



Marine & Offshore  
Division

Certificate number: 38553/A1 BV

File number: AP 4517

Product code: 2592I

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**ABB Oy Drives**

Helsinki - FINLAND

*for the type of product*

**FREQUENCY CONVERTERS**

ACS880-01/04

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

IEC 61800-5-1 (2007)

*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 03 Sep 2019**

**For BUREAU VERITAS,**

At BV HELSINKI, on 20 Jan 2015,

Tommy Andersson



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 5 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

ACS880-01\*/04\*\* wall or cabinet mounted industrial single drive Frequency Converter.

#### 1. Output data for input voltage 230 V (range 208 to 240 V).

Type designation ACS880-01/04-	Frame size	Nominal ratings	
		I N (A)	P (kW)
04A6-2	R1	4.4	0.75
06A6-2	R1	6.3	1.1
07A5-2	R1	7.1	1.5
10A6-2	R1	10.1	2.2
16A8-2	R2	16.0	3.0
24A3-2	R2	23	5.5
031A-2	R3	29	7.5
046A-2	R4	44	11
061A-2	R4	58	15
075A-2	R5	71	18.5
087A-2	R5	83	22
115A-2	R6	109	30
145A-2	R6	138	37
170A-2	R7	162	45
206A-2	R7	196	55
274A-2	R8	260	75

#### 2. Output data for input voltage 400 V (range 380 to 415 V).

Type designation ACS880-01/04-	Frame size	Nominal ratings	
		I N (A)	P (kW)
02A4-3	R1	2.3	0.75
03A3-3	R1	3.1	1.1
04A0-3	R1	3.8	1.5
05A6-3	R1	5.3	2.2
07A2-3	R1	7.6	3.0
09A4-3	R1	9.5	4.0
12A6-3	R1	12.3	5.5
017A-3	R2	16	7.5
025A-3	R2	24	11
032A-3	R3	30	15
038A-3	R3	36	18.5
045A-3	R4	43	22
061A-3	R4	58	30
072A-3	R5	68	30
087A-3	R5	83	45
105A-3	R6	100	55
145A-3	R6	138	55
169A-3	R7	161	75
206A-3	R7	196	90
246A-3	R8	234	110
293A-3	R8	278	132
363A-3	R9	345	160
430A-3	R9	409	200

**3. Output data for input voltage 500 V (range 380 to 500 V).**

Type designation ACS880-01/04-	Frame size	Nominal ratings	
		I <sub>N</sub> (A)	P (kW)
02A1-5	R1	2	0.75
03A0-5	R1	2.9	1.1
03A4-5	R1	3.2	1.1
04A8-5	R1	4.6	1.5
05A2-5	R1	4.9	2.2
07A6-5	R1	7.2	3
11A0-5	R1	10.5	4
014A-5	R2	13	5.5
021A-5	R2	20	7.5
027A-5	R3	26	11
034A-5	R3	32	15
040A-5	R4	38	18.5
052A-5	R4	49	22
065A-5	R5	62	30
077A-5	R5	73	37
096A-5	R6	91	45
124A-5	R6	118	55
156A-5	R7	148	75
180A-5	R7	171	90
240A-5	R8	228	110
260A-5	R8	247	132
302A-5	R9	287	160
361A-5	R9	343	160
414A-5	R9	393	200

**4. Output data for input voltage 690 V (range 660 to 690 V).**

Type designation ACS880-01/04-	Frame size	Nominal ratings	
		I <sub>N</sub> (A)	P (kW)
07A3-7	R5	6.9	4
09A8-7	R5	9.3	7.5
14A2-7	R5	13.5	11
018A-7	R5	17	11
022A-7	R5	21	18.5
026A-7	R5	25	22
035A-7	R5	33	30
042A-7	R5	40	30
049A-7	R5	47	37
061A-7	R6	58	55
084A-7	R6	80	55
098A-7	R7	93	75
119A-7	R7	113	90
142A-7	R8	135	110
174A-7	R8	165	132
210A-7	R9	200	160
271A-7	R9	257	200

Input data:	
- voltage	U2in = 208 to 240 V ± 15%, U3in = 380 to 415 V ± 15%, U5in = 380 to 500 V ± 15%, U7in = 525 to 690 V ± 15%.
- frequency:	50/60 Hz ± 5%
- power factor:	0.98
Output data:	
- voltage:	0 to U2in/U3in/U5in/U7in.
- frequency control:	0 to ± 500 Hz,
Enclosure protection:	IP 21 (standard) IP 55 (option) IP 20 (option)
Obligatory option:	+C132
*01	wall mounted IP21/IP55/IP20
**04	IP00/IP20 for enclosure assembly

## 2. DOCUMENTS AND DRAWINGS:

ACS880-01 HW-Manual	3AUA0000078093	2014-02-14
Marine supplement	3AXD50000010521 Rev.A	2014-04-30
ACS880-01 Catalog	3AUA0000098111 Rev.I	2014-02-06
Vibration dampers installation guide	3AXD50000010497 Rev.B 3AXD50000013389 Rev.A	2014-03-17 2014-03-17
CM-filter installation guide	3AXD50000015178 3AXD50000015179 3AXD50000015180 3AXD50000015201	
Routine test spec for LAC Modules	3AXD00000596052	2013-10-28
Nemko 3rd party Statement	R1...R9: 3AXD10000080707 R5...R9: 3AXD10000295204	
SoDePro Rev D	3AFE 002242	2014-03-10
ABB Oy Drives and ABB Oy Power Conversion Quality Manual	3AFE 001509	2013-04-19
ISO 9001 certificate	ISO 9001_2008.pdf	
Environmental Test cases-document	3AXD10000114570	2014-04-23
Recognition_BV_MODE_II_ACS800_01	3AXD10000111548	
Block Diagram	3AXD10000027212	2011-11-28
ACS880 primary control program guide	3AUA0000098062	

**3. TEST REPORTS:****ABB Oy :**

- Type Test document list ACS880-01 No. 3AXD10000114572, dated 2014-05-08

**NEMKO :**

- Test reports according to IEC 61800-5-1 No. 166547 S1, dated 2012-03-22
- Test reports according to IEC 61800-5-1 No. 166547 S2, dated 2012-03-22
- Test reports according to IEC 61800-5-1 No. 166547 S3, dated 2012-03-22
- Test reports according to IEC 61800-5-1 No. 166547 S4 A, dated 2012-11-05
- Test reports according to IEC 61800-5-1 No. 166547 S5, dated 2012-08-16
- Test reports according to IEC 61800-5-1 No. 166547 S6, dated 2012-07-02
- Test reports according to IEC 61800-5-1 No. 166547 S7, dated 2012-07-09
- Test reports according to IEC 61800-5-1 No. 166547 S8, dated 2012-07-09
- Test reports according to IEC 61800-5-1 No. 166547 S9, dated 2012-08-17
- Test reports according to IEC 61800-5-1 No. 203997 R6, dated 2013-12-11
- Test reports according to IEC 61800-5-1 No. 203997 R7, dated 2013-10-01
- Test reports according to IEC 61800-5-1 No. 203997 R8, dated 2013-11-01

**SGS :**

- Test reports according to IEC 61800-5-1 No. 203997 R5, dated 2014-02-13
- Test reports according to IEC 61800-5-1 No. 203997 R9, dated 2014-02-25

**4. APPLICATION / LIMITATION:**

4.1 - According to BV Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - For marine application option code +C132 is to be selected.



**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The above products are to be supplied by **ABB Oy Drives** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

**6. MARKING OF PRODUCT:**

- Maker's name or trade mark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested,
-  or  conformity marking, as relevant.

**7. OTHERS:**

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **ABB Oy Drives, Helsinki - Finland**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 38553/A0 BV issued on 03 Sep 2014 by the Society.

\*\*\* END OF CERTIFICATE \*\*\*