# TYPE APPROVAL CERTIFICATE

Certificate no.:
**TAA0000106**
Revision No:
**2**

## This is to certify:

**that the Position Switch**

with type designation(s)
**NJ1,5-18GM-N-D-V1**

issued to
**Pepperl+Fuchs SE**
**Mannheim, Baden-Württemberg, Germany**

is found to comply with
**DNV rules for classification – Ships**

## 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** | **B (IPx7 tested)** |

Issued at **Hamburg** on **2026-06-30**
This Certificate is valid until **2031-07-05**.
DNV local unit: **Augsburg**

for **DNV**

Approval Engineer: **Holger Jansen**

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 USD 300 000.

## Product description

Inductive sensor, model no. NJ1,5-18GM-N-D-V1

| | | |
|---|---|---|
| General specifications | Switching element function<br>Rated operating distance sn<br>Installation<br>Output polarity | NAMUR, NC<br>1.5 mm<br>flush<br>DC |
| Nominal ratings | Nominal voltage Uo<br>Switching frequency f | 8.2 V (Ri approx. 1 kΩ)<br>0 ... 400 Hz |
| Limit data | Operating pressure | 350 bar |
| Mechanical specifications | Connection type<br>Housing material<br>Sensing face | Connector M12 x 1 , 4-pin<br>Stainless steel 1.4305 / AISI 303<br>Ceramic |
| General information | Use in the hazardous area | Category 2G; 1D |

## Application/Limitation

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 RU SHIP Pt.4 Ch.9 Sec. 1.
Sensor must always be used in connection with an type approved isolation amplifier.

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- Certificates issued by a notified/recognized Certification Body:
The relevant Certificate is: PTB 00 ATEX 2048X.

## Type Approval documentation

## Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, Edition August 2021.
Vibration test with a displacement +/-2.5mm, turnover frequency 19.9Hz, and acceleration 4g.

## Marking of product

The products to be marked with:
· Manufacturer name
· Device name and part no.
· Date code.

## 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