

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 - 60

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**

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.

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.



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 U_{imp}	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_{scI})	I	875 / 210	650 / 210	210	210

Contactor type		GF1050-20			
Rated insulation voltage (U_i)	V	1500			
Rated impulse withstand voltage U_{imp}	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_{scI})	I	1050 / 210	850 / 210	210	210

Contactor type		GF1325-20			
Rated insulation voltage (U_i)	V	1500			
Rated impulse withstand voltage U_{imp}	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_{scI})	I	-	-	210	210

Technical data auxiliary contacts:

Auxiliary contacts CAL20	1 NO + 1 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
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

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