[1] # EC-TYPE EXAMINATION CERTIFICATE

[2] **Component intended for use on/in equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

CESI 01 ATEX 080 U

[4] Component: Sealing bushings type CP, TP, NPS, NCS, LPS.

[5] Manufacturer: **EL.FIT S. p. A.**

[6] Address: Via Aquileia 12, Villesse (Gorizia – Italy)

[7] This component 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 component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of components 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-A1/033944.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014: 1997 + A1...A2 EN 50018: 2000

[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 EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified component in accordance to the Directive 94/9/EC. 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 2 G EEx d IIC

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

date 14th November, 2001 - translation issued on 27th November, 2001

prepared CERT – M. Balaz

approved CERT – U. Colombo

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Business Unit Certificazione
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[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 080 U**

[15] **Description of component**

The sealing bushings type CP, TP, NPS, NCS, LPS are suitable to be mounted on flameproof enclosures.
They are made of a bush containing cables; the sealing is made by means of bicomponent resin set around each conductor.
The coupling is made by means of threaded joints or cylindrical joints.
The above-mentioned bushings are generally made of brass; as an alternative they can be made in stainless steel or zinc steel.
The coupling between the sealing bushing and the apparatus enclosure is made by means of threaded joints or cylindrical joints.
Threads normally used: from M10 x 1.5 to M42 x 1.5. Other equivalent threads can be used as an alternative.
The code of the sealing bushings is as follows:
- TP: sealing bushing with threaded joint
- CP: sealing bushing with cylindrical joint
- NPS: sealing bushing with two threaded joints (sealing nipple)
- NCS: sealing bushing with one threaded joint and one cylindrical joint
- LPS: sealing bushing with cylindrical joint and fixing by means of lock nut

Characteristics of cables

a) Cables type BETA THERM 155

Conductor size:	$0.5 \div 70$ mm^2
Rated current:	$5 \div 260$ A
Rated voltage:	750 V for size ≤ 0.75 mm^2
	1000 V for size ≥ 1 mm^2
Number of conductors:	$1 \div 21$ for sizes 0.75 – 1.5 – 2.5 mm^2
	$1 \div 12$ for size 4 mm^2
	$1 \div 6$ for sizes 6 – 10 - 16 mm^2
	1 for sizes 50 - 70 mm^2
Service temperature:	$-20 \div +80$ °C

b) Compensated cables type K

Conductor size:	$2 \times 0.22 \div 2 \times 1.5$ mm^2
Test voltage:	100 V
Number of conductors:	$1 \div 9$ for sizes from 2 x 0.22 to 2 x 1.5 mm^2
Service temperature:	$-20 \div +80$ °C

[16] **Report n. EX-A1/033944**

Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of the EN 50014 standard.

Prot. A1/033978 P: 3
Keywords 13010R 24030K 48010M 54250O 66540E

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 080 U**

Descriptive documents (prot. EX-A1/033947)

- n° A4-800 Rev. 0 (10 pag.)	dated	02.01.2001
- n° A4-817 Rev. 0	dated	02.02.2001
- n° A4-818 Rev. 0	dated	02.02.2001
- n° A4-819 Rev. 0	dated	02.02.2001
- n° A4-820 Rev. 0	dated	02.02.2001
- n° A4-821 Rev. 0	dated	02.02.2001
- n° A4-827 Rev. 0	dated	02.02.2001
- n° A3-226 Rev. 0	dated	02.02.2001
- n° A3-227 Rev. 0	dated	01.02.2001
- n° A3-228 Rev. 0	dated	01.02.2001
- n° A3-238 Rev. 0	dated	02.02.2001
- n° A3-240 Rev. 0	dated	01.02.2001
- n° A3-246 Rev. 0	dated	02.02.2001
- Safety instructions Annexe A/18 Rev. 0 (4 p.)	dated	02.02.2001
- Attestation of conformity for components	dated	03.02.2001

One copy of all documents is kept in CESI files.

[17] **Schedule of limitations**

The sealing bushings shall be coupled with the enclosures as indicated by the manufacturer in the documents annexed to this certificate in order not to jeopardise the type of protection of the electrical apparatus on which the sealing bushings are installed.

The conductors of the sealing bushing shall be connected inside enclosures conforming with one of the types of protection indicated in the standard EN 50014.

The service temperature of sealing bushings is – 20 ÷ + 80 °C.

The maximum current in the conductors shall be established taking into account the heating caused by the current flow in the conductors, the heating of the enclosure and the ambient temperature.

The tests on the components have been carried out so that the components can be used on flameproof enclosures without limitation of volume.

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

Covered by standards.

EXTENSION n. 01/05

to EC-Type Examination Certificate CESI 01 ATEX 080U

Component: Sealing bushings type CP, TP, NPS, NCS, LPS.

Manufacturer: **EL.FIT S. p. A.**

Address: Via Aquileia 12, Villesse (Gorizia – Italy)

Admitted variation

- Use in alternative the new casting resin,
- Alternative service temperature from – 40°C up to + 110 °C for new models CPt, TPt, NPSt, NCSt and LPSt.
- Added conductor of 1 mm^2 and use in one bushing the conductors having various sizes.

Report n. EX-A5060467

Schedule of limitations

The service temperature of sealing bushings type CPt, TPt, NPSt, NCSt and LPSt is - 40 ÷ + 110 °C.

Descriptive documents (prot. EX-A5060470)

- n. A4-800 Rev. 1 (4 pg.)	dated	18.11.2005
- n. A4-1039 Rev. 0	dated	18.11.2005
- n. A3-238 Rev. 0	dated	20.11.2004
- Technical sheets of resin (3 p.)	dated	18.11.2005
- Safety instructions Annexe A/18 Rev. 1 (4 p.)	dated	18.11.2005
- Attestation of conformity for components APQ-8	dated	18.11.2005

One copy of all documents is kept in CESI files.

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01ATEX080U.

date 22nd December, 2005 - translation issued on 22nd December, 2005

prepared CERT - M. Balaz

approved CERT - U. Colombo

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Prot. A5060469 P: 1

EST-CE –COMP.1p-E01

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EXTENSION n. 02/07

to EC-Type Examination Certificate CESI 01ATEX080U

Component: Sealing bushings type CP, TP, NPS, NCS, LPS.

Manufacturer: EL.FIT S.p.A.

Address: Via Aquileia 12, Villesse (Gorizia – Italy)

Admitted variation

- Update to EN 60079-0: 2006, EN 60079-1: 2004 standards.
- New type of protection – Combustible dust protection (tD) according to EN 61241-0: 2006 and EN 61241-1: 2004 standards
- Update of nameplate.

Identification equipment

The equipment shall include the following marking.

Ex II 2GD Ex d IIC or

Ex II 2GD Ex d IIC Ex tD A21

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01ATEX080U.

date	26.11.2007 - translation issued the 26.11.2007	
prepared	Pierluigi Molinari	
verified	Mirko Balaz	
approved	Fiorenzo Bregani	

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EXTENSION n. 02/07

to EC-Type Examination Certificate CESI 01ATEX080U

Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 27 of the EN 60079-0 standard and at clause 24 of the EN 61241-0 standard.

Report n. EX-A7/031587

Descriptive documents (prot. EX-A7/031580)

- Technical note A4-5037 Rev. 0 (1 page)	dated	13.02.2007
- Drawing n° A4-1130 Rev. 0	dated	06.04.2007
- Drawing n° A4-1131 Rev. 0	dated	06.04.2007
- Safety instruction A/18 Rev. 2 (5 pages)	dated	13.02.2007
- Declaration of conformity	dated	13.02.2007

One copy of all documents is kept in CESI files.

Schedule of limitations

The sealing bushing shall be coupled with the enclosures as indicated by the manufacturer in the documents annexed to this certificate in order not to jeopardise the type of protection of the electrical apparatus on which the sealing bushings are installed.
The series sealing bushings are suitable for application in enclosures in atmospheres with combustible gases and combustible dust. The conductors of the sealing bushing shall be connected inside enclosures conforming with one of the types of protection indicated in the standard EN 60079-0 (category 2G); and also EN 61241-0 and EN 61241-1 (category 2D type of protection "tD").

The service temperature of sealing bushings CP, TP, NPS, NCS and LPS is - 20 ÷ + 80 °C.
The service temperature of sealing bushings type CPt, TPt, NPSt, NCSt and LPSt is - 40 ÷ + 110 °C.

The maximum current in the conductors shall be established taking into account the heating caused by the current flow in the conductors, the heating of the enclosure and the ambient temperature.

The sealing bushing shall be fixed in the electrical apparatus in such a way that rotation and self-loosening will be prevented.

Essential Health and Safety Requirements

Compliance with the Health and Safety Requirements has been assured by compliance with the following standards:
EN 60079-0: 2006 - Electrical apparatus for explosive gas atmospheres. Part 0: General requirements
EN 60079-1: 2004 - Electrical apparatus for explosive gas atmospheres. Part 1: Flameproof enclosures "d"
EN 61241-0: 2006 - Electrical apparatus for use in the presence of combustible dust. Part 0: General requirements
EN 61241-1: 2004 - Electrical apparatus for use in the presence of combustible dust. Part 1: Protection by enclosures "tD".