ABB general machinery drives
ACS350, IP66 and IP67, 0.37 to 7.5 kW / 0.5 to 10 hp

A range of ABB general machinery drives with IP66, IP67 and UL Type 4X protection classes is designed to excel in the harshest and most demanding of conditions.

Designed for the food and beverage, textile, ceramics, pulp and paper and water and waste water industries, the drives are suitable for screws, mixers, pumps, fans and conveyors especially where the machine is exposed to dust, moisture and cleaning chemicals.

The drive's hygienic design and use of materials meeting current hygiene standards, means that the drive traps no bacteria and can withstand frequent washing. The drive is certified by NSF.

A user control panel housed within a plastic window is designed to resist moist and dusty atmospheres.

The drive is designed for fast installation, parameter setting and commissioning and is based on ABB general machinery drives, possessing the same software features and hardware connections. The wall mounted drive can be located close to the process and the operator.

Highlights
- Smooth, slanted surfaces ensure water drains away and drive will not trap bacteria
- Certified by NSF for hygienic installations in the food and beverage industry
- Corrosion resistant die cast aluminum chassis painted in white
- The heat sink’s cooling fins are completely open from top to bottom, allowing easy washing
- Tested to highest degree of protection (IP69K) for washing with pressurized hot water
- Optional input switch for fast shutdown, safety and process maintenance
- High torque for the start up of heavy loads
- Internally mounted cooling fan eliminates the need for maintenance of external moving parts
- Built-in brake chopper
- Optional pressure compensation valve for preventing water condensation within the enclosure
- Intuitive use with assistant control panel
- Silent operation of the drive

Power and voltage range
- 3-phase, 200 to 240 V ± 10%
  - 0.37 to 4 kW (0.5 to 5 hp)
- 3-phase, 380 to 480 V ± 10%
  - 0.37 to 7.5 kW (0.5 to 10 hp)

Options
- Input switch
- Fieldbus connection via optional modules
  - PROFIBUS DP
  - CANopen
  - DeviceNet
  - Modbus
  - Ethernet
- FlashDrop tool
- Pressure compensation valve
- DriveWindow Light for easy parametrization and graphical sequence programming
### Technical data and types

#### 3-phase supply voltage 200 to 240 V units

<table>
<thead>
<tr>
<th>( P_\text{e} ) kW</th>
<th>( P_\text{e} ) hp</th>
<th>( I_\text{e} ) A</th>
<th>Type code</th>
<th>Frame size</th>
<th>IP66/IP67/UL Type 4X</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.37</td>
<td>0.5</td>
<td>2.4</td>
<td>ACS350-03X-02A2 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>0.55</td>
<td>0.75</td>
<td>3.5</td>
<td>ACS350-03X-03A3 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>0.75</td>
<td>1</td>
<td>4.7</td>
<td>ACS350-03X-04A7 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>1.1</td>
<td>1.5</td>
<td>5.7</td>
<td>ACS350-03X-06A6 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>1.5</td>
<td>2</td>
<td>7.5</td>
<td>ACS350-03X-07A5 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>2.2</td>
<td>3</td>
<td>9.8</td>
<td>ACS350-03X-08A9 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>13.3</td>
<td>ACS350-03X-09A3 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>17.6</td>
<td>ACS350-03X-10A4 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>5.5</td>
<td>7.5</td>
<td>12.5</td>
<td>ACS350-03X-11A8 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>7.5</td>
<td>10</td>
<td>15.6</td>
<td>ACS350-03X-15A8 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
</tbody>
</table>

#### 3-phase supply voltage 380 to 480 V units

<table>
<thead>
<tr>
<th>( P_\text{e} ) kW</th>
<th>( P_\text{e} ) hp</th>
<th>( I_\text{e} ) A</th>
<th>Type code</th>
<th>Frame size</th>
<th>IP66/IP67/UL Type 4X</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.37</td>
<td>0.5</td>
<td>2.4</td>
<td>ACS350-03X-02A2 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>0.55</td>
<td>0.75</td>
<td>3.5</td>
<td>ACS350-03X-03A3 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>0.75</td>
<td>1</td>
<td>4.7</td>
<td>ACS350-03X-04A7 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>1.1</td>
<td>1.5</td>
<td>5.7</td>
<td>ACS350-03X-06A6 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>1.5</td>
<td>2</td>
<td>7.5</td>
<td>ACS350-03X-07A5 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>2.2</td>
<td>3</td>
<td>9.8</td>
<td>ACS350-03X-08A9 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>13.3</td>
<td>ACS350-03X-09A3 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>17.6</td>
<td>ACS350-03X-10A4 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>5.5</td>
<td>7.5</td>
<td>12.5</td>
<td>ACS350-03X-11A8 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
<tr>
<td>7.5</td>
<td>10</td>
<td>15.6</td>
<td>ACS350-03X-15A8 + B063</td>
<td>R1</td>
<td>305 195 281 7.7</td>
</tr>
</tbody>
</table>

#### Mains connection

- Voltage and power connection: 3-phase, 200 to 240 V ±10%; 0.37 to 4 kW (0.5 to 5 hp); 0.37 to 7.5 kW (0.5 to 10 hp)
- Frequency: 48 to 63 Hz

#### Motor connection

- Voltage: 3-phase, from 0 to \( U_{\text{supply}} \)
- Frequency: 0 to 500 Hz
- Overload capacity: 1.5 \( I_n \) for 1 minute
- Static accuracy: 20% of motor nominal slip
- Dynamic accuracy: < 1% with 100% torque step
- Torque control: < 10 ms with nominal torque, ± 5% with nominal torque

#### Programmable control connections

- **Two analog inputs**
  - Voltage signal
    - Unipolar: 0 to 10 V, \( R_n > 312 \, \Omega \)
    - Bipolar: -10 to 10 V, \( R_n > 312 \, \Omega \)
  - Current signal
    - Unipolar: 0 to 20 mA, \( R_n = 100 \, \Omega \)
    - Bipolar: -20 to 20 mA, \( R_n = 100 \, \Omega \)
- **One analog output**
  - Voltage: 0 to 20 mA, load < 500 \( \Omega \)
- **Auxiliary voltage**
  - 24 V DC ±10%, max. 200 mA
- **Five digital inputs**
  - 12 to 24 V DC with internal or external supply, PNP and NPN, pulse train 0 to 16 kHz (2.4 kHz)
- **One relay output**
  - Type: NO + NC
  - Maximum switching voltage: 250 V AC/30 V DC
  - Maximum switching current: 0.5 A/30 V DC, 5 A/230 V AC
  - Maximum controllable current: 2 A rms
- **One digital output**
  - Type: Transistor output
  - Maximum switching voltage: 30 V DC
  - Maximum switching current: 100 mA/30 V DC, short circuit protected
  - Frequency: 10 Hz to 16 kHz
  - Resolution: 1 Hz
  - Accuracy: 0.2%

#### Product compliance

- CE, cUL pending, UL pending, NSF Certified, GOST R, DIN40050-9 (IP69K)

#### Environmental limits

- Degree of protection: IP66, IP67 and UL Type 4X, indoor use only
- IP69K available for IP66/IP67 variant with compatible cable glands
- Ambient temperature: -10 to 40 °C (14 to 104 °F), no frost allowed

For more information see catalog ABB general machinery drives (3AFE68596106).

For more information please contact:

- www.abb.com/drives
- www.abb.com/drivespartners

© Copyright 2009 ABB. All rights reserved. Specifications subject to change without notice.