

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Frequency Converter**

with type designation(s)

**ACS800-01 / ACS800-U1 / ACS800-04**

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 :****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2020-03-25**for **DNV GL**This Certificate is valid until **2025-01-25**.DNV GL local station: **Helsinki FIS**Approval Engineer: **Nicolay Horn**

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**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

3-phase variable speed drive for motor applications, ACS800-01+C132, ACS800-U1+C132 and ACS800-04+C132.

Output data for input voltage U = 230 V

Type designation	Mains supply (V)	Frame size	Nominal ratings *	
			I <sub>cont. max</sub> (A)	I <sub>max</sub> (A)
AC800-01/04-0001-	208 - 240 V	R2	4,8	6,5
AC800-01/04-0002-	208 - 240 V	R2	6,2	8,2
AC800-01/04-0003-	208 - 240 V	R2	8,1	10,8
AC800-01/04-0004-	208 - 240 V	R2	10,4	13,8
AC800-01/04-0005-	208 - 240 V	R2	13,2	17,6
AC800-01/04-0006-	208 - 240 V	R3	18	24
AC800-01/04-0009-	208 - 240 V	R3	24	32
AC800-01/04-0011-	208 - 240 V	R3	32	46
AC800-01/04-0016-	208 - 240 V	R4	42	62
AC800-01/04-0020-	208 - 240 V	R4	52	72
AC800-01/04-0025-	208 - 240 V	R5	68	86
AC800-01/04-0030-	208 - 240 V	R5	82	112
AC800-01/04-0040-	208 - 240 V	R5	98	138
AC800-01/04-0050-	208 - 240 V	R6	134	164
AC800-01/04-0060-	208 - 240 V	R6	158	202
AC800-01/04-0070-	208 - 240 V	R6	192	282

Output data for input voltage U = 400 V

Type designation	Mains supply (V)	Frame size	Nominal ratings *	
			I <sub>cont. max</sub> (A)	I <sub>max</sub> (A)
AC800-01/04-0003-	380 - 415	R2	4,8	6,5
AC800-01/04-0004-	380 - 415	R2	6,2	8,2
AC800-01/04-0005-	380 - 415	R2	8,1	10,8
AC800-01/04-0006-	380 - 415	R2	10,4	13,8
AC800-01/04-0009-	380 - 415	R2	13,2	17,6
AC800-01/04-0011-	380 - 415	R3	18	24
AC800-01/04-0016-	380 - 415	R3	24	32
AC800-01/04-0020-	380 - 415	R3	32	46
AC800-01/04-0025-	380 - 415	R4	42	62
AC800-01/04-0030-	380 - 415	R4	52	72
AC800-01/04-0040-	380 - 415	R5	68	86
AC800-01/04-0050-	380 - 415	R5	82	112
AC800-01/04-0060-	380 - 415	R5	98	138
AC800-01/04-0075-	380 - 415	R5	137	170
AC800-01/04-0070-	380 - 415	R6	134	164
AC800-01/04-0100-	380 - 415	R6	158	202
AC800-01/04-0120-	380 - 415	R6	192	282
AC800-01/04-0135-	380 - 415	R6	214	326
AC800-01/04-0165-	380 - 415	R6	247	326
AC800-01/04-0205-	380 - 415	R6	276	351

Output data for input voltage U = 500 V

Type designation	Mains supply (V)	Frame size	Nominal ratings *	
			I <sub>cont. max</sub> (A)	I <sub>max</sub> (A)
AC800-01/04-0004-	380 – 500 V	R2	4,7	6,5
AC800-01/05-0005-	380 – 500 V	R2	5,9	8,2
AC800-01/04-0006-	380 – 500 V	R2	7,7	10,8
AC800-01/04-0009-	380 – 500 V	R2	10	13,8
AC800-01/04-0011-	380 – 500 V	R2	12,5	17,6
AC800-01/04-0016-	380 – 500 V	R3	18,5	24
AC800-01/04-0020-	380 – 500 V	R3	24	32
AC800-01/04-0025-	380 – 500 V	R3	32	46
AC800-01/04-0030-	380 – 500 V	R4	40	62
AC800-01/04-0040-	380 – 500 V	R4	46	72
AC800-01/04-0050-	380 – 500 V	R5	62	86
AC800-01/04-0060-	380 – 500 V	R5	75	112
AC800-01/04-0070-	380 – 500 V	R5	92	138
AC800-01/04-0105-5	380 – 500 V	R5	137	170
AC800-01/04-0100-	380 – 500 V	R6	118	164
AC800-01/04-0120-	380 – 500 V	R6	149	202
AC800-01/04-0140-	380 – 500 V	R6	171	282
AC800-01/04-0165-	380 – 500 V	R6	214	326
AC800-01/04-0205-	380 – 500 V	R6	247	326
AC800-01/04-0255-	380 – 500 V	R6	276	351

Output data for input voltage U = 690 V

Type designation	Mains supply (V)	Frame size	Nominal ratings *	
			I <sub>cont. max</sub> (A)	I <sub>max</sub> (A)
AC800-01/04-0011-	525 – 690 V	R4	12	14
AC800-01/04-0016-	525 – 690 V	R4	16,5	19
AC800-01/04-0020-	525 – 690 V	R4	21	28
AC800-01/04-0025-	525 – 690 V	R4	24	38
AC800-01/04-0030-	525 – 690 V	R4	31	44
AC800-01/04-0040-	525 – 690 V	R4	34	54
AC800-01/04-0050-	525 – 690 V	R5	48	68
AC800-01/04-0060-	525 – 690 V	R5	54	84
AC800-01/04-0070-	525 – 690 V	R6	75	104
AC800-01/04-0100-	525 – 690 V	R6	88	124
AC800-01/04-0120-	525 – 690 V	R6	107	172
AC800-01/04-0145-	525 – 690 V	R6	127	245
AC800-01/04-0175-	525 – 690 V	R6	157	245
AC800-01/04-0205-	525 – 690 V	R6	180	245

\* I<sub>cont. max</sub> = Rated current available continuously without overloadability at 45 °C.  
 I<sub>max</sub> = Maximum output current. Available for at least 10 seconds at start. Longer if drive temperature allows.

## Application/Limitation

3-ph supply voltage	$U_{2IN} = 208 - 240 \text{ V} \pm 10 \%$ $U_{3IN} = 380 - 415 \text{ V} \pm 10 \%$ $U_{5IN} = 380 - 500 \text{ V} \pm 10 \%$ $U_{7IN} = 525 - 690 \text{ V} \pm 10 \%$
Frequency	48 - 63 Hz
Power factor	$\text{Cos } \Phi = 0.98$ (fundamental) $\text{Cos } \Phi = 0.93 - 0.95$ (total)
3-ph output voltage	0 - $U_{2IN}/U_{3IN}/U_{5IN}/U_{7IN}$
Frequency control	0 - $\pm 300$ Hz 0 - $\pm 120$ Hz (with du/dt filter)
Degree of protection	ACS800-04: IP20 ACS800-01/-U1: IP 21 (standard), IP 55 (optional)
Temperature class	A
Humidity class	B
Vibration class	A
EMC	A
Obligatory option	+ C132

The frequency converter is to be regarded as a component. The actual installation to be designed according to ABB technical documentation,

Documents for the actual application are to be submitted for approval in each case in accordance with DNV Rules Pt.4, Ch.8, Sec.1 Table 2.

A Product Certificate is required for converters  $\geq 100\text{KW}$  for motor drives, if applied for essential or important functions.

To be installed in/with an enclosure with an IP degree in accordance with DNV Rules w.r.t. location.

The Type Approval covers hardware and software for the basic controller. The Type Approval does not cover application software.

For marine applications of the drive, OPTION CODE + C132 to be chosen.

## Type Approval documentation

### Technical info:

[ACS800 Marine Supplement 3AFE68291275.](#)

[ABB drives for Marine application Technical catalogue 3AFE68326753.](#)

### Test reports:

[ABB Oy test report binder for additional types.](#)

[ABB OY Drives Marine Type Approval ACS800-01 +C132, Test reports binders 1 - 2.](#)

[Binder 1 includes: List of type tests, Routine test specification and test reports, Power supply variation and failure, Vibration, heat tests and EMC tests.](#)

[Binder 2 includes: EMC tests.](#)

## Tests carried out

Full Current test, Heat Run Test, Power Supply Variation, Power Supply Failure, Dielectric, EMC (immunity and emission), Vibration, Low temperature and Damp heat (steady state and cyclic).

Job Id: **262.1-006132-4**  
Certificate No: **TAE00003XV**

## Marking of product

ABB

ACS800-xx-yyyy-z+...+C132

xx -01,-04 (standard) or -U1 (optional),  
where U= design according to UL standards.

yyyy kVA rating

z voltage class

+C132 obligatory option.

## 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 assessment are:

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