

ABB industrial drives

## Supplement

# ACS880 +C132 marine type-approved drive modules and module packages



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# List of related manuals

<b>General manuals</b>	<b>Code (English)</b>
<i>Safety instructions for ACS880 multidrive cabinets and modules</i>	<a href="#">3AUA0000102301</a>
<i>Electrical planning instructions for ACS880 multidrive cabinets and modules</i>	<a href="#">3AUA0000102324</a>
<i>Cabinet design and construction instructions for ACS880 multidrive modules</i>	<a href="#">3AUA0000107668</a>

<b>Drive hardware manuals and guides</b>	<b>Code (English)</b>
<i>ACS880 +C132 marine type-approved drive modules and module packages supplement</i>	<a href="#">3AXD50000037752</a>
<i>ACS880-04XT drive module packages hardware manual</i>	<a href="#">3AXD50000025169</a>
<i>ACS880-04 single drive module packages hardware manual</i>	<a href="#">3AUA0000138495</a>
<i>ACS880-14 and -34 single drive module packages hardware manual</i>	<a href="#">3AXD50000022021</a>
<i>ACS880-104 inverter modules hardware manual</i>	<a href="#">3AUA0000104271</a>
<i>ACS880-204 IGBT supply modules hardware manual</i>	<a href="#">3AUA0000131525</a>
<i>ACS880-304 +A018 diode supply modules hardware manual</i>	<a href="#">3AXD50000010104</a>
<i>ACS880-604 1-phase brake chopper units as modules hardware manual</i>	<a href="#">3AUA0000106244</a>
<i>ACS880-604 3-phase brake modules hardware manual</i>	<a href="#">3AXD50000022033</a>
<i>ACS880-1604 DC/DC converter modules hardware manual</i>	<a href="#">3AXD50000023642</a>

<b>Drive firmware manuals and guides</b>	
<i>ACS880 primary control program firmware manual</i>	<a href="#">3AUA0000085967</a>
<i>ACS880 primary control program quick start-up guide</i>	<a href="#">3AUA0000098062</a>
<i>ACS880 IGBT supply control program firmware manual</i>	<a href="#">3AUA0000131562</a>
<i>ACS880 diode supply control program firmware manual</i>	<a href="#">3AUA0000103295</a>
<i>ACS880 brake control program firmware manual</i>	<a href="#">3AXD50000020967</a>
<i>ACS880 DC/DC converter control program firmware manual</i>	<a href="#">3AXD50000024671</a>

<b>Option manuals and guides</b>
<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.

# Supplement

ACS880 +C132 marine type-approved drive  
modules and module packages

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# 1

## Introduction to the supplement

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### Contents of this chapter

This chapter describes the supplement.

### Applicability

This manual is a supplement to these hardware manuals:

- *ACS880-04XT drive module packages hardware manual (3AXD50000025169 [English])*
  - *ACS880-04 single drive module packages hardware manual (3AUA0000138495 [English])*
  - *ACS880-14 and -34 single drive module packages hardware manual (3AXD50000022021 [English])*
  - *ACS880-104 inverter modules hardware manual (3AUA0000104271 [English])*
  - *ACS880-204 IGBT supply modules (3AUA0000131525 [English])*
  - *ACS880-304 +A018 diode supply modules hardware manual (3AXD50000010104 [English])*
  - *ACS880-604 1-phase brake chopper units as modules hardware manual (3AUA0000106244 [English])*
  - *ACS880-604 3-phase brake modules hardware manual (3AXD50000022033 [English])*
  - *ACS880-1604 DC/DC converter modules hardware manual (3AXD50000023642 [English]).*
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The supplement contains ratings at an ambient temperature of 45 °C (113°F) and references to valid marine type approval certificates on

- the marine type-approved ACS880-04XT
- the marine type-approved ACS880-14/34 (frames n×R8i and n×R8i)
- the marine type-approved ACS880-04 (frames n×D8T and n×R8i)
- the marine type-approved ACS880-104 (frames R5i...n×R8i)
- the marine type-approved ACS880-204 (frames R6i and n×R8i)
- the marine type-approved ACS880-304 (frames 2×D7T and n×D8T)
- the marine type-approved ACS880-604 (module types NBRA-658 and NBRA-659)
- the marine type-approved ACS880-604 (frames R8i and n×R8i)
- the marine type-approved ACS880-1604 (frames R8i and n×R8i).

## Target audience

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

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

## Contents of the supplement

The chapters of the supplement are:

- [ACS880-04XT +C132](#)
- [ACS880-04 +C132](#)
- [ACS880-14/34 +C132](#)
- [ACS880-104 +C132](#)
- [ACS880-204 +C132](#)
- [ACS880-304 +A018 +C132](#)
- [ACS880-604 +C132, 1-phase](#)
- [ACS880-604 +C132, 3-phase](#)
- [ACS880-1604 +C132](#)

## Related manuals

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

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# 2

## ACS880-04XT +C132

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### **Contents of this chapter**

This chapter contains an overview and the ratings for the ACS880-04XT +C132.

### **Product overview**

The ACS880-04XT +C132 is a marine type-approved drive module package.

### **Mechanical installation**

Obey the instructions in the hardware manual.

### **Electrical installation**

Obey the instructions in the hardware manual.

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## Technical data

### Ratings

IEC RATINGS – ACS880-04XT +C132											
Drive module type ACS880-04XT	Frame size	Input current	Max. current			Output ratings					
						Nominal use		Light-overload use		Heavy-duty use	
			$I_1$	$I_{max}$	$I_{max\_start}$	$I_2$	$P_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
		A (AC)	A (AC)	A (AC)	A (AC)	kW	A (AC)	kW	A (AC)	kW	
$U_N = 400\text{ V}$											
-1190A-3	2×R10	1131	1276	1755	1131	599	1109	599	834	475	
-1610A-3	2×R11	1530	1923	2024	1530	855	1492	855	1210*	675	
$U_N = 500\text{ V}$											
-1160A-5	2×R10	1102	1276	1755	1102	760	1089	760	834	599	
-1610A-5	2×R11	1530	1923	2024	1530	950	1492	950	1210**	855	
$U_N = 690\text{ V}$											
-0810A-7	2×R10	770	1110	1356	770	760	751	675	644*	599	
-1080A-7	2×R11	1026	1398	1858	1026	950	998	950	883	855	
-1320A-7	2×R11	1254	1434	2024	1254	1140	1232	1140	998***	950	

NEMA RATINGS – ACS880-04XT +C132											
Drive module type ACS880-04XT-	Frame size	Input current	Max. current			Output ratings					
						Light-overload use			Heavy-duty use		
			$I_1$	$I_{max}$	$I_{max\_start}$	$I_{Ld}$	$P_{Ld}$		$I_{Hd}$	$P_{Hd}$	
		A (AC)	A (AC)	A (AC)	A (AC)	kW	hp	A (AC)	kW	hp	
$U_N = 460$											
-1160A-5	2×R10	1102	1276	-	1089	708	950	834	496	665	
-1610A-5	2×R11	1530	1923	-	1492	886	1188	1210**	708	950	
$U_N = 600\text{ V}$											
-0810A-7	2×R10	770	1110	-	751	567	760	644*	496	665	
-1080A-7	2×R11	1026	1398	-	998	708	950	883	708	950	
-1320A-7	2×R11	1254	1434	-	1232	886	1188	998***	708	950	

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### Definitions

$U_N$  Nominal voltage of the drive. For the input voltage range, see section *Electrical power network specification* in the hardware manual.

$I_1$  Nominal rms input current

$I_2$  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.

$I_{max\_start}$  Maximum output current at start. When enabled, available for 2 seconds only at start every 7 seconds.

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

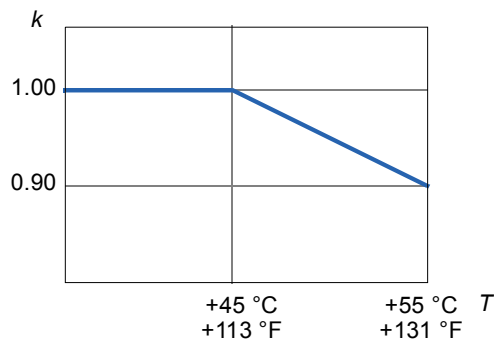
**Note 1:** The ratings apply at an ambient temperature of 45 °C (113°F).

**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.

The DriveSize dimensioning tool available from ABB is recommended for selecting the drive, motor and gear combination.

### Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).



### Applicable standards

See the hardware manual.

### Marine type approvals

You can find the ACS880-04XT +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.



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# ACS880-14/34 +C132

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## Contents of this chapter

This chapter contains an overview and the ratings for the ACS880-14 +C132 and ACS880-34 +C132.

## Product overview

The ACS880-14 +C132 and ACS880-34 +C132 are marine type-approved single drive module packages.

## Mechanical installation

Obey the instructions in the hardware manual.

## Electrical installation

Obey the instructions in the hardware manual.

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## Technical data

### ■ Ratings

ACS880-14/34- ...	Frame	No-overload use				Light-overload use		Heavy-duty use	
		$I_2$	$I_{max}$	$P_N$	$S_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
		A	A	kW	kW	A	kW	A	kW
$U_N = 400\text{ V}$ (Range 380 ... 415 V)									
0450A-3	1×R8i + 1×R8i	430	560	238	298	413	190	322	152
0620A-3	1×R8i + 1×R8i	580	760	337	402	557	299	434	238
0870A-3	1×R8i + 1×R8i	820	1070	475	568	787	428	613	337
1210A-3	2×R8i + 2×R8i	1150	1500	675	797	1104	599	860	475
1430A-3	2×R8i + 2×R8i	1360	1770	760	942	1306	675	1017	532
1700A-3	2×R8i + 2×R8i	1610	2100	950	1115	1546	855	1204	675
2060A-3	3×R8i + 3×R8i	1957	2550	1140	1356	1879	1045	1464	760
2530A-3	3×R8i + 3×R8i	2400	3120	1330	1663	2304	1140	1795	950
$U_N = 500\text{ V}$ (Range 380 ... 500 V)									
0420A-5	1×R8i + 1×R8i	400	520	238	346	384	238	299	190
0570A-5	1×R8i + 1×R8i	540	710	380	468	518	337	404	238
0780A-5	1×R8i + 1×R8i	740	970	532	641	710	475	554	380
1010A-5	2×R8i + 2×R8i	960	1250	675	831	921	599	718	475
1110A-5	2×R8i + 2×R8i	1050	1370	760	909	1008	675	785	532
1530A-5	2×R8i + 2×R8i	1450	1890	1045	1256	1392	950	1085	760
1980A-5	3×R8i + 3×R8i	1881	2450	1330	1629	1806	1235	1407	950
2270A-5	3×R8i + 3×R8i	2160	2810	1520	1871	2074	1425	1616	1140
$U_N = 690\text{ V}$ (Range 525...690 V)									
0320A-7	1×R8i + 1×R8i	310	470	299	370	298	238	232	190
0390A-7	1×R8i + 1×R8i	370	560	337	442	355	337	277	238
0580A-7	1×R8i + 1×R8i	550	830	532	657	528	475	411	380
0660A-7	2×R8i + 2×R8i	627	950	599	749	602	532	469	428
0770A-7	2×R8i + 2×R8i	730	1100	675	872	701	675	546	532
0950A-7	2×R8i + 2×R8i	903	1360	855	1079	866	760	675	675
1130A-7	2×R8i + 2×R8i	1070	1610	1045	1279	1027	950	800	760
1450A-7	3×R8i + 3×R8i	1378	2070	1330	1646	1322	1235	1030	950
1680A-7	3×R8i + 3×R8i	1600	2400	1520	1912	1536	1425	1197	1140
1950A-7	4×R8i + 4×R8i	1853	2780	1805	2214	1778	1710	1386	1330
2230A-7	4×R8i + 4×R8i	2110	3170	2090	2522	2026	1900	1578	1520

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## Definitions

### Nominal ratings

- $I_2$  Nominal output current (available continuously with no over-loading)
- $I_{\max}$  Maximum output current. Available for 10 s at start, otherwise as long as allowed by module temperature.
- $P_N$  Nominal output power

### Light-overload use (10% overload capability) ratings

- $I_{Ld}$  Continuous rms current. 10% overload is allowed for one minute every 5 minutes.
- $P_{Ld}$  Output power in light-overload use

### Heavy-duty use (50% overload capability) ratings

- $I_{Hd}$  Continuous rms current. 50% overload is allowed for one minute every 5 minutes.
- $P_{Hd}$  Output power in heavy-duty use

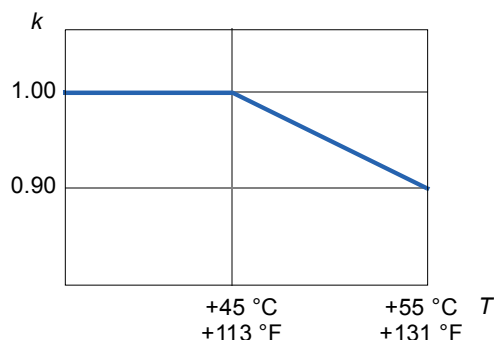
**Note 1:** The ratings apply at an ambient temperature of 45 °C (113°F).

**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.

The DriveSize dimensioning tool available from ABB is recommended for selecting the drive, motor and gear combination.

## Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).

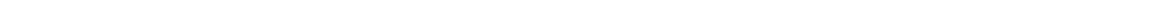


## Applicable standards

See the hardware manual.

## Marine type approvals

You can find the ACS880-14/34 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.





# ACS880-04 +C132

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## Contents of this chapter

This chapter contains an overview and the ratings for the ACS880-04 +C132.

### Product overview

The ACS880-04 +C132 is a marine type-approved single drive module package.

### Mechanical installation

Obey the instructions in the hardware manual.

### Electrical installation

Obey the instructions in the hardware manual.

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## Technical data

### ■ Ratings

ACS880-04-...	Frame	No-overload use					Light-overload use		Heavy-duty use	
		$I_1$	$I_2$	$I_{max}$	$P_N$	$S_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
		A (AC)	A (AC)	A (AC)	kW	kVA	A	kW	A	kW
$U_N = 400\text{ V}$ (Range 380 ... 415 V)										
6-pulse										
1140A-3	1×D8T + 2×R8i	995	1083	1408	599	750	1018	532	747	428
1250A-3	2×D8T + 2×R8i	1093	1190	1550	675	824	1142	599	890	475
1480A-3	2×D8T + 2×R8i	1295	1410	1840	760	977	1354	760	1055	599
1760A-3	2×D8T + 2×R8i	1534	1670	2010	950	1157	1603	855	1249	675
2210A-3	3×D8T + 3×R8i	1929	2100	2730	1140	1455	2016	1140	1571	855
2610A-3	3×D8T + 3×R8i	2278	2480	2980	1330	1718	2381	1330	1855	950
12-pulse										
0990A-3+A004	2×D7T + 2×R8i	863	940	1222	532	651	902	475	703	380
1140A-3+A004	2×D8T + 2×R8i	995	1083	1408	599	750	1040	532	810	428
1250A-3+A004	2×D8T + 2×R8i	1093	1190	1550	675	824	1142	599	890	475
1480A-3+A004	2×D8T + 2×R8i	1295	1410	1840	760	977	1354	760	1055	599
1760A-3+A004	2×D8T + 2×R8i	1534	1670	2010	950	1157	1603	855	1249	675
2210A-3+A004	4×D8T + 3×R8i	1929	2100	2730	1140	1455	2016	1140	1571	855
2610A-3+A004	4×D8T + 3×R8i	2278	2480	2980	1330	1718	2381	1330	1855	950
$U_N = 500\text{ V}$ (Range 380 ... 500 V)										
6-pulse										
1070A-5	1×D8T + 2×R8i	928	1010	1313	675	875	970	675	755	532
1320A-5	2×D8T + 2×R8i	1157	1260	1638	855	1091	1210	855	942	675
1450A-5	2×D8T + 2×R8i	1258	1370	1790	950	1186	1315	855	1025	675
1580A-5	2×D8T + 2×R8i	1378	1500	1950	1045	1299	1440	950	1122	760
1800A-5	2×D8T + 3×R8i	1571	1710	2223	1188	1481	1642	1140	1279	855
1980A-5	2×D8T + 3×R8i	1727	1880	2444	1330	1628	1805	1235	1406	950
12-pulse										
0990A-5+A004	2×D7T + 2×R8i	863	940	1222	675	814	902	599	703	475
1320A-5+A004	2×D8T + 2×R8i	1157	1260	1638	855	1091	1210	855	942	675
1450A-5+A004	2×D8T + 2×R8i	1258	1370	1790	950	1186	1315	855	1025	675
1580A-5+A004	2×D8T + 2×R8i	1378	1500	1950	1045	1299	1440	950	1122	760
1800A-5+A004	2×D8T + 3×R8i	1571	1710	2223	1188	1481	1642	1140	1279	855
1980A-5+A004	2×D8T + 3×R8i	1727	1880	2444	1330	1628	1805	1235	1406	950

ACS880-04-...	Frame	No-overload use					Light-overload use		Heavy-duty use	
		$I_1$	$I_2$	$I_{max}$	$P_N$	$S_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
		A (AC)	A (AC)	A (AC)	kW	kVA	A	kW	A	kW
$U_N = 690$ V (Range 525...690 V)										
6-pulse										
0800A-7	1×D8T + 2×R8i	698	760	1140	760	908	730	675	568	532
0900A-7	1×D8T + 2×R8i	785	855	1283	855	1022	821	760	640	599
1160A-7	2×D8T + 2×R8i	1010	1100	1650	1045	1315	1056	1045	823	760
1450A-7	2×D8T + 3×R8i	1265	1378	2066	1330	1646	1322	1188	1030	950
1650A-7	2×D8T + 3×R8i	1442	1570	2355	1520	1876	1507	1425	1174	1140
1950A-7	3×D8T + 4×R8i	1702	1853	2779	1805	2214	1778	1710	1386	1330
2300A-7	3×D8T + 4×R8i	2002	2180	3270	2090	2605	2093	1900	1631	1520
12-pulse										
0800A-7+A004	2×D7T + 2×R8i	698	760	1140	760	908	730	675	568	532
0950A-7+A004	2×D8T + 2×R8i	829	903	1354	855	1079	866	760	675	599
1160A-7+A004	2×D8T + 2×R8i	1010	1100	1650	1045	1315	1056	1045	823	760
1450A-7+A004	2×D8T + 3×R8i	1265	1378	2066	1330	1646	1322	1188	1030	950
1650A-7+A004	2×D8T + 3×R8i	1442	1570	2355	1520	1876	1507	1425	1174	1140
1950A-7+A004	4×D8T + 4×R8i	1702	1853	2779	1805	2214	1778	1710	1386	1330
2300A-7+A004	4×D8T + 4×R8i	2002	2180	3270	2090	2605	2093	1900	1631	1520

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## Definitions

### Nominal ratings

$U_N$  Nominal voltage

$I_1$  Nominal rms input current

$I_2$  Nominal output current (available continuously with no over-loading)

$I_{max}$  Maximum output current. Available for 10 s at start, otherwise as long as allowed by module temperature.

$P_N$  Nominal output power

$S_N$  Apparent power in no-overload use

### Light-overload use (10% overload capability) ratings

$I_{Ld}$  Continuous rms output current. 10% overload is allowed for one minute every 5 minutes.

$P_{Ld}$  Output power in light-overload use

### Heavy-duty use (50% overload capability) ratings

$I_{Hd}$  Continuous rms output current. 50% overload is allowed for one minute every 5 minutes.

$P_{Hd}$  Output power in heavy-duty use

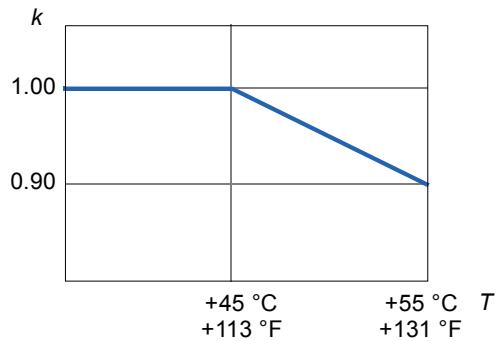
**Note 1:** The ratings apply at an ambient temperature of 45 °C (113°F).

**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.

The DriveSize dimensioning tool available from ABB is recommended for selecting the drive, motor and gear combination.

### Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).



### Applicable standards

See the hardware manual.

### Marine type approvals

You can find the ACS880-04 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.

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# ACS880-104 +C132

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## Contents of this chapter

This chapter contains an overview and the ratings for the ACS880-104 +C132.

## Product overview

The ACS880-104 +C132 is a marine type-approved inverter module.

## Mechanical installation

Obey the instructions in *Cabinet design and construction instructions for ACS880 multidrive modules* (3AUA0000107668 [English]) and in the hardware manual.

## Electrical installation

Obey the instructions in *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]) and in the hardware manual.

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## Technical data

### ■ Ratings

Inverter unit type ACS880-104- ...	Frame size	Input current	Output ratings							
			No-overload use				Light-overload use		Heavy-duty use	
			$I_1$	$I_{max}$	$I_2$	$P_N$	$S_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$
A (DC)	A (AC)	A (AC)	kW	kVA	A (AC)	kW	A (AC)	kW		
$U_N = 400\text{ V}$										
0140A-3	R6i	161	174	134	71	93	129	71	100	52
0170A-3	R6i	193	209	161	86	112	155	86	120	52
0210A-3	R6i	235	255	196	105	136	188	105	147	71
0250A-3	R6i	281	304	234	125	162	225	125	175	86
0300A-3	R7i	342	371	285	152	197	274	152	213	105
0350A-3	R7i	399	432	333	190	230	319	152	249	125
0470A-3	R8i	502	590	447	238	309	429	238	334	152
0640A-3	R8i	684	800	608	337	421	584	299	455	238
0760A-3	R8i	812	940	722	380	500	693	380	540	299
0900A-3	R8i	962	1030	855	475	592	821	428	640	337
1250A-3	2×R8i	1339	1550	1190	675	824	1142	599	890	475
1480A-3	2×R8i	1586	1840	1410	760	977	1354	760	1055	599
1760A-3	2×R8i	1879	2010	1670	950	1157	1603	855	1249	675
2210A-3	3×R8i	2363	2730	2100	1140	1455	2016	1140	1571	855
2610A-3	3×R8i	2790	2980	2480	1330	1718	2381	1330	1855	950
3450A-3	4×R8i	3690	3940	3280	1710	2272	3149	1710	2453	1330
4290A-3	5×R8i	4590	4900	4080	2280	2827	3917	1900	3052	1710
5130A-3	6×R8i	5479	5850	4870	2660	3374	4675	2280	3643	1900
$U_N = 500\text{ V}$										
0110A-5	R6i	130	140	108	71	94	104	71	81	52
0140A-5	R6i	155	168	129	86	112	124	86	96	52
0170A-5	R6i	188	204	157	105	136	151	105	117	71
0200A-5	R6i	226	244	187	125	162	180	125	141	86
0240A-5	R6i	274	296	228	152	197	219	152	171	105
0300A-5	R7i	344	373	287	190	249	276	190	215	125
0340A-5	R7i	388	420	323	238	280	310	190	242	152
0440A-5	R8i	470	550	418	238	362	401	238	313	190
0590A-5	R8i	631	730	561	380	485	538	337	419	238
0740A-5	R8i	791	920	703	475	609	675	428	526	337
0810A-5	R8i	866	1010	770	532	666	739	475	576	380
1150A-5	2×R8i	1226	1420	1090	760	944	1046	675	815	532
1450A-5	2×R8i	1541	1790	1370	950	1186	1315	855	1025	675
1580A-5	2×R8i	1688	1950	1500	1045	1299	1440	950	1122	760
2150A-5	3×R8i	2295	2660	2040	1425	1767	1958	1330	1526	1045
2350A-5	3×R8i	2509	2900	2230	1520	1931	2141	1425	1668	1140
3110A-5	4×R8i	3319	3840	2950	1900	2555	2832	1900	2207	1520
3860A-5	5×R8i	4129	4780	3670	2280	3178	3523	2280	2745	1900
4610A-5	6×R8i	4928	5700	4380	3040	3793	4205	2660	3276	2280



Inverter unit type ACS880-104- ...	Frame size	Input current	Output ratings							
			No-overload use				Light-overload use		Heavy-duty use	
		$I_1$	$I_{max}$	$I_2$	$P_N$	$S_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
		A (DC)	A (AC)	A (AC)	kW	kVA	A (AC)	kW	A (AC)	kW
$U_N = 690 V$										
007A3-7	R5i	8	9.0	6.9	5.2	8.3	6.6	5.2	5.3	3.8
009A8-7	R5i	11	12.1	9.3	7.1	11.1	8.8	7.1	6.9	5.2
014A2-7	R5i	16	17.5	13.5	10.5	16.1	12.8	10.5	9.3	7.1
0018A-7	R5i	21	22.2	17.1	14.3	20.4	16.2	14.3	13.5	10.5
0022A-7	R5i	25	27	21	17.6	25.1	19.9	17.6	17.1	14.3
0027A-7	R5i	31	33	26	20.9	30.7	24.4	20.9	20.9	17.6
0035A-7	R5i	40	43	33	28.5	39.7	31.6	28.5	25.7	20.9
0042A-7	R5i	48	52	40	35.2	47.7	37.9	35.2	33.3	28.5
0052A-7	R5i	59	64	49	42.8	59.0	46.9	42.8	39.9	35.2
0062A-7	R6i	71	77	59	52	71	57	52	44	43
0082A-7	R6i	94	101	78	71	93	75	71	58	52
0100A-7	R6i	114	124	95	86	114	91	86	71	71
0130A-7	R6i	143	155	119	105	142	114	105	89	71
0140A-7	R6i	164	178	137	125	164	132	125	102	86
0190A-7	R6i	220	238	183	152	219	176	152	137	125
0220A-7	R7i	248	269	206	190	247	198	190	155	152
0270A-7	R7i	308	334	257	238	307	247	238	192	190
0340A-7	R8i	363	490	323	299	386	310	238	242	190
0410A-7	R8i	438	590	390	380	465	374	337	291	238
0530A-7	R8i	566	760	504	475	602	483	428	377	337
0600A-7	R8i	641	860	570	532	681	547	532	426	380
0800A-7	2×R8i	855	1140	760	760	908	730	675	568	532
1030A-7	2×R8i	1103	1470	980	950	1171	941	855	733	675
1170A-7	2×R8i	1249	1670	1110	1045	1327	1066	950	830	760
1540A-7	3×R8i	1643	2190	1460	1330	1745	1402	1330	1092	1045
1740A-7	3×R8i	1856	2480	1650	1520	1972	1584	1520	1234	1140
2300A-7	4×R8i	2453	3270	2180	1900	2605	2093	1900	1631	1520
2860A-7	5×R8i	3060	4080	2720	2660	3251	2611	2280	2035	1900
3420A-7	6×R8i	3645	4860	3240	3040	3872	3110	3040	2424	2280
3990A-7	7×R8i	4264	5690	3790	3420	4529	3638	3420	2835	2660
4560A-7	8×R8i	4871	6500	4330	4180	5175	4157	3800	3239	3040
5130A-7	9×R8i	5479	7310	4870	4560	5820	4675	4560	3643	3420
5700A-7	10×R8i	6086	8120	5410	5320	6466	5194	4940	4047	3800

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## Definitions

- $U_N$  Nominal supply voltage
- $I_1$  Nominal rms input current
- $I_2$  Nominal output current (available continuously with no over-loading)
- $P_N$  Typical motor power in no-overload use
- $S_N$  Apparent 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; otherwise as long as allowed by drive temperature.
- $I_{Hd}$  Continuous rms output current allowing 50% overload for 1 minute every 5 minutes
- $P_{Hd}$  Typical motor power in heavy-duty use

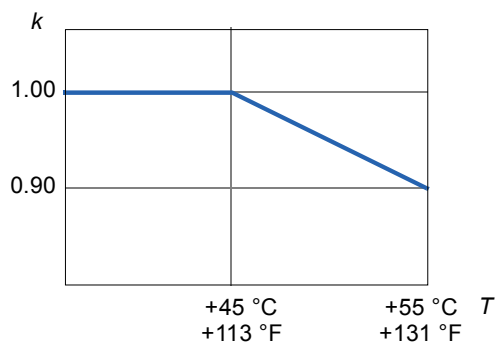
**Note 1:** The ratings apply at an ambient temperature of 45 °C (113 °F).

**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.

The DriveSize dimensioning tool available from ABB is recommended for selecting the drive, motor and gear combination.

### Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).



### Applicable standards

See *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]).

### Marine type approvals

You can find the ACS880-104 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.

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# ACS880-204 +C132

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## Contents of this chapter

This chapter contains an overview and the ratings for the ACS880-204 +C132.

## Product overview

The ACS880-204 +C132 is a marine type-approved IGBT supply module.

## Mechanical installation

Obey the instructions in *Cabinet design and construction instructions for ACS880 multidrive modules* (3AUA0000107668 [English]) and in the hardware manual.

## Electrical installation

Obey the instructions in *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]) and in the hardware manual.

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## Technical data

### Ratings

IGBT supply module type ACS880-204-...	Frame	No-overload use					Light-overload use		Heavy-duty use	
		$I_1$	$I_2$	$I_{max}$	$P_N$	$S_N$	$I_{Ld}$	$P_{Ld}$	$I_{Hd}$	$P_{Hd}$
		A (AC)	A (DC)	A (DC)	kW	kVA	A (DC)	kW (DC)	A (DC)	kW (DC)
<b><math>U_N = 400\text{ V}</math> (Range 380 ... 415 V)</b>										
0210A-3	R6i	200	242	314	137	138	232	131	181	102
0420A-3	R8i	402	487	633	276	278	468	265	364	206
0580A-3	R8i	547	663	863	375	379	637	360	496	281
0810A-3	R8i	770	933	1213	528	533	896	507	698	395
1130A-3	2×R8i	1071	1299	1688	735	742	1247	705	971	549
1330A-3	2×R8i	1269	1539	2000	870	879	1477	836	1151	651
1580A-3	2×R8i	1503	1822	2369	1031	1041	1749	990	1363	771
2350A-3	3×R8i	2232	2706	3518	1531	1546	2598	1470	2024	1145
3110A-3	4×R8i	2952	3579	4653	2025	2045	3436	1944	2677	1515
4620A-3	6×R8i	4383	5314	6909	3006	3037	5102	2886	3975	2249
<b><math>U_N = 500\text{ V}</math> (Range 380 ... 500 V)</b>										
0210A-5	R6i	200	242	314	171	173	232	164	181	128
0400A-5	R8i	376	456	593	323	326	438	310	341	241
0530A-5	R8i	504	612	795	432	437	587	415	458	324
0730A-5	R8i	693	840	1092	594	600	806	570	628	444
1040A-5	2×R8i	981	1189	1546	841	850	1142	807	890	629
1420A-5	2×R8i	1350	1637	2128	1157	1169	1571	1111	1224	866
2120A-5	3×R8i	2007	2433	3164	1721	1738	2336	1652	1820	1287
2800A-5	4×R8i	2655	3219	4185	2276	2299	3090	2185	2408	1703
4150A-5	6×R8i	3942	4780	6214	3380	3414	4588	3245	3575	2528
<b><math>U_N = 690\text{ V}</math> (Range 525 ... 690 V)</b>										
0310A-7	1×R8i	291	352	529	344	347	338	330	264	257
0370A-7	1×R8i	351	425	638	415	419	408	398	318	310
0540A-7	1×R8i	513	622	933	607	613	597	583	465	454
0720A-7	2×R8i	684	829	1244	809	817	796	777	620	605
1050A-7	2×R8i	999	1211	1817	1182	1194	1163	1135	906	884
1570A-7	3×R8i	1485	1801	2701	1757	1775	1729	1687	1347	1314
2070A-7	4×R8i	1962	2379	3568	2321	2345	2284	2229	1779	1736
3080A-7	6×R8i	2916	3536	5303	3450	3485	3394	3312	2645	2581
4100A-7	8×R8i	3897	4725	7088	4611	4657	4536	4426	3534	3449
5130A-7	10×R8i	4869	5904	8855	5761	5819	5668	5530	4416	4309

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## Definitions

### Nominal ratings

$U_N$	Nominal input voltage.
$I_1$	Continuous rms input (AC) current. No overload capability.
$I_2$	Continuous rms output (DC) current. No overload capability.
$I_{max}$	Maximum output current. Available for 10 s at start, otherwise as long as allowed by module temperature.
$P_N$	Nominal output power
$S_N$	Nominal apparent power

### Light-overload use (10% overload capability) ratings

$I_{Ld}$	Continuous rms current. 10% overload is allowed for one minute every 5 minutes.
$P_{Ld}$	Output power in light-overload use

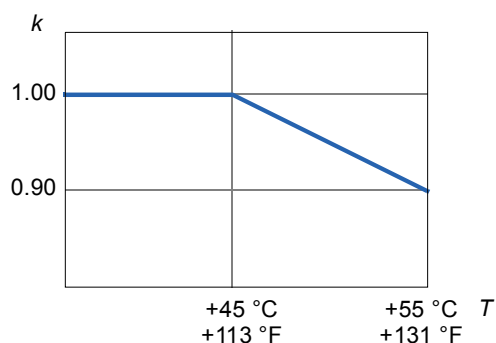
### Heavy-duty use (50% overload capability) ratings

$I_{Hd}$	Continuous rms current. 50% overload is allowed for one minute every 5 minutes.
$P_{Hd}$	Output power in heavy-duty use

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

### Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).




## Applicable standards

See *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]).

## Marine type approvals

You can find the ACS880-204 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.



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# ACS880-304 +A018 +C132

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## Contents of this chapter

This chapter contains an overview and the ratings for the ACS880-304 +A018 +C132.

## Product overview

The ACS880-304 +A018 +C132 is a marine type-approved diode supply module.

## Mechanical installation

Obey the instructions in *Cabinet design and construction instructions for ACS880 multidrive modules* (3AUA0000107668 [English]) and in the hardware manual.

## Electrical installation

Obey the instructions in *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]) and in the hardware manual.

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## Technical data

### Ratings

Diode supply module type ACS880-304-...	Nominal ratings			No overload use		Light overload use		Heavy-duty use	
	$I_1$	$I_2$	$I_{max}$	$S_n$	$P_N$	$I_{Ld}$	$P_{Ld}$	$I_{hd}$	$P_{Hd}$
	A (AC)	A (DC)	A (DC)	kVA	kW	A (DC)	kW (DC)	A (DC)	kW (DC)
$U_N = 400\text{ V}$									
6-pulse									
0650A-3+A018	621	760	1064	430	410	730	394	568	307
0980A-3+A018	931	1140	1596	645	616	1094	591	853	460
1210A-3+A018	1155	1414	1980	800	764	1357	733	1058	571
1820A-3+A018	1731	2120	2968	1199	1145	2035	1099	1586	856
2730A-3+A018	2598	3181	4453	1800	1718	3054	1649	2379	1285
3640A-3+A018	3463	4241	5937	2399	2290	4071	2199	3172	1713
4560A-3+A018	4329	5301	7421	2999	2863	5089	2748	3965	2141
5470A-3+A018	5194	6361	8905	3599	3435	6107	3298	4758	2569
12-pulse									
0910A-3+A004+A018	866	1060	1484	600	594	1018	570	793	444
1210A-3+A004+A018	1155	1414	1979	800	792	1357	760	1057	592
1820A-3+A004+A018	1732	2120	2969	1200	1187	2036	1140	1586	888
2430A-3+A004+A018	2309	2827	3958	1600	1583	2714	1520	2115	1184
3640A-3+A004+A018	3463	4241	5937	2399	2375	4071	2280	3172	1776
5470A-3+A004+A018	5194	6361	8906	3599	3562	6107	3420	4758	2665
$U_N = 500\text{ V}$									
6-pulse									
0650A-5+A018	621	760	1064	538	513	730	492	568	384
0980A-5+A018	931	1140	1596	806	770	1094	739	853	576
1210A-5+A018	1155	1414	1980	1000	954	1357	916	1058	714
1820A-5+A018	1731	2120	2968	1499	1431	2035	1374	1586	1070
2730A-5+A018	2597	3181	4453	2249	2147	3054	2061	2379	1606
3640A-5+A018	3463	4241	5937	2999	2863	4071	2748	3172	2141
4560A-5+A018	4329	5301	7421	3749	3578	5089	3435	3965	2676
5470A-5+A018	5194	6361	8905	4498	4294	6107	4122	4758	3212
12-pulse									
0910A-5+A004+A018	866	1060	1484	750	742	1018	712	793	555
1210A-5+A004+A018	1155	1414	1980	1000	990	1357	950	1058	740
1820A-5+A004+A018	1732	2120	2968	1499	1484	2035	1425	1586	1110
2430A-5+A004+A018	2309	2827	3958	2000	1979	2714	1900	2115	1480
3640A-5+A004+A018	3463	4241	5937	2999	2969	4071	2850	3172	2220
5470A-5+A004+A018	5194	6361	8906	4498	4453	6107	4275	4758	3331
$U_N = 690\text{ V}$									
6-pulse									
0570A-7+A018	543	665	931	649	619	638	595	497	463
0820A-7+A018	776	950	1330	927	885	912	850	711	662
1060A-7+A018	1011	1237	1732	1208	1152	1188	1106	925	862
1520A-7+A018	1443	1767	2474	1725	1646	1696	1580	1322	1231
2280A-7+A018	2165	2651	3711	2587	2469	2545	2371	1983	1847
3040A-7+A018	2886	3534	4948	3449	3292	3393	3160	2643	2462
3800A-7+A018	3608	4418	6185	4312	4115	4241	3951	3305	3078
4560A-7+A018	4329	5301	7421	5174	4938	5089	4740	3965	3694
12-pulse									
0760A-7+A004+A018	722	884	1238	863	854	849	820	661	639
1060A-7+A004+A018	1011	1237	1732	1208	1195	1188	1147	925	894
1520A-7+A004+A018	1443	1767	2474	1725	1707	1696	1639	1322	1277
2130A-7+A004+A018	2020	2474	3463	2414	2390	2375	2294	1850	1787
3040A-7+A004+A018	2886	3534	4948	3449	3414	3393	3277	2643	2554
4560A-7+A004+A018	4329	5301	7421	5174	5121	5089	4916	3965	3830



## Definitions

### Nominal ratings

$U_N$	Nominal input voltage. For $U_1$ , see the hardware manual.
$I_1$	Continuous rms input (AC) current. No overload capability.
$I_2$	Continuous output (DC) current. No overload capability.
$I_{max}$	Maximum output current
$S_n$	Nominal apparent power
$P_N$	Nominal output power

### Light-overload use (10% overload capability) ratings

$I_{Ld}$	Continuous current. 10% overload is allowed for one minute every 5 minutes.
$P_{Ld}$	Output power in light-overload use

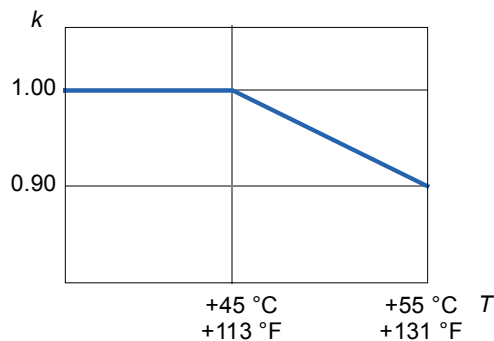
### Heavy-duty use (40% overload capability) ratings

$I_{Hd}$	Continuous current. 40% overload is allowed for one minute every 5 minutes.
$P_{Hd}$	Output power in heavy-duty use

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

### Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).

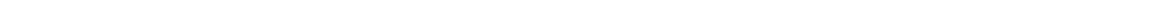


## Applicable standards

See *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]).

## Marine type approvals

You can find the ACS880-304 +A018 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.





# ACS880-604 +C132, 1-phase

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## Contents of this chapter

This chapter contains an overview and the ratings for the 1-phase. ACS880-604 +C132,

## Product overview

The ACS880-604 +C132 is a marine type-approved brake module.

## Mechanical installation

Obey the instructions in *Cabinet design and construction instructions for ACS880 multidrive modules* (3AUA0000107668 [English]) and in the hardware manual.

## Electrical installation

Obey the instructions in *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]) and in the hardware manual.

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## Technical data

### ■ Ratings (chopper module only)

Brake module type ACS880-604-	Module type	$P_{brmax}$ kW	$R_{tot}$ ohm	$I_{max}$ A	$I_{rms}$ A	$P_{cont.}$ kW	Duty cycle (1 min/5 min)		Duty cycle (10 s/60 s)	
							$P_{br}$ kW	$I_{rms}$ A	$P_{br}$ kW	$I_{rms}$ A
<b><math>U_N = 400\text{ V}</math> (Range 380...415 V)</b>										
0210-3	NBRA-658	219	1.70	365	104	67	219	337	219	337
0320-3	NBRA-659	335	1.20	518	142	91	288	445	335	518
0640-3	2×NBRA-659	671	0.60	1036	283	182	576	889	671	1036
0960-3	3×NBRA-659	1005	0.40	1553	425	274	864	1334	1006	1553
1280-3	4×NBRA-659	1340	0.30	2071	566	365	1151	1778	1341	2071
1600-3	5×NBRA-659	1676	0.24	2589	708	456	1439	2223	1677	2589
1920-3	6×NBRA-659	2011	0.20	3107	849	547	1727	2668	2012	3107
<b><math>U_N = 500\text{ V}</math> (Range 380...500 V)</b>										
0260-5	NBRA-658	255	2.15	361	96	77	255	314	255	314
0400-5	NBRA-659	383	1.43	542	129	104	301	371	383	473
0800-5	2×NBRA-659	766	0.72	1085	258	207	602	743	766	946
1200-5	3×NBRA-659	1148	0.48	1627	388	311	903	1114	1149	1419
1600-5	4×NBRA-659	1530	0.36	2170	517	414	1205	1486	1531	1892
2000-5	5×NBRA-659	1913	0.29	2712	646	518	1506	1857	1914	2366
2400-5	6×NBRA-659	2296	0.24	3255	775	621	1807	2229	2297	2839
<b><math>U_N = 690\text{ V}</math> (Range 525...690 V)</b>										
0400-7	NBRA-669	384	2.72	393	102	113	283	254	384	343
0800-7	2×NBRA-669	767	1.36	787	203	226	566	507	768	686
1200-7	3×NBRA-669	1150	0.91	1180	305	339	849	761	1151	1029
1600-7	4×NBRA-669	1534	0.68	1573	407	452	1132	1015	1535	1372
2000-7	5×NBRA-669	1918	0.54	1967	508	565	1416	1268	1919	1715
2400-7	6×NBRA-669	2301	0.45	2360	610	678	1699	1522	2303	2058

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**Definitions**

<p><b>Example: ACS880-604-0640-3</b></p> <p style="text-align: center;"> <math>R_{tot}</math>  <math>P_{brmax}</math>  <math>P_{br}</math>  <math>P_{cont.}</math> </p>	<p><b>Brake unit</b></p> <p><math>P_{brmax}</math> Maximum braking power per brake unit allowed momentarily</p> <p><math>R</math> Nominal resistance of the brake resistors connected to one brake chopper unit</p> <p><math>R_{tot}</math> Total recommended brake resistor resistance of the listed resistor assembly</p> <p><math>I_{max}</math> Peak brake current (DC) per chopper</p> <p><math>P_{cont.}</math> Continuous braking power per brake unit. The braking is considered continuous if the braking time exceeds 10 minutes</p> <hr/> <p><b>Duty cycle (10 s / 60 s)</b></p> <p><math>I_{rms}</math> Total rms DC current (per chopper) during a period of 10 seconds with braking power <math>P_{br}</math></p> <p><math>P_{br}</math> Short term braking power per brake unit allowed for 10 seconds every 60 seconds</p> <hr/> <p><b>Duty cycle (1 min / 5 min)</b></p> <p><math>I_{rms}</math> Total rms DC current (per chopper) during a period of 1 minute with braking power <math>P_{br}</math></p> <p><math>P_{br}</math> Short term braking power per brake unit allowed for one minute every 5 minutes</p> <hr/> <p><b>Brake current wave form</b></p>
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**Note 1:** The ratings apply at an ambient temperature of 45 °C (113°F).

## **Applicable standards**

See *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]).

## **Marine type approvals**

You can find the ACS880-604 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.

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# 9

## ACS880-604 +C132, 3-phase

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### Contents of this chapter

This chapter contains an overview and the ratings for the 3-phase ACS880-604 +C132.

### Product overview

The ACS880-604 +C132 is a marine type-approved brake module.

### Mechanical installation

Obey the instructions in *Cabinet design and construction instructions for ACS880 multidrive modules* (3AUA0000107668 [English]) and in the hardware manual.

### Electrical installation

Obey the instructions in *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]) and in the hardware manual.

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## Technical data

### Ratings

Brake unit type	Frame size	Resistor values		Ratings at $R_{min}$						
				No-overload use			Cyclic load (1 min / 5 min)			
		$R_{min}$	$R_{max}$	$I_1$	$I_2$	$P_{contmax}$ ( $S_N$ )	$I_{max}$	$I_{dc}$	$I_{rms}$	$P_{br}$
		Ohm	Ohm	A (DC)	A (DC)	kW (kVA)	A (DC)	A (DC)	A (DC)	kW
$U_N = 400\text{ V}$										
ACS880-604-0500-3	R8i	1.8	2.2	742	295	480	352	949	333	610
ACS880-604-0750-3	R8i	1.2	1.4	1113	442	720	527	1424	500	920
ACS880-604-1000-3	2×R8i	1.8	2.2	1483	590	950	703	1898	667	1220
ACS880-604-1510-3	2×R8i	1.2	1.4	2225	884	1430	1055	2847	1000	1830
ACS880-604-2260-3	3×R8i	1.2	1.4	3338	1327	2150	1582	4271	1501	2750
ACS880-604-3010-3	4×R8i	1.2	1.4	4450	1769	2860	2109	5694	2001	3660
ACS880-604-3770-3	5×R8i	1.2	1.4	5563	2211	3580	2636	7118	2501	4580
$U_N = 500\text{ V}$										
ACS880-604-0630-5	R8i	2.3	2.7	742	295	600	352	949	333	760
ACS880-604-0940-5	R8i	1.5	1.8	1113	442	890	527	1424	500	1150
ACS880-604-1260-5	2×R8i	2.3	2.7	1483	590	1190	703	1898	667	1530
ACS880-604-1880-5	2×R8i	1.5	1.8	2225	884	1790	1055	2847	1000	2290
ACS880-604-2830-5	3×R8i	1.5	1.8	3338	1327	2680	1582	4271	1501	3440
ACS880-604-3770-5	4×R8i	1.5	1.8	4450	1769	3580	2109	5694	2001	4580
ACS880-604-4710-5	5×R8i	1.5	1.8	5563	2211	4470	2636	7118	2501	5730
$U_N = 690\text{ V}$										
ACS880-604-0870-7	R8i	3.2	3.7	742	295	820	352	949	333	1050
ACS880-604-1300-7	R8i	2.1	2.5	1113	442	1240	527	1424	500	1580
ACS880-604-1730-7	2×R8i	3.2	3.7	1483	590	1650	703	1898	667	2110
ACS880-604-2600-7	2×R8i	2.1	2.5	2225	884	2470	1055	2847	1000	3160
ACS880-604-3900-7	3×R8i	2.1	2.5	3338	1327	3710	1582	4271	1501	4740
ACS880-604-5200-7	4×R8i	2.1	2.5	4450	1769	4940	2109	5694	2001	6320
ACS880-604-6500-7	5×R8i	2.1	2.5	5563	2211	6180	2636	7118	2501	7900

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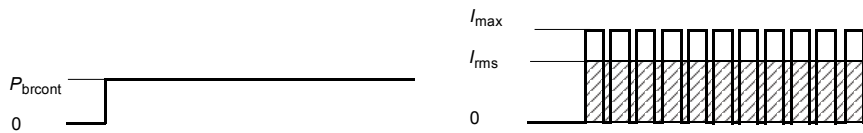
Brake unit type	Frame size	Resistor values		Ratings at $R_{max}$						
				No-overload use			Cyclic load (1 min / 5 min)			
		$R_{min}$	$R_{max}$	$I_1$	$I_2$	$P_{contmax}$ ( $S_N$ )	$I_{max}$	$I_{dc}$	$I_{rms}$	$P_{br}$
		Ohm	Ohm	A (DC)	A (DC)	kW (kVA)	A (DC)	A (DC)	A (DC)	kW
$U_N = 400\text{ V}$										
ACS880-604-0500-3	R8i	1.8	2.2	742	269	480	297	790	277	510
ACS880-604-0750-3	R8i	1.2	1.4	1113	413	720	445	1241	436	800
ACS880-604-1000-3	2×R8i	1.8	2.2	1483	538	950	593	1579	555	1020
ACS880-604-1510-3	2×R8i	1.2	1.4	2225	826	1430	890	2482	872	1600
ACS880-604-2260-3	3×R8i	1.2	1.4	3338	1239	2150	1335	3723	1308	2400
ACS880-604-3010-3	4×R8i	1.2	1.4	4450	1651	2860	1780	4964	1744	3190
ACS880-604-3770-3	5×R8i	1.2	1.4	5563	2064	3580	2225	6205	2180	3990
$U_N = 500\text{ V}$										
ACS880-604-0630-5	R8i	2.3	2.7	742	271	600	297	804	283	650
ACS880-604-0940-5	R8i	1.5	1.8	1113	407	890	445	1207	424	970
ACS880-604-1260-5	2×R8i	2.3	2.7	1483	543	1190	593	1609	565	1290
ACS880-604-1880-5	2×R8i	1.5	1.8	2225	814	1790	890	2413	848	1940
ACS880-604-2830-5	3×R8i	1.5	1.8	3338	1221	2680	1335	3620	1272	2910
ACS880-604-3770-5	4×R8i	1.5	1.8	4450	1628	3580	1780	4826	1696	3880
ACS880-604-4710-5	5×R8i	1.5	1.8	5563	2035	4470	2225	6033	2120	4850
$U_N = 690\text{ V}$										
ACS880-604-0870-7	R8i	3.2	3.7	742	272	820	297	810	285	900
ACS880-604-1300-7	R8i	2.1	2.5	1113	406	1240	445	1199	421	1330
ACS880-604-1730-7	2×R8i	3.2	3.7	1483	545	1650	593	1620	569	1800
ACS880-604-2600-7	2×R8i	2.1	2.5	2225	812	2470	890	2398	842	2660
ACS880-604-3900-7	3×R8i	2.1	2.5	3338	1217	3710	1335	3596	1264	3990
ACS880-604-5200-7	4×R8i	2.1	2.5	4450	1623	4940	1780	4795	1685	5320
ACS880-604-6500-7	5×R8i	2.1	2.5	5563	2029	6180	2225	5994	2106	6650

**Definitions**

- $U_N$  Nominal voltage
- $R_{min}$  Minimum allowed resistance value of the brake resistor per one phase of the brake module
- $R_{max}$  Maximum resistance value of the brake resistor per one phase of the brake module
- Note:** Connect one resistor per brake module phase. For example, a brake unit of frame size 2xR8i includes two brake modules -> 2 x 3 resistors are needed.

**No-overload use**

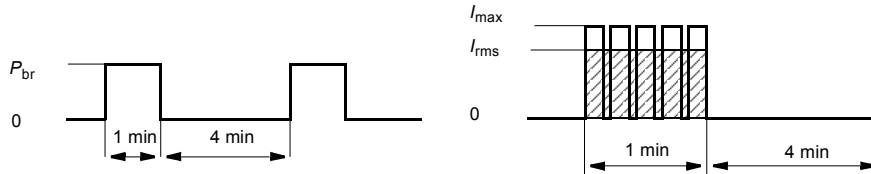
- $I_1$  Input current.  
The input current with  $R_{min}$  at 40 °C (104°F) is given in the type designation label, see *ACS880-604 3-phase brake modules hardware manual* (3AXD50000022033 [English])
- $I_2$  Output current. This is indicated the type designation label as 3x the value with  $R_{min}$  at 40 °C (104°F), see *ACS880-604 3-phase brake modules hardware manual* (3AXD50000022033 [English]).
- $P_{cont.max}$  Maximum continuous braking power per brake unit



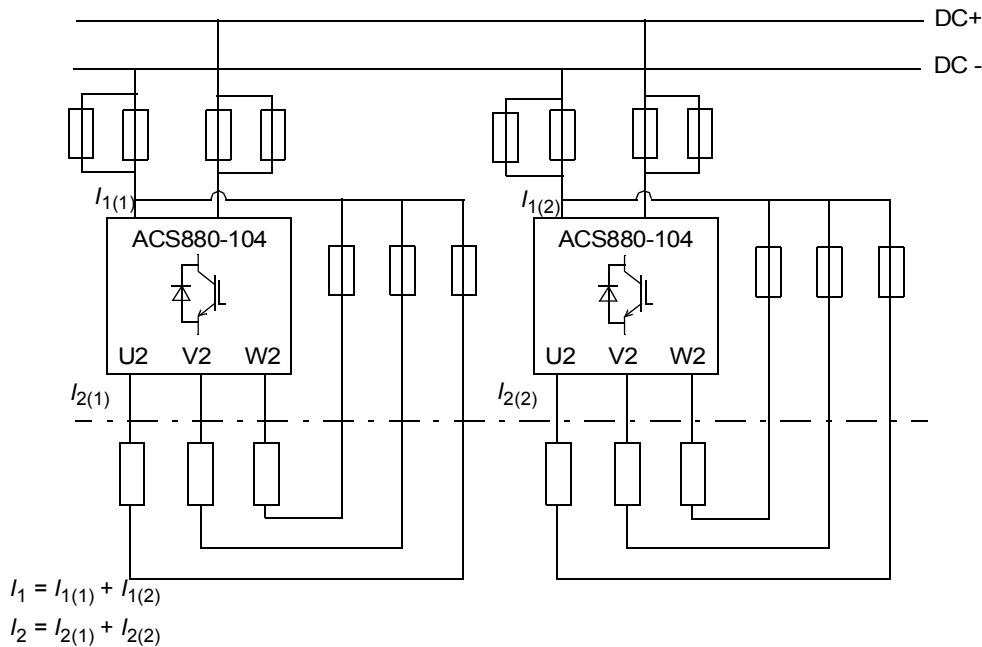
- $S_N$  Apparent power

**Cyclic load (1 min / 5 min)**

- $I_{max}$  Peak brake current (DC) per chopper module phase
- $I_{dc}$  Input current
- $I_{rms}$  Total rms DC current per brake unit phase during a period of 1 minute with braking power  $P_{br}$
- $P_{br}$  Short term braking power per brake unit allowed for one minute every 5 minutes



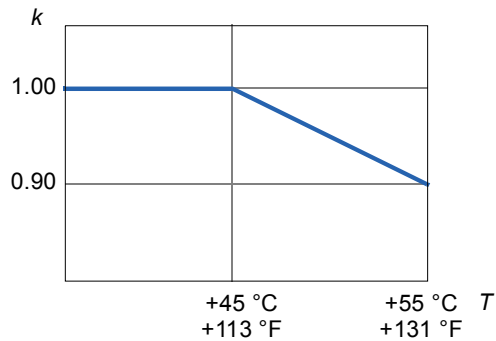
**Example: Brake unit with two parallel brake modules**



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

### Ambient temperature (surrounding air) derating

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).

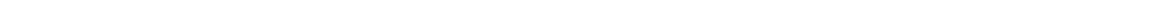


### Applicable standards

See *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]).

### Marine type approvals

You can find the ACS880-604 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.



A large green square with rounded corners containing the number '10' in a bold, black, sans-serif font.

# ACS880-1604 +C132

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## Contents of this chapter

This chapter contains an overview and the ratings for the ACS880-1604 +C132.

## Product overview

The ACS880-1604 +C132 is a marine type-approved DC/DC converter module.

## Mechanical installation

Obey the instructions in *Cabinet design and construction instructions for ACS880 multidrive modules* (3AUA0000107668 [English]) and in the hardware manual.

## Electrical installation

Obey the instructions in *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]) and in the hardware manual.

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## Technical data

### ■ Ratings

Module type ACS880-1604-...	Consists of module type ACS880-104-...	Frame	No-overload use							
			$I_1$	$I_2$	$P_{contmax}$	$P_{contmax}$	$I_{max}$ output	$S_N$	$I_{p2p}$	$f_{sw out}$
			A (DC)	A (DC)	kW	hp	A (DC)	kVA	A (DC)	Hz
<b><math>U_N = 400 V</math></b>										
0600A-3	0640A-3	R8i	570	570	290	389	855	290	22	12000
0900A-3	0900A-3	R8i	855	855	435	584	1283	435	33	12000
1200A-3	0640A-3	2×R8i	1140	1140	580	778	1710	580	44	12000
1800A-3	0900A-3	2×R8i	1710	1710	871	1167	2565	871	65	12000
2700A-3	0900A-3	3×R8i	2565	2565	1306	1751	3848	1306	98	12000
3600A-3	0900A-3	4×R8i	3420	3420	1741	2335	5130	1741	131	12000
4500A-3	0900A-3	5×R8i	4275	4275	2176	2919	6413	2176	164	12000
<b><math>U_N = 500 V</math></b>										
0600A-5	0590A-5	R8i	570	570	363	486	855	363	27	12000
0900A-5	0810A-5	R8i	855	855	544	730	1283	544	41	12000
1200A-5	0590A-5	2×R8i	1140	1140	725	973	1710	725	55	12000
1800A-5	0810A-5	2×R8i	1710	1710	1088	1459	2565	1088	82	12000
2700A-5	0810A-5	3×R8i	2565	2565	1632	2189	3848	1632	123	12000
3600A-5	0810A-5	4×R8i	3420	3420	2176	2919	5130	2176	164	12000
4500A-5	0810A-5	5×R8i	4275	4275	2721	3648	6413	2721	205	12000
<b><math>U_N = 690 V</math></b>										
0400A-7	0410A-7	R8i	380	380	334	448	570	334	38	12000
0600A-7	0600A-7	R8i	570	570	501	671	855	501	56	12000
0800A-7	0410A-7	2×R8i	760	760	667	895	1140	667	75	12000
1200A-7	0600A-7	2×R8i	1140	1140	1001	1343	1710	1001	113	12000
1800A-7	0600A-7	3×R8i	1710	1710	1502	2014	2565	1502	169	12000
2400A-7	0600A-7	4×R8i	2280	2280	2002	2685	3420	2002	226	12000
3000A-7	0600A-7	5×R8i	2850	2850	2503	3356	4275	2503	282	12000

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Module type ACS880-1604-...	Consists of module type ACS880-104-...	Frame	High-overload use		Heavy-duty use	
			$I_{fast}$	$P_{fast}$	$I_{Hd}$	$P_{Hd}$
			A	kW	A	kW
<b><math>U_N = 400\text{ V}</math></b>						
0600A-3	0640A-3	R8i	427	218	484	247
0900A-3	0900A-3	R8i	641	326	726	370
1200A-3	0640A-3	2×R8i	854	435	969	493
1800A-3	0900A-3	2×R8i	1282	653	1453	740
2700A-3	0900A-3	3×R8i	1923	979	2179	1110
3600A-3	0900A-3	4×R8i	2563	1305	2906	1479
4500A-3	0900A-3	5×R8i	3204	1631	3632	1849
<b><math>U_N = 500\text{ V}</math></b>						
0600A-5	0590A-5	R8i	427	272	484	308
0900A-5	0810A-5	R8i	641	408	726	462
1200A-5	0590A-5	2×R8i	854	544	969	616
1800A-5	0810A-5	2×R8i	1282	816	1453	925
2700A-5	0810A-5	3×R8i	1923	1224	2179	1387
3600A-5	0810A-5	4×R8i	2563	1631	2906	1849
4500A-5	0810A-5	5×R8i	3204	2039	3632	2312
<b><math>U_N = 690\text{ V}</math></b>						
0400A-7	0410A-7	R8i	285	250	323	284
0600A-7	0600A-7	R8i	427	375	484	425
0800A-7	0410A-7	2×R8i	570	500	646	567
1200A-7	0600A-7	2×R8i	854	750	969	851
1800A-7	0600A-7	3×R8i	1282	1126	1453	1276
2400A-7	0600A-7	4×R8i	1709	1501	1937	1701
3000A-7	0600A-7	5×R8i	2136	1876	2422	2127

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## Definitions

$U_N$  Supply voltage range. See the hardware manual.

### Nominal ratings

$I_1$  DC input current

$I_2$  Continuous output current (RMS)

$P_{contmax}$  Maximum continuous active power

$S_N$  Nominal apparent power

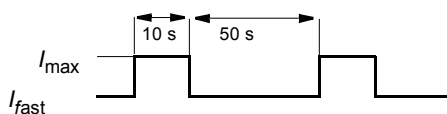
$I_{max\text{ output}}$  Maximum output current

$I_{p2p}$  Peak-to-peak value of output current ripple measured after the filter

$f_{sw\text{ out}}$  Switching frequency at output terminals (energy storage connection) measured after the filter

### High-overload use

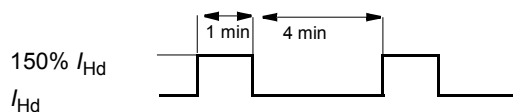
$I_{fast}$  Continuous current allowing  $I_{max}$  for 10 s / 60 s



$P_{fast}$  Continuous power allowing  $I_{max}$  for 10 s / 60 s

**Heavy-duty use**

$I_{Hd}$  Continuous current allowing 150%  $I_{Hd}$  for 1 min / 5 min

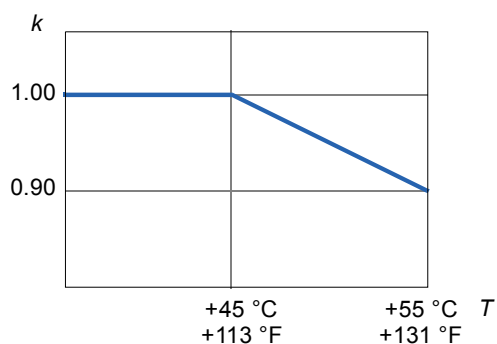


$P_{Hd}$  Continuous power allowing 150%  $I_{Hd}$  for 1 min / 5 min

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

**Ambient temperature (surrounding air) derating**

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) as follows. Calculate the output current by multiplying the current given in the rating table by the derating factor ( $k$ ).

**Applicable standards**

See *Electrical planning instructions for ACS880 multidrive cabinets and modules* (3AUA0000102324 [English]).

**Marine type approvals**

You can find the ACS880-1604 +C132 marine type approval certificates on the Internet. Go to [www.abb.com/drives/documents](http://www.abb.com/drives/documents). Browse or enter selection criteria in the search field.



## 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).

### Product training

For information on ABB product training, navigate to [new.abb.com/service/training](http://new.abb.com/service/training).

### Providing feedback on ABB manuals

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### Document library on the Internet

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