



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA00001VX**  
Revision No:  
**1**

## This is to certify:

**That the Pressure Switch**

with type designation(s)  
**CAS 133, -136, -137, -139, -143, -145, -147, -155**

Issued to  
**Danfoss A/S**  
**Nordborg, Syddanmark, Denmark**

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:

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>N/A</b>
<b>Enclosure</b>	<b>C / IP67</b>

Issued at **Høvik** on **2023-06-20**

for **DNV**

This Certificate is valid until **2028-05-27**.

DNV local unit: **Denmark CMC**

Approval Engineer: **Martin Skårerverket**

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**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.



### Product description

CAS 133:	0 - 3.5 bar
CAS 136:	0 - 10 bar
CAS 137:	6 - 18 bar
CAS 139:	10 - 36 bar
CAS 143:	1 - 10 bar
CAS 145:	4 - 40 bar
CAS 147:	6 - 60 bar
CAS 155:	0.2- 2.5 bar, differential pressure switch, max. pressure 8 bar
Output:	1(2) c/o - contacts
Rating	AC-15/AC14 (inductive load): 0.1A, 220V AC
Rating	DC-13 (inductive load): 12W, 125V DC

### Place of manufacture

Danfoss Poland Sp. z o.o.  
Ul. Chrzanowska 5  
PL-05-825 Grodzisk Mazowiecki  
Poland

### 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.

### Type Approval documentation

Test reports: 60 - 763, 960354  
Drawings: 060 R 0251, 060 R 0044, 060 R 0033-36, 060 R0252  
Data sheet: AI226486438268en-001001, dated 2020-06

Type approval renewal assessment report for TAA00001VX, DNV Gdansk 2023-03-29.

### 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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE