DNV·GL

Certificate No:
TAE000022F

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Frequency Converter

with type designation(s)
ACS880-107-xxxx-x, ACS880-207-xxxx-x, ACS880-307-xxxx-x, ACS880-607-xxxx-x, ACS880-1607-xxxx-x, ACS880-07-xxxx-x, ACS880-17/37-xxxx-x, ACS880 multidrives

Issued to
ABB Oy, Drives
Helsinki, Finland

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.

This Certificate is valid until **2022-07-10**.
Issued at **Høvik** on **2017-07-11**

DNV GL local station: **Helsinki**

Approval Engineer: **Nicolay Horn**

for **DNV GL**

Digitally Signed By: Andreas Kristoffersen
Location: DNV GL Høvik, Norway
Signing Date: 2017-07-12

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: **262.1-021795-2**
Certificate No: **TAE000022F**

Name and place og manufactuer

ABB Oy Drives Helsinki, Finland	ABB Beijing Drive Systems Co.; Ltd Beijing, China
ABB AS Jüri, Harjumaa, Estonia	

Product description

The ACS880 with the type designations ACS880-107-xxxx-x, ACS880-207-xxxx-x, ACS880-307-xxxx-x, ACS880-607-xxxx-x, ACS880-1607-xxxx-x, ACS880-07-xxxx-x and ACS880-17/37-xxxx-x are cabinet built single drives and multidrives units for controlling asynchronous AC induction motors, permanent magnet motors, AC induction servomotors and ABB synchronous reluctance motors (SynRM motors).

Type code designation +C132 for marine applications.

Voltage:	380V – 690V
Voltage tolerance:	Steady state ±10%, transient state ±20%
Frequency:	50/60 Hz
Frequency tolerance:	Steady state ±5%, transient state ±10%
Ambient temperature:	0-45°C
Humidity:	0-95%, no condensation
Vibration class:	A
EMC class:	IEC 61800-3 (see application limitation)

	Category 2	**Voltage U_N**	**Power P_N (+45°C)**	**Power S_N (+45°C)**	**Frame sizes**
		V	**kW**	**kVA**	
2a	**Cabinet-built ACS880 multidrives**				
	ACS880-207	380-690	-	278…5819	R8i … 10xR8i + BLCL … 5xBLCL-XX-X
	ACS880-307	380-690	-	430…5174	2xD7T, D8T…6xD8T
	ACS880-107	380-690	5…5320	-	R5i…10xR8i
	ACS880-607 (NBRA -types, 1-phase)	380-690	91…678	-	NBRA659…6xNBRA669
	ACS880-607 (nxR8i -types, 3-phases)	380-690	480…6180	-	R8i…5R8i
	ACS880-1607	380-690	290…2721	-	R8i…5xR8i (DC output)
2b	**Cabinet-built ACS880 single**				
	ACS880-07	380-690	52…2660	-	R6…R11, 2xD7T, D8T…4D8T+2…5xR8i
	ACS880-17/37	380-690	152…3040	-	R11, R8i…6xR8i+R8i… 6xR8i

Application/Limitation

Electro Magnetic Compatibility:
- EMC filter option E202 (not for 690V) to be used in TN-system for 1st environment, restricted distribution, C2.
- EMC filter as standard (Note: For category 3 no optional equipment is needed, but the drive must be installed according to the instructions given in the manuals) for 2nd environment, C3, grounded/ungrounded network (TN/IT-systems).

Converter to be installed in "special distribution zone" and "general power distribution zone", in accordance with IEC 60533 provided measures are taken to attenuate these effects on the distribution system.

Pollution degree:
To be installed in an enclosure with an IP degree in accordance with DNV Rules w.r.t. location. IP 20 and 21 versions are limited to be used in pollution protected rooms (maximum pollution degree II).

Product certification:
Frequency converters larger than 100kW serving important or essential equipment are subjected for additional case by case based product certification. Documentation to be submitted for product certification shall be according DNVGL ship rules Pt.4 Ch.8 or DNVGL offshore standard D201, including reference to this type approval certificate and confirmation that the correct marine options and power ratings are used.

Type Approval documentation

As stated in approval letter:

MCANO381/NHORN/262.1-021795-J-44

Tests carried out

According to DNVGL-CP-0395

Marking of product

ABB Oy – Type designation – Output – Input – IP degree

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, 3.5 year and at renewal.

END OF CERTIFICATE