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Schema di certificazione

CESI-ATEX

CERTIFICATE



[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 17 ATEX 007X /03

[4] Product: **Barrier cable glands KBCTA.., KBCTN.. and KBCTNLS..**

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

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

[7] This supplementary certificate extends EU-Type Examination Certificate **CESI 17 ATEX 007X**, 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-C1017973**.

[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 » (only for types KBCTA..
and KBCTN..)**
and / or
 II 2GD Ex db IIC Gb and Ex eb IIC Gb » (all types)
Ex tb IIIC Db
IP66/68

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Date 28/10/2021 - Translation issued the 28/10/2021

Prepared
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PRD N. 018B
Membro degli Accordi di Mutuo
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Signatory of EA, IAF and ILAC
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[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007X /03**

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

Variation 3.1:

The certified **Barrier cable glands** types **KBCTA.., KBCTN.., KBCTNLS.. (CenTAURUS)** previously assessed in compliance to EN 60079-0:2012+A11:2013 and EN 60079-7:2015, has been re-assessed on the basis of the standards EN IEC 60079-0:2018 and EN IEC 60079-7:2015+A1:2018.

Variation 3.2:

Editorial corrections on the following clamping range sizes:

KBCTA.. and KBCTN.. type

Cable gland size	Thread size		Cable dia. Ranges (mm)			Max. No. of cores	Max. cross sectional area of cores admitted (mm ²)
	ISO 261	NPT	Cable sheath diameter	Over core diameter			
			Min. ÷ Max.	Min.	Max.		
1XS..	M 20x1.5	1/2"	3.0 – 8.5	1.5	8.5	9	70.90
5M	M 50x1.5	-	35.0 – 48.0	1.5	37.0	75	1075.20
5N	-	1" ½	29.0 – 40.0	1.5	29.0	55	660.50
6M	M 63x1.5	-	42.0 – 56.0	1.5	46.0	99	1661.90
6N	-	2"	35.0 – 48.0	1.5	37.0	75	1075.20

For alternative threads "P", "C" and "S", the "M" – Metric sizes apply.

Variation 3.3:

To the certified **Barrier cable glands** types **KBCTA.. and KBCTN.. (CenTAURUS)** with certificate no. **CESI 17 ATEX 007X**, new type **KBCTNLS..** was added.

Unchanged the constructional characteristics of Barrier cable glands types KBCTA.., KBCTN.. (CenTAURUS).

Description of Product

A Barrier gland is an Ex db cable gland incorporating a compound filled chamber sealing around the individual cores of the cable to maintain the flameproof integrity of the equipment on which it has been fitted.

The Barrier glands **KBCTA.., KBCTN.., KBCTNLS..** series (commercial gland family named CENTAURUS) are suitable for inserting single cable or multiple circular cores into Ex db enclosures having threaded entries and Ex eb or Ex tb enclosures having either threaded or plane entries. Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. The epoxy filling compound type **epoxy putty** is used to seal cores and gland body together and to clamp the cables to prevent pulling or twisting forces being transmitted to the conductors connections.

Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.

The Barrier glands types KBCTN.. and KBCTNLS.. are designed for non-armoured cables while the Barrier glands type KBCTA.. are designed for SWA (steel wire armoured) cables, SWB (steel wire braided) and STA (steel tape armoured) cables.

KBCTNLS type barrier conduit fitting is designed by combining KBCTN type Barrier gland and hoses. The lower part is the same as KBCTN type Barrier gland and upper part is designed for hose mounting. It is comprised by a cap, pressure ring, ferrule, barrier pressure ring bushing, barrier tube, lower body and O-Ring. All metal and rubber material types which are used in KBCTN and KBCTNLS types are the same.

The Barrier glands types KBCTN.. and KBCTA.. are designed for Group I and Group II applications while KBCTNLS.. is designed for Group II applications only.

The Barrier glands **KBCTA.., KBCTN.., KBCTNLS..** series have an ambient and service temperature range from -60°C up to +100°C, with the limitation from -50°C up to +80°C when supplied with Fiber flat washers.

The Barrier glands standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M90x1.5. Alternative available threads are tapered NPT ANSI/ASME B1.20.1 from 1/2" up to 3".

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Schedule

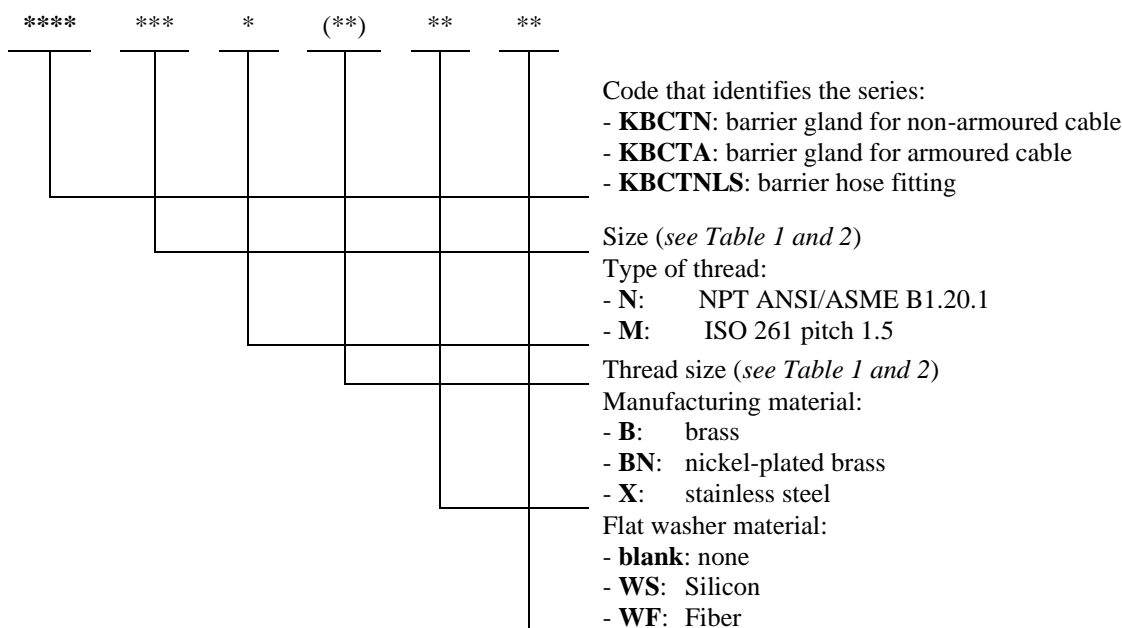
[14]

SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007X /03

To guarantee the IP 66/68 (50 m for 30 min.) degree of protection the Barrier glands **KBCTA..**, **KBCTN..**, **KBCTNLS..** series with cylindrical threads employs an O-Ring or a flat washer made of Silicon rubber, while for tapered threads the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

The Barrier glands are generally made in Brass. The alternative materials Nickel plated brass or Stainless steel can be supplied on demand.

Identification of cable glands **KBCTA..**, **KBCTN..**, **KBCTNLS..** series:



Types and thread sizes of cable glands are listed on the following Tables 1 and 2.

Table 1:

Barrier cable glands KBCTN.., KBCTA.. series							
Cable gland size	Thread size		Cable dia. Ranges (mm)			Max. No. of cores	Max. cross sectional area of cores admitted (mm ²)
	ISO 261 pitch 1.5	NPT	Cable sheath diameter Min. ÷ Max.	Over single core dia. Min. Max.			
1XS..	M 20	1/2"	3.0 – 8.5	1.5	8.5	9	70.90
1S..	M 20	1/2"	6.0 – 13.0	1.5	9.5	9	70.90
1..	M 20	1/2"	8.0 – 15.0	1.5	9.5	9	70.90
1L..	M 20	1/2"	13.5 – 21.0	1.5	12.0	11	113.10
2S..	M 25	3/4"	8.0 – 15.0	1.5	9.5	9	70.90
2..	M 25	3/4"	13.5 – 21.0	1.5	12.0	11	113.10
2L..	M 25	3/4"	18.0 – 27.0	1.5	15.0	22	176.70
3..	M 32	1"	18.0 – 27.0	1.5	15.0	22	176.70
3L..	M 32	1"	23.0 – 33.0	1.5	21.5	36	363.10

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007X /03**

...follows

Barrier cable glands KBCTN., KBCTA.. series							
Cable gland size	Thread size		Cable dia. Ranges (mm)			Max. No. of cores	Max. cross sectional area of cores admitted (mm ²)
	ISO 261 pitch 1.5	NPT	Cable sheath diameter Min. ÷ Max.	Over single core dia. Min. Max.			
4S..	M 40	1" ¼	23.0 – 33.0	1.5	21.5	36	363.10
4..	M 40	1" ¼	29.0 – 40.0	1.5	29.0	55	660.50
5SM	M 50	-	29.0 – 40.0	1.5	29.0	55	660.50
5M	M 50	-	35.0 – 48.0	1.5	37.0	75	1075.20
5N	-	1" ½	29.0 – 40.0	1.5	29.0	55	660.50
6SM	M 63	-	35.0 – 48.0	1.5	37.0	75	1075.20
6M	M 63	-	42.0 – 56.0	1.5	46.0	99	1661.90
6N	-	2"	35.0 – 48.0	1.5	37.0	75	1075.20
7SM	M 75	-	42.0 – 56.0	1.5	46.0	99	1661.90
7..	M 75	2" ½	54.0 – 70.0	1.5	58.0	129	2642.10
8..	M 90	3"	54.0 – 70.0	1.5	58.0	129	2642.10

Table 2:

Barrier cable glands KBCTNLS.. series							
Cable gland size	Thread size		Cable dia. Ranges (mm)			Max. No. of cores	Max. cross sectional area of cores admitted (mm ²)
	ISO 261 pitch 1.5	NPT	Over multi cores diameter Max.	Over single core dia. Min. Max.			
1S..	M 20	1/2"	9.5	1.5	9.5	9	70.90
	M 20	1/2"	12.0	1.5	12.0	11	113.1
	M 20	1/2"	9.5	1.5	9.5	9	70.90
1..	M 20	1/2"	12.0	1.5	12.0	11	113.10
2S..	M 25	3/4"	9.5	1.5	9.5	9	70.90
2..	M 25	3/4"	12.0	1.5	12.0	11	113.10
2L..	M 25	3/4"	15.0	1.5	15.0	22	176.70
3S..	M 32	1"	15.0	1.5	15.0	22	176.70
3..	M 32	1"	21.5	1.5	21.5	36	363.10
4S..	M 40	1" ¼	21.5	1.5	21.5	36	363.10
4..	M 40	1" ¼	29.0	1.5	29.0	55	660.50
5SM	M 50	-	29.0	1.5	29.0	55	660.50
5M	M 50	-	37.0	1.5	37.0	75	1075.20
5N	-	1" ½	29.0	1.5	29.0	55	660.50
6N	-	2"	37.0	1.5	37.0	75	1075.20

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007X /03**

Constructional characteristics

Degree of protection (EN 60529): IP 66 or IP 68 (50 m for 30 min.).
 Ambient temperature range: - 60 up to + 100 °C for models with Silicon flat washers.
 - 50 up to + 80 °C for models with Fiber flat washers.
 Service temperature range: - 60 up to + 100 °C for models with Silicon flat washers.
 - 50 up to + 80 °C for models with Fiber flat washers.

[16] **Report n. EX-C1017973**

Routine tests

None.

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

- The coupling of the Barrier cable glands 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 Barrier cable glands are mounted.
- The Barrier cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- When the cores will be fitted inside the sealing pot by filling compound, the mounting should guarantee a sufficient quantity of compound around each single core to ensure the clamping of the cemented joint. This shall be done as indicated in the manufacturer instructions.
- The Barrier cable glands **KBCTN..** and **KBCTA..** series have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) use.
- The Barrier cable glands **KBCTA..** series for braided cables (SWB types) and **KBCTNLS..** series are not admitted when applied for Group I (mines) use.
- The Barrier cable glands should be installed within the following ambient/service temperature ranges:
 - **from - 60°C up to + 100°C for models with Silicon flat washers;**
 - **from - 50°C up to + 80°C for models with Fiber flat washers.**
- The degree of protection IP 66/68 according to the EN 60529 standard will be guaranteed for the Barrier cable glands if the holes into which they 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.

[19] **Descriptive documents (prot. EX-C1017976)**

*A3-IEC.150 Lower body dimensions for Metric thread Rev.3	dated	15/04/2021
*A3-IEC.151 Barrier gland Barrier pot dimensions Rev.3	dated	15/04/2021
*A3-IEC.153 Barrier gland pressure ring dimensions (1F) Rev.3	dated	15/04/2021
*A3-IEC.162 Lower body dimensions for NPT thread Rev.3	dated	15/04/2021
*A3-IEC.166 Ferrule dimensions for KBCTNLS type cable glands for no armoured c. Rev.0	dated	15/04/2021
*A3-IEC.167 Plastic ring dimensions for KBCTNLS type cable glands for no armoured Rev.0	dated	15/04/2021
*A3-IEC.168 Cap dimensions for KBCTNLS type cable glands for no armoured cables Rev.0	dated	15/04/2021
*A3-IEC.169 Barrier Gland upper body dimensions for KBCTNLS Rev.0	dated	15/04/2021
*A3-IEC.170 O-Ring dimension for KBCTNLS Rev.0	dated	15/04/2021
*A3-IEC.171 Marking Rev.0	dated	15/04/2021

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 17 ATEX 007X /03**

Descriptive documents, follows:

*A3-IEC.172 Centaurus-N Barrier, Hydrus And Centaurus-N Barrier Conduit Comparis. Rev.0	dated	15/04/2021
*A3-KBCTNLS (M) Barrier cable gland dimension table for KBCTNLS Rev.0	dated	15/04/2021
*A3-KBCTNLS (NPT) Barrier cable gland dimension table for KBCTNLS Rev.0	dated	15/04/2021
*CA4-MI Safety, Maintenance and Mounting Instructions (17 pag.) Rev.3	dated	15/04/2021
*CA4-TN Technical note (7 pag.) Rev.3	dated	15/04/2021
-A3-IEC.152 Drawing A3-IEC.152 Rev.2	dated	20/07/2018
-A3-IEC.154 Drawing A3-IEC.154 Rev.2	dated	20/07/2018
-A3-IEC.155 Drawing A3-IEC.155 Rev.2	dated	20/07/2018
-A3-IEC.156 Drawing A3-IEC.156 Rev.2	dated	20/07/2018
-A3-IEC.159 Drawing A3-IEC.159 Rev.2	dated	20/07/2018
-A3-IEC.160 Drawing A3-IEC.160 Rev.2	dated	20/07/2018
*A3-IEC.161 O-Ring Dimension for KBCTA and KBCTN Rev.2	dated	20/07/2018
-A3-IEC.163 Drawing A3-IEC.163 Rev.2	dated	20/07/2018
-A3-KBCTA (M) Drawing A3-KBCTA (M) Rev.2	dated	20/07/2018
-A3-KBCTA (NPT) Drawing A3-KBCTA (NPT) Rev.2	dated	20/07/2018
-A3-KBCTN (M) Drawing A3-KBCTN (M) Rev.2	dated	20/07/2018
-A3-KBCTN (NPT) Drawing A3-KBCTN (NPT) Rev.2	dated	20/07/2018
-AA4-IEC.79 Adequate analysis and assessment of the risk(s) Rev.0	dated	21/04/2017
-MA3-IEC.157 Marking information for KBCTA and KBCTN (Group II, Group III) Rev.0	dated	10/06/2016
-MA3-IEC.158 Marking information for KBCTA and KBCTN (Group I) Rev.0	dated	10/06/2016
-MA3-IEC.164 Marking inf. for KBCTA and KBCTN (Group I, Group II and Group III) Rev.0	dated	10/06/2016
-MA3-IEC.165 Manufacturing materials and their related datasheets Rev.0	dated	10/06/2016

*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	22/05/2017	First Issue of the Certificate.
01	17/06/2018	New sizes for KBCTN..., KBCTA.. series have been added. Use of alternative flat washers made of Fiber have been added.
02	08/05/2019	New clamping range for sizes M20 and 1/2" NPT of KBCTN..., KBCTA.. series have been added. The new max. Ambient temperature of +100°C (limited up to +80°C with Fiber flat washers) has been added. The use of armoured cable types SWA, SWB and STA have been admitted.
03	28/10/2021	Standard update to EN IEC 60079-0:2017 and EN IEC 60079-7:2015/A1:2018, addition of the new type KBCTNLS...