Certificate No:
TAE00004C9

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Contactor

with type designation(s)
GF 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)	**1500**
Rated current (A)	**875 - 1325**
Frequency (Hz)	**50 - 50**

Issued at **Høvik** on **2021-09-20**

This Certificate is valid until **2026-09-19**.
DNV local station: **Sweden CMC**

Approval Engineer: **Nicolay Horn**

for **DNV**

Digitally Signed By: Alonso Pontes, Marta
Location: DNV Høvik, Norway

Marta Alonso Pontes
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.

Product description

Low voltage DC contactors

Technical data 2-pole:

Contactor type		**GF875-20**			
Rated insulation voltage (U_i)	V	1500			
Rated impulse withstand voltage Uimp	kV	8			
Rated Frequency	Hz	50/60			
Degree of protection	IP	00			
Rated thermal current (I_{th})	A	875			
Utilization category		DC-PV3		DC1	
Ambient temperature	°C	60	70	60	70
Rated operational voltage (U_e)	V	1500	1500	1500	1500
Rated operational current (I_e /I_{scl})	I	875 /210	650 / 210	210	210

Contactor type		**GF1050-20**			
Rated insulation voltage (U_i)	V	1500			
Rated impulse withstand voltage Uimp	kV	8			
Rated Frequency	Hz	50/60			
Degree of protection	IP	00			
Rated thermal current (I_{th})	A	1050			
Utilization category		DC-PV3		DC1	
Ambient temperature	°C	60	70	60	70
Rated operational voltage (U_e)	V	1500	1500	1500	1500
Rated operational current (I_e /I_{scl})	I	1050 /210	850 /210	210	210

Contactor type		**GF1325-20**			
Rated insulation voltage (U_i)	V	1500			
Rated impulse withstand voltage Uimp	kV	8			
Rated Frequency	Hz	50/60			
Degree of protection	IP	00			
Rated thermal current (I_{th})	A	1325			
Utilization category		DC-PV3		DC1	
Ambient temperature	°C	-	-	60	70
Rated operational voltage (U_e)	V	-	-	1500	1500
Rated operational current (I_e /I_{scl})	I	-	-	210	210

Technical data auxiliary contacts:

Auxiliary contacts CAL20	1 NO + 1 NC
Rated control circuit voltage	24 – 690 V AC
Rated impulce withstand voltage Uimp	6 kV
Conventional thermal current Ith	16 A

Rated control supply voltage, Uc: 24-500VAC / 20-500VDC
24-500VAC and 20-500VDC with PLC

Application / limitation

Location Classes:
Temperature: B, Humidity: B, Vibration: A

Operating instruction of the manufacturer to be observed

Type Approval documentation

Technical info:
«Technical data for GF-contactors» and «Contactors for DC switching", undated.

Test reports:
Intertek type test reports nos. 1905129VAS-001 & 1905129VAS-002 issued 2021-11-21.
Force test teport nos. 12124094-1 dated 2021-07-13 and 620237-11-R0 issued 2020-10-20.

Tests carried out

Type tests according to IEC 60947-4-1 Sequence I and II and Appendix M, Environmental tests in accordance with DNVGL-CG-0339 December 2019 / IACS E10 rev.8: Power supply variations, Power supply failure, Vibration test, Insulation resistance test, Damp heat test, Dry heat test, Low temperature test, EMC 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