-4952 (equivalence table for tapered threads) and A4-5404 (equivalence table for cylindrical threads).

For low temperatures CORTEM declare that the materials used are made in stainless steel AISI 303, AISI 304, AISI 316, AISI 316L and that suitable for applications to operating temperatures from -60°C to +150°C.

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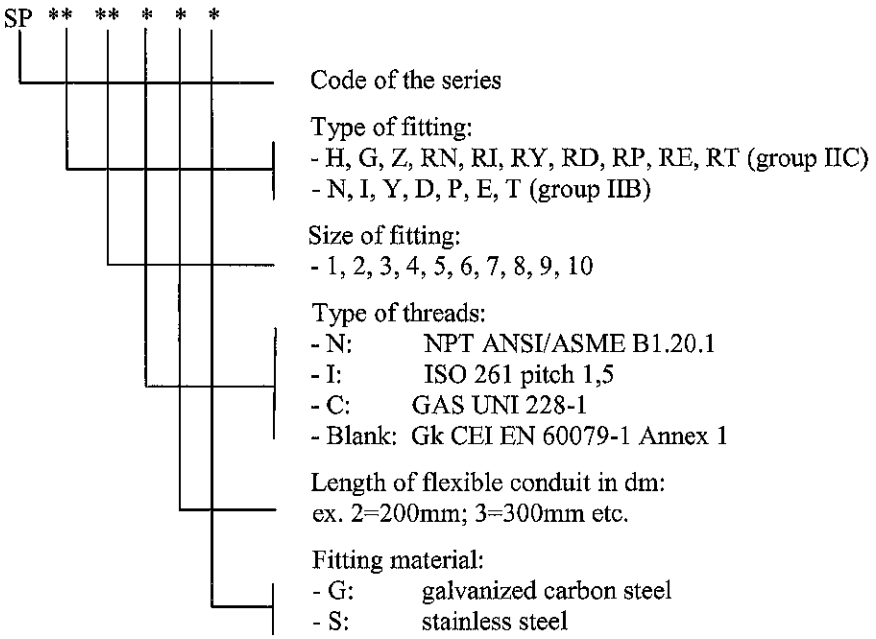
[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 048 U/04**

Identification of flexible conduit series SP..:



[16] **Report n.** EX-B6015929

Routine tests

The routine overpressure test shall be carried out using the static method (paragraph 15.2.3.1 of EN 60079-1 standard) at a pressure of 40 bar.

[17] **Schedule of limitations**

The coupling of the Flexible conduit series SP.. 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 Flexible conduit are mounted.

The Flexible conduit series SP.. shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.

The Flexible conduit series SP.. shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 00 ATEX 048 U/04**

	Flexible conduit type	Exec.	Manufacturing materials		Size	Ambient Temperature
			Fixed fitting	Revolving fitting (gasket)		
Fixed fittings	SPH – SPG SPZ	Ex-d IIC	Stainless steel	/	1/2" ÷ 1"	–20°C +150°C
			Galvanised steel	/	1¼" ÷ 4"	
	SPH – SPG SPZ	Ex-d IIC	Stainless steel	/	1/2" ÷ 4"	–60°C +150°C
Revolving fittings type B..	SPN – SPI SPY – SPD SPP – SPE SPT	Ex-d IIB	Stainless steel	Galvanised steel	1/2" ÷ 1"	–20°C +60°C
			Galvanised steel	Galvanised steel	1¼" ÷ 4"	
	SPN – SPI SPY – SPD SPP – SPE SPT	Ex-d IIB	Stainless steel	Stainless steel	1/2" ÷ 4"	–60°C +60°C
R..	SPRN – SPRI SPRY – SPRD SPRP – SPRE SPRT	Ex-d IIC	Stainless steel	Galvanised steel	1/2" ÷ 1"	–20°C +60°C
			Galvanised steel	Galvanised steel	1¼" ÷ 4"	
	SPRN – SPRI SPRY - SPRD SPRP – SPRE SPRT	Ex-d IIC	Stainless steel	Stainless steel	1/2" ÷ 4"	–60°C +60°C
RB..	SPRN – SPRI SPRY – SPRD SPRP – SPRE SPRT	Ex-d IIB	Stainless steel	Stainless steel	1/2" ÷ 4"	–60°C +150°C

The IP 66/67 mechanical protection of the Flexible conduit series SP.. with revolving fittings type B.., R.. or RB.. 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, depending on the maximum service temperature.

- If the Flexible conduit series SP.. are intended for use with dust protection "Ex tb" the holes into Flexible conduit 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.

It is the final assemblers/users responsibility to ensure the threaded joint between the flexible conduit series SP.. 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 00 ATEX 048 U/04**

[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-B6015930)**

- n. A4-769 Technical note (6 sheets)	Rev. 4	dated	12.07.2016
- n. A13 Mounting instructions (6 sheets)	Rev. 4	dated	12.07.2016
- n. 0163 Fac simile Attestation of conformity		dated	12.07.2016
- n. A1-012 drawing (1 sheets)	Rev. 3	dated	12.07.2016

One copy of all documents is kept in CESI files.

Certificate history

Issue N°	Issue Date	Summary description of variation
04	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.
03	24.03.2014	Update to new edition of EN 60079-0:2012, EN 60079-1:2007, EN 60079-31:2009; Update of marking.
02	12.06.2008	Conformity to EN 60079-0:2006, EN 60079-1:2004, EN 61241-0:2006, EN 61241-1:2004; Update of nameplate; Structural changes; New size .9 with threads 3 ½"; New operative range -55°C ÷ + 110°C.
01	22.12.2005	New category II2 GD (added protection against the risk of explosion from combustibile dusts in conformità with the standard EN 50281-1-1).
00	30.04.1999	First Issue of the Certificate