TYPE APPROVAL CERTIFICATE

Certificate No:
TAE000019B
Revision No:
2

This is to certify:

That the Miniature Circuit Breaker

with type designation(s)
NB1-63

Issued to
Zhejiang Chint Electrics Co.,Ltd
Wenzhou, **China**

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.

Issued at **Hamburg** on **2023-12-08**

This Certificate is valid until **2026-10-04**.
DNV local unit: **Ningbo FIS**

Approval Engineer: **Harald Amberger**

for **DNV**

Digitally Signed By: Schaarmann, Arne
Location: DNV GL SE Hamburg, Germany
on behalf of

Oddvar Deinboll
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

Miniature Circuit Breakers with the following type designations:

Type NB1-63 and NB1-63H – 1, 2, 3 and 4 poles

Tripping characteristics:	B/C/D
Rated operation voltage (AC)	240/415V (1P), 240V (1P+N), 415V (2P, 3P, 3P+N, 4P) 230/400V (1P), 230V (1P+N), 400V (2P, 3P, 3P+N, 4P)
Frequency	50 - 60 Hz
Rated current	1, 2, 3, 4, 6, 10 - 63 A
Breaking capacity Icn	10 kA (NB1-63H) 6 kA (NB1-63)
Power factor	0.2 – 0.25

Application/Limitation

Tested in accordance with IEC 60947-2 Annex C (C2 test).

Type Approval documentation

Technical data: “NB1-63 DNV Application”, undated.
Intertek Testing Services Shanghai test report ref. no 200301983SHA-001, issued 2020-04-14
230100201SHA-001, issued 2023-01-12, DEKRA no.: 332255.50, issued 2021-09-06

Tests carried out

Type tested according to IEC / EN 60898 “Circuit breakers for overcurrent protection for household and similar installations” and IEC 60947-2 “Circuit breakers”.
Vibration test, dry heat test and damp heat test in according to DNV-CG-0339 (Class A).

Marking of product

Product marking: NB1-63 – Zhejiang Chint Electrics - Type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer’s product type marking and 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