
FOR SMOOTH MOTOR CONTROL AND ENERGY SAVINGS

Low voltage AC drives and softstarters

Catalog and price list



—

**AC drives and
softstarters.
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.

What is a softstarter?

Softstarter is a full-speed starter that accelerates, decelerates and protects three phase motors. The softstarter controls the voltage

applied to the motor by using thyristors which gives it control over current, torque and acceleration. The softstarter's parameters can be configured to match the application's requirements, so that the required current and torque are optimized.

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. ABB operates in more than 100 countries with about 110,000 employees.

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 or a softstarter.

Softstarters are ideal choice when an application requires speed and torque control only during startup. The softstarters prevent large inrush currents from being drawn while starting the motor by smoothly ramping up the supply voltage. The smooth ramp up prolongs the life

time of the motors because less current means also less heat in the motors. AC drives, on the other hand, are good choice when speed control only during a startup is not enough, big energy savings are a must, custom motor control is required, or more functionalities are needed.



Improve your processes with softstarters and 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 softstarters and drives 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 electric 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 and softstarters common features

- **Easy to select**
You can be sure to find a right product for your application from a wide selection of ABB softstarters and AC drives.
- **Easy to purchase**
ABB softstarters and drives are available from ABB and selected ABB partners. Please contact ABB for more details.
- **Easy to install**
The softstarters and 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 softstarters and drives are incredibly easy to operate. The user interface allows instant adjustments to speed or other more advanced parameters.

Choosing between a drive and a softstarter

| Identify the application | |
|---|---|
| 1 | Is it a full speed application, or a variable speed application? |
| 2 | Is speed and torque control during startups enough, or does the speed and torque need to be controlled also during run cycles? |
| 3 | Is smooth startup enough, or are energy savings sought? |
| → Choose a softstarter | → Choose an AC drive |
| Softstarters offer you a complete range of products for full speed applications. See the softstarter selection tool on the page 41, to select the softstarter for your needs. | Variable speed drives offer you a right product for variable speed applications. See the drive selection tool on the page 6, to select the drive to match your needs. |

Application examples:

Softstarters: pumps, compressors, fans, conveyors, bow thrusters, crushers etc.
Variable speed drives: conveyors, fans, mixers, grinders, elevators, cranes, etc.

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, 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 5. 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 kW/amp 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 10, 13, 16, 19, 22 or 25 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. | |

ABB AC drive selection table

| Applications where to use | ABB micro drives | | ABB machinery drive | ABB general purpose drives | | |
|---------------------------------|------------------|--------|---------------------|----------------------------|--------|--------|
| | ACS55 | ACS150 | ACS355 | ACS310 | ACS480 | ACS580 |
| Pumps | ● | ● | ● | ● | ● | ● |
| Fans | ● | ● | ● | ● | ● | ● |
| Conveyors | ● | ● | ● | – | ● | ● |
| Material handling machines | ● | ● | ● | – | ● | ● |
| Exercise equipment | ● | ● | – | – | – | – |
| White goods | ● | ● | – | – | – | – |
| Gates, doors, barriers | ● | ● | ● | – | ● | – |
| Compressors | – | – | ● | ● | ● | ● |
| Cutting machines, shears, saws | – | – | ● | – | ● | ● |
| Extruders | – | – | ● | – | ● | ● |
| Machine tools, mixers, stirrers | – | – | ● | – | ● | ● |
| Spinning machines | – | ● | ● | – | ● | ● |
| Centrifuges | – | – | ● | – | ● | ● |
| Processing lines | – | – | – | – | ● | ● |

| Specification | | ACS55 | ACS150 | ACS355 | ACS310 | ACS480 | ACS580 |
|---|---|--|--|---|---|--|---|
| Voltage and power ranges | | 1-phase, 100 to 120 V: 0.18 to 0.37 kW | 1-phase, 200 to 240 V: 0.37 to 2.2 kW | 1-phase, 200 to 240 V: 0.37 to 2.2 kW | 1-phase, 200 to 240 V: 0.37 to 2.2 kW | | |
| | | 1-phase, 200 to 240 V: 0.18 to 2.2 kW | 3-phase, 200 to 240 V: 0.37 to 2.2 kW | 3-phase, 200 to 240 V: 0.37 to 11 kW | 3-phase, 200 to 240 V: 0.37 to 11 kW | | 3-phase, 200 to 240 V: 0.75 to 75 kW |
| | | | 3-phase, 380 to 480 V: 0.37 to 4 kW | 3-phase, 380 to 480 V: 0.37 to 22 kW | 3-phase, 380 to 480 V: 0.37 to 22 kW | 3-phase, 380 to 480 V: 0.75 to 22 kW | 3-phase, 380 to 480 V: 0.75 to 500 kW |
| Protection classes | IP20 | ● | ● | ● | ● | ● | ○ |
| | IP21 | – | – | ○ | ○ | – | ● |
| | IP54/IP55 | – | – | – | – | – | ● ¹⁾ |
| | IP66/IP67 | – | – | ● ¹⁾ | – | – | – |
| Mounting arrangements | Optimal for cabinet mounting | ● | ● | ● | ● | ● | ● |
| | Optimal for wall mounting | – | – | ● (IP66/67 variant) | – | – | ● |
| Programming | Parameter programming | ● | ● | ● | ● | ● | ● |
| | Sequence programming | – | – | ● | – | ● | ● |
| Human-machine interface | Basic control panel | – | ● | ● | ● | ○ | ○ |
| | Assistant control panel | – | – | ○/● (with IP66/67 variant) | ○ | ● | ● |
| | Assistant control panel with bluetooth link | – | – | – | – | ○ | ○ |
| Ambient temperature | 0 to +40 °C with nominal current and 5 kHz switching frequency, up to +50 °C with derating, -20 °C with restrictions. | -10 to +40 °C, no frost allowed, +50 °C with 10% derating. | -10 to +40 °C, no frost allowed, +50 °C with 10% derating. | -10 to +50 °C (14 to 122 °F), no frost allowed. | -10 to +50 °C (14 to 122 °F), no frost allowed. From +50 to +60 °C with derating. | -15 to +40 °C (5 to 104 °F), no frost allowed. From +40 to +50 °C with derating. | |
| Inputs and outputs | Digital inputs/outputs | 3/0 | 5/0 | 5/1 | 5/1 | 6/0 | 6/0 |
| | Relay outputs | 1 | 1 | 1 | 1 | 3 + (6 as option) | 3 + (2 as option) |
| | Analog inputs/outputs | 1/0 | 2/1 | 2/1 | 2/1 | 2/2 | 2/2 |
| | Speed feedback | – | – | ○ | – | – | – |
| Supported fieldbus protocols | Modbus RTU | – | – | ○ | ● | ● | ● |
| | Profibus DP | – | – | ○ | – | ○ | ○ |
| | DeviceNet™ | – | – | ○ | – | ○ | ○ |
| | ControlNet | – | – | ○ | – | ○ | ○ |
| | CANopen® | – | – | ○ | – | ○ | ○ |
| | Ethernet (Modbus/TCP) | – | – | ○ | – | ○ | ○ |
| | Ethernet (EtherNet/IP™) | – | – | ○ | – | ○ | ○ |
| | Ethernet (EtherCAT®) | – | – | ○ | – | ○ | ○ |
| | Ethernet (PROFINET IO) | – | – | ○ | – | ○ | ○ |
| | Ethernet (POWERLINK) | – | – | ○ | – | ○ | ○ |
| EMC compliance (EN 61800-3) | C3, industrial use | ● | ● | ● | ● | ● | ● |
| | C2, commercial use (installation by EMC experts) | ● | ○ | ○ | ○ | ● | ● |
| | C1, commercial use | ○ (conductive emissions) | ○ (conductive emissions) | ○ (conductive emissions) | ○ (conductive emissions) | ○ (conductive emissions) | ○ (conductive emissions) |
| Chokes | Input chokes | ○ | ○ | ○ | ○ | ○ | ● (built-in) |
| | Output chokes | ○ | ○ | ○ | ○ | ○ | ○ |
| Brake chopper | – | ● | ● | – | ● | ● ²⁾ | |
| Suggested maximum motor cable length | 30 to 50 m | 30 to 60 m | 30 to 60 m | 30 to 60 m | 50 to 150 m | 100 to 300 m | |
| Switching frequency | up to 16 kHz | up to 16 kHz | up to 16 kHz | up to 16 kHz | up to 12 kHz | up to 12 kHz | |
| Output frequency | 0 to 120/130 Hz | 0 to 500 Hz | 0 to 599 Hz | 0 to 599 Hz | 0 to 500 Hz | 0 to 500 Hz | |
| Overload capacity | 150% for 60 s | 150% for 60 s, 180% for 2 s | 150% for 60 s, 180% for 2 s | 110% for 60 s, 180% for 2 s | 150% for 60 s, 180% for 2 s | 150% for 60 s, 180% for 2 s ³⁾ | |
| Number of preset speeds | 1 | 3 | 7 | 7 | 7 | 7 | |
| PC tools | Drive commissioning tool | ○ | – | ○ | ○ | ○ | ○ |
| | Drive offline programming tool | – | ○ | ○ | ○ | ○ | ○ |
| | Drive dimensioning tool | – | – | – | – | – | ○ |
| Approvals | CE, UL, cUL, C-Tick, EAC | ● | ● | ● | ● | ● | ● |
| RoHS compliance | | ● | ● | ● | ● | ● | ● |

● = Standard

○ = Option

– = Not available

¹⁾ IP66/67 and IP54/55 product variants²⁾ Up to R3 as standard³⁾ ACS580-01-293A-4 130% for 60 s, ACS580-01-430A-4 125% for 60 s and ACS580-04-880A-4 140% for 60 s.

ABB general purpose drives

ACS480, 0.75 to 22 kW

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01
ACS480 frame sizes:
R1, R2, R3, R4

What is it?

The ACS480 is ready made package having all essential features built-in as standard, simplifying drive selection, and making additional hardware unnecessary. Straightforward settings menu and assistants enable fast setup, commissioning, use and maintenance.

With its cabinet optimized size and embedded features, ACS480 is a great fit for variable torque and basic speed applications, where easiness, reliability and efficiency matters. However, if more power or options are needed, ACS580 is a great choice.



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| Feature | Advantage | Benefit |
|---|--|--|
| Control panel and Primary settings menu with multi-language support | Effortless commissioning, configuration, monitoring and defect tracking. No need to know parameters with the Primary settings menu. | Substantial time savings. Drive speaks your local language. No need for manual as the help function is already built-in to the panel. |
| Optimized for cabinet installations with unified height and depth. | Highest power density against most of the comparable products in the market. Multiple drives can be installed side-by-side. | Cost, space and time savings |
| All essentials built-in | Integrated C2 EMC filter, Safe torque off, brake chopper and Modbus RTU are built-in to simplify selection, ordering and installation | Reduces amount of external components and manual work. Standard drive available from central stock with simplified logistics and without need for extra configuration. |
| Energy efficiency functionality | Support for high efficiency motors enables best system efficiency. Built-in energy optimizer ensures maximum torque per ampere. And energy efficiency information help you monitor and save the energy used in your process. | Energy savings through improved energy management |
| Standard safety functions | Integrated, certified safety with SIL3/PL e safe torque off (STO), fulfilling the machinery directive. | Fulfills Machinery Directive 2006/42/EC, EN/ IEC 61800-5-2:2007. Cost-effective and certified solution for safe machine maintenance. |

Inputs and outputs

The figure shows the ACS480 factory-set standard inputs and outputs. All inputs and outputs are freely programmable.

The base unit includes:

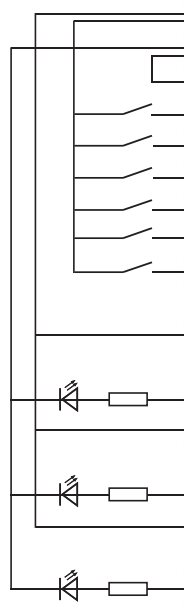
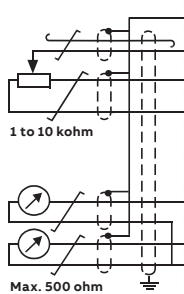
- 2 digital inputs
- 1 relay output
- Safe torque off (SIL3/PL e)

The rest of the connections comes with the I/O module (RIIO-01):

- 2 analog inputs
- 2 analog outputs
- 4 digital inputs
- 2 relay outputs

The standard delivery includes an I/O module. If a fieldbus adapter is needed, it is delivered instead of the I/O module. If the I/Os on the base unit are not enough when using a fieldbus adapter, an optional I/O extension (BIO-01) can be used underneath a fieldbus adapter.

| Terminal | Meaning | Terminal Meaning | Default macro connections |
|--|-----------|---|---------------------------|
| Reference voltage and analog inputs and outputs | | | |
| 1 | SCR | Signal cable shield (screen) | |
| 2 | AI1 | Output frequency/speed reference: 0...10 V ¹⁾ | |
| 3 | AGND | Analog input circuit common | |
| 4 | +10 V | Reference voltage 10 V DC | |
| 5 | AI2 | Not configured | |
| 6 | AGND | Analog input circuit common | |
| 7 | AO1 | Output frequency: 0...20 mA | |
| 8 | AO2 | Output current: 0...20 mA | |
| 9 | AGND | Analog output circuit common | |
| Aux. voltage output and programmable digital inputs | | | |
| 10 | +24 V | Auxiliary voltage output +24 V DC, max. 200 mA | |
| 11 | DGND | Auxiliary voltage output common | |
| 12 | DCOM | Digital input common for all | |
| 13 | DI1 | Stop (0)/Start (1) | |
| 14 | DI2 | Forward (0)/Reverse (1) | |
| 15 | DI3 | Constant frequency/speed selection | |
| 16 | DI4 | Constant frequency/speed selection | |
| 17 | DI5 | Ramp set 1 (0)/Ramp set 2 (1) | |
| 18 | DI6 | Not configured | |
| Relay outputs | | | |
| 19 | RO1C | Ready | 250 V AC/30 V DC 2 A |
| 20 | RO1A | | |
| 21 | RO1B | Running | 250 V AC/30 V DC 2 A |
| 22 | RO2C | | |
| 23 | RO2A | Fault (-1) | 250 V AC/30 V DC 2 A |
| 24 | RO2B | | |
| 25 | RO3C | | |
| 26 | RO3A | | |
| 27 | RO3B | | |
| EIA-485 Modbus RTU | | | |
| 29 | B+ | Embedded Modbus RTU (EIA-485) | |
| 30 | A- | | |
| 31 | DGND | | |
| S100 | TERM&BIAS | Serial data link termination switch | |
| Safe torque off | | | |
| 34 | SGND | Safe torque off. Factory connection. Both circuits must be closed for the drive to start. See chapter The Safe torque off function in the Hardware manual of the drive. | |
| 35 | IN1 | | |
| 36 | IN2 | | |
| 37 | OUT1 | | |
| 42 | +24 V | | |
| 43 | DGND | | |
| 44 | DCOM | | |



Dimensions and weights

| Frame size | H (mm) | W (mm) | D (mm) | Weight (kg) |
|------------|--------|--------|--------|-------------|
| R1 | 223.0 | 73.0 | 207.1 | 1.77 |
| R2 | 223.0 | 96.6 | 207.1 | 2.35 |
| R3 | 220.0 | 171.7 | 207.1 | 3.52 |
| R4 | 240.0 | 260.0 | 212.1 | 6.02 |



Types and voltages

| Light-duty use | | Heavy-duty use | | ABB ordering code Enclosure IP20 | Electrical code/ reference code | ABB type code/ order code for IP20 | Frame size | Price (Eur) |
|--|-----------------|------------------|-----------------|-------------------------------------|------------------------------------|---------------------------------------|---------------|--------------------|
| P_{Ld} (kW) | I_{Ld} (A) | P_{Hd} (kW) | I_{Hd} (A) | | | | | |
| 3-phase, $U_N = 400$ V (3-phase supply AC voltage range 380-480 V) | | | | | | | | |
| 0.75 | 2.5 | 0.55 | 1.8 | 3AXD50000047765 | | ACS480-04-02A7-4 | R1 | |
| 1.1 | 3.1 | 0.75 | 2.6 | 3AXD50000047766 | | ACS480-04-03A4-4 | R1 | |
| 1.5 | 3.8 | 1.1 | 3.3 | 3AXD50000047767 | | ACS480-04-04A1-4 | R1 | |
| 2.2 | 5.3 | 1.5 | 4 | 3AXD50000047768 | | ACS480-04-05A7-4 | R1 | |
| 3 | 6.8 | 2.2 | 5.6 | 3AXD50000047769 | | ACS480-04-07A3-4 | R1 | |
| 4 | 8.9 | 3 | 7.2 | 3AXD50000047770 | | ACS480-04-09A5-4 | R1 | |
| 5.5 | 12 | 4 | 9.4 | 3AXD50000047791 | | ACS480-04-12A7-4 | R2 | |
| 7.5 | 16.2 | 5.5 | 12.6 | 3AXD50000047792 | | ACS480-04-018A-4 | R3 | |
| 11 | 23.8 | 7.5 | 17 | 3AXD50000047793 | | ACS480-04-026A-4 | R3 | |
| 15 | 30.5 | 11 | 25 | 3AXD50000199068 | | ACS480-04-033A-4 | R4 | |
| 18.5 | 36 | 15 | 32 | 3AXD50000199075 | | ACS480-04-039A-4 | R4 | |
| 22 | 42.8 | 18.5 | 38 | 3AXD50000199082 | | ACS480-04-046A-4 | R4 | |
| 22 | 48 | 22 | 45 | 3AXD50000199099 | | ACS480-04-050A-4 | R4 | |

Light-duty use

| | |
|----------|---|
| P_{Ld} | Typical motor power in light-duty use. |
| I_{Ld} | Continuous current allowing 110% I_{Ld} for 1 min/10 min at 50 °C |

Heavy-duty use ratings

| | |
|----------|---|
| P_{Hd} | Typical motor power in heavy-duty use |
| I_{Hd} | Continuous current allowing 150% I_{Hd} for 1 min/10 min at 50 °C |

For more technical information, see ACS480 catalog (3AUA0000145061 EN)

ABB general purpose drives

ACS580, 0.75 to 500 kW

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ACS580 frame sizes:
R1 to R11



—
01

What is it?

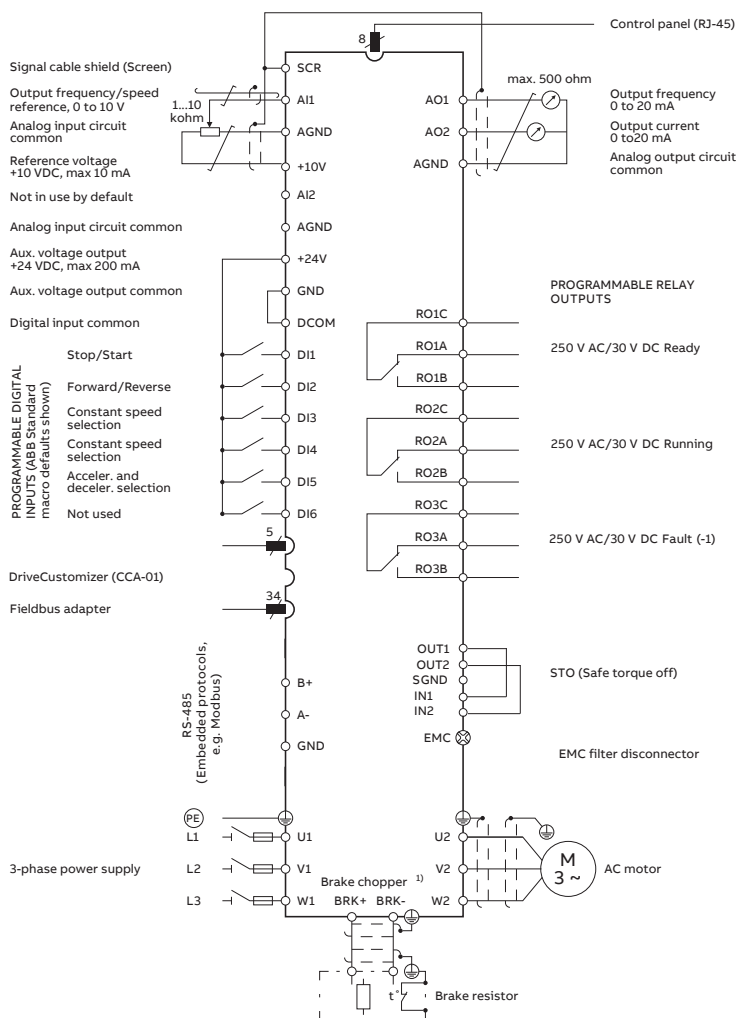
The ACS580 is plug-in ready to control your compressors, conveyors, pumps, mixers, fans and many other variable and constant torque applications. Most essential features are built-in as standard, simplifying drive selection, and making additional hardware unnecessary. Straightforward settings menu and assistants enable fast setup, commissioning, use and maintenance.

The ACS580 drive meets the requirements of drive users, installers, electricians, machine builders, system integrators and panel builders.

| Feature | Advantage | Benefit |
|---|--|---|
| Control panel and Primary settings menu with multi-language support | Effortless commissioning, configuration, monitoring and defect tracking. No need to know parameters with the Primary settings menu. | Substantial time savings. Drive speaks your local language. No need for manual as the help function is already built-in to the panel. |
| Installation and commissioning | Highest power density against most of the comparable products in the market. Multiple drives can be installed side-by-side. | Cost, space and time savings |
| Connect to public low voltage networks | Integrated C2 EMC filter (1 st environment) for frame sizes R1 to R9 or C3 EMC filter (2 nd environment) for frame sizes R10 to R11 and swinging choke (compatible harmonics levels) as standard | Ensure that the product can be used on public installations and therefore no additional filters or engineering is required. |
| Energy efficiency functionality | The built-in energy efficiency calculators monitoring used and saved kWh, CO ₂ reduction and money saved. The energy optimizer ensures the maximum torque per ampere. The wall-mounted drive fulfills the highest IE2 drive (EN 50598-2) energy efficiency class and is compatible with high-efficiency IE4 motors. | Energy savings through improved energy management |
| Standard safety functions | Integrated, certified safety with SIL3/PL e safe torque off (STO), fulfilling the machinery directive. | Fulfills Machinery Directive 2006/42/EC, EN/IEC 61800-5-2:2007. Cost-effective and certified solution for safe machine maintenance. |

Inputs and outputs

The figure shows the ACS580 factory-set standard inputs and outputs. All inputs and outputs are freely programmable.



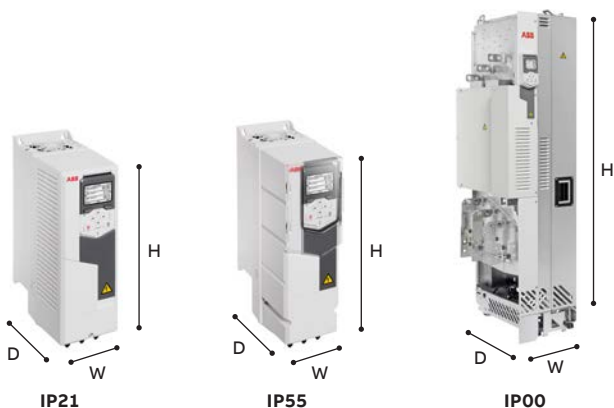
Dimensions and weights

| Wall mounted frames IP21 | | | | |
|--------------------------|-------------------------|-----------|-----------|----------------|
| Frame size | H ^{*)} (mm) | W (mm) | D (mm) | Weight (kg) |
| R1 | 373 | 125 | 223 | 4.6 |
| R2 | 473 | 125 | 229 | 7.5 |
| R3 | 490 | 203 | 229 | 13.8 |
| R4 | 636 | 203 | 257 | 19.0 |
| R5 | 732 | 203 | 295 | 28.5 |
| R6 | 727 | 252 | 369 | 45 |
| R7 | 880 | 284 | 370 | 54 |
| R8 | 965 | 300 | 393 | 69 |
| R9 | 955 | 380 | 418 | 97 |

^{*)} Front height of the drive with glandbox

| Wall mounted frames IP55 | | | | |
|--------------------------|-------------------------|-----------|-----------|----------------|
| Frame size | H ^{*)} (mm) | W (mm) | D (mm) | Weight (kg) |
| R1 | 403 | 128 | 232 | 5.1 |
| R2 | 503 | 128 | 239 | 6.7 |
| R3 | 490 | 206 | 237 | 13.0 |
| R4 | 636 | 206 | 265 | 20 |
| R5 | 732 | 203 | 320 | 29 |
| R6 | 727 | 252 | 380 | 43 |
| R7 | 880 | 284 | 381 | 56 |
| R8 | 965 | 300 | 452 | 77 |
| R9 | 955 | 381 | 477 | 103 |

^{*)} Front height of the drive with glandbox



| Drive modules | | | | |
|---------------|-------------------|-----------|-----------|----------------|
| Frame size | IP00/UL open type | | | |
| | H (mm) | W (mm) | D (mm) | Weight (kg) |
| R10 | 1462 | 350 | 529 | 162 |
| R11 | 1662 | 350 | 529 | 200 |

Types and voltages

| Light-duty applications | | Heavy-duty applications | | ABB ordering code Enclosure IP21 | Electrical code/ reference code | ABB type code/order code for IP21 units | Frame size | Price for IP21 units (Eur) |
|--|---------------------------|----------------------------|---------------------------|-------------------------------------|------------------------------------|--|---------------|--------------------------------------|
| P_{motor} (kW) | I_{motor} (A) | P_{motor} (kW) | I_{motor} (A) | | | | | |
| 3-phase, $U_N = 400$ V (3-phase supply AC voltage range 380-480 V) | | | | | | | | |
| 0.75 | 2.5 | 0.55 | 1.8 | 3AXD50000038937 | | ACS580-01-02A7-4 | R1 | |
| 1.1 | 3.1 | 0.75 | 2.6 | 3AXD50000038938 | | ACS580-01-03A4-4 | R1 | |
| 1.5 | 3.8 | 1.1 | 3.3 | 3AXD50000038939 | | ACS580-01-04A1-4 | R1 | |
| 2.2 | 5.3 | 1.5 | 4 | 3AXD50000038940 | | ACS580-01-05A7-4 | R1 | |
| 3 | 6.8 | 2.2 | 5.6 | 3AXD50000038951 | | ACS580-01-07A3-4 | R1 | |
| 4 | 8.9 | 3 | 7.2 | 3AXD50000038952 | | ACS580-01-09A5-4 | R1 | |
| 5.5 | 12 | 4 | 9.4 | 3AXD50000038953 | | ACS580-01-12A7-4 | R1 | |
| 7.5 | 16.2 | 5.5 | 12.6 | 3AXD50000038959 | | ACS580-01-018A-4 | R2 | |
| 11 | 23.8 | 7.5 | 17 | 3AXD50000038960 | | ACS580-01-026A-4 | R2 | |
| 15 | 30.4 | 11 | 24.6 | 3AXD50000038961 | | ACS580-01-033A-4 | R3 | |
| 18.5 | 36.1 | 15 | 31.6 | 3AXD50000038962 | | ACS580-01-039A-4 | R3 | |
| 22 | 42.8 | 18.5 | 37.7 | 3AXD50000038963 | | ACS580-01-046A-4 | R3 | |
| 30 | 58 | 22 | 44.6 | 3AUA0000080498 | | ACS580-01-062A-4 | R4 | |
| 37 | 68.4 | 30 | 61 | 3AUA0000080499 | | ACS580-01-073A-4 | R4 | |
| 45 | 83 | 37 | 72 | 3AUA0000080502 | | ACS580-01-088A-4 | R5 | |
| 55 | 100 | 45 | 87 | 3AUA0000080503 | | ACS580-01-106A-4 | R5 | |
| 75 | 138 | 55 | 105 | 3AUA0000080504 | | ACS580-01-145A-4 | R6 | |
| 90 | 161 | 75 | 145 | 3AUA0000080505 | | ACS580-01-169A-4 | R7 | |
| 110 | 196 | 90 | 169 | 3AUA0000080506 | | ACS580-01-206A-4 | R7 | |
| 132 | 234 | 110 | 206 | 3AUA0000080507 | | ACS580-01-246A-4 | R8 | |
| 160 | 278 | 132 | 246 ^{*)} | 3AUA0000080508 | | ACS580-01-293A-4 | R8 | |
| 200 | 345 | 160 | 293 | 3AUA0000080509 | | ACS580-01-363A-4 | R9 | |
| 250 | 400 | 200 | 363 ^{**)} | 3AUA0000080510 | | ACS580-01-430A-4 | R9 | |

| Light-duty applications | | Heavy-duty applications | | ABB ordering code Enclosure IP55 | Electrical code/ reference code | ABB type code/order code for IP55 units | Frame size | Price for IP55 units (Eur) |
|--|---------------------------|----------------------------|---------------------------|-------------------------------------|------------------------------------|--|---------------|--------------------------------------|
| P_{motor} (kW) | I_{motor} (A) | P_{motor} (kW) | I_{motor} (A) | | | | | |
| 3-phase, $U_N = 400$ V (3-phase supply AC voltage range 380-480 V) | | | | | | | | |
| 0.75 | 2.5 | 0.55 | 1.8 | 3AXD50000038964 | | ACS580-01-02A7-4+B056 | R1 | |
| 1.1 | 3.1 | 0.75 | 2.6 | 3AXD50000038965 | | ACS580-01-03A4-4+B056 | R1 | |
| 1.5 | 3.8 | 1.1 | 3.3 | 3AXD50000038966 | | ACS580-01-04A1-4+B056 | R1 | |
| 2.2 | 5.3 | 1.5 | 4 | 3AXD50000038967 | | ACS580-01-05A7-4+B056 | R1 | |
| 3 | 6.8 | 2.2 | 5.6 | 3AXD50000038968 | | ACS580-01-07A3-4+B056 | R1 | |
| 4 | 8.9 | 3 | 7.2 | 3AXD50000038969 | | ACS580-01-09A5-4+B056 | R1 | |
| 5.5 | 12 | 4 | 9.4 | 3AXD50000038970 | | ACS580-01-12A7-4+B056 | R1 | |
| 7.5 | 16.2 | 5.5 | 12.6 | 3AXD50000038976 | | ACS580-01-018A-4+B056 | R2 | |
| 11 | 23.8 | 7.5 | 17 | 3AXD50000038977 | | ACS580-01-026A-4+B056 | R2 | |
| 15 | 30.4 | 11 | 24.6 | 3AXD50000038978 | | ACS580-01-033A-4+B056 | R3 | |
| 18.5 | 36.1 | 15 | 31.6 | 3AXD50000038979 | | ACS580-01-039A-4+B056 | R3 | |
| 22 | 42.8 | 18.5 | 37.7 | 3AXD50000038980 | | ACS580-01-046A-4+B056 | R3 | |
| 30 | 58 | 22 | 44.6 | 3AUA0000083573 | | ACS580-01-062A-4+B056 | R4 | |
| 37 | 68.4 | 30 | 61 | 3AUA0000083574 | | ACS580-01-073A-4+B056 | R4 | |
| 45 | 83 | 37 | 72 | 3AUA0000083577 | | ACS580-01-088A-4+B056 | R5 | |
| 55 | 100 | 45 | 87 | 3AUA0000083578 | | ACS580-01-106A-4+B056 | R5 | |
| 75 | 138 | 55 | 105 | 3AUA0000083579 | | ACS580-01-145A-4+B056 | R6 | |
| 90 | 161 | 75 | 145 | 3AUA0000083580 | | ACS580-01-169A-4+B056 | R7 | |
| 110 | 196 | 90 | 169 | 3AUA0000083581 | | ACS580-01-206A-4+B056 | R7 | |
| 132 | 234 | 110 | 206 | 3AUA0000083582 | | ACS580-01-246A-4+B056 | R8 | |
| 160 | 278 | 132 | 246 ^{*)} | 3AUA0000083583 | | ACS580-01-293A-4+B056 | R8 | |
| 200 | 345 | 160 | 293 | 3AUA0000083584 | | ACS580-01-363A-4+B056 | R9 | |
| 250 | 400 | 200 | 363 ^{**)} | 3AUA0000083585 | | ACS580-01-430A-4+B056 | R9 | |

Light-duty use

| | |
|-----------------|---|
| P_{Ld} | Typical motor power in light-duty use |
| I_{Ld} | Continuous current allowing 110% I_{Ld} for 1 minute every 10 minutes at 40 °C |

Heavy-duty use ratings

| | |
|-----------------|---|
| P_{Hd} | Typical motor power in heavy-duty use |
| I_{Hd} | Continuous current allowing 150% I_{Hd} for 1 min/10 min at 40 °C *) Continuous current allowing 130% I_{Hd} for 1 min/10 min at 40 °C **) Continuous current allowing 125% I_{Hd} for 1 min/10 min at 40 °C |

For more technical information, see ACS580 catalog (3AUA0000145061 EN) or ABB drives product guide (3AFE68401771 EN)

Types and voltages

| Light-duty applications | | Heavy-duty applications | | ABB ordering code Enclosure IP00 | Electrical code/ reference code | ABB type code/order code for IP00 units | Frame size | Price for IP00 units (Eur) |
|--|---------------------------|----------------------------|---------------------------|-------------------------------------|------------------------------------|--|---------------|--------------------------------------|
| P_{motor} (kW) | I_{motor} (A) | P_{motor} (kW) | I_{motor} (A) | | | | | |
| 3-phase, $U_N = 400$ V (3-phase supply AC voltage range 380-480 V) | | | | | | | | |
| 250 | 485 | 200 | 361 | 3AUA0000184475 | | ACS580-04-505A-4 | R10 | |
| 315 | 575 | 250 | 429 | 3AUA0000184601 | | ACS580-04-585A-4 | R10 | |
| 355 | 634 | 250 | 477 | 3AUA0000184651 | | ACS580-04-650A-4 | R10 | |
| 400 | 715 | 315 | 566 | 3AUA0000184652 | | ACS580-04-725A-4 | R11 | |
| 450 | 810 | 355 | 625 | 3AUA0000184663 | | ACS580-04-820A-4 | R11 | |
| 500 | 865 | 400 | 725*) | 3AUA0000184476 | | ACS580-04-880A-4 | R11 | |

Light-duty use

| | |
|-----------------|---|
| P_{Ld} | Typical motor power in light-duty use |
| I_{Ld} | Continuous current allowing 110% I_{Ld} for 1 minute every 10 minutes at 40 °C |

Heavy-duty use ratings

| | |
|-----------------|---|
| P_{Hd} | Typical motor power in heavy-duty use |
| I_{Hd} | *) Continuous current allowing 140% I_{Hd} for 1 min/10 min at 40 °C |

| Light-duty applications | | Heavy-duty applications | | ABB ordering code Enclosure IP21/IP00 | Electrical code/ reference code | ABB type code/order code for IP21/IP00 units | Frame size | Price for IP21/IP00 units (Eur) |
|--|---------------------------|----------------------------|---------------------------|--|------------------------------------|---|---------------|---|
| P_{motor} (kW) | I_{motor} (A) | P_{motor} (kW) | I_{motor} (A) | | | | | |
| 3-phase, $U_N = 230$ V (3-phase supply AC voltage range 200-240 V) | | | | | | | | |
| 0.75 | 4.6 | 0.6 | 3.5 | 3AXD50000417346 | | ACS580-01-04A7-2 | R1 | |
| 1.1 | 6.6 | 0.8 | 4.6 | 3AXD50000417353 | | ACS580-01-06A7-2 | R1 | |
| 1.5 | 7.5 | 1.1 | 6.6 | 3AXD50000417360 | | ACS580-01-07A6-2 | R1 | |
| 3.0 | 11.8 | 2.2 | 7.5 | 3AXD50000417377 | | ACS580-01-012A-2 | R1 | |
| 4.0 | 16.7 | 3.0 | 10.6 | 3AXD50000417384 | | ACS580-01-018A-2 | R1 | |
| 5.5 | 24.2 | 4.0 | 16.7 | 3AXD50000417391 | | ACS580-01-025A-2 | R2 | |
| 7.5 | 30.8 | 5.5 | 24.2 | 3AXD50000417407 | | ACS580-01-032A-2 | R2 | |
| 11.0 | 46.2 | 7.5 | 30.8 | 3AXD50000417414 | | ACS580-01-047A-2 | R3 | |
| 15.0 | 59 | 11.0 | 46 | 3AXD50000417421 | | ACS580-01-060A-2 | R3 | |
| 22.0 | 88 | 18.5 | 75 | 3AXD50000417438 | | ACS580-01-089A-2 | R5 | |
| 30 | 114 | 22.0 | 88 | 3AXD50000417445 | | ACS580-01-115A-2 | R5 | |
| 37 | 143 | 30.0 | 114 | 3AXD50000417452 | | ACS580-01-144A-2 | R6 | |
| 45 | 169 | 37 | 143 | 3AXD50000417469 | | ACS580-01-171A-2 | R7 | |
| 55 | 211 | 45 | 169 | 3AXD50000417476 | | ACS580-01-213A-2 | R7 | |
| 75 | 273 | 55 | 211 | 3AXD50000417483 | | ACS580-01-276A-2 | R8 | |

| Light-duty applications | | Heavy-duty applications | | ABB ordering code Enclosure IP55 | Electrical code/ reference code | ABB type code/order code for IP55 units | Frame size | Price for IP55 units (Eur) |
|--|---------------------------|----------------------------|---------------------------|-------------------------------------|------------------------------------|--|---------------|--------------------------------------|
| P_{motor} (kW) | I_{motor} (A) | P_{motor} (kW) | I_{motor} (A) | | | | | |
| 3-phase, $U_N = 230$ V (3-phase supply AC voltage range 200-240 V) | | | | | | | | |
| 0.75 | 4.6 | 0.6 | 3.5 | 3AXD50000417490 | | ACS580-01-04A7-2+B056 | R1 | |
| 1.1 | 6.6 | 0.8 | 4.6 | 3AXD50000417506 | | ACS580-01-06A7-2+B056 | R1 | |
| 1.5 | 7.5 | 1.1 | 6.6 | 3AXD50000417513 | | ACS580-01-07A6-2+B056 | R1 | |
| 3.0 | 11.8 | 2.2 | 7.5 | 3AXD50000417520 | | ACS580-01-012A-2+B056 | R1 | |
| 4.0 | 16.7 | 3.0 | 10.6 | 3AXD50000417537 | | ACS580-01-018A-2+B056 | R1 | |
| 5.5 | 24.2 | 4.0 | 16.7 | 3AXD50000417544 | | ACS580-01-025A-2+B056 | R2 | |
| 7.5 | 30.8 | 5.5 | 24.2 | 3AXD50000417551 | | ACS580-01-032A-2+B056 | R2 | |
| 11.0 | 46.2 | 7.5 | 30.8 | 3AXD50000417568 | | ACS580-01-047A-2+B056 | R3 | |
| 15.0 | 59 | 11.0 | 46 | 3AXD50000417575 | | ACS580-01-060A-2+B056 | R3 | |
| 22.0 | 88 | 18.5 | 75 | 3AXD50000417582 | | ACS580-01-089A-2+B056 | R5 | |
| 30 | 114 | 22.0 | 88 | 3AXD50000417599 | | ACS580-01-115A-2+B056 | R5 | |
| 37 | 143 | 30.0 | 114 | 3AXD50000417605 | | ACS580-01-144A-2+B056 | R6 | |
| 45 | 169 | 37 | 143 | 3AXD50000417612 | | ACS580-01-171A-2+B056 | R7 | |
| 55 | 211 | 45 | 169 | 3AXD50000417629 | | ACS580-01-213A-2+B056 | R7 | |
| 75 | 273 | 55 | 211 | 3AXD50000417636 | | ACS580-01-276A-2+B056 | R8 | |

Light-duty use

| | |
|-----------------|---|
| P_{Ld} | Typical motor power in light-duty use |
| I_{Ld} | Continuous current allowing 110% I_{Ld} for 1 minute every 10 minutes at 40 °C |

Heavy-duty use ratings

| | |
|-----------------|--|
| P_{Hd} | Typical motor power in heavy-duty use |
| I_{Hd} | Continuous current allowing 150% I_{Hd} for 1 min/10 min at 40 °C |

For more technical information, see ACS580 catalog (3AUA0000145061 EN) or ABB drives product guide (3AFE68401771 EN)



ABB micro drives

ACS55, 0.18 to 2.2 kW

—
01
ACS55 frame
sizes: A, B, C, D

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.

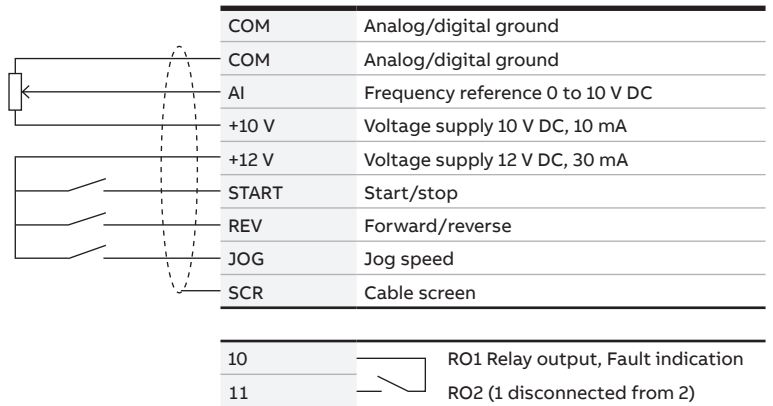


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01

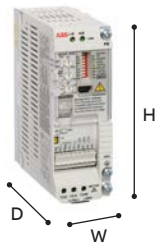
| Feature | Advantage | Benefit |
|------------------------------------|---|---|
| Single phase supply | Suitable for single phase residential and commercial applications | Avoids cabling and installation costs associated with three-phase supplies |
| Slim design | Fits easily into a variety of cabinet 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. |

Inputs and outputs

The figure shows the ACS55 factory-set standard inputs and outputs.



Dimensions and weights



| Frame size | Built-in EMC filter | | | | No EMC filter | | | |
|------------|---------------------|--------|--------|-------------|---------------|--------|--------|-------------|
| | H (mm) | W (mm) | D (mm) | Weight (kg) | H (mm) | W (mm) | D (mm) | Weight (kg) |
| A | 170 | 45 | 128 | 0.65 | 170 | 45 | 128 | 0.65 |
| B | 170 | 67.5 | 128 | 0.9 | 170 | 67.5 | 128 | 0.9 |
| C | - | - | - | - | 194 | 70 | 159 | 1.2 |
| D | 226 | 70 | 159 | 1.6 | - | - | - | - |

Types and voltages

| Rated values ^{*)} | | ABB ordering code Enclosure IP20 | Electrical code/ reference code | ABB type code/ order code | Frame size | Price (Eur) |
|--|---------------------------|-------------------------------------|------------------------------------|------------------------------|---------------|--------------------|
| P_{motor} (kW) | I_{motor} (A) | | | | | |
| Built-in EMC filter, 1-phase AC supply, 200 to 240 V, +10/-15%, 3-phase output 200 to 240 V | | | | | | |
| 0.18 | 1.4 | 68878331 | | ACS55-01E-01A4-2 | A | |
| 0.37 | 2.2 | 68878349 | | ACS55-01E-02A2-2 | A | |
| 0.75 | 4.3 | 68878357 | | ACS55-01E-04A3-2 | B | |
| 1.5 | 7.6 | 68878365 | | ACS55-01E-07A6-2 | D | |
| 2.2 | 9.8 | 68878373 | | ACS55-01E-09A8-2 | D | |
| No EMC filter, 1-phase AC supply, 200 to 240 V, +10/-15%, 3-phase output 200 to 240 V | | | | | | |
| 0.18 | 1.4 | 68878403 | | ACS55-01N-01A4-2 | A | |
| 0.37 | 2.2 | 68878420 | | ACS55-01N-02A2-2 | A | |
| 0.75 | 4.3 | 68878438 | | ACS55-01N-04A3-2 | B | |
| 1.5 | 7.6 | 68878446 | | ACS55-01N-07A6-2 | C | |
| 2.2 | 9.8 | 68878454 | | ACS55-01N-09A8-2 | C | |
| Built-in EMC filter, 1-phase AC supply, 110/120 V, +10/-15%, 3-phase output 200/240 V | | | | | | |
| 0.18 | 1.4 | 68878314 | | ACS55-01E-01A4-1 | A | |
| 0.37 | 2.2 | 68878322 | | ACS55-01E-02A2-1 | A | |
| No EMC filter, 1-phase AC supply, 110/120 V, +10/-15%, 3-phase output 200/240 V | | | | | | |
| 0.18 | 1.4 | 68878381 | | ACS55-01N-01A4-1 | A | |
| 0.37 | 2.2 | 68878390 | | ACS55-01N-02A2-1 | A | |

^{*)} The rated power and current values are valid for both pump and fan applications and heavy load applications.
Examples of typical heavy load applications include most extruders and compressors.

For more technical information, see ACS55 catalog (3AFE68899842 EN) or ABB product guide (3AFE68401771 EN)

ABB micro drives

ACS150, 0.37 to 4 kW

—
01
ACS150 frame
sizes: R0, R1, R2

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.

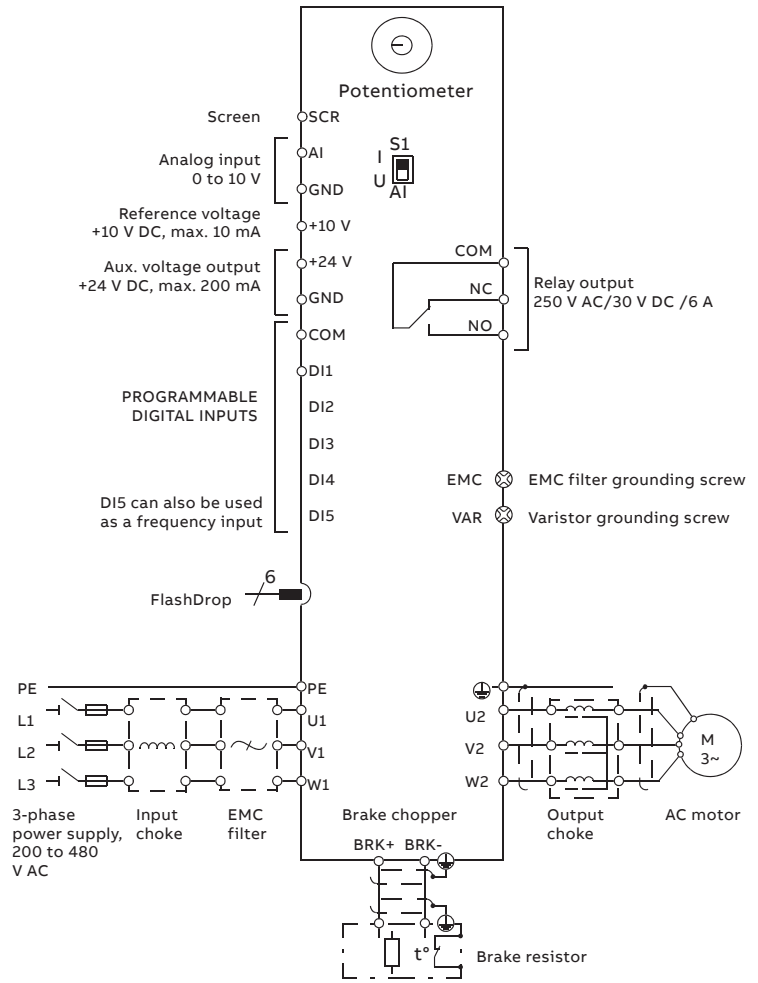


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01

| 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 |

Inputs and outputs

The figure shows the ACS150 factory-set standard inputs and outputs. All inputs and outputs are freely programmable.



Dimensions and weights

| Frame size | IP20/UL open | | | | NEMA 1 | | | |
|------------|--------------|--------|--------|-------------|--------|--------|--------|-------------|
| | H (mm) | W (mm) | D (mm) | Weight (kg) | H (mm) | W (mm) | D (mm) | Weight (kg) |
| R0 | 239 | 70 | 142 | 1.1 | 280 | 70 | 142 | 1.5 |
| R1 | 239 | 70 | 142 | 1.3 | 280 | 70 | 142 | 1.7 |
| R2 | 239 | 105 | 142 | 1.5 | 282 | 105 | 142 | 1.9 |



Types and voltages

| Rated values *) | | ABB ordering code Enclosure IP20 | Electrical code/ reference code | ABB type code/ order code for IP20 units | Frame size | Price (Eur) |
|--|---------------------------|-------------------------------------|------------------------------------|--|---------------|----------------|
| P_{motor} (kW) | I_{motor} (A) | | | | | |
| 1-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.4 | 68581940 | | ACS150-01E-02A4-2 | R0 | |
| 0.75 | 4.7 | 68581966 | | ACS150-01E-04A7-2 | R1 | |
| 1.1 | 6.7 | 68581974 | | ACS150-01E-06A7-2 | R1 | |
| 1.5 | 7.5 | 68581982 | | ACS150-01E-07A5-2 | R2 | |
| 2.2 | 9.8 | 68581991 | | ACS150-01E-09A8-2 | R2 | |
| 3-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.4 | 68582008 | | ACS150-03E-02A4-2 | R0 | |
| 0.55 | 3.5 | 68582016 | | ACS150-03E-03A5-2 | R0 | |
| 0.75 | 4.7 | 68582024 | | ACS150-03E-04A7-2 | R1 | |
| 1.1 | 6.7 | 68582032 | | ACS150-03E-06A7-2 | R1 | |
| 1.5 | 7.5 | 68582041 | | ACS150-03E-07A5-2 | R1 | |
| 2.2 | 9.8 | 68582059 | | ACS150-03E-09A8-2 | R2 | |
| 3-phase AC supply, 380 to 480 V | | | | | | |
| 0.37 | 1.2 | 68581737 | | ACS150-03E-01A2-4 | R0 | |
| 0.55 | 1.9 | 68581745 | | ACS150-03E-01A9-4 | R0 | |
| 0.75 | 2.4 | 68581753 | | ACS150-03E-02A4-4 | R1 | |
| 1.1 | 3.3 | 68581761 | | ACS150-03E-03A3-4 | R1 | |
| 1.5 | 4.1 | 68581788 | | ACS150-03E-04A1-4 | R1 | |
| 2.2 | 5.6 | 68581796 | | ACS150-03E-05A6-4 | R1 | |
| 3 | 7.3 | 68581800 | | ACS150-03E-07A3-4 | R1 | |
| 4 | 8.8 | 68581818 | | ACS150-03E-08A8-4 | R1 | |

*) The rated power and current values are valid for both pump and fan applications and heavy load applications.
Examples of typical heavy load applications include most extruders and compressors.

For more technical information see ACS150 catalog (3AFE68596114 EN) or ABB product guide (3AFE68401771 EN)

ABB machinery drives

ACS355, 0.37 to 22 kW

—
01
ACS355 frame sizes:
R0, R1, R2, R3, R4 and
IP66/IP67 variants

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.



—
01

Dimensions and weights

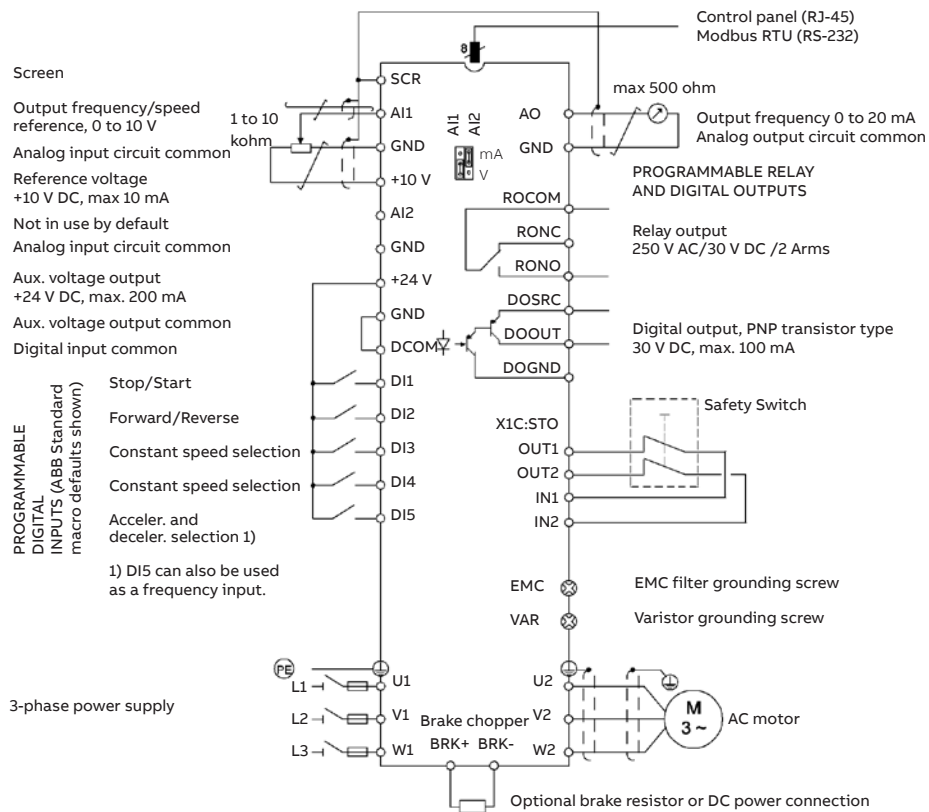
| Frame size | IP20/UL open | | | | IP66/IP67 | | | |
|------------|--------------|--------|--------|-------------|-----------|--------|--------|-------------|
| | H (mm) | W (mm) | D (mm) | Weight (kg) | H (mm) | W (mm) | D (mm) | Weight (kg) |
| R0 | 239 | 70 | 161 | 1.1 | — | — | — | — |
| R1 | 239 | 70 | 161 | 1.3 | 305 | 195 | 281 | 7.7 |
| R2 | 239 | 105 | 165 | 1.5 | — | — | — | — |
| R3 | 236 | 169 | 169 | 2.5 | 436 | 246 | 277 | 13 |
| R4 | 244 | 260 | 169 | 4.4 | — | — | — | — |



| 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 |

Inputs and outputs

The figure shows the ACS355 factory-set standard inputs and outputs. All inputs and outputs are freely programmable.



Types and voltages

| Rated values *) | | ABB ordering code Enclosure IP20 | Electrical code/ reference code | ABB type code/order code for IP20 units | Frame size | Price (Eur) |
|--|---------------------------|-------------------------------------|------------------------------------|--|---------------|--------------------|
| P_{motor} (kW) | I_{motor} (A) | | | | | |
| 1-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.4 | 3AUA0000058166 | | ACS355-01E-02A4-2 | R0 | |
| 0.75 | 4.7 | 3AUA0000058167 | | ACS355-01E-04A7-2 | R1 | |
| 1.1 | 6.7 | 3AUA0000058168 | | ACS355-01E-06A7-2 | R1 | |
| 1.5 | 7.5 | 3AUA0000058169 | | ACS355-01E-07A5-2 | R2 | |
| 2.2 | 9.8 | 3AUA0000058170 | | ACS355-01E-09A8-2 | R2 | |
| 3-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.4 | 3AUA0000058171 | | ACS355-03E-02A4-2 | R0 | |
| 0.55 | 3.5 | 3AUA0000058172 | | ACS355-03E-03A5-2 | R0 | |
| 0.75 | 4.7 | 3AUA0000058173 | | ACS355-03E-04A7-2 | R0 | |
| 1.1 | 6.7 | 3AUA0000058174 | | ACS355-03E-06A7-2 | R1 | |
| 1.5 | 7.5 | 3AUA0000058175 | | ACS355-03E-07A5-2 | R1 | |
| 2.2 | 9.8 | 3AUA0000058176 | | ACS355-03E-09A8-2 | R2 | |
| 3 | 13.3 | 3AUA0000058177 | | ACS355-03E-13A3-2 | R2 | |
| 4 | 17.6 | 3AUA0000058178 | | ACS355-03E-17A6-2 | R2 | |
| 5.5 | 24.4 | 3AUA0000058179 | | ACS355-03E-24A4-2 | R3 | |
| 7.5 | 31 | 3AUA0000058180 | | ACS355-03E-31A0-2 | R4 | |
| 11 | 46.2 | 3AUA0000058181 | | ACS355-03E-46A2-2 | R4 | |
| 3-phase AC supply, 380 to 480 V | | | | | | |
| 0.37 | 1.2 | 3AUA0000058182 | | ACS355-03E-01A2-4 | R0 | |
| 0.55 | 1.9 | 3AUA0000058183 | | ACS355-03E-01A9-4 | R0 | |
| 0.75 | 2.4 | 3AUA0000058184 | | ACS355-03E-02A4-4 | R1 | |
| 1.1 | 3.3 | 3AUA0000058185 | | ACS355-03E-03A3-4 | R1 | |
| 1.5 | 4.1 | 3AUA0000058186 | | ACS355-03E-04A1-4 | R1 | |
| 2.2 | 5.6 | 3AUA0000058187 | | ACS355-03E-05A6-4 | R1 | |
| 3 | 7.3 | 3AUA0000058188 | | ACS355-03E-07A3-4 | R1 | |
| 4 | 8.8 | 3AUA0000058189 | | ACS355-03E-08A8-4 | R1 | |
| 5.5 | 12.5 | 3AUA0000058190 | | ACS355-03E-12A5-4 | R3 | |
| 7.5 | 15.6 | 3AUA0000058191 | | ACS355-03E-15A6-4 | R3 | |
| 11 | 23.1 | 3AUA0000058192 | | ACS355-03E-23A1-4 | R3 | |
| 15 | 31 | 3AUA0000058193 | | ACS355-03E-31A0-4 | R4 | |
| 18.5 | 38 | 3AUA0000058194 | | ACS355-03E-38A0-4 | R4 | |
| 22 | 44 | 3AUA0000058195 | | ACS355-03E-44A0-4 | R4 | |

*) The rated power and current values are valid for both pump and fan applications and heavy load applications.
Examples of typical heavy load applications include most extruders and compressors.

| Rated values *) | | ABB ordering code Enclosure IP66/IP67 | Electrical code/ reference code | ABB type code/order code for IP66/IP67 units | Frame size | Price (Eur) |
|--|---------------------------|--|------------------------------------|---|---------------|--------------------|
| P_{motor} (kW) | I_{motor} (A) | | | | | |
| 3-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.4 | 3AUA0000058148 | | ACS355-03X-02A4-2 + B063 | R1 | |
| 0.55 | 3.5 | 3AUA0000058149 | | ACS355-03X-03A5-2 + B063 | R1 | |
| 0.75 | 4.7 | 3AUA0000058150 | | ACS355-03X-04A7-2 + B063 | R1 | |
| 1.1 | 6.7 | 3AUA0000058151 | | ACS355-03X-06A7-2 + B063 | R1 | |
| 1.5 | 7.5 | 3AUA0000058152 | | ACS355-03X-07A5-2 + B063 | R1 | |
| 2.2 | 9.8 | 3AUA0000058153 | | ACS355-03X-09A8-2 + B063 | R3 | |
| 3 | 13.3 | 3AUA0000058154 | | ACS355-03X-13A3-2 + B063 | R3 | |
| 4 | 17.6 | 3AUA0000058155 | | ACS355-03X-17A6-2 + B063 | R3 | |
| 3-phase AC supply, 380 to 480 V | | | | | | |
| 0.37 | 1.2 | 3AUA0000058156 | | ACS355-03X-01A2-4 + B063 | R1 | |
| 0.55 | 1.9 | 3AUA0000058157 | | ACS355-03X-01A9-4 + B063 | R1 | |
| 0.75 | 2.4 | 3AUA0000058158 | | ACS355-03X-02A4-4 + B063 | R1 | |
| 1.1 | 3.3 | 3AUA0000058159 | | ACS355-03X-03A3-4 + B063 | R1 | |
| 1.5 | 4.1 | 3AUA0000058160 | | ACS355-03X-04A1-4 + B063 | R1 | |
| 2.2 | 5.6 | 3AUA0000058161 | | ACS355-03X-05A6-4 + B063 | R1 | |
| 3 | 7.3 | 3AUA0000058162 | | ACS355-03X-07A3-4 + B063 | R1 | |
| 4 | 8.8 | 3AUA0000058163 | | ACS355-03X-08A8-4 + B063 | R1 | |
| 5.5 | 12.5 | 3AUA0000058164 | | ACS355-03X-12A5-4 + B063 | R3 | |
| 7.5 | 15.6 | 3AUA0000058165 | | ACS355-03X-15A6-4 + B063 | R3 | |

X within the type code stands for E or U.

For more technical information, see ACS355 catalog (3AUA0000068569 EN) or ABB drives product guide (3AFE68401771 EN)

ABB general purpose drives

ACS310, 0.37 to 22 kW

—
01
ACS310 frame sizes:
R0, R1, R2, R3, R4

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.

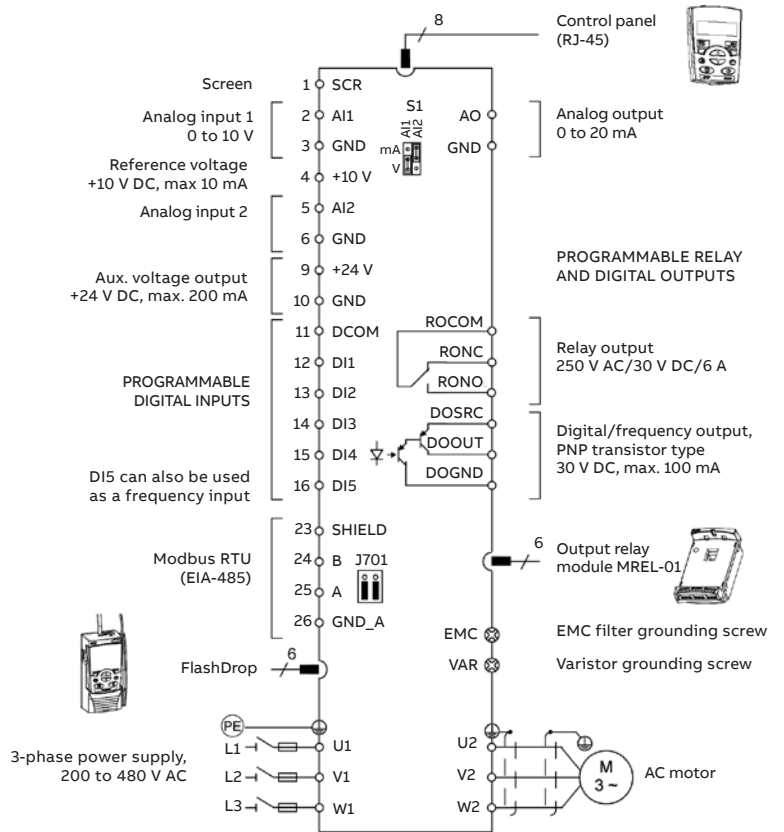
The ACS310 drive meets the requirements of new drive users, installers, machine builders, system integrators and panel builders.



—
01

| 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 | Preprogrammed 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 |

Inputs and outputs
 The figure shows the ACS310 factory-set standard inputs and outputs. All inputs and outputs are freely programmable.



Dimensions and weights

| Frame size | IP20/UL open | | | | NEMA 1 | | | |
|------------|--------------|--------|--------|-------------|--------|--------|--------|-------------|
| | H (mm) | W (mm) | D (mm) | Weight (kg) | H (mm) | W (mm) | D (mm) | Weight (kg) |
| R0 | 239 | 70 | 161 | 1.1 | 280 | 70 | 169 | 1.5 |
| R1 | 239 | 70 | 161 | 1.3 | 280 | 70 | 169 | 1.7 |
| R2 | 239 | 105 | 165 | 1.5 | 282 | 105 | 169 | 1.9 |
| R3 | 236 | 169 | 169 | 2.5 | 299 | 169 | 177 | 3.1 |
| R4 | 244 | 260 | 169 | 4.4 | 320 | 260 | 177 | 5 |



Types and voltages

| Rated values *) | | ABB ordering code Enclosure IP20 | Electrical code/ reference code | ABB type code/order code for IP20 units | Frame size | Price (Eur) |
|--|---------------------------|-------------------------------------|------------------------------------|--|---------------|--------------------|
| P_{motor} (kW) | I_{motor} (A) | | | | | |
| 1-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.4 | 3AUA0000038701 | | ACS310-01X-02A4-2 | R0 | |
| 0.75 | 4.7 | 3AUA0000038843 | | ACS310-01X-04A7-2 | R1 | |
| 1.1 | 6.7 | 3AUA0000038844 | | ACS310-01X-06A7-2 | R1 | |
| 1.5 | 7.5 | 3AUA0000038845 | | ACS310-01X-07A5-2 | R2 | |
| 2.2 | 9.8 | 3AUA0000039071 | | ACS310-01X-09A8-2 | R2 | |
| 3-phase AC supply, 200 to 240 V | | | | | | |
| 0.37 | 2.6 | 3AUA0000039087 | | ACS310-03X-02A6-2 | R0 | |
| 0.55 | 3.9 | 3AUA0000039163 | | ACS310-03X-03A9-2 | R0 | |
| 0.75 | 5.2 | 3AUA0000039192 | | ACS310-03X-05A2-2 | R1 | |
| 1.1 | 7.4 | 3AUA0000039215 | | ACS310-03X-07A4-2 | R1 | |
| 1.5 | 8.3 | 3AUA0000039218 | | ACS310-03X-08A3-2 | R1 | |
| 2.2 | 10.8 | 3AUA0000039234 | | ACS310-03X-10A8-2 | R2 | |
| 3 | 14.6 | 3AUA0000039307 | | ACS310-03X-14A6-2 | R2 | |
| 4 | 19.4 | 3AUA0000039621 | | ACS310-03X-19A4-2 | R2 | |
| 5.5 | 26.8 | 3AUA0000039622 | | ACS310-03X-26A8-2 | R3 | |
| 7.5 | 34.1 | 3AUA0000039623 | | ACS310-03X-34A1-2 | R4 | |
| 11 | 50.8 | 3AUA0000039624 | | ACS310-03X-50A8-2 | R4 | |
| 3-phase AC supply, 380 to 480 V | | | | | | |
| 0.37 | 1.3 | 3AUA0000039625 | | ACS310-03X-01A3-4 | R0 | |
| 0.55 | 2.1 | 3AUA0000039626 | | ACS310-03X-02A1-4 | R0 | |
| 0.75 | 2.6 | 3AUA0000039627 | | ACS310-03X-02A6-4 | R1 | |
| 1.1 | 3.6 | 3AUA0000039628 | | ACS310-03X-03A6-4 | R1 | |
| 1.5 | 4.5 | 3AUA0000039629 | | ACS310-03X-04A5-4 | R1 | |
| 2.2 | 6.2 | 3AUA0000039630 | | ACS310-03X-06A2-4 | R1 | |
| 3 | 8.0 | 3AUA0000039631 | | ACS310-03X-08A0-4 | R1 | |
| 4 | 9.7 | 3AUA0000039632 | | ACS310-03X-09A7-4 | R1 | |
| 5.5 | 13.8 | 3AUA0000039633 | | ACS310-03X-13A8-4 | R3 | |
| 7.5 | 17.2 | 3AUA0000039634 | | ACS310-03X-17A2-4 | R3 | |
| 11 | 25.4 | 3AUA0000039635 | | ACS310-03X-25A4-4 | R3 | |
| 15 | 34.1 | 3AUA0000039636 | | ACS310-03X-34A1-4 | R4 | |
| 18.5 | 41.8 | 3AUA0000039637 | | ACS310-03X-41A8-4 | R4 | |
| 22 | 48.4 | 3AUA0000039638 | | ACS310-03X-48A4-4 | R4 | |

*) The rated power and current values are valid for both pump and fan applications and heavy load applications.

Examples of typical heavy load applications include most extruders and compressors. X within the type code stands for E or U.










For more technical information, see ACS310 catalog (3AUA0000051082 EN) or ABB drives product guide (3AFE68401771 EN)

Options

ACS480 and ACS580

| ACS480 and 580 options | | | | | | |
|---|------------|-----------------------------------|--|----------------|--------|--------|
| | Type code | Electrical code/ ordering code | | Price (Eur) | ACS480 | ACS580 |
| Control panels | | | | | | |
|  | ACS-AP-S | 3AUA0000064884 | Assistant control panel, delivered as standard if no other display option is selected. Features commissioning and diagnostic assistants, a multilingual display and a real-time clock. | | ● | ● |
|  | ACS-AP-I | 3AUA0000088311 | Industrial control panel replaces standard ACS-AP-S control panel. It offers compatibility to ACS880 drives. | | ● | ● |
|  | ACS-AP-W | 3AXD50000025965 | Control panel with Bluetooth interface | | ● | ● |
|  | CDUM-01 | 3AXD50000009843 | Blank control panel cover replaces control panel (no control panel) | | | ● |
|  | DPMP-EXT | 3AXD50000010763 | Combined panel bus adapter and panel platform kit, enables mounting of the control panel on the cabinet door | | | ● |
|  | DPMP-EXT2 | 3AXD50000048730 | Combined Blank panel with RJ45 connector and panel platform kit, enables mounting of the control panel on the cabinet door (RDUM-01 and DPMP-21) | | ● | |
|  | DPMP-01 | 3AUA0000108878 | Control panel mounting platform (flush) | | ● | ● |
|  | DPMP-02 | 3AXD50000009374 | Control panel mounting platform (surface) | | ● | ● |
|  | DPMP-04 *) | 3AXD50000217717 | Control panel mounting kit for outdoor installation | | ● | ● |
|  | CDPI-01 | 3AXD50000004419 | | | | ● |
| | CDPI-02 *) | 3AXD50000313204 | | | ● | |
|  | RDUM-01 | 3AXD50000040008 | Blank panel with RJ45 connector | | ● | |

*) For availability please contact your local ABB.

| ACS480 and 580 options | | | | | | |
|---|--|-----------------------------------|--|----------------|--------|--------|
| | Type code | Electrical code/ ordering code | | Price (Eur) | ACS480 | ACS580 |
| Fieldbus adapter modules ¹⁾ | | | | | | |
|  | FDNA-01 | 68469341 | DeviceNet™ protocol | | ● | ● |
| | FPBA-01 | 68469325 | PROFIBUS DP protocol | | ● | ● |
| | FCAN-01 | 68469376 | CANopen® protocol | | ● | ● |
| | FCNA-01 | 3AUA0000094512 | ControlNet protocol | | ● | ● |
| | FEIP-21 | 3AXD50000192786 | Two-Port EtherNet/IP protocol | | ● | ● |
| | FMBT-21 | 3AXD50000049964 | Two-Port Modbus/TCP protocol | | ● | ● |
| | FPNO-21 | 3AXD50000192779 | Two-Port PROFINET IO protocol | | ● | ● |
| | FECA-01 | 3AUA0000072069 | EtherCAT® protocol | | ● | ● |
| | FSCA-01 | 3AUA0000031336 | Modbus/RTU | | ● | ● |
| | FEPL-02 | 3AUA0000072120 | POWERLINK protocol | | ● | ● |
| Remote monitoring | | | | | | |
|  | NETA-21 | 3AUA0000094517 | Ethernet adapter with remote monitoring access can send process data, data logs and event messages independently, without a PLC or a dedicated on-site computer. It has an internal web server for configuration and drive access. | | ● | ● |
| Input/output extension module | | | | | | |
|  | CMOD-01 | 3AXD50000004420 | External 24 V AC and DC input 2 x RO and 1 x DO | | | ● |
|  | CMOD-02 | 3AXD50000004418 | External 24 V AC and DC input and isolated PTC interface | | | ● |
|  | CHDI-01 | 3AXD50000004431 | Six 115/230 V AC digital inputs and two relay outputs | | | ● |
|  | CBAI-01 | 3AXD50000137954 | Bipolar analog I/O extension module | | | ● |
|  | CPTC-02 | 3axd50000033144 | ATEX certified PTC interface and external 24 V | | | ● |
|  | BIO-01 | 3AXD50000191635 | I/O extension module used together with a fieldbus module | | ● | |
|  | BAPO-01 | 3AXD50000022164 | Auxiliary power extension module External 24 V DC input | | ● | |
| | BREL-01 | 3AXD50000022162 | Relay output extension module 4 x RO | | ● | |
| Drive construction options | | | | | | |
| | IP20 shrouds for finger safe operation | +B051 | Factory-made enclosure for the IP20 protection class on ACS580-04 drives | | | ● |
| | Full-size input power cable terminals | +H370 | For connecting the ACS580-04 drive to busbars or to multiple cables | | | ● |

¹⁾ One slot available for a fieldbus adapter. Modbus EIA-485 built-in as standard.

ACS480 and 580 options

| Type code | Electrical code/ ordering code | Price (Eur) | ACS480 | ACS580 |
|-----------|-----------------------------------|----------------|--------|--------|
|-----------|-----------------------------------|----------------|--------|--------|

Brake units

ACS580 frame sizes R1, R2 and R3 and ACS480 frame sizes R1, R2, R3 and R4 are delivered with an integrated brake chopper as standard. Other units can use external braking choppers and resistors or integrated braking chopper and resistor unit.

| | | | | | |
|-----------|----------|--|--|---|---|
| | | | Reference brake resistors are listed in the manuals. Make sure to dimension them correctly. | ● | ● |
| ACS-BRK-D | 64102931 | | Integrated braking chopper and resistor. Resistor's resistance 10.5 ohm, continuous output power 7 kW, maximum output power for 20 s is 42 kW for 380 to 480 V units | | ● |
| NBRA-658 | 59006428 | | Braking chopper module. Maximum braking power depends on a braking cycle, drive's typecode and brake resistor. For further details, please refer to the hardware manual. | | ● |
| NBRA-659 | 59006436 | | | | ● |

Flange mounting kits



| | | | | | |
|---------------|-----------------|--|---|--|---|
| | 3AXD50000105311 | | Flange mounting kit for the frame size R1 IP21 | | ● |
| | 3AXD50000105328 | | Flange mounting kit for the frame size R2 IP21 | | ● |
| | 3AXD50000105335 | | Flange mounting kit for the frame size R3 IP21 | | ● |
| | 3AXD50000031460 | | Flange mounting kit for the frame size R4 IP21 | | ● |
| | 3AXD50000031461 | | Flange mounting kit for the frame size R5 IP21 | | ● |
| 6438177339694 | 3AXD50000018852 | | Flange mounting kit for the frame size R6, IP21 | | ● |
| 6438177339700 | 3AXD50000018853 | | Flange mounting kit for the frame size R7, IP21 | | ● |
| 6438177339816 | 3AXD50000018854 | | Flange mounting kit for the frame size R8, IP21 | | ● |
| 6438177339823 | 3AXD50000018855 | | Flange mounting kit for the frame size R9, IP21 | | ● |

PC tools, configuration tools and adapters



| | | | | | |
|----------------------------|---|--|---|---|---|
| Drive Composer entry | Download free from www.abb.com/drives | | Drive Composer PC tool for startup, configuration, monitoring and process tuning. PC tool is connected to the drive's control panel via USB interface. | ● | ● |
| DCPT-01 Drive Composer pro | 3AUA0000108087 (1 user license) 3AUA0000145150 (10 users license) 3AUA0000145151 (20 users license) | | Drive Composer pro provides the same standard functionality as the free version and some additional features, like graphic control diagrams. The tool has fast monitoring capabilities of multiple signals from several drives in the panel bus. Full backup and restore functions are also included. | ● | ● |
| CCA-01 | 3AXD50000019865 | | Cold configuration adapter provides serial communication interface to unpowered drives. This adapter ensures safety isolation of both serial communication and control board power supply. The power supply is taken from PC USB port. | ● | ● |



ABB

The control panel features a monochrome LCD screen displaying the following information:

| | | |
|------------------|---------|---------|
| Remote | 1147F01 | 16.8 Hz |
| Output frequency | 16.78 | Hz |
| Motor current | 5.56 | A |
| DC voltage | 550.27 | V |
| Options | 1518 | Menu |

Below the screen is a control keypad with the following buttons:






- Stop (Red circle with a diagonal line)
- Loc/Rem (Lock/Release)
- Start (Green diamond)
- Navigation buttons: Up, Down, Left, Right, and a central button with a question mark.
- Two large grey buttons with curved arrows above the keypad.
- A USB port at the bottom.

ABB

A partial view of another ABB drive control panel, showing the right side of the LCD screen and the Stop button.












Options





ACS55 and ACS150

| ACS55 options | | | |
|---|-----------|-----------------------------------|---|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| Potentiometer | | | |
|  | ACS50-POT | 68226716 | Integrated potentiometer for adjusting the motor speed |
| DriveConfig kit | | | |
|  | RFDT-02 | 68973988 | PC tool for programming of ACS55 drives in larger quantities without the need for a power connection |
| ACS150 options | | | |
| | Type code | Electrical code/ ordering code | Price (Eur) |
| NEMA 1 enclosure kit | | | |
|  | MUL1-R1 | 68566398 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame sizes R0 to R2 |
| EMC filters | | | |
|  | RFI-11 | 68902371 | Compatibility with category C1 and C2, 1-phase, 0.37 kW |
| | RFI-12 | 68902401 | Compatibility with category C1 and C2, 1-phase, 0.75 to 1.1 kW |
| | RFI-13 | 68902410 | Compatibility with category C1 and C2, 1-phase, 1.5 to 2.2 kW |
| | RFI-32 | 68902495 | Compatibility with category C1 and C2, 3-phase, 0.37 to 4.0 kW |
| Low leakage current filters | | | |
| | LRFI-31 | 3AUA0000050644 | Low leakage current filters are ideal for installations where residual current devices (RCD) are required and leakage current needs to be below 30 mA |
| | LRFI-32 | 3AUA0000050645 | |
| PC tools and adapters | | | |
|  | MFDT-01 | 68566380 | FlashDrop is a powerful palm sized tool for fast and easy parameter selecting and setting. It gives the possibility to hide selected parameters to protect the machine. |

Options


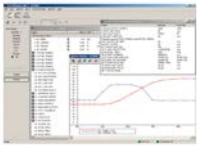


ACS355

| ACS355 options | | | |
|---|-------------------|-----------------------------------|---|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| Potentiometer and control panels | | | |
|  | MPOT-01 | 68566282 | Integrated potentiometer for adjusting the motor speed |
|  | | | - Control panel cover, delivered with ACS355 drives as standard |
|  | ACS-CP-C | 64739000 | Basic control panel with numeric display and large buttons |
|  | ACS-CP-A | 64691473 | Assistant control panel with commissioning and diagnostic assistants. Features a multilingual display and a real-time clock. |
|  | ACS/H-CP-EXT | 68294673 | Control panel mounting kit, enables mounting of the control panel on the cabinet door |
|  | ACS/H-CP-EXT-IP66 | 68829593 | Control panel mounting kit with IP66 enclosure, enables mounting of the control panel on the cabinet door |
|  | OPMP-01 | 3AUA0000013086 | Control panel holder mounting kit. Includes a panel platform that enables the panel to be removed in the same way as a drive-mounted panel. |
| NEMA 1 enclosure kits | | | |
|  | MUL1-R1 | 68566398 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame sizes R0 to R2. Total height increases by 43 mm and depth by 8 mm. |
|  | MUL1-R3 | 68566410 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame size R3. Total height increases by 63 mm and depth by 8 mm. |
|  | MUL1-R4 | 3AUA0000023888 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame size R4. Total height increases by 76 mm and depth by 8 mm. |
|  | | B063 | IP66/NEMA 4X enclosure Available up to 7.5 kW Has to be ordered together with ACS355 drive |

| ACS355 options | | | |
|---|------------------|--|--|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| Extension modules | | | |
|  | MTAC-01 | 68566355 | Pulse encoder interface module |
| | MREL-01 | 3AUA0000031854 | Relay output extension module. The optional MREL-01 module offers three additional relay outputs, which can be configured for different functions with parameters. |
| | MPOW-01 | 3AUA0000059808 | Auxiliary power module |
| Connection options | | | |
| | Cable gland kit | Frame R1: 3AUA0000045483 Frame R3: 3AUA0000045484 | Cable gland kit for the IP66/67 drive variant |
| | Input switch kit | F278 | Input switch kit for the IP66/67 drive variant, factory installed variant |
| Pressure compensation | | | |
| | C169 | 3AUA0000045485 | Pressure compensation valve for IP66/67 variant to prevent water condensation within the enclosure. |
| Fieldbus adapter modules | | | |
|  | FCAN-01 | 68469376 | CANopen® protocol |
| | FPBA-01 | 68469325 | PROFIBUS DP protocol |
| | FDNA-01 | 68469341 | DeviceNet™ protocol |
| | FMBA-01 | 68469881 | EIA-485/Modbus RTU protocol |
| | FENA-01 | 68469422 | Ethernet (EtherNet/IP, Modbus/TCP, PROFINET IO) |
| | FENA-21 | 3AUA0000089109 | 2-port Ethernet (EtherNet/IP, Modbus/TCP, PROFINET IO) |
| | FECA-01 | 3AUA0000072069 | Ethernet/EtherCAT® protocol |
| | FCNA-01 | 3AUA0000094512 | ControlNet protocol |
| | FEPL-02 | 3AUA0000072120 | POWERLINK protocol |
| Remote monitoring | | | |
|  | SREA-01 | 3AUA0000039179 | Ethernet adapter with remote monitoring access can send process data, data logs and event messages independently, without a PLC or a dedicated on-site computer. It has an internal web server for configuration and drive access. |
| Braking resistors | | | |
|  | CBR-V 160 | 68691770 | Compatibility with 1-phase, 200 to 240 V, units up to 2.2 kW Compatibility with 3-phase, 200 to 240 V, units up to 2.2 kW |
| | CBR-V 210 | 68569311 | Compatibility with 3-phase, 380 to 480 V, units up to 2.2 kW |
| | CBR-V 260 | 68691796 | Compatibility with 3-phase, 200 to 240 V, units 3 and 4 kW |
| | CBR-V 460 | 68455685 | Compatibility with 3-phase, 380 to 480 V, units from 3 to 7.5 kW |
| | CBR-V 660 | 68897921 | Compatibility with 3-phase, 380 to 480 V, unit 11 kW |
| | CBT-H 560 | 3AUA0000023613 | Compatibility with 3-phase, 200 to 240 V, units from 5.5 to 11 kW Compatibility with 3-phase, 380 to 480 V, units from 15 to 22 kW |












ACS355 options





| | Type code | Electrical code/ ordering code | Price (Eur) |
|---|--------------|-----------------------------------|---|
| Input chokes | | | |
|  | CHK-A1 | 68418500 | Compatibility with 1-phase, 200 to 240 V, unit 0.37 kW |
| | CHK-B1 | 68418518 | Compatibility with 1-phase, 200 to 240 V, unit 0.75 kW |
| | CHK-C1 | 68418526 | Compatibility with 1-phase, 200 to 240 V, units from 1.1 to 1.5 kW |
| | CHK-D1 | 68418534 | Compatibility with 1-phase, 200 to 240 V, unit 2.2 kW |
| | CHK-01 | 68711185 | Compatibility with 3-phase, 200 to 240 V, unit 0.37 kW Compatibility with 3-phase, 380 to 480 V, units from 0.37 to 1.1 kW |
| | CHK-02 | 68711193 | Compatibility with 3-phase, 200 to 240 V, unit 0.55 kW Compatibility with 3-phase, 380 to 480 V, units from 1.5 to 3 kW |
| | CHK-03 | 68711215 | Compatibility with 3-phase, 200 to 240 V, units 0.75 to 1 kW Compatibility with 3-phase, 380 to 480 V, units from 4 to 5.5 kW |
| | CHK-04 | 68711231 | Compatibility with 3-phase, 200 to 240 V, units 1.5 to 4 kW Compatibility with 3-phase, 380 to 480 V, units from 7.5 to 11 kW |
| | CHK-05 | 68711240 | Compatibility with 3-phase, 380 to 480 V, unit 15 kW |
| | CHK-06 | 68711266 | Compatibility with 3-phase, 200 to 240 V, units 5.5 to 11 kW Compatibility with 3-phase, 380 to 480 V, units from 18.5 to 22 kW |
| Output chokes | | | |
|  | ACS-CHK-B3 | 64324063 | Compatibility with 1-phase, 200 to 240 V, units up to 0.75 kW Compatibility with 3-phase, 200 to 240 V, units up to 0.75 kW Compatibility with 3-phase, 380 to 480 V, units up to 1.1 kW |
| | ACS-CHK-C3 | 64324080 | Compatibility with 1-phase, 200 to 240 V, units from 1.1 to 2.2 kW Compatibility with 3-phase, 200 to 240 V, units from 1.1 to 2.2 kW Compatibility with 3-phase, 380 to 480 V, units from 1.5 to 2.2 kW |
|  | NOCH-0016-6x | 61445412 | Compatibility with 3-phase, 200 to 240 V, units from 3 to 4 kW Compatibility with 3-phase, 380 to 480 V, units from 3 to 7.5 kW |
| | NOCH-0030-6x | 61445439 | Compatibility with 3-phase, 200 to 240 V, units from 5.5 to 7.5 kW Compatibility with 3-phase, 380 to 480 V, units from 11 to 18.5 kW |
| | NOCH-0070-6x | 61445455 | Compatibility with 3-phase, 200 to 240 V, unit 11 kW Compatibility with 3-phase, 380 to 480 V, unit 22 kW |

| ACS355 options | | | |
|---|--------------------|-----------------------------------|--|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| EMC filters | | | |
|  | RFI-11 | 68902371 | Compatibility with category C1 and C2, 1-phase, 0.37 kW |
| | RFI-12 | 68902401 | Compatibility with category C1 and C2, 1-phase, 0.75 to 1.1 kW |
| | RFI-13 | 68902410 | Compatibility with category C1 and C2, 1-phase, 1.5 to 2.2 kW |
| | RFI-32 | 68902495 | Compatibility with category C1 and C2, 3-phase, 0.37 to 4.0 kW |
| | RFI-33 | 68902509 | Compatibility with category C1 and C2, 3-phase, 5.5 to 11 kW |
| | RFI-34 | 3AUA0000023611 | Compatibility with category C1 and C2, 3-phase, 15 to 22 kW |
| Low leakage current filters | | | |
| | LRFI-31 | 3AUA0000050644 | Compatibility with 3-phase, 380 to 480 V, units 0.37 to 2.2 kW |
| | LRFI-32 | 3AUA0000050645 | Compatibility with 3-phase, 380 to 480 V, units 3 to 4 kW |
| PC tools, configuration tools and adapters | | | |
|  | DriveWindow Light | 64532871 | DriveWindow Light is a PC program for easy commissioning and drive monitoring. Includes an RS-232 cable as standard for connecting the drive to the PC. |
|  | MFDT-01 | 68566380 | FlashDrop is a powerful hand held tool that is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives and stores up to 20 different drive parameter sets. |
|  | USB serial adapter | 68583667 | USB, an RS-232 adapter to be used between the PC and the drive. Not needed if the computer has an RS-232 port. |

Options

ACS310

| ACS310 options | | | |
|---|-------------------|-----------------------------------|--|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| Potentiometer and control panels | | | |
|  | | – | Control panel cover, delivered with ACS310 drives as standard |
|  | ACS-CP-C | 64739000 | Basic control panel with numeric display and large buttons |
|  | ACS-CP-A | 64691473 | Assistant control panel with commissioning and diagnostic assistants. Features a multilingual display and a real-time clock. |
|  | ACS/H-CP-EXT | 68294673 | Control panel mounting kit, enables mounting of the control panel on the cabinet door |
|  | ACS/H-CP-EXT-IP66 | 68829593 | Control panel mounting kit with IP66 enclosure, enables mounting of the control panel on the cabinet door |
|  | OPMP-01 | 3AUA0000013086 | Control panel holder mounting kit. Includes a panel platform that enables the panel to be removed in the same way as a drive-mounted panel. |
| NEMA 1 enclosure kits | | | |
|  | MUL1-R1 | 68566398 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame sizes R0 to R2. Total height increases by 43 mm and depth by 8 mm. |
|  | MUL1-R3 | 68566410 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame size R3. Total height increases by 63 mm and depth by 8 mm. |
|  | MUL1-R4 | 3AUA0000023888 | NEMA 1 enclosure kit for finger protection and for protection against dirt and dust, available for frame size R4. Total height increases by 76 mm and depth by 8 mm. |
| Extension module | | | |
|  | MREL-01 | 3AUA0000031854 | Relay output extension module. The optional MREL-01 module offers three additional relay outputs, which can be configured for different functions with parameters. |
| Remote monitoring | | | |
|  | SREA-01 | 3AUA0000039179 | Ethernet adapter with remote monitoring access can send process data, data logs and event messages independently, without a PLC or a dedicated on-site computer. It has an internal web server for configuration and drive access. |

| ACS310 options | | | |
|---|--------------|-----------------------------------|---|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| Input chokes | | | |
|  | CHK-01 | 68711185 | Compatibility with 3-phase, 200 to 240 V, unit 0.37 kW Compatibility with 3-phase, 380 to 480 V, units from 0.37 to 1.1 kW |
| | CHK-02 | 68711193 | Compatibility with 3-phase, 200 to 240 V, unit 0.55 kW Compatibility with 3-phase, 380 to 480 V, units from 1.5 to 3 kW |
| | CHK-03 | 68711215 | Compatibility with 3-phase, 200 to 240 V, units 0.75 to 1 kW Compatibility with 3-phase, 380 to 480 V, units from 4 to 5.5 kW |
| | CHK-04 | 68711231 | Compatibility with 3-phase, 200 to 240 V, units 1.5 to 4 kW Compatibility with 3-phase, 380 to 480 V, units from 7.5 to 11 kW |
| | CHK-05 | 68711240 | Compatibility with 3-phase, 380 to 480 V, unit 15 kW |
| | CHK-06 | 68711266 | Compatibility with 3-phase, 200 to 240 V, units 5.5 to 11 kW Compatibility with 3-phase, 380 to 480 V, units from 18.5 to 22 kW |
| Output chokes | | | |
|  | ACS-CHK-B3 | 64324063 | Compatibility with 1-phase, 200 to 240 V, units up to 0.75 kW Compatibility with 3-phase, 200 to 240 V, units up to 0.75 kW Compatibility with 3-phase, 380 to 480 V, units up to 1.1 kW |
| | ACS-CHK-C3 | 64324080 | Compatibility with 1-phase, 200 to 240 V, units from 1.1 to 2.2 kW Compatibility with 3-phase, 200 to 240 V, units from 1.1 to 2.2 kW Compatibility with 3-phase, 380 to 480 V, units from 1.5 to 2.2 kW |
|  | NOCH-0016-6x | 61445412 | Compatibility with 3-phase, 200 to 240 V, units from 3 to 4 kW Compatibility with 3-phase, 380 to 480 V, units from 3 to 7.5 kW |
| | NOCH-0030-6x | 61445439 | Compatibility with 3-phase, 200 to 240 V, units from 5.5 to 7.5 kW Compatibility with 3-phase, 380 to 480 V, units from 11 to 18.5 kW |
| | NOCH-0070-6x | 61445455 | Compatibility with 3-phase, 200 to 240 V, unit 11 kW Compatibility with 3-phase, 380 to 480 V, unit 22 kW |
| Low leakage current filters | | | |
| | LRFI-31 | 3AUA0000050644 | Compatibility with 3-phase, 380 to 480 V, units 0.37 to 2.2 kW |
| | LRFI-32 | 3AUA0000050645 | Compatibility with 3-phase, 380 to 480 V, units 3 to 4 kW |
| EMC filters | | | |
|  | RFI-32 | 68902495 | Compatibility with category C1 and C2, 3-phase, 0.37 to 4.0 kW |
| | RFI-33 | 68902509 | Compatibility with category C1 and C2, 3-phase, 5.5 to 11 kW |
| | RFI-34 | 3AUA0000023611 | Compatibility with category C1 and C2, 3-phase, 15 to 22 kW |

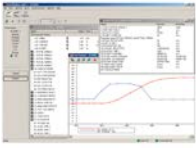


| ACS310 options | | | |
|--|--------------------|-----------------------------------|--|
| | Type code | Electrical code/ ordering code | Price (Eur) |
| PC tools, configuration tools and adapters | | | |
|  | DriveWindow Light | 64532871 | DriveWindow Light is a PC program for easy commissioning and drive monitoring. Includes an RS-232 cable as standard for connecting the drive to the PC. |
|  | MFD-01 | 68566380 | FlashDrop is a powerful hand held tool that is used to quickly and easily set drive parameters. FlashDrop tool uploads drive parameters directly to unpowered drives and stores up to 20 different drive parameter sets. |
|  | USB serial adapter | 68583667 | USB, an RS-232 adapter to be used between the PC and the drive. Not needed if the computer has an RS-232 port. |

ABB softstarters

How we are helping the industry

A softstarter from ABB offers you several values and benefits. Whether you are a consultant, OEM, panel builder or end-user, a softstarter will add to your business value by securing motor reliability, improving installation efficiency and increasing application productivity.



SECURE
MOTOR
Reliability

ABB softstarters help increase your motor's lifetime by protecting it from electrical stress. Starting currents are easily optimized to your load, application and motor size. Over ten motor protection features are included to keep your motor safe from different load and network irregularities.



IMPROVE
INSTALLATION
Efficiency

Reduce your installation time and panel size by having all features you need built into your softstarter. Our softstarters are easy to install thanks to their compact design and many built-in features. The built-in bypass saves energy and space while reducing heat generation. A complete motor starting solution in one unit.



INCREASE
APPLICATION
Productivity

Reduce the number of stops in your production by allowing your softstarter to do more than just starting. Our softstarters reduce the mechanical stress on your motor application, which will increase your uptime. Torque control, pump cleaning, motor brake and many other features enable you to operate your process at its full potential.

ABB softstarters

Selection tool

| Step | Process |
|----------|---|
| 1 | Determine softstarter series First, determine the softstarter series that fulfill the needs of the application and motor. Use the guide on the left to explore the three series and the power range each one covers. |
| 2 | Match the softstarter size with the motor current When the softstarter series is selected, the correct size should now be determined. The selection of a softstarter is based on the current. Find the softstarter that corresponds to the motor current. |
| 3 | Fine tune and select the correct size The last step is to fine tune the selection, and there are three different factors to consider: a. Normal or a heavy load: If the load is characterized as a heavy load, select the next size softstarter in the series. b. High ambient temperature c. High altitude Use the equations below to find the correct de-rating equation for each softstarter type. |

Note: If the application is more complicated and there are specific requirements on acceleration time, maximum starting current or many starts per hour, the software Prosoft should be used for a fine tuned selection. [Link](#)



For a more precise selection, use the online softstarter selection tool available by scanning the shown QR code or using the selection tool available on: econfigure.xe.abb.com/global

Altitude formula

De-rate for altitudes between 1000-4000 m or 3280-13123 ft with the following formula for all softstarters:

In meters: % of Ie = 100 - (x-1000)/150

In feet: % of FLA = 100 - (y-3280)/480

Where x/y is the actual altitude in m/ft

Temperature formula

PSTX and PSR

In Celsius: 40...60 °C: Reduce Ie with 0.8%/°C

In Fahrenheit: 104...140 °F: Reduce FLA with 0.44%/°F

PSE

In Celsius: 40...60 °C: Reduce Ie with 0.6%/°C

In Fahrenheit: 104...140 °F: Reduce FLA with 0.33%/°F

Typical applications

| Normal duty start | Heavy duty |
|-----------------------|----------------------|
| Bow thrusters | Centrifugal fan |
| Compressors | Crusher |
| Elevator | Mixer |
| Centrifugal pump | Conveyor belt (long) |
| Conveyor belt (short) | Mill |
| Escalators | Stirrer |

PSTX – the advanced range

- When full control and motor protection is needed
- When an advanced softstarter with an extensive functionality is needed
- When motor is connected inside delta or in 690 V

PSE – the efficient range

- When there is limited space
- When common softstarter functions and protections are needed
- When operating a pump

PSR – the compact range

- When standard softstarter benefits and values are requested
- When operating a small motor
- When up to 100 starts per hour are requested

| Feature | PSR | PSE | PSTX | |
|---|-----|-----|------|-----------------------------------|
| Current limit | - | ● | ● | Secure motor reliability |
| Current limit ramp and dual current limit | - | - | ● | |
| Electronic motor overload protection | - | ● | ● | |
| Dual overload protection | - | - | ● | |
| Underload protection | - | ● | ● | |
| Power factor underload protection | - | - | ● | |
| Locked rotor protection | - | ● | ● | |
| Current/Voltage imbalance protection | - | - | ● | |
| Phase reversal protection | - | - | ● | |
| Customer defined protection | - | - | ● | |
| Motor heating | - | - | ● | Improve installation efficiency |
| PTC/PT100 input for motor protection | - | - | ● | |
| Overvoltage/undervoltage protection | - | - | ● | |
| Earth-fault protection | - | - | ● | |
| Built-in bypass | ● | ● | ● | |
| Inside-delta connection possible | - | - | ● | |
| Graphical display and keypad | - | ● | ● | |
| Detachable keypad | - | - | ● | |
| Motor runtime and start count | - | - | ● | |
| Programmable warning functions | - | - | ● | |
| Diagnostics | - | - | ● | Increase application productivity |
| Overload time-to-trip | - | - | ● | |
| Overload time-to-cool | - | - | ● | |
| Analog output | - | ● | ● | |
| Fieldbus communication | ○ | ● | ● | |
| Event log | - | ○ | ● | |
| Multiple languages | - | - | 17 | |
| Electricity metering | - | - | ● | |
| Torque control | - | ● | ● | |
| Torque limit | - | - | ● | |
| Coated PCBA | - | ● | ● | |
| Limp mode | - | - | ● | |
| Jog with slow speed forward/ reverse | - | - | ● | |
| Dynamic brake | - | - | ● | |
| Stand still brake | - | - | ● | |
| Sequence start | - | - | ● | |
| Full voltage start | - | - | ● | |
| Kick start | - | ● | ● | |
| Automatic pump cleaning | - | - | ● | |

- = Standard
- = Option
- = Not available

ABB softstarters

PSR – The compact range



Technical data

- Operational voltage: 208...600 V AC
- Wide rated control supply voltage: 100...240 V AC, 50/60 Hz or 24 V AC/DC
- Rated operational current: 3...105 A
- Two-phase controlled
- Soft start with voltage ramp
- Soft stop with voltage ramp
- Built-in bypass for energy saving and easy installation
- Easy setup by three potentiometers
- Fieldbus communication with fieldbus plug adaptor and the FieldBusPlug

- Run and Top of Ramp relays available for monitoring
- Connection kits available for connection to ABB's manual motor starters (MMS)

Available communication protocols:

- Modbus RTU
- PROFIBUS
- DeviceNet

Certifications and approvals:

- CE, cULus, CCC, EAC, ANCE, C-tick, KC



Reduce the electrical stresses and keep the motor protected with the MMS

The PSR reduces the starting current for the motor. The possibility to connect it to the manual motor starter makes it possible to build a compact and complete starting solution with overload and short-circuit protection.



Saving time and money with built-in bypass and easy set-up

On the PSR, the bypass is built in and verified by ABB, saving you time during installation and space in your panel. Set-up is done through three potentiometers making it very fast and easy.



Reduce the mechanical stresses on your motor

Soft start and stop with PSR will reduce mechanical wear and tear on the application and increase the availability and uptime.

PSR Dimensions and weight

| Frame size | H (mm) | W (mm) | D (mm) | Weight (kg) | Weight (lb) |
|-------------|--------|--------|--------|-------------|-------------|
| PSR3...16 | 140 | 45 | 113.5 | 0.45 | 0.99 |
| PSR25...30 | 160 | 45 | 128 | 0.60 | 1.43 |
| PSR37...45 | 187 | 54 | 153 | 1.0 | 2.20 |
| PSR60...105 | 220 | 70 | 180 | 2.27 | 5.0 |



Ordering details

Normal start, class 10, in-line



For a more precise selection, use the online softstarter selection tool available by scanning the shown QR code or using the selection tool available on: econfigure.xe.abb.com/global

Rated operational voltage U_e , 208...600 V AC
Rated control supply voltage, U_s , 100...240 V AC, 50/60 Hz

| IEC | | | | UL/CSA | | | | Type | Order code | Price (Eur) | |
|-------------------------|------------------------|------------------------|-------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------|---------------|-----------------|-----------------------|
| Rated operational power | | | Current I_e (A) | Rated operational power | | | | | | | Current FLA (A) |
| 230 V P_e (kW) | 400 V P_e (kW) | 500 V P_e (kW) | | 200/208 V P_e (hp) | 220/240 V P_e (hp) | 440/480 V P_e (hp) | 550/600 V P_e (hp) | | | | |
| 0.75 | 1.5 | 2.2 | 3.9 | 0.5 | 0.75 | 2 | 2 | 3.4 | PSR3-600-70 | 1SFA896103R7000 | |
| 1.5 | 3 | 4 | 6.8 | 1 | 1.5 | 3 | 5 | 6.1 | PSR6-600-70 | 1SFA896104R7000 | |
| 2.2 | 4 | 4 | 9 | 2 | 2 | 5 | 7.5 | 9 | PSR9-600-70 | 1SFA896105R7000 | |
| 3 | 5.5 | 5.5 | 12 | 3 | 3 | 7.5 | 10 | 11 | PSR12-600-70 | 1SFA896106R7000 | |
| 4 | 7.5 | 7.5 | 16 | 3 | 5 | 10 | 10 | 15.2 | PSR16-600-70 | 1SFA896107R7000 | |
| 5.5 | 11 | 15 | 25 | 7.5 | 7.5 | 15 | 20 | 24.2 | PSR25-600-70 | 1SFA896108R7000 | |
| 7.5 | 15 | 18.5 | 30 | 7.5 | 10 | 20 | 25 | 28 | PSR30-600-70 | 1SFA896109R7000 | |
| 7.5 | 18.5 | 22 | 37 | 10 | 10 | 25 | 30 | 34 | PSR37-600-70 | 1SFA896110R7000 | |
| 11 | 22 | 30 | 45 | 15 | 15 | 30 | 40 | 46.2 | PSR45-600-70 | 1SFA896111R7000 | |
| 15 | 30 | 37 | 60 | 20 | 20 | 40 | 50 | 59.4 | PSR60-600-70 | 1SFA896112R7000 | |
| 22 | 37 | 45 | 72 | 20 | 25 | 50 | 60 | 68 | PSR72-600-70 | 1SFA896113R7000 | |
| 22 | 45 | 55 | 85 | 25 | 30 | 60 | 75 | 80 | PSR85-600-70 | 1SFA896114R7000 | |
| 30 | 55 | 55 | 105 | 30 | 40 | 75 | 100 | 104 | PSR105-600-70 | 1SFA896115R7000 | |

Rated operational voltage U_e , 208...600 V AC
Rated control supply voltage, U_s , 24 V AC/DC, 50/60 Hz

| | | | | | | | | | | |
|------|------|------|-----|-----|------|-----|-----|------|---------------|-----------------|
| 0.75 | 1.5 | 2.2 | 3.9 | 0.5 | 0.75 | 2 | 2 | 3.4 | PSR3-600-11 | 1SFA896103R1100 |
| 1.5 | 3 | 4 | 6.8 | 1 | 1.5 | 3 | 5 | 6.1 | PSR6-600-11 | 1SFA896104R1100 |
| 2.2 | 4 | 4 | 9 | 2 | 2 | 5 | 7.5 | 9 | PSR9-600-11 | 1SFA896105R1100 |
| 3 | 5.5 | 5.5 | 12 | 3 | 3 | 7.5 | 10 | 11 | PSR12-600-11 | 1SFA896106R1100 |
| 4 | 7.5 | 7.5 | 16 | 3 | 5 | 10 | 10 | 15.2 | PSR16-600-11 | 1SFA896107R1100 |
| 5.5 | 11 | 15 | 25 | 7.5 | 7.5 | 15 | 20 | 24.2 | PSR25-600-11 | 1SFA896108R1100 |
| 7.5 | 15 | 18.5 | 30 | 7.5 | 10 | 20 | 25 | 28 | PSR30-600-11 | 1SFA896109R1100 |
| 7.5 | 18.5 | 22 | 37 | 10 | 10 | 25 | 30 | 34 | PSR37-600-11 | 1SFA896110R1100 |
| 11 | 22 | 30 | 45 | 15 | 15 | 30 | 40 | 46.2 | PSR45-600-11 | 1SFA896111R1100 |
| 15 | 30 | 37 | 60 | 20 | 20 | 40 | 50 | 59.4 | PSR60-600-11 | 1SFA896112R1100 |
| 22 | 37 | 45 | 72 | 20 | 25 | 50 | 60 | 68 | PSR72-600-11 | 1SFA896113R1100 |
| 22 | 45 | 55 | 85 | 25 | 30 | 60 | 75 | 80 | PSR85-600-11 | 1SFA896114R1100 |
| 30 | 55 | 55 | 105 | 30 | 40 | 75 | 100 | 104 | PSR105-600-11 | 1SFA896115R1100 |

ABB softstarters

PSE – The efficient range



Technical data

- Operational voltage: 208...600 V AC
- Wide rated control supply voltage: 100...250 V AC, 50/60 Hz
- Rated operational current: 18...370 A
- Two-phase controlled
- Voltage ramp and torque control for both start and stop
- Current limit
- Kick-start
- Built-in bypass for energy saving and easy installation
- Coated PCBA protecting from dust, moist and corrosive atmosphere
- Illuminated display that uses symbols to become language neutral
- External keypad rated IP66 (Type 1, 4X,12) as an option

- Built-in Modbus RTU for monitoring and control
- Analog output for display of motor current
- Electronic overload protection
- Underload protection
- Locked rotor protection

Available communication protocols:

- Built-in: Modbus RTU
- Fieldbus plug (optional): PROFIBUS, DeviceNet, Modbus TCP

Certifications and approvals:

- CE, cULus, CCC, EAC, ANCE, C-tick, ABS, DNV GL, Lloyd's Register, CCS, PRS, Class NK, KC



Basic motor protection and current limit

The PSE includes the most important protections for handling different load situations that can happen to pumps e.g. overload and underload. The current limit gives you more control of the motor during start and allows you to start your motor in weaker networks.



Saving time and money with built-in bypass and compact design

On the PSE, the bypass is built in and verified by ABB, saving you time during installation and space in your panel. The keypad is language neutral and illuminated for easy set-up and operation in field. The compact design makes installation fast and easy.



Torque control for elimination of water hammering in pumps

Torque control is the most efficient way to stop a full speed pump. The PSE has a special torque stop ramp that is designed together with a pump manufacturer to eliminate water hammering in an optimal way.

PSE Dimensions and weight

| Frame size | H (mm) | W (mm) | D (mm) | Weight (kg) | Weight (lb) |
|--------------|--------|--------|--------|-------------|-------------|
| PSE18...60 | 245 | 90 | 185.5 | 2.4 | 5.3 |
| PSE72...105 | 245 | 90 | 185.5 | 2.5 | 5.5 |
| PSE142...170 | 295 | 130 | 219.5 | 4.2 | 9.2 |
| PSE210 | 435 | 190 | 236.5 | 9.5 | 20.9 |
| PSE210...370 | 435 | 190 | 236.5 | 10.9 | 20.4 |

¹⁾Note: Include HMI



Ordering details

Normal start and heavy-duty start



PSE18 ... PSE105



PSE142 ... PSE170



New PSE210... PSE370



For a more precise selection, use the online softstarter selection tool available by scanning the shown QR code or using the selection tool available on: econfigure.xe.abb.com/global

Normal starts, class 10, in-line

Rated operational voltage U_g , 208...600 V. Rated control supply voltage U_c , 100...250 V AC, 50/60 Hz

| IEC | | | | UL/CSA | | | | | Type | Order code | Price |
|-------------------------|---------------|---------------|--------------|-------------------------|---------------|---------------|---------------|---------|-----------------|-----------------|-------|
| Rated operational power | | | Current | Rated operational power | | | | Current | | | |
| 230 V | 400 V | 500 V | | 200/208 V | 220/240 V | 440/480 V | 550/600 V | | | | |
| P_e (kW) | P_e (kW) | P_e (kW) | I_e (A) | P_e (hp) | P_e (hp) | P_e (hp) | P_e (hp) | (A) | (Eur) | | |
| 4 | 7.5 | 11 | 18 | 5 | 5 | 10 | 15 | 18 | PSE18-600-70 | 1SFA897101R7000 | |
| 5.5 | 11 | 15 | 25 | 7.5 | 7.5 | 15 | 20 | 25 | PSE25-600-70 | 1SFA897102R7000 | |
| 7.5 | 15 | 18.5 | 30 | 7.5 | 10 | 20 | 25 | 28 | PSE30-600-70 | 1SFA897103R7000 | |
| 9 | 18.5 | 22 | 37 | 10 | 10 | 25 | 30 | 34 | PSE37-600-70 | 1SFA897104R7000 | |
| 11 | 22 | 30 | 45 | 10 | 15 | 30 | 40 | 42 | PSE45-600-70 | 1SFA897105R7000 | |
| 15 | 30 | 37 | 60 | 20 | 20 | 40 | 50 | 60 | PSE60-600-70 | 1SFA897106R7000 | |
| 18.5 | 37 | 45 | 72 | 20 | 25 | 50 | 60 | 68 | PSE72-600-70 | 1SFA897107R7000 | |
| 22 | 45 | 55 | 85 | 25 | 30 | 60 | 75 | 80 | PSE85-600-70 | 1SFA897108R7000 | |
| 30 | 55 | 75 | 106 | 30 | 40 | 75 | 100 | 104 | PSE105-600-70 | 1SFA897109R7000 | |
| 40 | 75 | 90 | 143 | 40 | 50 | 100 | 125 | 130 | PSE142-600-70 | 1SFA897110R7000 | |
| 45 | 90 | 110 | 171 | 60 | 60 | 125 | 150 | 169 | PSE170-600-70 | 1SFA897111R7000 | |
| 59 | 110 | 132 | 210 | 60 | 75 | 150 | 200 | 192 | PSE210-600-70-1 | 1SFA897112R7001 | |
| 75 | 132 | 160 | 250 | 75 | 100 | 200 | 250 | 248 | PSE250-600-70-1 | 1SFA897113R7001 | |
| 90 | 160 | 200 | 300 | 100 | 100 | 250 | 300 | 302 | PSE300-600-70-1 | 1SFA897114R7001 | |
| 110 | 200 | 250 | 370 | 125 | 150 | 300 | 350 | 361 | PSE370-600-70-1 | 1SFA897115R7001 | |

Heavy-duty start, class 30, in-line

Rated operational voltage U_g , 208...600 V. Rated control supply voltage U_c , 100...250 V AC, 50/60 Hz

| | | | | | | | | | | |
|------|------|------|-----|-----|-----|-----|-----|-----|-----------------|-----------------|
| 3 | 5.5 | 7.5 | 12 | 3 | 3 | 7.5 | 10 | 11 | PSE18-600-70 | 1SFA897101R7000 |
| 4 | 7.5 | 11 | 18 | 5 | 5 | 10 | 15 | 18 | PSE25-600-70 | 1SFA897102R7000 |
| 5.5 | 11 | 15 | 25 | 7.5 | 7.5 | 15 | 20 | 25 | PSE30-600-70 | 1SFA897103R7000 |
| 7.5 | 15 | 18.5 | 30 | 7.5 | 10 | 20 | 25 | 28 | PSE37-600-70 | 1SFA897104R7000 |
| 9 | 18.5 | 22 | 37 | 10 | 10 | 25 | 30 | 34 | PSE45-600-70 | 1SFA897105R7000 |
| 11 | 22 | 30 | 45 | 10 | 15 | 30 | 40 | 42 | PSE60-600-70 | 1SFA897106R7000 |
| 15 | 30 | 37 | 60 | 20 | 20 | 40 | 50 | 60 | PSE72-600-70 | 1SFA897107R7000 |
| 18.5 | 37 | 45 | 72 | 20 | 25 | 50 | 60 | 68 | PSE85-600-70 | 1SFA897108R7000 |
| 22 | 45 | 55 | 85 | 25 | 30 | 60 | 75 | 80 | PSE105-600-70 | 1SFA897109R7000 |
| 30 | 55 | 75 | 106 | 30 | 40 | 75 | 100 | 104 | PSE142-600-70 | 1SFA897110R7000 |
| 40 | 75 | 90 | 143 | 40 | 50 | 100 | 125 | 130 | PSE170-600-70 | 1SFA897111R7000 |
| 45 | 90 | 110 | 171 | 60 | 60 | 125 | 150 | 169 | PSE210-600-70-1 | 1SFA897112R7001 |
| 59 | 110 | 132 | 210 | 60 | 75 | 150 | 200 | 192 | PSE250-600-70-1 | 1SFA897113R7001 |
| 75 | 132 | 160 | 250 | 75 | 100 | 200 | 250 | 248 | PSE300-600-70-1 | 1SFA897114R7001 |
| 90 | 160 | 200 | 300 | 100 | 100 | 250 | 300 | 302 | PSE370-600-70-1 | 1SFA897115R7001 |

ABB softstarters

PSTX – The advanced range



Technical data

- Operational voltage: 208...690 VAC
- Wide rated control supply voltage: 100...250 V, 50/60 Hz
- PSTX rated operational current: 30...1250 A (inside-delta: 2160 A)
- Three-phase controlled
- Both in-line and inside-delta connection
- Coated circuit boards protecting from dust, moist and corrosive atmosphere
- Detachable keypad rated IP66 (Type 1, 4X,12)
- Graphical display with 17 languages for easy setup and operation
- Built-in bypass for energy saving and easy installation
- Built-in Modbus RTU for monitoring and control

- Support for all major communication protocols
- Analog output for measurement of current, voltage, power factor etc.

Available communication protocols:

- Built-in: Modbus RTU
- Anybus (optional): Modbus RTU, PROFIBUS DP, DeviceNet, EtherNet IP, PROFINET, Modbus TCP, BACnet, EtherCAT
- Fieldbus plug (optional): PROFIBUS, DeviceNet, Modbus RTU

Certifications and approvals:

- CE, cULus, CCC, EAC, ANCE, C-tick, ABS, DNV GL, Lloyd's Register, CCS, PRS, Class NK, KC



Complete motor protection

The PSTX offers complete motor protection in only one unit and is able to handle both load and network irregularities. PT-100, earth fault protection and over/under voltage protection along with many other functions keep your motor safer than ever.



Built-in bypass saves time and energy

When reaching full speed, the PSTX will activate its bypass. This saves energy while reducing the softstarter's heat generation. On the PSTX, the bypass is built in and verified by ABB, saving you time during installation and space in your panel.



Complete control of pumps

Time to use your processes to their full potential. The PSTX features many application enhancing features, including torque control: the most efficient way to start and stop pumps. The pump cleaning feature can reverse pump flow and clean out pipes, securing uptime of your pump system.

PSTX Dimensions and weight

| Frame size | H (mm) | W (mm) | D ¹⁾ (mm) | Weight (kg) | Weight (lb) |
|---------------|--------|--------|----------------------|-------------|-------------|
| PSTX30...105 | 314 | 150 | 197.5 | 6.10 | 13.45 |
| PSTX142...170 | 377 | 199 | 283.3 | 9.60 | 21.16 |
| PSTX210...370 | 470 | 258 | 279.1 | 12.70 | 27.99 |
| PSTX470...570 | 493 | 361 | 282.15 | 25.00 | 55,12 |
| PSTX720...840 | 493 | 435 | 366.5 | 46.20 | 101.85 |
| PSTX1050 | 515 | 435 | 366.5 | 64.20 | 141.64 |
| PSTX1250 | 565 | 435 | 366.5 | 64.70 | 142.64 |

¹⁾Note: Include HMI



Ordering details

Normal start, class 10, in-line



For a more precise selection, use the online softstarter selection tool available by scanning the shown QR code or using the selection tool available on: econfigure.xe.abb.com/global



Normal start, class 10, in-line. For more PSTX view softstarter main catalog Link.
Rated operational voltage U_g , 208...600 V, Rated control supply voltage U_c , 100...250 V AC, 50/60 Hz










| IEC | | | UL/CSA | | | | | Type | Order code | Price |
|-------------------------|---------------|---------------|-------------------------|---------------|---------------|---------------|---------|------|-----------------|-----------------|
| Rated operational power | | Current | Rated operational power | | | | Current | | | |
| 400 V | 500 V | 690 V | 200/208 V | 220/240 V | 440/480 V | 550/600 V | FLA | | | |
| P_o (kW) | P_o (kW) | P_o (kW) | P_o (hp) | P_o (hp) | P_o (hp) | P_o (hp) | (A) | | (Eur) | |
| 15 | 18.5 | - | 30 | 7.5 | 10 | 20 | 25 | 28 | PSTX30-600-70 | 1SFA898103R7000 |
| 18.5 | 22 | - | 37 | 10 | 10 | 25 | 30 | 34 | PSTX37-600-70 | 1SFA898104R7000 |
| 22 | 25 | - | 45 | 10 | 15 | 30 | 40 | 42 | PSTX45-600-70 | 1SFA898105R7000 |
| 30 | 37 | - | 60 | 20 | 20 | 40 | 50 | 60 | PSTX60-600-70 | 1SFA898106R7000 |
| 37 | 45 | - | 72 | 20 | 25 | 50 | 60 | 68 | PSTX72-600-70 | 1SFA898107R7000 |
| 45 | 55 | - | 85 | 25 | 30 | 60 | 75 | 80 | PSTX85-600-70 | 1SFA898108R7000 |
| 55 | 75 | - | 106 | 30 | 40 | 75 | 100 | 104 | PSTX105-600-70 | 1SFA898109R7000 |
| 75 | 90 | - | 143 | 40 | 50 | 100 | 125 | 130 | PSTX142-600-70 | 1SFA898110R7000 |
| 90 | 110 | - | 171 | 50 | 60 | 125 | 150 | 169 | PSTX170-600-70 | 1SFA898111R7000 |
| 110 | 132 | - | 210 | 60 | 75 | 150 | 200 | 192 | PSTX210-600-70 | 1SFA898112R7000 |
| 132 | 160 | - | 250 | 75 | 100 | 200 | 250 | 248 | PSTX250-600-70 | 1SFA898113R7000 |
| 160 | 200 | - | 300 | 100 | 100 | 250 | 300 | 302 | PSTX300-600-70 | 1SFA898114R7000 |
| 200 | 257 | - | 370 | 125 | 150 | 300 | 350 | 361 | PSTX370-600-70 | 1SFA898115R7000 |
| 250 | 315 | - | 470 | 150 | 200 | 400 | 500 | 480 | PSTX470-600-70 | 1SFA898116R7000 |
| 315 | 400 | - | 570 | 200 | 200 | 500 | 600 | 590 | PSTX570-600-70 | 1SFA898117R7000 |
| 400 | 500 | - | 720 | 250 | 300 | 600 | 700 | 720 | PSTX720-600-70 | 1SFA898118R7000 |
| 450 | 600 | - | 840 | 300 | 350 | 700 | 800 | 840 | PSTX840-600-70 | 1SFA898119R7000 |
| 560 | 730 | - | 1050 | 400 | 450 | 900 | 1000 | 1062 | PSTX1050-600-70 | 1SFA898120R7000 |
| 710 | 880 | - | 1250 | 400 | 500 | 1000 | 1200 | 1250 | PSTX1250-600-70 | 1SFA898121R7000 |

Rated operational voltage U_g , 208...690 V, Rated control supply voltage U_c , 100...250 V AC, 50/60 Hz

| | | | | | | | | | | |
|------|------|------|------|-----|-----|------|------|------|-----------------|-----------------|
| 15 | 18.5 | 25 | 30 | 7.5 | 10 | 20 | 25 | 28 | PSTX30-690-70 | 1SFA898203R7000 |
| 18.5 | 22 | 30 | 37 | 10 | 10 | 25 | 30 | 34 | PSTX37-690-70 | 1SFA898204R7000 |
| 22 | 25 | 37 | 45 | 10 | 15 | 30 | 40 | 42 | PSTX45-690-70 | 1SFA898205R7000 |
| 30 | 37 | 55 | 60 | 20 | 20 | 40 | 50 | 60 | PSTX60-690-70 | 1SFA898206R7000 |
| 37 | 45 | 59 | 72 | 20 | 25 | 50 | 60 | 68 | PSTX72-690-70 | 1SFA898207R7000 |
| 45 | 55 | 75 | 85 | 25 | 30 | 60 | 75 | 80 | PSTX85-690-70 | 1SFA898208R7000 |
| 55 | 75 | 90 | 106 | 30 | 40 | 75 | 100 | 104 | PSTX105-690-70 | 1SFA898209R7000 |
| 75 | 90 | 132 | 143 | 40 | 50 | 100 | 125 | 130 | PSTX142-690-70 | 1SFA898210R7000 |
| 90 | 110 | 160 | 171 | 50 | 60 | 125 | 150 | 169 | PSTX170-690-70 | 1SFA898211R7000 |
| 110 | 132 | 184 | 210 | 60 | 75 | 150 | 200 | 192 | PSTX210-690-70 | 1SFA898212R7000 |
| 132 | 160 | 220 | 250 | 75 | 100 | 200 | 250 | 248 | PSTX250-690-70 | 1SFA898213R7000 |
| 160 | 200 | 257 | 300 | 100 | 100 | 250 | 300 | 302 | PSTX300-690-70 | 1SFA898214R7000 |
| 200 | 257 | 355 | 370 | 125 | 150 | 300 | 350 | 361 | PSTX370-690-70 | 1SFA898215R7000 |
| 250 | 315 | 450 | 470 | 150 | 200 | 400 | 500 | 480 | PSTX470-690-70 | 1SFA898216R7000 |
| 315 | 400 | 560 | 570 | 200 | 200 | 500 | 600 | 590 | PSTX570-690-70 | 1SFA898217R7000 |
| 400 | 500 | 710 | 720 | 250 | 300 | 600 | 700 | 720 | PSTX720-690-70 | 1SFA898218R7000 |
| 450 | 600 | 800 | 840 | 300 | 350 | 700 | 800 | 840 | PSTX840-690-70 | 1SFA898219R7000 |
| 560 | 730 | 1000 | 1050 | 400 | 450 | 900 | 1000 | 1062 | PSTX1050-690-70 | 1SFA898220R7000 |
| 710 | 880 | 1200 | 1250 | 400 | 500 | 1000 | 1200 | 1250 | PSTX1250-690-70 | 1SFA898221R7000 |










Accessories

PSR softstarter

| | For softstarter type | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) |
|---|--|----------------|-----------------|---------|----------------|---------|-------------|
| | | | | | (kg) | (lb) | |
| Connection kit | | | | | | | |
|  | PSR3...16 | PSR16-MS116 | 1SFA896211R1001 | 1 | 0.022 | (0.049) | |
|  | PSR25...30 | PSR30-MS132 | 1SFA896212R1001 | 1 | 0.040 | (0.088) | |
|  | PSR60...105 | PSR105-MS495 | 1SAM501903R1001 | 1 | 0.034 | (0.075) | |
|  | PSR37...45 | PSR45-MS165 | 1SFA896216R1001 | 1 | 0.050 | (0.110) | |
|  | PSR60...72 | PSR60-MS165 | 1SFA896215R1001 | 1 | 0.050 | (0.110) | |
| Fan | | | | | | | |
|  | PSR3 ... PSR45 | PSR-FAN3-45A | 1SFA896311R1001 | 1 | 0.010 | (0.022) | |
|  | PSR60 ... PSR105 | PSR-FAN60-105A | 1SFA896313R1001 | 1 | 0.013 | (0.029) | |
| Terminal enlargements | | | | | | | |
|  | PSR60 ... PSR105 Wire range mm ² 1 x 10...50 mm ² , 2 x 10...25 mm ² | PSLW-72 | 1SFA899002R1072 | 1 | 0.150 | (0.033) | |
| FieldBusPlug connection accessory | | | | | | | |
|  | PSR3 ... PSR105 | PS-FBPA | 1SFA896312R1002 | 1 | 0.060 | (0.132) | |


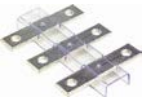
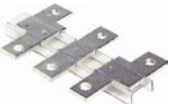




Accessories









PSE softstarter

| | For softstarter type | Wire range (mm ²) | Tightening torque max. (Nm) | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) |
|---|---|--------------------------------------|-----------------------------|-----------------|-----------------|----------------|----------------|-------------|-------------|
| | | | | | | | (kg) | (lb) | |
| Cable connectors for Cu cables | | | | | | | | | |
|  | PSE142 ... PSE170 | 6...120 | 14 | - | 1SDA066917R1 | 3 | 0.113 | (0.249) | |
| | PSE142 ... PSE170 | 2 x (50...120) | 16 | LZ185-2C/120 | 1SFN074709R1000 | 3 | 0.100 | (0.220) | |
| | PSE210 ... PSE370 | 16...300 | 25 | - | 1SDA055016R1 | 3 | 0.133 | (0.293) | |
| Cable connectors for Al and Cu cables | | | | | | | | | |
| | PSE142 ... PSE170 | 95...185 | 31 | - | 1SDA054988R1 | 3 | 0.078 | (0.172) | |
| | PSE210 ... PSE370 | 185...240 | 43 | - | 1SDA055020R1 | 3 | 0.133 | (0.293) | |
| | For softstarter type | Dimensions hole ø (mm ²) | bar (mm ²) | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) |
| Terminal enlargements | | | | | | | | | |
|  | PSE18 ... PSE105 | 6.5 | 15 x 3 | LW110 | 1SFN074307R1000 | 1 | 0.100 | (0.220) | |
| | PSE142 ... PSE170 | 10.5 | 17.5 x 5 | LW185 | 1SFN074707R1000 | 1 | 0.450 | (0.992) | |
| | PSE210 ... PSE370 | 10.5 | 20 x 5 | LW300 | 1SFN075107R1000 | 1 | 1.230 | (2.712) | |
| | For softstarter type | Req. qty | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) | |
| Terminal shrouds | | | | | | | | | |
|  | PSE142 ... PSE170, short for use with cable clamps | 2 | LT185-AC | 1SFN124701R1000 | 2 | 0.050 | (0.110) | | |
| | PSE210 ... PSE370, short for use with cable clamps | 2 | LT300-AC | 1SFN125101R1000 | 2 | 0.070 | (0.154) | | |
|  | PSE142 ... PSE170, long for use with compression lugs | 2 | LT185-AL | 1SFN124703R1000 | 2 | 0.220 | (0.485) | | |
| | PSE210 ... PSE370, long for use with compression lugs | 2 | LT300-AL | 1SFN125103R1000 | 2 | 0.280 | (0.617) | | |
| | For softstarter type | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) | | |
| External keypad including a 3 m cable | | | | | | | | | |
|  | PSE18 ... PSE370 | PSEEK | 1SFA897100R1001 | 1 | 0.198 | (0.437) | | | |
| USB cable for Service Engineer Tool | | | | | | | | | |
|  | PSE18 ... PSE370 | PSECA | 1SFA897201R1001 | 1 | 0.130 | (0.287) | | | |
| FieldBusPlug connection accessory | | | | | | | | | |
|  | PSE18 ... PSE370 | PS-FBPA | 1SFA896312R1002 | 1 | 0.060 | (0.132) | | | |
| Terminal Extensions retrofit kit | | | | | | | | | |
|  | PSE210 ... PSE370-1 | LXR370 | 1SFA899222R1003 | 1 | 0.450 | (0.992) | | | |
| Modbus adapter | | | | | | | | | |
|  | PSE18...PSE370-1 | PS-MBIA | 1SFA899300R1020 | 1 | 0.011 | (0.024) | | | |

Accessories

PSTX softstarter

| | For softstarter type | Wire range (mm ²) | Tightening torque max. (Nm) | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) |
|---|--|---|-----------------------------------|--------------|-------------------|--------------------|-----------------------|---------|------------------------|
| | | | | | | | (kg) | (lb) | |
| Cable connectors for Cu cables | | | | | | | | | |
|  | PSTX142 ... PSTX170 | 6-120 | 8 | - | 1SDA066917R1 | 3 | 0.113 | (0.249) | |
| | PSTX142 ... PSTX170 | 2 x (50-95) | 16 | LZ185-2C/120 | 1SFN074709R1000 | 3 | 0.300 | (0.661) | |
| | PSTX210 ... PSTX370 | 16-240 | 25 | - | 1SDA055016R1 | 3 | 0.133 | (0.293) | |
| | PSTX210 ... PSTX370 | 2 x (70-185) | 22 | OZXB4 | 1SCA022194R0890 | 3 | 0.570 | (1.257) | |
| | PSTX470 ... PSTX570 | 2 x (120-240) | 35 | - | 1SDA013922R1 | 3 | 0.570 | (1.257) | |
| | PSTX570 ... PSTX1050 | 3 x (70-185) | 45 | - | 1SDA013956R1 | 3 | 0.570 | (1.257) | |
| Cable connectors for Al and Cu cables | | | | | | | | | |
| | PSTX142 ... PSTX170 | 95-185 | 31 | - | 1SDA054988R1 | 3 | 0.078 | (0.172) | |
| | PSTX210 ... PSTX370 | 185-240 | 43 | - | 1SDA055020R1 | 3 | 0.133 | (0.293) | |
| | PSTX470 ... PSTX1050 | 2 x (120-240) | 31 | - | 1SDA023380R1 | 3 | 0.110 | (0.243) | |
| | For softstarter type | Dimensions hole ø (mm²) | bar (mm²) | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) |
| | | | | | | | (kg) | (lb) | |
| Terminal extensions | | | | | | | | | |
|  | PSTX142 ... PSTX170 | 8.5 | 17.5 x 5 | LX205 | 1SFN074810R1000 | 1 | 0.250 | (5.551) | |
| | PSTX210 ... PSTX370 | 10.5 | 20 x 5 | LX370 | 1SFN075410R1000 | 1 | 0.350 | (0.772) | |
| | PSTX470 ... PSTX570 | 10.5 | 25 x 5 | LX460 | 1SFN075710R1000 | 1 | 0.500 | (1.102) | |
| | PSTX720 ... PSTX840 | 13 | 40 x 6 | LX750 | 1SFN076110R1003 | 1 | 0.850 | (1.874) | |
| Terminal enlargements | | | | | | | | | |
|  | PSTX30 ... PSTX105 | 6.5 | 15 x 3 | LW110 | 1SFN074307R1000 | 1 | 0.100 | (0.220) | |
| | PSTX142 ... PSTX170 | 10.5 | 17.5 x 5 | LW205 | 1SFN074807R1000 | 1 | 0.250 | (5.551) | |
| | PSTX210 ... PSTX370 | 10.5 | 20 x 5 | LW370 | 1SFN075407R1000 | 1 | 0.450 | (0.992) | |
| | PSTX470 ... PSTX570 | 10.5 | 25 x 5 | LW460 | 1SFN075707R1000 | 1 | 0.730 | (1.609) | |
| | PSTX720 ... PSTX840 | 13 | 40 x 6 | LW750 | 1SFN076107R1000 | 1 | 1.230 | (2.712) | |
| | For softstarter type | Req. qty | | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) |
| | | | | | | | (kg) | (lb) | |
| Terminal shrouds | | | | | | | | | |
|  | PSTX142 ... PSTX170, short for use with cable clamps | 2 | | LT205-30C | 1SFN124801R1000 | 2 | 0,050 | (0.110) | |
| | PSTX210 ... PSTX370, short for use with cable clamps | 2 | | LT370-30C | 1SFN125401R1000 | 2 | 0.035 | (0.077) | |
|  | PSTX142 ... PSTX170, long for use with compression lugs | 2 | | LT205-30L | 1SFN124803R1000 | 2 | 0.220 | (0.485) | |
| | PSTX210 ... PSTX370, long for use with compression lugs | 2 | | LT370-30L | 1SFN125403R1000 | 2 | 0.280 | (0.617) | |
| | PSTX210 ... PSTX370, long and deep for use with extending cable clamps, ATK300/2 and OZXB4 | 2 | | LT370-30D | 1SFN125406R1000 | 2 | 0.150 | (0.331) | |
|  | PSTX470 ... PSTX570 , short for use with cable clamps | 2 | | LT460-AC | 1SFN125701R1000 | 2 | 0.100 | (0.220) | |
| | PSTX720 ... PSTX840, short for use with cable clamps | 2 | | LT750-AC | 1SFN126101R1000 | 2 | 0.120 | (0.265) | |
|  | PSTX470 ... PSTX570, long for use with compression lugs | 2 | | LT460-AL | 1SFN125703R1000 | 2 | 0.800 | (1.764) | |
| | PSTX720 ... PSTX840, long for use with compression lugs | 2 | | LT750-AL | 1SFN126103R1000 | 2 | 0.825 | (1.819) | |

| | For softstarter type | Type | Order code | Pkg qty | Weight (1 pce) | | Price (Eur) | |
|--|----------------------|------------------|-----------------|-----------------|----------------|----------------|-------------|-------|
| | | | | | (kg) | (lb) | | |
| Anybus connection accessory for communication protocol suitable for PSTX30 ... PSTX1250 | | | | | | | | |
|  | Profibus | AB-PROFIBUS-1 | 1SFA899300R1001 | 1 | 0.028 | 0.062 | | |
|  | DeviceNet | AB-DEVICENET-1 | 1SFA899300R1002 | 1 | 0.028 | 0.062 | | |
|  | Modbus-RTU | AB-MODBUS-RTU-1 | 1SFA899300R1003 | 1 | 0.028 | 0.062 | | |
|  | BACnet IP | AB-BACNET-IP-2 | 1SFA899300R1004 | 1 | 0.028 | 0.062 | | |
| | EtherNet/IP (2-port) | AB-ETHERNET-IP-2 | 1SFA899300R1006 | 1 | 0.028 | 0.062 | | |
| | Modbus/TCP (2-port) | AB-MODBUS-TCP-2 | 1SFA899300R1008 | 1 | 0.028 | 0.062 | | |
| | Profinet (2-port) | AB-PROFINET-IO-2 | 1SFA899300R1010 | 1 | 0.028 | 0.062 | | |
|  | BACnet MS/TP | AB-BACNET-MSTP-1 | 1SFA899300R1011 | 1 | 0.028 | 0.062 | | |
|  | EtherCAT | AB-ETHERCAT-IP-2 | 1SFA899300R1012 | 1 | 0.028 | 0.062 | | |
| FieldBusPlug connection accessory, ABB's FieldBusPlug suitable for all sizes, see latest softstarter catalog. | | | | | | | | |
|  | PSTX30 ... PSTX1250 | PS-FBPA | 1SFA896312R1002 | 1 | 0.060 | (0.132) | | |
| | PSTX30 ... PSTX1250 | PS-FBPK | 1SFA899320R1002 | 1 | 0.150 | (0.331) | | |
| I/O module, 24 V DC digital input | | | | | | | | |
| | PSTX30 ... PSTX1250 | DX111-FBP.0 | 1SAJ611000R0101 | 1 | 0.220 | (0.485) | | |
| Terminal kit | | | | | | | | |
| | Terminal kit | Req. qty | Type | Order code | Pkg qty | Weight (1 pce) | | Price |
| | | | | | | (kg) | (lb) | (Eur) |
| Terminal nut washer | | | | | | | | |
|  | PSTX142 ... PSTX170 | 1 | PSLE-185 | 1SFA899221R1002 | 1 | 0.200 | (0.441) | |
| | PSTX210 ... PSTX370 | 1 | PSLE-300 | 1SFA899221R1003 | 1 | 0.300 | (0.661) | |
| | PSTX470 ... PSTX570 | 1 | PSLE-460 | 1SFA899221R1004 | 1 | 0.600 | (1.323) | |
| | PSTX720 ... PSTX840 | 1 | PSLE-750 | 1SFA899221R1005 | 1 | 0.750 | (1.653) | |

Introducing 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 set up 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:

abb.com/drives
new.abb.com/low-voltage/products/softstarters



We keep your world turning

Whatever your needs are, we offer the most extensive service offering for drives, motors and generators from spare parts and technical support to cloud-based condition monitoring solutions to keep your equipment running.

The global ABB service units complemented by external Value Providers form a service network on your doorstep. Maximize performance, uptime and efficiency throughout the life cycle of your assets.

With you every step of the way

Even before you buy a generator, drive, motor, bearing or softstarter, ABB's experts are on hand to offer technical advice from dimensioning through to potential energy saving.

When you've decided on the right product, ABB and its global network of Value Providers can help with installation and commissioning. They are also on hand to support you throughout the operation and maintenance phases of the products life cycle, providing maintenance programs tailored to your facility's needs.

ABB will ensure you are aware of any service opportunities. If you've registered your drives and motors with ABB, then its engineers will proactively contact you advising on your most effective service options. All of which helps maximize performance, uptime and efficiency throughout the lifetime of your powertrain.



Replacements
Fast and efficient replacement services to minimize production downtime.



End-of-life services
Responsible dismantling, recycling and reusing of products, according to local laws and industrial standards.



Maintenance
Systematic and organized maintenance and support over the life cycle of your assets.





Advanced services
Gain the unique ABB Ability™ digital advantage through data collection and analytics with advanced services.



Extensions, upgrades & retrofits
Up-to-date systems and devices with the best possible performance level.



Engineering & consulting
Ways to identify and improve the reliability, usability, maintainability and safety of your production processes.



Spares & consumables
Authentic, high-quality ABB spares and consumables with quick delivery.



Technical support & repairs
Quick and accurate response during emergencies and efficient support during planned production breaks.



Installation & commissioning
Highly-trained and reliable installation and commissioning experts at your service.



Training
Comprehensive and professional training either at ABB premises or your own.



Agreements
Comprehensive bundling of relevant services into one contract to suit your needs.

Global service network 24/7

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“I need operational excellence, rapid response, improved performance and life cycle management.”

A lifetime of peak performance

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

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

ABB drives 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. |

Keeping you informed

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

The benefit for you is clear information about the status of your drives and the exact 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, the availability of product and services, the life cycle plan, and recommended actions.

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

new.abb.com/drives
new.abb.com/drivespartners
new.abb.com/drives/softstarters



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