

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Gland**

with type designation(s)

EXIOS, EXIOS BARRIER, EXIOS A2F, EXIOS MZ

Issued to

Hummel AG**Denzlingen, Germany**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Material	Metallic
Suitable for open deck	Yes
Suitable for Hazardous areas	Yes

Issued at **Hamburg** on **2017-07-11**for **DNV GL**This Certificate is valid until **2022-07-10**.DNV GL local station: **Augsburg**Approval Engineer: **Carsten Hunsalz**

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Duy Nam Le
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-011893-3**
 Certificate No: **TAE000024V**

Product description

Type designation:	EXIOS
Gland material:	Brass, nickel plated brass or Stainless steel
Seal material:	Black neoprene or Red silicon
Operating temperature range:	- 60 to +105°C
Degree of protection:	IP66, IP67 & IP68 (5 bar).
Cable type:	Braided, Armoured or Unarmoured
Gland sizes range:	Metric thread size: 16, 20, 25, 32, 40, 50, 63, 75 NPT thread size: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"
Ex classification:	II 2G Ex de IIC Gb / II 1D Ex ta IIIC Da
Ex certificate number:	ATEX: No. BVS 10 ATEX E062X & IECEx: No. BVS 10.0078X
Optional accessories:	PVC Shroud, Locknut, Earth tag, IP washer, Serrated washer.

Type designation:	EXIOS BARRIER
Gland material:	Brass, nickel plated brass or Stainless steel
Seal material:	Black neoprene or Red silicon
Operating temperature range:	- 60 to +85°C
Degree of protection:	IP66, IP67 & IP68 (5 bar).
Cable type:	Braided, Armoured or Unarmoured
Gland sizes range:	Metric thread size: 16, 20, 25, 32, 40, 50, 63, 75. NPT thread size: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3".
Ex classification:	I M2 Ex d I Mb / Ex e I Mb II 2G Ex d/e IIC / Gb / Ex e IIC Gb II 1D Ex ta IIIC Da IP 66 / 67 / 68
Ex certificate number:	ATEX: No. Sira ATEX 1110x & IECEx: No. 11.0044 X
Optional accessories:	PVC Shroud, Locknut, Earth tag, IP washer, Serrated washer.

Type designation:	EXIOS A2F
Gland material:	Brass, nickel plated brass or Stainless steel
Seal material:	Black neoprene or Red silicon
Operating temperature range:	- 60 to +105°C
Degree of protection:	IP66, IP67 & IP68 (5 bar).
Cable type:	Braided, Armoured or Unarmoured
Gland sizes range:	Metric thread size: 16, 20, 25, 32, 40, 50, 63, 75, 90 NPT thread size: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"
Ex classification:	II 2G Ex db e IIC Gb / II 1D Ex ta IIIC Da
Ex certificate number:	ATEX:DEKRA 12ATEX0139 X & IECEx: No. DEK 12.0039 X
Optional accessories:	PVC Shroud, Locknut, Earth tag, IP washer, Serrated washer.

Job Id: **262.1-011893-3**
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Type designation:	EXIOS MZ
Gland material:	Brass, nickel plated brass or Stainless steel
Seal material:	Black neoprene or Red silicon
Operating temperature range:	- 60 to +105°C
Degree of protection:	IP66, IP67 & IP68 (5 bar).
Cable type:	Braided, Armoured or Unarmoured
Gland sizes range:	Metric thread size: 16, 20, 25, 32, 40, 50, 63, 75 NPT thread size: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"
Ex classification:	II 2G Ex de IIC Gb / II 1D Ex ta IIIC Da
Ex certificate number:	ATEX: No. BVS 10 ATEX E062X & IECEx: No. BVS 10.0078X
Optional accessories:	PVC Shroud, Locknut, Earth tag, IP washer, Serrated washer.

Application/Limitation

Manufacturer's installation description, instructions and DNV GL rules to be followed.

Not to be used in bulkheads/decks or for penetrating boundaries of tanks.

Suitable for open deck.

The information related to Ex certification from recognised test institution is given as information only. Applications where Ex certified equipment is required will in general be subject to approval case by case based on documentation as required in DNV Rules

Type Approval documentation

Technical info: "HUMMEL-Setting Standard" brochure for EXIOS / HUMMEL-Setting Standard" brochure for EXIOS Barrier

Drawings:

EXIOS EXIOS M20x1,5 Art.no. 1.605.200052 dated 2010-06-17 & EXIOS NTP 1/2" Art. no. 1.605.1200.71 dated 2010-07-16

EXIOS BARRIER EXIOS Compound M20x1,5 Art. no. E-10010830 dated 2011-04-11 & EXIOS Compound NTP 1/2" Art. No. E-11010365 dated 2011-04-11.

Test reports/Certificates:

DEKRA EC-Type Examination no. DEKRA 12ATEX0139 X dated 2012-12-03
DEKRA IECEx Certificate of conformity no. IECEx DEK 12.0039X dated 2012-12-03
DEKRA Test and Assessment report no. BVS PP 10.2198 EG dated 2010-07-21
DEKRA IECEx Certificate of Conformity no. IECEx BVS 10.0078X dated 2010-11-21
Sira Assessment Report no.R23555A/00 dated 2011/09
Sira IECEx Certificate of Conformity no. IECEx SIR 11.0044X dated 2011-10-14
Sira EC Type-Examination Certificate no. Sira 11ATEX1110x undated.

Tests carried out

Type tests in accordance with IEC/EN 60079-0:2011/2012, IEC/EN 60079-1:2014, IEC/EN 60079-7:2006/2007, IEC/EN 60079-31:2013/2014, IEC/EN 60529:2013/2014

Marking of product

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Name of manufacturer – type designation – Ex rating.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE