

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA00000Y8**  
Revision No:  
**1**

## This is to certify:

That the **Temperature Switch**

with type designation(s)

**RT-3, RT-9, RT-10, RT-13, RT-101, RT-106, RT-107, RT-120, RT-123, RT-124**

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:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
<b>RT-3, RT-9, RT-10, RT-13</b>	<b>B</b>	<b>B</b>	<b>A</b>	<b>Not relevant</b>	<b>B/IP66</b>
<b>RT-101, RT-106, RT-107, RT-120, RT-123, RT-124</b>	<b>D</b>	<b>B</b>	<b>B</b>	<b>Not relevant</b>	<b>B/IP66</b>

Issued at **Høvik** on **2022-08-19**

for **DNV**

This Certificate is valid until **2027-05-01**.

DNV local station: **Denmark CMC**

Approval Engineer: **Martin Skårerverket**

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**Marta Alonso Pontes**  
**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

The temperature-controlled switches:

Type:	Range [°C]:	Switching diff. [°C] at:	
		min. setting /	max. setting
RT 3	-25 to 15	2.8 to 10	1 to 4
RT 9	-45 to -15	2.2 to 10	1 to 4.5
RT 10	-60 to -25	1.7 to 7	1 to 3
RT 13	-30 to 0	1.5 to 6	1 to 3
RT 101	25 to 90	2.4 to 10	3.5 to 20
RT 106	20 to 90	4 to 90	2 to 7
RT 107	70 to 150	6 to 25	1.8 to 8
RT 120	120 to 215	7 to 30	1.9 to 9
RT 123	150 to 250	6.5 to 30	1.8 to 9
RT 124	200 to 300	5 to 25	2.5 to 10

Output: 1 c/o contact

Contact load: AC-1: 10A, 400V; AC-3: 4A, 400V; AC-15: 3A, 400V

## 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.

## Application/Limitation

Thermometer wells shall be used when measuring temperature in fluids, steam or gases under pressure. RT-124 is not for application where DNV requires temperature wells.

All models to be equipped with metal cable entry, code No. 631-4547, and seal cap code No. 017-0895.

## Type Approval documentation

Data sheet: [AI245286497322en-000301 \(2021-03\)](#)  
Drawings: [017R0461 v.00](#), [017-5727 v.04](#), [017R0459](#), [017R0759 v.01](#), [027M0024 v.00](#)  
Test Report: [Danfoss Job.No. 980137, dtd. 980407](#)  
Legacy GL certificate: [5649771 HH](#)  
Approval documentation at renewal 2012:  
Chapter 1. - Main conclusion  
Chapter 2. - Test schedule and test specification  
Chapter 3. - Approval drawings  
Chapter 4. - RT Pressure Datasheet  
Chapter 5. - RT temperature Datasheet  
Chapter 6. - Signing sheets for test under surveillance  
Chapter 7. - Glow wire test  
Chapter 8. - Flammability test  
Chapter 9. - Functional test (before and after approval tests)

[Type approval renewal assessment report for TAA00000Y8, DNV Gdansk 2022-06-08.](#)

## 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