

# Cabinet-built single drives

## ACS880-07

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01  
ACS880-07  
frame size R6 to R8, IP22

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02  
ACS880-07  
frame size R9, IP22



01



02

Our cabinet-built single drives are built to order, meeting your needs regardless of the technical challenges. The drive configuration includes a rectifier, DC link, inverter, fuses, line choke and a main switch, all built into a compact cabinet for easy assembly and commissioning.

The ACS880-07 offers a wide variety of standardized configurations for different application requirements, from line contactors, to preventing unexpected motor starts. If the application requires more, ABB's Order-Based Engineering services can add special features to the standard product, such as an additional cabinet for customer-specific devices.

Drives up to frame size R11 are based on a compact single module including rectifier and inverter. Larger drives consist of separate rectifier and inverter modules, providing redundancy with parallel connected units. If one module needs to be disconnected, the drive can continue running at reduced power.

The robust design and enclosures up to IP54 make the ACS880-07 suitable for even very harsh environments.

The drives have an extensive selection of built-in features and options. See page 100.

### Cabinet-built ACS880-07 drives

- Power ratings: 45 to 2800 kW
- Enclosure classes IP22 (as standard), IP42 and IP54 for different environments, with option for air intake through the bottom of the cabinet and channeled air outlet on the top of the cabinet

#### Main options:

- Cabling solutions for bottom and top entry and exit
- Functional safety modules, see page 70
- I/O extension modules, see page 63
- Communication protocol adapters, see page 63
- Speed feedback interfaces, see page 65
- Brake option inside the module or cabinet, see page 82
- C2 and C3 EMC filters, see page 73
- Du/dt and common mode filter options for motor protection, see page 90
- Marine construction option
- Cabinet light and heater option

### Highlights

- Compact package for easy assembly and commissioning
- Available as an engineered, customer-specific solution
- All essential features built-in
- Robust design verified by various standards

# Ratings, types and voltages

## Cabinet-built drives, ACS880-07

$U_N = 400$  V (range 380 to 415 V). The power ratings are valid at nominal voltage 400 V (45 to 1400 kW).

Drive type	Frame size	Nominal ratings			Light overload use		Heavy-duty use		Noise level (dB(A))	Heat dissipation (W)	Air flow (m <sup>3</sup> /h)
		$I_N$ (A)	$I_{MAX}$ (A)	$P_N$ (kW)	$I_{Ld}$ (A)	$P_{Ld}$ (kW)	$I_{Hd}$ (A)	$P_{Hd}$ (kW)			
<b>6-pulse diode</b>											
ACS880-07-0105A-3	R6	105	148	55	100	55	87	45	67	1795	1750
ACS880-07-0145A-3	R6	145	178	75	138	75	105	55	67	1940	1750
ACS880-07-0169A-3	R7	169	247	90	161	90	145	75	67	2440	1750
ACS880-07-0206A-3	R7	206	287	110	196	110	169	90	67	2810	1750
ACS880-07-0246A-3	R8	246	350	132	234	132	206	110	65	3800	1750
ACS880-07-0293A-3	R8	293	418	160	278	160	246 <sup>1)</sup>	132	65	4400	1750
ACS880-07-0363A-3	R9	363	498	200	345	200	293	160	68	5300	1150
ACS880-07-0430A-3	R9	430	545	250	400	200	363 <sup>2)</sup>	200	68	6500	1150
ACS880-07-0505A-3	R10	505	560	250	485	250	361	200	72	6102	2950
ACS880-07-0585A-3	R10	585	730	315	575	315	429	250	72	6909	2950
ACS880-07-0650A-3	R10	650	730	355	634	355	477	250	72	8622	2950
ACS880-07-0725A-3	R11	725	1020	400	715	400	566	315	72	9264	2950
ACS880-07-0820A-3	R11	820	1020	450	810	450	625	355	72	10362	2950
ACS880-07-0880A-3	R11	880	1100	500	865	500	725 <sup>3)</sup>	400	71	11078	3170
ACS880-07-1140A-3	D8T + 2×R8i	1140	1490	630	1072	560	787	450	73	18000	4290
ACS880-07-1250A-3	2×D8T + 2×R8i	1250	1630	710	1200	630	935	500	74	21000	5720
ACS880-07-1480A-3	2×D8T + 2×R8i	1480	1930	800	1421	800	1107	630	74	25000	5720
ACS880-07-1760A-3	2×D8T + 2×R8i	1760	2120	1000	1690	900	1316	710	74	29000	5720
ACS880-07-2210A-3	3×D8T + 3×R8i	2210	2880	1200	2122	1200	1653	900	76	37000	8580
ACS880-07-2610A-3	3×D8T + 3×R8i	2610	3140	1400	2506	1400	1952	1000	76	44000	8580
<b>12-pulse diode</b>											
ACS880-07-0990A-3+A004	2×D7T + 2×R8i	990	1290	560	950	500	741	400	73	15000	5720
ACS880-07-1140A-3+A004	2×D8T + 2×R8i	1140	1490	630	1094	560	853	450	74	19000	5720
ACS880-07-1250A-3+A004	2×D8T + 2×R8i	1250	1630	710	1200	630	935	500	74	21000	5720
ACS880-07-1480A-3+A004	2×D8T + 2×R8i	1480	1930	800	1421	800	1107	630	74	25000	5720
ACS880-07-1760A-3+A004	2×D8T + 2×R8i	1760	2120	1000	1690	900	1316	710	74	29000	5720
ACS880-07-2210A-3+A004	4×D8T + 3×R8i	2210	2880	1200	2122	1200	1653	900	76	35000	10010
ACS880-07-2610A-3+A004	4×D8T + 3×R8i	2610	3140	1400	2506	1400	1952	1000	76	44000	10010

<sup>1)</sup> = 130% overload

<sup>2)</sup> = 125% overload

<sup>3)</sup> = 140% overload

$U_n = 500$  V (range 380 to 500 V). The power ratings are valid at nominal voltage 500 V (45 to 1400 kW).

Drive type	Frame size	Nominal ratings			Light overload use		Heavy-duty use		Noise level (dB(A))	Heat dissipation (W)	Air flow (m <sup>3</sup> /h)
		$I_N$ (A)	$I_{MAX}$ (A)	$P_N$ (kW)	$I_{Ld}$ (A)	$P_{Ld}$ (kW)	$I_{Hd}$ (A)	$P_{Hd}$ (kW)			
<b>6-pulse diode</b>											
ACS880-07-0096A-5	R6	96	148	55	91	55	77	45	67	1795	1750
ACS880-07-0124A-5	R6	124	178	75	118	75	96	55	67	1940	1750
ACS880-07-0156A-5	R7	156	247	90	148	90	124	75	67	2440	1750
ACS880-07-0180A-5	R7	180	287	110	171	110	156	90	67	2810	1750
ACS880-07-0240A-5	R8	240	350	132	228	132	180	110	65	3800	1750
ACS880-07-0260A-5	R8	260	418	160	247	160	240 <sup>1)</sup>	132	65	4400	1750
ACS880-07-0361A-5	R9	361	542	200	343	200	302	200	68	5300	1150
ACS880-07-0414A-5	R9	414	542	250	393	250	361 <sup>2)</sup>	200	68	6500	1150
ACS880-07-0460A-5	R10	460	560	315	450	315	330	200	72	4903	2950
ACS880-07-0503A-5	R10	503	560	355	483	315	361	250	72	6102	2950
ACS880-07-0583A-5	R10	583	730	400	573	400	414	250	72	6909	2950
ACS880-07-0635A-5	R10	635	730	450	623	450	477	315	72	8622	2950
ACS880-07-0715A-5	R11	715	850	500	705	500	566	400	72	9264	2950
ACS880-07-0820A-5	R11	820	1020	560	807	560	625	450	71	10362	2950
ACS880-07-0880A-5	R11	880	1100	630	857	560	697	500	71	11078	2950
ACS880-07-1070A-5	D8T + 2×R8i	1070	1400	710	1027	710	800	560	73	18000	4290
ACS880-07-1320A-5	2×D8T + 2×R8i	1320	1720	900	1267	900	987	710	74	22000	5720
ACS880-07-1450A-5	2×D8T + 2×R8i	1450	1890	1000	1392	900	1085	710	74	25800	5720
ACS880-07-1580A-5	2×D8T + 2×R8i	1580	2060	1100	1517	1000	1182	800	74	27000	5720
ACS880-07-1800A-5	2×D8T + 3×R8i	1800	2340	1250	1728	1200	1346	900	75	32000	7150
ACS880-07-1980A-5	2×D8T + 3×R8i	1980	2580	1400	1901	1300	1481	1000	75	36000	7150
<b>12-pulse diode</b>											
ACS880-07-0990A-5+A004	2×D7T + 2×R8i	990	1290	710	950	630	741	500	73	16000	5720
ACS880-07-1320A-5+A004	2×D8T + 2×R8i	1320	1720	900	1267	900	987	710	74	22000	5720
ACS880-07-1450A-5+A004	2×D8T + 2×R8i	1450	1890	1000	1392	900	1085	710	74	25000	5720
ACS880-07-1580A-5+A004	2×D8T + 2×R8i	1580	2060	1100	1517	1000	1182	800	74	27000	5720
ACS880-07-1800A-5+A004	2×D8T + 3×R8i	1800	2340	1250	1728	1200	1346	900	75	32000	7150
ACS880-07-1980A-5+A004	2×D8T + 3×R8i	1980	2580	1400	1901	1300	1481	1000	75	36000	7150

<sup>1)</sup> = 130% overload

<sup>2)</sup> = 125% overload

$U_N = 690$  V (range 525 to 690 V). The power ratings are valid at nominal voltage 690 V (45 to 2800 kW).

Drive type	Frame size	Nominal ratings			Light overload use		Heavy-duty use		Noise level (dB(A))	Heat dissipation (W)	Air flow (m <sup>3</sup> /h)
		$I_N$ (A)	$I_{MAX}$ (A)	$P_N$ (kW)	$I_{Ld}$ (A)	$P_{Ld}$ (kW)	$I_{Hd}$ (A)	$P_{Hd}$ (kW)			
<b>6-pulse diode</b>											
ACS880-07-0061A-7	R6	61	104	55	58	55	49	45	67	1795	1750
ACS880-07-0084A-7	R6	84	124	75	80	75	61	55	67	1940	1750
ACS880-07-0098A-7	R7	98	168	90	93	90	84	75	67	2440	1750
ACS880-07-0119A-7	R7	119	198	110	113	110	98	90	67	2810	1750
ACS880-07-0142A-7	R8	142	250	132	135	132	119	110	65	3800	1750
ACS880-07-0174A-7	R8	174	274	160	165	160	142	132	65	4400	1750
ACS880-07-0210A-7	R9	210	384	200	200	200	174	160	68	4700	1150
ACS880-07-0271A-7	R9	271	411	250	257	250	210	200	68	5300	1150
ACS880-07-0330A-7	R10	330	480	315	320	315	255	250	72	5640	2950
ACS880-07-0370A-7	R10	370	520	355	360	355	325	315	72	6371	2950
ACS880-07-0430A-7	R10	430	520	400	420	400	360 <sup>4)</sup>	355	72	7570	2950
ACS880-07-0470A-7	R11	470	655	450	455	450	415	400	72	6611	2950
ACS880-07-0522A-7	R11	522	685	500	505	500	455	450	72	7388	2950
ACS880-07-0590A-7	R11	590	800	560	571	560	505	500	71	8971	2950
ACS880-07-0650A-7	R11	650	820	630	630	630	571 <sup>4)</sup>	560	71	9980	3170
ACS880-07-0721A-7	R11	721	820	710	705	630	571 <sup>4)</sup>	560	71	11177	3170
ACS880-07-0800A-7	D8T + 2×R8i	800	1200	800	768	710	598	560	73	16000	4290
ACS880-07-0900A-7	D8T + 2×R8i	900	1350	900	864	800	673	630	74	20000	4290
ACS880-07-1160A-7	2×D8T + 2×R8i	1160	1740	1100	1114	1100	868	800	74	26000	5720
ACS880-07-1450A-7	2×D8T + 3×R8i	1450	2180	1400	1392	1250	1085	1000	75	32000	7150
ACS880-07-1650A-7	2×D8T + 3×R8i	1650	2480	1600	1584	1500	1234	1200	75	36500	7150
ACS880-07-1950A-7	3×D8T + 4×R8i	1950	2930	1900	1872	1800	1459	1400	76	44000	10010
ACS880-07-2300A-7	3×D8T + 4×R8i	2300	3450	2200	2208	2000	1720	1600	76	52000	10010
ACS880-07-2600A-7	4×D8T + 5×R8i	2600	3900	2500	2496	2400	1945	1900	78	58000	12870
ACS880-07-2860A-7	4×D8T + 5×R8i	2860	4290	2800	2746	2600	2139	2000	78	65000	12870
<b>12-pulse diode</b>											
ACS880-07-0800A-7+A004	2×D7T + 2×R8i	800	1200	800	768	710	598	560	73	16000	5720
ACS880-07-0950A-7+A004	2×D8T + 2×R8i	950	1430	900	912	800	711	630	74	20000	5720
ACS880-07-1160A-7+A004	2×D8T + 2×R8i	1160	1740	1100	1114	1100	868	800	74	26000	5720
ACS880-07-1450A-7+A004	2×D8T + 3×R8i	1450	2180	1400	1392	1250	1085	1000	75	32000	7150
ACS880-07-1650A-7+A004	2×D8T + 3×R8i	1650	2480	1600	1584	1500	1234	1200	75	36500	7150
ACS880-07-1950A-7+A004	4×D8T + 4×R8i	1950	2930	1900	1872	1800	1459	1400	77	44000	11440
ACS880-07-2300A-7+A004	4×D8T + 4×R8i	2300	3450	2200	2208	2000	1720	1600	77	52000	11440
ACS880-07-2600A-7+A004	4×D8T + 5×R8i	2600	3900	2500	2496	2400	1945	1900	78	58000	12870
ACS880-07-2860A-7+A004	4×D8T + 5×R8i	2860	4290	2800	2746	2600	2139	2000	78	65000	12870

<sup>4)</sup> = 144% overload

**Nominal ratings**

$I_N$	Rated current available continuously without overloadability at 40 °C.
$P_N$	Typical motor power in no-overload use.

**Maximum output current**

$I_{max}$	Maximum output current. Available for 10 seconds at start, then as long as allowed by drive temperature.
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**Light-overload use**

$I_{Ld}$	Continuous current allowing 110% $I_{Ld}$ for 1 minute every 5 minutes at 40 °C.
$P_{Ld}$	Typical motor power in light-overload use.

**Heavy-duty use**

$I_{Hd}$	Continuous current allowing 150% $I_{Hd}$ for 1 minute every 5 minutes at 40 °C.
$P_{Hd}$	Typical motor power in heavy-duty use.

The ratings apply at 40 °C ambient temperature. At higher temperatures (up to 50 °C), the derating is 1%/1 °C. Operation above 150 Hz might require type specific derating.