



[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 18 ATEX 037X /02

[4] **Product: Barrier cable glands CG.BA., CG.BN..**

[5] **Manufacturer: Pepperl+Fuchs SE**

[6] **Address: Lilienthalstraße 200, 68307 Mannheim (Germany)**

[7] This supplementary certificate extends EU-Type Examination Certificate **CESI 18 ATEX 037X**, 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-C2003956**.

[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 IIIC Db

IP66/68

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Date 10/05/2022 - Translation issued the 10/05/2022

Prepared

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Description of the variation to the Product

Variation 2.1:

The manufacturer's company name was changed from **Pepperl+Fuchs GmbH** to **Pepperl+Fuchs SE**.

Variation 2.2:

The certified **Barrier cable glands** types **CG.BA..**, **CG.BN..** 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 2.3:

To the **Barrier cable glands** series, new Brass leadfree as new constructional material has been added.

Unchanged the constructional characteristics of Barrier cable glands types CG.BA.., CG.BN..

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 **CG.BA..**, **CG.BN..** series 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 CG.BN.. are designed for non-armoured cables while the Barrier glands type CG.BA.. are designed for SWA (steel wire armoured) cables, SWB (steel wire braided) and STA (steel tape armoured) cables.

The Barrier glands types CG.BN.. and CG.BA.. are designed for Group I and Group II applications.

The Barrier glands **CG.BA..**, **CG.BN..** 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".

To guarantee the IP 66/68 (50 m for 30 min.) degree of protection the Barrier glands **CG.BA..**, **CG.BN..** 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.

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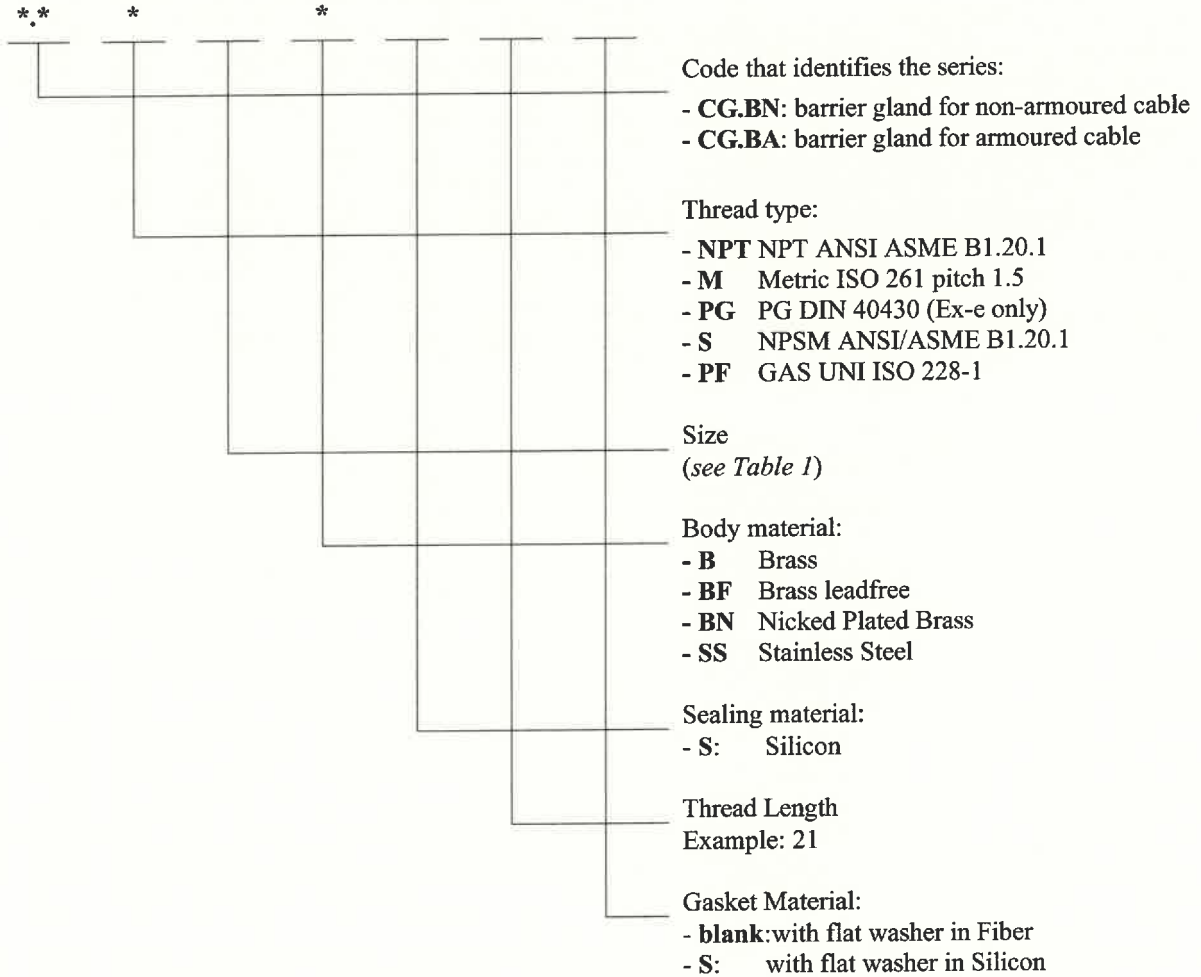
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Identification of cable glands CG.BA., CG.BN. series:



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

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Table 1:

Barrier cable glands CG.BN..., CG.BA.. series								
Size		Thread size		Cable dia. Ranges (mm)			Max. cross sectional area of cores admitted (mm ²)	
		ISO 261 pitch 1.5	NPT	Cable sheath dia. Min. + Max.	Over core dia.			Max. No. of cores
Metric	NPT				Min.	Max.		
M20XS..	NPT1/2XS..	M 20	1/2"	3.0 – 8.0	1.5	9.5	9	70.90
M20S..	NPT1/2S..	M 20	1/2"	6.0 – 13.0	1.5	9.5	9	70.90
M20..	NPT1/2..	M 20	1/2"	8.0 – 15.0	1.5	9.5	9	70.90
M20L..	NPT1/2L..	M 20	1/2"	13.5 – 21.0	1.5	12.0	11	113.10
M25S..	NPT3/4S..	M 25	3/4"	8.0 – 15.0	1.5	9.5	9	70.90
M25..	NPT3/4..	M 25	3/4"	13.5 – 21.0	1.5	12.0	11	113.10
M25L..	NPT3/4L..	M 25	3/4"	18.0 – 27.0	1.5	15.0	22	176.70
M32..	NPT1..	M 32	1"	18.0 – 27.0	1.5	15.0	22	176.70
M32L..	NPT1L..	M 32	1"	23.0 – 33.0	1.5	21.5	36	363.10
M40S..	NPT1-1/4S..	M 40	1" ¼	23.0 – 33.0	1.5	21.5	36	363.10
M40..	NPT1-1/4..	M 40	1" ¼	29.0 – 40.0	1.5	29.0	55	660.50
M50SM	-	M 50	-	29.0 – 40.0	1.5	29.0	55	660.50
M50..	NPT1-1/2..	M 50	1" ½	35.0 – 48.0	1.5	37.0	75	1075.20
M63SM	-	M 63	-	35.0 – 48.0	1.5	37.0	75	1075.20
M63..	NPT2..	M 63	2"	42.0 – 56.0	1.5	46.0	99	1661.90
M75SM	-	M 75	-	42.0 – 56.0	1.5	46.0	99	1661.90
M75..	NPT2-1/2..	M 75	2" ½	54.0 – 70.0	1.5	58.0	129	2642.10
M90..	NPT3..	M 90	3"	54.0 – 70.0	1.5	58.0	129	2642.10

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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.

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Report n. EX-C2003956

Routine tests

None.

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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 **CG.BN..** and **CG.BA..** series have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) use.
- The Barrier cable glands **CG.BA..** series for braided cables (SWB types) 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.

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Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

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Descriptive documents (prot. EX-C2003961)

*PCA4-TN Technical Note (7 pag.) Rev.2	dated	13/01/2022
*PCA4-MI Safety, Maintenance and Mounting Instructions (13 pag.) Rev.2	dated	13/01/2022
-PA3-CG.BA(M) Barrier cable gland dimension table for CG.BA (M) Rev.1	dated	15.03.2019
-PA3-CG.BA(NPT) Barrier cable gland dimension table for CG.BA (NPT) Rev.1	dated	15.03.2019
-PA3-CG.BN(M) Barrier cable gland dimension table for CG.BN (M) Rev.1	dated	15.03.2019
-PA3-CG.BN(NPT) Barrier cable gland dimension table for CG.BN (NPT) Rev.1	dated	15.03.2019
-PA3-IEC.157 Marking info. for CG.BA and CG.BN (Group II, Group III) Rev.1	dated	15.03.2019
-PA3-IEC.158 Marking info. for CG.BA and CG.BN Barrier Glands (Group I) Rev.1	dated	15.03.2019
-PA3-IEC.164 Marking info. for CG.BA and CG.BN (Group I , Group II and Group III) Rev.0	dated	08.06.2018

*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	24/05/2019	New clamping range for sizes M20 and 1/2" NPT of CG.BN., CG.BA.. 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.
02	10/05/2022	Change of company name from Pepperl+Fuchs GmbH to Pepperl+Fuchs SE. Standard update to EN IEC 60079-0:2017 and EN IEC 60079-7:2015/A1:2018