

TYPE APPROVAL CERTIFICATE

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

with type designation(s)
NK10

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 (-20 °C / 16h)

Humidity B

Vibration A

EMC N/A

Enclosure B (IP 55)

Issued at **Hamburg** on **2018-09-26**

This Certificate is valid until **2023-09-25**.

DNV GL local station: **Magdeburg**

for **DNV GL**

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

Type: NK10

Float switch with functional tset facility

Temperature medium: max. 400 °C (depending on the type)

Nominal pressure: max. 20 bar (depending on the type)

Output: 1 or 2 c/o – contact(s), rating 6 A, 250 Vac

Material float: 1.4571

Material flange: 1.4571 / 1.0425 (P265GH)

Material welding tube: P235GH TC1

Order code: NK10x000000y0000

Type NK101: flange DIN EN 1092-1 form B1 DN65 PN40 1.0425
Type NK102: flange DIN EN 1092-1 form B1 DN80 PN40 1.0425
Type NK103: flange DIN EN 1092-1 form B1 DN80 PN16 1.0425
Type NK104: 82,5 mm welding tube (S80)
Type NK105: 88,9 mm welding tube (S90)
Type NK106: flange DIN EN 1092-1 form C DN65 PN40 1.0425
Type NK107: flange DIN EN 1092-1 form B1 DN65 PN40 1.4571
Type NK10A: flange DIN EN 1092-1 form C DN65 PN16 1.0425
Type NK10B: flange DIN EN 1092-1 form D DN65 PN40 1.0425
Type NK10F: flange DIN EN 1092-1 form C DN40 PN40 1.0425
Type NK10G: flange DIN EN 1092-1 form B1 DN80 PN40 1.4571
Type NK10H: flange DIN EN 1092-1 form G DN80 PN40 1.4571
Type NK10K: flange - 3" - ANSI B16.5 - 150lbs - 1.0425
Type NK10M: flange - 2,5" - ANSI B16.5 - 300lbs - 1.0425
Type NK10N: flange - 3" - ANSI B16.5 - 300lbs - 1.0425
Type NK10P: flange - 4" - ANSI B16.5 - 300lbs - 1.0425

y = 1: 1 c/o contact

y = 2: 2 c/o contacts

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.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

Marking of product

The products to be marked with:

- manufacturer name
- type 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