

**DNV·GL**Certificate No:  
**TAA000011J**

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Solenoid Valve**with type designation(s)  
**VSNC and VUVS**

Issued to

**Festo AG & Co. KG**  
**Esslingen, 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:**

<b>Temperature</b>	<b>B</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>-</b>
<b>Enclosure</b>	<b>B</b>

Issued at **Hamburg** on **2017-02-08**This Certificate is valid until **2022-02-07**.DNV GL local station: **Augsburg**for **DNV GL**Approval Engineer: **Klaus-Peter Schröder**

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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.



Job Id: **262.1-022073-2**  
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## Product description

Solenoid NAMUR valves VSNC-...F8 / VSNC-...F8... with 8 mm armature  
3/2 or 5/2 way valve single solenoid or 5/2 and 5/3 – way double solenoid  
Solenoid: VACF coils with connection pattern type B, industry standard or pattern type A, to EN 175301  
Operating voltage: 12, 24, 48 V DC or 24, 48, 120, 230 V AC

Solenoid NAMUR valves VSNC-...FN / VSNC-...FN... with 9 mm armature  
3/2 or 5/2 way valve or 5/2 and 5/3 – way double solenoid  
Solenoid: VACN-N coils with connection pattern type A, to EN 175301 or cable version  
Operating voltage: 24 V DC or 120, 230 V AC

Solenoid valves with 8 mm armature  
VUVS-L25...F8 / VUVS-L25...F8...  
VUVS-L30...F8 / VUVS-L30...F8...  
3/2 or 5/2 way valve or 5/2 and 5/3 – way double solenoid  
Solenoid: VACF coils with connection pattern type B, industry standard or pattern type A, to EN 175301  
Operating voltage: 12, 24, 48 V DC or 24, 48, 120, 230 V AC

## 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.

## 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:

- Model name
- Part no.
- Serial no.
- Operating pressure
- Ambient temperature.

### 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