



(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 15 ATEX 1001 X

Issue: 3

- (4) Product: Cable gland Type UNI Ex * Dicht Silicone ***** and
Type UNI Ex Sleeve EMC Dicht Silicone *****
- (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 23-19139.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018/AC:2020, 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 eb IIC Gb**

 **II 1 D Ex ta IIIC Da**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, September 15, 2023



Dr.-Ing. D. Markus
Direktor und Professor



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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 15 ATEX 1001 X, Issue: 3**

(15) Description of Product

The cable gland type UNI Ex * Dicht Silicone ***** made of brass, brass nickel-plated and stainless steel, serves to introduce cables into electrical apparatus of the type of protection Increased Safety "eb" or Protection by Enclosure "ta". The cable gland consists of:

- pressure screw standard
- pressure screw with clamping device
- double nipple with a metric, Pg, Inch or NPT connection thread and O-ring
- sealing component out of silicone for one hole, multiple holes or flat cable

The cable gland is installed in enclosures with through-holes or threaded holes. For through-holes, lock nuts are used.

The cable gland type UNI Ex Sleeve EMC Dicht Silicone ***** made of brass, brass nickel-plated or stainless steel, serves to introduce fixed cables into electrical apparatus of the type of protection Increased Safety "eb" or Protection by Enclosure "ta". The cable gland consists of:

- pressure screw, optionally with a spring bend protection
- sleeve, optionally with an EMC spring
- two inserts (standard and multiple)
- adapter coupling with connection thread and O-ring

The cable gland is installed in enclosures with through-holes or threaded holes. For through-holes, lock nuts are used.

Technical data UNI Ex * Dicht Silicone *****

Size, Connection thread and head thread				Torque			Mechanical risk level
metric	Pg	Inch	NPT	Connection thread	Head thread	Clamping screw	
M 12	Pg 7	G 1/4"	-	6 Nm	6 Nm	1 Nm	Low
M 16	Pg 9	G 3/8"	NPT 3/8"	6 Nm	6 Nm	1 Nm	Low
M 20	Pg 11 Pg 13,5	G 1/2"	NPT 3/8" NPT 1/2"	10 Nm	5 Nm standard 10 Nm flat cable 10 Nm multiple	1 Nm	High
M 25	Pg 16	G 3/4"	NPT 1/2"	10 Nm	10 Nm	1 Nm	High
M 32	Pg 21	G 1"	NPT 3/4"	15 Nm	15 Nm	1 Nm	High
M 40	Pg 29	G 1 1/4"	NPT 1"	20 Nm	20 Nm	1 Nm	High
M 50	Pg 36	G 1 1/2"	NPT 1 1/4"	30 Nm	30 Nm	1 Nm	High

Cable dimensions	Circular cable (single): 4.5 mm to 36.0 mm Details given in table below. Circular cable (multiple):
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	min. diameter 1.0 mm max. diameter 30.0 mm Flat cable: 4 inserts for different sizes Details given in table below.
Strain relief	Depends on the pressure screw used, low or high
Suited for devices of equipment group II with mechanical risk level	Low (sizes smaller than M 20) High (sizes M 20 and above)
Mounted in enclosures with clearance holes 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	Circular cable (single): -55 °C to +160 °C Circular cable (multiple): -55 °C to +160 °C Insert for flat cable: depends on size, see table below
Ingress protection	IP66 and IP68 (10 bar, 30 min) in accordance with EN 60529

Sealing range and service temperature for flat cables					
Connecting thread metric	Head thread Pg	ID sealing insert	Sealing range height / mm (min / max)	Sealing range width / mm (min / max)	Service temperature
M 20	52	4,9v11,5	4.6 / 5.0	10.4 / 11.5	-55 °C to +180 °C
"	"	5,9v12,4	5.3 / 5.9	10.7 / 12.4	-55 °C to +180 °C
"	"	7,4v13	5.6 / 7.4	11.7 / 12.9	-40 °C to +130 °C
M 25	53	7,1v15,3	6.9 / 7.1	15.1 / 15.5	-55 °C to +180 °C

Sealing range for circular cables (single)				
Connecting thread metric	Head thread Pg	ID sealing insert	Sealing range max / mm	Sealing range min / mm
M 12	49	5	5.0	4.5
"	"	7	6.5	5.5
M 16	50	7	6.5	5.5
"	"	8	8.0	6.5
"	"	9	9.5	8.5
M 20	51	7	6.5	5.5
"	"	9	9.5	9.0
"	"	11	10.5	9.5
M 20	52	7	6.5	5.5
"	"	8	8.0	6.5
"	"	9	9.5	8.0
"	"	11	10.5	7.0
"	"	13	13.0	10.0
M 25	53	7	6.5	5.5



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"	"	8	8.0	7.5
"	"	9	9.5	8.5
"	"	11	10.5	9.5
"	"	13	13.0	12.5
"	"	16	15.5	13.5
M 32	54	11	10.5	8.5
"	"	13	13.0	10.5
"	"	16	15.5	13.5
"	"	18	18.0	15.5
"	"	20	20.5	18.5
M 40	55	16	15.5	13.5
"	"	18	18.0	15.5
"	"	20	20.5	18.5
"	"	25	25.0	22.0
"	"	28	28.0	25.5
M 50	56	32	32.0	28.0
"	"	34	34.0	31.0
"	"	36	36.0	33.0

Technical data UNI Ex Sleeve EMC Dicht Silicone *****

Size of connection thread	M20 and M32
Cable diameter	12.4 mm and 17.4 mm Min. diameter 2.1 mm Max. diameter 3.9 mm
Round cable insert	
Multiple cable insert	
Suited for devices of equipment group II with mechanical risk level	High
Strain relief	Low
Torque	Size M20 Adapter coupling 10 Nm Pressure screw 5 Nm Pressure screw multiple 10 Nm Size M32 Adapter coupling 20 Nm Pressure screw 15 Nm
Mounted in enclosures with clearance holes	≥ 2 mm ≥ 1 mm
Plastic, wall thickness	
Metal, wall thickness	≥ 5 mm ≥ 3 mm
Mounted in enclosures with threaded holes	
Plastic, wall thickness	≥ 5 mm ≥ 3 mm
Metal, wall thickness	
Service temperature	-60 °C to +130 °C
Ingress protection	IP66 and IP68 (10 bar, 30 min) in accordance with EN 60529

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Nomenclature

UNI Ex	*	Dicht Silicone	*	*	*	*	*	*	*	*	*	*	*
1	2	3	4	5	6	7	8	9	10	11	12	13	14

1	Type designation	UNI Ex																				
2	Part of type designation	e.g. HF, IRIS																				
3	Part of type designation	Dicht Silicone																				
4	Type edition	(multiple metric, multiple PG)																				
5	Type of thread	1 = Pg / Inch, 2 = metric, 3 = NPT, 8 = metric long																				
6	Connecting thread (code number)	<p>Pg- thread DIN 40430</p> <p>49 = PG 7 53 = PG 16 50 = PG 9 54 = PG 21 51 = PG 11 55 = PG 29 52 = PG 13,5 56 = PG 36</p> <p>Metric ISO- thread EN 60423</p> <p>12 = M 12 32 = M 32 16 = M 16 40 = M 40 20 = M 20 50 = M 50 25 = M 25</p> <p>Inch- thread DIN EN ISO 228-1</p> <p>014 = 1/4" 100 = 1" 038 = 3/8" 114 = 1 1/4" 012 = 1/2" 112 = 1 1/2" 034 = 3/4"</p> <p>NPT- thread ANSI / ASME B1.20.1</p> <p>038 = NPT 3/8 012 = NPT 1/2 034 = NPT 3/4 100 = NPT 1 114 = NPT 1 1/4 200 = NPT 2</p>																				
7	Head thread (code number)	<p>Pg-thread DIN 46320</p> <p>49 = PG 7 52 = PG 13,5 55 = PG 29 50 = PG 9 53 = PG 16 56 = PG 36 51 = PG 11 54 = PG 21</p>																				
8	Material	st = stainless steel, d = brass, nickel-plated, LF = brass lead-free																				
9	Kind of insert	i = silicone, im = multiple if = flat																				
10	Cable diameter, cable dimension (code number):	<p>Circular cables (single)</p> <table border="1"> <thead> <tr> <th>Connecting thread metric</th> <th>Head thread Pg</th> <th>ID sealing insert</th> <th>Sealing range max / mm</th> <th>Sealing range min / mm</th> </tr> </thead> <tbody> <tr> <td>M 12</td> <td>49</td> <td>5</td> <td>5.0</td> <td>4.5</td> </tr> <tr> <td>"</td> <td>"</td> <td>7</td> <td>6.5</td> <td>5.5</td> </tr> <tr> <td>M 16</td> <td>50</td> <td>7</td> <td>6.5</td> <td>5.5</td> </tr> </tbody> </table>	Connecting thread metric	Head thread Pg	ID sealing insert	Sealing range max / mm	Sealing range min / mm	M 12	49	5	5.0	4.5	"	"	7	6.5	5.5	M 16	50	7	6.5	5.5
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Circular cables (multiple)
 1x1.5 mm. 2x3 mm. 3x4 mm. 4x6 mm
 5x6.5 mm. 6x2.5 mm. 6x10 mm.
 3x12 mm. 4x13 mm
 List of VDE-cores
 Sample with 3 holes:
 VDE E152im1x1,5/2x2/1x9
 Minimum bore diameter 1.5mm
 Maximum bore diameter 30.0mm

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		<p><i>The list is only an excerpt of the possible multiple sealing inserts.</i></p> <p>Flat cables</p> <table border="1"> <thead> <tr> <th>ID sealing insert</th> <th>Sealing range height / mm (min / max)</th> <th>Sealing range width / mm (min / max)</th> </tr> </thead> <tbody> <tr> <td>4,9v11,5</td> <td>4.6 / 5.0</td> <td>10.4 / 11.5</td> </tr> <tr> <td>5,9v12,4</td> <td>5.3 / 5.9</td> <td>10.7 / 12.4</td> </tr> <tr> <td>7,4v13</td> <td>5.6 / 7.4</td> <td>11.7 / 12.9</td> </tr> <tr> <td>7,1v15,3</td> <td>6.9 / 7.1</td> <td>15.1 / 15.5</td> </tr> </tbody> </table>	ID sealing insert	Sealing range height / mm (min / max)	Sealing range width / mm (min / max)	4,9v11,5	4.6 / 5.0	10.4 / 11.5	5,9v12,4	5.3 / 5.9	10.7 / 12.4	7,4v13	5.6 / 7.4	11.7 / 12.9	7,1v15,3	6.9 / 7.1	15.1 / 15.5
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7,1v15,3	6.9 / 7.1	15.1 / 15.5															
11	Not used	Not used															
12	Not used	Not used															
13	Explosion protected	Type of protection, Ex e „ex“															
14	Additional letters for material	zu, V4A, bl, tri, /HT, SW24															
<p><i>Remark: Variant numbers can be unoccupied</i></p>																	

UNI Ex	Sleeve EMC	Dicht Silicone	*	*	*	*	*	*	*	*	*	*	*	*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	

- 1: Part of general type
- 2: Type edition
- 3: Part of general type
- 4: Type edition (multiple, metric)
- 5: Size of connection thread
- 6: Size of head thread
- 7: Material (st = stainless steel)
- 8: Maximum cable diameter
- 9: Flexible spring = FBS
- 10: Kind of insert (i = silicone, m = multiple)
- 11: Maximum cable diameter (multiple)
- 12: EMC connection = tri
- 13: Material of sealing insert = HTS
- 14: Explosion protected, "ex"

Remark: variant numbers can be unoccupied

Changes with respect to previous editions

- 1. Addition of types for circular cables from 4.5 mm to 36.0 mm diameter.
- 2. Addition of sealing rings for flat cables and extension of service temperature.
- 3. Updated to current version of IEC 60079-7 (Ed. 5.1).

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 15 ATEX 1001 X, Issue: 3

(16) Test Report PTB Ex 23-19139

(17) Specific conditions of use

1. Unless the pressure screw with clamping device is used, 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.
3. Types suitable for a "low" risk of mechanical danger shall be mounted in such a way that they are mechanically protected against impact force.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, September 15, 2023


Dr.-Ing. D. Markus
Direktor und Professor

