

TYPE APPROVAL CERTIFICATE

This is to certify:**That the RPM sensor**

with type designation(s)

DSE xxxx.yy zHZ, SPBG-Modul, Cable connector

Issued to

Jaquet Technology Group AG
4009 Basel, SWITZERLAND

is found to comply with

**GL Rules for Classification and Construction VI - Additional Rules and Guidelines Part 7 -
Guidelines for the Performance of Type Approvals Chapter 2 - Test Requirements for
Electrical/Electronic Equipment and Systems****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed
by DNV GL.****Product Description** Electromagnetic sensor for speed measurement
Amplitude limiting device, cable with connector**Environmental Category** D/H, EMC2This Certificate is valid until **2020-11-11**.Issued at **Hamburg** on **2015-11-12**for **DNV GL**DNV GL local station: **Augsburg**Approval Engineer: **Marco Rinkel**-----
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.

Product description

DSE xxxx.yy zHZ

Power supply	Active sensor without power supply
Output :	AC Signal output , 10 Hz - 25 kHz, sinusoidal with gear form of the pole wheel
Degree of protection :	IP67
Xxxx	Housing thread according catalogue
Yy	Consecutive number for designation of different variants
z = A	Connector integrated
z = S	integral cable (5 m) with open wire ends
z = P/P1	Cable with connector
HZTL446144Rw	SPBG- Modul (Amplitude limiting device)
HZTL321056P1	Cable connector
W	4 digit consecutive number for designation of different variants

Application/Limitation

General marine application.

Type Approval documentation

Tests carried out

Applicable tests according to GL Guidelines for the Performance of Type Approvals, Chapter 2, Test Requirements for Electrical/Electronic Equipment and Systems (Edition 2012).

Marking of product

The products to be marked with model name, manufacturer name and serial number.

Periodical assessment

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

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE