DNV·GL

Certificate No:
TAE00003S4

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electrical Equipment

with type designation(s)
GA 65.38

Issued to
Kuhse Industrial Components GmbH
Winsen / Luhe, 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.

Issued at **Hamburg** on **2019-10-23**
This Certificate is valid until **2024-10-22**.
DNV GL local station: **Hamburg CMC**

Approval Engineer: **Harald Amberger**

for **DNV GL**

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.

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Product description

DC-Solenoid, Type GA 65.38

Technical Data:

Power supply:	24 V DC
Stroke:	30 mm
Starting force:	85 N
Holding force:	230 N
Duty cycle: starting / holding:	5 / 100 %

Application/Limitation

Degree of protection:	IP 54
Max. ambient temperature:	70° C
Vibration test - axle direction:	5 - 32 Hz amplitude = 8 mm
	32 - 500 Hz acceleration = 10 g
Vibration test - transverse direction:	5 - 25 Hz amplitude = 8 mm
	25 - 500 Hz acceleration = 20 g

Type Approval documentation

Tests carried out

Cold, dry heat, damp heat, vibration, flame retardancy.

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