

Maintenance schedule for ACS880 single drives

ACS880 single drives and modules, cabinet-built single drives and ACS880U/R single drives 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.

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

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)

Electrolytic capacitors	4FPS10001015180
Film capacitors	4FPS10001454838
Cooling fans	4FPS10001147616
PCBAs	4FPS10001147621
Power supplies	4FPS10001454842

For drives manufactured or maintained 2017 and onwards

ACS880-01/-01XT/-04/-04XT/-04F/-04FXT/-11/-14/-31/-34 Single drives and modules

ACS880-07/-17/-37 Cabinet-build single drives

ACS880U/R-x7xx single drive modernization

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
Connections and environment																					
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
Spare parts																					
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
Inspections by user																					
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
Other																					
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

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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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
Main cooling fan																					
Main cooling fan (R1 to R9) speed controlled LONG-LIFE									R									R			
⁽¹⁾ Main cooling fan (R10 and R11) speed controlled									R									R			
⁽¹⁾ Main cooling fan (R8i and D8T) speed controlled									R									R			
Main cooling fan (D7T) speed controlled LONG-LIFE									R									R			
Main cooling fan (BLCL) direct online 50 Hz LONG-LIFE									R									R			
Main cooling fan (BLCL) direct online 60 Hz LONG-LIFE						R						R						R			
Aux cooling fan																					
Auxiliary cooling fan for circuit boards (R1 to R9) LONG-LIFE									R									R			
Auxiliary cooling fan IP55 (R8 and R9) LONG-LIFE									R									R			
Circuit board compartment cooling fans (R10, R11) LONG-LIFE									R									R			
Internal cooling fan for circuit boards (R8i and D8T) LONG-LIFE									R									R			
Cabinet cooling fan																					
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			
⁽¹⁾ IP54 50Hz									R									R			
⁽¹⁾ IP54 60Hz						R						R						R			
xSIN filter cooling fan																					
Filter cooling fan LONG-LIFE									R									R			

⁽¹⁾ Fan has been always "LONG-LIFE" type

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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
Common, control panel and control unit batteries																					
ZCU/BCU control unit battery (Real-time clock)						R						R						R			
UCU-22/-23/-24 control unit battery (Real-time clock)									R									R			
Control panel battery (Real-time clock)									R									R			
⁽²⁾ Cabinet auxiliary 24VDC power supplies and buffers												R									
Frequency converter R6 to R9 (except ACS880-11/-31 R6)																					
ZCU control unit												R									
Frequency converter R6 to R9 (except ACS880-11/-31 R6)																					
DC circuit electrolytic capacitors and discharging resistors									R									R			
ZINT, ZPOW, ZINP, QINT Module internal circuit boards												R									
QCAP (ACS880-11/-31 R6 HW 2)									R									R			
Frequency converter ACS880-11/31 R6 HW 2																					
DC capacitor board QCAP									R												
Drive frame sizes R10 and R11																					
Flat ribbon cables												R									
DC circuit electrolytic capacitors and discharging resistors									R									R			
BPOW / ZPOW Module internal circuit boards												R									
BFPS, BGDR, ZBDR, ZINT, BINT Module internal circuit boards												R									
ZCU control unit												R									
Inverter module, IGBT Supply module R8i																					
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/UCU control unit												R									
DSU D7T, D8T																					
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/UCU control unit												R									
Filter unit capacitors																					
BLCL capacitor									R									R			
NSIN capacitor									R									R			
Drive frame size R11 (-14/-34)																					
Charging circuit contactor									R									R			

⁽²⁾ 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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For drives manufactured 2016 or before

ACS880-01/-01XT/-04/-04F/-04XT/-11/-14/-31/-34 Single drives and modules

ACS880-07/-17/-37 Cabinet-build single drives

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
Connections and environment																					
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
Spare parts																					
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
Inspections by user																					
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
Other																					
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

Legend

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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
Main cooling fan																					
Main cooling fan (R1 to R9) speed controlled						R						R						R			
Main cooling fan (R10 and R11) speed controlled									R									R			
Main cooling fan (QLCL) speed controlled									R									R			
Main cooling fan (R8i and D8T) speed controlled									R									R			
Main cooling fan (D7T) speed controlled						R						R						R			
Main cooling fan (BLCL) direct online 50 Hz						R						R						R			
Main cooling fan (BLCL) direct online 60 Hz						R						R						R			
Aux cooling fan																					
Auxiliary cooling fan for circuit boards (R1 to R9)						R						R						R			
Auxiliary cooling fan IP55 (R8 and R9)						R						R						R			
Circuit board compartment cooling fans (R10, R11)						R						R						R			
Fans for circuit board compartment (-14/-34) speed controlled									R									R			
Internal cooling fan for circuit boards (R8i and D8T)						R						R						R			
Cabinet cooling fan																					
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			
xSIN filter cooling fan																					
Filter cooling fan						R						R						R			

Legend

- I Inspection (visual inspection and maintenance action if needed)
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AGING
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Common, control panel and control unit batteries																					
ZCU/BCU control unit battery (Real-time clock)						R						R						R			
Control panel battery (Real-time clock)									R									R			
⁽²⁾ Cabinet auxiliary 24VDC power supplies and buffers												R									
Frequency converter R6 to R9																					
DC circuit electrolytic capacitors and discharging resistors									R									R			
ZINT, ZPOW, ZINP Module internal circuit boards												R									
ZCU control unit												R									
Drive frame sizes R10 and R11																					
Flat ribbon cables												R									
DC circuit electrolytic capacitors and discharging resistors									R									R			
BPOW / ZPOW Module internal circuit boards												R									
BFPS, BGDR, ZBDR, ZINT, BINT Module internal circuit boards												R									
ZCU control unit												R									
Inverter module, IGBT Supply module R8i																					
DC circuit electrolytic capacitors + discharg. resistors									R									R			
BDPS, BFPS Module internal power supply boards												R									
BINT, BGDR, BDPC Module internal circuit boards												R									
Flat ribbon cables (when boards replaced)												R									
BCU control unit												R									
DSU D7T, D8T																					
BDPS, BFPS Module internal power supply boards												R									
BINT, BTDR, BPCB, BDPC Module internal circuit boards												R									
Flat ribbon cables (when boards replaced)												R									
BCU control unit												R									
Filter unit capacitors																					
BLCL capacitor									R									R			
NSIN capacitor									R									R			
Drive frame size R11 (-14/-34)																					
Charging circuit contactor									R									R			

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

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