DNV·GL

Certificate No:
TAA00001NV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the 460-Gateway for bridge communication networks

with type designation(s)
VL-Gateway 460

Issued to
Veinland GmbH
Seddiner See, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft
DNV GL class programme DNVGL-CP-0203 – Type approval – Electronic and programmable equipment and systems
IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results

Application :

Product approved by this certificate is accepted for installation on all vessels classed by DNV GL. It fullfills the requirements of IEC 60945 (2002) for protected equipment.

Temperature	**A (-15..50 °C)**
Humidity	**Test levels acc. to IEC 60945**
Vibration	**A**
EMC	**B**
Enclosure	**IP 54**

Issued at **Hamburg** on **2018-04-24**
This Certificate is valid until **2020-04-23**.
DNV GL local station: **Rostock**

for **DNV GL**

Approval Engineer: **Jörg Rebel**

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

The 460-gateway VL–Gateway 460 can be used for communication between a 460-network according to IEC 61162-460 and an uncontrolled network. It has following interfaces:

- 4 x 1Gbit Ethernet Interface
- 1 x isolated Digital Input
- 1 x isolated Digital Output
- 2 x USB
- 1 x Serviceport
- Power supply: 24 V DC (9 – 36 V DC)

Software version: 2.3.x

Approval conditions

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- Functional description
- Configuration file loaded for application

The Type Approval covers hardware and software listed under Product description and is based on the default configuration file config-VL-Gateway-460.localdomain-20180412200531.xml (Version no. 1.0.0.0 2018-04-12).

When the type-approved software or the configuration file is revised (affecting all future deliveries) DNV GL is to be informed by forwarding updated version documentation. If the changes are judged to affect functionality, for which rule requirements apply, a new functional type test may be required and the certificate may have to be renewed to identify the new software version.

Product certificate

A product certificate according to Pt.4 Ch.9 Sec.1 [1.2.3] will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation by the network system integrator. The submitted configuration file of the application (Version no. 1.0.0.x, date/time of download) is to be compared to the default configuration file according to its specification (document version 2018-04-04), and at minimum the firewall-related tests (IEC 61162-460, Sect.10.8.4) are to be repeated. After the successful testing the clause for application software control will be put into force.

Application software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board.

Type Approval documentation

DNV GL No	Document ID	Rev.	Description
1	416.095.1	Rev.0, 2016-06-17	Report: Mechanical strength tests acc. to IEC 60945, Sec. 8.7
2	416.095.2	Rev.0, 2016-05-11	Report: Environmental tests acc. to IEC 60945, Sec. 8.2 to 8.4
3	416.095.3	Rev.0, 2016-05-18	Report: EMC tests acc. to IEC 60945, Sec. 9 and 10
4	962	2017-03-08	Certificate: Compass safe distance
5	-	2018-01-15	Declaration of Conformity acc. to corrosion
6	Report_IEC61162_460_ MagicNet-GWR	Rev.1-9, 2018-02-13	Report: Tests acc. to IEC 61162-460 and IEC 60945 Sec. 6, 11.1, 13 to 15
7	-	Rev. 1.7, 2018-04-11	Manual: Technical Documentation VL-Gateway

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016. For the bridge mounted component the 'Compass safe distance' was measured according to section 11.2 of IEC 60945 (2002). Applicable tests for protected equipment according to IEC 60945 Ed.4 (2002) including Corrigendum 1 (2008) and according to IEC 61162-460 Ed.1 (2015) and Ed.2 (FDIS 2018-01).

Marking of product

The products to be marked with:
- Manufacturer name
- Model name
- Serial number
- Power supply ratings
- Compass safe distance (if not marked on the product, to be given in the equipment manual)

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 renewal of this certificate.

END OF CERTIFICATE