

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Temperature Switch

with type designation(s)

B- series, C- series, W-series

Issued to

Beta B.V.

Rijswijk Zh, Zuid-Holland, Netherlands

is found to comply with

DNV GL 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 GL.

Location classes:

Temperature	D
Humidity	B
Vibration	B
EMC	N/A
Enclosure	B

Issued at **Høvik** on **2020-10-02**

This Certificate is valid until **2025-10-01**.

DNV GL local station: **Netherlands CMC**

Approval Engineer: **Nils Jarem**



for **DNV GL**

Digitally Signed By: Sneen, Ståle

Location: DNV GL Høvik, Norway

on behalf of

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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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

Beta Temperature Switches, types B-, C-, W-series.

All BETA switches are built as a spring-loaded piston and diaphragm combination which actuates a switching element at a certain increasing or decreasing process pressure or temperature. The setpoint is adjustable within an exact specified pressure or temperature range, including a specific dead band.

Approval conditions

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.

Application/Limitation

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-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Doc. No.	Rev.	Description
2174187.0511-EMC	2014-09-17	DEKRA Declaration concerning electromagnetic compatibility
200300546	2020-05-06	KIWA Declaration of Conformity for IP testing BETA 11-05-2020
968/FSP 2040.01/20	2020-05-14	Environmental test of switches B, C and W
MARINE TYPE APPROVAL E&D DOCUMENTS / DRAWINGS C-, W-, B-series, dated 2020-05-28		

Type approval initial assessment report, DNV GL Netherlands CMC 2020-08-25.

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, December 2019.

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