



(1) **EU-TYPE EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 18 ATEX 1001 X

Issue: 3

(4) Product: Cable gland Type LevelEx ***** , LevelEx TRI ***** and
LevelEx AC *****

(5) Manufacturer: PFLITSCH GmbH & Co. KG

(6) Address: Ernst-Pflitsch-Straße 1, 42499 Hückeswagen, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the 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 products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 22-12131.

(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

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of 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 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:

 **II 2 G Ex db eb IIC Gb**

 **II 1 D Ex ta IIIC Da**

Konformitätsbewertungsstelle, Sektor Explosionsschutz

Braunschweig, December 6, 2022

On behalf of PTB

Dr.-Ing. M. Thedens
Regierungsdirektor



sheet 1/6

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE

(13)

(14) **EU-Type Examination Certificate Number PTB 18 ATEX 1001 X, Issue: 3**

(15) Description of Product

The cable glands type LevelEx *****, LevelEx TRI ***** and LevelEx AC ***** made of brass, brass nickel-plated, brass lead-free or stainless steel, serve to introduce permanently installed cables into electrical equipment of the types of protection flameproof enclosure "db", increased safety "eb" and protection by enclosure "ta".

The cable gland LevelEx ***** consists of:

- pressure screw (brass, brass nickel-plated, brass lead-free or stainless steel)
- pressure sleeve (PFA or PTFE)
- sealing ring (silicone)
- double nipple with metric or NPT thread (brass, brass nickel-plated, brass lead-free or stainless steel)
- connection thread O-ring (silicone)

The cable gland LevelEx TRI ***** consists of:

- pressure screw (brass, brass nickel-plated, brass lead-free or stainless steel)
- pressure sleeve (PFA or PTFE)
- sealing ring (silicone)
- double nipple with metric or NPT thread (brass, brass nickel-plated, brass lead-free or stainless steel)
- TRI spring (stainless steel or bronze)
- connection thread O-ring (silicone)

The cable gland LevelEx AC ***** consists of:

- pressure screw (brass, brass nickel-plated, brass lead-free or stainless steel)
- pressure sleeve (PFA or PTFE)
- sealing ring (silicone)
- intermediate connection LevelEx armoured (brass, brass nickel-plated, brass lead-free or stainless steel)
- intermediate connection Klemm AC (brass, brass nickel-plated, brass lead-free or stainless steel)
- intermediate connection O-ring (silicone)
- sealing ring (silicone)
- double nipple with metric or NPT thread (brass, brass nickel-plated, brass lead-free or stainless steel)
- connection thread O-ring (silicone)

Accessory is a lock nut.

sheet 2/6

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 18 ATEX 1001 X, Issue: 3

Technical data

Size of connection thread	LevelEx ***** and LevelEx TRI ***** M16 to M75 NPT 3/8" to NPT 2 1/2"	LevelEx AC ***** M16 to M63 NPT 1/2" to NPT 2 1/2"
Cable diameter	See table below	
Suited for devices of equipment group II with mechanical risk level	High	
Mounted in enclosures with clearance holes (only for increased safety "e") Plastic, wall thickness Metal, wall thickness	≥ 2 mm ≥ 1 mm	
Mounted in enclosures with threaded holes Plastic, wall thickness Metal, wall thickness	≥ 5 mm ≥ 3 mm	
Service temperature range	-60 °C to +130 °C	
Suitable for Ex Equipment with reference pressure up to	32.4 bar (test pressure: 48.6 bar)	
Ingress protection	IP66 and IP68 (10 bar, 60 min) in accordance with EN 60529	

Sealing ranges and tightening torques for different sizes

LevelEx ***** and LevelEx TRI *****				
Thread size		Sealing range (cable diameter) / mm		Torque / Nm
metric	NPT	Max.	Min.	Connection thread and pressure screw
M 16	NPT 3/8"	11.0	7.0	15
M 20	NPT 1/2"	14.0	8.0	20
M 25	NPT 3/4"	20.0	12.5	30
M 32	NPT 1"	26.0	18.5	30
M 40	NPT 1 1/4"	34.0	25.0	35
M 50	NPT 2"	45.0	33.0	80
M 63	NPT 2 1/2"	56.0	44.0	80
M 75		66.0	56.0	100

LevelEx AC ***** (brass)									
Gland size	Thread size		Sealing range (armouring side) / mm		Sealing range (equipment side) / mm		Torque / Nm		
	metric	NPT	Max.	Min.	Max.	Min.	Pressure screw	Intermediate connection*	Connection thread
1407	M 16	NPT 1/2"	14.0	8.0	6.5	4.0	20	20	30
1409	"	"	"	"	9.5	6.5	"	"	"
1411	"	"	"	"	10.5	7.0	"	"	"
2009	M 20	NPT 1/2"	20.0	12.5	9.5	6.5	30	35	40

sheet 3/6

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2014	"	"	"	"	14.0	9.0	"	"	"
2616	M 25	NPT 3/4"	26.0	18.5	15.5	11.5	30	70	40
2618	"	"	"	"	18.0	14.0	"	"	"
2620	"	"	"	"	20.5	17.0	"	"	"
3420	M 32	NPT 1"	34.0	25.0	20.5	17.0	35	70	45
3425	"	"	"	"	25.0	20.0	"	"	"
3426	"	"	"	"	26.0	24.0	"	"	"
4528	M 40	NPT 1 1/4"	45.0	33.0	28.0	24.0	80	100	90
4534	"	"	"	"	34.0	26.0	"	"	"
5637	M 50	NPT 2"	56.0	44.0	37.0	28.0	80	160	90
5644	"	"	"	"	44.0	35.0	"	"	"
6644	M 63	NPT 2 1/2"	66.0	56.0	44.0	35.0	100	160	110
6656	"	"	"	"	56.0	45.0	"	"	"

*The connection must be fully tightened.

LevelEx AC ***** (stainless steel)									
Gland size	Thread size		Sealing range (armouring side) / mm		Sealing range (equipment side) / mm		Torque / Nm		
	metric	NPT	Max.	Min.	Max.	Min.	Pressure screw	Intermediate connection*	Connection thread
1407	M 16	NPT 1/2"	14.0	8.0	6.5	4.0	20	35	30
1409	"	"	"	"	9.5	6.5	"	"	"
1411	"	"	"	"	10.5	7.0	"	"	"
2009	M 20	NPT 1/2"	20.0	12.5	9.5	6.5	30	80	40
2014	"	"	"	"	14.0	9.0	"	"	"
2616	M 25	NPT 3/4"	26.0	18.5	15.5	11.5	30	100	40
2618	"	"	"	"	18.0	14.0	"	"	"
2620	"	"	"	"	20.5	17.0	"	"	"
3420	M 32	NPT 1"	34.0	25.0	20.5	17.0	35	120	45
3425	"	"	"	"	25.0	20.0	"	"	"
3426	"	"	"	"	26.0	24.0	"	"	"
4528	M 40	NPT 1 1/4"	45.0	33.0	28.0	24.0	80	100	90
4534	"	"	"	"	34.0	26.0	"	"	"
5637	M 50	NPT 2"	56.0	44.0	37.0	28.0	80	160	90
5644	"	"	"	"	44.0	35.0	"	"	"
6644	M 63	NPT 2 1/2"	66.0	56.0	44.0	35.0	100	220	110
6656	"	"	"	"	56.0	45.0	"	"	"

*The connection must be fully tightened.

Nomenclature

LevelEx	*	*	*	*	*	*	*	*	*	*	*
1	2	3	4	5	6	7	8	9	10	11	12

1	Type designation	LevelEx LevelEx TRI LevelEx AC
2	Part of type designation	Lex LexAC

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 18 ATEX 1001 X, Issue: 3

3	Type of thread	2 = metric, 3 = NPT
4	Connecting thread (code number)	Metric ISO- thread EN 60423 16 = M 16 20 = M 20 25 = M 25 32 = M 32 40 = M 40 50 = M 50 63 = M 63 75 = M 75 NPT- thread ANSI / ASME B1.20.1 038 = NPT 3/8" 012 = NPT 1/2" 01223 = NPT 1/2" 034 = NPT 3/4" 100 = NPT 1" 114 = NPT 1 1/4" 200 = NPT 2" 212 = NPT 2 1/2"
5	Not used	Not used
6	Material	VA/316L = stainless steel (Lex), VA = stainless steel (LexAC), ms = brass, nickel-plated, LF = brass lead free
7	TRI spring	tri = 1.4310 (AISI 301) triNM = CuSn6 (bronze)
8	AC Cable outer diameter (code number):	cable diameter (code number): 14 = 14.0 mm – 8.0 mm 20 = 20.0 mm – 12.5 mm 26 = 26.0 mm – 18.5 mm 34 = 34.0 mm – 26.0 mm 45 = 45.0 mm – 33.0 mm 56 = 56.0 mm – 44.0 mm 66 = 66.0 mm – 56.0 mm
9	AC Cable inner diameter (code number):	cable diameter (code number): 7 = 6.5 mm – 4.0 mm 9 = 9.5 mm – 6.5 mm 11 = 10.5 mm – 7.0 mm 14 = 14.0 mm – 9.0 mm 16 = 15.5 mm – 11.5 mm 18 = 18.0 mm – 14.0 mm 20 = 20.5 mm – 17.0 mm 25 = 25.0 mm – 20.0 mm 26 = 26.0 mm – 24.0 mm 28 = 28.0 mm – 24.0 mm 34 = 34.0 mm – 26.0 mm 37 = 37.0 mm – 28.0 mm 44 = 44.0 mm – 35.0 mm 56 = 56.0 mm – 45.0 mm
10	AC-Additional letters for material VA	/316L (LexAC)
11	Kind of insert	HTS = silicone
12	Additional letters for variants	zu (strain relief pressure screw), VA (AISI 303), V4A (AISI 316Ti), bl (brass blanc)
Remark: Variant numbers can be unoccupied		

Changes with respect to previous editions

1. New type LevelEx TRI *****

sheet 5/6

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 18 ATEX 1001 X, Issue: 3

(16) Test Report PTB Ex22-12131

(17) Specific conditions of use

1. Only permanently wired cables may be entered. The user shall provide additional clamping of the cable to ensure that pulling is not transmitted to the terminations.
2. Degree of protection is ensured only if the seals and cable entries are properly fitted. The manufacturer's instructions must be followed.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, December 6, 2022


Dr.-Ing. M. Thedens
Regierungsdirektor

