[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 104 U

[4] Component: Fittings series EM, NP, ELF, ELMF, ELM.

[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-A1/039686.

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

EN 50014: 1997 + A1...A2 EN 50018: 2000 EN 50019: 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 EEx e II

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

date 21st December, 2001 - translation issued on 21st December, 2001

prepared CERT – M. Balaz

approved CERT – U. Colombo

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[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 104 U**

[15] **Description of component**

The fittings subject of this certificate are suitable to be mounted on cable conduits, on flameproof enclosures and on increased safety enclosures.
They are identified by a code as follows:

- EM: coupling female-female
- NP: nipple male-male
- ELF: elbow female-female
- ELMF: elbow male-female
- ELM: elbow male-male

The above mentioned codes are followed by a number which indicates the dimensions of the threaded hole (01; 02; 1; 2; 3; 4; 5; 6; 7; 8; 10; 12; 14). The complete code of all fittings is reported on the drawings A3-202, A3-203, A3-204 and A3-213 annexed to this certificate.
The fittings can be made in brass, stainless steel, galvanised steel or in aluminium alloy.
For fittings with diameter lower than 25 mm aluminium alloy cannot be used.
Threads normally used are GAS UNI ISO 7/1. Other equivalent threads can be used in alternative.
Service temperature: - 40 ÷ + 60 °C

[16] **Report n. EX-A1/039686**

Routine tests

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

Descriptive documents (prot. EX-A1/039687)

- n° A4-752 Rev. 0 (2 p.)	dated	19.02.1999
- n° A4-745 Rev. 0	dated	03.12.1998
- n° A3-202 Rev. 0	dated	19.02.1999
- n° A3-203 Rev. 0	dated	19.02.1999
- n° A3-204 Rev. 0	dated	19.02.1999
- n° A3-208 Rev. 0	dated	18.02.1999
- n° A3-213 Rev. 0	dated	19.02.1999
- n° A3-251 Rev. 0	dated	19.02.1999
- n° A3-261 Rev. 0	dated	19.02.1999
- Safety instructions Annexe A/3 Rev. 0 (2 p.)	dated	01.06.2000
- Attestation of conformity for components	dated	07.04.2000

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

Prot. A1/039690 P: 3
Keywords 13010R 24030K 48010M 54250O 66540E

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 104 U**

[17] **Schedule of limitations**

The coupling of the fittings with the enclosures shall be made 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 fittings are mounted.
The degree of protection IP 66/67 (EN 60529 – 1991) is guaranteed for the fittings if they are mounted according to the indications given in the documents annexed to this certificate.

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

Covered by standards.

EXTENSION n. 01/05

to EC-Type Examination Certificate CESI 01 ATEX 104U

Component: Fittings series EM, NP, ELF, ELMF, ELM.

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

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

Admitted variation

- new category II 2 GD (added protection against the risk of explosion from combustible dusts in conformity with the standard EN 50281-1-1)

The results of verifications and tests are reported in the confidential report n. EX-A5060537.

Identification and description of the equipment

The marking of the fittings series EM, NP, ELF, ELMF, ELM. shall include the following:

II 2 GD EEx d IIC EEx e II IP 66/67

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01ATEX104U.

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date 23rd December, 2005 - translation issued on 23rd December, 2005

prepared CERT - M. Balaz

approved CERT - U. Colombo

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EXTENSION n. 01/05

to EC-Type Examination Certificate CESI 01 ATEX 104 U

Descriptive documents (prot. EX-A5060540)

- n. A4-752 Rev. 1 (2 pg.)	dated	13.06.2003
- n. A4-969 Rev. 0	dated	13.06.2003
- Safety instructions Annexe A/3 Rev. 1 (2 pg.)	dated	13.06.2003
- Attestation of conformity for components	dated	13.06.2003

One copy of all documents is kept in CESI files.

Schedule of limitations

The fittings series EM, NP, ELF, ELMF, ELM. above mentioned, when mounted on the enclosures as indicated in the documents annexed to this certificate, are in compliance with the prescriptions of the standard EN 60529 (1991) for the degree of protection IP 66/67.

The coupling of the fittings series EM, NP, ELF, ELMF, ELM. with the enclosures shall be made 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 they are mounted.

Essential Health and Safety Requirements

Compliance with the Health and Safety Requirements has been assured by compliance with the following standards:
EN 50014: 1997 + A1..A2 – General requirements
EN 50018: 2000 + A1 - Flameproof enclosures "d"
EN 50019: 2000 – Increased safety "e"
EN50281-1-1: 1998 + A1 – Electrical apparatus for use in the presence of combustible dust. Part 1-1: Electrical apparatus protected by enclosures – Construction and testing.

EXTENSION n. 02/07

to EC-Type Examination Certificate CESI 01 ATEX 104U

Component: Fittings series EM, EMt, NP, NPt, ELF, ELM, ELMF.

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

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

Admitted variation

- Updating to new standards EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2006), EN 61241-1 (2004)
- Updating of nameplate
- New minimum limit temperature: T = -55°C
- New maximun limit temperature: T = +150°C

The results of verifications and tests are reported in the confidential report n. EX- A7035209.

Identification and description of the equipment

The marking of the fittings series EM EM, EMt, NP, NPt, ELF, ELM, ELMF shall include the following:

II 2 GD Ex d IIC Ex e II Ex tD A21 IP 66/67

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01ATEX104U.

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date 21 December 2007 - Translation issued 21 December 2007

prepared Giorgio Chinnici

verified Mirko Balaz

approved Fiorenzo Bregani

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EXTENSION n. 02/07

to EC-Type Examination Certificate CESI 01 ATEX 104 U

Descriptive documents (prot. EX-A7035212)

- Technical Note n. A4-752 Rev. 2 (3 pg.)	dated	30/01/2007
- Drawing no. A4-745 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A4-969 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-202 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-203 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-204 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-208 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-213 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-251 Rev. 1 (1 pg.)	dated	30/01/2007
- Drawing no. A3-261 Rev. 1 (1 pg.)	dated	30/01/2007
- Safety Instruction mod. A3 Rev. 2 (3 pag.)	dated	30/01/2007
- EC Declaration of Conformity (1 pag.)	dated	30/01/2007

One copy of all documents is kept in CESI files.

Schedule of limitations

The coupling of the fittings series with conduit systems and enclosures shall be made 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 they are mounted.
The degree of protection IP 66/67 is guaranteed when mounted on the enclosures as indicated in the documents annexed to this certificate.

The limit temperatures are listed in the following table:

Series	Material	Gasket	T min	T max
EM, NP	Any	EPDM	-40 °C	+ 60 °C
EM, NP	Any	SI/50	-40 °C	+150 °C
EMt, NPt	Stainless steel	SI/50	-55 °C	+150 °C
ELF	Aluminium	SI/50	-55 °C	+150 °C
ELM, ELMF	Aluminium (ELF) + Stainless steel (EMt, NPt)	SI/50	-55 °C	+150 °C

Essential Health and Safety Requirements

The Health and Safety Requirements are assured by compliance with the following Standards:

- EN 60079-0 : 2006 — Electrical apparatus for explosive gas atmospheres. General requirements
- EN 60079-1 : 2004 — Flamoproof enclosures "d".
- EN 60079-7 : 2003 — Increased safety "e".
- EN 61241-0 : 2006 — Electrical apparatus for use in the presence of combustible dust. General requirements
- EN 61241-1 : 2004 — Protection by enclosures "tD"

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EXTENSION n. 03/15

to EC-Type Examination Certificate CESI 01 ATEX 104U

Component: Fittings series **EM.., NP.., ELF.., ELMF.., ELM...**

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

Address: Via Aquileia, 12 – 34070 Villesse (GO) – Italy.

Admitted variation
- Update to new edition of EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7:2007, EN 60079-31: 2009.
- Update of marking.

Conformity to new edition of the harmonized European standard

The component subject of the certificate CESI 01 ATEX 104U and annexed extension are conform to the standards:

EN 60079-0: 2012 EN 60079-1: 2007 EN 60079-7 : 2007 EN 60079-31: 2009

The component shall be marked as follows:

Ex **II2GD** **Ex d IIC Gb**
Ex e IIC Gb
Ex tb IIIC Db
IP66/67

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01 ATEX 104U.

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Date 14th April 2015 - translation issued the 14th April 2015

Prepared
Mirko Balaz

Approved
Roberto Piccin

CESI S.p.A.
Testing & Certification Division

EST-CE-ING-0

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EXTENSION n. 03/15

to EC-Type Examination Certificate CESI 01 ATEX 104U

Description of component

The fittings series **EM.., NP.., ELF.., ELM.., ELMF..** are suitable to be mounted on cable conduits, on flameproof enclosures and on increased safety enclosures.

They are identified by a code as follows:

- **EM**: Coupling female-female;
- **NP**: Nipple male-male;
- **ELF**: 90° Elbow female-female;
- **ELMF**: 90° Elbow male-female;
- **ELM**: 90° Elbow male-male.

The fittings standard threads types are NPT/ANSI ASME B1.20.1 from 1/4" up to 6" for types **EM..** and **NP..** and from 1/4" up to 4" for types **ELF.., ELM..** and **ELMF..**. Alternative available tapered threads are Gk CEI EN 60079-1, Annex 1, while for cylindrical threads are ISO Metric 965/1 and ISO 965/3, NPSM ANSI/ASME B1.20.1, PG DIN 40430 and GAS ISO 228/1.

Identification of fittings:

**** ** *

Code which identifies the series:
- **EM**: Coupling female-female
- **NP**: Nipple male-male
- **ELF**: 90° Elbow female-female
- **ELMF**: 90° Elbow male-female *(ELF + NP fitting coupling)*
- **ELM**: 90° Elbow male-male *(NP + ELF + NP fitting coupling)*

Size of fitting (*see table 1*)

Type of material:
- **A**: Aluminium alloy
- **B**: Brass
- **S**: Stainless steel
- **G**: Galvanized carbon steel standard
- **GL**: Galvanized steel for low temperatures

Types, sizes and threads of fittings are listed on the following Table 1:

Table 1:

Fittings type	Size code	NPT Thread	Gk Thread	ISO pitch 1,5 Thread
EM.., NP.., ELF.., ELMF.., ELM..	02	1/4"	--	M 12
	01	3/8"	--	M 16
	1	1/2"	1/2	M 20
	2	3/4"	3/4	M 25
	3	1"	1	M 32
	4	1¼"	1¼	M 40
	5	1½"	1½	M 50
	6	2"	2	M 63
	7	2½"	2½	M 75
	8	3"	3	M 90
	10	4"	4	M 100
EM.., NP..	12	5"	--	--
	14	6"	--	--

EXTENSION n. 03/15

to EC-Type Examination Certificate CESI 01 ATEX 104U

Report n. EX- B5008520

Routine tests
None.

Descriptive documents (prot. EX- B5008524)

- Technical note A4-1135 (pg. 4)	rev.1	del	30.01.2013
- Safety, maintenance and mounting Instructions A3 (pg. 3)	rev.3	del	30.01.2013
- Attestation of Conformity no. 0139 FACSIMILE (pg. 1)	rev.0	del	30.01.2013
- Drawing A3-202 (pg. 1)	rev.2	del	30.01.2013
- Drawing A3-203 (pg. 1)	rev.2	del	30.01.2013
- Drawing A3-204 (pg. 1)	rev.2	del	30.01.2013
- Drawing A3-208 (pg. 1)	rev.2	del	30.01.2013
- Drawing A4-4952 (pg. 1)	rev.2	del	29.01.2013
- Drawing A4-5404 (pg. 1)	rev.1	del	29.01.2013

One copy of all documents is kept in CESI files.

Schedule of limitations

- The coupling of the fittings with the conduits or the enclosures shall be made as indicated by the manufacturer in the documents annexed to this certificate in order respect the type of protection of the electrical apparatus on which the fittings are mounted.
- The fittings shall be mounted in the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- Fittings with diameter lower than ø3/4"(25 mm) made of Aluminium alloy cannot be used.
- The fittings shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:

Fittings type	Materials	Min. Temperature	Max. Temperature
EM.., NP..	Galvanised steel ASTM A105, brass, Aluminium alloy, Stainless steel.	-20 °C	+80 °C
EM.., NP..	Galvanised steel ASTM A203, brass, Aluminium alloy, Stainless steel.	-40 °C	+150 °C
EM.., NP..	Stainless steel	-55 °C	+150 °C
ELF..	Aluminium alloy	-55 °C	+150 °C
ELM.., ELMF..	Aluminium alloy (ELF..) + Stainless steel (NP..)	-55 °C	+150 °C

- The degree of protection IP 66/67 according to the EN 60529 standard is guaranteed for the fittings if the holes into which fittings 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 as indicated in the manufacturer instruction.

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

EN 60079-0: 2012	Explosive atmospheres – Part 0: Equipment - General requirements;
EN 60079-1: 2007	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure "d";
EN 60079-7: 2007	Explosive atmospheres – Part 7: Equipment protection by increased safety "e";
EN 60079-31: 2009	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t".