

FOR SMOOTH MOTOR CONTROL AND ENERGY SAVINGS

# Low voltage AC drives

# Catalog and price list





 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. AC drives.
For smooth
motor control
and energy
savings.

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## Smooth motor control and energy savings

#### What is an AC drive?

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

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

## ABB – global market and technology leader in AC drives

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. ABB is the world's largest drives manufacturer. ABB operates in more than 100 countries with about 105,000 employees.

Electric motors consume over 45% of the world's electricity. Yet, only 23% of those motors are fitted with variable speed drives. By 2040 the number of motors will double. Adoption of high-efficiency motor systems would cut global electricity consumption by up to 10%.



# Improve your processes with AC drives

#### Increased life time

Smooth ramp up to full speed reduces the mechanical wear and tear on the equipment and running the motor based on the process demand rather than running at full speed prolongs your process lifetime.

#### Increased productivity

Using 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 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 common features

#### • Easy to select

You can be sure to find a right product for your application from a wide selection of ABB AC drives.

#### Easy to purchase

ABB drives are available from ABB and selected ABB partners. Please contact ABB for more details.

#### • Easy to install

The drives are simple to install, featuring a variety of mounting options from wall-mounted to cabinet mounted.

#### · Easy to operate

Once installed and commissioned, the drives are incredibly easy to operate. The user interface allows instant adjustments to speed or other more advanced parameters.



# Choosing the right drive for your application

Step	Process	Action
1	Identify the application Identify the type of application and the likely demands of the drive.	Continue to step 2.
2	Gather the load data: system inertia, required acceleration and deceleration rates, minimum and maximum speeds, overload requirements, etc.  This information can often be determined by the performance of the existing motor.	Continue to step 3.
3	Gather the motor data: rated torque, kW, 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**

	ABB	ABB			ABB
	micro drives	machinery drive		general pur	pose drives
Applications where to use	ACS150	ACS355	ACS310	ACS480	ACS580
Pumps	•	•	•	•	•
Fans	•	•	•	•	•
Conveyors	•	•	-	•	•
Material handling machines	•	•	-	•	•
Excercise equipment	•	-	-	_	_
White goods	•	-	-	-	_
Gates, doors, barriers	•	•	-	•	-
Compressors	-	•	•	•	•
Cutting machines, shears, saws	-	•	-	•	•
Extruders	-	•	-	•	•
Machine tools, mixers, stirrers	_	•	-	•	•
Spinning machines	•	•	-	•	•
Centrifuges	-	•	-	•	•
Processing lines	_	-	_	•	•

 $See how \ easy it is to \ match \ a \ drive \ with \ a \ motor, visit \ Drive \ and \ Motor \ Selector: https://selector.drivesmotors.abb.com/$ 

Protection classes    Protection classes	AC	S150	ACS355	ACS310	ACS480	ACS580
IP21   IP54/IP55   IP66/IP67	1-p 200 to 2	hase,	1-phase, 200 to 240 V:	1-phase, 200 to 240 V: 0.37		
IP21   IP54/IP55   IP66/IP67	0.37 to 2		0.37 to 2.2 kW	to 2.2 kW		
IP21   IP54/IP55   IP66/IP67		hase,	3-phase,	3-phase,		3-phase,
IP21 IP54/IP55 IP66/IP67  Mounting arrangements  Optimal for cabinet mounting Optimal for wall mounting Programming Programming Parameter program Sequence program Sequence program Assistant control p with bluetooth link Ambient temperature  Inputs and outputs  Analog inputs/outp Speed feedback  Modbus RTU Profibus DP DeviceNet™ ControlNet CANopen® Ethernet (Modbus/Ethernet (EtherNet) Ethernet (EtherNet) Ethernet (POWERL) Ethernet (POWERL) Ethernet (POWERL) Ethernet (POWERL) Ethernet (POWERL) Compliance (EN 61800-3)  Chokes  Input chokes Output chokes Output frequency Output frequency Overload capacity  Number of preset speeds	200 to 2		200 to 240 V: 0.37 to 11 kW	200 to 240 V: 0.37		200 to 240 V:
IP21   IP54/IP55   IP66/IP67	0.37 to 2	hase,	3-phase,	to 11 kW 3-phase,	3-phase,	0.75 to 75 kW 3-phase,
IP21   IP54/IP55   IP66/IP67	380 to 4		380 to 480 V:	380 to 480 V: 0.37	380 to 480 V:	380 to 480 V:
IP21   IP54/IP55   IP66/IP67	0.37 to	4 kW	0.37 to 22 kW	to 22 kW	0.75 to 22 kW	0.75 to 500 kW
IP51 IP54/IP55 IP66/IP67  Mounting arrangements  Programming Optimal for cabinet mounting Optimal for wall mounting Programming Parameter program Sequence program Basic control panel Assistant control p with bluetooth link Ambient temperature  Inputs and outputs  Analog inputs/outpout Speed feedback Supported fieldbus protocols Profibus DP DeviceNet™ ControlNet CANopen® Ethernet (Modbus/Ethernet (EtherNet Ethernet (EtherNet Ethernet (PROFINE Ethernet (POWERL) Ethernet (POWER		•	•	•	•	0
IP66/IP67		-	0	0	_	•
Mounting arrangements  Optimal for cabinet mounting Optimal for wall mounting Programming Parameter program Sequence program Assistant control panel Assistant control p with bluetooth link Ambient temperature  Inputs and outputs  Input chokes Input chokes Input chokes Input chokes Input chokes Output frequency Output frequency Overload capacity  Number of preset speeds		_	_	-	_	<b>1</b> )
arrangements    Cabinet mounting			1)	_	-	_
Programming Programming Parameter program Sequence program Basic control panel Assistant control p with bluetooth link  Ambient temperature    Inputs and outputs		•	•	•	•	•
Sequence program Human- machine interface  Assistant control p with bluetooth link Ambient temperature    Digital inputs/outp Relay outputs		-	• (IP66/67 variant)	-	-	•
Human- machine interface    Assistant control p     With bluetooth link     Ambient temperature	nming	•	•	•	•	•
machine interface  Assistant control p with bluetooth link  Ambient temperature  Inputs and outputs  Analog inputs/outp Speed feedback  Analog inputs/outp Speed feedback  Modbus RTU Profibus DP DeviceNet™ ControlNet CANopen® Ethernet (Modbus/Ethernet (EtherNet) Ethernet (EtherNet) Ethernet (PROFINE) Ethernet (POWERL) Ethernet (POWERL) Ethernet (POWERL) C1, commercial use (installation by EMC experts) C1, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C1, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C1, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C6, commercial use C7, commercial use C1, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C6, commercial use C7, commercial use C8, commercial use C9, commercial use C1, commercial use C1, commercial use C2, commercial use C1, commercial use C2, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C6, commercial use C7, commercial use C1, commercial use C1, commercial use C2, commercial use C1, commercial use C2, commercial use C1, commercial use C1, commercial use C2, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C1, commercial use C1, commercial use C1, commercial use C2, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C6, commercial use C7, commercial use C8, industrial use C9, commercial use C1, commercial use C1, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C5, commercial use C6, commercial use C6, commercial use C7, commercial use C8, commercial use C1, commercial use C1, commercial use C2, commercial use C3, industrial use C4, commercial use C6, commercial use C6, commercial use C7, com	ming	-	•	-	•	•
Assistant control p with bluetooth link  Ambient temperature    Inputs and outputs		•	•	•	0	0
with bluetooth link  Ambient temperature    Inputs and outputs	anel	-	O/● (with IP66/67 variant)	0	•	•
Inputs and outputs  Relay outputs  Analog inputs/outputs  Analog inputs/outputs  Analog inputs/outputs  Analog inputs/outputs  Speed feedback  Modbus RTU  Profibus DP  DeviceNet™  ControlNet  CANopen®  Ethernet (Modbus/ Ethernet (EtherNet)  Ethernet (EtherNet)  Ethernet (POWERL)  Ethernet (POWERL)  Ethernet (POWERL)  Ethernet (Powerla)  C2, commercial use (installation by EMC experts)  C1, commercial use  Chokes  Input chokes  Output chokes  Output chokes  Output chokes  Output frequency  Overload capacity  Number of preset speeds	anel	-	-	-	0	0
Relay outputs  Analog inputs/outp Speed feedback  Supported fieldbus protocols  Profibus DP DeviceNet™ ControlNet CANopen® Ethernet (Modbus/Ethernet (EtherNet) Ethernet (PROFINE) Ethernet (POWERL) Ethernet (POWERL) Ethernet (POWERL)  Ethernet (POWERL) C2, commercial use (installation by EMC experts) C1, commercial use Chokes  Input chokes Output chokes  Brake chopper Suggested maximum motor cable let Switching frequency Overload capacity  Number of preset speeds	-10 to +4 no frost allo +50 °C 10% dera	owed, C with	-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.
Analog inputs/outp Speed feedback  Supported fieldbus protocols  Profibus DP DeviceNet™ ControlNet CANopen® Ethernet (Modbus/ Ethernet (EtherNet) Ethernet (EtherNet) Ethernet (PROFINE) Ethernet (POWERL) Ethernet (POWERL) Ethernet (Powerlal use (installation by EMC experts) C1, commercial use C1, commercial use Output chokes  Brake chopper Suggested maximum motor cable let Switching frequency Overload capacity  Number of preset speeds	uts	5/0	5/1	5/1	6/0	6/0
Speed feedback  Supported fieldbus protocols  Modbus RTU  Profibus DP  DeviceNet™  ControlNet  CANopen®  Ethernet (Modbus/ Ethernet (EtherNet)  Ethernet (PROFINE)  Ethernet (POWERL)  Ethernet (POWERL)  Ethernet (POWERL)  C2, commercial use (installation by EMC experts)  C1, commercial use  Chokes  Input chokes  Output chokes  Brake chopper  Suggested maximum motor cable let  Switching frequency  Overload capacity  Number of preset speeds		1	1	1	3 + (6 as option)	3 + (2 as option)
Speed feedback  Supported fieldbus protocols  Modbus RTU  Profibus DP  DeviceNet™  ControlNet  CANopen®  Ethernet (Modbus/ Ethernet (EtherNet)  Ethernet (PROFINE)  Ethernet (POWERL)  Ethernet (POWERL)  Ethernet (POWERL)  C2, commercial use (installation by EMC experts)  C1, commercial use  Chokes  Input chokes  Output chokes  Brake chopper  Suggested maximum motor cable let  Switching frequency  Overload capacity  Number of preset speeds	outs	2/1	2/1	2/1	2/2	2/2
Fieldbus protocols  Profibus DP DeviceNet™ ControlNet CANopen® Ethernet (Modbus/ Ethernet (EtherNet Ethernet (PROFINE Ethernet (POWERLI E			0		-	
Protocols    DeviceNet™   ControlNet		-	0	•	•	•
DeviceNet™ ControlNet CANopen® Ethernet (Modbus/ Ethernet (EtherNet Ethernet (PROFINE Ethernet (POWERLI ETHERNET ETHERN		-	0	-	0	0
CANopen®  Ethernet (Modbus/ Ethernet (EtherNet Ethernet (EtherCAT Ethernet (PROFINE Ethernet (POWERL)  Ethernet (POWERL)  C3, industrial use C2, commercial use (installation by EMC experts)  C1, commercial use  Chokes  Input chokes Output chokes  Brake chopper  Suggested maximum motor cable let Switching frequency  Overload capacity  Number of preset speeds		-	0	-	0	0
Ethernet (Modbus/ Ethernet (EtherNet Ethernet (EtherCAT Ethernet (PROFINE Ethernet (POWERLI Ethernet (POWERLI Ethernet (POWERLI ETHERNET)  C3, industrial use C2, commercial use (installation by EMC experts)  C1, commercial use Output chokes Output chokes  Brake chopper  Suggested maximum motor cable let Switching frequency Overload capacity  Number of preset speeds			0	-	0	0
Ethernet (EtherNet Ethernet (EtherCAT Ethernet (PROFINE Ethernet (POWERLI Ethernet (POWERLI C3, industrial use C2, commercial use (installation by EMC experts) C1, commercial use Output chokes Output chokes Brake chopper Suggested maximum motor cable ler Switching frequency Output frequency Overload capacity Number of preset speeds			0	-	0	0
Ethernet (EtherCAT Ethernet (PROFINE Ethernet (POWERLI Ethernet (POWERLI Ethernet (POWERLI C3, industrial use C2, commercial use (installation by EMC experts) C1, commercial use Chokes Input chokes Output chokes Brake chopper Suggested maximum motor cable ler Switching frequency Output frequency Overload capacity Number of preset speeds	TCP)		0	-	0	0
Ethernet (PROFINE Ethernet (POWERLI Ethernet (POWERLI Ethernet (POWERLI Ethernet (POWERLI Ethernet (POWERLI C3, industrial use C2, commercial use (installation by EMC experts) C1, commercial use Output chokes Output chokes Brake chopper Suggested maximum motor cable ler Switching frequency Output frequency Overload capacity Number of preset speeds	/IP™)		0	-	0	0
Ethernet (POWERLI  Compliance (EN 61800-3)  C1, commercial use (installation by EMC experts)  C1, commercial use Output chokes  Brake chopper  Suggested maximum motor cable let Switching frequency Output frequency Overload capacity  Number of preset speeds	®)		0	-	0	0
EMC compliance (EN 61800-3)  C2, commercial use (installation by EMC experts)  C1, commercial use (installation by EMC experts)  Cutput chokes  Output chokes			0	-	0	0
C2, commercial use (installation by EMC experts)  C1, commercial use (installation by EMC experts)  C1, commercial use Output chokes  Brake chopper  Suggested maximum motor cable less Switching frequency  Output frequency  Overload capacity  Number of preset speeds	NK)		0	_	0	0
(EN 61800-3)  Copyrights of the composition of the		•	•	•	•	•
Chokes Input chokes Output chokes  Brake chopper Suggested maximum motor cable ler Switching frequency Output frequency Overload capacity  Number of preset speeds		0	0	0	•	•
Output chokes  Brake chopper  Suggested maximum motor cable ler  Switching frequency  Output frequency  Overload capacity  Number of preset speeds		uctive sions)	O (conductive emissions)	O (conductive emissions)	O (conductive emissions)	O (conductive emissions)
Brake chopper Suggested maximum motor cable ler Switching frequency Output frequency Overload capacity Number of preset speeds		0	0	0	0	• (built-in)
Suggested maximum motor cable let Switching frequency Output frequency Overload capacity Number of preset speeds		0	0	0	0	0
Switching frequency Output frequency Overload capacity Number of preset speeds		•	•	-	•	●2)
Output frequency Overload capacity Number of preset speeds	igth 30 to	60 m	30 to 60 m	30 to 60 m	50 to 150 m	100 to 300 m
Overload capacity Number of preset speeds	up to 1		up to 16 kHz	up to 16 kHz	up to 12 kHz	up to 12 kHz
Number of preset speeds	0 to 5		0 to 599 Hz	0 to 599 Hz	0 to 500 Hz	0 to 500 Hz
	150% for 180% f	or 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 *)
Drive commissionis		3	7	7	7	7
			0	0	0	0
Drive offline progra tool		0	0	0	0	0
Drive dimensioning				_	_	0
Approvals CE, UL, cUL, C-Tick, RoHS compliance	EAC	•	•	•	•	•

<sup>=</sup> StandardO = Option= Not available

 $<sup>^{1)}</sup>$  IP66/67 and IP54/55 product variants  $^{2)}$  Up to R3 as standard  $^{*)}$  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.



## **EU Ecodesign Regulation**

The EU has agreed upon a new, more demanding regulation (EU) 2019/1781, replacing regulation 640/2009 and setting the minimum efficiency levels not only for direct-on-line rated low voltage induction motors but now also for variable speed drives with a voltage up to 1000 V. The regulation is implemented in two steps July 1, 2021 and July 1, 2023.



## Variable speed drives

Step 1: July 1, 2021

#### IE2 efficiency level mandatory for AC drives

- Power range from 0.12 to 1000 kW.
- 3-phase drives with diode rectifier including ABB's micro, machinery, general purpose, industrial and industry-specific drives.
- Drive manufacturers must declare power losses in percentage of the rated apparent output power at 8 different operating points as well as standby losses. The international efficiency (IE) level is given at nominal point. Drives fulfilling the requirements will be CE marked.
- All the covered ABB products fulfill the requirements.

# Losses compared to reference CDM\*) CDM IE0 CDM IE1 CDM IE2 125% 100% 75% 0% Of ref. CDM losses

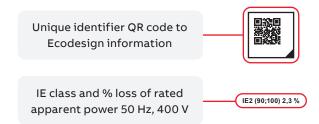
Improving efficiency, lower losses compared to reference CDM  $\,$ 

Complete drive module

#### Excluded from the regulation:

- · All drives without CE marking
- Following low voltage AC drives: regenerative drives, low-harmonic drives (THD < 10%), multiple AC-output drives and single-phase drives.
- · Drive cabinets with already conformity assessed modules
- Medium voltage drives, DC drives and traction drives

## Markings on the ABB AC drives



Unique QR codes are located on the rating plate and/or the front side of the drive.

Step 2: July 1, 2023

No changes for drives from July 1, 2021

For more information, see Ecodesign tool: https://ecodesign.drivesmotors.abb.com/

## **ABB** general purpose drives

## ACS480, 0.75 to 22 kW

#### 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.



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.

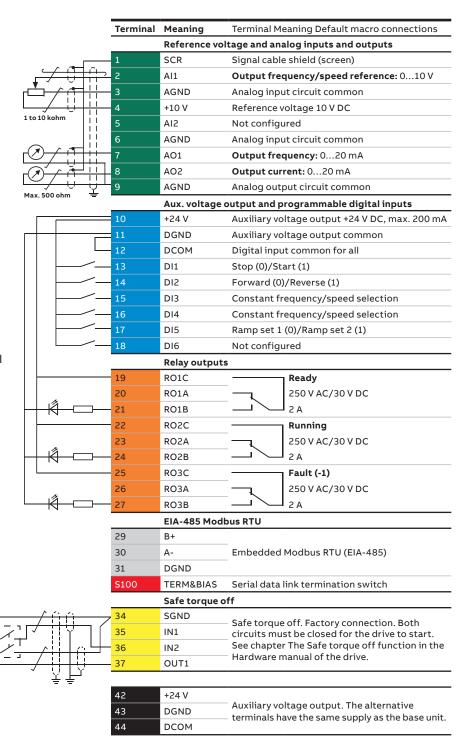
#### The base unit includes:

- 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.



#### Dimensions and weights

Frame size	Н	W	D	Weight
	(mm)	(mm)	(mm)	(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	Electrical code/	ABB type code/	Frame	Price
P <sub>Ld</sub> (kW)	/ <sub>Ld</sub> (A)	P <sub>Hd</sub> (kW)	I <sub>нd</sub> (А)	Enclosure IP20	reference code	order code for IP20	size	(Eur)
3-phase	e, <i>U</i> <sub>N</sub> = 400	0 V (3-pha	ase supply A	C 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		Heavy-	duty use ratings
P <sub>Ld</sub>	Typical motor power in light-duty use.	$P_{Hd}$	Typical motor power in heavy-duty use
I <sub>Ld</sub>	Continuous current allowing 110% I <sub>Ld</sub> for 1 min/10 min at 50 °C	I <sub>Hd</sub>	Continuous current allowing 150% $I_{\rm Hd}$ 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

01 ACS580 frame sizes: R1 to R11



#### What is it?

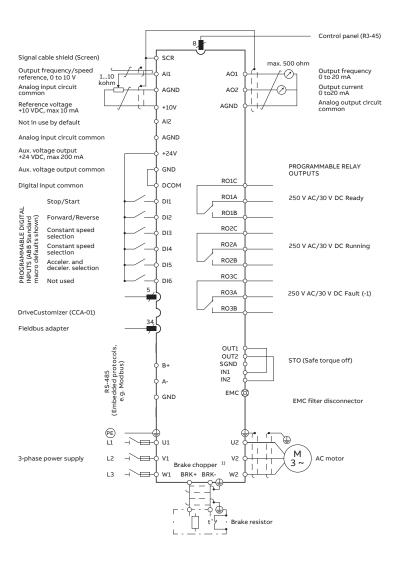
The ACS580 is plug-in ready to control your compressors, conveyors, pumps, mixers, fans and many other variable and constant torque applications. Most essential features are built-in as standard, simplifying drive selection, and making additional hardware unnecessary. Straightforward settings menu and 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 (1st environment) for frame sizes R1 to R9 or C3 EMC filter (2nd 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 <sub>2</sub> 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 factoryset standard inputs and outputs. All inputs and outputs are freely programmable.



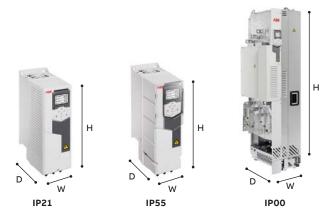
#### **Dimensions and weights**

Wall mounted frames IP21						
Frame size	H* <sup>)</sup> (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
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Wall mounted	Wall mounted frames IP55							
Frame size	H* <sup>)</sup> (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				

<sup>\*)</sup> Front height of the drive with glandbox



Drive modules								
Frame	IP00/UL open type							
size	Н	W	D	Weight				
	(mm)	(mm)	(mm)	(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
P <sub>motor</sub> (kW)	I <sub>motor</sub>	P <sub>motor</sub> (kW)	I <sub>motor</sub>					(Eur)
3-phase	, U <sub>N</sub> = 400	V (3-phas	e 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		R9	
250	400	200	363 **)	3AUA0000080510			R9	

Light-duty applications		Heavy-duty applications		ABB ordering code Electrical code/ Enclosure IP55 reference code		ABB type code/order	Frame	Price for
				Enclosure IP55	reterence code	code for IP55 units	size	IP55 units
P <sub>motor</sub> (kW)	/ motor (A)	P <sub>motor</sub> (kW)	/ <sub>motor</sub> (A)					(Eur)
3-phase	, U <sub>N</sub> = 400	V (3-phas	e 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 <sub>Ld</sub>	Continuous current allowing 110% $I_{\rm Ld}$ for 1 minute every 10 minutes at 40 °C					

Heavy-duty use ratings							
F	D Hd	Typical motor power in heavy-duty use					
1	Hd	Continuous current allowing 150% $I_{\rm Hd}$ for 1 min/10 min at 40 °C *)Continuous current allowing 130% $I_{\rm Hd}$ for 1 min/10 min at 40 °C **)Continuous current allowing 125% $I_{\rm Hd}$ for 1 min/10 min at 40 °C					

## 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
P <sub>motor</sub> (kW)	I P I Motor I Motor (A) (kW) (A)			_				(Eur)
3-phase	, U <sub>N</sub> = 400	V (3-phas	e 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 <sub>Ld</sub>	Typical motor power in light-duty use					
I <sub>Ld</sub>	Continuous current allowing 110% I <sub>Ld</sub> for 1 minute every 10 minutes at 40 °C					

Heavy-duty use ratings						
$P_{Hd}$	Typical motor power in heavy-duty use					
I <sub>Hd</sub>	*) Continuous current allowing 140% I <sub>Hd</sub> 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
P <sub>motor</sub> (kW)	I <sub>motor</sub>	P <sub>motor</sub> (kW)	/ <sub>motor</sub>					(Eur)	
3-phase	, U <sub>N</sub> = 230	V (3-phas	e 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		duty tions	ABB ordering code Enclosure IP55	•	ABB type code/order code for IP55 units	Frame size	Price for IP55 units
P <sub>motor</sub> (kW)	/ <sub>motor</sub> (A)	P <sub>motor</sub> (kW)	/ <sub>motor</sub> (A)					(Eur)
3-phase	, U <sub>N</sub> = 230	V (3-phas	e 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			Heavy-duty use ratings		
P <sub>Ld</sub>	Typical motor power in light-duty use	P <sub>Hd</sub>	Typical motor power in heavy-duty use		
I <sub>Ld</sub>	Continuous current allowing 110% $I_{\rm Ld}$ for 1 minute every 10 minutes at 40 °C	I <sub>Hd</sub>	Continuous current allowing 150% I <sub>Hd</sub> for 1 min/10 min at 40 °C		



## **ABB** micro drives

# ACS150, 0.37 to 4 kW

# O1 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.



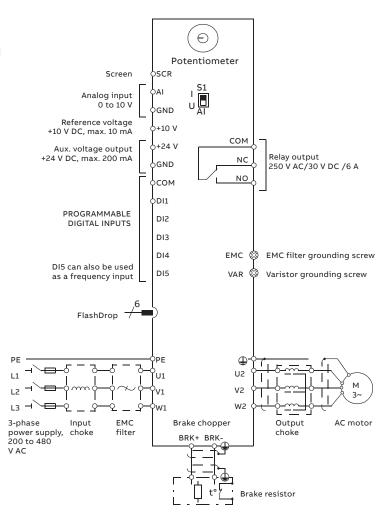
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Feature	Advantage	Benefit
User-friendly LCD control panel	Clear alphanumeric display Easy setup and use	Time savings
Flexible mounting alternatives	Screw or DIN rail mounting, sideways or side-by-side	One drive type can be used in various designs, 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

ACS150, 0.37 TO 4 KW

## 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		IP20/UL open				NEMA 1			
size	H (mm)	W (mm)	D (mm)	Weight (kg)	H (mm)	W (mm)	D (mm)	Weight (kg)	
RO	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 value	es*)	ABB ordering code	Electrical code/	ABB type code/	Frame	Price
P <sub>motor</sub>	I <sub>motor</sub>	Enclosure IP20	reference code	order code for IP20 units	size	
(kW)	(A)			TOT IP20 units		(Eur)
1-phase AC	supply, 200 to 240 V					
0.37	2.4	68581940		ACS150-01E-02A4-2	RO	
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	RO	
0.55	3.5	68582016		ACS150-03E-03A5-2	RO	
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	RO	
0.55	1.9	68581745		ACS150-03E-01A9-4	RO	
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	

<sup>\*)</sup> 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.



#### Dimensions and weights

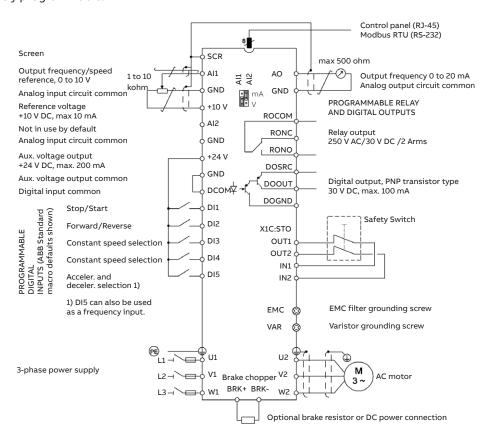
Frame		IP20/UL open				IP66/IP67			
size	H (mm)	W (mm)	D (mm)	Weight (kg)	H (mm)	W (mm)	D (mm)	Weight (kg)	
R0	239	70	161	1.1	_		_	-	
R1	239	70	161	1.3	305	195	281	7.7	
R2	239	105	165	1.5	-	-	-	-	
R3	236	169	169	2.5	436	246	277	13	
R4	244	260	169	4.4	_	_	_	_	



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 efficienctly
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 valu	es*)	ABB ordering code	Electrical code/	ABB type code/order code	Frame	Price
P <sub>motor</sub>	I <sub>motor</sub>	Enclosure IP20	reference code	for IP20 units	size	(=)
(kW)	(A) supply, 200 to 240	V				(Eur)
0.37	2.4	3AUA000058166		ACS355-01E-02A4-2	RO	
0.75	4.7	3AUA0000058167		ACS355-01E-04A7-2	R1	
1.1	6.7	3AUA0000058167		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	
	supply, 200 to 240			ACSSSS OIL OSAG L	NL	
0.37	2.4	3AUA000058171		ACS355-03E-02A4-2	RO	
0.55	3.5	3AUA0000058172		ACS355-03E-03A5-2	RO	
0.75	4.7	3AUA0000058173		ACS355-03E-04A7-2	RO	
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	3AUA000058180		ACS355-03E-31A0-2	R4	
11	46.2	3AUA000058181		ACS355-03E-46A2-2	R4	
	supply, 380 to 480			7.00000 002 107.2 2		
0.37	1.2	3AUA000058182		ACS355-03E-01A2-4	RO	
0.55	1.9	3AUA000058183		ACS355-03E-01A9-4	RO	
0.75	2.4	3AUA000058184		AC\$355-03E-02A4-4	R1	
1.1	3.3	3AUA000058185		ACS355-03E-03A3-4	R1	
1.5	4.1	3AUA000058186		ACS355-03E-04A1-4	R1	
2.2	5.6	3AUA000058187		ACS355-03E-05A6-4	R1	
3	7.3	3AUA000058188		ACS355-03E-07A3-4	R1	
4	8.8	3AUA000058189		AC\$355-03E-08A8-4	R1	
5.5	12.5	3AUA000058190		ACS355-03E-12A5-4	R3	
7.5	15.6	3AUA000058191		ACS355-03E-15A6-4	R3	
11	23.1	3AUA000058192		ACS355-03E-23A1-4	R3	
15	31	3AUA0000058193		ACS355-03E-31A0-4	R4	
18.5	38	3AUA000058194		ACS355-03E-38A0-4	R4	
22	44	3AUA000058195		AC\$355-03E-44A0-4	R4	

<sup>\*)</sup> 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	Electrical code/	ABB type code/order code	Frame	Price
P <sub>motor</sub> (kW)	/ <sub>motor</sub>	Enclosure IP66/IP67	reference code	for IP66/IP67 units	size	(Eur)
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	

 $\boldsymbol{X}$  within the type code stands for  $\boldsymbol{E}$  or  $\boldsymbol{U}.$ 

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.

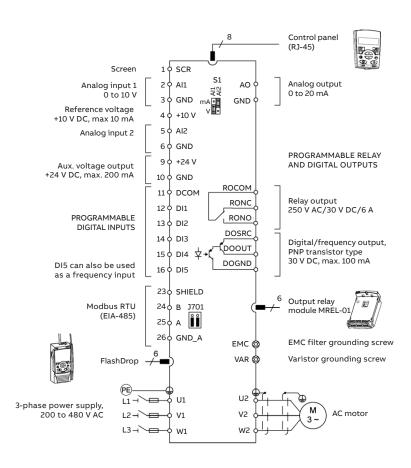


01

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 <sub>2</sub> 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		IP20/UI	open .			NEN	1A 1	
size	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



ACS310, 0.37 TO 22 KW

## Types and voltages

Rated valu	ies *)	ABB ordering code	Electrical code/	ABB type code/order code	Frame	Price
P <sub>motor</sub> (kW)	/ motor (A)	Enclosure IP20	reference code	for IP20 units	size	(Eur)
1-phase AC	supply, 200 to 240 V					
0.37	2.4	3AUA0000038701		ACS310-01X-02A4-2	RO	
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	RO	
0.55	3.9	3AUA0000039163		ACS310-03X-03A9-2	RO	
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	RO	
0.55	2.1	3AUA0000039626		ACS310-03X-02A1-4	RO	
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	

<sup>\*)</sup> 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		=1			100100	
	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 compatiblity to ACS880 drives.		•	•
0	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* <sup>)</sup>	3AXD50000217717	Control panel mounting kit for outdoor installation		•	•
The state of the s	CDPI-01	3AXD50000004419	Panel bus adapter			•
	CDPI-02 *)	3AXD50000313204	Panel bus adapter		•	
Total Control	RDUM-01	3AXD50000040008	Blank panel with RJ45 connector		•	

<sup>\*)</sup> For availability please contact your local ABB.

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ACS480 and 580 options	Type code	Electrical code/		Price	ACS480	ACS580
	<b>3</b> ,	ordering code		(Eur)		
Fieldbus adapter module	es <sup>1)</sup>					
	FDNA-01	68469341	DeviceNet <sup>™</sup> 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		•	•
	FSPS-21	3AXD50000112821	PROFIsafe safety functions module			•
Remote monitoring						
	NETA-21	3AUA0000094517	Ethernet adapter with remote monitoring		•	•
1			access can send process data, data logs			
B			and event messages independently,			
			without a PLC or a dedicated on-site			
			computer. It has an internal web server for configuration and drive access.			
nput/output extension	module		Tor comigaration and arrive access.			
input/output extension	CMOD-01	3AXD50000004420	External 24 V AC and DC input 2 x RO and			
Chemi Chemi Chemi	51.122.42		1 x DO			
- · · · ·	CMOD-02	3AXD50000004418	External 24 V AC and DC input and			•
Lines (Mill) and			isolated PTC interface			
and the second						
	CHDI-01	3AXD50000004431	Six 115/230 V AC digital inputs and two			•
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			relay outputs			
	CBAI-01	3AXD50000137954	Bipolar analog I/O extension module			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CDAI-01	3AAD30000137334	bipolar analogiyo extension module			
· · ·	CPTC-02	3axd50000033144	ATEX certified PTC interface and			•
Care onto			external 24 V			
Care Comment	BIO-01	3AXD50000191635	I/O extension module used together		•	
			with a fieldbus module			
, 1						
10.0	BAPO-01	3AXD50000022164	Auxiliary power extension module		•	
			External 24 V DC input			
	BREL-01	3AXD50000022162	Relay output extension module			
	DILLE OI		4 × RO			
OCCUPATION OF THE PARTY OF THE						
Drive construction optio		. 8051	Footomy mode and footby 1800			
	IP20 shrouds for finger safe	+B051	Factory-made enclosure for the IP20 protection class on ACS580-04 drives			•
	operation		protection class on AC3360-04 drives			
	Full-size input	+H370	For connecting the ACS580-04 drive to			•
	power cable		busbars or to multiple cables			
	terminals					

 $<sup>^{\</sup>mbox{\tiny 1)}}$  One slot available for a fieldbus adapter. Modbus EIA-485 built-in as standard.

ACS480 and 580 option		Planate 1 1 1		- •	100100	100500
	Type code	Electrical code/ ordering code		Price (Eur)	ACS480	ACS580
Brake units						
			and R4 are delivered with an integrated bra	ake chopper as sta	ndard.	
Other units can use ext	ernal braking chopper	s and resistors or integ	rated 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.			•
	NBRA-659	59006436	Maximum braking power depends on			•
	115101 033	33000-130	a braking cycle, drive's typecode and			
			brake resistor. For further details,			
Flange mounting kits			please refer to the hardware manual.			
i ange mounting kits		3AXD50000105311	Flange mounting kit			
		5, 1,1250000105511	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			•
0	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.		•	•
All	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.		•	•

# **Options** ACS150

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	
1 Instrument of the state of th	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 filte	ers			
	LRFI-31	3AUA0000050644	Low leakage current filters are ideal for installations	_
	LRFI-32	3AUA0000050645	where residual current devices (RCD) are required and leakage current needs to be below 30 mA	
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

	Type code	Electrical code/ ordering code		Price (Eur
Potentiometer and cont	rol panels			
HC	MPOT-01	68566282	Integrated potentiometer for adjusting the motor speed	
V money V many		-	Control panel cover, delivered with ACS355 drives as standard	
124 <u>5</u> _	ACS-CP-C	64739000	Basic control panel with numeric display and large buttons	
- 100 Mar. 1 100 Mar.	ACS-CP-A	64691473	Assistant control panel with commissioning and diagnostic assistants. Features a multilingual display and a real-time clock.	
- Billion - Billion	ACS/H-CP-EXT	68294673	Control panel mounting kit, enables mounting of the control panel on the cabinet door	
A33	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				
09	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		0.009		(==-)
	MTAC-01	68566355	Pulse encoder interface module	
- 9	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.	
PARKETERIE	MPOW-01	3AUA0000059808	Auxiliary power module	
Connection options				
	Cable gland kit	Frame R1:	Cable gland kit for the IP66/67 drive variant	
	J	3AUA0000045483 Frame R3: 3AUA0000045484	,	
	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 <sup>™</sup> protocol	
	FMBA-01	68469881	EIA-485/Modbus RTU protocol	
mindrate in this	FENA-01	68469422	Ethernet (EtherNet/IP, Modbus/TCP, PROFINET IO)	
PROPOSET O	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				
11111111	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	
DAS	CBR-V 210	68569311	Compatibility with 3-phase, 380 to 480 V, units up to 2.2 kW	
er fr	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	
000	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	

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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	
	СНК-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			300 to 400 V, dimes from 10.5 to EE 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	
n a a	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	
£ .8 -1 = 3 - 3 - 3	RFI-13	68902410	Compatibility with category C1 and C2, 1-phase, 1.5 to 2.2 kW	
3 €	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 filte	rs			
	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 to	ools and adapters			
Control of the contro	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.	
0	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

	Type code	Electrical code/		Price
		ordering code		(Eur
Potentiometer and cont	rol panels			
		-	Control panel cover, delivered with ACS310 drives as standard	
<u></u>	ACS-CP-C	64739000	Basic control panel with numeric display and large buttons	
Time spin	ACS-CP-A	64691473	Assistant control panel with commissioning and diagnostic assistants. Features a multilingual display and a real-time clock.	
AS COM	ACS/H-CP-EXT	68294673	Control panel mounting kit, enables mounting of the control panel on the cabinet door	
ASE ASE	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				
anounu	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				
11111111	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		ordering code		(20.)
	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	
ASS	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	

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ACS310 options					
	Type code	Electrical code/ ordering code		Price (Eur)	
PC tools, configuration t	ools 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.		
7	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.		
0.11	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.		

# Introducing the most extensive drives 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.

To find more information please visit: new.abb.com/drives

# Our service expertise, your advantage

ABB Motion Services help customers around the globe by maximizing uptime, extending product life cycle, and enhancing the performance and energy efficiency of electrical motion solutions. We enable innovation and success through digitalization by securely connecting and monitoring your motors and drives, increasing reliability and improving efficiency.

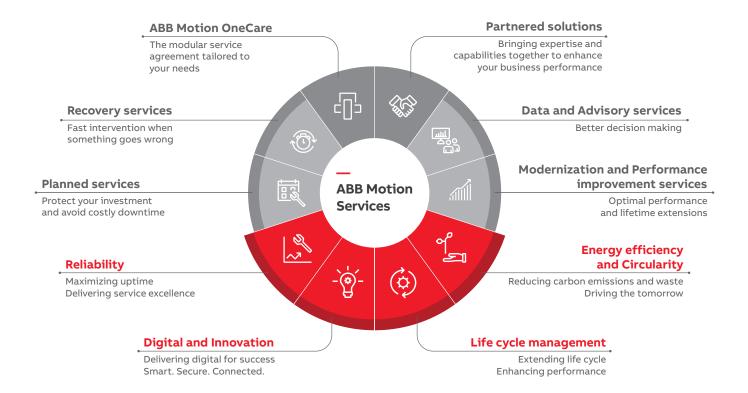
Even before you consider buying a drive or motor, ABB's experts are on hand to provide technical solutions ranging from advisory to modernization and performance improvement services, giving you peace of mind and transparency into your cost of ownership throughout the asset's economical lifetime.

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 operations and maintenance phases of the products life cycle, providing planned services programs customized to your operations.

With a service offering tailored to your needs, service experts can maximize the uptime and extend the life cycle of your powertrain, while optimizing its performance and maximizing your energy efficiency gains across the entire lifetime of your applications. Service helps keep your applications turning profitably, safely, and reliably.





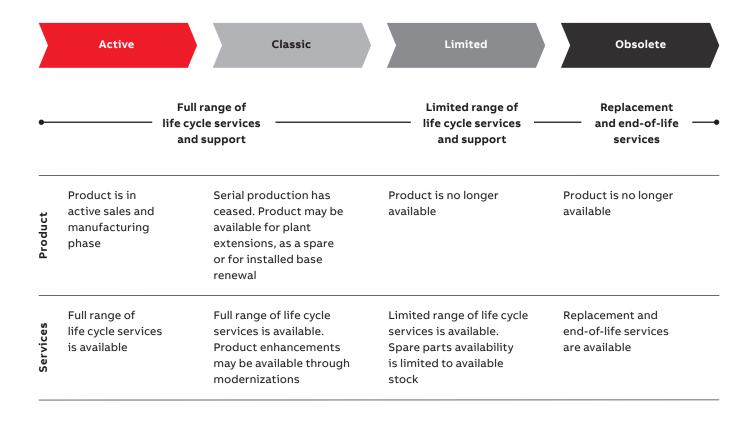
# OUR EXPERTISE YOUR ADVANTAGE

# **ABB Drives Life Cycle Management**

# A life time of peak performance

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

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

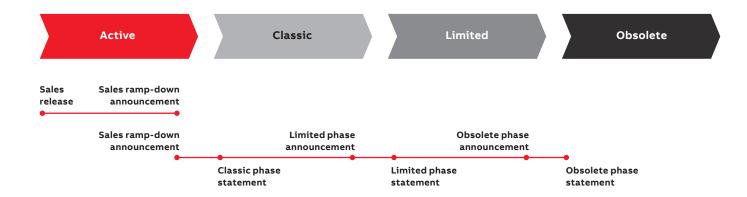


## Keeping you informed throughout the life cycle

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

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





### Sales release

Details about product portfolio and release schedule.

## Sales ramp down announcement

Last time buy and last deliveries dates, informed well in advance.

### Life cycle phase change annoucement

Early information about the upcoming life cycle phase change and affects on the service availability. Informed well in advance, minimum six months prior to the change.

### Life cycle phase statement

Information about the current life cycle status, product and services availability and recommended actions. Plan for the next life cycle phase transition.

## **Notes**




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

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