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Legend

<table>
<thead>
<tr>
<th>Inspection (visual inspection and maintenance action if needed)</th>
<th>Performance of on/off-site work (commissioning, tests, measurements or other work)</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>P</td>
<td>R</td>
</tr>
</tbody>
</table>

Recommended annual actions by the user

<table>
<thead>
<tr>
<th>Connections and environment</th>
<th>Annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinet door filters IP54</td>
<td>R</td>
</tr>
<tr>
<td>Quality of supply voltage</td>
<td>P</td>
</tr>
<tr>
<td>Spare parts</td>
<td>I</td>
</tr>
<tr>
<td>DC circuit capacitors reforming, spare modules and spare capacitors</td>
<td>P</td>
</tr>
</tbody>
</table>

Inspections by user

- IP22 and IP42 air inlet and outlet meshes: I
- Tightness of terminals: I
- Dustiness, corrosion and temperature: I
- Heat sink cleaning: I

Other

- ABB-SACE Air circuit breaker maintenance: I

Cooling

<table>
<thead>
<tr>
<th>Years from start-up</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
<th>15</th>
<th>18</th>
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<tbody>
<tr>
<td><strong>Main cooling fan</strong></td>
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<td>R</td>
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<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>(R1 to R9) speed controlled LONG-LIFE</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>(R10 and R11) speed controlled</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>(H6i and D8T) speed controlled*</td>
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<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Main cooling fan (D7T) speed controlled LONG-LIFE</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td>Main cooling fan (BLCL) direct online 50 Hz LONG-LIFE</td>
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<td>R</td>
<td>R</td>
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<tr>
<td>Main cooling fan (BLCL) direct online 60 Hz LONG-LIFE</td>
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</table>

**Aux cooling fan**

- Auxiliary cooling fan for circuit boards (R1 to R9) LONG-LIFE | R | R | R | R  | R  | R  | R  |
- Auxiliary cooling fan IP55 (R8 and R9) LONG-LIFE | R | R | R | R  | R  | R  | R  |
- Circuit board compartment cooling fans (R10; R11) LONG-LIFE | R | R | R | R  | R  | R  | R  |
- Internal cooling fan for circuit boards (R8i and D8T) LONG-LIFE | R | R | R | R  | R  | R  | R  |

**Cabinet cooling fan**

- Internal LONG-LIFE 50Hz | R | R | R | R  | R  | R  | R  |
- Internal LONG-LIFE 60Hz | R | R | R | R  | R  | R  | R  |
- Door LONG-LIFE 50 Hz | R | R | R | R  | R  | R  | R  |
- Door LONG-LIFE 60Hz | R | R | R | R  | R  | R  | R  |
- IP54 50Hz* | R | R | R | R  | R  | R  | R  |
- IP54 60Hz* | R | R | R | R  | R  | R  | R  |

**xSIN filter cooling fan**

- Filter cooling fan LONG-LIFE | R | R | R | R  | R  | R  | R  |

*A fan has been always “LONG-LIFE” type

Aging

<table>
<thead>
<tr>
<th>Years from start-up</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
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<th>18</th>
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<tbody>
<tr>
<td><strong>Common, control panel and control unit batteries</strong></td>
<td></td>
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</tr>
<tr>
<td>ZCU/BCU control unit battery (Real-time clock)</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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</tr>
<tr>
<td>Control panel battery (Real-time clock)</td>
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<td>R</td>
<td>R</td>
<td>R</td>
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<td>R</td>
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<tr>
<td><strong>Frequency converter R1 to R9</strong></td>
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<tr>
<td>Flat ribbon cables (R6 to R9)</td>
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<td>R</td>
<td>R</td>
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<tr>
<td>DC circuit electrolytic capacitors (R6 to R9) and discharging resistors</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>ZINT, ZPOW, ZINT, ZINP, QINT (R6 to R9) and module internal circuit boards</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
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## Maintenance Schedule

**ACS880-01,-01XT,-04,-04F,-04XT,-11,-14,-31,-34 Single drives and modules**  
**ACS880-07,-17,-37 Cabinet-build single drives**  
Valid for drives manufactured or maintained in 2017 onwards.

### Maintenance Schedule

#### Years from start-up

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<thead>
<tr>
<th>Aging</th>
<th>3</th>
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<th>12</th>
<th>15</th>
<th>18</th>
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<tbody>
<tr>
<td>Drive frame sizes R10 and R11</td>
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<td>Flat ribbon cables</td>
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</tr>
<tr>
<td>DC circuit electrolytic capacitors and discharging resistors</td>
<td>R</td>
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<tr>
<td>BPOW / ZPOW module internal circuit board</td>
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<tr>
<td>BFPS, BGDR, ZBDR, ZINT, BINT module internal circuit boards</td>
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<tr>
<td>ZCU control unit</td>
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<tr>
<td>Inverter module, IGBT Supply module R8i</td>
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<td>DC circuit electrolytic capacitors (R8i) and discharging resistors</td>
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<td>BDS, BFP5 module internal power supply boards</td>
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<td>BINT, BGDR, BDFC module internal circuit boards</td>
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<tr>
<td>BCU control unit</td>
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<td>Supply modules D7T and D8T</td>
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<td>BDS, BFP5 module internal power supply boards</td>
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<td>BINT, BTD, BFCB, BDFC module internal circuit boards</td>
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<td>NSIN capacitor</td>
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<td>Charging circuit contactor</td>
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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

### Recommended annual actions by the user

<table>
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<tr>
<th>Connections and environment</th>
<th>Annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinet door filters IP54</td>
<td>R</td>
</tr>
<tr>
<td>Quality of supply voltage</td>
<td>P</td>
</tr>
<tr>
<td>Spare parts</td>
<td></td>
</tr>
<tr>
<td>DC circuit capacitors reforming, spare modules and spare capacitors</td>
<td>P</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Inspections by user</th>
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<tbody>
<tr>
<td>IP22 and IP42 air inlet and outlet meshes</td>
</tr>
<tr>
<td>Tightness of terminals</td>
</tr>
<tr>
<td>Humidity, corrosion and temperature</td>
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<tr>
<td>Heat sink cleaning</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>ABB-SACE Air circuit breaker maintenance</td>
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</tbody>
</table>

### Cooling

<table>
<thead>
<tr>
<th>Years from start-up</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
<th>15</th>
<th>18</th>
<th>21</th>
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<tbody>
<tr>
<td><strong>Main cooling fan</strong></td>
<td></td>
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<td></td>
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<tr>
<td>(R1 to R9) speed controlled</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<td></td>
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<tr>
<td>(R10 and R11) speed controlled</td>
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<td>R</td>
<td>R</td>
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<tr>
<td>(QLCL) speed controlled</td>
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<tr>
<td>(R6 and D8T) speed controlled</td>
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<tr>
<td>(D7T) speed controlled</td>
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<tr>
<td>(BLCL) direct online 50 Hz</td>
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<td>R</td>
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<td>(BLCL) direct online 60 Hz</td>
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<tr>
<td><strong>Aux cooling fan</strong></td>
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<tr>
<td>Auxiliary cooling fan for circuit boards (R1 to R9)</td>
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<td>R</td>
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<tr>
<td>Auxiliary cooling fan IP55 (R8 and R8)</td>
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<td>Circuit board compartment cooling fans (R10, R11)</td>
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<td>Fans for circuit board compartment (-14, -34) speed controlled</td>
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<tr>
<td>Internal cooling fan for circuit boards (R8i and D8T)</td>
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<tr>
<td>Door 60Hz</td>
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<td>xSIN filter cooling fan</td>
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<td>Filter cooling fan</td>
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### Aging

<table>
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<th>9</th>
<th>12</th>
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<th>21</th>
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<tr>
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<td></td>
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<tr>
<td>ZCU/BCU control unit battery (Real-time clock)</td>
<td>R</td>
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<tr>
<td>Control panel battery (Real-time clock)</td>
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<td><strong>Frequency converter R1 to R9</strong></td>
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<tr>
<td>Flat ribbon cables (R6 to R9)</td>
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<td>DC circuit electrolytic capacitors (R6 to R9) and discharging resistors</td>
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<td>ZINT, ZPOW, ZINP, QINT (R6 to R9) module internal circuit boards</td>
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<td>ZCU control unit</td>
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<tr>
<td><strong>Drive frame sizes R10 and R11</strong></td>
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<tr>
<td>DC circuit electrolytic capacitors and discharging resistors</td>
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<tr>
<td>BPOW / ZPOW module internal circuit board</td>
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<tr>
<td>BFPS, BGDR, ZBDR, ZINT module internal circuit boards</td>
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<td>ZCU control unit</td>
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<tr>
<td><strong>Inverter module, IGBT Supply module R8i</strong></td>
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<td>DC circuit electrolytic capacitors (R8i) and discharging resistors</td>
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<td>BDPS, BFPS module internal power supply boards</td>
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<td>BINT, BGDR, BDFC module internal circuit boards</td>
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<tr>
<td>Flat ribbon cables (when boards replaced)</td>
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<td>BCU control unit</td>
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<td><strong>Supply modules D7T and D8T</strong></td>
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<td>BINT, BDTR, BPCB, BDFC module internal circuit boards</td>
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<td>Flat ribbon cables (when boards replaced)</td>
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<td>BCU control unit</td>
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<td><strong>Filter unit capacitors</strong></td>
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<td>NSIN capacitor</td>
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<td><strong>Drive frame size R11 (-14, -34)</strong></td>
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Valid for drives manufactured 2016 or before