



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE00000DY
Revision No:
2

This is to certify:

that the Contactor

with type designation(s)
AF contactors

issued to

ABB Electrification Sweden AB, Motor Starting & Safety
Västerås, Sweden

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Rated voltage (V) 400 - 1000

Rated current (A) 160 - 600

Frequency (Hz) 50 - 60

Issued at **Høvik** on **2024-07-05**

for **DNV**

This Certificate is valid until **2029-04-08**.

DNV local unit: **Sweden CMC**

Approval Engineer: **Nicolay Horn**

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.



Form code: TA 251

Revision: 2023-09

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Name and place of manufacturer

ABB AB, Control Products Västerås, Sweden	ABB Xinhui Low Voltage Switchgear Co. Ltd Xinhui, China
ABB INDIA LIMITED Bangalore Karnataka 562123 INDIA	

Product description

Low voltage contactors

Technical data 3-pole:

Contactor type		AF116-30				AF140-30			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	160				200			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	-	60	60	40	-	60	60	40
Rated operational voltage (U _e)	U	-	690	440	690	-	690	440	690
Rated operational current (I _e)	I	-	65	116	160	-	80	140	200

Contactor type		AF146-30				AF190-30			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	225				275			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	60	60	60	40	60	60	60	40
Rated operational voltage (U _e)	U	1000	690	440	1000	1000	690	440	1000
Rated operational current (I _e)	I	60	93	146	225	85	135	190	250

Contactor type		AF205-30				AF265-30			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	350				400			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	60	60	60	40	60	60	60	40
Rated operational voltage (U _e)	U	1000	690	440	1000	1000	690	440	1000
Rated operational current (I _e)	I	100	165	205	275	113	250	265	350

Contactor type		AF305-30				AF370-30			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	500				600			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	60	60	60	40	60	60	60	40
Rated operational voltage (U _e)	U	1000	690	440	1000	1000	690	440	1000
Rated operational current (I _e)	I	131	290	305	375	141	315	370	400

Technical data 4-pole:

Contactor type		AF116-40				AF140-40			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	160				200			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	60	40	60	-	60	40	60	-
Rated operational voltage (U _e)	U	440*	690	690	-	440*	690	690	-
Rated operational current (I _e)	I	116	160	145	-	140	200	175	-

Contactor type		AF190-40				AF205-40			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	275				350			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	60	40	60	40	60	40	60	40
Rated operational voltage (U _e)	U	440*	690	690	1000	440*	690	690	1000
Rated operational current (I _e)	I	190	275	250	250	205	350	300	275

Contactor type		AF265-40				AF305-40			
Rated insulation voltage (U _i)	V	1000				1000			
Rated impulse withstand voltage	kV	8				8			
Rated Frequency	Hz	50/60				50/60			
Degree of protection	IP	00				00			
Rated thermal current (I _{th})	A	400				500			
Utilization category		AC3		AC1		AC3		AC1	
Ambient temperature	°C	60	40	60	40	60	40	60	40
Rated operational voltage (U _e)	U	440*	690	690	1000	440*	690	690	1000
Rated operational current (I _e)	I	265	400	350	350	305	500	400	375

Contactor type		AF370-40			
Rated insulation voltage (U _i)	V	1000			
Rated impulse withstand voltage	kV	8			
Rated Frequency	Hz	50/60			
Degree of protection	IP	00			
Rated thermal current (I _{th})	A	525			
Utilization category		AC3		AC1	
Ambient temperature	°C	60	40	60	40
Rated operational voltage (U _e)	U	440*	690	690	1000
Rated operational current (I _e)	I	370	525	425	400

* The voltage range is from 220 V to 440V

Technical data auxiliary contacts:

Auxiliary contacts CAL19	1(2)NO + 1(2)NC
Rated control circuit voltage	24 – 690 V AC
Rated impulse withstand voltage U _{imp}	6 kV
Conventional thermal current I _{th}	16 A

Rated control supply voltage, U_c: 24-500VAC / 20-500VDC
100-500VAC/DC with PLC

Type Approval documentation

Technical info:

1SBC100214C0202 rev D – Main catalogue Motor protection and control.

«Technical data for AF-contactors » and «Technical data for AF-contactors (4-pole) undated.

Test reports:

Intertek type test reports no. 14119354VAS-001, 1411356VAS-001 & 1411357VAS-001 issued 2014-09-23, 1714758STO-001 & 171475STO-001 issued 2017-12-20, 1714757STO-001 issued 2018-01-24. Intertek EMC Test Reports no. 1220391-1 / 2/ 3 Ed 1 issued 2012-10-16, no. 1307371-1 Ed 1 issued 2013-06-24, 1314106-1 to 8 dated 2013-12-30, 1121438-1 to 3 issued 2011-11-16, 1301264-1 ed 2 issued 2013-02-22, 2110107STO104 issued 2023-04-14.

DELTA test reports REC-E703770_1 & REC-E703770_2 dated 2014-01-07, 620-20237-12-R0 issued 2020-10-20
Intertek- SEMCO test report nos. 1215933-1, 1215933-2 dated 2012-09-26, 1220489 dated 2013-01-23, 1301147-1 dated 2013-03-04. 1308699-1 dated 2013-07-04 and 1314369 dated 2013-12-18

Tests carried out

Type tests according to IEC 60947-4-1 Sequence I and II, 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 is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routines (RT) checked (if not available tests according 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.

Survey to be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE