



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE0000454
Revision No:
2

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 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.

Degree of protection IP 66/67
Vibration class B

Issued at **Hamburg** on **2023-12-04**

for **DNV**

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

DNV local unit: **Essen**

Approval Engineer: **Harald Amberger**

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Form code: TA 251

Revision: 2023-09

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Product description

Empty enclosures and cabinet type GEOS

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

I	II	III	IV	V	VI	VII	VIII
Type	Design	Dimension	Base/Cover/Door	Construction features	Fixation of cover / frame	Door locking	Color
GEOS-	S	3040-18	t	o	/S	/SH	/sw

Design	II	L S	Enclosure with cover, glass fibre reinforced polycarbonate Enclosure with door, glass fibre reinforced polycarbonate				
Dimension [mm]	III		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		
Base/Cover/Door	IV	t tz no suffix	Cover / Door transparent version Cover / Door translucent version Cover / Door in-transparent version				
Construction features	V	o m	smooth side wall knockouts on side wall				
Fixation of cover / frame to base	VI	no suffix /S /S/DK /S/VK/8 /S/VK/5 /S/TX	quick lock (bayonet type) threaded lock (screw type) triangular head (screw type) square head 8mm (screw type) square head 5mm (screw type) Torx (screw type)				
Door locking	VII	no suffix /SH	cabinet lock pivot lever				
Color	VIII	no suffix /sw	gray base, gray frame with gray cover / door or with transp./transl. cover / door black base, black frame and black cover / door or cover in blacktranslucent				
¹ Only 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

258088-TL7-1, 278513-TL7-1, 278513-TL7-2, UL-EU-01840-M1, 4790399053.1, 291521-TL7-1

Tests carried out

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

Marking of product

Spelsberg - Type designation - Main data.

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