



Certificate no.:  
**TAE0000512**

# TYPE APPROVAL CERTIFICATE

---

**This is to certify:**  
**that the Contactor Relay**

---

with type designation(s)  
**NFC 4 or 8-poles and CAL4, CAT4, CA4, CA4X1,2 or 4-poles**

issued to  
**ABB France**  
**Chassieu, France**

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 **Høvik** on **2025-01-30**

for **DNV**

This Certificate is valid until **2030-01-29**.

DNV local unit: **France CMC**

Approval Engineer: **Qiang William Guo**

---

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 USD 300 000.

### Name and place of manufacturer

|  |   |
|--|---|
| ABB France<br>11 Rue d'Arsonval 69680 Chassieu, France | ABB Xinhui Low voltage Switchgear Co Ltd.<br>Jiangmen City, Jingguzhou Industrial Development Zone<br>Guangdong Province, China |
|--|---|

### Product description

Contactor relay NFC & auxiliary contact CAL4, CA4 & CA4X with the following data (with screw or push-in terminals):

Free air continuous current Ith ambient temperature < 40°C: 16 A

Rated operation voltage Ue = 690 V

Rated insulation voltage Ui = 690 V

Uimp = 6 kV

Making capacity AC-15: 10 x Ie AC-15

Breaking capacity AC-15: 10 x Ie AC-15

Short circuit protection gG type fuse: 10 A

Rated short circuit protection current Icw: 100 A / 1.0 s 140 A / 0.1 s

Contact Utilization Characteristics according to IEC: Type contactor relay

| Type contactor relay                |           | NFC22E  | NFC31E        | NFC40E | NFC44E  | NFC53E  | NFC62E  | NFC71E  | NFC80E |  |
|-------------------------------------|-----------|---------|---------------|--------|---------|---------|---------|---------|--------|--|
| Contact type                        |           | 2NO+2NC | 3NO+1NC       | 4NO    | 4NO+4NC | 5NO+3NC | 6NO+2NC | 7NO+1NC | 8NO    |  |
| Rated<br>Operated<br>current<br>(A) | AC-<br>15 | 240 V   | 4 A           |        |         |         |         |         |        |  |
|                                     |           | 400 V   | 3 A           |        |         |         |         |         |        |  |
|                                     |           | 600 V   | 2 A           |        |         |         |         |         |        |  |
|                                     | DC-<br>13 | 24 V    | 6 A / 144 W   |        |         |         |         |         |        |  |
|                                     |           | 48 V    | 2.8 A / 134 W |        |         |         |         |         |        |  |
|                                     |           | 110 V   | 0.55 A / 60 W |        |         |         |         |         |        |  |
|                                     |           | 220 V   | 0.27 A / 68 W |        |         |         |         |         |        |  |
|                                     |           | 400 V   | 0.15 A / 60 W |        |         |         |         |         |        |  |

Auxiliary contact: as listed in the catalogue

### Application/Limitation

For installation inside switchboards/enclosures onboard ships and mobile offshore unit.

Location class according to DNV-CG-0339 Aug. 2021:

|                   |      |
|-------------------|------|
| Temperature class | B    |
| Vibration class   | A    |
| Humidity class    | A    |
| Enclosure         | IP20 |

### Type Approval documentation

| Documentation description                             | Doc. No.   | Issue date |
|---|------------|------------|
| AFC 1SBC100219C0201 Catalog                           |            | 2023       |
| CB certificate Contactor relays NFC                   | SE-113885  | 2024-05-02 |
| CB certificate Auxiliary contact CA4 4p               | SE-112440  | 2023-11-01 |
| CB certificate Auxiliary contact CA4 1 or 2p and CAL4 | FR-719194  | 2024-05-30 |
| CB certificate Auxiliary contact CA4X                 | CN-59138M1 | 2023-11-09 |

| Test report description | Report no. | Issue date |
|-------------------------|------------|------------|
|-------------------------|------------|------------|

|  |  |            |
|--|--|------------|
| TR CB Contactor relays NFC   | 20210462-6 TR CB NFC Intertek n°2201380STO-001               | 2020-09-21 |
| TR CB Auxiliary contact CA4 4p                                     | 2023420-1 TR CA4 CAT4 VEM4 Intertek n°2307872STO-001         | 2023-10-24 |
| TR CB Auxiliary contact CA4 1 or 2p and CAL4                       | 20230420-4 TR CB CA4-1 or 2p CAL4 CC4 Lcie n°21324121-797951 | 2024-05-13 |
| TR CB Auxiliary contact CA4X                                       | STIEE n°00901-CB2022CQC-104542-M1                            | 2023-10-23 |
| TR Vib contactor relays NFC and Auxiliary contact CA4, CAL4, CA4X  | 20210261-1MA AFC09-30-01                                     | 2023-06-23 |
| TR Clim contactor relays NFC and Auxiliary contact CA4, CAL4, CA4X | 20210262-MA AFC09 3p AFC26 3&4p                              | 2022-01-12 |

### Tests carried out

Electrical type tests in accordance with IEC 60947-5-1:2016.

Environmental tests in accordance with DNV-CG-0339 Aug. 2021(Vibration, Dry heat, damp heat and cold, high voltage and insulation resistance measurement test)

### Marking of product

ABB France – Type designation – Ratings

### 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.

Assessment to be performed at least 2 and 3,5 year and at renewal

END OF CERTIFICATE