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(1) # EU-Type Examination Certificate

(2) Equipment or protective system intended for use in potentially explosive atmospheres **- Directive 2014/34/EU**

(3) Certificate number: **SEV 17 ATEX 0153**

(4) Product: Cable gland EX Compact MS KB, EX Compact A2 KB, EX Compact A4 KB

(5) Manufacturer: AGRO AG

(6) Address: Korbackerweg 7, 5502 Hunzenschwil, Switzerland

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

(8) Eurofins, notified body No. 1258, 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 products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no 21CH-00852.X03

(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 60079-7:2015
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 subjected to special conditions for safe use specified in the schedule to this certificate. The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

(11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this 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 D IIC IIIC

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

(13) # Appendix

(14) **EU-Type Examination Certificate no. SEV 17 ATEX 0153**

(15) **Description of product**

The Cable gland type EX Compact MS KB, EX Compact A2 KB and EX Compact A4 KB are made from brass or stainless steel. They consist of a compression cup nut, lower part, press-fit element, sealing ring, 'O' ring and a strain relief device.
They are used for entering cables into electrical equipment that is designed to Increased Safety "eb", Flameproof Enclosure "db" and Protection by Enclosure "tb" type of protection.
They are installed in enclosures with threaded holes or through-holes.

Comment:
Since the cable glands only provide little space for the marking, the detailed notation of the Ex marking is dispensed with. However, since this cable gland is suitable for 3 types of protection, the following notations are also used:
2nd variant: [Ex] II 2GD Ex db eb IIC Gb tb IIIC Db
3rd variant: [Ex] II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Note on variant 2:
It is intended that the designation Ex db eb IIC will be used on cable glands, although there are no two areas with different types of protection, but rather separate different types of protection. See also IEC 60079-0: 2017 ed 7.0 section 29.7.
This means that Ex db eb IIC can be used as Ex db IIC (flameproof enclosure) or as Ex eb IIC (increased safety). In addition, a second "Ex" from "tb" is dispensed with for reasons of space.

Classification of installation and use:	stationary
Ingress protection:	IP68
Rated ambient temperature range (°C):	-60 °C to +105 °C
Rated ambient temperature range (°C) for Ex Components:	---

Technical Data

Type name	Thread, Size of thread	Material	Sealing / O-ring	Temperature
EX Compact MS KB	M16x1.5 to M63x1.5 NPT 3/8" to NPT 2"	Brass nickel plated	NBR / FKM NBR / n.a	-60 °C to +105 °C
Ex Compact A2 KB	M16x1.5 to M63x1.5 NPT 3/8" to NPT 2"	Steel A2 (1.4305)	NBR / FKM NBR / n.a	-60 °C to +105 °C
Ex Compact A4 KB	M16x1.5 to M63x1.5 NPT 3/8" to NPT 2"	Steel A4 (1.4435)	NBR / FKM NBR / n.a	-60 °C to +105 °C

Minimum wall thickness	Size
for equipment with threaded holes	3.0 mm (metal) 5.0 mm (plastic)
For equipment with through-holes	1.0 mm (metal) 2.0 mm (plastic)

Torques for Ex-Component

Thread type	Thread type	Cable diameter [mm]	DM [Nm]	KB [Nm]
M16	NPT3/8	3 to 7	12	0.3
M16	NPT3/8	5 to 10	16	0.3
M20	NPT1/2	5 to 11	20	0.5
M20	NPT1/2	9 to 14	25	0.5
M25	NPT3/4	7.5 to 15	30	0.6
M25	NPT3/4	12.5 to 18	25	0.6
M32	NPT1	17 to 23	40	0.8
M32	NPT1	21 to 26	40	1.0
M40		21 to 26	50	1.0
M40	NPT11/4	24 to 32	40	1.0
M50	NPT11/2	28 to 36	30	1.5
M50		35 to 42	38	2.0
M63	NPT2	36 to 44	80	2.0
M63	NPT2	43 to 50	84	2.0

Legend:
DM = Compression cap nut (Applicable for compression cap nuts and lower parts)
KB = Clamping screws
The torques of the clamping screws are to be adjusted according to the diameter and quality of the cable used.

Type key description

Ex 1826.	**.	**.	***
1	2	3	4

Legend

1	Codes serie Ex Compact with strain relief		
2	Code size of connection thread with		
	12	=	M12 x 1.5
	17	=	M16 x 1.5
	20	=	M20 x 1.5
	25	=	M25 x 1.5
	32	=	M32 x 1.5
	40	=	M40 x 1.5
	50	=	M50 x 1.5
	63	=	M63 x 1.5
	3/8NPT	=	NPT 3/8
	1/2NPT	=	NPT 1/2"
	3/4NPT	=	NPT 3/4"
	1NPT	=	NPT 1"
	11/4NPT	=	NPT 1 ¼"
	11/2NPT	=	NPT 1 ½"
	2NPT	=	NPT 2"

3	Code combination of material of the cable gland and the gasket, O-ring always FKM			
	without number	=	Brass, nickel plated	/ NBR
	91	=	Brass, nickel plated	/ FKM
	94	=	Steel A2 (1.4305)	/ NBR
	96	=	Steel A2 (1.4305)	/ FKM
	97	=	Steel A4 (1.4435)	/ NBR
	98	=	Steel A4 (1.4435)	/ FKM

4	Code maximum cable diameter		
	e.g. 140	=	14 mm diameter

Notes:

The cable gland is used for entering cables into electrical equipment that is designed to Increased Safety "eb", Flameproof Enclosure "db", and Protection by Enclosure "tb" type of protection.

For the use in electrical equipment in the type of protection Flameproof Enclosure "db" the threaded holes have to meet the minimum requirements as set forth in EN 60079-1, section 5.3.
If the reference pressure exceeds 20 bar, the cable gland must be included in the type test of EN 60079-1, section 15.1.3 (overpressure test) as required for IIA, IIB or IIC classification of the corresponding operator/apparatus.

The forcing nut must be tightened with the torque specified in the manual.

The cable gland must be fixed in the electrical apparatus so that accidental loosening and rotation will be prevented.

The assignment of the temperatures to the temperature class of the cable gland must be determined when type testing the corresponding electrical apparatus.

(16) **Report number** 21CH-00852.X03

(17) **Special conditions for safe use: Schedule of limitations**
None

(18) **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	**Subject**
None	

(19) **Drawings and Documents**
See test report "Manufacturer's Documents"