



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 SIR 11.0044X** Page 1 of 5 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2011-10-14

Applicant: **Hummel AG**
Division ET
Lise Meitner Str. 2
D-79211
Denzlingen
Germany

Equipment: **EXIOS Barrier Cable Glands**

Optional accessory:

Type of Protection: **Flameproof, Increased Safety and Dust**

Marking: Ex d IIC Gb / Ex d I Mb
Ex e IIC Gb / Ex e I Mb
Ex ta III C Da IP66
Ta = -60 °C to +85 °C

Approved for issue on behalf of the IECEx
Certification Body:

C Ellaby

Position:

Deputy Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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United Kingdom

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CERTIFICATION



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Manufacturer: **Hummel AG**
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Lise Meitner Str. 2
D-79211
Denzlingen
Germany

Additional
manufacturing
locations:

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 60079-0:2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:5

IEC 60079-1:2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

IEC 60079-31:2008 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
Edition:1

IEC 60079-7:2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:4

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:

[GB/SIR/ExTR11.0241/00](#)

Quality Assessment Report:

[DE/BVS/QAR07.0001/03](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The EXIOS BARRIER Range of Barrier Cable Glands are metallic and are intended for use with armoured or unarmoured cables. They allow the entry of the cable into enclosures without compromising the explosion protection provided by the enclosure, in accordance with relevant codes of practice.

The EXIOS BARRIER Range of Barrier Cable Glands, when installed with a sealing ring and in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66 and IP68 to 50 metres for 30 minutes.

The EXIOS BARRIER Group I range comprises the following sizes:

* Metric sizes M20 (22 A/F), M20 (24 A/F), M20 (30 A/F), M25, M32, M40, M50, M63, M75

* NPT sizes 1/2" (22 A/F), 1/2" (24 A/F), 1/2" (30 A/F), 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"

The EXIOS BARRIER Group II range comprises the following sizes:

* Metric sizes M16, M20 (22 A/F), M20 (24 A/F), M20 (30 A/F), M25, M32, M40, M50, M63, M75

* NPT sizes 3/8", 1/2" (22 A/F), 1/2" (24 A/F), 1/2" (30 A/F), 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"

The EXIOS BARRIER range may be manufactured from the following materials:

* Brass grade CW614 (CuZn39Pb3)/ CZ121 3Pb

* Stainless Steel grade AISI 316L (1.4404)

Additionally, brass may be provided with Nickel plating.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1 The cable glands shall not be used in enclosures where the temperature, at the point of mounting, is outside the range of -60°C to +85°C.
The entry component threads will be suitably sealed using a method that is applicable to the associated equipment to which the gland will be attached. This will be in accordance with the relevant installation code of practice and will ensure that any ingress protection requirements are maintained.
- 2
- 3 When glands without sealing rings are installed in an explosive dust atmosphere, they shall only be fitted into enclosures that provide cable entries with a minimum of 5 fully engaged threads, this is in accordance with clause 5.1.1 of IEC 60079-31:2008.



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Equipment (continued):

The glands comprise from front (enclosure side) to rear (incoming cable side):

- * Entry body to tighten into an associated enclosure which is fitted with a sealing ring; the front and rear having male threads.
- * Front ferrule that fits into the entry body. The ferrule body is the main part of a two part chamber where a two-part epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath.
- * O-ring located between the entry body and mid cap to provide an ingress seal to the unthreaded flamepath between the entry body and front ferrule.
- * Rear ferrule/ cone, second part of a two part compound chamber at front and cone for clamping cable armour, when available, at rear.
- * Clamp ring that secures cable armour, when available, to the cone and also provides earth protection. The clamp ring must be used, even when unarmoured cables are used.
- * Middle cap that has female thread at the front and secures ferrules in place within the entry body; the rear of the middle cap has a male thread to accept the back nut.
- * Elastomeric cable outer sheath seal, fitted within the back nut.
- * Non-metallic compression ring, fitted between outer sheath seal and back nut.
- * Back nut with female thread that screws into the middle cap to compress the outer sheath seal.



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Additional information:

The following table details the available thread sizes, maximum number of cores that the gland can accept and the range of acceptable cable sizes for the range:

Gland size	Entry thread size		Max. dia. over cores	Max. number & dia. of cores	Outer sheath seal range	
	Metric	NPT			Min.	Max.
16*	M16 x 1.5	3/8"	7.90 mm	8 x 0.8 mm	6 mm	12 mm
20-1	M20 x 1.5	1/2"	7.90 mm	8 x 0.8 mm	6 mm	12 mm
20-2	M20 x 1.5	1/2"	8.80 mm	10 x 0.8 mm	9 mm	16 mm
20-3	M20 x 1.5	1/2"	11.50 mm	15 x 0.8 mm	12.5 mm	20.5 mm
25	M25 x 1.5	3/4"	16.40 mm	25 x 0.8 mm	16.9 mm	26 mm
32	M32 x 1.5	1"	21.40 mm	45 x 0.8 mm	22 mm	33 mm
40	M40 x 1.5	1 1/4"	27.60 mm	70 x 0.8 mm	28 mm	41 mm
50	M50 x 1.5	2"	37.50 mm	85 x 0.8 mm	36 mm	52.6 mm
63	M63 x 1.5	2 1/2"	47.30 mm	120 x 0.8 mm	46 mm	65.3 mm
75	M75 x 1.5	3"	58.00 mm	150 x 0.8 mm	57 mm	78 mm

* Group II only