LOW VOLTAGE AC DRIVES

ABB general purpose drives

ACS560, 0.75 to 160 kW

Empowering effortless productivity

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ACS560 all-compatible drive
Engineered to be compatible

Easy of use
The user-friendly Icon based control panel is standard, giving the user a delightful experience.

Integrated essentials
Essentials such as Modbus RTU interface, brake chopper, safe torque off, DC choke, EMC filter, digital and analog IO's make ACS560 an all convenient drive.

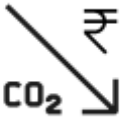
Fieldbus autoconfiguration
Fieldbus autoconfiguration functionality with all major automation communication networks, assures faster connection to your devices with just one setting.

All compatible
Compatible with assistant control panels ACS-AP-S, ACS-AP-I & ACS-AP-W (Bluetooth) with Hindi language support.
Bluetooth enabled control panel allows the user to connect to the drive with mobile through "Drive tune" mobile App.

Simple control panel installation
Control panel can be mounted on cabinet door.

A dummy panel RDUM-01 and DPMP-02 cabinet door mounting kit is offered as an option.

Energy optimizer
Energy optimizer helps you save energy. Energy efficiency information helps you monitor consumption, savings and CO_2 reduction.



Additional external options
Specially designed options such as input choke, output choke, brake resistor to make the system more efficient.

Remote monitoring
Remote monitoring with a built-in web server and standalone data logger, the NETA-21 enables worldwide and secure remote access to drives with primary focus on remote condition monitoring.
ACS560 also introduces Eco remote monitoring solution targeting remote diagnosis and support.

Start-up and maintenance tool
Drive composer PC tool for startup, configuration, monitoring and process tuning.
Automation Builder-Drive Manager for single point of commissioning and monitoring of your drives together with other automation products such as PLC, HMI etc., Drive size tool and Energy save calculator to make data driven decisions.

ACS560 perfect fit drive
One drive fits for most industrial needs

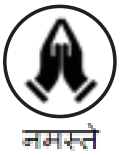
The user driven features and reliable design of ACS560 ensures effortless commissioning and operation in challenging conditions

One product, many applications
ACS560 is available up to 160 kW, with specifications and features needed for variable torque and constant torque applications, helping customers to select one product family for entire general purpose application needs.

Robust design and quality, suits Indian conditions
ACS560 uses protective coated circuit boards and individual air cooling lanes, all 3 phase current measurement to help ensure highest performance, high reliability and a long lifetime. ACS560 designed to work up to +55 deg C ambient conditions.

Engineered in India for India
Specially engineered application macros for plastic extrusion, pharma segments, textiles and always demanding PFC, SPFC, PID control macros. Cleverly designed input filter, output filter and brake resistors.

Operate in Hindi language
Control panel information display and user documentation in Hindi, first-of-its-kind feature in India for Drives. Applicable for any Advanced Control Panel.



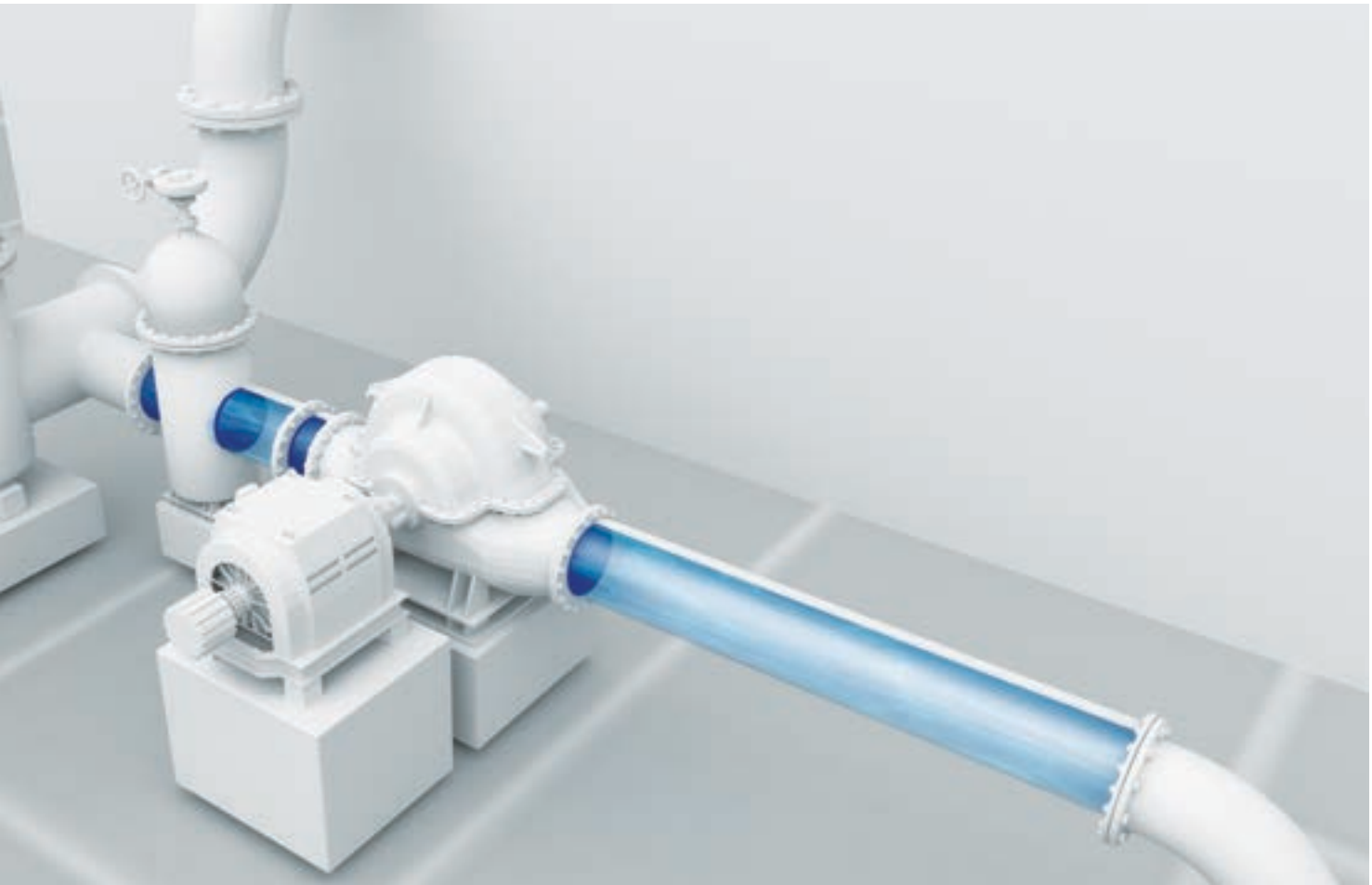
Fit and Play
Rapid connectivity to control systems with intelligent Fit & Play fieldbus configuration facility. Modbus RTU as standard, optional Profibus, Profinet,Ethernet IP, EtherCat, CANopen and Modbus TCP. Mobile,remote monitoring connection ready.

All essentials inside
The ACS560 general purpose drive is compliant with IEC standards. Integrated cable conduit plates and routing clamps ensures perfect mounting and cable routing

Energy saving
The built-in energy optimizer and energy efficiency information help to save energy and monitor consumption in the processes and reduce CO_2 emissions.

Backward compatibility
Having the same order and service resources as the ACS550, but with a more compact size and added new features, users familiar with ACS550 can quickly adopt and use ACS560

- Compatible for most ACS550 applications.
- Smaller size allows easy replacement
- More options available
- Built-in STO, AO configurable for mA/V
- Enhanced functionality from ACS550
- Parameter conversion tool from ACS550 to ACS560
- A separate guide for ACS550/ACS310 application conversion.



High reliability, long life
Rigorously tested to ensure trouble free operation

Multiple levels of in-depth tests performed at various stages of development, ensures quality and reliability

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Reliability of every drive, assured by demanding test procedures and advanced facilities

ABB ensures that each and every drive produced is tested thoroughly with various test procedures by in-house as well through external certifications. The routine test procedures are stringent and always one step ahead to ensure reliable operation and long life.

The newly designed cooling lane lets air going through the lane to cool the power components. It also isolates the dust in the air from the power and control unit. This protects the components on the printed circuit board (PCB), thus reducing fault rate and extend the lifetime.

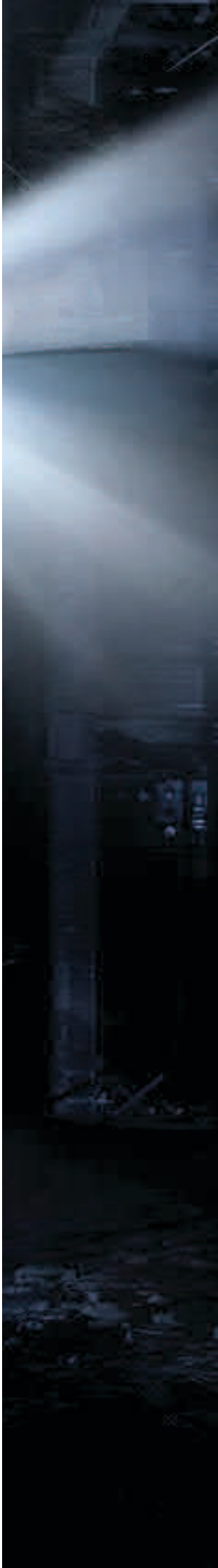
By using a new coating technique, a greater area on the printed circuit board is covered protecting the drive from powder dust and oil, allowing the drive to function reliably even in harsh environments.

The ACS560 has been thoroughly tested under harsh environmental conditions, ensuring that the product can function in demanding environments.

- Tested in high humidity environments
- Tested for withstanding, dusty environmental conditions seen in ceramics, textiles and stone processing applications.
- Tested for resisting corrosive gases as per 3C2 and conductive solid particles as per 3S2 operational category.

The ACS560 designed to operate with up to +55 °C ambient temperature .

A wide line network voltage ranging from -15% to +10% allows functioning despite voltage fluctuations.




ABB

Increased productivity
Consistent quality of the end product

ACS560 enables a process to achieve fast and accurate speed control while continuously maintaining the quality.

The optimal process control of the ACS560 leads to a more consistent quality end product, which means the maximum profit for the customer.
A pump macro can maintain product consistency by telling the drive to start additional pumps in response to a pressure drop, should there be a surge in demand.

In addition to dedicated pump control, ACS560 provides a pre-pressurization for process start-ups.

Increasing throughput
Process equipment is usually designed to cater for future increase in productivity. Changing constant-speed equipment to provide higher production volumes requires money and time. Boosting productivity with the help of ACS560, speed increase of 5% to 20% percent is possible and the production increase often can be achieved without any extra investment.

Supervision function
Supervision function allows monitoring upto 6 of any process signals, alerting the user and preventing machinery damage or productivity loss.

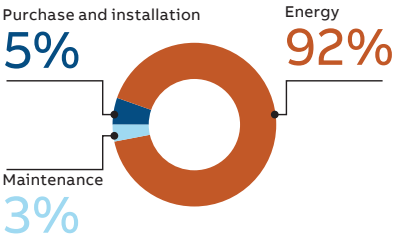
Peak Value Logger
The logger records the peak value of the signal along with the time the peak occurred, as well as motor current, DC voltage and motor speed at the time of the peak. The peak value is sampled at 2 ms intervals.

Energy saving
Given that power consumption savings of 50% can be made by reducing the motor speed by just 20% and with payback times as short as six months
ACS560 is arguably the one product that can have the maximum impact on a company's energy and carbon reduction policy

Energy efficiency
Faster returns on investment

It pays back. The payback time for using variable speed drives is very short, and the return on investment can come within months.

According to life cycle approach, the purchase cost of a motor and a drive is just a few percent compared to the energy spent to run the equipment over its entire lifetime.

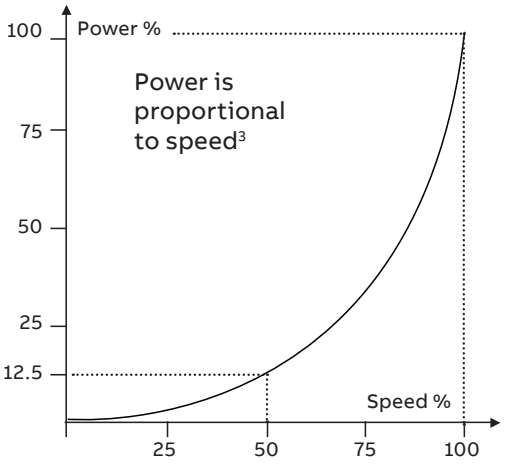


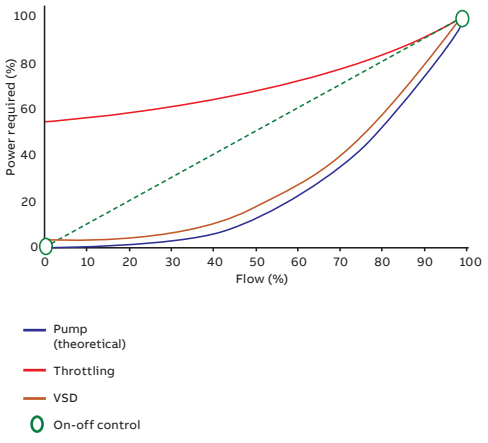
Energy saving

- Maximum flow has fewer requirements during most of pump and fan application.
- Even a small reduction in speed can result in significant energy savings
- With energy efficiency control, ACS560 helps user reduce energy consumption and save cost during its whole life cycle
- ACS560 has energy saving calculator which logs energy saving and displays the savings in local currency. It also logs CO_2 reduction data.

Energy saved with ABB's variable speed drives

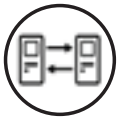
- The installed base of ABB drives saved about 490 TWh in 2015, equivalent to the consumption per year of more than 110 million households in EU.
- If 490 TWh would have been generated by fossil fuel powered electricity plants, ABB drives reduced CO_2 emissions in 2015 by about 410 million tons, corresponding to the yearly emission of more than 90 million cars.





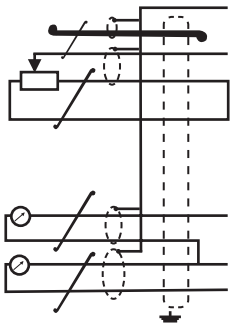
Special features
For increased operational efficiency

ACS560 is designed with a focus on the needs of users who require specific features for higher efficiency in general purpose applications.

Industry	Features	Customer benefits
	**PFC and SPFC application macro with auto change and interlock.**	- Predefined PFC and SPFC macro's logic and parameterization ensures quick commissioning of the fan or pump, keeping the system cost is low as there is no need of a PLC.. - Auto-change functionality ensures the even run time of all pumps or fans in the system to have even wear and avoid downtime of the pump/fan - Interlock provides option to exclude a pump or fan from the system for maintanence or manual direct on-line start
	**Plastic extrusion application macro with screw rpm indication and supervision**	- Plastic extrusion macro has pre-configured parameters, which enables quick commissioning - Screw speed can be displayed using load speed and gear ratio parameters which reduce the investment of additional display meter - Supervision function can be used to avoid productivity loss and screw damage in case of a jam, by interlocking minimum required speed reference to start the drive
	**Life Science application macro with integrated brake chopper and brake resistor package**	- Life science application macro has pre-configured parameters to commission pharmaceutical reactor equipment by changing only one parameter - Integrated brake chopper offers competitive advantage - Packaged brake resistor avoids resistor selection process and procurement hassles
	**Cooling fan control mode**	- Two modes of cooling fan control are included in ACS560, one is "Auto", other one is "Always on" - This option increases reliability and productivity in textile application by avoiding the bluff accumulation.
	**Fieldbus auto configuration and Fieldbus macro**	- Hassle free fieldbus module configuration, fit the fieldbus module and restart the drive - All fieldbus configurations are just done by one parameter settings. Select the respective fieldbus macro, and all the fieldbus parameters are set, to send or receive data from PLC - Supports for Modbus RTU, Modbus TCP, Profibus, Profinet, Ethernet TCP/IP, EtherCAT, CAN Open.
	**Current limit warning**	- If the drive load hits its stall limit then it goes to stall condition causing production loss - In ACS560, new current limit is introduced for 180% of heavy duty current I_{Hd} (less than stall limit) - Whenever drive hits this limit a warning or a fault can be generated, so that the user gets notified about the load thereby taking necessary action and avoid production loss.
	**User load curve with multi point load limits**	- Enhanced user load curve with multiple point limit setting, enables to set different limits at various points of load curve according to its load pattern and helps in load analysis with alerts specifying its region..
	**Motor pot up and down time & inching**	- Motor potentiometer feature is now added with separated parameters for uptime and down time - This gives the flexibility to set different times for increase and decrease. - Inching can be activated through fieldbus, it uses jogging references and ramp times.

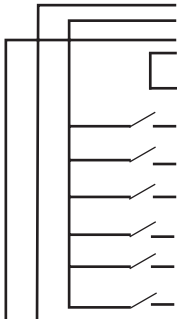
Standard interface I/O connections (ABB standard macro)

X1 Reference voltage and analog input and output



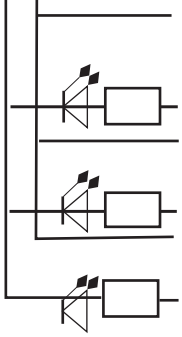
1	SCR	Signal cable shield (screen)
2	AI1	External frequency reference: 0...10 V or 0/4...20mA
3	AGND	Analog input circuit, common
4	+10V	10 V DC reference voltage
5	AI2	Not configured
6	AGND	Analog input circuit, common
7	AO1	Output frequency: 0/4...20 mA or 0...10V
8	AO2	Output current 0/4...20 mA
9	AGND	Analog output circuit, common

X2, X3 Aux. voltage output and programmable digital input



10	+24V	Aux. voltage output +24 VDC, max. 250 mA
11	DGND	Aux. 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 selection
16	DI4	Constant frequency selection
17	DI5	Ramp selection: ramp 1(0) / ramp 2 (1)
18	DI6	Not configured

X6,X7,X8 Relay output



19	RO1C	**Ready run** 250 V AC / 30 V DC 2A	
20	RO1A		
21	RO1B		
22	RO2C	**Running** 250 V AC / 30 V DC 2A	
23	RO2A		
24	RO2B		
25	RO3C	**Fault(-1)** 250 V AC / 30 V DC 2A	
26	RO3A		
27	RO3B		

X5 Built–in modbus

29	B+	Internal modbus RTU (EIA-485).
30	A-	
31	DGND	

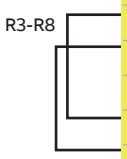
(Frame R0 – R2)

S100	TERM & BIAS	Termination resistor and bias resistor switch

(Frame R3 – R8)

S100	TERM	Termination resistor switch
S200	BIAS	Bias resistor switch

X4 Safety torque off



	R0 – R2	R3 – R8	
33	-	OUT1	Safety tourque off function. factoryconnection. both circuite must be closed for the drive to start. see safe torque off function in the drive hardware manual.
34	SGND	OUT2	
35	OUT1	SGND	
36	IN1	IN1	
37	IN2	IN2	

X10 24 V AC/DC (frame R6-R8)

40	24 VACDC-In	24V AC/DC input for control unit power supply when external main power is disconnected
41	24 VACDC-In	

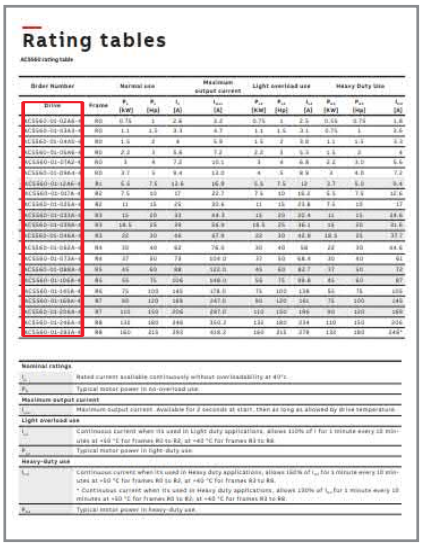
Redundant auxiliary voltage output (frame R0-R2)

42	+24 V	Aux. voltage output +24 V DC, max. 250mA
43	DGND	Aux. voltage output common
44	DDOM	Digital input common for all

How to select a drive

The right drive is extremely easy to select. The following instructions show you how to order the right drive for your application.

1. Start with identifying your supply voltage This tells you what rating table to use. See page 17.


Rating tables

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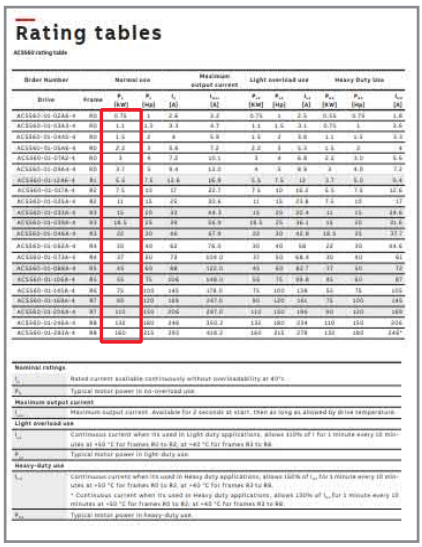
2. Choose your motor's power and current rating from the rating tables starting on page 17.


Rating tables

Page 17

3. Select the Typer designation for the ACS560 drive (page 17).

4. Choose your options (on page 20) and add the option codes to the drive's type code. Remember to use a "+" mark before each option code.


Options

Page 20

Type designation: ACS560 – 04 – 02A6 – 4 + XXXX

- Product
- Construction
- Current Rating
- Voltage Rating
- Option Codes

Technical Data

Mains connection	
Input voltage and output power range	3-phase, U_N 380 to 480 V, +10%/-15% from 0.75 up to 160 kW
Frequency	50/60 Hz ±5%
Power factor	cosφ = 0.98
Efficiency (at nominal power)	98%
Motor connection	
Voltage	3-phase, from 0 to supply voltage
Frequency	0 to 500 Hz
Motor control	Scalar and vector control
Torque control	Torque step rise time: <10 ms with nominal torque Non-linearity: ± 5% with nominal torque
Speed control	Static accuracy: 20% of motor nominal slip Dynamic accuracy: 1% seconds with 100% torque step
Maximum recommended motor cable length	R0-R2: 100 m R3-R8: 300 m For more detailed information please see the ACS560 hardware manual

Product compliance

CE
Low Voltage Directive 2014/34/EU, EN 61800-5-1: 2007
Machinery Directive 2006/42/EC, EN 61800-5-2: 2007
EMC Directive 2004/108/EC, EN 61800-3: 2004 + A1: 2012
RoHS directive 2011/65/EU
Quality assurance system ISO 9001 and Environmental system ISO 14001
Waste electrical and electronic equipment directive (WEEE) 2002/96/EC
EAC

EMC according to EN 61800-3:2004 + A1:2012

Frames R0 to R2 with built-in C3 category filter as standard
Frames R3 and R8 with built-in C2 category filter as standard

Environmental limits	
Ambient temperature	
Transport Storage	-40 to +70 °C -40 to +70 °C
Operation area	-15 to +50 °C. No frost allowed R0 to R2 : No derating required upto +50 °C, derating needed above +50°C to +55°C R3 to R8 : No derating needed upto +40°C, derating needed over +40°C to +55°C
Cooling method	
Air-cooled	Dry clean air (Speed Controlled)
Altitude	
0 to 1,000 m 1,000 to 4,000 m	Without derating With derating of 1%/100 m For more detailed information please see the ACS560 hardware manual
Relative humidity	5 to 95%, no condensation allowed
Degree of protection	IP20
Functional safety	Safe torque off (STO according EN 61800-5-2) IEC 61508 ed2: SIL 3. IEC 61511: SIL 3. IEC 62061: SIL CL 3. EN ISO 13849-1: PL e
Contamination levels	No conductive dust allowed
Storage	IEC 60721-3-1. Class 1C2 (chemical gases). Class 1S2 (solid particles) *)
Operation	IEC 60721-3-3. Class 3C2 (chemical gases). Class 3S2 (solid particles) *)
Transportation	IEC 60721-3-2. Class 2C2 (chemical gases) Class 2S2 (solid particles) *)

*) C = Chemically active substances
S = Mechanically active substances

ACS560 Rating table

Order Number		Normal use			Maximum output current	Light overload use			Heavy Duty Use		
Drive	Frame	P_n [kW]	P_n [Hp]	I_n [A]	I_{max} [A]	P_{Ld} [KW]	P_{Ld} [Hp]	I_{Ld} [A]	P_{Hd} [KW]	P_{Hd} [Hp]	I_{Hd} [A]
ACS560-01-02A6-4	R0	0.75	1	2.6	3.2	0.75	1	2.5	0.55	0.75	1.8
ACS560-01-03A3-4	R0	1.1	1.5	3.3	4.7	1.1	1.5	3.1	0.75	1	2.6
ACS560-01-04A0-4	R0	1.5	2	4	5.9	1.5	2	3.8	1.1	1.5	3.3
ACS560-01-05A6-4	R0	2.2	3	5.6	7.2	2.2	3	5.3	1.5	2	4
ACS560-01-07A2-4	R0	3	4	7.2	10.1	3	4	6.8	2.2	3.0	5.6
ACS560-01-09A4-4	R0	3.7	5	9.4	13.0	4	5	8.9	3	4.0	7.2
ACS560-01-12A6-4	R1	5.5	7.5	12.6	16.9	5.5	7.5	12	3.7	5.0	9.4
ACS560-01-017A-4	R2	7.5	10	17	22.7	7.5	10	16.2	5.5	7.5	12.6
ACS560-01-025A-4	R2	11	15	25	30.6	11	15	23.8	7.5	10	17
ACS560-01-033A-4	R3	15	20	33	44.3	15	20	30.4	11	15	24.6
ACS560-01-039A-4	R3	18.5	25	39	56.9	18.5	25	36.1	15	20	31.6
ACS560-01-046A-4	R3	22	30	46	67.9	22	30	42.8	18.5	25	37.7
ACS560-01-062A-4	R4	30	40	62	76.0	30	40	58	22	30	44.6
ACS560-01-073A-4	R4	37	50	73	104.0	37	50	68.4	30	40	61
ACS560-01-088A-4	R5	45	60	88	122.0	45	60	82.7	37	50	72
ACS560-01-106A-4	R5	55	75	106	148.0	55	75	99.8	45	60	87
ACS560-01-145A-4	R6	75	100	145	178.0	75	100	138	55	75	105
ACS560-01-169A-4	R7	90	120	169	247.0	90	120	161	75	100	145
ACS560-01-206A-4	R7	110	150	206	287.0	110	150	196	90	120	169
ACS560-01-246A-4	R8	132	180	246	350.2	132	180	234	110	150	206
ACS560-01-293A-4	R8	160	215	293	418.2	160	215	278	132	180	246*

Nominal ratings	
I_N	Rated current available continuously without overloadability at 40 °C.
P_N	Typical motor power in no-overload use.
Maximum output current	
I_{max}	Maximum output current. Available for 2 seconds at start.
Light-overload use	
I_{Ld}	Continuous current allowing 110% I_{Ld} for 1 minute every 10 minutes at 50 °C for R0-R2 frames , at +40 °C. for R3- R8 frames.
P_{Ld}	Typical motor power in light-duty use.
Heavy-duty use	
I_{Hd}	Continuous current allowing 150% I_{Hd} for 1 minute every 10 minutes at 50 °C for R0-R2 frames , at +40 °C. for R3- R8 frames *Continuous current allowing 130% I_{Hd} for 1 minute every 10 minutes at 40 °C.
P_{Hd}	Typical motor power in heavy-duty use.

Dimensions and Weight

Dimensions and weight

Frames*	Height		Width	Depth	Weight
	H1	H2	W	D	
	mm	mm	mm	mm	Kg
R0	223	x	73	207	1.6
R1	223	x	97	207	1.9
R2	220	x	172	207	2.9
R3	490	x	203	229	14.9
R4	636	x	203	257	19.0
R5	719	600	203	296	28.3
R6	722	548	252	369	42.4
R7	839	600	284	371	54.0
R8	943	680	300	394	69.0

H1 - Height of front side

H2 - Height of back side (without cable connecting box)

W - Width

D - Depth

*For more information on drive frame sizes, see Rating tables (page 18).

Flexible options

Basic control panel, ACS-BP-S
The icon based control panel supports users with basic operation, settings and fault tracking when nothing extra is needed. ACS-BP-S is right choice.

Assistant control panel, ACS-AP-I
The optional Assistant control has a graphical, multilingual display. There is no need to know any drive parameters, as the control panel helps you set up the essential settings quickly and get the drive into action without a hassle. Panel can be used with any products belonging to ABB all-compatible product portfolio.

Bluetooth control panel, ACS-AP-W
The optional Bluetooth panel enables connection with the Drivetune mobile app. The app is available for free from Google Play and the Apple App store. Together with the Drivetune app and the Bluetooth panel, users can, for example, commission and monitor the drive remotely.

Cold Configuration Tool
With CCA-01 tool is it possible to configure drive parameters and even download a new software from PC to the unpowered ACS380. The power supply is taken from a PC USB port.

PC tools
The Drive composer PC tool offers fast and harmonized setup, commissioning and monitoring. The free version of the tool provides startup and maintenance capabilities and gathers all drive information, such as parameter loggers, faults, and backups into a support diagnostics file. Drive composer pro provides additional features such as custom parameter windows, graphical control diagrams of the drive's configuration, and improved monitoring and diagnostics.

Fieldbus adapter modules
The ACS560 general purpose drives are compatible with a wide range of fieldbus protocols. The drive comes with Modbus RTU fieldbus interface as standard. Fieldbus communication reduces wiring costs when compared to traditional hard-wired input/ output connections.

Control panel mounting platform, RDUM-01
This is a blank control panel cover that can be used to connect drive to a remote basic or assistant control panel mounted on a cabinet door.

Control panel mounting platform, DPMP-01
This mounting platform is for flush mountings. The panel mounting platform does not include the control panel.

Control panel mounting platform, DPMP-02
This mounting platform is for surface mounting. The panel mounting platform does not include the control panel.

Remote monitoring
With a built-in web server and stand-alone datalogger NETA-21 module enables worldwide and secure access to drives.

Options

Options	Code	Type Designation	Description
Fieldbus Adaptors	+K454	FPBA-01	Profibus DP
	+K457	FCAN-01	CAN Open
	+K469	FECA-01	EtherCAT
	+K458	FSCA-01	Modbus RTU
	+K473	FENA-11	One port Ethernet IP / Profinet / Modbus TCP
	+K475	FENA-21	Two port Ethernet IP / Profinet / Modbus TCP
	+K490	FEIP-21	Two port Ethernet / IP protocol
	+K491	FMBT-21	Two port Modbus TCP protocol
	+K492	FPNO-21	Two port Profinet IO protocol
I/O Option#	+L515	BIO-01 #	I/O Extension module
	+L534	BAPO-01	External 24 V DC (side option), for R0-R2 frames
	+L501	CMOD-01	External 24 V AC and DC 2 x RO and 1 x DO
	+L523	CMOD-02	External 24 V and isolated PTC interface
Control Panel	+J404	ACS-BP-S	Basic control panel
	+J400	ACS-AP-S	Assistant control panel with Hindi language included
	+J425	ACS-AP-I	Assistant control panel with Hindi language included
	+J429	ACS-AP-W	Bluetooth control panel with Hindi language included
	+J424	RDUM-01	Blank Panel with power LE and PC communication provision
Cables	+J431	BCBL-01	USB to RJ45 PC connectivity cable (RS-485)
Printed Manuals	+R700	EN	ACS560-01 drives hardware and firmware manual
Cabinet door mounting kit	3AXD50000010763	DPMP-EXT*	Door mounting kit for panel (for one drive, contains DPMP-02 and CDPI-01)
	3AUA0000108878	DPMP-01**	Control panel mounting platform (flush)
	3AXD50000009374	DPMP-02**	Control panel mounting platform (surface)
Configuration adapter	3AXD50000019865	CCA-01	Cold configuration adapter
External input choke	3AYN477110-CHK1A	CHK-01	for 2.6 - 4A drives
	3AYN477110-CHK2A	CHK-02	For 5.6 - 7.2A drives
	3AYN477110-CHK3A	CHK-03	For 9.4 - 12.6A drives
	3AYN477110-CHK4A	CHK-04	For 17A drives
	3AYN477110-CHK5A	CHK-05	For 25A drives
Brake Resistor***	3AYNSBR-RES99	RES99	2.2 kW max power suitable for 2.6 - 5.6A drives
	3AYNSBR-RES53	RES53	4 kW max power suitable for 7.2 - 9.4A drives
	3AYNSBR-RES32	RES32	7.5 kW max power suitable for 12.6 - 17 A drives
	3AYNSBR-RES23	RES23	11 kW max power suitable for 25A drives
	3AYNSBR-RES16	RES16	15 kW max power suitable for 33 A drives
	3AYNSBR-RES10	RES10	22 kW max power suitable for 39 - 46 A drives
Brake Resistor ##	3AYNSBR-RESM99	RES99	2.2 kW max power suitable for 2.6 - 5.6A drives
	3AYNSBR-RESM53	RESM53	4 kW max power suitable for 7.2 - 9.4A drives
	3AYNSBR-RESM32	RESM32	7.5 kW max power suitable for 12.6 - 17 A drives
	3AYNSBR-RESM23	RESM23	11 kW max power suitable for 25A drives
	3AYNSBR-RESM16	RESM16	15 kW max power suitable for 33 A drives
	3AYNSBR-RESM10	RESM10	22 kW max power suitable for 39 - 46 A drives
Remote Monitoring	3AUA0000094517	NETA-21	Remote monitoring
PC tools	3AUA0000108087	DCPT-01	Drive composer pro PC tool (Single user license)
	3AUA0000145150	DCPT-01	Drive composer pro PC tool (10 user license)
	3AUA0000145151	DCPT-01	Drive composer pro PC tool (20 user license)

For R0-R2 frames, only 2xDI, 1xRO and STO will be available in the drive base unit if any fieldbus option is included.

* Suitable only for frames R3-R8.

** Need RDUM-01 (+J424) additionally to have complete door mounting kit.

*** 1min/5min duty cycle. Refer hardware manual for more details on brake resistor selection

10sec/2min duty cycle. Refer hardware manual for more details on brake resistor selection

EMC – electromagnetic compatibility

Every ACS560 drive is equipped with a built-in filter to reduce high-frequency emissions.

EMC standards
The EMC product standard (EN 61800-3) covers the specific EMC requirements stated for drives (tested with motor and motor cable) within the EU. EMC standards such as EN 55011 or EN 61000-6-3/4 are applicable to industrial and domestic equipment and systems, including the components inside the drive. Drive units complying with the requirements of EN 61800-3 are compliant with comparable categories in EN 55011 and EN61000-6-3/4 but not necessarily vice versa.

EN 55011 and EN 61000-6-3/4 do not specify cable length or require a motor to be connected as a load. The emission limits are comparable to EMC standards according to the table below.

Domestic environments versus public low voltage networks
The first environment includes domestic premises. It also includes establishments directly connected without an intermediate transformer to a low voltage power supply network that supplies buildings used for domestic purposes. The second environment includes all establishments directly connected to public low voltage power supply networks.

Comparison of EMC standards

EMC according to EN 61800-3 product standard	EN 61800-3 product standard	EN 55011. product family standard for industrial, scientific and medical (ISM) equipment	EN 61000-6-4, generic emission standard for industrial environments	EN 61000-6-3, generic emission standard for residential, commercial and light-industrial environment
1st environment, unrestricted distribution	Category C1	Group 1. Class B	Not applicable	Applicable
1st environment, restricted distribution	Category C2	Group 1. Class A	Applicable	Not applicable
2nd environment, unrestricted distribution	Category C3	Group 2. Class A	Not applicable	Not applicable
2nd environment, restricted distribution	Category C4	Not applicable	Not applicable	Not applicable

ABB automation products
Wide range of solutions

ABB offers a wide range of industrial automation products, solutions and software catering to the market needs.

Software tools for ABB Drives
ABB offers several software tools to ease and enhance the use of ABB drives. These tools provide a user-friendly and easy-to-use approach for the selection, commissioning and use of ABB drives.
http://abb.com/drives/software-tools

Drive Composer
Drive composer is a start-up and maintenance tool for ABB's common architecture drives.

Drive Manager
Drive Manager for AC500 PLC is a tool in Automation Builder. This tool communicates with the drives connected to AC500 PLC's PROFIBUS or PROFINET network

Drive Size
DriveSize helps to select an optimal motor, drive and transformer. DriveSize can also be used to compute network harmonics and to create dimensioning documents. Two versions are available, one for online users (Drive Size Web), and the other can be installed on a PC.

Automation Builder
ABB Automation Builder is the integrated software suite for machine builders and system integrators. ABB Automation Builder covers the engineering of ABB PLCs, Safety PLCs, control panels, drives, motion and robots.

Mobile Tools for ABB Drives
ABB offers several smartphone applications to ease and enhance the use of ABB drives.
http://abb.com/drives/mobile-tools

Drive Tune App
Drivetune is the smartphone application which is capable of connecting wirelessly to ABB drives.

Energy save calculator
EnergySave is a user-friendly and interactive energy saving calculator for comparing AC drive control against traditional flow control methods in different applications such as pumps, fans and compressors.

Drive base App
Drivebase is an app that allows easy access to product manuals and search function for ABB contacts. The app also facilitates a capability to report service actions and provides users with service recommendations for their drives installed base.

Remote Monitoring for ABB Drives:
Remote Condition Monitoring is a service that delivers you accurate, real-time information about drive events to ensure your equipment is available, reliable and maintainable. When you have all the facts, you can make the right decisions.
http://abb.com/drives/services/advanced-services remote-condition-monitoring

Industry specific drives & motion control
General purpose
All the essential features built-in, simplifying drive selection, installation and use.
Micro
Precise speed control and simple integration.
Machinery
Premium motor control with hardware flexibility, programmability and scalability for optimal solution.
Industrial
Our benchmark of performance, expertise and quality serving you locally on a global scale.
Industry specific drives. Dedicated solutions for industries and applications such as HVAC, elevators, electric heavy machines, water and waste water.

Motion control
Suitable for different applications from single to multi-axle machine control.
http://abb.com/drives/low-voltage-ac

ABB Motors & Generators:
ABB offers a comprehensive range of reliable and high efficiency motors and generators for all applications.
http://abb.com/motors-generators
http://abb.com/plc

AC500 PLC, Zenon SCADA, CP600 HMI:
AC500- ABB's high performance and modular PLC, CP600 HMI offers with wide range of functionality offers easy usability and Zenon SCADA securely delivers supervision, control, data acquisition, scheduling and performance reporting to users.

PS553 Drives library:
AC500 PLC library with pre-engineered function blocks and visualizations for control and diagnostics of ABB ACS drives. Available as free in Automation builder installation.

Soft starter
ABB's soft starters increase a motor's lifetime by protecting it from electrical stresses. They do so by letting you optimize starting currents that with conventional starting methods put lots of stress on the motor. With many built-in motor protection features, your motor is safe in its hands.
http://abb.com/low-voltage/products/softstarters

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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.

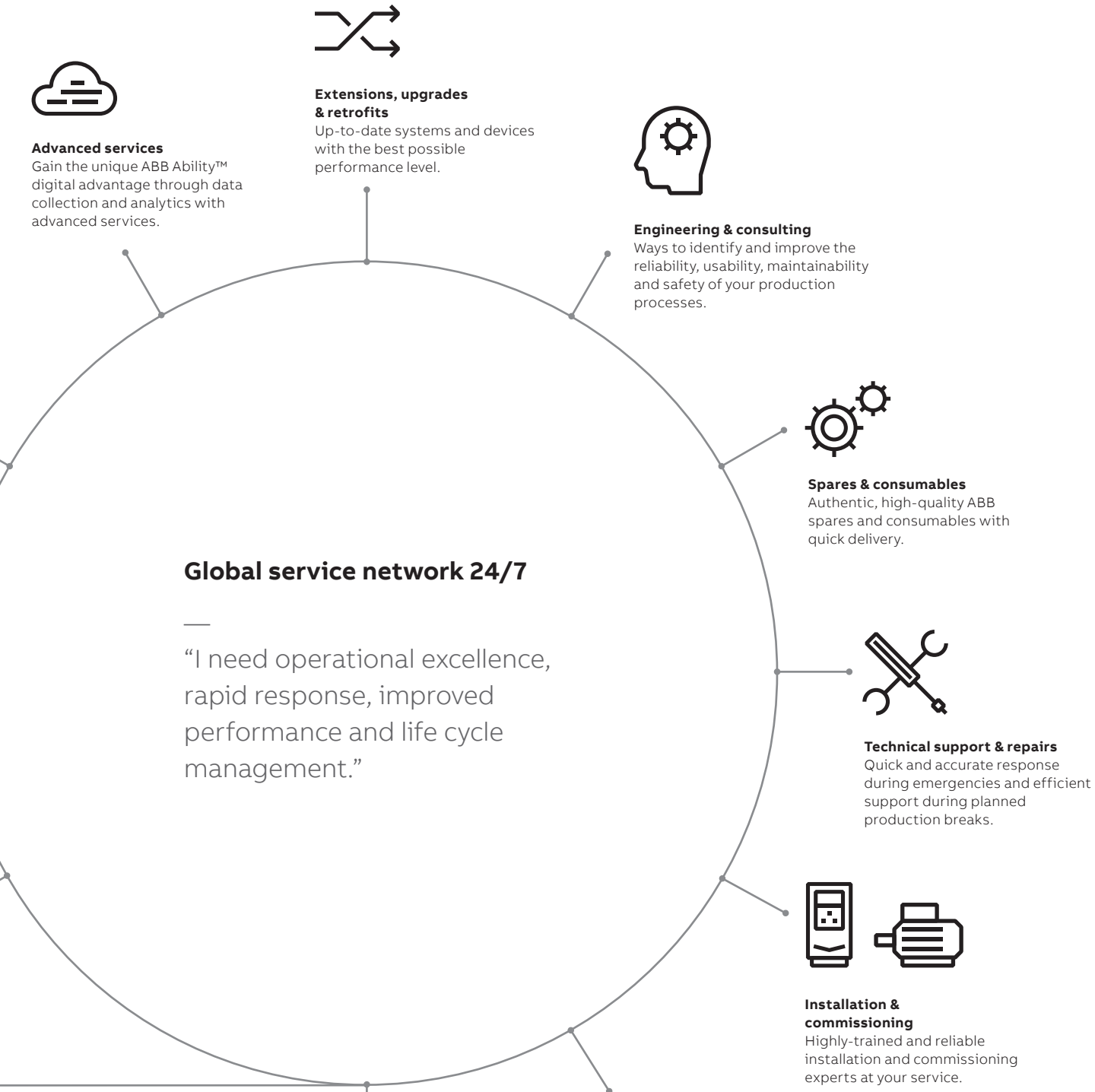
When you've decided on the right product, ABB and its global network of Value Providers can help with installation and commissioning. They are also on hand to support you throughout the operation and maintenance phases of the products life cycle, providing maintenance programs tailored to your facility's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

Services to match your needs

Your service needs depend on your operations, the life cycle of your equipment, and your business priorities. We have identified our customers' four most common needs, and we created service options to satisfy them. Which will you choose to keep your drives at peak performance?

Is uptime your priority?

Keep your drives running with precisely planned and executed maintenance.

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

Operational efficiency

Is rapid response a key consideration?

If your drives need immediate action, our global network is at your service.

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

Rapid response

Drives service
Your choice, your future

The longevity of your drives is influenced by the service you choose.
Whatever you choose, it should be a well-informed decision. We have the expertise and experience to help you find and implement the right service for your drive equipment. Start by asking yourself these two critical questions:
- Why would my drive be serviced?
- What would my optimal service options be?

From here, count on our guidance and full support throughout the entire lifetime of your drives.

Your choice, your business efficiency
ABB Drive Care lets you focus on your core business. A selection of predefined service options matching your needs provides optimal, more reliable performance, extends your drive's lifetime, and controls costs. This reduces the risk of unplanned downtime and makes it easier to budget for maintenance.

We can help you more if we know where you are!
Register your drive for advanced services.

Need to extend your assets' lifetime?

Maximize the lifetime of your drive with our services.

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

Life cycle management

Is performance most critical to your operation?

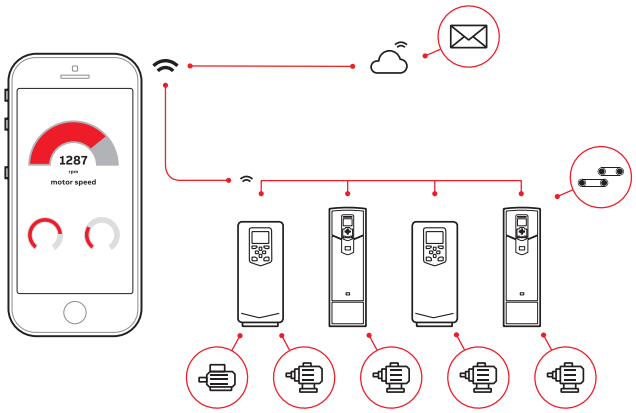
Get optimal performance out of your machinery and systems.

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

Performance improvement

ABB Ability™ smartphone apps

Better connectivity and user experience with Drivetune



Easy and fast access to product information and support

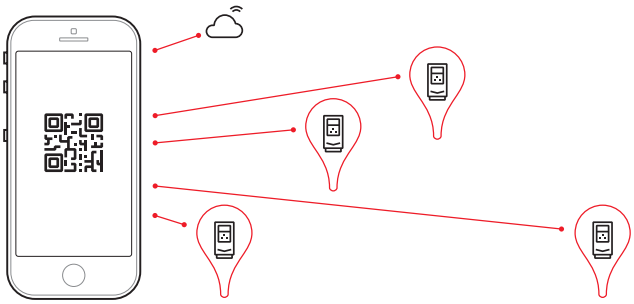
Startup, commission and tune your drive and application

Instantly access drive status and configuration with a simplified user guidance

Optimize performance via drive troubleshooting features

Create and share backups and support packages

Services and support on the go with Drivebase



Search for support documents and contacts

Access your product and service information in the cloud from anywhere

View your drives installed base and plan service activities

Use dynamic QR code to troubleshoot your drive

Report service events

Access information anywhere

Download the apps using the QR codes below or directly from the app stores

Drivetune for commissioning and managing drives

Drivebase for ensured reliability and reduced downtime on production sites

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.	Replacement and end-of-life services are available.

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

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.

Notes

Additional information
We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

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Learn more from ACS560 Website

ACS560 Smart Guide

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