



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

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

[3] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

[4] PRODUCT: **Metal cable glands**
TYPE/SERIES: **421U...; 421M...; 421S...; 421MC...; 421LN...; 421LQ...; 421LS...; 421MS...;**
421U...(axb), 421M...(axb); 421S...(axb); 421MC...(axb); 421LN...(axb);
421LQ...(axb); 421LS...(axb); 421MS...(axb);

[5] MANUFACTURER: **Shomal Engineering & Manufacturing Co.**

[6] ADDRESS: **No.5, 2nd Baharestan st.,Pasdaran Ave.,Tehran-Iran**

[7] This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documents therein referred to.

[8] IMQ, notified body N° 0051, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 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 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 Report No.: **AT18-0025271-01**


[9] Compliance with Essential Health and Safety Requirements, except in respect of those listed at item 18 of the annex, has been assured by compliance with:

EN 60079-0:2012 + A11:2013; EN 60079-1:2014; EN 60079-7:2015; EN 60079-31: 2014

[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 and construction of the specified product. 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 equipment or protective system shall include the following:

 **II 2G Ex eb IIC Gb; Ex db IIC Gb**
II 2 D Ex tb IIIC Db

This document is composed of 8 pages including 1 annex

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Stefano Ferrari
B.U. PRODUCT CONFORMITY ASSESSMENT
CERTIFICATION SECTOR – MANAGER

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[13] Annex

[14] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

[15] Description of product:

The cable glands series 421U..., 421M..., 421S..., 421MC..., 421LN..., 421LQ..., 421LS..., 421MS... 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.

The cable glands series 421U...(axb), 421M...(axb), 421S...(axb), 421MC...(axb), 421LN...(axb), 421LQ...(axb), 421LS...(axb), 421MS...(axb) are suitable for inserting flat cables into Ex eb or Ex tb enclosures having either threaded or plane entries.

Cable glands are suitable for not-armoured cables, and are made of metal body (aluminium; stainless steel; brass; galvanized steel; nickel-plated brass). Sealing rings are made of silicon or neoprene (chloroprene) for all types, as detailed in Table 2.

The degree of the IP protection is IP66/68.

Cable glands are suitable for electrical equipment either with type of protection Ex db, Ex eb or type of protection Ex tb, suitability for each model is shown in following tables. Cable glands with type of protection "db" and "eb" can be also used for wiring of intrinsically safe circuits. These cable glands have a light blue painted part.

Cable glands for circular cables can be supplied with tap, commercial called "dome plug", polyamide made, as accessory (421DP-., available in black, blue color), suitable to guarantee IP degree when installed according to manufacturer's instructions. Details in Table 5. Cable glands are intended for use with any cable type where sealing and retention as well as the type of protection is ensured by gripping the outer sheath of cable according to EN 60079-14.

Proper details to the use on installation and use of cable glands are listed in Safety, Maintenance and Mounting Instructions (RM01 rev.0 dated 2018.06.25).

Table 2: Materials ¹

Series	Body materials	Sealing rings material	Flat washer materials	O-ring	Accessories
421U...	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421M.....	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421MC...	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421S...	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421LS...	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421LQ...	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421LN...	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421MS.....	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	chloroprene (neoprene) silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer dome plug
421U... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421M... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421MC... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421S... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421LS... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421LQ... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421LN... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer
421MS... (axb)	stainless steel; brass ; aluminium; nickel plated brass; galvanized steel	silicone	chloroprene (neoprene), silicone, EPDM rubber, fiber KLINGERSIL® C-4400, PA washer	neoprene silicone EPDM, Viton	serrated washer

¹ Service temperature is related to material of sealing rings which cable glands body is made of, but can be additionally limited by material of flat washer/OR/accessories material temperature limitations: chloroprene (-40÷100 °C); silicone (-60÷180 °C); EPDM rubber (-40÷110 °C); KLINGERSIL® C-4400 fiber (-50÷130 °C); NBR (-40÷100 °C), PA (-60÷65 °C); Viton (-17÷210 °C). The use of these materials has to be taken into account in determination of lower and upper limit of service temperature of cable glands.

[13] **Annex**

[14] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

[15.1] **Models/Series Identification:**

The characteristics of the cable glands are codified according to following key code:

421U	(1)	(2)	(3)	(4)	(5)	(6)	(1): size, according to related table			
421MC	(1)	(2)	(3)	(4)	(5)	(6)	(2): thread type: "N" – NPT ANSI ASME B1.20.1 "M" – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3) "P" – PG DIN 40430 (Ex e only) "C" – GAS UNI ISO 228/1 "S" – N.P.S.M. "G" – GAS UNI ISO 7/1 "K" – GAS Gk UNI 6125 (for Ex e only)			
421S	(1)	(2)	(3)	(4)	(5)	(6)	(3): body material: "B" – brass "X" – stainless steel "A" – aluminium "BN" – Nickel Plated Brass "Z" – Galvanized Steel (4): Sealing material: "C" – Chloroprene "S" – Silicon (5): Flat washer material: Blank -None "WC" – Chloroprene "WS" – Silicon "WF" – Fiber "WE" – EPDM "WP" – Polyamide (6): Sealing hole type Blank – Circular sealing ring hole dimensios (axb) – Flat sealing ring hole dimensions			
421LS	(1)	(2)	(3)	(4)	(5)	(6)				
421LQ	(1)	(2)	(3)	(4)	(5)	(6)				
421LN	(1)	(2)	(3)	(4)	(5)	(6)				
421M	(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(1): male size, according to related table (2): male thread type: "N" – NPT ANSI ASME B1.20.1 "M" – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3) (3): female size, according to related table (4): female thread type: "N" – NPT ANSI ASME B1.20.1 "M" – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3) (5): body material: "B" – brass "X" – stainless steel "A" – aluminium "BN" – Nickel Plated Brass "Z" – Galvanized Steel (6): Sealing material: "C" – Chloroprene "S" – Silicon (7): Flat washer material: Blank -None "WC" – Chloroprene "WS" – Silicon "WF" – Fiber "WE" – EPDM "WP" – Polyamide (8): Sealing hole type Blank – Circular sealing ring hole dimensios (axb) – Flat sealing ring hole dimensions
421MS	(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	
421DP	(1)	-	(2)	(1): Colour " " : Black "B": Blue						

[13] **Annex**

[14] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

Models included in this Certificate are shown in Tables 3.x and 4.x in following pages.

Table 3.1*: 421U...

Model	Min-max cable Ø mm	Torque value [Nm]			Suitable for	
		S1+S2+S3 triple sealing ring	S1+S2 double sealing ring	S1 single sealing ring	Ex db	Ex eb Ex tb
421U 0XS..	2-4	-	-	4	no	yes
421U 0S..	4-8	20	18	-	no	yes
421U 0..	3-8	-	25	18	yes	yes
421U 01S..	3-9	-	25	18	yes	yes
421U 01..	4-12	20	18	16	yes	yes
421U 1S..	3-9	-	25	18	yes	yes
421U 1..	4-12	20	18	16	yes	yes
421U 12..	10-16	25	22	18	yes	yes
421U 2S..	4-12	20	18	16	yes	yes
421U 2..	10-18	25	22	18	yes	yes
421U 23..	14-20	28	23	-	yes	yes
421U 3S..	10-18	25	22	18	yes	yes
421U 3..	14-24	28	23	20	yes	yes
421U 34..	22-28	56	50	35	yes	yes
421U 4S..	14-24	28	23	20	yes	yes
421U 4..	22-32	56	50	45	yes	yes
421U 45..	26-34	57	55	52	yes	yes
421U 5S..	22-32	56	50	45	yes	yes
421U 5..	26-35	57	55	52	yes	yes
421U 56..	35-44	190	155	140	yes	yes
421U 6S..	26-35	57	55	52	yes	yes
421U 6..	35-45	190	155	140	yes	yes
421U 67..	46-56	160	145	135	yes	yes
421U 7S..	35-45	190	155	140	yes	yes
421U 7..	46-62	185	175	150	yes	yes
421U 78..	60-69	123	118	-	yes	yes
421U 8S..	46-62	185	175	150	yes	yes
421U 8..	60-75	123	118	110	yes	yes
421U 810..	75-82	135	130	125	yes	yes
421U 10S..	60-75	123	118	110	yes	yes
421U 10..	75-85	135	130	125	yes	yes
421U 11..	85-95	180	175	170	yes	yes
421U 115XS..	75-85	135	130	125	yes	yes
421U 115S..	85-95	180	175	170	yes	yes
421U 115..	95-105	450	450	450	yes	yes
421U 13..	105-115	526	500	535	yes	yes

[13] **Annex**

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Table 3.2*: 421M; 421MS

Model	Min-max cable Ø mm	Torque value [Nm]			Suitable for		
		S1+S2+S3 triple sealing ring	S1+S2 double sealing ring	S1 single sealing ring	Ex db	Ex eb Ex tb	
421M 05.05..	-	4-8	20	18	-	no	yes
421M 05.01..	-	4-8	20	18	-	no	yes
421M 01.05..	-	4-8	20	18	16	yes	yes
421M 01.12..	421MS 01.12..	4-12	20	18	16	yes	yes
421M 12.01..	421MS 12.01..	4-12	25	22	18	yes	yes
421M 1.1..	421MS 1.1..	4-12	20	18	16	yes	yes
421M 12.12..	421MS 12.12..	10-16	25	22	18	yes	yes
421M 12.23..	421MS 12.23..	10-16	25	22	18	yes	yes
421M 23.12..	421MS 23.12..	10-16	25	22	18	yes	yes
421M 2.2..	421MS 2.2..	10-18	25	22	18	yes	yes
421M 23.23..	421MS 23.23..	14-20	28	23	-	yes	yes
421M 23.34..	421MS 23.34..	14-20	28	23	-	yes	yes
421M 34.23..	421MS 34.23..	14-20	28	23	-	yes	yes
421M 3.3..	421MS 3.3..	14-24	28	23	20	yes	yes
421M 34.34..	421MS 34.34..	22-28	56	50	35	yes	yes
421M 34.45..	421MS 34.45..	22-28	56	50	35	yes	yes
421M 45.34..	421MS 45.34..	22-28	56	50	35	yes	yes
421M 4.4..	421MS 4.4..	22-32	56	50	45	yes	yes
421M 45.45..	421MS 45.45..	26-34	57	55	52	yes	yes
421M 45.56..	421MS 45.56..	26-34	57	55	52	yes	yes
421M 5.5..	421MS 5.5..	26-35	57	55	52	yes	yes
421M 5.45..	421MS 5.45..	26-34	57	55	52	yes	yes
421M 56.56..	421MS 56.56..	35-44	190	155	140	yes	yes
421M 56.67..	421MS 56.67..	35-44	190	155	140	yes	yes
421M 67.56..	421MS 67.56..	35-44	190	155	140	yes	yes
421M 6.6..	421MS 6.6..	35-45	190	155	140	yes	yes
421M 67.67..	421MS 67.67..	46-56	160	145	135	yes	yes
421M 67.78..	421MS 67.78..	46-56	160	145	135	yes	yes
421M 78.67..	421MS 78.67..	46-56	160	145	135	yes	yes
421M 7.7..	421MS 7.7..	46-62	185	175	150	yes	yes
421M 78.78..	421MS 78.78..	60-70	123	118	-	yes	yes
421M 78.810..	421MS 78.810..	60-70	123	118	-	yes	yes
421M 810.78..	421MS 810.78..	60-70	135	130	-	yes	yes
421M 8.8..	421MS 8.8..	60-75	123	118	110	yes	yes
421M 810.810..	421MS 810.810..	75-82	135	130	125	yes	yes
421M 810.10..	421MS 810.10..	75-82	135	130	125	yes	yes
421M 10.10..	421MS 10.10..	75-85	135	130	125	yes	yes
421M 10.810..	421MS 10.810..	75-82	135	130	125	yes	yes
421M 11.10..	421MS 11.10..	75-85	135	130	125	yes	yes
421M 11.11..	421MS 11.11..	85-95	180	175	170	yes	yes

* metric threads cable glands sizes are shown; models with other threads, as detailed in Key Code, are available. Full list is shown in drawings listed to Certificate

Table 3.3*: 421MC ...

Model	Min-max cable Ø mm	Torque value [Nm]			Suitable for	
		S1+S2+S3 triple sealing ring	S1+S2 double sealing ring	S1 single sealing ring	Ex db	Ex eb Ex tb
421MC 05..	4-8	20	18	-	no	yes
421MC 01S..	3-9	-	25	18	yes	yes
421MC 01..	4-12	20	18	16	yes	yes
421MC 1S..	3-9	-	25	18	yes	yes
421MC 1..	4-12	20	18	16	yes	yes
421MC 12..	10-16	25	22	18	yes	yes
421MC 2..	10-18	25	22	18	yes	yes
421MC 23..	14-20	28	23	-	yes	yes
421MC 3..	14-24	28	23	20	yes	yes
421MC 34..	22-28	56	50	35	yes	yes
421MC 4..	22-32	56	50	45	yes	yes
421MC 45..	26-34	57	55	52	yes	yes
421MC 5..	26-35	57	55	52	yes	yes
421MC 56..	35-44	190	155	140	yes	yes
421MC 6..	35-45	190	155	140	yes	yes
421MC 7..	46-59	185	175	150	yes	yes

Table 3.4*: 421S ...

Model	Min-max cable Ø mm	Torque value [Nm]			Suitable for	
		S1+S2+S3 triple sealing ring	S1+S2 double sealing ring	S1 single sealing ring	Ex db	Ex eb Ex tb
421S 01S..	4-8	-	25	18	yes	yes
421S 01..	4-8	-	25	18	yes	yes
421S 1..	4-12	20	18	16	yes	yes
421S 2..	10-18	25	22	18	yes	yes
421S 3..	14-24	28	23	20	yes	yes
421S 4..	22-32	56	50	45	yes	yes
421S 5..	26-35	57	55	52	yes	yes
421S 6..	35-45	190	155	140	yes	yes
421S 7..	46-62	185	175	150	yes	yes
421S 8..	60-75	123	118	110	yes	yes
421S 10..	75-85	135	130	125	yes	yes
421S 11..	85-95	180	175	170	yes	yes

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Model			Min-max cable Ø mm	Torque value [Nm]			Suitable for	
				S1+S2+S3 triple sealing ring	S1+S2 double sealing ring	S1 single sealing ring	Ex db	Ex eb Ex tb
421LN 02..	421LS 02..	421LQ 02..	4-8	20	18	-	no	yes
421LN 01..	421LS 01..	421LQ 01..	4-12	20	18	16	yes	yes
421LN 1S..	421LS 1S..	421LQ 1S..	4-10	20	18	15	yes	yes
421LN 1..	421LS 1..	421LQ 1..	4-12	20	18	15	yes	yes
421LN 2..	421LS 2..	421LQ 2..	10-18	25	22	18	yes	yes
421LN 3..	421LS 3..	421LQ 3..	14-24	28	23	20	yes	yes
421LN 4..	421LS 4..	421LQ 4..	22-32	56	50	45	yes	yes
421LN 5..	421LS 5..	421LQ 5..	26-35	57	55	52	yes	yes

Model	Sealing ring type (refer to table 6)	Torque value [Nm]	Suitable for	
			Ex db	Ex eb Ex tb
421U 1S..(axb)	FxA1; FxB1; FxC1; FxD1; FxE1; FxG1	16	no	yes
421U 1..(axb)		16	no	yes
421U 12..(axb)		16	no	yes
421U 2..(axb)	FxA2; FxB2; FxC2; FxD2; FxE2; FxF2; FxG2; FxH2	18	no	yes
421U 23..(axb)		18	no	yes

Model		Sealing ring type (refer to table 6)	Torque value [Nm]	Suitable for	
				Ex db	Ex eb Ex tb
421M 12.01..(axb)	421MS 12.01..(axb)	FxA1; FxB1; FxC1; FxD1; FxE1; FxG1	16	no	yes
421M 1.1..(axb)	421MS 1.1..(axb)		16	no	yes
421M 12.12..(axb)	421MS 12.12..(axb)		16	no	yes
421M 12.23..(axb)	421MS 12.23..(axb)	FxA2; FxB2; FxC2; FxD2; FxE2; FxF2; FxG2; FxH2	16	no	yes
421M 23.12..(axb)	421MS 23.12..(axb)		18	no	yes
421M 2.2..(axb)	421MS 2.2..(axb)		18	no	yes
421M 23.23..(axb)	421MS 23.23..(axb)		18	no	yes
421M 23.34..(axb)	421MS 23.34..(axb)		18	no	yes

* metric threads cable glands sizes are shown; models with other threads, as detailed in Key Code, are available. Full list is shown in drawings listed to Certificate

Model	Sealing ring type (refer to table 6)	Torque value [Nm]	Suitable for	
			Ex db	Ex eb Ex tb
421MC 1S..(axb)	FxA1; FxB1; FxC1; FxD1; FxE1; FxG1	16	no	yes
421MC 1..(axb)		16	no	yes
421MC 12..(axb)		16	no	yes
421MC 2..(axb)	FxA2; FxB2; FxC2; FxD2; FxE2; FxF2; FxG2; FxH2	18	no	yes
421MC 23..(axb)		18	no	yes

Model	Sealing ring type (refer to table 6)	Torque value [Nm]	Suitable for	
			Ex db	Ex eb Ex tb
421S 1..(axb)	FxA1; FxB1; FxC1; FxD1; FxE1; FxG1	16	no	yes
421S 2..(axb)	FxA2; FxB2; FxC2; FxD2; FxE2; FxF2; FxG2; FxH2	18	no	yes

Model			Sealing ring type (refer to table 6)	Torque value [Nm]	Suitable for	
					Ex db	Ex eb Ex tb
421LN 1S..(axb)	421LS 1S..(axb)	421LQ 1S..(axb)	FxA1; FxB1; FxC1; FxD1; FxE1; FxG1	16	no	yes
421LN 1..(axb)	421LS 1..(axb)	421LQ 1..(axb)		16	no	yes
421LN 2..(axb)	421LS 2..(axb)	421LQ 2..(axb)	FxA2; FxB2; FxC2; FxD2; FxE2; FxF2; FxG2; FxH2	18	no	yes

* metric threads cable glands sizes are shown; models with other threads, as detailed in Key Code, are available. Full list is shown in drawings listed to Certificate

From size to size	Material	Mechanical risk
M12/PG7/PF 1/4" NPT 1/4"	M32/PG21/PF 1" NPT 1"	polyamide	High (7J)
M32/PG21/PF 1" NPT 1"	M63/PG48/PF 2" NPT 2"		High (7J) at T≥-40°C Low (4J) at T<-40°C

[13] Annex

[14] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

Sealing ring type	Sealing ring dimensions [mm x mm]	Cable min [mm x mm]	Cable max [mm x mm]	Sealing ring type	Sealing ring dimensions [mm x mm]	Cable min [mm x mm]	Cable max [mm x mm]
FxA1	5 x 12,2	5 x 10	5,75 x 12,2	FxA2	5 x 12,8	5 x 10,4	5,5 x 14
FxB1	6 x 8,5	5,75 x 8,5	6 x 10	FxB2	6 x 8,5	5,75 x 8,5	6 x 10
FxC1	5,5 x 11,7	5,3 x 11,3	5,5 x 11,7	FxC2	5,5 x 11,7	5,3 x 11,3	5,5 x 11,7
FxD1	6 x 12,2	5,3 x 11,3	6,5 x 14,5	FxD2	6 x 14	5,5 x 12	6,5 x 14,5
FxE1	6,3 x 10,8	5,3 x 11,3	6,3 x 10,8	FxE2	9,1 x 12,3	7 x 10	9,1 x 12,3
FxG1	6,7 x 12,7	6,5 x 10	6,8 x 12,7	FxF2	7,35 x 13,4	5,6 x 10	9 x 14
-	-	-	-	FxG2	6,8 x 15,3	6,5 x 14,8	6,8 x 15,3
-	-	-	-	FxH2	5,5 x 10,7	5,2 x 10	7 x 12

[15.2] Ratings:

For minimal and maximal diameters of permitted cables and torque values, see Tables 3.x and 4.x.

[15.3] Safety Ratings:

None

[15.4] Ambient temperature and temperature classes:

Serie:	Ex eb – Ex tb execution	Ex db execution		
421U...	neoprene sealing ring: -40°C ÷ +80°C silicon sealing ring: -60°C ÷ +140°C	neoprene sealing ring: -40°C ÷ +80°C silicon sealing ring: -60°C ÷ +80°C		
421M....				
421MC...				
421S...				
421LS...				
421LQ...				
421LN...				
421MS....				
421U...(axb)			silicone sealing ring: -60°C ÷ +140°C	Not available for flat cables.
421M...(axb)				
421MC...(axb)				
421S...(axb)				
421LS...(axb)				
421LQ...(axb)				
421LN...(axb)				
421MS...(axb)				

[15.5] Degree of protection (IP code):

IP66/68

[15.6] Warnings:

None

[16] Report: AT18-0025271-01

[16.1] Routine (factory) tests:

The manufacturer shall carry out the routine test prescribed at clauses 27 of the EN 60079-0.

[16.2] Conformity with the documentation:

The manufacturer shall carry out the verifications or tests necessary to ensure that the product complies with the documentation.

Marking the equipment in accordance with Clause 29 of EN 60079-0, the manufacturer attests on his own responsibility that:

- the equipment has been constructed in accordance with the applicable requirements of the relevant standards in safety matters;
- the routine verifications and routine tests in 28.1 of EN 60079-0 have been successfully completed with positive results.

[13] Annex

[14] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

[16.3] Installation conditions:

Above referred equipment is foreseen to be installed in locations where there are environmental conditions, as clearly specified at clause 1, par. 2 of EN 60079-0.

Installation and use in atmospheric and environmental conditions that are out of above mentioned intervals request special considerations and additional measures by the side of installer or user.

These should be specified to the manufacturer by the user;

It is not a required by applicable standard listed in [9] that the certification body confirm suitability for the adverse conditions.

The coupling of the cable glands to the enclosure and torque values of cap clamping 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 gland installation shall be done according to EN 60079-14 and to safety manufacturer instructions to maintain degree of protection.

The cable gland installation shall be done in such a way that the temperature at the mounting point will remain within the service temperature ranges declared in this certificate.

[17] Special Condition of use (X):

- The cable glands are only suitable for fixed installations. Cables shall be effectively clamped to prevent pulling or twisting.
- The coupling of the cable glands to the enclosure and torque values of cap clamping 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 gland installation shall be done according to safety manufacturer instructions to maintain degree of protection. The cable gland installation shall be done in such a way that the temperature at the mounting point will remain within the service temperature ranges declared in this certificate.
- When cable glands are installed with polyamide insert 421DP-.21, mechanical risk have to be taken into account, depending on cable gland and insert tap. The upper operating temperature is limited to 70 °C. When insert tap is removed in order to install the proper cable, the integrity of sealing rings have to be checked, in order to guarantee the correct tightness. If necessary, sealing rings have to be replaced with new ones (original spare parts only). Precautions shall be taken in order to guarantee protection against risk of mechanical damage is provided, when insert taps are suitable for low mechanical risk (4J) only.
- Cable glands for non circular cables shall be fitted with proper cables, suitable for sealing ring, according to manufacturer's instruction.

[18] Essential Health and safety Requirements:

This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed in [9].

This Certificate **does not** cover hazards coming from environmental conditions different from those clearly and precisely indicated and covered in clause 1 of EN 60079-0.

ESHR 1.2.7 According Annex VIII of the Directive

ESHR 1.4 Not verified.

ESHR 1.5 Not verified.

ESHR 3 Not applied.

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at [9], the following are considered relevant to this product, and conformity is demonstrated in the report:
None

[19] **Descriptive documents:** DL- AT18-0025271-01 dated 2018.10.22

[13] **Annex**

[14] EU-type Examination Certificate number: **IMQ 18 ATEX 026 X**

[20] **Certification Validity Conditions:**

The use of this Certificate is subject to the Certification Scheme and to the Regulation applicable to holders of IMQ Certificates.

The validity of this certificate is subject to the condition that the manufacturer complies with the results of the document review and of the pertinent requirement if any included, recorded in the relevant copy of documentation as per 19. One copy of the mentioned documentation is kept in IMQ file.

[21] In accordance with Article 41 of Directive 2014/34/EU, 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. New issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

[22] **Variations**

First issue