



Certificate No:
TAE00004KG

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Cleats

with type designation(s)
SmartCleat GFP Single & Trefoil

Issued to

Øglænd System AS
KLEPPE, Norway

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

For fixing of cables on board Mobile Offshore Units and Ships.

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Material **GFP**
Suitable for open deck **Yes**

Issued at **Høvik** on **2022-10-11**

This Certificate is valid until **2027-10-10**.

for **DNV**

DNV local station: **Stavanger**

Approval Engineer: **Ivar Bull**

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Frederik Tore Elter
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 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: 2021-03

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Manufacturing places

Oglaend Industries SDN
Shah Alam
Malaysia

Product description

SmartCheat Non-metallic GFP (Glass filled Polymer) Single & Trefoil cable cleat for high voltage cables

Classification	According to IEC 61914:2021
Material	GFP
Max and min temperature	+60°C -40°C
Resistance to impact	Very Heavy
Resistance to mechanical forces	Lateral and axial retention
Resistance to electromechanical forces	Withstanding more than one short circuit.
Resistance to corrosion	High

Type	Cable Size (outer diameter)
SmartCheat GFP Trefoil	3x26 mm to 3x75 mm
SmartCheat GFP Single	1x15 mm to 1x130 mm

Application/Limitation

For distance between cable cleats refer to manufactures spread sheet "Calculation of distance between SmartCleats".

Type	Configuration	Cable OD	CC / S (mm)	Maximum Peak SC current (kA)	
				Single short circuit.	Multiple short circuit.
SmartCheat® Non-metallic	Single	1 x 32mm	300/200	128	128
	Trefoil	3 x 32mm	300	127	104

CC= Distance between cable cleats.

S= Cable centre spacing in flat formation.

Type Approval documentation

Tests carried out

Type tests according to IEC 61914:2021

Marking of product

Øglænd logo - Product identification -manufacturing id (or symbol)

Periodical assessment

The scope of the periodic assessment is to verify that the conditions stipulated for the Type approval is 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)
- 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