

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Contactor**

with type designation(s)
AF9 to AF96 3 pole contactors, AF9 to AF80 4 pole contactors

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.

Type	Rated Voltage (V)	Rated Current (A)	Frequency (Hz)
AF9 to AF96 3 pole contactors	600 / 690	7 to 57 (AC-3 690 V)	50 / 60
AF9 to AF80 4 pole contactors	600 / 690	25 to 125 (AC-1)	50 / 60

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

Issued at **Høvik** on **2017-03-21**

for **DNV GL**

DNV GL local station: **Marseille**

Approval Engineer: **Nicolay Horn**

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Andreas Kristoffersen
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.

Certificate No: **TAE00001AF**
 File No: **823.20**
 Job Id: **262.1-010482-7**

Product description

AF09 ... AF96 3 pole contactors AC/DC operated – with screw or spring terminal:

Contacteur type	AF9	AF12	AF16	AF26	AF30	AF38
Maximum rated voltage Ue (V AC)	690	690	690	690	690	690
Rated frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Rated insulation voltage (V)	690**	690**	690**	690**	690**	690**
Main contacts:						
Rated operational current AC-1 40 °C	25/22 A*	28/24 A*	30/24 A*	45 A	50 A	50 A
AC3 Utilization category:						
Rated power AC-3 400 V (kW)	4	5.5	7.5	11	15	18.5
Rated operational current AC-3 400 V	9 A	12 A	18 A	26 A	32 A	38 A
Rated power AC-3 690 V (kW)	5.5	7.5	9	15	18.5	22
Rated operational current AC-3 690 V	7 A	9 A	10.5 A	17 A	21 A	24 A
Rated operational current AC-8a 400 V	12 A	16 A	22 A	30 A	40 A	50 A

Contacteur type	AF40	AF52	AF65	AF80	AF96
Maximum rated voltage Ue (V AC)	690	690	690	690	690
Rated frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Rated insulation voltage (V)	690**	690**	690**	1000	1000
Main contacts:					
Rated operational current AC-1 40 °C	70 A	100 A	105 A	125 A	130 A
AC3 Utilization category:					
Rated power AC-3 400 V (kW)	18.5	22	30	37	45
Rated operational current AC-3 400 V	40 A	53 A	65 A	80 A	96 A
Rated power AC-3 690 V (kW)	22	30	37	45	55
Rated operational current AC-3 690 V	25 A	35 A	39 A	49 A	57 A
Rated operational current AC-8a 400 V	53 A	70 A	85 A	105 A	120 A

AF09 ... AF80 4 pole contactors AC/DC operated – with screw terminal:

Contacteur type	AF09	AF16	AF26	AF38	AF40	AF52	AF80
Maximum rated voltage Ue (V AC)	690	690	690	690	690	690	690
Rated frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Rated insulation voltage (V)	690**	690**	690**	690**	690**	690**	1000
Main contacts:							
Rated operational current AC-1 40 °C	25 A	30 A	45 A	55 A	70 A	100 A	125 A

* For spring terminals

** See Application / limitation

Application/Limitation

With Uimp=6kV the max. rated voltage is 600 V when used in IT (ship) net. It can be used in applications with directly earthed systems with rated voltage of 400/690 V.

Type Approval documentation

Technical info :

“Motor protection and control – Manual motor starters, contactors and overload relays” ABB catalogue issued July 2016. “AF40... AF96 3-pole contactors”, parts of ABB catalogue “Summary table of electrical data of products”, dated 2011-11-02. Part of CD “AA France Approval DNV Range AF, dated 2011-11-10.

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Test reports:

Intertek test report nos.1404056STO-001 issued 2014-10-24, 1521526STO-002 issued 2016-02-16, 1209915-1 & 1209915-2 dated 2013-02-26. Intertek Semko AB test report nos 1210336-1 dated 2013-01-31, 1210336-2 dated 2013-01-30, 1210336-3 dated 2013-01-29 & 1210336-5 dated 2013-02-13
Parts of of CD "AA France Approval DNV Range AF, dated 2011-11-10.

Tests carried out

Type tests in accordance with IEC 60947-4-1. 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 2 and 3,5 year and at renewal.

END OF CERTIFICATE