MOTION SERVICES

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.

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

More detailed maintenance information can be found in maintenance instructions, product manuals and on the Internet:
/new.abb.com/drives

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

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

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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 (Air filter replacement may be needed more frequently in dusty environment)	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 inventory	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
ABB contactors maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
[1] Control unit (ZCU/BCU/UCU) condition	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

[1] In harsh environmental conditions (heat/dust), control unit replacement is recommended after 12 years of operation time

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, R9e) speed controlled									R									R			
Main cooling fan (R10 and R11) speed controlled									R									R			
Main cooling fan (R8i and D8T) speed controlled									R									R			
Main cooling fan (D7T) speed controlled									R									R			
Main cooling fan (BLCL) direct online 50 Hz									R									R			
Main cooling fan (BLCL) direct online 60 Hz						R						R						R			
Aux cooling fan																					
Auxliary cooling fan for circuit boards (R1 to R9, R9e)									R									R			
Auxliary cooling fan IP55 (R8 and R9)									R									R			
Auxliary cooling fan in IP55 Cover R9e									R									R			
Circuit board compartment cooling fans (R10, R11)									R									R			
Internal cooling fan for circuit boards (R8i and D8T)									R									R			
Cabinet cooling fan																					
Internal 50Hz									R									R			
Internal 60Hz						R						R						R			
Door 50 Hz									R									R			
Door 60Hz									R									R			
IP54 50Hz									R									R			
IP54 60Hz						R						R						R			
xSIN filter cooling fan																					
Filter cooling fan LONG-LIFE									R									R			

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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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)																					
DC circuit electrolytic capacitors and discharging resistors									R									R			
ZINT, ZPOW, ZINP, QINT Module internal circuit boards												R									
DC busbar									R												
Frequency converter R9e																					
DC circuit electrolytic capacitors									R									R			
ZINT, ZPOW, ZINP Module internal circuit boards												R									
Frequency converter ACS880-11/31 R6 HW 2																					
DC capacitor board QCAP									R									R			
Drive frame sizes R10 and R11																					
Flat ribbon cables (when boards are replaced)												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									
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									
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									
Filter unit capacitors																					
BLCL capacitor									R									R			
NSIN capacitor									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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