

# Maintenance schedule for ACS880 multidrive

ACS880 multidrive and ACS880U/R multidrive modernization



Recommended maintenance intervals and component replacements are based on specified operational and environmental conditions. ABB recommends annual drive inspections to ensure the highest reliability and optimum performance.

## Note

Long term operation near or over the maximum specified ratings or environmental conditions may require shorter maintenance intervals. Check the device specific technical specifications in the relevant hardware manual and consult your local ABB Service for maintenance recommendations at: [/new.abb.com/channel-partners/search](https://new.abb.com/channel-partners/search)

More detailed maintenance information can be found in maintenance instructions, product manuals and on the Internet:

[/new.abb.com/drives](https://new.abb.com/drives)

See the below listed technical notes for more details on component aging and possible effects on the drive.

Electrolytic capacitors	<a href="#">4FPS10001015180</a>
Film capacitors	<a href="#">4FPS10001454838</a>
Cooling fans	<a href="#">4FPS10001147616</a>
PCBAs	<a href="#">4FPS10001147621</a>
Power supplies	<a href="#">4FPS10001454842</a>

# For drives manufactured or maintained 2017 and onwards

ACS880-107/-207/-307/-607/-907/-1607 multidrives  
ACS880U/R-x07xx multidrive and supply unit modernizations

## FUNCTIONAL SAFETY ACTIONS

Safety function test interval	I	The drive can be a part of a safety system or application which requires periodic testing. The customer defines the test interval of the complete safety system or application. Use this test interval to test the safety function.
Safety component expiry (Mission time $T_M$ ) 20 years	R	The mission time of the ABB LV AC drive safety component is 20 years in the safety data of the drive product. The safety data is introduced in the product hardware manual.

## RECOMMENDED ACTIONS BY THE USER

	Years from startup																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>Connections and environment</b>																					
Cabinet door filters IP54	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Quality of supply voltage	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>Spare parts</b>																					
Spare parts	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
DC circuit capacitors reforming, spare modules and spare capacitors	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>Inspections by user</b>																					
IP22 and IP42 air inlet and outlet meshes	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Tightness of terminals	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Dustiness, corrosion and temperature	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Heat sink cleaning	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>Other</b>																					
ABB-SACE Air circuit breaker maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
ABB Contactors maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

### Legend

- I Inspection (visual inspection and maintenance action if needed)
- P Performance of on/off-site work (commissioning, tests, measurements, or other work)
- R Replacement

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4FPS10000292961	M	23.3.2023	External	EN	2 / 7
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# COOLING

## Years from startup

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>Main cooling fan</b>																					
R1i to R4i speed controlled LONG-LIFE									R									R			
R5i to R7i speed controlled LONG-LIFE									R									R			
D6D to D7D/D7T direct on line 50Hz LONG-LIFE									R									R			
D6D to D7D/D7T direct on line 60Hz LONG-LIFE									R									R			
<sup>(1)</sup> D8D (50/60Hz)									R									R			
R8i and D8T direct online 50Hz LONG-LIFE									R									R			
R8i and D8T direct online 60Hz LONG-LIFE									R									R			
LCL, L and BDCL direct online 50Hz LONG-LIFE									R									R			
<sup>(2)</sup> LCL, L and BDCL direct online 60Hz LONG-LIFE						<sup>(2)</sup> R			R			<sup>(2)</sup> R						R/ <sup>(2)</sup> R			
<sup>(1)</sup> D7T speed controlled									R									R			
<sup>(1)</sup> R8i and D8T speed controlled									R									R			
<sup>(3)</sup> ACS880R DSU/TSU H6 Cooling fan (DCS880)						R						R						R			
<sup>(3)</sup> ACS880R DSU/TSU H7 Cooling fan (DCS880)			R			R			R			R			R			R			R
<b>Internal cooling fan for circuit boards</b>																					
R5i LONG-LIFE									R									R			
<sup>(1)</sup> R8i and D8T									R									R			
<b>Cabinet cooling fan</b>																					
Internal LONG-LIFE 50Hz									R									R			
Internal LONG-LIFE 60Hz						R						R						R			
Door LONG-LIFE 50 Hz									R									R			
Door LONG-LIFE 60Hz									R									R			
<sup>(1)</sup> IP54 50Hz									R									R			
<sup>(1)</sup> IP54 60Hz						R						R						R			
<b>NSIN filter cooling fan</b>																					
<sup>(1)</sup> Filter cooling fan direct online 50Hz									R									R			
<sup>(1)</sup> Filter cooling fan direct online 60Hz									R									R			

<sup>(1)</sup> Fan has been always "LONG-LIFE" type

<sup>(2)</sup> 6 years interval if fan supply voltage is 400V instead of 320V

<sup>(3)</sup> Detailed PM schedule for DCS880, see Service Manual [3ADW000488R](#).

## Legend

I	Inspection (visual inspection and maintenance action if needed)
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# AGING

## Years from startup

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>Common, control panel and control unit batteries</b>																					
ZCU/BCU control unit battery (Real-time clock)						R						R						R			
Control panel battery (Real-time clock)									R									R			
<sup>(4)</sup> Cabinet auxiliary 24VDC power supplies and buffers												R									
<b>INU R1i...R4i</b>																					
JPU power unit (R1i and R2i)									R									R			
JCAP capacitor board (R3i and R4i)									R									R			
<b>INU R5i</b>																					
<b>INU, ISU R6i, R7i</b>																					
DC circuit electrolytic capacitors + discharg. resistors									R									R			
ZPOW Module internal power supply board												R									
ZINT/BMIB Module internal circuit board												R									
ZCU control unit												R									
<b>INU, ISU, DBU, RRU, DDC R8i</b>																					
DC circuit electrolytic capacitors + discharg. resistors									R									R			
BDPS, BFPS Module internal power supply boards												R									
BINT, BGDR, BDFC Module internal circuit boards												R									
Flat ribbon cables (when boards replaced)												R									
BCU control unit												R									
BSFC Cabinet side charging control board (INU only)												R									
<b>DSU D7T, D8T</b>																					
BDPS, BFPS Module internal power supply boards												R									
BINT, BTDR, BPCB, BDFC Module internal circuit boards												R									
Flat ribbon cables (when boards replaced)												R									
BCU control unit												R									
<b>Filter unit capacitors</b>																					
BLCL capacitor									R									R			
NSIN capacitor									R									R			
<b><sup>(2)</sup> ACS880R DSU/TSU H6,H7 (DCS880)</b>																					
SDCS-POW-H01 DCS880 power supply board									R									R			

<sup>(2)</sup> Detailed PM schedule for DCS880, see Service Manual [3ADW000488R](#).

<sup>(4)</sup> Check amount and types of Auxiliary power supplies from cabinet or manufactured BOM.

## Legend

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# For drives manufactured 2016 or before

ACS880-107/-207/-307/-607/-907/-1607 multidrive

## FUNCTIONAL SAFETY ACTIONS

Safety function test interval	I	The drive can be a part of a safety system or application which requires periodic testing. The customer defines the test interval of the complete safety system or application. Use this test interval to test the safety function.
Safety component expiry (Mission time $T_M$ ) 20 years	R	The mission time of the ABB LV AC drive safety component is 20 years in the safety data of the drive product. The safety data is introduced in the product hardware manual.

## RECOMMENDED ACTIONS BY THE USER

### Years from startup

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>Connections and environment</b>																					
Cabinet door filters IP54	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Quality of supply voltage	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>Spare parts</b>																					
Spare parts	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
DC circuit capacitors reforming, spare modules and spare capacitors	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>Inspections by user</b>																					
IP22 and IP42 air inlet and outlet meshes	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Tightness of terminals	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Dustiness, corrosion and temperature	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Heat sink cleaning	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>Other</b>																					
ABB-SACE Air circuit breaker maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
ABB Contactors maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

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**COOLING**
**Years from startup**

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<b>Main cooling fan</b>																					
R1i to R4i speed controlled						R						R						R			
R5i to R7i speed controlled						R						R						R			
D6D to D7D/D7T direct on line 50Hz						R						R						R			
D6D to D7D/D7T direct on line 60Hz						R						R						R			
D8D (50/60Hz)									R									R			
R8i and D8T direct online 50Hz						R						R						R			
R8i and D8T direct online 60Hz						R						R						R			
LCL, L and BDCL direct online 50Hz						R						R						R			
<sup>(1)</sup> LCL, L and BDCL direct online 60Hz LONG-LIFE						<sup>(1)</sup> R			R			<sup>(1)</sup> R						R/ <sup>(1)</sup> R			
D7T speed controlled									R									R			
R8i and D8T speed controlled									R									R			
<b>Internal cooling fan for circuit boards</b>																					
R5i			R			R			R			R			R			R			R
R8i and D8T									R									R			
<b>Cabinet cooling fan</b>																					
Internal 50Hz						R						R						R			
Internal 60Hz			R			R			R			R			R			R			R
Door 50 Hz						R						R						R			
Door 60Hz						R						R						R			
IP54 50Hz									R									R			
IP54 60Hz						R						R						R			
<b>NSIN filter cooling fan</b>																					
Filter cooling fan direct online 50Hz									R									R			
Filter cooling fan direct online 60Hz									R									R			

<sup>(1)</sup> 6 years interval if fan supply voltage is 400V instead of 320V

**Legend**

- I Inspection (visual inspection and maintenance action if needed)
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# AGING

## Years from startup

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>Common, control panel and control unit batteries</b>																					
ZCU/BCU control unit battery (Real-time clock)						R						R						R			
Control panel battery (Real-time clock)									R									R			
<sup>(2)</sup> Cabinet auxiliary 24VDC power supplies and buffers												R									
<b>INU R1i...R4i</b>																					
JPU power unit (R1i and R2i)									R									R			
JCAP capacitor board (R3i and R4i)									R									R			
<b>INU R5i</b>																					
<b>INU, ISU R6i, R7i</b>																					
DC circuit electrolytic capacitors + discharg. resistors									R									R			
ZPOW Module internal power supply board												R									
ZINT Module internal circuit board												R									
ZCU control unit												R									
<b>INU, ISU, DBU, RRU, DDC R8i</b>																					
DC circuit electrolytic capacitors + discharg. resistors									R									R			
BDPS, BFPS Module internal power supply boards												R									
BINT, BGDR, BDFC Module internal circuit boards												R									
Flat ribbon cables (when boards replaced)												R									
BCU control unit												R									
BSFC Cabinet side charging control board (INU only)												R									
<b>DSU D7T, D8T</b>																					
BDPS, BFPS Module internal power supply boards												R									
BINT, BTDR, BPCB, BDFC Module internal circuit boards												R									
Flat ribbon cables (when boards replaced)												R									
BCU control unit												R									
<b>Filter unit capacitors</b>																					
BLCL capacitor									R									R			
NSIN capacitor									R									R			

<sup>(2)</sup> Check amount and types of Auxiliary power supplies from cabinet or manufactured BOM.

## Legend

- I Inspection (visual inspection and maintenance action if needed)
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