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Schema di certificazione
CESI-ATEX

[1] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE**

[2] **Equipment or Protective System intended for use
in potentially explosive atmospheres
Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:

CESI 13 ATEX 066 X /03

[4] Product: **Adaptors and Plugs series B-RA., B-RB., B-RM., B-RN., B-TS.,
MB-TS., NB-TS..**

[5] Manufacturer: **Bimed Teknik Aletler Sanayi Ve Ticaret A.S.**

[6] Address: **S.S Bakir ve Piriñ Sanayi Sitesi Leylak Caddesi no:16
TR - 34524 Beylikdüzü – Istanbul
(Turkey)**

[7] This supplementary certificate extends EU-Type Examination Certificate CESI 13 ATEX 066 X, to apply to Product 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 Product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or 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- C1005321.

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

EN IEC 60079-0: 2018 EN 60079-1: 2014 EN 60079-7: 2015 EN 60079-31: 2014

except in respect of those requirements listed at item 18 of the Schedule.

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

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified Product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the Product shall include the following:

	I M2	Ex db I Mb and Ex eb I Mb	<i>or</i>
	II 2 GD	Ex db IIC Gb and Ex eb IIC Gb and Ex tb IIC Db IP66/68	

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Date 12.05.2021 - Translation issued the 12.05.2021

Prepared
Alessandro Fedato

Verified
Mirko Balaz

Approved
Roberto Piccin

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Schedule

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SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066 X /03

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Description of the variation to the Product

Variation 3.1: Reassessment of the product according to the new harmonized standard EN IEC 60079-0: 2018.

Variation 3.2: To the Adaptors and Plugs series the new sizes M12x1.5 and 1/4"NPT have been added.

Variation 3.3: Adaptors and Plugs series has been assessed for Group I (mines) applications with the exclusion of M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) sizes and NB-TS.. types.

Variation 3.4: To the Adaptors and Plugs series new Aluminium alloy and new Brass as constructional material have been added. Aluminium alloy is not assessed for Group I (mines) applications. Furthermore, M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) sizes made of Aluminium alloy are intended for Ex eb and Ex tb type of protection only.

Variation 3.5: Minor mechanical changes have been applied.

Description of Product

The Adaptors series **B-RA**, **B-RB**, **B-RM** and **B-RN** are used to match equipment, conduits and hubs having different threaded entry sizes. Attachment of the Adaptors to an enclosure is by means of the male threaded portion on the male body.

The series of available Adaptors are:

B-RA – they are used to reduce a female hub or increase a male hub.

B-RB – they are used to increase a female hub or reduce a male hub.

B-RM – they are used to vary the diameter of a male hub by transforming it into a female hub.

B-RN – they are used to vary the diameter of a female hub by transforming it into a male hub.

The male Plugs series **B-TS**, **MB-TS** and **NB-TS** are suitable for closing female hubs or unused openings on Ex db conduits or Ex db, Ex eb and Ex tb enclosures. Attachment of the male plugs to an enclosure is by means of the male threaded portion on the male body.

The series of available Plugs are:

B-TS – they are used to close a female hub with cylindrical or tapered threads.

MB-TS – they are used to close a female hub with ISO Metric threads only.

NB-TS – they are used to close a female hub with NPT tapered threads and Ex eb or Ex tb execution only.

The Adaptors and male plugs are generally made in Brass (CuZn39Pb3 CW614N or CuZn42 CW510L). The following alternative material can be supplied on demand:

- Nickel-plated Brass type CuZn39Pb3 or CuZn42.
- Galvanized carbon steel type FE36; FE37 UNI 10233/4.
- Stainless steel type AISI316; AISI304; AISI303.
- Aluminium alloy Aluminium alloy EN AW-6026, EN AW-6063 and EN AW-6082.

To guarantee the IP 66/68 degree of protection the Adaptors series **B-RA..**, **B-RB..**, **B-RM..**, **B-RN..** and male Plugs series **B-TS..** and **MB-TS..** with cylindrical threads have a sealing edge machined for fitting a elastomeric gasket, while for all other threads and for **NB-TS..** Plugs the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

The Adaptors and male Plugs standard threads types are NPT ANSI/ASME B1.20.1 from 1/4" up to 4" and cylindrical ISO Metric 965/1 and ISO 965/3 from M12x1.5 up to M110x1.5. Alternative available tapered threads are GAS ISO 7/1 or Gk (CEI EN 60079-1, Annex 1) while cylindrical threads are ISO Metric 965/1 and ISO 965/3 from M60x2 up to M110x2, GAS ISO 228/1, NPSM ANSI/ASME B1.20.1 and type PG DIN 40430. Threads type PG DIN 40430 can be used for "Ex eb" execution only.

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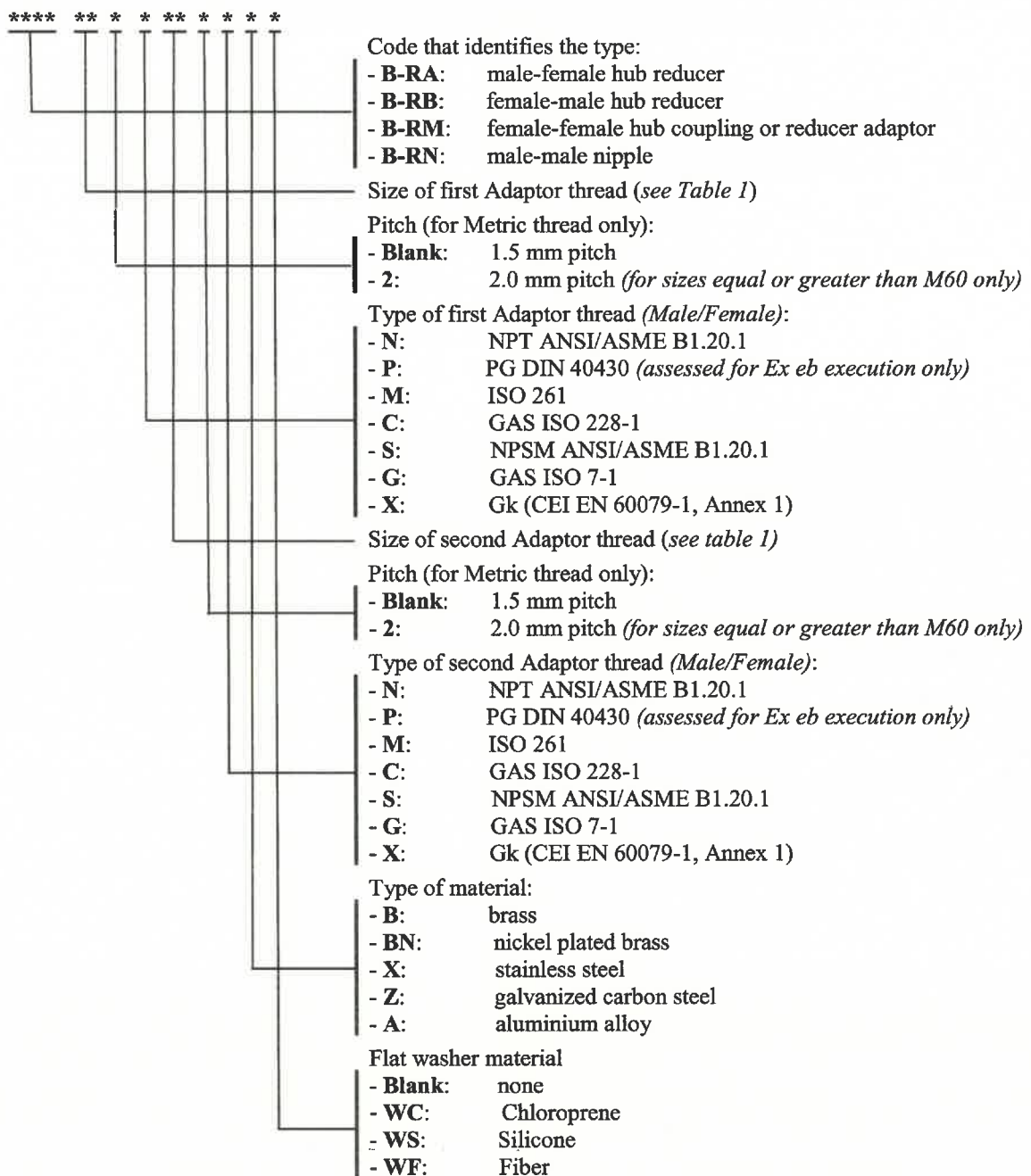
Constructional characteristics

Degree of protection (EN 60529): IP 66 / IP 68 (50 m for 30 min.).

Service temperature ranges:

- 40°C ÷ +100°C for Adaptors and Plugs with Chloroprene O-rings;
- 60°C ÷ +130°C for Adaptors and Plugs with Silicon O-rings or flat washers;
- 40°C ÷ +80°C for Adaptors and Plugs with Chloroprene or Fiber flat washers;
- 40°C ÷ +100°C for Adaptors and Plugs made of Aluminium alloy;
- up to -20 °C for models made of Galvanized carbon steel.

The Adaptors are identified by a code as below:



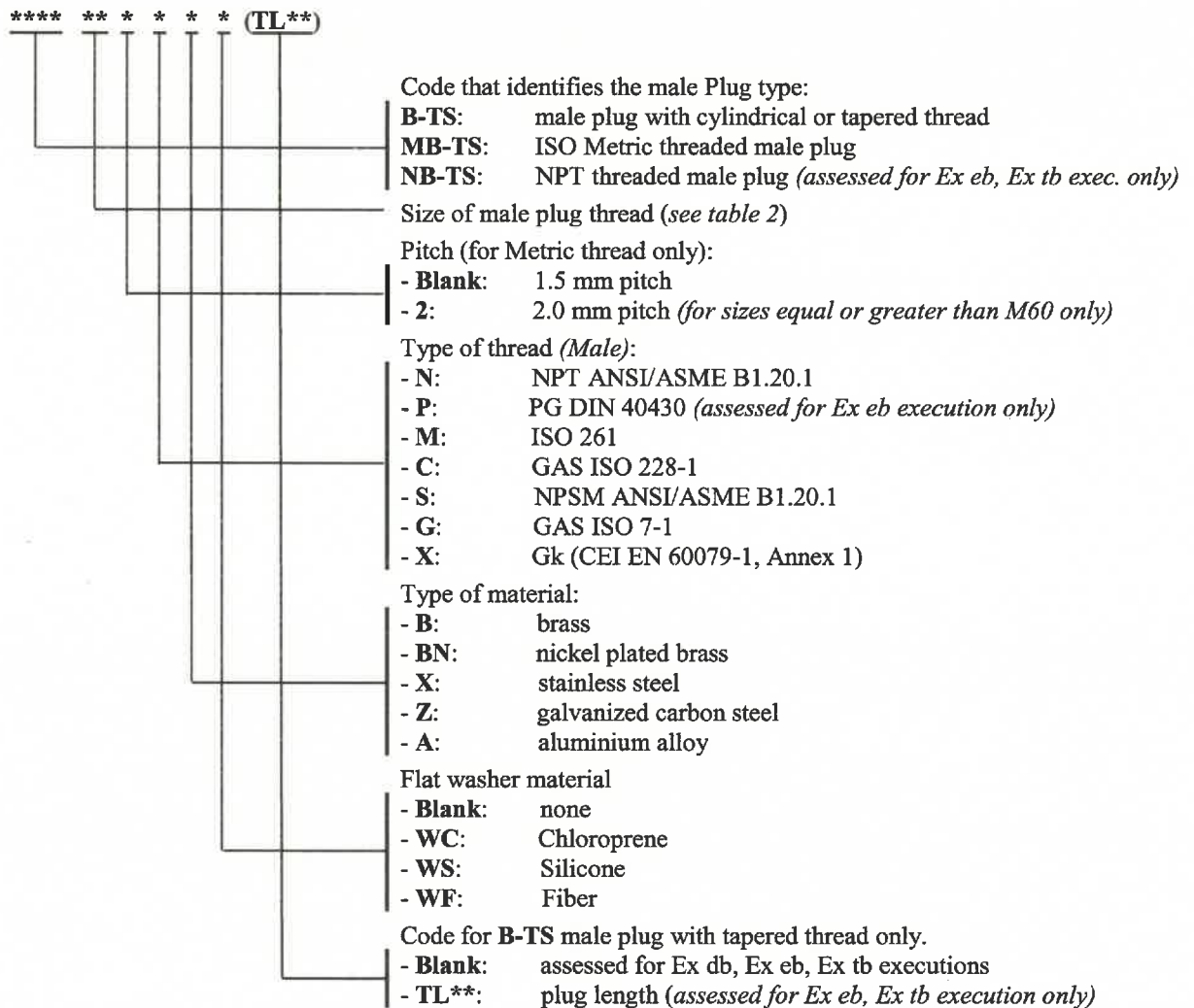
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The male Plugs are identified by a code as follows:



The Adaptors type **B-RM..** and **B-RN..** have both NPT threads or both Metric threads or coupling NPT-Metric threads.

The Adaptors **B-RB..**, **B-RM..** and **B-RN..** may be made with two different thread types and sizes combinations or with the same thread types and sizes combinations.

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The sizes and thread types of the Adaptors and Plugs are listed on the tables below:

Table 1: B-RA., B-RB., B-RM.. and B-RN.. Adaptors sizes and threads type list.

Adaptor thread size	Thread dimension				
	NPT ANSI/ASME B1.20.1	ISO		ISO 7-1 or 228/1	PG DIN 40430
		pitch 1.5	pitch 2.0		
02	1/4"	M 12	-	1/4"	-
01	3/8"	M 16	-	3/8"	-
1	1/2"	M 20	-	1/2"	7
2	3/4"	M 25	-	3/4"	9
3	1"	M 32	-	1"	11
4	1 ¼ "	M 40	-	1 ¼ "	13.5
5	1 ½ "	M 50	-	1 ½ "	16
60	-	M 60	M 60	-	-
6	2"	M 63	M 63	2"	21
70	-	M 70	M 70	-	-
7	2 ½ "	M 75	M 75	2 ½ "	29
80	-	M 80	M 80	-	-
85	-	M 85	M 85	-	-
8	3"	M 90	M 90	3"	36
9	3 ½ "	M 100	M 100	-	42
10	4"	M 110	M 110	4"	48

Table 2: B-TS., MB-TS.. and NB-TS.. sizes and threads type list for Plugs.

Male plugs thread size	Thread dimension				
	B-TS				
	NB-TS	MB-TS		ISO 7-1 or 228/1	PG DIN 40430
NPT ANSI/ASME B1.20.1	ISO				
		pitch 1.5	pitch 2.0		
02	1/4"	M 12	-	1/4"	-
01	3/8"	M 16	-	3/8"	-
1	1/2"	M 20	-	1/2"	7
2	3/4"	M 25	-	3/4"	9
3	1"	M 32	-	1"	11
4	1 ¼ "	M 40	-	1 ¼ "	13.5
5	1 ½ "	M 50	-	1 ½ "	16
60	-	M 60	M 60	-	-
6	2"	M 63	M 63	2"	21
70	-	M 70	M 70	-	-
7	2 ½ "	M 75	M 75	2 ½ "	29
80	-	M 80	M 80	-	-
85	-	M 85	M 85	-	-
8	3"	M 90	M 90	3"	36
9	3 ½ "	M 100	M 100	-	42
10	4"	M 110	M 110	4"	48

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066 X /03**

[16] **Report n. EX- C1005321**

Routine tests

None.

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

- The coupling of the Adaptors and Plugs 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 the adaptors and plugs are mounted.
- The Adaptors and Plugs shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The Adaptors and Plugs shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:
 - -40°C to +100°C for Adaptors and Plugs with Chloroprene O-rings;
 - -60°C to +130°C for Adaptors and Plugs with Silicon O-rings and flat washers;
 - -40°C to +80°C for Adaptors and Plugs with Chloroprene or Fiber flat washers;
 - Restricted use up to -20°C for adaptors and plugs made of galvanized carbon steel;
 - -40°C to +100°C for Adaptors and Plugs made of Aluminium alloy.
- The Adaptors and Plugs made of Aluminium alloy are not admitted for Group I (Mines) applications.
- The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) are not admitted for Group I (Mines) applications.
- The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) made of Aluminium alloy are for Ex eb and Ex tb application only.
- The Plugs type NB-TS are not admitted for Group I (Mines) applications and are for Ex eb and Ex tb application only.
- The Adaptors and Plugs sizes M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) made of Aluminium alloy shall be protected from impacts because assessed for low risk only.
- The degree of protection IP 66/68 according to the EN 60529 standard will be guaranteed for the adaptors and plugs if the holes into which adaptors and plugs 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.

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

Compliance with the Essential Health and Safety Requirements has been assured by compliance to the following standards:

EN IEC 60079-0: 2018	Explosive atmospheres – Part 0: Equipment - General requirements
EN 60079-1: 2014	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure “d”
EN 60079-7: 2015	Explosive atmospheres – Part 7: Equipment protection by increased safety “e”
EN 60079-31: 2014	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure “t”

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Descriptive documents (prot. EX- C1005325)

- | | | | | |
|--------------------------------------------------------|--|-------|-------|------------|
| - *Technical note A4-IEC.32 (9 pg.) | | rev.3 | dated | 2020.11.16 |
| - *Safety and mounting instructions MI-IEC.34 (13 pg.) | | rev.3 | dated | 2020.11.16 |
| - *Drawing A3-IEC.39-1 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.54-2 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A4-IEC.T70-1 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A4-IEC.T70-2 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A4-IEC.33 (4 sheets) | | rev.3 | dated | 2020.11.16 |
| - *Drawing A3-IEC.52-1 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.52-3 | | rev.0 | dated | 2020.11.16 |
| - *Drawing A3-IEC.53 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.54 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.74-1 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.74-2 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.74-3 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.74-7 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.75-1 | | rev.0 | dated | 2020.11.16 |
| - *Drawing A3-IEC.75-2 | | rev.0 | dated | 2020.11.16 |
| - *Drawing A3-IEC.76 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.77 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.78 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.80-1 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.80-2 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.80-3 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.81-1 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.81-2 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.82 | | rev.1 | dated | 2020.11.16 |
| - *Drawing A3-IEC.83 | | rev.2 | dated | 2020.11.16 |
| - *Drawing A3-IEC.36 | | rev.1 | dated | 2020.11.16 |
| - Drawing A3-IEC.79 | | rev.1 | dated | 2016.03.10 |
| - Drawing A3-IEC.84 | | rev.2 | dated | 2016.03.10 |
| - Drawing A3-IEC.52-2 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.74-4 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.74-5 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.74-6 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.74-8 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.78-1 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.80-4 | | rev.0 | dated | 2019.01.07 |
| - Drawing A3-IEC.85 | | rev.0 | dated | 2019.01.07 |
| - *Drawing A3-IEC.86 | | | dated | 2020.02.12 |
| - *Drawing A3-IEC.87 | | | dated | 2020.01.12 |
| - *Drawing A3-IEC.88 | | | dated | 2020.01.12 |
| - *Drawing A3-IEC.89 | | | dated | 2020.01.12 |
| - *Drawing A3-IEC.90 | | | dated | 2020.01.12 |

*Note: an * is placed before the title of documents which are new or revised, annexed to this supplement.*

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

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SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066 X /03

Certificate history

Issue N.	Issue Date	Summary description of variation
03	Current	Reassessment of the product according to the new harmonized standard EN IEC 60079-0: 2018. To the Adaptors and Plugs series the new sizes M12x1.5 and 1/4"NPT have been added. Adaptors and Plugs series has been assessed for Group I (mines) applications with the exclusion of M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) sizes and NB-TS.. types. To the Adaptors and Plugs series new Aluminium alloy and new Brass as constructional material have been added. Aluminium alloy is not assessed for Group I (mines) applications. Furthermore, M12x1.5 (1/4"NPT) and M16x1.5 (3/8"NPT) sizes made of Aluminium alloy are intended for Ex eb and Ex tb type of protection only. Minor mechanical changes have been applied.
02	2019.05.10	To the Adaptors and Plugs series the new sizes M60, M70, M80, M85, M100 and M110 with ISO pitch 2.0 have been added.
01	2016.05.30	Updating to standards EN60079-1:2014; EN60079-7:2015 and EN60079-31:2014. New sizes were added, use of Silicon O-rings and flat washers, Chloroprene flat washers and Fiber flat washers and new male plug types NB-TS and MB-TS were added. Nickel plated Brass is added as manufacturing raw material.
00	2014.02.17	First Issue of the Certificate.