



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX PTB 12.0056	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2013-12-09)
Date of Issue:	2024-02-28		Issue 0 (2013-03-01)
Applicant:	AGRO AG Korbackerweg 7 5502 Hunzenschwil Switzerland		
Equipment:	Cable gland type 18**.**.**. and blanking element (locking plug) type 8710**.**. .		
Optional accessory:			
Type of Protection:	db, eb, ta		
Marking:	Ex db eb IIC Gb Ex ta IIC Da		

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Detlev Markus

Position:

Head of Department "Explosion Protection in Energy Technology"

Signature:
(for printed version)

Date:
(for printed version)

29.2.24

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Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





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Manufacturer: **AGRO AG**
Korbackerweg 7
5502 Hunzenschwil
Switzerland

Manufacturing
locations: **AGRO AG**
Korbackerweg 7
5502 Hunzenschwil
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/PTB/ExTR12.0070/02](#)

Quality Assessment Report:

[CH/SEV/QAR12.0001/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description

The cable gland type 18**.**.**, made of steel or nickel-plated brass, is used to introduce non-permanently laid cables into enclosures of the type of protection Flameproof Enclosure "db", Increased Safety "eb" or Protection by enclosure "ta".

The blanking element (locking plug) type 8710.**, made of steel or nickel-plated brass, is used to close cable entry openings in enclosures of the type of protection Flameproof Enclosure "db", Increased Safety "eb" or Protection by enclosure "ta".

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

1. No technical changes. Updated to current editions of IEC 60079-0 (Ed. 7), IEC 60079-1 (Ed. 7.0), IEC 60079-7 (Ed. 5.1), IEC 60079-31 (Ed. 2).
2. Marking is changed to:
Ex db eb IIC Gb
Ex ta IIIC Da

Annex:

[COCA120056-02_1.pdf](#)



Applicant: AGRO AG
Korbackerweg 7
5502 Hunzenschwil
Switzerland

Electrical Apparatus: Cable gland type 18**.**.**. and
blanking element (locking plug) type 8710**..

Cable gland type 18**.**.>.

The cable gland type 18**.**. , made of steel or nickel-plated brass, is used to introduce non-permanently laid cables into enclosures of the type of protection Flameproof Enclosure "db", Increased Safety "eb" or Protection by enclosure "ta".

Technical data	
Type and size of connection thread	M16x1.5 to M63x1.5 Pg 9 to Pg 48 NPT 3/8" to NPT1 1/2" G 3/8" to G 2"
Nominal cable diameter	7 mm to 44 mm
Minimum wall thickness for enclosures of Type of Protection increased safety "eb"	Threaded holes ≥ 5 mm (plastic enclosure) ≥ 3 mm (metal enclosure) Through holes ≥ 2 mm (plastic enclosure) ≥ 1 mm (metal enclosure)
Minimum wall thickness for enclosures of Type of Protection flameproof enclosure "db"	Threaded holes ≥ 8 mm and at least 8 full threads available Through holes Not allowed
Ingress protection	IP68
Ambient temperature	-40 °C to +100 °C

Article final digits	Nominal cable diameter \varnothing / mm		Torque / Nm	
	min	max	Pressure nut and lower part	Clamping jaw screws
.09.26	7	9	10	0.95
.11.26	9	11	10	0.95
.13.26	11	13	16	1.00
.16.26				
.16.27				
.21.26	13	16,5	20	1.00
.21.27	16,5	20	24	1.00
.29.26	20	24	30	1.45
.29.27	24	28	35	1.55
.36.26	28	32	44	2.20
.36.27	32	36	60	2.70
.48.26	36	40	60	3.20
.48.27	40	44	65	3.20

Nomenclature Cable gland type 18**.**.**.**

18	**	**	**	**
1	2	3	4	5

- 1: Type
- 2: Code type and size connection thread
- 3: Code basis size of the cable gland
- 4: Code material of housing and elastomeric sealing ring
- 5: Code size of the gasket

Code of type and size of the connection thread			
12 = M12x1.5	07 = Pg7	3/8G = G3/8"	3/8NPT = NPT 3/8"
17 = M16x1.5	09 = Pg9	1/2G = G1/2"	1/2NPT = NPT 1/2"
20 = M20x1.5	11 = Pg11	3/4G = G3/4"	3/4NPT = NPT 3/4"
25 = M25x1.5	13 = Pg13.5	1G = G1"	1NPT = NPT 1"
32 = M32x1.5	16 = Pg16	1 1/4G = G1 1/4"	1 1/2 NPT = NPT 1 1/2 "
40 = M40x1.5	21 = Pg21	1 1/2G = G1 1/2"	1 1/4NPT = NPT 1 1/4"
50 = M50x1.5	29 = Pg29	2G = G2"	
63 = M63x1.5	36 = Pg36		
	42 = Pg42		
	48 = Pg48		



Code basis size of the cable gland
without = basis size corresponds with the size of the connection thread
07 = basis size 7
09 = basis size 9
11 = basis size 11
13 = basis size 13
16 = basis size 16
21 = basis size 21
29 = basis size 29
36 = basis size 26
49 = basis size 48

Code of the material combination of body and gasket
without = brass, nickel plated / HNBR, NBR
94 = steel A2 (1.4305) / HNBR, NBR
97 = steel A4 (1.4435) / HNBR, NBR

Code of the size of the gasket
26 small gasket
27 big gasket

Blanking element (locking plug) type 8710.**

The blanking element (locking plug) type 8710.**, made of steel or nickel-plated brass, is used to close cable entry openings in enclosures of the type of protection Flameproof Enclosure "db", Increased Safety "eb" or Protection by enclosure "ta".

Technical data	
Type and size of blanking element (locking plug) thread	M12x1.5 to M63x1.5 Pg7 to Pg36 NPT3/8" to NPT1 1/2"
Torque	6 Nm to 60 Nm
Minimum wall thickness for enclosures of Type of Protection increased safety "eb"	Threaded holes ≥ 5 mm (plastic enclosure) ≥ 3 mm (metal enclosure) Through holes ≥ 2 mm (plastic enclosure) ≥ 1 mm (metal enclosure)
Minimum wall thickness for enclosures of Type of Protection flameproof enclosure "db"	Threaded holes ≥ 8 mm and at least 8 full threads available Through holes Not allowed
Ingress protection	IP68
Ambient temperature Metric and Pg thread (with O-ring FPM) NPT thread (without O-ring)	-40 °C to +100 °C -40 °C to +200 °C

Metric thread		Pg thread		NPT thread	
Size	Torque / Nm	Size	Torque / Nm	Size	Torque / Nm
8710.12	6	8710.07	6	8710.3/8NPT	9
8710.17	9	8710.09	9	8710.1/2NPT	16
8710.20	16	8710.11	12	8710.3/4NPT	20
8710.25	20	8710.13	16	8710.1/NPT	30
8710.32	30	8710.16	16	8710.11/4NPT	35
8710.40	35	8710.21	20	8710.11/2NPT	45
8710.50	45	8710.29	25		
8710.63	60	8710.36	35		



Nomenclature blanking element (locking plug) type 8710.**

8710	**	**
1	2	3

- 1: Type
- 2: Code material of body
- 3: Code type and size connection thread (see cable gland)

Code material of body
without = brass, nickel-plated
96 = steel A2 (1.4305)
98 = steel A4 (1.4435)

Code of type and size of the connection thread			
12 = M12x1.5	07 = Pg7	3/8G = G3/8"	3/8NPT = NPT 3/8"
17 = M16x1.5	09 = Pg9	1/2G = G1/2"	1/2NPT = NPT 1/2"
20 = M20x1.5	11 = Pg11	3/4G = G3/4"	3/4NPT = NPT 3/4"
25 = M25x1.5	13 = Pg13.5	1G = G1"	1NPT = NPT 1"
32 = M32x1.5	16 = Pg16	1 1/4G = G1 1/4"	1 1/2 NPT = NPT 1 1/2"
40 = M40x1.5	21 = Pg21	1 1/2G = G1 1/2"	1 1/4NPT = NPT 1 1/4"
50 = M50x1.5	29 = Pg29	2G = G2"	
63 = M63x1.5	36 = Pg36		
	42 = Pg42		
	48 = Pg48		