DNV·GL

Certificate No:
TAA00000RK

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Position Transmitter

with type designation(s)
Incremental encoder 830900002

Issued to
Leine & Linde AB
Strängnäs, Sweden

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.

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**B**
EMC	**B**
Enclosure	**B / IP56**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-10-05**

for **DNV GL**

DNV GL local station: **Stockholm**

Approval Engineer: **Ståle Sneen**

Odd Magne Nesvåg
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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Job Id: **262.1-012424-3**
Certificate No: **TAA00000RK**

Product description
Incremental encoder 830900002 with optional line count and cable length.

Application/Limitation
The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

The encoder cable is not covered by this type approval. The encoder cable type is to be covered by separate type approval.

The equipment is not approved for direct power connection to the ship's distribution board. The equipment shall be installed with power supply of an approved type.

Type Approval documentation

Tests carried out
Applicable tests according to Standard for Certification No. 2.4, April 2006.

Marking of product
Manufacturer name: Leine & Linde
Model name: 830900002
Unique serial no.
Power supply rating: 9 – 30 Vdc

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 systems, software versions, 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