



CESI S.p.A.
Via Rubattino 54
I-20134 Milano - Italy
Tel: +39 02 21251
Fax: +39 02 2125440
e-mail: info@cesi.it
www.cesi.it

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 066X /04

[4] Product: **Adaptors and Plugs type 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 Pirinç Sanayi Sitesi Leylak Caddesi no:16
TR – 34524 Beylikdüzü – Istanbul (Turkey)**

[7] This supplementary certificate extends EU-Type Examination Certificate **CESI 13 ATEX 066X**, 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-C2001671**.

[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 IEC 60079-7:2015/A1:2018 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
and / or
 II 2GD Ex db IIC Gb and Ex eb IIC Gb
Ex tb IIC Db
IP66/68

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Date 08/02/2022 - Translation issued the 08/02/2022

Prepared
Adrián Lucas Vagni

Verified
Alessandro Fedato

Approved
Roberto Piccin

Vop
Page 1/7

Alessandro Fedato

Roberto Piccin

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066X /04**

[15] **Description of the variation to the Product**

Variation 4.1:

The certified **Adaptors and Plugs type B-RA.., B-RB.., B-RM.., B-RN.., B-TS.., MB-TS.., NB-TS..** previously assessed in compliance to the standard EN 60079-7:2015, has been re-assessed on the basis of the harmonized standard EN IEC 60079-7:2015+A1:2018.

Description of Product

The **Adaptors type B-RA.., B-RB.., B-RM.. and B-RN..** are used to match equipment, pipes 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. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the **Adaptors** are installed in accordance with the manufacturer's instructions.

The types 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 type B-TS.., MB-TS.. and NB-TS..** are suitable for closing female hubs or unused openings on Ex db pipes 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. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the male plugs are installed in accordance with the manufacturer's instructions.

The types 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 EN AW-6026, EN AW-6063 and EN AW-6082.

To guarantee the IP 66/68 degree of protection the **Adaptors type B-RA.., B-RB.., B-RM.., B-RN..** and male **Plugs type 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 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.

Adaptors and male Plugs M12x1.5 or 1/4"NPT and M16x1.5 or 3/8"NPT thread sizes and all sizes made of Aluminium alloy are not admitted for Group I 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.

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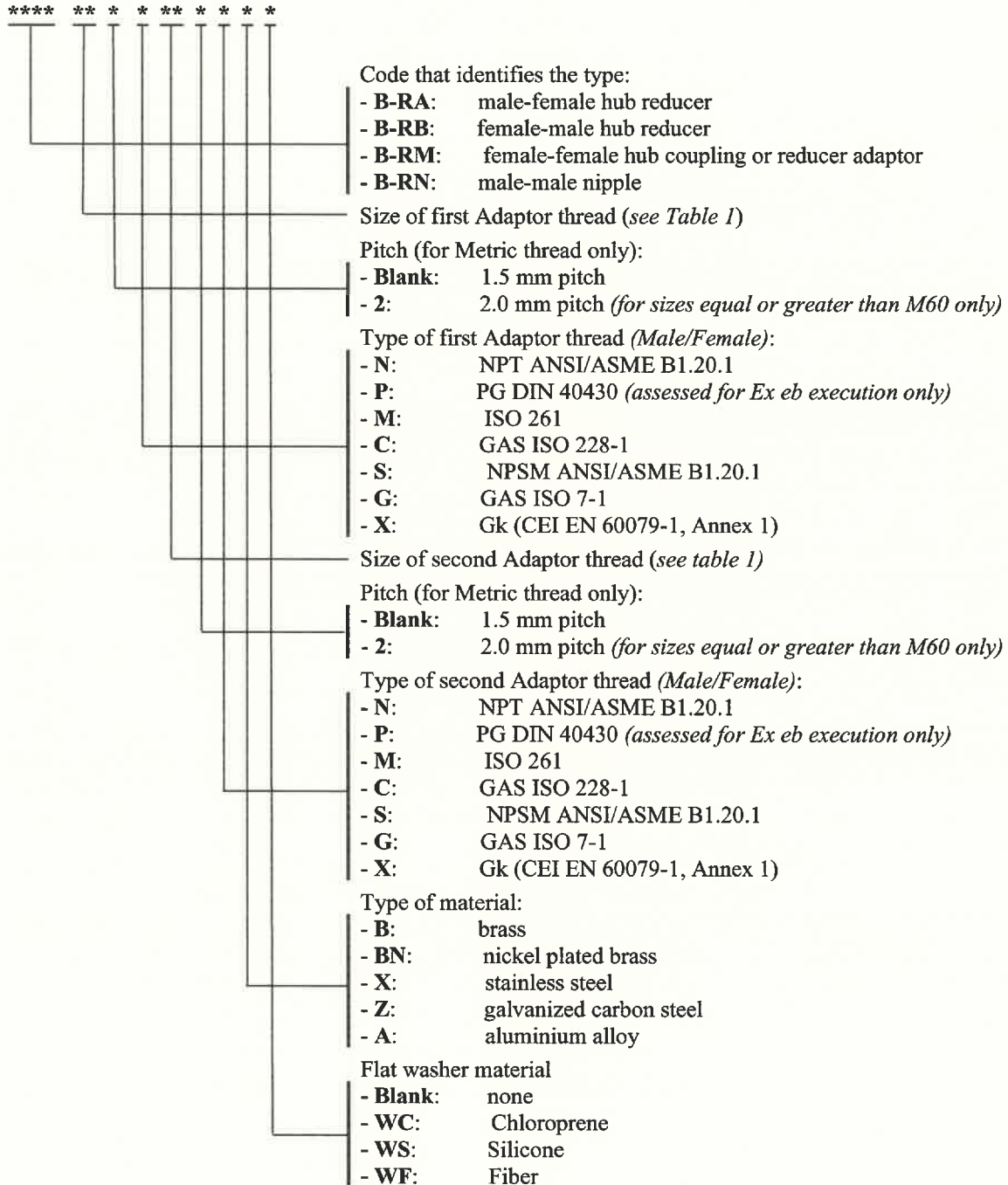
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The Adaptors are identified by a code as follows:



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

Adaptors type **B-RB..**, **B-RM..** and **B-RN..** can be made with the combination of two different types and sizes of threads or with the same combination.

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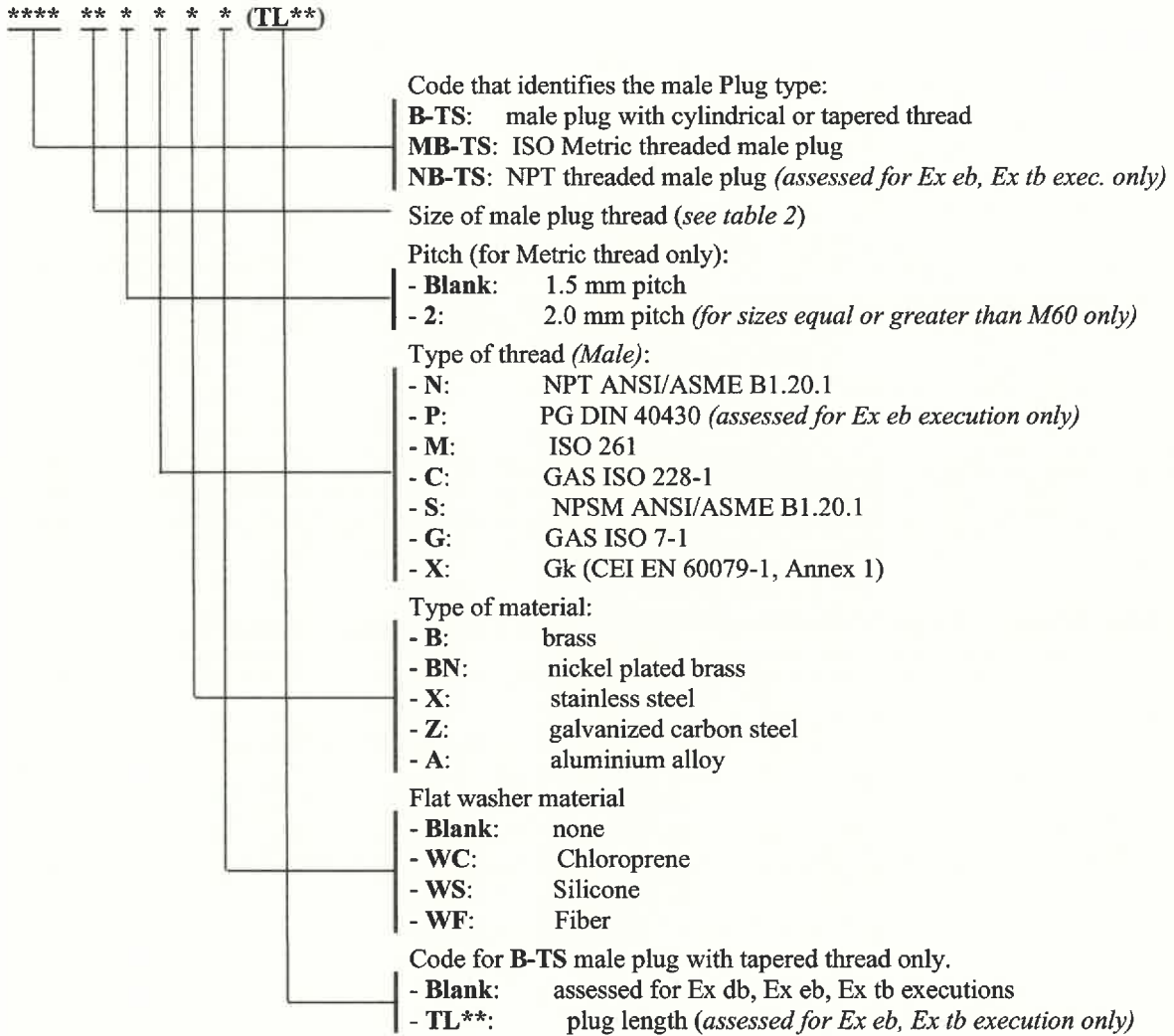
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The male Plugs are identified by a code as follows:

**** ** * * * * (TL**)



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

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SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066X /04

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.. NPT ANSI/ASME B1.20.1 | MB-TS.. 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 |

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SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066X /04

Constructional characteristics

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

Service temperature ranges:

-40°C and +100°C for Adaptors and male Plugs supplied with Chloroprene O-rings;

-60°C and +130°C for Adaptors and male Plugs supplied with Silicon O-rings or flat washers;

-40°C and +80°C for Adaptors and male Plugs supplied with Chloroprene or Fiber flat washers;

-40°C and +100°C for Adaptors and male Plugs made of Aluminium alloy;

up to -20 °C for models made of Galvanized carbon steel.

[16] **Report n. EX-C2001671**

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 applications 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 IEC 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 is not affected by this variation.

Compliance with the Essential Health and Safety Requirements is ensured by compliance with the harmonised standards referred to in paragraph 9.

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 066X /04**

[19] **Descriptive documents (prot. EX-C2001687)**

| | | |
|---|-------|------------|
| *A4-IEC.32 Technical note (10 sheets) Rev.4 | dated | 08.11.2021 |
| A3-IEC.87 B-RB adaptors type | dated | 27.01.2021 |
| A3-IEC.88 B-RB adaptors type | dated | 27.01.2021 |
| A3-IEC.89 B-RM adaptors type | dated | 27.01.2021 |
| A3-IEC.90 B-RN adaptors type | dated | 27.01.2021 |
| A3-IEC.39-1 Special adaptors type B-RA male-female (PG) for 2,0 pitch Rev.1 | dated | 16.11.2020 |
| A3-IEC.52-1 Male Plugs B-TS type M, PG, PF threads Rev.2 | dated | 16.11.2020 |
| A3-IEC.52-3 Male Plugs NPT threads Rev.0 | dated | 16.11.2020 |
| A3-IEC.53 Dimensional Chart For NPT Ex-e Blind Stops (NB-TS) Rev.2 | dated | 16.11.2020 |
| A3-IEC.54 Stopper Blind stop MB-TS Rev.1 | dated | 16.11.2020 |
| A3-IEC.54-2 Stopper Blind stop MB-TS for 2,0 pitch Rev.1 | dated | 16.11.2020 |
| A3-IEC.74-1 B-RB type adaptors (M-M) Rev.1 | dated | 16.11.2020 |
| A3-IEC.74-2 B-RB type adaptors (M-NPT) Rev.2 | dated | 16.11.2020 |
| A3-IEC.74-3 B-RB type adaptors (M-PG)(M-PF) Rev.2 | dated | 16.11.2020 |
| A3-IEC.74-7 B-RB type adaptors (M-NPT) for 2,0 pitch Rev.1 | dated | 16.11.2020 |
| A3-IEC.75-1 B-RB (NPT/M and NPT/NPT) type adaptors dimension tables Rev.0 | dated | 16.11.2020 |
| A3-IEC.75-2 B-RB (NPT/PG and NPT/PF) type adaptors dimension tables Rev.0 | dated | 16.11.2020 |
| A3-IEC.76 B-RA (C) type adaptors dimension tables Rev.1 | dated | 16.11.2020 |
| A3-IEC.77 B-RB (PG) type adaptors dimension tables Rev.1 | dated | 16.11.2020 |
| A3-IEC.78 B-RN (M) type adaptors dimension tables Rev.2 | dated | 16.11.2020 |
| A3-IEC.80-1 B-RA type adaptors (M-M)(M-NPT) Rev.1 | dated | 16.11.2020 |
| A3-IEC.80-2 B-RA type adaptors (M-PG)(M-PF) Rev.1 | dated | 16.11.2020 |
| A3-IEC.80-3 B-RA type adaptors (M-M)(M-NPT) for 2,0 pitch Rev.1 | dated | 16.11.2020 |
| A3-IEC.81-1 B-RA type adaptors (NPT-NPT)(NPT-M) Rev.2 | dated | 16.11.2020 |
| A3-IEC.81-2 B-RA type adaptors (NPT-PG)(NPT-PF) Rev.2 | dated | 16.11.2020 |
| A3-IEC.82 B-RA (PG) type adaptors dimension tables Rev.1 | dated | 16.11.2020 |
| A3-IEC.83 B-RM (M) type adaptors dimension tables Rev.2 | dated | 16.11.2020 |
| A4-DS-2 Datasheet of materials (40 sheets) Rev.0 | dated | 16.11.2020 |
| A4-IEC.32 Technical note (10 sheets) Rev.3 | dated | 16.11.2020 |
| A4-IEC.33 Example for chosen and marking (4 sheets) Rev.3 | dated | 16.11.2020 |
| A4-IEC.36 Equivalence table for threads male and female hubs Rev.1 | dated | 16.11.2020 |
| A4-IEC.T70-1 Drawing dimensions flat washer (chloroprene, silicone) Rev.1 | dated | 16.11.2020 |
| A4-IEC.T70-2 Drawing dimensions flat washer (PA6, fiber) Rev.1 | dated | 16.11.2020 |
| MI-IEC.34 Safety, maintenance and mounting instructions (13 sheets) Rev.3 | dated | 16.11.2020 |
| A4-IEC.86 PF/PF Series IECEx Ex db IIC Ex eb IIC reducer dimension table | dated | 12.02.2020 |

*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.

Certificate history

| Issue N. | Issue Date | Summary description of variation |
|----------|------------|--|
| 00 | 17/03/2014 | First Issue of the Certificate. |
| 01 | 30/05/2016 | 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. |
| 02 | 10/05/2019 | To the Adaptors and Plugs series the new sizes M60, M70, M80, M85, M100 and M110 with ISO pitch 2.0 have been added. |
| 03 | 12/05/2021 | Adaptors and Plugs series were assessed in compliance to EN IEC 60079-0:2018 new standard, for Group I (mines) applications, Aluminium alloy and new Brass type CuZn42 as additional manufacturing materials (Group I equipment excluded) and new M12x1.5 and 1/4"NPT sizes have been added. Furthermore, thread lengths for B-TS NPT Plug models have been updated. |
| 04 | 08/02/2022 | Standard update to EN IEC 60079-7:2015/A1:2018 |

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