



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA000018W**  
Revision No:  
**1**

## This is to certify:

That the Level Switches

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

Issued to

**Nivelco Ipari Elektronika Zrt.**  
**Budapest, Hungary**

is found to comply with

**DNV 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.

## Location classes:

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	C / IP 67

Issued at **Høvik** on **2022-12-21**

for **DNV**

This Certificate is valid until **2027-06-30**.

DNV local unit: **Budapest**

Approval Engineer: **Ståle Sneen**

**Frederik Tore Elter**  
**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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2022-09

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## Product description

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

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

Output (code -z):

0 - 1 SPDT relay

A - 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

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

## 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), T-Network No. EMC-220721/2 (2022-07-21).

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

Type approval renewal assessment report for TAA000018W, DNV Budapest 2022-08-10.

## Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

## 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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE