

TYPE APPROVAL CERTIFICATE

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

with type designation(s)
NK06

Issued to

FISCHER Mess- und Regeltechnik GmbH
Bad Salzuflen, Nordrhein-Westfalen, 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:

Temperature B

Humidity B

Vibration A

EMC N/A

Enclosure Required protection according to DNVGL Rules shall be provided upon installation on board

Issued at **Hamburg** on **2019-06-03**

This Certificate is valid until **2024-06-02**.

for **DNV GL**

DNV GL local station: **Magdeburg**

Approval Engineer: **Holger Jansen**

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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

Electronic Level Switch
Electrodes

Type: NK06

Number electrodes:	1 ... 3
Working pressure:	max. 10 bar
Media temperature:	max.60°C
Ambient temperature:	-20°C ... 50°C
Material electrode head:	brass
Material electrode:	stainless steel 1.4305
Length of electrode:	max. 1000 mm
Screwed plug:	G1"A
Conductivity min.:	5 @S/cm (min.)
Appliance plug:	GDME 3011

To be used with level circuit electronic type ER76 = GT76.

In case of several electrodes rods with a length of > 500 mm spacers have to be used.

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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

Type Approval documentation

Tests carried out

Applicable tests according to DNV GL Class Guideline CG0339, November 2016.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- 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 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