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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 15 ATEX 035X /01

[4] Product: **Cable glands series PAP.., PAPO.., PAPU.., PNAU.., M..-PNAU.., PAP..LT.., PAPO..LT.., PAPU..LT.., LSK-PAP..**

[5] Manufacturer: **SPINA GROUP S.R.L.**

[6] Address: **Via del Tecchione 36/B – I-20098 San Giuliano Milanese – Italy**

[7] This supplementary certificate extends EC–Type Examination Certificate CESI 15 ATEX 035X to apply to products 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 equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and 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-C1019284.

[9] In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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 equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

Ex **I M2**	**Ex db I Mb** *and* **Ex eb I Mb**	*» (only for types PAP.. and PAP..LT.. Standard, M..-PNAU.., LSK-PAP..)*
	or	
Ex **II 2GD**	**Ex db IIC Gb** *and* **Ex eb IIC Gb** **Ex tb IIIC Db** **IP66/68**	*» (all types)*

Date 23/12/2021 - Translation issued the 23/12/2021

Prepared	**Verified**	**Approved**
Adrián Lucas Vagni	Alessandro Fedato	Roberto Piccin

Schema di certificazione CESI-ATEX

ACCREDIA
PRD N. 018B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

[15] **Description of the variation**

Variation 1.1.
The Manufacturer's name has been changed from **ATEX SRL** to **SPINA GROUP S.R.L.**

Variation 1.2.
The certified **Cable glands** previously assessed in compliance to EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007 and EN 60079-31:2009, were re-assessed on the basis of the Standards reported in paragraph **[18]**.

Variation 1.3.
New types **M..-PNAU..** (for non-armoured cables) and **LSK-PAP..** (for Lead sheathed cables) were added.

Variation 1.4.
The cable glands **PAP..** Standard type and **LSK-PAP..** (from M20x1.5 up to M90x1.5 sizes and with the exclusion of Aluminium alloy), **M..-PNAU..** type (M16x1.5 sizes excluded) and **PAP..LT..** Standard type (from M20x1.5 up to M130x2 sizes) were tested and upgraded to Group I executions.

Variation 1.5.
To the certified **Cable glands** the use of Aluminium alloy and Brass ($Cu\text{-}Zn_{42}$) as manufacturing material were added.

Variation 1.6.
The certified **Cable glands** supplied with Fiber flat washer were tested and upgraded to -50 °C.

Variation 1.7.
To the certified **Cable glands** types **PAP.., PAPO.., PAPU.., PAP..LT..** and **PAPU..LT..** new sizes have been added (the details of the new sizes can be found in the annexed drawings).

Description of equipment

The cable glands series **PAP.., PAPO.., PAPU.., PNAU.., M..-PNAU.., PAP..LT.., PAPO..LT.., PAPU..LT..** and **LSK-PAP..** are suitable for inserting circular cables 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. An elastomeric inner sealing ring is used in each gland type to facilitate sealing between the cable and gland body and to clamp the cable to prevent pulling or twisting forces being transmitted to the conductor 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 Standard types **PAP..** and **PAP..LT..** cable glands are suitable for steel wire armoured cables, while the type **LSK-PAP..** is suitable for lead sheathed armoured cables only. They are comprised of a male body, lower sealing ring, grounding cone, swivel braid retainer, middle body, upper sealing ring and cap. For type **LSK-PAP..** only are used a further contact spring and a metal washer to grounding the lead sheath. When the middle body is screwed onto the male body the cable wire armour is clamped between the swivel braid retainer and the grounding cone and the lower sealing ring is compressed onto the inner sheath of the cable. Sealing of the cable outer sheath is facilitated by the upper sealing ring which is compressed onto the outer sheath when the cap is screwed onto the middle body.

For Universal types **PAPU..** and **PAPU..LT..** cable glands the armour reduction ring is used. With this additional ring, they can be used for shielded cables. When the armour reduction ring is taken out, then they can be used for armoured cables. While Offshore types **PAPO..** and **PAPO..LT..** cable glands instead of the grounding cone, shielding cone is used and they are used for shielded cables.

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

The types **PNAU..** and **M..-PNAU..** glands are designed for non-armoured cables and are comprised of a male body, inner sealing ring, pressure ring and cap. When the cap is screwed onto the male body, the pressure ring comprises the lower sealing ring onto the outer sheath of the cable and realizes the clamping.

The cable glands Standard type **PAP..** and **LSK-PAP..** (from M20x1.5 up to M90x1.5 sizes and with the exclusion of Aluminium alloy), **PAP..LT..** Standard type (from M20x1.5 up to M130x2 sizes) and **M..-PNAU..** type (M16x1.5 sizes excluded) only are for Group I (mines) executions. While all the cable glands types **PAP..**, **LSK-PAP..**, **M..-PNAU..** and **PAP..LT..** are for Group IIC and Group IIIC. The cable glands should be also used for intrinsically safe circuits Ex i and should have a part painted in light blue.

The **PAP..** cable glands series standard threads types are NPT ANSI/ASME B1.20.1 from 1/4" up to 3"½ and cylindrical ISO Metric 965/1 and ISO 965/3 from M12x1.5 up to M110x1.5.

The **LSK-PAP..** cable glands series standard threads types are NPT ANSI/ASME B1.20.1 from 1/2" up to 3" and cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M90x1.5.

The **PNAU..** and **M..-PNAU..** cable glands series standard threads types are NPT ANSI/ASME B1.20.1 from 3/8" up to 3" and cylindrical ISO Metric 965/1 and ISO 965/3 from M16x1.5 up to M90x1.5.

For **PAP..LT..** and **PAPU..LT..** cable glands series standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M130x2 and tapered threads type NPT ANSI/ASME B1.20.1 from 1/2" up to 5", while for **PAPO..LT..** cable glands series standard threads types are cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M32x1.5 and tapered threads type NPT ANSI/ASME B1.20.1 from 1/2" up to 1".

Alternative available cylindrical threads are GAS ISO 228/1, NPSM ANSI/ASME B1.20.1 and type PG DIN 40430. Thread type PG DIN 40430 can be used for "Ex eb" execution only.

To guarantee the IP 66/68 degree of protection the cable glands types **PNAU..**, **M..-PNAU..**, **PAP..**, **LSK-PAP..** and **PAP..LT..** with cylindrical threads have a sealing edge machined for fitting an O-ring, alternatively it is available a flat washer, while for all other 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 cable glands are generally made in Brass. The following alternative materials can be supplied on demand:

- Nickel-plated Brass type CuZn39Pb3 EN 12164.
- Stainless steel type AISI316; AISI304; AISI303.
- Galvanized carbon steel type FE36; FE37 UNI 10233/4.
- Aluminium alloy EN AW-6026 EN 573-3 (PAP.. and LSK-PAP.. types, sizes from M25x1.5 up to M75x1.5 only).

In addition, the cable glands can be supplied with an anti-tearing nut, only if specifically required by the purchaser.

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Model identification

Identification of cable glands **PAP.., PAPO.., PAPU.., PNAU..** and **M..-PNAU..** types:

... ... (...) ... ... - ...

Code that identifies the type:
- **PAP**: cable gland for armoured or shielded cable
- **M..-PNAU**: cable gland for non-armoured cable
- **PNAU**: cable gland for non-armoured cable

Code that identifies the cable type *(**PAP** type only)*:
- **Blank**: Standard *(for armoured cables only)*
- **U**: Universal *(for armoured or shielded cables)*
- **O**: Offshore *(for shielded cables only)*

Size
(*see Tables 1, 2 and 3*)

Type of thread:
- **N**: NPT ANSI/ASME B1.20.1
- **M**: ISO 261 pitch 1.5
- **P**: PG DIN 40430 *(assessed for Ex eb protection mode only)*
- **S**: NPSM ANSI/ASME B1.20.1
- **C**: GAS ISO 228-1

Thread Size
(*see Tables 1, 2 and 3*)

Manufacturing material:
- **B**: brass
- **BN**: nickel-plated brass
- **X**: stainless steel
- **Z**: galvanized carbon steel
- **A**: aluminium alloy *(**PAP** type and M25 up to M75 sizes only)*

Seals material:
- **C**: Chloroprene (Neoprene)
- **S**: Silicon rubber

Flat washer:
- **Blank**: none
- **WC**: with flat washer in Chloroprene (Neoprene)
- **WS**: with flat washer in Silicon rubber
- **WF**: with flat washer in Fiber

Types and thread sizes of cable glands **PAP.., PAPO.., PAPU.., PNAU..** and **M..-PNAU..** are listed on the following Table 1, Table 2 and Table 3.

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Table 1:

PAP.., PAPO.., PAPU..					
Cable glands		**Thread size**		**Cable Dia. ranges (mm)**	
Type	**Size**	**NPT**	**ISO** pitch 1.5	**Inner sheath**	**Armour sheath**
PAP	0S..	1/4"	M 12	2-4	3-5.5
PAP, PAPO, PAPU	0SLM	-	M 12	3-7.5	6-12
	0SLN	1/4"	-	3-8	6-12
	01S..	3/8"	M 16	3-8.5	6-12
	01..	3/8"	M 16	6-12	8.5-16
	1S..	1/2"	M 20	3-8.5	6-12
	1..	1/2"	M 20	6-12	8.5-16
	1L..	1/2"	M 20	8.5-14.5	12-20
	2XS..	3/4"	M 25	3-8.5	6-12
	2S..	3/4"	M 25	6-12	8.5-16
	2..	3/4"	M 25	8.5-16	12-21
	2L..	3/4"	M 25	12-20	16-26
	3XS..	1"	M 32	6-12	8.5-16
	3S..	1"	M 32	12-20	16-26
	3..	1"	M 32	15-26	20-33
	4XS..	1 ¼"	M 40	12-20	16-26
	4S..	1 ¼"	M 40	15-26	20-33
	4..	1 ¼"	M 40	20-32	29-41
	5XS..	1 ½"	M 50	15-26	20-33
	5XM..	1 ½"	M 50	20-32	29-41
	5S..	1 ½"	M 50	22-35	33-48
	5..	1 ½"	M 50	27-41	36-52
	6XS..	2"	M 63	22-35	33-48
	6XM..	2"	M 63	27-41	36-52
	6S..	2"	M 63	35-45	43-57
	6..	2"	M 63	40-52	47-60
PAP	6LM	-	M 63	45-56	54-70
	6LN	2"	-	45-52	54-70
PAP, PAPO, PAPU	7XS..	2 ½"	M 75	35-45	43-57
	7S..	2 ½"	M 75	40-52	47-60
	7..	2 ½"	M 75	45-60	54-70
	8XS..	3"	M 90	40-52	47-60
	8S..	3"	M 90	45-60	54-70
	8..	3"	M 90	60-72	63-80
	9SN	3 ½"	-	45-60	54-70
	9N	3 ½"	-	60-72	63-80
	10SM	-	M 110	45-60	54-70
	10M	-	M 110	60-72	63-80

Note: Aluminium alloy available from M25x1.5 (1/2"NPT) up to M75x1.5 (2"½NPT) sizes only.

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Table 2:

PNAU..				
Cable glands		**Thread size**		**Cable Dia. ranges** (mm)
Type	**Size**	**NPT**	**ISO** pitch 1.5	
PNAU	01..	3/8"	M 16	3-8,5
	01L..	3/8"	M 16	6-12
	1..	1/2"	M 20	6-12
	1L..	1/2"	M 20	12-14,5
	2S..	3/4"	M 25	6-12
	2..	3/4"	M 25	12-16
	2L..	3/4"	M 25	12-20
	3S..	1"	M 32	12-20
	3..	1"	M 32	15-26
	4S..	1 ¼"	M 40	15-26
	4..	1 ¼"	M 40	20-32
	5S..	1 ½"	M 50	22-35
	5..	1 ½"	M 50	27-41
	6S..	2"	M 63	35-45
	6..	2"	M 63	40-52
	7S..	2 ½"	M 75	40-52
	7..	2 ½"	M 75	45-60
	8S..	3"	M 90	45-60
	8..	3"	M 90	60-72

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Table 3:

M..-PNAU..				
Cable glands		**Thread size**		**Cable Dia. ranges (mm)**
Type	**Size**	**NPT**	**ISO** pitch 1.5	
M2-PNAU	01..	3/8"	M 16	3-8.5
M1-PNAU	01L..	3/8"	M 16	6-9
M2-PNAU	01L..	3/8"	M 16	9-12
M1-PNAU	1..	1/2"	M 20	6-9
M2-PNAU	1..	1/2"	M 20	9-12
M1-PNAU	1L..	1/2"	M 20	8.5-11.5
M2-PNAU	1L..	1/2"	M 20	11.5-14.5
M1-PNAU	2S..	3/4"	M 25	6-9
M2-PNAU	2S..	3/4"	M 25	9-12
M1-PNAU	2..	3/4"	M 25	8.5-12.5
M2-PNAU	2..	3/4"	M 25	12.5-16
M1-PNAU	2L..	3/4"	M 25	12-16
M2-PNAU	2L..	3/4"	M 25	16-20
M1-PNAU	3S..	1"	M 32	12-16
M2-PNAU	3S..	1"	M 32	16-20
M1-PNAU	3..	1"	M 32	15-20
M2-PNAU	3..	1"	M 32	20-26
M1-PNAU	4S..	1 ¼"	M 40	15-20
M2-PNAU	4S..	1 ¼"	M 40	20-26
M1-PNAU	4..	1 ¼"	M 40	20-26
M2-PNAU	4..	1 ¼"	M 40	26-32
M1-PNAU	5S..	1 ½"	M 50	22-28
M2-PNAU	5S..	1 ½"	M 50	28-35
M1-PNAU	5..	1 ½"	M 50	27-34
M2-PNAU	5..	1 ½"	M 50	34-41
M1-PNAU	6S..	2"	M 63	35-40
M2-PNAU	6S..	2"	M 63	40-45
M1-PNAU	6..	2"	M 63	40-46
M2-PNAU	6..	2"	M 63	46-52
M1-PNAU	7S..	2 ½"	M 75	40-46
M2-PNAU	7S..	2 ½"	M 75	46-52
M1-PNAU	7..	2 ½"	M 75	45-52
M2-PNAU	7..	2 ½"	M 75	52-60
M1-PNAU	8S..	3"	M 90	45-52
M2-PNAU	8S..	3"	M 90	52-60
M1-PNAU	8..	3"	M 90	60-66
M2-PNAU	8..	3"	M 90	66-72

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Identification of cable glands **PAP..LT.. , PAPO..LT.. and PAPU..LT..** types:

PAP ... ... (...) LT ... ... - ...

Code that identifies cable glands for armoured or shielded cable

Code that identifies the cable type:
- **Blank**: Standard *(for armoured cables only)*
- **U**: Universal *(for armoured or shielded cables)*
- **O**: Offshore *(for shielded cables only)*

Size
(*see Table 4*)

Type of thread:
- **N**: NPT ANSI/ASME B1.20.1
- **M**: ISO 261 pitch 1.5
- **P**: PG DIN 40430 *(for Ex eb protection mode only)*
- **S**: NPSM ANSI/ASME B1.20.1
- **C**: GAS ISO 228-1

Thread size
(*see Table 4*)

LT (Lower temperature)
cable gland series

Manufacturing material:
- **B**: brass
- **BN**: nickel-plated brass
- **X**: stainless steel
- **Z**: galvanized carbon steel

Seals material:
- **C**: Chloroprene (Neoprene)
- **S**: Silicon rubber

Flat washer:
- **Blank**: none
- **WC**: with flat washer in Chloroprene (Neoprene)
- **WS**: with flat washer in Silicon rubber
- **WF**: with flat washer in Fiber

Types and thread sizes of cable glands **PAP..LT.., PAPO..LT..** and **PAPU..LT..** are listed on the following Table 4 and Table 5.

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Table 4:

PAP..LT.., PAPO..LT.., PAPU..LT..						
Cable glands		**Thread size**			**Cable Dia. ranges (mm)**	
Type	**Size**	**NPT**	**ISO** pitch 1.5	**ISO** pitch 2.0	**Inner sheath**	**Armour sheath**
PAP, PAPO, PAPU	1..	1/2"	M 20	-	8.5-14.5	12-20
	2XM..	3/4"	M 25	-	8.5-14.5	12-20
	2..	3/4"	M 25	-	8.5-16	12-21
	3XM..	1"	M 32	-	8.5-16	12-21
PAP, PAPU	8LM	-	-	M 90	70-82	78-90
	9MN	3" ½	-	-	70-82	78-90
	9SM	-	-	M 100	80-92	88-100
	10SN	4"	-	-	80-92	88-100
	10LM	-	-	M 110	90-101	98-110
	10N	4"	-	-	90-101	98-110
	13M	-	-	M 130	100-115	109-123
	11SN	5"	-	-	100-115	109-123

Identification of cable glands **LSK-PAP..** type:

LSK-PAP ... ... (...) ... ...

Code that identifies the cable type:
- **Blank**: Standard *(for armoured cables only)*
- **U**: Universal *(for armoured or shielded cables)*
- **O**: Offshore *(for shielded cables only)*

Size
(*see Table 5*)

Type of thread:
- **N**: NPT ANSI/ASME B1.20.1
- **M**: ISO 261 pitch 1.5
- **P**: PG DIN 40430 *(for Ex eb protection mode only)*
- **S**: NPSM ANSI/ASME B1.20.1
- **C**: GAS ISO 228-1

Thread Size
(*see Table 5*)

Manufacturing material:
- **B**: brass
- **BN**: nickel-plated brass
- **X**: stainless steel
- **Z**: galvanized carbon steel
- **A**: aluminium alloy *(sizes M25 up to M75 only)*

Seals material:
- **C**: Chloroprene (Neoprene)
- **S**: Silicon rubber

Flat washer:
- **Blank**: none
- **WC**: with flat washer in Chloroprene (Neoprene)
- **WS**: with flat washer in Silicon rubber
- **WF**: with flat washer in Fiber

Types and thread sizes of cable glands **LSK-PAP..** are listed on the following Table 5.

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Table 5:

LSK-PAP..					
Cable glands		**Thread size**		**Cable Dia. ranges (mm)**	
Type	**Size**	**NPT**	**ISO** pitch 1.5	**Inner sheath**	**Armour sheath**
LSK-PAP	1S..	1/2"	M 20	3-8	6-12
	1..	1/2"	M 20	6-11.5	8.5-16
	1L..	1/2"	M 20	8.5-14	12-20
	2XS..	3/4"	M 25	3-8	6-12
	2S..	3/4"	M 25	6-11.5	8.5-16
	2..	3/4"	M 25	8.5-15	12-21
	2L..	3/4"	M 25	12-19	16-26
	3XS..	1"	M 32	6-11.5	8.5-16
	3S..	1"	M 32	12-19	16-26
	3..	1"	M 32	15-25	20-33
	4XS..	1 ¼"	M 40	12-19	16-26
	4S..	1 ¼"	M 40	15-25	20-33
	4..	1 ¼"	M 40	20-31	29-41
	5XS..	1 ½"	M 50	15-25	20-33
	5XM..	1 ½"	M 50	20-31	29-41
	5S..	1 ½"	M 50	22-34	33-48
	5..	1 ½"	M 50	27-40	36-52
	6XSM	-	M 63	22-35	33-48
	6XSN	2"	-	22-34	33-48
	6XM..	2"	M 63	27-40	36-52
	6S..	2"	M 63	35-44	43-57
	6..	2"	M 63	40-50	47-60
	6LM	-	M 63	45-56	54-70
	6LN	2"	-	45-50	54-70
	7XS..	2 ½"	M 75	35-44	43-57
	7S..	2 ½"	M 75	40-50	47-60
	7..	2 ½"	M 75	45-58	54-70
	8XS..	3"	M 90	40-50	47-60
	8S..	3"	M 90	45-58	54-70
	8..	3"	M 90	60-70	63-80

Note: Aluminium alloy available from M25x1.5 (1/2"NPT) up to M75x1.5 (2"½NPT) sizes only.

Ambient temperature

Models with sealing rings made of Chloroprene rubber ..... - 40 ÷ + 100 °C for **PAP..,PNAU..,LSK-PAP..**;
- 40 ÷ + 80 °C for **M..-PNAU..,PAP..LT..**

Models with sealing rings made of Silicon rubber..... - 60 ÷ + 130 °C for **PAP..,PNAU..,LSK-PAP..**;
- 60 ÷ + 80 °C for **M..-PNAU..,PAP..LT..**

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

PAP.., **LSK-PAP..** models made of Aluminium alloy ..... up to + 80 °C.

Types for **Group I** applications ..... up to + 80 °C.

Models supplied with Fiber flat washer..... - 50 ÷ + 80 °C for all types.

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

The cable gland types, installation Group, manufacturer materials and ambient temperature ranges are reported in the table below:

Type	Execution	Materials	Seals	Ambient Temp.
PAP.. **LSK-PAP..**	Group I	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	*All seals*	-20°C ÷ +80°C
	Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +100°C
			Silicon	-60°C ÷ +130°C
		Aluminium alloy	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	Chloroprene	-20°C ÷ +100°C
			Silicon	-20°C ÷ +130°C
PNAU..	Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	All seals	-20°C ÷ +80°C
M..-PNAU..	Group I Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	*All seals*	-20°C ÷ +80°C
PAP..LT..	Group I Group IIC Group IIIC	Brass, Nickel plated brass, Stainless steel	Chloroprene	-40°C ÷ +80°C
			Silicon	-60°C ÷ +80°C
		Galvanised steel	*All seals*	-20°C ÷ +80°C
Restricted use to the ambient temperature range of -50°C ÷ +80°C for all types whit fiber flat washers.				

[16] **Report n.** EX-C1019284.

Routine tests
None.

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

- The coupling of the 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 cable glands are mounted.
- The cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- Only cable glands types **PAP..** (Standard) and **LSK-PAP..** from M20x1.5 up to M90x1.5 sizes, **PAP..LT..** (Standard) all sizes and **M..-PNAU..** M16x1.5 sizes excluded, are admitted for Group I (mines) applications. They have to be protected from hydraulic fluids, oils and greases.
- The **LSK-PAP..** cable glands types M20x1.5 sizes with clamping range Ø3.0÷8.5 are admitted for Group II applications only.
- The **PAP..** and **LSK-PAP..** cable glands types made of Aluminium alloy are not admitted for Group I applications and are available from M25x1.5 up to M75x1.5 sizes only.
- The cable glands shall be installed in such a way that the temperature at the mounting point will remain within the service temperature ranges accordingly to the marking.
- The degree of protection IP 66/68 according to the EN 60529 standard will be guaranteed for the cable glands if the holes into which cable glands 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.

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

[18] **Essential Health and Safety Requirements**
Compliance with the Essential Health and Safety Requirements is assured by compliance to the following harmonized standards:

EN IEC 60079-0:2018	Explosive atmospheres – Part 0: Equipment - General requirements
EN 60079-1:2014	Part 1: Equipment protection by flameproof enclosure "d"
EN IEC 60079-7:2015/A1:2018	Part 7: Equipment protection by increased safety "e"
EN 60079-31:2014	Part 31: Equipment dust ignition protection by enclosure "t"

[19] **Descriptive documents** (prot. EX-C1019285)

*SA4-IEC.03 Technical Note (9 pg.) Rev.1	dated	28.09.2021
*SMI.IEC.10 Safety and Mounting Instructions (23 pg.) Rev.1	dated	28.09.2021
*SA4-MI-LSK-PAP Safety and Mounting Instruction for LSK-PAP (11 pg.) Rev.0	dated	28.09.2021
*SA3-PAP(M) Drawing Cable glands type PAP with Metric thread Rev.1	dated	28.09.2021
*SA3-PAP(NPT) Drawing Cable glands type PAP with NPT thread Rev.1	dated	28.09.2021
*SA3-PAPO(M) Drawing Cable glands type PAPO.. Metric thread Rev.1	dated	28.09.2021
*SA3-PAPO(NPT) Drawing Cable glands type PAPO.. with NPT thread Rev.1	dated	28.09.2021
*SA3-PAPU(M) Drawing Cable glands type PAPU.. with Metric thread Rev.1	dated	28.09.2021
*SA3-PAPU(NPT) Drawing Cable glands type PAPU.. with NPT thread Rev.1	dated	28.09.2021
*SA3-PNAU(M) Drawing Cable glands type PNAU with Metric thread Rev.1	dated	28.09.2021
*SA3-PNAU(NPT) Drawing Cable glands type PNAU with NPT thread Rev.1	dated	28.09.2021
*SA3-MPNAU(M) Drawing M..-PNAU.. cable glands Metric thread Rev.0	dated	28.09.2021
*SA3-MPNAU(NPT) Drawing M..-PNAU.. cable glands NPT thread Rev.0	dated	28.09.2021
*SA3-PAPLT(M) Drawing Cable glands PAPLT type with Metric thread Rev.1	dated	28.09.2021
*SA3-PAPLT(NPT) Drawing Cable glands type PAPLT with NPT thread Rev.1	dated	28.09.2021
*SA3-PAPOLT(M) Drawing Cable glands Metric thread PAPO..LT type Rev.1	dated	28.09.2021
*SA3-PAPOLT (NPT) Drawing Cable glands NPT thread PAPO..LT Rev.1	dated	28.09.2021
*SA3-PAPULT(M) Drawing Cable glands Metric thread PAPU..LT type Rev.1	dated	28.09.2021
*SA3-PAPULT(NPT) Drawing Cable glands NPT thread PAPU..LT Rev.1	dated	28.09.2021
*SA3-LSK-PAP(M) Cable glands metric thread LSK-PAP type Rev.0	dated	28.09.2021
*SA3-LSK-PAP(NPT) Cable glands NPT thread LSK-PAP.. type Rev.0	dated	28.09.2021
*SA4-IEC.67 Group II and Group III Marking Information for PAP Rev.1	dated	28.09.2021
*SA4-IEC.75 Group I Marking Information for PAP and M..-PNAU.. Rev.1	dated	28.09.2021
*SA4-IEC.76 Group II and Group III Marking Info. for PNAU and M..-PNAU.. Rev.1	dated	28.09.2021
*SA4-14-IEC.67 Group I , Group II and Group III Marking Info. for PAP..LT Rev.1	dated	28.09.2021
*SA4-IEC.313 Marking Information For LSK- PAP Cable Glands Rev.1	dated	28.09.2021
- SA3-15-IEC.61 Rev.0	dated	05.02.2015
- SA3-15-IEC.62 Rev.0	dated	05.02.2015
- SA3-15-IEC.64 Rev.0	dated	05.02.2015
- SA3-15-IEC.68 Rev.0	dated	05.02.2015
- SA3-IEC.02 (M) Rev.0	dated	05.02.2015
- SA3-IEC.03 (NPT) Rev.0	dated	05.02.2015
- SA3-IEC.53 (M) Rev.0	dated	05.02.2015
- SA3-IEC.54 (NPT) Rev.0	dated	05.02.2015

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 15 ATEX 035X /01**

Descriptive documents, follows:

- SA3-IEC.58 Rev.0	dated	05.02.2015
- SA3-IEC.61 Rev.0	dated	05.02.2015
- SA3-IEC.62 Rev.0	dated	05.02.2015
- SA3-IEC.64 Rev.0	dated	05.02.2015
- SA3-IEC.68 Rev.0	dated	05.02.2015
- SA4-15-IEC.56 Rev.0	dated	05.02.2015
- SA4-15-IEC.63 Rev.0	dated	05.02.2015
- SA4-15-IEC.65 Rev.0	dated	05.02.2015
- SA4-15-IEC.67 Rev.0	dated	05.02.2015
- SA4-15-IEC.70 Rev.0	dated	05.02.2015
- SA4-15-IEC.LT08 Rev.0	dated	05.02.2015
- SA4-15-IEC.LT09 Rev.0	dated	05.02.2015
- SA4-IEC.04 Rev.0	dated	05.02.2015
- SA4-IEC.06 Rev.0	dated	05.02.2015
- SA4-IEC.07 Rev.0	dated	05.02.2015
- SA4-IEC.08 Rev.0	dated	05.02.2015
- SA4-IEC.09 Rev.0	dated	05.02.2015
- SA4-IEC.55 Rev.0	dated	05.02.2015
- SA4-IEC.56 Rev.0	dated	05.02.2015
- SA4-IEC.57 Rev.0	dated	05.02.2015
- SA4-IEC.59 Rev.0	dated	05.02.2015
- SA4-IEC.60 Rev.0	dated	05.02.2015
- SA4-IEC.63 Rev.0	dated	05.02.2015
- SA4-IEC.65 Rev.0	dated	05.02.2015
- SA4-IEC.70 Rev.0	dated	05.02.2015
- Properties of sealing rings - Chloroprene Rev.0	dated	18.01.2013
- Properties of sealing rings - Silicon rubber Rev.0	dated	18.01.2013

*Note: an * is included before the title of documents that are new or revised.*

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

Certificate history

Issue nr	Issue Date	Summary description of variation
01	23/12/2021	Change of company name. Standard update. Upgraded to Group I executions. New types. New materials. New sizes.
00	15/06/2015	First Issue of the Certificate.