DNV·GL

Certificate No:
TAE00001BV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Contactor Relay

with type designation(s)
NF and CAL4, CAT4 & CA4

Issued to
ABB France
CHASSIEU Cedex, France

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.

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-09-10**

for **DNV GL**

DNV GL local station: **Marseille**

Approval Engineer: **Nicolay Horn**

Trond Sjåvåg
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.

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Job Id: **262.1-010482-4**
Certificate No: **TAE00001BV**

Product description

Contactor relay NF & auxiliary contact CAL4, CAT4 & CA4 with the following data:

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 / 10.7 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 Charecteristics according to IEC: Type contactor relay

Type contactor relay			NF22E	NF31E	NF40E	NF44E	NF53E	NF62E	NF71E	NF80E
			2NO+2NC	3NO+1NC	4NO	4NO+4NC	5NO+3NC	6NO+2NC	7NO+1NC	8NO
AC-15	Rated Operated current (A)	240 V	4 A							
		400 V	3 A							
		600 V	2 A							
DC-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.

Data in the tables above is for an ambient temperature of 40 °C. For 45 °C ambient temperature the data must be derated with 5 %.

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 60947-5-1. Environmental tests in accordance with DNV Standard for Certification No. 2.4 (Vibration, Dry heat, damp heat and cold)

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 every second year.

END OF CERTIFICATE