ABB industrial drives
ACS800, single drives, 0.75 to 7500 hp (0.55 to 5600 kW)

Single drives are complete AC drives, which can be installed without any additional cabinet or enclosure. They are used in process industries such as pulp & paper, metals, mining, cement, power, chemical, and oil & gas.

Single drives are available as wall-mounted, free-standing and cabinet-built constructions. The degree of protection is at least UL Type 1 (IP21), and higher protection classes are available as an option.

ABB industrial drives
ABB industrial drives are designed for industrial applications, and especially for applications in process industries such as the pulp & paper, metals, mining, cement, power, chemical, and oil & gas. The key features of these drives are programmability and configurability, which makes adaptation to different applications easy. Marine variants are also available.

Highlights
− High flexibility
− Programmability
− Everything inside
− Wide range of configurations and options. Tailor-made configurations for cabinet-built drives through ABB’s application engineering
− Application programs for different industrial segments
− Liquid-cooled variant provides added benefits when availability of space and cooling air is limited

Voltage and power range
− 3-phase 230 V: 0.75 to 250 hp
− 3-phase 400 V: 1.5 to 3755 hp
− 3-phase 500 V: 2 to 4500 hp
− 3-phase 690 V: 7.5 to 7500 hp

Applications
− Pumps and fans
− Cranes
− Winches
− Master/follower
− Winders
− Conveyors
− Extruders and compressors
− Test benches
− Processing lines and roller tables
− Presses
− Mixers
− Thrusters and propulsion

Options
− Control programs
− EMC, du/dt and sine filters
− Remote monitoring and diagnostics tools
− Fieldbuses and I/O extensions
− PC tools

ACS800 single drives
Wall-mounted drives, ACS800-U1
− Power range:
  0.75 to 250 hp (230 to 690 V)
− UL Type 1 (IP21) as standard, UL Type 12 (IP55) as option
− Marine type approved design available

Wall-mounted regenerative drives, ACS800-U11
− Power range:
  7.5 to 150 hp (230 to 690 V)
− UL Type 1 (IP21) as standard

Wall-mounted low harmonic drives, ACS800-U31
− Power range:
  7.5 to 150 hp (230 to 690 V)
− UL Type 1 (IP21) as standard

Free-standing drives, ACS800-PC
− Power range:
  125 to 600 hp (480 V)
− UL Type 1 (IP21) as standard
Cabinet-built drives, ACS800-U7/07
- Power range: 75 to 3000 hp (480 to 690 V)
- UL Type 1 (IP21) as standard, IP22, IP42, UL Type 12 (IP54) and IP54R as options

Cabinet-built liquid-cooled drives, ACS800-07LC
- Power range: 250 to 7500 hp (380 to 690 V)
- IP42 as standard, UL Type 12 (IP54) as option
- Marine type approved design available

Cabinet-built regenerative drives, ACS800-17
- Power range: 40 to 2800 hp (480 to 600 V)
- UL Type 1 (IP21) as standard, IP22, IP42, UL Type 12 (IP54) and IP54R as options

Cabinet-built low harmonic drives, ACS800-37
- Power range: 40 to 2800 hp (480 to 600 V)
- UL Type 1 (IP21) as standard, IP22, IP42, UL Type 12 (IP54) and IP54R as options

### Mains connection

<table>
<thead>
<tr>
<th>Voltage and power range</th>
<th>3-phase, $U_{\text{in}} = 208$ to $240$ V, ±10%, except -U7,-U7LC,-17,-37</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3-phase, $U_{\text{in}} = 380$ to $415$ V, ±10%</td>
</tr>
<tr>
<td></td>
<td>3-phase, $U_{\text{in}} = 380$ to $500$ V, ±10%</td>
</tr>
<tr>
<td></td>
<td>3-phase, $U_{\text{in}} = 525$ to $690$ V, ±10%</td>
</tr>
<tr>
<td>Frequency</td>
<td>48 to 63 Hz</td>
</tr>
<tr>
<td>Power factor</td>
<td>$\cos \varphi = 0.98$ (fundamental)</td>
</tr>
<tr>
<td></td>
<td>$\cos \varphi = 0.93...0.95$ (total)</td>
</tr>
</tbody>
</table>

### Motors connection

| Frequency               | 0...±300 Hz (0...±120 Hz with optional $du/dt$ filters) |
| Field weakening point   | 8...300 Hz                                               |
| Motor control           | ABB’s Direct Torque Control (DTC)                         |

### Environmental limits

| Ambient temperature     | -40 to +70 °C (-40 to +158 °F)                             |
|                        | -40 to +70 °C (-40 to +158 °F)                             |
| Operation              | -15 to +50 °C (5 to 122 °F) no frost allowed              |
|                        | +40 to 50 °C (108 to 122 °F) at reduced output current (1% / 1 °C) (1% / 1.8 °F) |
|                        | 0 to +55 °C (32 to 131 °F) no frost allowed               |
|                        | +45 to 55 °C (113 to 131 °F) at reduced output current (0.5% / 1 °C) (0.5% / 1.8 °F) |

| Cooling method         | Dry clean air                                             |
|                        | Direct liquid-cooling (ACS800-07LC)                        |
|                        | +48 °C (118 °F) max converter circuit, fresh water        |
|                        | +42 °C to +48 °C (107 to 118 °F) at reduced output current |

### Product compliance

Cabinet-built drives ACS800-PHTC01U-EN.

For more information see catalog

ABB single drives ACS800-PHTC01U-EN.