

ABB single drives

## Supplement

ACS880-01/04 +C132 marine type-approved drives



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# List of related manuals

## Drive hardware manuals and guides

## Code (English)

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<i>ACS880-01 hardware manual</i>	<a href="#">3AUA0000078093</a>
<i>ACS880-01 +N7502 drives for SynRM motors supplement</i>	<a href="#">3AXD50000029482</a>
<i>ACS880-01 quick installation guide for frames R1 to R3</i>	<a href="#">3AUA0000085966</a>
<i>ACS880-01 quick installation guide for frames R4 and R5</i>	<a href="#">3AUA0000099663</a>
<i>ACS880-01 quick installation guide for frames R6 to R9</i>	<a href="#">3AUA0000099689</a>
<i>ACS880-01 +P940/+P944 drives for cabinet installation supplement</i>	<a href="#">3AUA0000145446</a>
<i>ACS880-01 assembly drawings for cable entry boxes of IP21 frames R5 to R9</i>	<a href="#">3AUA0000119627</a>
<i>ACS-AP-x assistant control panels user's manual</i>	<a href="#">3AUA0000085685</a>
<i>ACS880-04 drive modules (200 to 710 kW, 300 to 700 hp) hardware manual</i>	<a href="#">3AUA0000128301</a>
<i>ACS880-04 drive modules (200 to 710 kW, 300 to 700 hp) quick installation guide</i>	<a href="#">3AXD50000009366</a>
<i>ACS880-01/04 +C132 marine type-approved drives supplement</i>	<a href="#">3AXD50000010521</a>

## Drive firmware manuals and guides

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<i>ACS880 primary control program firmware manual</i>	<a href="#">3AUA0000085967</a>
<i>Quick start-up guide for ACS880 drives with primary control program</i>	<a href="#">3AUA0000098062</a>

## Option manuals and guides

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<i>Common mode filter kit for ACS880-01 drives (frame R6, option +E208) installation guide</i>	<a href="#">3AXD50000015178</a>
<i>Common mode filter kit for ACS880-01 drives (frame R7, option +E208) installation guide</i>	<a href="#">3AXD50000015179</a>
<i>Common mode filter kit for ACS880-01 drives (frame R8, option +E208) installation guide</i>	<a href="#">3AXD50000015180</a>
<i>Common mode filter kit for ACS880-01 drives (frame R9, option +E208) installation guide</i>	<a href="#">3AXD50000015201</a>
<i>Vibration dampers for ACS880-01 drives (frames R4 and R5, option +C131) installation guide</i>	<a href="#">3AXD50000010497</a>
<i>Vibration dampers for ACS880-01 drives (frames R6 to R9, option +C131) installation guide</i>	<a href="#">3AXD50000013389</a>
<i>Manuals and quick guides for I/O extension modules, fieldbus adapters, etc.</i>	

You can find manuals and other product documents in PDF format on the Internet. See section [Document library on the Internet](#) on the inside of the back cover. For manuals not available in the Document library, contact your local ABB representative.

The code below opens an online listing of the manuals applicable to this product.



[ACS880-01 manuals](#)



[ACS880-04 manuals](#)

# Supplement

## ACS880-01/04 +C132 marine type-approved drives

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# ACS880-01/04 +C132 marine type-approved drives

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## Safety instructions

Obey all safety instructions of the drive. Read the safety instructions before you install, start up, or use the drive. See *ACS880-01 hardware manual* (3AUA0000078093 [English]) or *ACS880-04 drive modules hardware manual* (3AUA0000128301 [English]).

## Introduction to the manual

### ■ Applicability

This manual is a supplement to *ACS880-01 hardware manual* (3AUA0000078093 [English]) and *ACS880-04 drive modules hardware manual* (3AUA0000128301 [English]). The supplement contains additional instructions and information on the marine type-approved ACS880-01 and ACS880-04.

### ■ Target audience

This supplement is intended for people who plan the installation, install, start up, use and service the drive. Read the supplement before you do work on the drive. You are expected to know the fundamentals of electricity, wiring, electrical components and electrical schematic symbols.

The supplement is written for readers worldwide. Both SI and imperial units are shown.

### ■ Related manuals

See [List of related manuals](#) on the inside of the front cover.

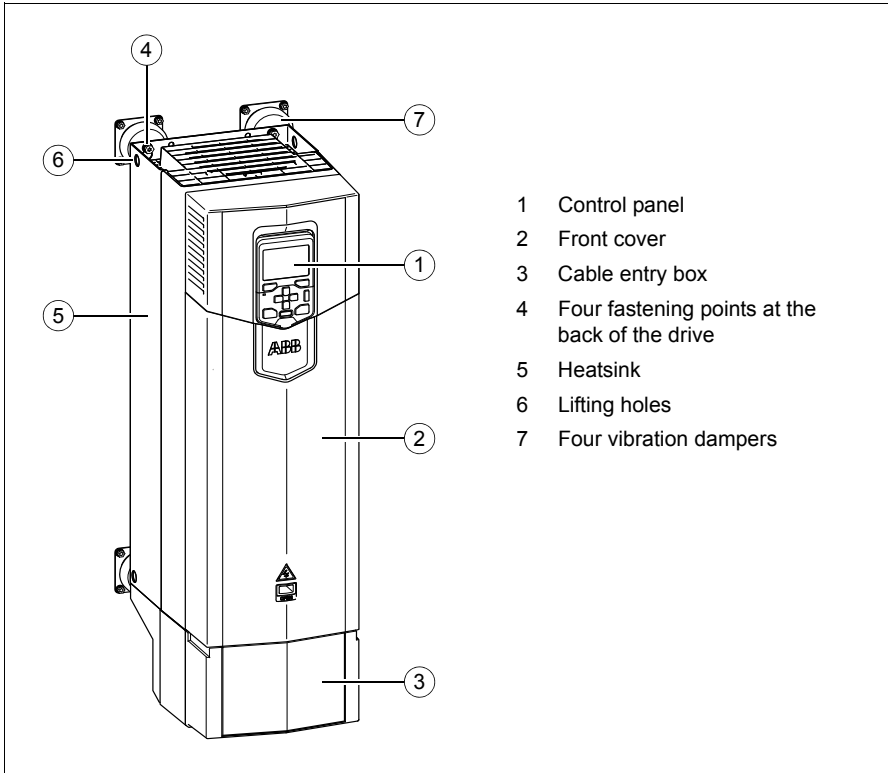
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## Product overview – ACS880-01 +C132

The ACS880-01 + C132 is a marine type-approved drive for controlling asynchronous AC induction motors, permanent magnet synchronous motors, AC induction servomotors and ABB synchronous reluctance motors (SynRM motors). The drive covers all common input voltages used in the marine environment, also marine specific 440 V voltage.

### ■ Layout (IP21, UL Type 1)

The components of the standard IP21 marine type-approved drive are shown below (view of frame R5).





### ■ Type code designation

CODE	DESCRIPTION
+C131	Vibration dampers for frames R4 to R9 in wall installations. Not needed in cabinet installations.
+C132	Marine type-approved drive. Includes common mode filter in frames R6 to R9. Requires option +C131 in wall installations for frames R4 to R9.

## Product overview – ACS880-04 +C132

The ACS880-04 +C132 is a marine type-approved drive module for controlling asynchronous AC induction motors, permanent magnet synchronous motors, AC induction servomotors and ABB synchronous reluctance motors (SynRM motors).

### ■ Type code designation

CODE	DESCRIPTION
+C132	Marine type-approved drive. Requires: option +E208.
+E208	Common mode filter

## Mechanical installation

### ■ Wall installation of frame sizes R1 to R3

Install the drive on the wall as described in *ACS880-01 hardware manual* (3AUA0000078093 [English]). No vibration dampers are needed.

### ■ Wall installation of frame sizes R4 to R9

Install the drive on the wall as described in the applicable installation guide:

- *Vibration dampers for ACS880-01 drives (frames R4 and R5, option +C131) installation guide* (3AXD50000010497 [English])
- *Vibration dampers for ACS880-01 drives (frames R6 to R9, option +C131) installation guide* (3AXD50000013389 [English]).

### ■ Cabinet installation of frame sizes R1 to R9

The drive can be installed into a cabinet without vibration dampers. See *ACS880-01 cabinet installation supplement* (3AUA0000145446 [English]).

### ■ Cabinet installation of frame sizes R10 and R11

Install the drive module into a cabinet as described in *ACS880-04 drive modules hardware manual* (3AUA0000128301 [English]).

## Electrical installation

### ■ Connecting the power cables

#### Connection diagram

See *ACS880-01 hardware manual* (3AUA0000078093 [English]) or *ACS880-04 drive modules hardware manual* (3AUA0000128301 [English]).

#### Connection procedure – ACS880-01

1. Install the input power cable (and brake resistor cable, if present) as shown in *ACS880-01 hardware manual* (3AUA0000078093 [English]).
2. Install the common mode filter ring to the cable entry box. If the cable entry box is not used (option +P940), hang the ring on the cabinet structure.

For instructions, see the applicable installation guide:

- *Common mode filter kit for ACS880-01 drives (frame R6, option +E208) installation guide* (3AXD50000015178 [English])
  - *Common mode filter kit for ACS880-01 drives (frame R7, option +E208) installation guide* (3AXD50000015179 [English])
  - *Common mode filter kit for ACS880-01 drives (frame R8, option +E208) installation guide* (3AXD50000015180 [English])
  - *Common mode filter kit for ACS880-01 drives (frame R9, option +E208) installation guide* (3AXD50000015201 [English]).
3. Route the motor cable through the ring as shown in the installation guide.

#### Connection procedure – ACS880-04

See *ACS880-04 drive modules hardware manual* (3AUA0000128301 [English]).

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## Technical data

### ■ Ratings – ACS880-01 +C132

The nominal ratings for marine type-approved ACS880-01 drives with 50 Hz and 60 Hz supply at an ambient temperature of 45 °C (113 °F) are given below. The symbols are described on page 12.

IEC RATINGS – ACS880-01 +C132									
Drive type ACS880-01-	Frame size	Input rating	Max. current	Output ratings					
				Nominal use		Light-overload use		Heavy-duty use	
				$I_{N}$	$I_{max}$	$I_{N}$	$P_{N}$	$I_{Ld}$	$P_{Ld}$
				A	kW	A	kW	A	kW
$U_N = 230 V$									
04A6-2	R1	4.4	6.3	4.4	0.75	4.2	0.75	3.5	0.55
06A6-2	R1	6.3	7.8	6.3	1.1	6.0	1.1	4.4	0.75
07A5-2	R1	7.1	11.2	7.1	1.5	6.8	1.5	6.3	1.1
10A6-2	R1	10.1	12.8	10.1	2.2	9.6	2.2	7.1	1.5
16A8-2	R2	16.0	18.0	16.0	3.0	15.2	3.0	10.1	2.2
24A3-2	R2	23	28.6	23	5.5	21.9	5.5	16.0	4.0
031A-2	R3	29	41	29	7.5	27.8	7.5	23	5.5
046A-2	R4	44	64	44	11	42	11	36	7.5
061A-2	R4	58	76	58	15	55	15	43	11
075A-2	R5	71	104	71	18.5	68	18.5	58	15
087A-2	R5	83	122	83	22	79	22	68	18.5
115A-2	R6	109	148	109	30	104	30	83	22
145A-2	R6	138	178	138	37	131	37	100	30
170A-2	R7	162	247	162	45	153	45	138	37
206A-2	R7	196	287	196	55	186	55	161	45
274A-2	R8	260	362	260	75	247	75	202	55
$U_N = 400 V$									
02A4-3	R1	2.3	3.1	2.3	0.75	2.2	0.55	1.7	0.55
03A3-3	R1	3.1	4.1	3.1	1.1	3.0	1.1	2.3	0.75
04A0-3	R1	3.8	5.6	3.8	1.5	3.6	1.5	3.1	1.1
05A6-3	R1	5.3	6.8	5.3	2.2	5.1	2.2	3.8	1.5
07A2-3	R1	7.6	9.5	7.6	3.0	7.2	3.0	5.3	2.2
09A4-3	R1	9.5	12.2	9.5	4.0	9.0	4.0	7.6	3.0
12A6-3	R1	12.3	16.0	12.3	5.5	11.4	5.5	9.5	4.0

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IEC RATINGS – ACS880-01 +C132									
Drive type ACS880-01-	Frame size	Input rating	Max. current	Output ratings					
				Nominal use		Light-overload use		Heavy-duty use	
				$I_N$	$I_{max}$	$I_N$	$P_N$	$I_{Ld}$	$P_{Ld}$
A	A	A	kW	A	kW	A	kW		
017A-3	R2	16	21	16	7.5	15	7.5	12	5.5
025A-3	R2	24	29	24	11	23	11	16	7.5
032A-3	R3	30	42	30	15	29	15	23	11
038A-3	R3	36	54	36	18.5	34	15	30	15
045A-3	R4	43	64	43	22	41	18.5	36	18.5
061A-3	R4	58	76	58	30	55	22	42	22
072A-3	R5	68	104	68	30	65	30	58	30
087A-3	R5	83	122	83	45	79	37	68	30
105A-3	R6	100	148	100	55	95	45	83	45
145A-3	R6	138	178	138	55	131	55	100	55
169A-3	R7	161	247	161	75	153	75	138	55
206A-3	R7	196	287	196	90	186	90	161	75
246A-3	R8	234	350	234	110	222	110	196	90
293A-3	R8	278	418	278	132	264	132	234	110
363A-3	R9	345	498	345	160	328	160	278	132
430A-3	R9	409	545	409	200	380	200	345**	160
$U_N = 500\text{ V}$									
02A1-5	R1	2.0	3.1	2.0	0.75	2.0	0.55	1.6	0.55
03A0-5	R1	2.9	4.1	2.9	1.1	2.8	1.1	2.0	0.75
03A4-5	R1	3.2	5.6	3.2	1.1	3.2	1.1	2.9	1.1
04A8-5	R1	4.6	6.8	4.6	1.5	4.6	1.5	3.2	1.1
05A2-5	R1	4.9	9.5	4.9	2.2	5.0	2.2	4.6	1.5
07A6-5	R1	7.2	12.2	7.2	3.0	7.2	3.0	5.0	2.2
11A0-5	R1	10.5	16.0	10.5	4.0	10.4	4.0	7.2	3.0
014A-5	R2	13	21	13	5.5	13	5.5	10	4.0
021A-5	R2	20	29	20	7.5	19	7.5	13	5.5
027A-5	R3	26	42	26	11	26	11	20	7.5
034A-5	R3	32	54	32	15	32	15.0	26	11
040A-5	R4	38	64	38	18.5	38	18.5	32	15
052A-5	R4	49	76	49	22	49	22	38	18.5
065A-5	R5	62	104	62	30	62	30	49	22

IEC RATINGS – ACS880-01 +C132									
Drive type ACS880-01-	Frame size	Input rating	Max. current	Output ratings					
				Nominal use		Light-overload use		Heavy-duty use	
				$I_{N}$	$I_{max}$	$I_{Nd}$	$P_{Nd}$	$I_{Hd}$	$P_{Hd}$
		A	A	A	kW	A	kW	A	kW
077A-5	R5	73	122	73	37	73	37	62	30
096A-5	R6	91	148	91	45	91	45	73	37
124A-5	R6	118	178	118	55	118	55	91	45
156A-5	R7	148	247	148	75	148	75	118	55
180A-5	R7	171	287	171	90	171	90	148	75
240A-5	R8	228	350	228	110	228	110	171	90
260A-5	R8	247	418	247	132	247	132	240*	110
302A-5	R9	287	498	287	160	287	160	247	132
361A-5	R9	343	542	343	160	343	160	287	160
414A-5	R9	393	542	393	200	393	200	361**	200
$U_N = 690\text{ V}$									
07A3-7	R5	6.9	12.2	6.9	4.0	6.6	4.0	5.3	3.0
09A8-7	R5	9.3	18	9.3	7.5	8.8	7.5	6.9	4.0
14A2-7	R5	13.5	22	13.5	11.0	12.8	11	9.3	5.5
018A-7	R5	17	29	17	11	16	11	13.5	11
022A-7	R5	21	44	21	18.5	20	15.0	17	11
026A-7	R5	25	54	25	22	23	19	21	18.5
035A-7	R5	33	64	33	30	32	22	25	22
042A-7	R5	40	70	40	30	38	30	33	30
049A-7	R5	47	71	47	37	44	37	40	30
061A-7	R6	58	104	58	55	55	45	47	37
084A-7	R6	80	124	80	55	76	55	58	55
098A-7	R7	93	168	93	75	88	75	80	55
119A-7	R7	113	198	113	90	107	90	93	75
142A-7	R8	135	250	135	110	128	110	113	90
174A-7	R8	165	274	165	132	157	132	135	110
210A-7	R9	200	384	200	160	190	160	165	132
271A-7	R9	257	411	257	200	245	200	200	160

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NEMA RATINGS – ACS880-01 +C132									
Drive type ACS880-01-	Frame size	Input rating	Max. current	Output ratings					
				Light-overload use			Heavy-duty use		
		$I_{1N}$	$I_{max}$	$I_{Ld}$	$P_{Ld}$		$I_{Hd}$	$P_{Hd}$	
		A	A	A	kW	hp	A	kW	hp
$U_N = 440\text{ V}$									
02A0-4	R1	2.0	3.1	2.0	0.75	1	1.6	0.55	0.75
02A8-4	R1	2.8	4.1	2.8	1.1	1.5	2	0.75	1
03A2-4	R1	3.2	5.6	3.2	1.5	2	2.9	1.1	1.5
04A6-4	R1	4.6	6.8	4.6	2.2	3	3.2	1.5	2
04A9-4	R1	4.9	9.5	4.9	3	4	4.6	1.5	2
07A2-4	R1	7.2	12.2	7.2	4	5	4.9	2.2	3
10A4-4	R1	10.4	16	10.4	5.5	7.5	7.2	4.0	5
013A-4	R2	13	21	13	7.5	10	10	5.5	7.5
019A-4	R2	19	29	19	11	15	13	7.5	10
026A-4	R3	26	42	26	15	20	20	11	15
032A-4	R3	32	54	32	18.5	25	26	15	20
038A-4	R4	38	64	38	22	30	32	18.5	25
049A-4	R4	49	76	49	30	40	38	22	30
062A-4	R5	62	104	62	37	50	49	30	40
073A-4	R5	73	122	73	45	60	62	37	50
091A-4	R6	91	148	91	55	75	73	45	60
118A-4	R6	118	178	118	75	100	91	55	75
148A-4	R7	148	247	148	90	125	118	75	100
171A-4	R7	171	287	171	110	150	148	90	125
228A-4	R8	228	350	228	132	200	171	110	150
247A-4	R8	247	418	247	160	215	228*	110	150
343A-4	R9	343	542	343	200	300	287	160	214
393A-4	R9	393	542	393	250	350	343**	200	300
$U_N = 460\text{ V}$									
02A1-5	R1	2.0	3.1	2.0	0.75	1.00	1.6	0.55	0.75
03A0-5	R1	2.9	4.1	2.9	1.1	1.5	2.0	0.75	1.00
03A4-5	R1	3.2	5.6	3.2	1.5	2.0	2.9	1.1	1.5
04A8-5	R1	4.6	6.8	4.6	2.2	3.0	3.2	1.5	2.0
05A2-5	R1	4.9	9.5	4.9	3.0	3.0	4.6	1.5	2.0

NEMA RATINGS – ACS880-01 +C132											
Drive type ACS880-01-	Frame size	Input rating	Max. current	Output ratings							
				Light-overload use			Heavy-duty use				
				$I_{1N}$	$I_{max}$	$I_{Ld}$	$P_{Ld}$		$I_{Hd}$	$P_{Hd}$	
				A	A	A	kW	hp	A	kW	hp
07A6-5	R1	7.2	12.2	7.2	4.0	5.0	4.9	2.2	3.0		
11A0-5	R1	10	16.0	10	5.5	7.5	7.2	4.0	5.0		
014A-5	R2	13	21	13	7.5	10.0	10	5.5	7.5		
021A-5	R2	20	29	20	11	15	13	7.5	10.0		
027A-5	R3	26	42	26	15	20	20	11.0	15.0		
034A-5	R3	32	54	32	18.5	25	26	15	20.0		
040A-5	R4	38	64	38	22	30	32	19	25		
052A-5	R4	49	76	49	30	40	38	22	30		
065A-5	R5	62	104	62	37	50	49	30	40		
077A-5	R5	73	122	73	45	60	62	37	50		
096A-5	R6	91	148	91	55	75	73	45	60		
124A-5	R6	118	178	118	75	100	91	55	75		
156A-5	R7	148	247	148	90	125	118	75	100		
180A-5	R7	171	287	171	110	150	148	90	125		
240A-5	R8	228	350	228	132	200	171	110	150		
260A-5	R8	247	418	247	160	215	228*	110	150		
302A-5	R9	287	498	287	200	250	247	132	200		
361A-5	R9	343	542	343	200	300	287	160	214		
414A-5	R9	393	542	393	250	350	343**	200	300		
$U_N = 575 V$											
07A3-7	R5	8.6	12.2	8.6	5.5	7.5	5.8	3.0	4.0		
09A8-7	R5	10	18	10	7.5	10	8.6	4.0	5.0		
14A2-7	R5	16	22	16	11	15	10	5.5	8		
018A-7	R5	21	29	21	15	20	16	11	15		
022A-7	R5	26	44	26	18.5	25	21	15	20		
026A-7	R5	30	54	30	22	30	26	18.5	25		
035A-7	R5	39	64	39	30	40	30	22	30		
042A-7	R5	49	70	49	37	50	39	30	40		
049A-7	R5	49	71	49	37	50	39	30	40		
061A-7	R6	59	104	59	45	60	49	37	50		
084A-7	R6	73	124	73	55	75	59	45	60		
098A-7	R7	94	168	94	75	100	73	55	75		
119A-7	R7	119	198	119	90	125	94	75	100		

NEMA RATINGS – ACS880-01 +C132											
Drive type ACS880-01-	Frame size	Input rating	Max. current	Output ratings							
				Light-overload use			Heavy-duty use				
				$I_{1N}$	$I_{max}$	$I_{Ld}$	$P_{Ld}$		$I_{Hd}$	$P_{Hd}$	
				A	A	A	kW	hp	A	kW	hp
142A-7	R8	137	250	137	110	150	119	90	125		
174A-7	R8	171	274	171	132	200	137	110	150		
210A-7	R9	230	384	230	160	250	182	132	200		
271A-7	R9	257	411	257	200	250	230	160	250		

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### Definitions – ACS880-01

$U_N$	Nominal voltage of the drive. For the input voltage range, see section <i>Electrical power network specification</i> in the hardware manual.
$I_{1N}$	Nominal rms input current
$I_N$	Nominal output current (available continuously with no over-loading)
$P_N$	Typical motor power in no-overload use
$I_{Ld}$	Continuous rms output current allowing 10% overload for 1 minute every 5 minutes
$P_{Ld}$	Typical motor power in light-overload use
$I_{max}$	Maximum output current. Available for 10 seconds at start. then as long as allowed by drive temperature.
$I_{Hd}$	Continuous rms output current allowing 50% overload for 1 minute every 5 minutes. * Continuous rms output current allowing 30% overload for 1 minute every 5 minutes. ** Continuous rms output current allowing 25% overload for 1 minute every 5 minutes.
$P_{Hd}$	Typical motor power in heavy-duty use

**Note 1:** The ratings apply at an ambient temperature of 45 °C (113 °F).

**Note 2:** To achieve the rated motor power given in the table, the rated current of the drive must be higher than or equal to the rated motor current.

We recommend ABB's DriveSize dimensioning tool for selecting the drive, motor and gear combination.



## ■ Ratings – ACS880-04 +C132

The nominal ratings for marine type-approved ACS880-04 drive modules with 50 Hz and 60 Hz supply at an ambient temperature of 45 °C (113 °F) are given below. The symbols are described on page 14.

IEC RATINGS – ACS880-04 +C132										
Drive module type ACS880-04	Frame size	Input rating	Max. current			Output ratings				
			$I_{1N}$	$I_{max}$	$I_{max\_start}$	Nominal use		Light-overload use		Heavy-duty use
		$I_N$				$P_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
A	A	A	A	kW	A	kW	A	kW		
$U_N = 400\text{ V}$										
505A-3	R10	480	560	671	480	250	461	250	343	160
585A-3	R10	556	730	828	556	315	551	315	408	200
650A-3	R10	621	730	954	621	355	602	315	453	250
725A-3	R11	689	1020	1100	689	355	679	355	538	250
820A-3	R11	779	1020	1100	779	400	770	400	594	315
880A-3	R11	836	1100	1100	836	450	822	450	689*	355
$U_N = 500\text{ V}$										
460A-5	R10	437	560	460	437	250	428	250	314	200
503A-5	R10	478	560	503	478	315	459	315	343	200
583A-5	R10	554	730	583	554	355	544	355	393	250
635A-5	R10	603	730	635	603	400	592	400	453	315
715A-5	R11	679	850	715	679	450	670	450	538	355
820A-5	R11	779	1020	820	779	500	767	500	594	400
880A-5	R11	836	1100	880	836	560	814	560	662**	450
$U_N = 690\text{ V}$										
330A-7	R10	314	480	510	314	250	304	250	242	200
370A-7	R10	352	520	650	352	315	342	315	309	250
430A-7	R10	409	540	720	409	400	399	355	342**	315
425A-7	R11	404	520	720	409	400	399	355	342	315
470A-7	R11	447	655	830	447	400	432	400	394	355
522A-7	R11	496	685	910	496	450	480	450	432	400
590A-7	R11	561	800	1010	561	500	542	500	480	450
650A-7	R11	618	820	1100	618	560	599	560	542**	500
721A-7	R11	685	825	1100	685	630	670	630	542**	500

14 ACS880-01/04 +C132 marine type-approved drives

NEMA RATINGS – ACS880-04 +C132											
Drive module type ACS880-04-	Frame size	Input rating	Max. current			Output ratings					
			$I_{1N}$	$I_{max}$	$I_{max\_start}$	Light-overload use			Heavy-duty use		
		$I_{Ld}$				$P_{Ld}$		$I_{Hd}$	$P_{Hd}$		
		A	A	A	A	kW	hp	A	kW	hp	
$U_N = 460$											
503A-5	R10	478	560	671	459	315	400	343	200	300	
583A-5	R10	554	730	828	544	355	450	395	250	350	
635A-5	R10	603	730	954	592	400	500	453	315	400	
715A-5	R11	679	850	1100	670	450	550	538	355	450	
820A-5	R11	779	1020	1100	767	500	600	594	400	500	
880A-5	R11	836	1100	1100	814	560	700	645***	450	550	
$U_N = 575 V$											
330A-7	R10	314	480	510	304	250	300	242	200	250	
370A-7	R10	352	520	650	342	315	350	309	250	300	
430A-7	R10	409	540	720	399	355	400	342**	315	350	
425A-7	R11	404	520	720	394	355	400	342	315	350	
470A-7	R11	447	655	830	432	400	450	394	355	400	
522A-7	R11	496	685	910	480	450	500	432	400	450	
590A-7	R11	561	800	1010	542	500	550	480	450	500	
650A-7	R11	618	820	1100	599	560	600	542**	500	600	
721A-7	R11	685	825	1100	670	630	700	542**	500	600	

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**Definitions – ACS880-04**

$U_N$	Nominal voltage of the drive. For the input voltage range, see section <i>Electrical power network specification</i> in the hardware manual.
$I_{1N}$	Nominal rms input current
$I_N$	Nominal output current (available continuously with no over-loading)
$P_N$	Typical motor power in no-overload use
$I_{Ld}$	Continuous rms output current allowing 10% overload for 1 minute every 5 minutes
$P_{Ld}$	Typical motor power in light-overload use
$I_{max}$	Maximum output current. Available for 10 seconds at start. then as long as allowed by drive temperature.

$I_{Hd}$	<p>Continuous rms output current allowing 50% overload for 1 minute every 5 minutes.</p> <p>* Continuous rms output current allowing 40% overload for 1 minute every 5 minutes.</p> <p>** Continuous rms output current allowing 44% overload for 1 minute every 5 minutes.</p> <p>*** Continuous rms output current allowing 45% overload for 1 minute every 5 minutes.</p>
$P_{Hd}$	Typical motor power in heavy-duty use

**Note 1:** The ratings apply at an ambient temperature of 45 °C (113 °F).

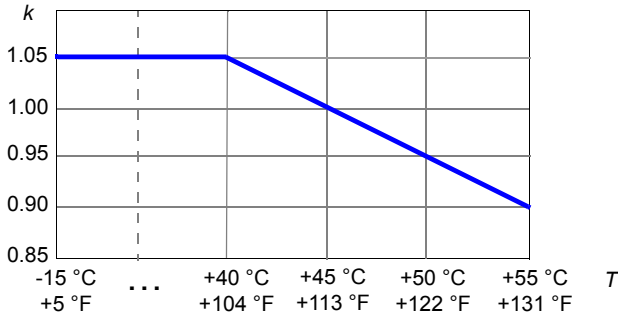
**Note 2:** To achieve the rated motor power given in the table, the rated current of the drive must be higher than or equal to the rated motor current.

We recommend ABB's DriveSize dimensioning tool for selecting the drive, motor and gear combination.

### ■ Ambient temperature derating

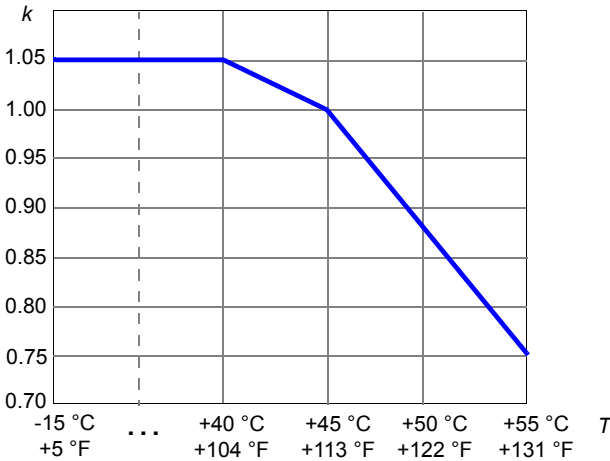
#### ACS880-04 drive modules, ACS880-01 IP21 (UL Type 1) drive types and other IP55 (UL Type 12) types than listed in the following subheadings

In the temperature range +45...55 °C (+113...131 °F), the rated output current is derated by 1% for every added 1 °C (1.8 °F). The output current can be calculated by multiplying the current given in the rating table by the derating factor ( $k$ ):



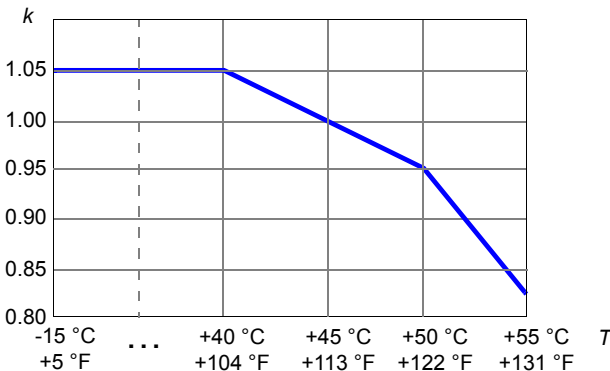
**ACS880-01 IP55 (UL Type 12) drive types -274A-2, 293A-3, -247A-4, -260A-5, -302A-5 and -174A-7**

In the temperature range +45...55 °C (+113...131 °F), the rated output current is derated by 2.5% for every added 1 °C (1.8 °F). The output current can be calculated by multiplying the current given in the rating table by the derating factor ( $k$ ):



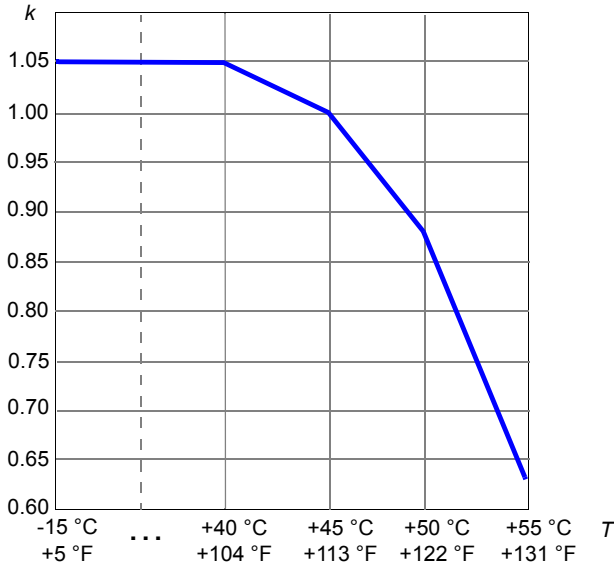
**ACS880-01 IP55 (UL Type 12) types -228A-4 and -240A-5**

In the temperature range +45...50 °C (+113...122 °F), the rated output current is derated by 1% for every added 1 °C (1.8 °F). In the temperature range +50...55 °C (+122...131 °F), the rated output current is derated by 2.5% for every added 1 °C (1.8 °F). The output current can be calculated by multiplying the current given in the rating table by the derating factor ( $k$ ):



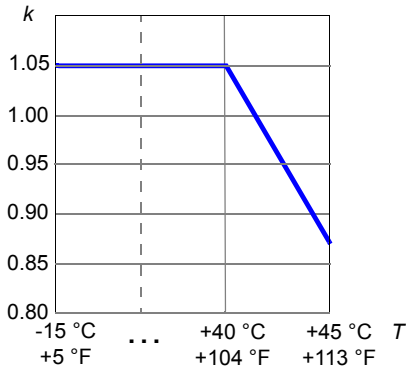
**ACS880-01 IP55 (UL Type 12) drive types -363A-3, -343A-4 and -361A-5**

In the temperature range +45...50 °C (+113...122 °F), the rated output current is derated by 2.5% for every added 1 °C (1.8 °F). In the temperature range +50...55 °C (+122...131 °F), the rated output current is derated by 5% for every added 1 °C (1.8 °F). The output current can be calculated by multiplying the current given in the rating table by the derating factor ( $k$ ):



**ACS880-01 IP55 (UL Type 12) drive type -210A-7**

The maximum temperature is 45 °C (113 °F).



**ACS880-01 IP55 (UL Type 12) types -0430A-3, -393A-4, -0414A-5 and -0271A-7**

The maximum ambient temperature is 35 °C (95 °F).

■ **Applicable standards**

See *ACS880-01 hardware manual* (3AJA0000078093 [English]) or *ACS880-04 drive modules hardware manual* (3AJA0000128301 [English]).

■ **Marine type approvals**

You can find the ACS880-01 and ACS880-04 marine type approval certificates on the Internet. Go to [www.abb.com/drives](http://www.abb.com/drives) and select *Document Library*. Browse or enter selection criteria in the search field.

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## Further information

### Product and service inquiries

Address any inquiries about the product to your local ABB representative, quoting the type designation and serial number of the unit in question. A listing of ABB sales, support and service contacts can be found by navigating to [www.abb.com/searchchannels](http://www.abb.com/searchchannels).

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