

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Level Switches**

with type designation(s)
NRG 16-11, NRGT 26-1S, NRS 1-50, NRG 16-50S

Issued to

Gestra AG
Bremen, 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.

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
NRG 16-11	B	B	A	A	C
NRGT 26-1S	B	B	A	A	C
NRS 1-50	B	B	A	A	IP40 / IP20
NRG 16-50S	B	B	A	A	C

Issued at **Hamburg** on **2019-08-15**

This Certificate is valid until **2024-08-14**.

for **DNV GL**

DNV GL local station: **Hamburg**

Approval Engineer: **Dariusz Lesniewski**

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Joannis Papanuskas
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

NRG 16-50S is a level electrode.

NRS 1-50 is a level switch which is used in conjunction with one or two NRG 16-50S. It is applicable as a water level limiter for use in water steam boilers. Power supply for 24 VDC and 230 VAC.

NRGT 26-1S is a 4-20 mA level transmitter.

The following system assemblies are available:

NRG 16-38S consists of one NRG 16-11 and one NRGT 26-1 mounted in a common DN100 or DN150 flange.

NRG 16-39S consists of two NRG 16-11 and one NRGT 26-1 mounted in a common DN150 flange.

Approval conditions

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.

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE