TYPE APPROVAL CERTIFICATE

Certificate No:
TAA0000106
Revision No:
1

This is to certify:

That the Position Switch

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

Issued to
Pepperl+Fuchs SE
Mannheim, **Germany**

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

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	**B (IPx7 tested)**

Issued at **Hamburg** on **2021-07-06**

This Certificate is valid until **2026-07-05**.
DNV local station: **Augsburg**

Approval Engineer: **Holger Jansen**

for **DNV**
Digitally Signed By: Rinkel, Marco
Location: DNV GL SE Hamburg, Germany
Signing Date: 07.07.2021 , on behalf of

Joannis Papanuskas
Head of Section

Product description

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

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

Place of manufacture

PT. Pepperl + Fuchs Bintan
SD 56, 57 Lobam
Bintan Industrial Estate
Pulau Bintan, Riau
Indonesia

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 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

Pepperl+Fuchs test-plan/test-selection no. PRDE-BHW0C (2016-08-11)
Pepperl+Fuchs test report no. PRDE-BKS9B (2016-10-19)
Pepperl+Fuchs EMC test report no. PRDE-BKL1C (2016-10-19)
Pepperl+Fuchs test report no. PRUS-4168B (2009-03-17)
Pepperl+Fuchs test report no. PRUS-B1L0 (2013-05-03)
Data sheet 106344 (2016-11-08)
Circuit diagram T01-1625BEN (Index B / 1985-04-17)
Part list_ 106344 (0003 / 2016-02-22)
Production instruction no. 57-7115B (2013-09-27)
Drawing no. 10-AHZ1 B Type label (2011-10-10)
Drawing no. 10-ANV1 G Sticker (2016-07-20)
Type Approval Assessment Report (2021-06-30)
Type Approval Assessment Report Bintan (2016-12-21)

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition December 2019.
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 at renewal of this certificate.

END OF CERTIFICATE