

LOW VOLTAGE AC DRIVES

ABB general purpose drives

ACS310, 0.37 to 22 kW/0.5 to 30 Hp



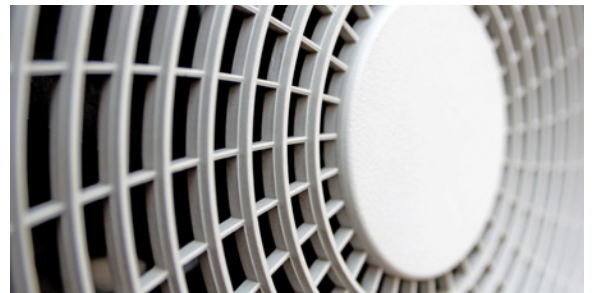
ABB general purpose drives, ACS310, are dedicated to variable torque applications such as booster pumps, level control systems, centrifugal fans, and irrigation systems.

Make wise savings with your pump and fan applications

- **Built-in pump and fan features for easier commissioning and operation**

The drive design includes a powerful set of features which benefit pump and fan applications including built-in PID controllers and PFC (pump and fan control) that varies the drive's performance in response to changes in pressure, flow or other external data. The drives also have pre-programmed application macros and protection functions such as pump cleaning for preventive maintenance. These features together with an intuitive user interface and several assistant screens speed up the installation, parameter setting and commissioning of the drive.
- **Maximal energy savings throughout your processes**

The ACS310 drives provide built-in energy efficiency features. Energy savings can be easily monitored using the built-in energy calculators that display energy savings in kilowatt hours and saved carbon dioxide emissions. The savings can also be displayed in local currencies. In addition, the ACS310 drives feature an energy optimizer and load analyzer functions. The energy optimizer helps improve system's energy efficiency while operating at partial load. The load analyzer provides statistical information on the dimensioning of the drive and motor and further analyzes the process energy efficiency and operation.



Technical data

Mains connection	
Voltage and power connection	1-phase, 200 to 240 V ± 10% 0.37 to 2.2 kW (0.5 to 3 hp)
	3-phase, 200 to 240 V ± 10% 0.37 to 11 kW (0.5 to 15 hp)
	3-phase, 380 to 480 V ± 10% 0.37 to 22 kW (0.5 to 30 hp)
Frequency	48 to 63 Hz
Motor connection	
Motor types	Asynchronous induction motors
Voltage	3-phase, from 0 to U_{supply}
Frequency	0 to 500 Hz
Overload capacity (at a max. ambient temperature of 40 °C)	I_{LD} stands for a continuous output current at max 50 °C ambient temperature, 10% overloadability for one minute every ten minutes. I_{2N} indicates the maximum continuous output current at 40 °C ambient temperature, no overloadability, derating up to 50 °C 1% for every additional 1 °C.
Switching frequency	4, 8, 12 and 16 kHz (derated)
Type of control	Scalar U/f Linear, squared and user definable U/f profiles Energy optimizer
Serial communication	
Fieldbus	Embedded fieldbus (Modbus) connection through either RS-232 or EIA-485 Modbus TCP with SREA-01 option module
Environmental limits	
Degree of protection	IP20/ Optional NEMA 1 enclosure
Ambient temperature	-10 to +40 °C (14 to 104 °F) without derating, +40 to 50 °C (104 to 122 °F) with derating, no frost allowed
Product compliance	
Markings	CE and C-Tick approvals UL, cUL and GOST R RoHS compliant
Directives	Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC
Harmonics	For reducing THD in partial loads and to comply with EN/IEC 61000-3-12 with external AC input chokes
EMC	Class C3 (2 nd environment unrestricted distribution) built-in as standard. Class C2 and C1 with external optional EMC filters.

For more details see ACS310 catalog (3AUA0000051082).

Highlights

- Pump and fan features such as pump and fan control (PFC and SPFC)
- Pump cleaning and pipe fill functions
- Energy efficiency calculators
- Energy optimizer
- Load analyzer for optimized dimensioning of the drive, motor and process
- Embedded Modbus EIA-485 fieldbus interface
- FlashDrop tool for fast parameter setting
- Unified height and depth
- Full output current at 40 °C ambient
- Short parameter menu view

For more information please contact your local ABB representative or visit:

abb.com/drives
abb.com/drivespartners

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