FOR SMOOTH MOTOR CONTROL AND ENERGY SAVINGS

Low voltage micro & machinery drives

Product guide

AC drives. For smooth motor control and energy savings.

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Smooth motor control and energy savings

What is an AC drive?
An AC drive is an electronic device that is used to adjust the rotating speed and torque of a standard, electric AC motor. The electric motor, in turn, drives a load such as a fan, pump or conveyor.

AC drives are also referred to as frequency converters, variable frequency drives (VFD), variable speed drives (VSD), adjustable frequency drives (AFD), adjustable speed drives (ASD) or inverters.

ABB - global market and technology leader in AC drives
ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. ABB is the world's largest drives manufacturer. The ABB Group of companies operates in around 100 countries and employs more than 140,000 people.

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Electric motors consume about 65% of all electricity used throughout industry. Yet, less than 10% of those motors are fitted with a variable speed drive.

Improve your processes with AC drives

Increased life time
Reduced starting current decreases the electrical stress on the motor and network. Smooth ramp up to full speed also reduces mechanical wear on the equipment, prolonging its life time.

Increased productivity
Using a drive increases the productivity of the applications by reducing the number of unintended stops caused by excessive heating of the motor or sudden breakdowns of mechanical equipment due to high mechanical stress.

Reduced need for maintenance
Being able to apply a softer starting moment and vary the speed and torque of an electric motor means there is less wear and tear on the motor and the driven machine.

Further optimize your processes with AC drives

Substantial energy savings
Rather than having an electric motor running continuously at full speed, an AC drive allows the user to slow down or speed up the motor depending on the demand.

Optimal process control
An electric drive enables the process to achieve the right speed and torque while maintaining its accuracy. This contributes to more consistent quality and throughput of the end product.

Efficient system upgrade
An AC drive allows the removal of valves, gears and belts. It also ensures network dimensioning based on a lower starting current.

ABB drives common features

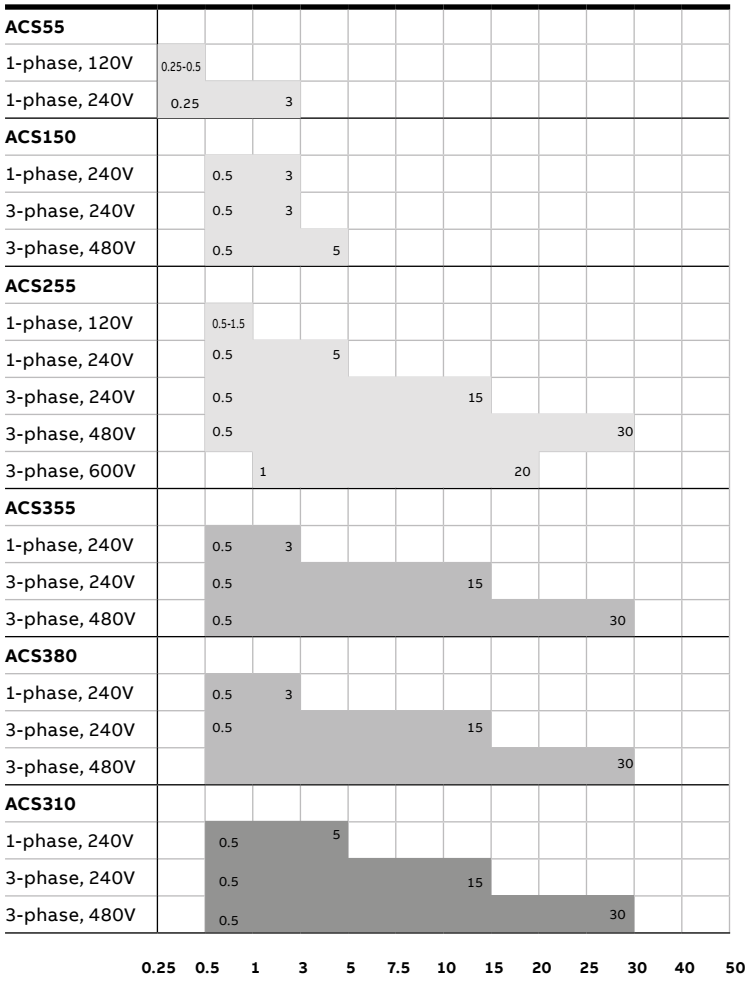
- **Easy to select**
  You can be sure to find a right product for your application from a wide selection of ABB drives.
- **Easy to purchase**
  ABB drives are available from ABB and selected ABB partners. Please contact ABB for more details.
- **Easy to install**
  The drives are simple to install, featuring a variety of mounting options from wall-mounted to cabinet mounted.
- **Easy to operate**
  Once installed and commissioned, the drives are incredibly easy to operate. The user interface allows instant adjustments to speed or other more advanced parameters.

Choosing the right drive for your application

Step	Process	Action
1	**Identify the application** Identify the type of application and the likely demands of the drive.	Continue to step 2.
2	**Gather the load data: system inertia, required acceleration and deceleration rates, minimum and maximum speeds, overload requirements, etc.** This information can often be determined by the performance of the existing motor.	Continue to step 3.
3	**Gather the motor data: rated torque, kW/hp, volts, insulation class, speed, etc.** Whether an existing motor or a new motor is being used, the motor information is critical to choosing a drive.	Continue to step 4.
4	**Choose a drive** Match the data gathered in Steps 1 to 3 against the table of drive features on page 8-9. Select a drive that meets the motor requirements and has all the software features needed for the application.	Continue to step 5.
5	**Is the drive offered in the correct hp rating?** The drive you choose must be able to supply the necessary current to the motor to produce the torque required. This includes normal and overload conditions. Select current from the tables on pages 7, depending on drive type selected.	If yes, continue to step 6. If no, go to step 4.
6	**Is the drive offered in the correct enclosure and environmental ratings?** The drive you choose must be available in an enclosure style that will withstand the application's environment. It also must produce the required current at the application's altitude and ambient temperature.	If yes, continue to step 7. If no, go to step 4.
7	**Does this drive have the features needed to meet the application's demands?** The drive you choose must have a feature set that matches the application. It also must have sufficient hardware (inputs and outputs, feedback, communications, etc.) to perform the application.	If yes, continue to step 8. If no, go to step 4.
8	**Does this drive have the motor control performance to meet the application's demands?** The drive you choose must be able to produce the needed torque at the necessary speeds. It must also be able to control speed and torque depending on the application requirements.	If yes, continue to step 9. If no, go to step 4.
9	**Congratulations!** The ABB AC drive you have chosen has the features and performance needed for a successful application.	

	Micro drives			Machinery drive	
Applications	**ACS55**	**ACS150**	**ACS255**	**ACS355**	**ACS380**
Food & beverage				●	●
Irrigation			●	●	
Conveyor	●	●		●	●
Fan	●	●	●	●	
Pump	●	●			
Integrated / machinery	●	●	●	●	●
Overhead / gantry crane				●	●

Horsepower comparison



Drive selection table

Specification		ACS55	ACS150	ACS255
Voltage and power ranges		1-phase, 100 to 120 V: 0.25 to 0.5 hp (0.18 to 0.37 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	1-phase, 110 to 120 V: 0.5 to 1.5 hp (0.37 to 1.1 kW)
		1-phase, 200 to 240 V: 0.25 to 3 hp (0.18 to 2.2 kW)	3-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	1-phase, 200 to 240 V: 0.5 to 5 hp (0.37 to 4 kW)
			3-phase, 380 to 480 V: 0.5 to 5 hp (0.37 to 4 kW)	3-phase, 200 to 240 V: 0.5 to 15 hp (0.37 to 11 kW)
				3-phase, 380 to 480 V: 0.5 to 30 hp (0.37 to 22 kW)
				3-phase, 500 to 600 V: 1 to 15 hp (0.75 to 11 kW)[1] 1 to 20 hp (0.75 to 15 kW)
Protection classes	UL type 0/IP20	●	●	●
	UL type 1/IP21	–	–	–
	UL Type 12/IP54/IP55	–	–	–
	UL Type 4X/IP66/IP67	–	–	●
	UL type 3R	–	–	–
Mounting arrangements	Optimal for cabinet mounting	●	●	●[8]
	Optimal for wall mounting	–	O	●[1]
Programming	Parameter programming	●	●	●
	Sequence programming	–	–	–
Human-Machine interface	Basic control panel	–	–	–
	Assistant control panel	–	–	–
	Bluetooth-enabled panel	–	–	–
	Integrated control panel	●	●	●
Motor Control		Scalar (V/Hz) selectable for linear (CT) or square function (VT)	Scalar (V/Hz) selectable for linear (CT) or square function (VT)	Open loop vector, Scalar (V/Hz), enhanced V/Hz or open loop vector
Ambient temperature		-4 to 104˚F (-20 to 40˚C), 50 ˚C (122˚F) with 15% derate, 55˚C (131˚C) with 25% derate No frost allowed.	14 to 104˚F (-10 to +40˚C), 122˚F (+50˚C) with derating No frost allowed.	UL Type 0: 14 to 104˚F (-10 to 40˚C), 122˚F (50˚C) with derate UL type 4X: 14 to 104˚F (-10 to 40˚C), No frost allowed.
Inputs and outputs	Digital inputs/outputs	3/0	5/0	4/0
	Relay outputs	1	1	1 (+1 as option)
	Analog inputs/outputs	1/0	2/1	2/1
	Encoder feedback	–	–	–
Supported fieldbus protocols	Modbus RTU	–	–	●
	Profibus DP	–	–	–
	DeviceNetTM	–	–	–
	ControlNet	–	–	–
	CANopen®	–	–	–
	Ethernet (Modbus/TCP)	–	–	–
	Ethernet (EtherNet/IPTM)	–	–	–
	Ethernet (EtherCAT®)	–	–	–
	Ethernet (PROFINET IO)	–	–	–
	Ethernet (PowerLink)	–	–	–
EMC compliance (EN 61800-3)	C3, industrial use	O	●	O
	C2, commercial use (installation by EMC experts)	O	O	O
	C1, commercial use	O(conductive emissions)	O (conductive emissions)	O
	Input reactors	–	O	O
	Output reactors	–	O	O
Brake chopper		–	●	Sizes 2 & 3 only
Suggested maximum motor cable length		98.5 to 164 ft (30 to 50 m)	98.5 to 196.9 ft (30 to 60 m)	328 ft (100 m)
Switching frequency		up to 16 kHz	up to 16 kHz	up to 32 kHz
Output frequency		0-130Hz (0/250Hz)[10]	0 to 500 Hz	0 to 500 Hz
Overload capacity		150% for 60 s, 180% for 2s at start	150% for 60 s, 180% for 2 s	150% for 60 s, 175% for 2 s
Number of preset speeds		1[10]	3	4
PC tools	Drive commissioning tool	O	–	–
	Drive offline prog tool	–	O	–
	Drive dimensioning tool	–	–	–
Approvals	UL, cUL, CE, RMS, C-Tick, EAC	●	●	●
RoHS compliance		●	●	●

● Standard
O Option
— Not Available

[1] IP66 product variants
[2] up to R2 as standard
[3] G1/G2 frames IP00
[4] Application Programming
[5] DO are DIO and can be used as DI
[6] Frame dependant
[7] CC, PC, and PD product variants
[8] IP20 variant
[9] IP54 variant
[10] Greater range when programmed with DriveConfig software
[11] I/O can be expanded with optional modules
[12] Eight digital outputs can be configured to be DI or DO

Specification		ACS355	ACS380	ACS310
Voltage and power ranges		1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 4 kW)	1-phase, 200 to 240 V: 0.5 to 3 hp (0.37 to 2.2 kW)	1-phase, 200 to 240 V: 0.5 to 5 hp (0.37 to 4 kW)
		3-phase, 200 to 240 V: 0.5 to 15 hp (0.37 to 11 kW)	3-phase, 200 to 240 V: 0.5 to 15 hp (0.37 to 11 kW)	3-phase, 200 to 240 V: 0.5 to 15 hp (0.37 to 11 kW)
		3-phase, 380 to 480 V: 0.5 to 30 hp (0.37 to 22 kW)	3-phase, 380 to 480 V: 0.5 to 30 hp (0.37 to 22 kW)	3-phase, 380 to 480 V: 0.5 to 30 hp (0.37 to 22 kW)
Protection classes	UL type 0/IP20	●	●	●
	UL type 1/IP21	O	–	O
	UL Type 12/IP54/IP55	–	–	–
	UL Type 4X/IP66/IP67	●[1]	–	–
	UL type 3R	–	–	–
Mounting arrangements	Optimal for cabinet mounting	●	•	●
	Optimal for wall mounting	O	–	O
Programming	Parameter programming	●	•	●
	Sequence programming	●	●[13]	–
Human-Machine interface	Basic control panel	O	–	O
	Assistant control panel	O /●[1]	–	O
	Bluetooth-enabled panel	–	O	–
	Integrated control panel	–	●	–
Motor Control		Open loop vector, Scalar (V/Hz) and Closed loop control	Open loop vector, Scalar (V/Hz) and Closed loop control - AC induction and PMAC motors	Scalar (V/Hz) - Linear (CT), squared (VT), or user defined curve
Ambient temperature		14 to 104˚F (-10 to 40˚C), 122˚F (50˚C) with derating No frost allowed.	14 to 122˚F (-10 to 50˚C), Up to 140˚F (60˚C) with derating No frost allowed.	14 to 104˚F (-10 to +40˚C), up to 50˚C with 10% derate No frost allowed.
Inputs and outputs	Digital inputs/outputs	5/1	4/2[5]	5/1
	Relay outputs	1 (+3 as option)	1 (+4 as option)	1 (+3 as option)
	Analog inputs/outputs	2/1	2	2/1
	Speed feedback	O	●	–
Supported fieldbus protocols	Modbus RTU	O	●	●
	Profibus DP	O	●	–
	DeviceNet™	O	–	–
	ControlNet	O	–	–
	CANopen®	O	●	–
	Ethernet (Modbus/TCP)	O	●	–
	Ethernet (EtherNet/IP™)	O	●	–
	Ethernet (EtherCAT®)	O	●	–
	Ethernet (PROFINET IO)	O	●	–
	Ethernet (PowerLink)	–	●	–
EMC compliance (EN 61800-3)	C3, industrial use	●	O	●
	C2, commercial use (installation by EMC experts)	O	O	●
	C1, commercial use	O (conductive emissions)	O	O (conductive emissions)
	Input reactors	O	O	O
	Output reactors	O	O	O
Brake chopper		●	●	–
Suggested maximum motor cable length		98.5 to 196,9 ft (30 to 60 m)	98.5 to 196.9 ft (30 to 60 m)	98.5 to 196.9 ft (30 to 60 m)
Switching frequency		up to 16 kHz	up to 12 kHz	up to 16 kHz
Output frequency		0 to 599 Hz	0 to 599 Hz	0 to 500 Hz
Overload capacity		150% for 60 s, 180% for 2 s	150% for 60 s, 180% for 2 s	110% for 60 s, 180% for 2 s
Number of preset speeds		7	7	7
PC tools	Drive commissioning tool	O	●	O
	Drive offline prog tool	O	●	O
	Drive dimensioning tool	–	●	–
Approvals	UL, cUL, CE, RMS, C-Tick, EAC	●	●	●
RoHS compliance		●	●	●

ACS55, micro drives
0.25 to 3 hp (0.18 to 2.2 kW)

What is it?
The ACS55 drive is a component that can be integrated easily into existing panels, replacing contactors and motor starters. Its compact size is ideal for new installations or whenever speed control of AC induction motors is needed. For users new to drives, its interface with DIP switches and trimmers is exceptionally intuitive.

The ACS55 drive meets the requirements of new drive users, installers, machine builders and panel builders.

Feature	Advantage	Benefit
Single phase supply	Suitable for single phase residential and commercial applications	Avoids cabling and installation costs associated with three-phase supplies
Slim design	Fits easily into a variety of cabinet designs	Cabinet size can be smaller or greater packing density can be achieved
Flexible installation alternatives	Screw or DIN rail mounting, sideways or side-by-side	One drive type can be used in various designs, saving installation costs and time
High switching frequency	Reduced motor noise	Does not disturb occupants of buildings
Integrated EMC filter as standard	High electromagnetic compatibility	Low EMC emissions in all environments
Easy configuration	Quick setup with DIP switches and trimmers	Substantial time savings. Minimal expertise needed.
DriveConfig kit PC tool	DriveConfig kit PC tool is used to set drive parameters and to upload the parameter set to a drive in seconds, even without a power connection to the drive. The DIP switches and trimmers on the front panel of the drive are disabled after using the DriveConfig kit. This prevents the end users from altering the drive configuration.	Time savings with multiple drives. Drive configuration protected from end user alterations.

For additional technical information, see the ACS55 Technical Catalog (3AUA0000163305) or www.abb.com/drives.

ACS150, micro drives
0.25 to 3 hp (0.18 to 2.2 kW)

What is it?
The ACS150 drive is a component that is brought together with other components and includes, as standard, all necessary functions and interfaces for typical applications with AC induction motors. This makes the product selection very easy.

The ACS150 drive meets the requirements of new drive users, installers, machine builders and panel builders.

Feature	Advantage	Benefit
User-friendly LCD control panel	Clear alphanumeric display Easy setup and use	Time savings
Flexible mounting alternatives	Screw or DIN rail mounting, sideways or side-by-side	One drive type can be used in various designs, saving installation costs and time
Integrated EMC filter	High electromagnetic compatibility	Low EMC emissions in selected environments
Built-in brake chopper as standard	No need for an external brake chopper	Space savings, reduced installation cost
Embedded potentiometer	Easy to adjust output frequency	Time savings
PID control	Simple integration to process control	Cost savings as a result of less cabling
FlashDrop tool	FlashDrop is a hand held tool that is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS150 Technical Catalog (3AUA0000085631) or www.abb.com/drives.

ACS255, micro drives
0.5 to 20 hp (0.37 to 15 kW)

What is it?
The ACS255 micro drive offers easy to use and compact solutions for general purpose, low power applications, including mixers, pumps, fans, conveyors. All variants include a built-in Modbus RTU serial communication to provide straightforward integration with control and monitoring systems.

Available in IP20 and IP66/NEMA4x enclosures.

Feature	Benefit	Result
User-friendly LCD control panel	Clear alphanumeric display Easy setup and use	Time savings with programming and monitoring
Optional front mounted operator controls (IP66 variant)	Allows the drive to be mounted on the machine close to the operator	Cost savings with operator controls already mounted on the drive – no need for custom panels
Flexible mounting alternatives (IP20 variant)	Wall or DIN rail mounting without extra accessory kits	One drive type can be used in various designs, saving installation costs and time
PI control	Simple integration to process control	Cost savings with PLC functionality built into the drive
Slide-out help card (IP20 variant)	Ready reference, right on the drive	Time savings with setup and programming
Epoxy coated heatsink (IP66 variant)	Protects the heatsink from harsh washdown chemicals	Cost savings with extended life in the harshest environments
Enhanced V/Hz control for variable or constant torque applications	Optimized performance and energy savings for all applications	One drive can efficiently power both VT or CT applications
Flow through wiring (IP20 variant)	Facilitates panel layout, or contactor replacement, with power leads in at the top and motor cables out at the bottom	Time and cost savings for panel builders
Separate terminal cover (IP66 variant)	No need to expose sensitive electronics to the environment when connecting and commissioning the drive	Time savings with easy access to connection terminals
Built-in brake chopper as standard (sizes 2, 3, & 4)	No need for an external brake chopper	Space savings, reduced installation cost
Safe torque off function (SIL3) as standard (600V only)	Built-in and certified function that is used for prevention of an unexpected startup and other stopping related functions	Reduces the need for external safety components. Helps machine builders to fulfill the requirements of Machinery Directive 2006/42/EC
High protection class variant (IP20 variant, up to 20 hp) (IP66 variant, up to 30 hp)	No need to design special enclosure for applications that require high ingress protection	Time and cost savings
CopyStick tool	CopyStick is used to quickly and easily set drive parameters. The tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS255 documentation (ACS255-PHPB01U-EN, ACS255-PHPB02U-EN, and ACS255-PHPB03U-EN) or www.abb.com/drives.

ACS355, machinery drives
0.5 to 30 hp (0.37 to 22 kW)

What is it?
The ACS355 is designed to be the fastest drive in terms of installation, setting parameters and commissioning. The drive is user-friendly, yet provides a wide range of built-in technology such as the safe torque off functionality and sequence programming which reduce the need for additional control electronics. The product offers options and diverse functionality to cater to the needs set for speed and torque control of AC induction and permanent magnet motors.

The ACS355 drive meets the requirements of new drive users, installers, machine builders, system integrators and panel builders.

Feature	Advantage	Benefit
Same height and depth across power range	Effective space usage	Less engineering and installation time
Assistant control panel with Help functions	Quick setup, easy configuration and commissioning, rapid fault diagnosis	Substantial time savings locating faults and implementing repairs, thereby reducing maintenance costs
Scalar and vector control	Optimum performance depending on application	Ensures the end-product is produced cost efficiently
Sequence programming	Logic programming included as standard with PLC-like functions	Reduces components and wiring in control system
Integrated EMC filter	High electromagnetic compatibility	Low EMC emissions in selected environments
Built-in brake chopper as standard	No need for an external brake chopper	Space savings, reduced installation cost
Safe torque off function (SIL3) as standard	Built-in and certified function that is used for prevention of an unexpected startup and other stopping related functions	Reduces the need for external safety components. Helps machine builders to fulfill the requirements of Machinery Directive 2006/42/EC.
High protection class variant (IP66/67) up to 7.5 kW	No need to design special enclosure for applications that require high ingress protection	Time and cost savings
Product variant for solar pumps	Drive converts PV energy from solar panels to AC current, it can be operated independent from the grid.	Long life time and reduced maintenance costs, energy use and pollution. Improved reliability in electricity supply.
FlashDrop tool	FlashDrop is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS355 Technical Catalog (3AUA0000081917) or www.abb.com/drives.

ACS380, machinery drives
0.5 to 10 hp (0.37 to 7.5kW)

What is it?
The ACS380 is a compact machinery drive and a part of the ABB family of all-compatible drives. It is designed to meet the needs of demanding constant torque applications in the food and beverage, material handling, and compact machinery industry segments.

It is the first compact industrial drive available with a graphical icon-based control panel to simplify setup, operation, and data gathering, while removing language barriers for a drive/control interface.

The ACS380 achieves a new level of high performance motor control with the ability to power AC induction, permanent magnet AC, and SynRM motors.

Feature	Advantage	Benefit
Optimized cooling configuration	Allows drive operation up to 50 °C at full rating and up to 60 °C with derating. Channels most of the cooling air over the heatsink and DC capacitors and less over the control board	Minimizes dust and dirt contamination of sensitive electronics, extending the drives lifespan and minimizing maintenance cost
Same height and depth across power range	More efficient panel layout and installation	Reduced design and installation time
Integrated graphic icon-based control panel	Quick setup, easy configuration and commissioning, rapid fault diagnosis	Substantial time savings locating faults and implementing repairs, thereby reducing maintenance costs
Adaptive programming with sequence programming	State machine programming with PLC-like functionality included as standard	Reduces cost for components and integration in the control system
Integrated EMC filter options	Standard or high electromagnetic compatibility	Low EMC emissions in the local environment extends the life and usability of sensitive components located near the drive.
Built-in brake chopper as standard	No need for an external brake chopper	Space savings, reduced installation cost
Safe torque off function (SIL3) as standard	Built-in and certified function that is used for prevention of an unexpected startup and other stopping related functions.	Reduces the need for external safety components. Helps machine builders to fulfill the requirements of Machinery Directive 2006/42/EC.
Pre-configured connectivity for all major machine automation fieldbus protocols	At power-up, the installed fieldbus module automatically configures drive parameters allowing drive programming directly from the PLC.	Time is saved by not having to configure drive parameters to enable PLC direct control
Cold Configuration Tool	The CCA-01 is used to connect a PC to an unpowered drive for loading or managing drive parameters using DriveComposer. Direct connection between the drive and PC is possible using the BCBL-01 cable and the RJ-25 panel port on the top of the ACS380.	Saves time for OEM's programming multiple drives for production or to send out as machine replacements

For additional technical information, see the ACS380 Technical Catalog (ACS380-PHTC01U-EN) or www.abb.com/drives.

ACS310, general purpose drives
0.5 to 30 hp (0.37 to 22 kW)

What is it?
The ACS310 drive is designed for squared torque applications such as booster pumps and supply and return fans. The drive includes a powerful set of features which benefit pump and fan applications including built-in PID controllers and pump and fan control (PFC) that varies the drive's performance in response to changes in pressure, flow or other external data.

The ACS310 drive meets the requirements of new drive users, installers, machine builders, system integrators and panel builders.

Feature	Advantage	Benefit
Same height and depth across power range	Effective space usage	Less engineering and installation time
Commissioning assistants	Easy set up of parameters for PID controllers, real-time clock, serial communication, drive optimizer and drive startup	Time savings. Ensures all required parameters are set.
Pump and fan control (PFC)	One drive controls several pumps or fans. Auxiliary motors are driven according to the needed pump/fan capacity. One motor can be disengaged from the mains supply while others continue operating in parallel.	Saves cost of additional drives and external PLC. Longer life for pump or fan system while reducing maintenance time and costs. Maintenance can be carried out safely without stopping the process.
Pump protection functions	Pre-programmed features such as pipe cleaning, pipefill, inlet/outlet pressure supervision and detection of under- or overload	Reduces maintenance costs. Longer life for pump and fan system.
PID controllers	Varies the drive's performance according to the need of the application	Enhances production output, stability and accuracy
Energy efficiency counters	Illustrates saved energy, CO_2 emissions and energy cost in local currency using a baseline determined from the energy consumed when the fan or pump is used directly online	Shows direct impact on energy bill and helps control operational expenditure (OPEX)
Embedded Modbus EIA-485 fieldbus interface	No need for external fieldbus options. Integrated and compact design.	Saves cost of an external fieldbus device. Increases reliability
FlashDrop tool	FlashDrop is a hand held tool that is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives. The tool can copy parameters from one drive to another or between a PC and a drive.	Time savings, especially with multiple drives

For additional technical information, see the ACS310 Technical Catalog (3AUA0000159910) or www.abb.com/drives.

ABB compact drives, part of the most extensive drives and softstarters portfolio in the world

ABB low voltage AC drives
The ABB low voltage AC drives product range, from 0.18 to 5600 kW, is the widest available from any manufacturer. These drives are the global benchmark that signifies reliability, simplicity, flexibility and ingenuity throughout the entire life cycle of the drive.

Several ABB drives feature calculators that provide energy consumption data. This information can be used to further analyze and tune a process for even greater energy savings.

The portfolio is supported by a selection of PC tools, fieldbus and communication options.

ABB micro drives
ABB micro drives are suitable for many low power applications such as pumps, fans and conveyors. The focus in our design has been the easy integration into machines, which provides flexible mounting alternatives and straightforward commissioning.

ABB general purpose drives
ABB general purpose drives are ideal in those situations where there is a need for simplicity to install, commission and use. They are designed to control a wide range of standard drives applications, including pump, fan and constant torque use, such as conveyors.

ABB machinery drives
ABB machinery drives can be configured to meet the precise needs of industries and order-based configuration is an integral part of the offering. Covering a wide power and voltage range with standard and optional features, the drives are readily programmable, making their adaptation to different applications easy.

ABB motion control products
ABB offers an extensive range of complete machine control solutions for diverse industrial applications such as labeling, packaging, bottling, pick and place, laser cutting/trimming, stacking, cut-to-length, flying shear, web feeders and high speed rotary wrappers.

ABB industrial drives
The ABB industrial drive portfolio is designed for heavy industrial applications such as those found in pulp and paper, metals, mining, cement, power, chemical, oil and gas, water and wastewater and food and beverage. Drives adapted and approved for use in the marine environment are also included within this portfolio.

Industry specific drives
Our industry specific ABB drives provide our customers with dedicated drive solutions for AC motor control used in industries such as HVAC and water and wastewater. Working closely with these industries, we have developed targeted functionality to help you improve your overall operating performance while also helping to reduce energy use. Built-in application macros in the drives help you easily setup and tailor processes.

ABB DC drives
ABB's DC drive portfolio, from 9 to 18000 kW, provides the highest power-to-size ratio on the market. The drives are designed for most industries including metals, cement, mining, pulp and paper, printing, food and beverage, wire manufacturing, test rigs, ski lift and cranes. ABB DC drives are available as complete cabinets, modules for cabinet assembly, and as retrofit kits. With built-in field exciters and integrated PLC's, they are the best DC drives choice for all new and retrofit applications.

ABB softstarters
A softstarter is the optimal compromise between a direct on-line or star delta starter and an advanced variable speed drive in many motor applications. Like direct on-line or star delta starters, it is used in full-speed applications. Like variable speed drives, it can perform soft starts and stops.

To find more information please visit:
www.abb.com/drives
www.new.abb.com/low-voltage/products/softstarters

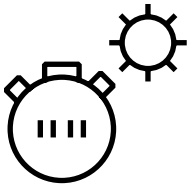
Services to match your needs

Your service needs depend on your operation, life cycle of your equipment and business priorities. We have identified our customers' four most common needs and defined service options to satisfy them. What is your choice to keep your drives at peak performance?

Is uptime your priority?

Keep your drives and softstarters running with precisely planned and executed maintenance.

Example services include:
- ABB Ability Life Cycle Assessment
- Installation and Commissioning
- Spare Parts
- Preventive Maintenance
- Reconditioning
- ABB Drive and Softstarter Care agreement
- Drive and Softstarter Exchange



Operational efficiency

Is rapid response a key consideration?

If your drives and softstarters require immediate action, our global network is at your service.

Example services include:
- Technical Support
- On-site Repair
- ABB Ability Remote Assistance
- Response time agreements
- Training

Rapid response

Drives and softstarters service
Your choice, your future

The future of your drives and softstarters depends on the service you choose.
Whatever you choose, it should be a well-informed decision. No guesswork. We have the expertise and experience to help you find and implement the right service for your drive equipment. You can start by asking yourself these two critical questions:

- Why should my drive and softstarter be serviced?
- What would my optimal service options be?

From here, you have our guidance and full support along the course you take, throughout the entire lifetime of your drives.

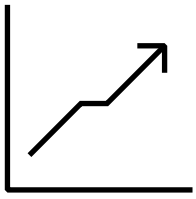
Your choice, your business efficiency
ABB Drive Care agreement lets you focus on your core business. A selection of predefined service options matching your needs provides optimal, more reliable performance, extended drive and softstarter lifetime and improved cost control. So you can reduce the risk of unplanned downtime and find it easier to budget for maintenance.

We can help you more by knowing where you are!
Register your drive and softstarter at www.abb.com/drivereg for extended warranty options and other benefits.

Need to extend your assets' lifetime?

Maximize your drive's lifetime with our services.

Example services include:
- ABB Ability Life Cycle Assessment
- Upgrades, Retrofits and Modernization
- Replacement, Disposal and Recycling

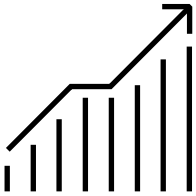


Life cycle management

Is performance most critical to your operation?

Get optimal performance out of your machinery and systems.

Example services include:
- ABB Ability Remote Services
- Engineering and Consulting
- Inspection and Diagnostics
- Upgrades, Retrofits and Modernization
- Workshop Repair
- Tailored services



Performance improvement

A lifetime of peak performance

You're in control of every life cycle phase of your drives and softstarters. At the heart of drive and softstarter services is a four-phase product life cycle management model. This model defines the services recommended and available throughout drives and softstarters lifespan.

Now it's easy for you to see the exact service and maintenance available for your drives and softstarters.

ABB drives and softstarters life cycle phases explained:

	Full range of life cycle services and support		Limited range of life cycle services and support	Replacement and end-of-life services
Product	Product is in active sales and manufacturing phase.	Serial production has ceased. Product may be available for plant extensions, as a spare part or for installed base renewal.	Product is no longer available.	Product is no longer available.
Services	Full range of life cycle services is available.	Full range of life cycle services is available. Product enhancements may be available through upgrade and retrofit solutions.	Limited range of life cycle services is available. Spare parts availability is limited to available stock.	Replacement and end-of-life services are available.

Keeping you informed
We notify you every step of the way using life cycle status statements and announcements.

Your benefit is clear information about your drives' status and precise services available. It helps you plan the preferred service actions ahead of time and make sure that continuous support is always available.

Step 1

Life Cycle Status Announcement
Provides early information about the upcoming life cycle phase change and how it affects the availability of services.

Step 2

Life Cycle Status Statement
Provides information about the drive's current life cycle status, availability of product and services, life cycle plan and recommended actions.

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

www.abb.com/drives

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