

TYPE APPROVAL CERTIFICATE

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

with type designation(s)
NIVOSWITCH RF x-4-yy-z

Issued to

**Nivelco Ipari Elektronika Zartkörűen Muködo
Reszvenytársasag
Budapest, Hungary**

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 C / IP 67

Issued at **Hamburg** on **2017-06-19**

This Certificate is valid until **2022-06-18**.

DNV GL local station: **Budapest**

for **DNV GL**

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

Vibrating fork level switch NIVOSWITCH RF x-4-yy-z

Power supply: 20 ... 255V AC or 20 ... 60V DC

Output (code -z):

G - 1 SPDT relay

H - 2 SPDT relays

Contact rating: 250V AC, 8A, AC 1 (Relay 1)

250V AC, 6A, AC 1 (Relay 2)

Electrical connection: M20 x1.5 cable gland

Mechanical connection (code x-):

M - 1" BSP thread

P - 1" NPT thread

G, B, K - flange

Housing: Aluminium casting

Length (code -yy-):

00 - 69mm

01 - 125 mm

02 - 0.2m

03 - 0.3m

Wetted parts (fork): stainless steel (1.4571)

Degree of protection: IP 67

Application/Limitation

Application: detection of level or flow of liquids

Type Approval documentation

Test Reports:

MEEI No. 28202818 002 (2006-10-03), MEEI No. 28202615 001 (2006-10-02)

MEEI No. 28202691 001 (2006-08-30), MEEI No. 28207031 001 (2009-01-07)

CHEMRES No. 36/2006 (2006-08-14)

Documents according to the reference lists GLRF4LS1.doc (2006 JUN.01) and GLRF4LS1.

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



Job Id: **262.1-024347-1**
Certificate No: **TAA000018W**

- 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