

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Enclosure for Electrical Equipment

with type designation(s)
GEOS

Issued to

Günther Spelsberg GmbH + Co. KG
Schalksmühle, 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.

Degree of protection IP 66/67

Vibration class B

Issued at **Hamburg** on **2020-12-15**

This Certificate is valid until **2025-12-14**.

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Harald Amberger**

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Arne Schaarmann
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Empty enclosures and cabinet type GEOS

Type code designation / example for complete enclosures with cover + frame

	I	II	III
	Design	Dimension	Cover/Door
GEOS-	L	3030-18	to

Design	I	L	Enclosure with cover, glass fibre reinforced polycarbonate		
		S	Enclosure with door, glass fibre reinforced polycarbonate		
Dimension [mm]	II		Width	Length	Height
		3030-18	300	300	180
		3030-22	300	300	220
		3040-18	300	400	180
		3040-22	300	400	220
		4030-18 ¹	400	300	180
		4030-22 ¹	400	300	220
		4050-22	400	500	220
		5040-22 ¹	500	400	220
Cover/Door	III	o	Grey cover / Grey door cabinet lock		
		to	Transparent cover / Transparent door cabinet lock		

¹Only GEOS-S Design

Halogen-free
Rated insulation voltage AC 1000 V
Rated insulation voltage DC 1500 V

Application/Limitation

Location Classes:
Temperature: A, Humidity: A, Vibration: B

Operating instruction of the manufacturer to be observed

Type Approval documentation

Tests carried out

IEC 62208, damp heat, vibration, flame retardancy V-2 acc. UL-94

Marking of product

Spelsberg - Type designation - Main data.

Job Id: **262.1-034220-1**
Certificate No: **TAE0000454**

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