

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Contactor

with type designation(s)
A95 to A300, AF95 to AF1650

Issued to

ABB AB, Control Products
VÄSTERÅS, Sweden

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

For installations inside switchboards / enclosures onboard ships and offshore units

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)
A95 to A300	220 - 1000	96 - 300 (400 V/ AC3)	50 / 60
AF95 to AF1650	220 - 1000	96-1060 (400 V/ AC3)	50 / 60

Issued at **Høvik** on **2017-05-15**

This Certificate is valid until **2022-05-14**.

for **DNV GL**

DNV GL local station: **Stockholm**

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.



Job Id: **262.1-007034-3**
Certificate No: **TAE00001W1**

Name and place of manufacturer

ABB AB, Controll Products VÄSTERÅS, Sweden	ABB Xinhui Low Voltage Switchgear Co, Ltd Xinhui, China
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Product description

Contactor type		A95-30 / AF95-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	145			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40
Rated operational voltage (Ue)	V	1000	690	415	690
Rated operational current (Ie)	A	30	65	96	145

Contactor type		A110-30 / AF110-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	160			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40
Rated operational voltage (Ue)	V	1000	690	415	690
Rated operational current (Ie)	A	30	82	110	160

Contactor type		A145-30 / AF145-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	250			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40 40
Rated operational voltage (Ue)	V	1000	690	500	1000 690
Rated operational current (Ie)	A	80	120	145	180 250

Contactor type		A185-30 / AF185-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	275			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40 40
Rated operational voltage (Ue)	V	1000	690	500	1000 690
Rated operational current (Ie)	A	95	170	170	200 275

Contactor type		A210-30 / AF210-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	350			
Utilization category		AC-3			AC-1
Ambient temperature	°C	-	55	-	40
Rated operational voltage (Ue)	V	-	690	-	690
Rated operational current (Ie)	A	-	210	-	350

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Contact type		A260-30 / AF260-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	400			
Utilization category		AC-3			AC-1
Ambient temperature	°C	-	55	55	40
Rated operational voltage (Ue)	V	-	690	415	690
Rated operational current (Ie)	A	-	220	260	400

Contact type		A300-30 / AF300-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	500 with terminal enlargement LW300			
Utilization category		AC-3			AC-1
Ambient temperature	°C	-	55	55	40
Rated operational voltage (Ue)	V	-	690	415	690
Rated operational current (Ie)	A	-	280	300	500

Contact type		AF400-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	600			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40
Rated operational voltage (Ue)	V	1000	690	500	1000
Rated operational current (Ie)	A	155	350	400	600

Contact type		AF460-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	700			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40
Rated operational voltage (Ue)	V	1000	690	500	1000
Rated operational current (Ie)	A	200	400	460	700

Contact type		AF580-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	800			
Utilization category		AC-3			AC-1
Ambient temperature	°C	55	55	55	40
Rated operational voltage (Ue)	V	1000	690	500	1000
Rated operational current (Ie)	A	250	500	580	800

Contact type		AF750-30			
Rated insulation voltage (Ui)	V	1000			
Rated Frequency	Hz	50/60			
Rated thermal current (Ith)	A	1050			

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Utilization category		AC-3			AC-1	
Ambient temperature	°C	55	55	55	40	40
Rated operational voltage (Ue)	V	1000	690	500	1000	690
Rated operational current (Ie)	A	300	650	750	1000	1050

Contactor type		AF1350-30				
Rated insulation voltage (Ui)	V	1000				
Rated Frequency	Hz	50/60				
Rated thermal current (Ith)	A	1350				
Utilization category		AC-3			AC-1	
Ambient temperature	°C	55	55	55	40	
Rated operational voltage (Ue)	V	1000	690	440	1000	
Rated operational current (Ie)	A	375	800	860	1350	

Contactor type		AF1650-30				
Rated insulation voltage (Ui)	V	1000				
Rated Frequency	Hz	50/60				
Rated thermal current (Ith)	A	1650				
Utilization category		AC-3			AC-1	
Ambient temperature	°C	55	55	55	40	
Rated operational voltage (Ue)	V	1000	690	440	1000	
Rated operational current (Ie)	A	375	970	1060	1650	

Application/Limitation

Environmental categories: Vibration A, Temperature B, Humidity B

Type Approval documentation

Tests carried out

Type tests according to IEC 60947-4-1(2009) Sequence I and II,
Environmental tests in accordance with "Regulation for the Performance of Type Test Edition 2012":
Power supply variations, Inclination test, Vibration test, Insulation resistance test, Damp heat test, Dry heat test, Low temperature test and high voltage test.

Marking of product

ABB – Type designation – Rated voltage – Breaking capacity.

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



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