



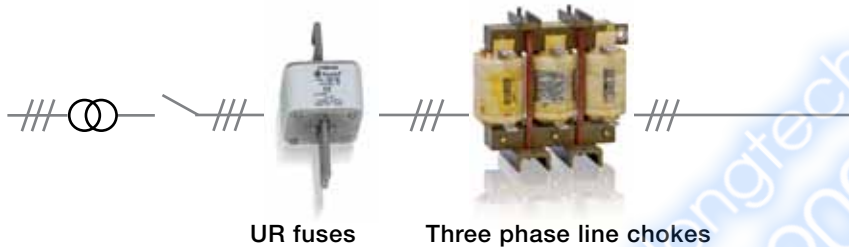
Catalog

ABB DC Drives DCS550, 20 A to 1000 A

Flexibly geared to all the requirements of modern-day machinery manufacturers

Startup and maintenance software

Used from drive startup and configuration to daily use and process tuning



Assistant control panel

The assistant control panel features a multilingual alpha-numeric display for easy drive programming. The control panel has various assistants and a built-in help function to guide the user.



Adaptive Programming

Adaptive Programming is easy and fast because there is a graphical support.





Fieldbus adapter modules

The pluggable fieldbus options allow connection to most automation systems. A single cable replaces complex conventional cabling.



DC motor



Interface extension modules

The pluggable I/O modules extend the basic I/Os.



On-board field exciter

Integrated on-board field exciter reduces hardware and installation work.

Integrated macros

Most frequent parameter settings covered by macros for easy commissioning.

With its compact dimensions and robust technology, the DCS550 is an ideal drive solution for machinery manufacturers – both in new installations or as a replacement for older analog devices.

Integrated “winder”, high-performance field supply and various interfaces provide machinery manufacturers with a maximum of flexibility in terms of machine integration.

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Designed to meet the essential requirements of machinery manufacturers

DCS550 – The highlights

- Compact dimensions
For installations with limited space
- Integrated high performance three phase field exciter up to 35 A
Fits all available motors without additional installations
- “Winder” with commissioning assistant
For easy and fast adaptation to different applications
- Different fieldbus interfaces (incl. EtherCAT, Profinet...)
For easy integration into automation
- Additional PID-controller
For overriding control functions (e. g. pressure or level control)
- Adaptive programming with Drive AP, ABB’s graphical PC-tool
For easy implementation of additional functions
- Various start-up assistants and auto-tune functions
For fast commissioning
- Large control panel
For straight forward and self-explanatory operation
- Rugged design
For rough environments, high reliability
- Worldwide service
Local service in more than 60 countries

Easy to use

The basic version of the DCS550 is already equipped with a large number of standard hardware interfaces like an encoder, an analog tachogenerator and four analog input devices. Since the basic unit includes all important functions almost all applications are covered – options are not necessary. The single-volume documentation provides comprehensive information on the unit, firmware and hardware. The guided start-up and complementary support functions reduce start-up times to a minimum. The grouped structure of the parameters provides easy and clearly arranged navigation within the various features and functions. Error messages and help texts are displayed in plaintext in the user’s native language. The reduced need for training is an additional advantage created by the synergies and similarities with ABB’s DCS800 converter and ABB AC-drives.



DCS550 converter module

Flexibility for different applications

DCS550 – Extensive applications

- Extruders
- Sugar centrifuges
- Wire drawing machines
- Coating lines
- Printing machines
- Presses
- Tools machines main drives
- Food processing machines
- Woodworking (wooden products and MDF industry)
- Retrofit of analog DC-technology

Modern DC-drives – More up-to-date than ever

Today, DC-drive technology is more up-to-date than ever. Their attractive cost-performance ratio and functional advantages such as high torque at low speed, light weight and low power loss, turn DC-drives into the preferred solution for many applications. As far as innovation is concerned ABB's DC-drives match the same high standards as ABB's AC-drives.

Easy upgrade of installed older converters

The machines are frequently still in very good condition, but spare parts and know-how for the installed power electronics are no longer available.

With the DCS550, existing machines can be kept in operation by replacing the old drive.

Short downtimes and low costs for the retrofit are additional advantages of an upgrade of existing machinery.



Smart human-drive interface

General

All units are equipped with the DCS550 Control Panel. It can be snapped into place on the power converter module or installed in the switchgear cubicle door by means of a mounting kit.

Control panel: high level of convenience included

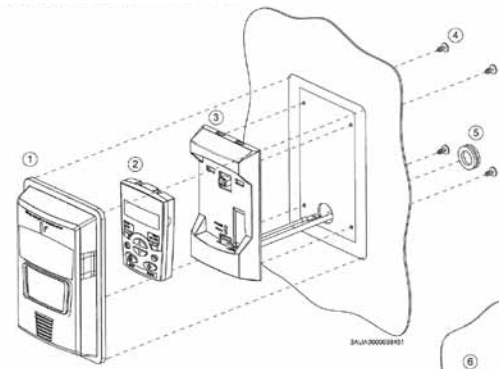
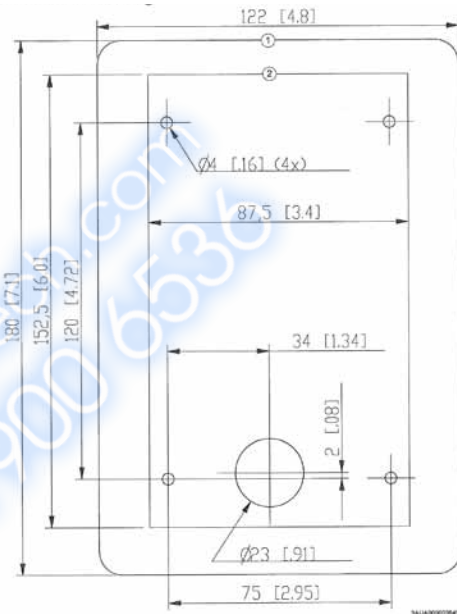
The assistant control panel is part of the basic unit. It offers a multi-language alphanumeric display (EN, DE, ES, FR, IT) with a multilingual help function. The large graphic display allows the user to freely select actual and set values. Another additional advantage: the user can call up a list of all changed parameters. The control panel can also store parameters as a security backup or copy them for use in other converters.



- Startup Assistant
- Fault logger function
- Plain text for fault logger, faults and alarms
- Shows actual values in physical units
- Backup and Copy function for parameter
- Compare function for parameters
- Real time clock
 - Help function
 - Multilingual

Panel mounting kits

To attach the control panel to the outside of a larger enclosure, two panel mounting kits are available. A simple and cost-efficient installation is possible with the ACS/H-CP-EXT kit, while the JPMP-01 kit provides a more user-friendly solution, including a panel platform that enables the panel to be removed in the same way as a drive-mounted panel. The panel mounting kits include all hardware required, including 3 m extension cables and installation instructions.



Standard Firmware for scalable control and functionality

Basic firmware

DCS550 firmware includes the basic functions of speed control, armature current, field current and motor voltage. The design of the drive logic enables a drive reaction defined by Profibus standard, but can also be configured to adapt classic command structures.

Macros

The DCS550 is equipped with seven different macros to cover the most frequent parameter settings.

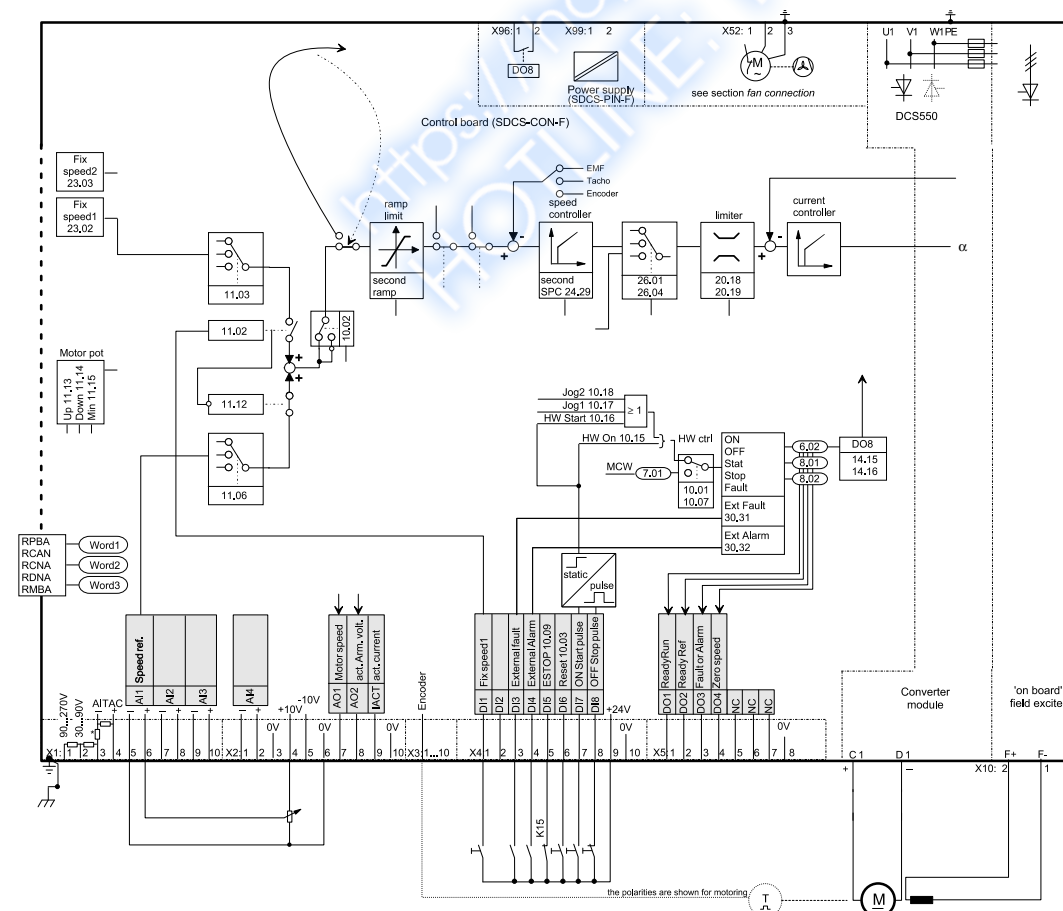
Macros are pre-programmed parameter sub-sets. During start-up, the drive can be configured easily without changing individual parameters. The functions of all inputs and several outputs and of allocations in the control structure are influenced by the selection of a macro. The means whether the drive is speed-controlled or torque-controlled, whether supplementary references are processed, which actual values are available at the analog outputs, which reference value sources are used etc. is already defined in the macro.

Functions of basic firmware

- Different speed ramp function
- Speed control
- Torque control
- Armature current control
- Field current control
- Automatic field weakening
- E-stop function according to Profibus standard
- Interface for fieldbus
- Programmable digital and analogue outputs
- 16 blocks Adaptive Program
- Converter protection (temperature, voltage,...)

Motor protection features

- Stall protections
- Thermal motor model
- Klixon supervision
- Speed feedback error
- Over speed
- Armature current ripple
- Armature over current
- Minimum field current



Example: STANDARD macro

PC tool for easy start-up and maintenance

Useful features

DriveWindow Light

The user-friendly start-up and maintenance tool for the world of ABB-drives supports both ABB's DC-drives and AC-drives. DriveWindow Light is a PC software package for easy and fast start-up and maintenance of DCS550 converters and is part of the basic package. In offline-mode, all parameters can be set from the user's office desk. The parameter browser can both display and save parameters on the computer. A comparison feature can compare and align current values with a stored set of parameters. With the "Local"-feature, the drive can be controlled as well. At the same time, up to four display values can be visualized graphically. DriveWindow Light also includes an assistant for guided start-up, winder functions as well as the AP-tool for block programming.

Start-up assistant

The DriveWindow Light start-up assistant for the DCS550 provides valuable support during commissioning via an interactive dialog. The individual steps of the start-up process are pre-defined in the right order and all required parameters are displayed. The "Basic"-feature captures motor and connection data and adjusts the controller automatically. The

"Advanced"-feature supports the start-up of serial communication (fieldbus) and winder functions. The context-sensitive help function is always available.

Adaptive Programming (AP):

Adaptive Programming is included in the basic package. With the help of 16 functional blocks users can develop, test and document their own programs easily in graphical mode. The „Adaptive Programming“ (AP) function allows the implementation of additional features. Modifications can be configured with either the control panel or with the help of the graphical interface of DriveWindow Light AP.

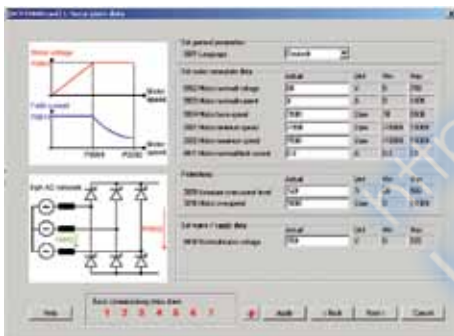
The main features of DriveWindow Light AP are:

- 16 programmable function blocks
- Available functions:
 - Logical: AND, OR and XOR
 - Mathematical: ADD, MUL, DIV, ABS, MAX and MIN
 - Other: timer, switch, comparator, filter, SR, PI and user-defined warnings or faults
- Freely definable execution order
- Easy documentation

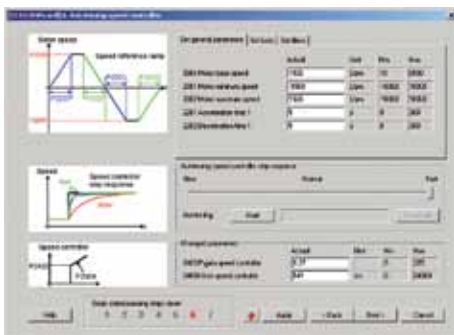
Content CD:

The CD ROM provides information about DCS550 and contains PC tools:

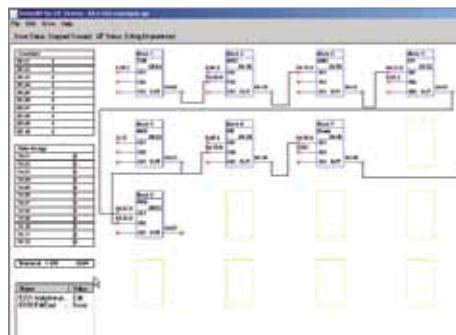
- DriveWindow Light for DC drives + Commissioning Wizard + DWL AP
- FDT Firmware download kit + workspace
- Firmware



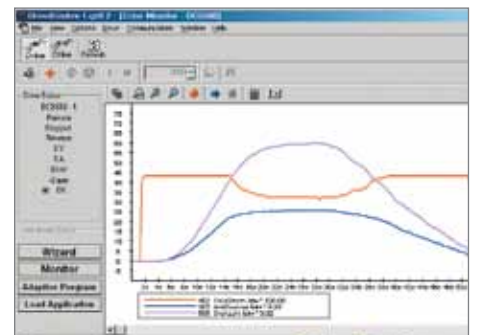
Start-up Assistant



Speed Controller Autotuning



Adaptive Programming



Trending

Winder function required?

Integrated winder functions

The DCS550 is equipped with a winder function featuring pre-defined macros for the four most commonly used winder types:

Velocity control

Calculates the diameter and rotation speed setpoint value. The diameter is used to adjust the speed controller to all winding sizes. There is no tension control. All other macros are included in this basic structure.

Indirect tension control

Controls the tension with the help of preset charts for friction and moment of inertia (open loop).

This structure provides a very robust control behavior because no physical tension measurement is required.

Direct tension control

Closed loop for physical value of tension

The tension is measured with a load cell and transferred to the drive as an analog actual value. The DCS550 is equipped with a free PID-controller that can be integrated into the control loop with the "Tension Control" macro.

Dancer control

Controls the tension with the weight of the dancer roll (closed loop).

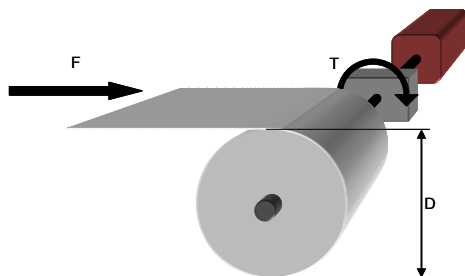
The dancer has to be kept in the right position with additional speed set values. The PID-controller of the DCS550 can also control the positioning of the dancer roll. The position of the dancer roll is transmitted to the controller as an analog actual value.

Commissioning assistant

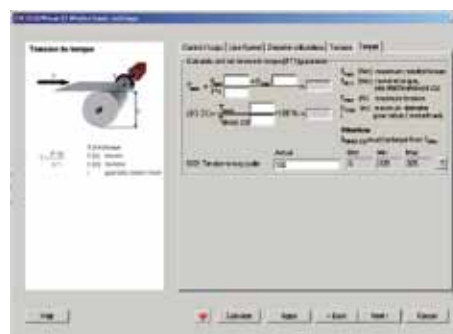
For an easy winder set-up, all different winder types can be configured and commissioned using a graphical assistant.

The assistant is part of DriveWindows Light PC-tool.

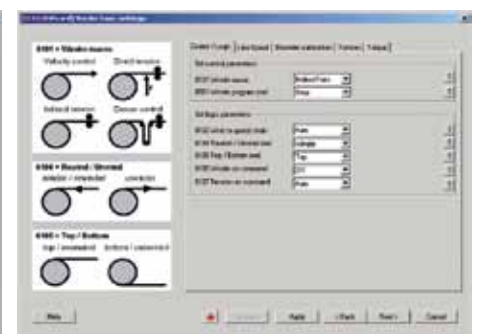
The rating for friction and inertia can be determined by auto tuning.



Example: direct tension control (closed loop)



Winder Assistant



Winder Macros

How to select a drive

Many of the features for DCS550 drives are built-in as standard providing easy selection.

Every drive is equipped with

- Assistant Control panel
- CD ROM with PC commissioning assistant and DWL/ AP programming PC tool (PC requires COM port)
- Quickguide manual in 5 language En,DE,IT,FR,ES
- Marking CE and cULus
- ON board field exciter, rating see table

The control board and power interface board are coated.
Cable marking C and tin plated Cu bars inside, Protection class IP00.

Available as options

- R-fieldbus modules
- additional R I/O modules
- semiconductor fuses
- line reactors
- EMC Filters

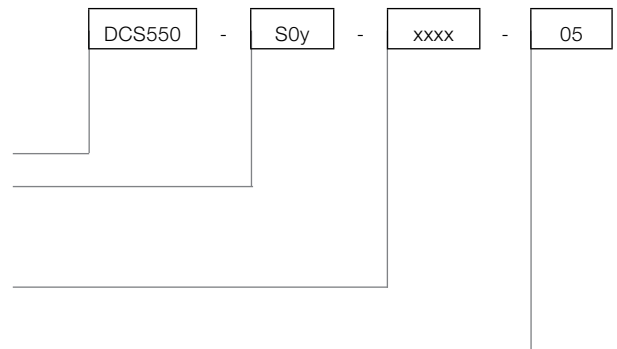
To choose the right drive for your application, please refer to the ratings table on page 12. The selected drive has a unique type designation, which identifies the drive by construction, power and voltage range.

Type designation:

DCS550-S0y-xxxx-05

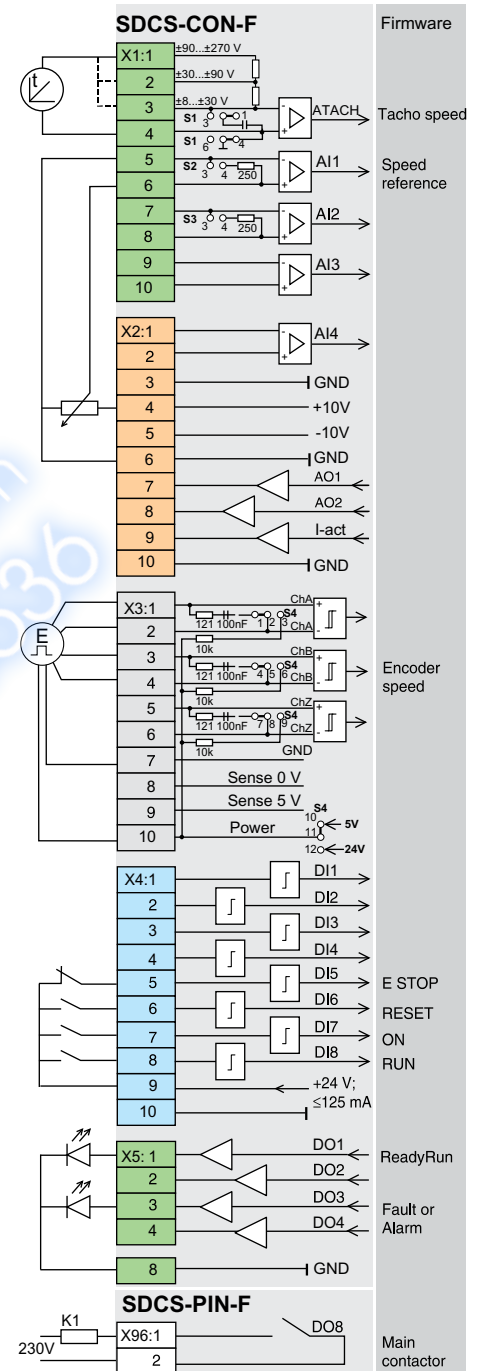
- DCS550 = Product series
- S0 = DC drive converter module
- y = 1 = single bridge/ motor operation
= 2 = double bridge motor + regen operation
- xxxx = rated current (main bridge armature circuit) double check suitable duty cycles rated field current, see table
- 05 = 230 V_{AC} ... 525 V_{AC} supply

Options are ordered via Id code of the price list.



Standard interface and extensions for comprehensive connectivity

Mains connection	
Mains	3-phase 230 V _{AC} - 525 V _{AC} ; -15 % / +10 %
Rated frequency	50 Hz or 60 Hz
Field exciter	
Supply voltage	Internally connected to the mains
Hardware	Completely integrated 3-phase OnBoard field exciter
Operating conditions	
Degree of protection	IP 00
EMC	Fulfilling EN 61800-3 in accordance with 3ADW 000 032
Compliance	CE, cULus
Control interfaces	
Auxiliary voltages	115 V _{AC} ; 230 V _{AC} ; 230 V _{DC}
PC-tools	DriveWindow Light, DWL AP, start-up assistant, winder assistant, help function
DCS550 Control Panel	As standard, several languages, start-up assistant, help function
Status display	Seven-segment display as standard
Analog I/O	4 AI (15 bit + sign); 3 AO (11 bit + sign; two are freely programmable, one is fixed for armature current)
Digital I/O	8 DI, 5 DO (one for mains breaker)
Motor temperature	1 PTC
Analog tachometer input	As standard
Encoder input	As standard for 5 V and 24 V encoders
Option slots	two slots for analog and digital I/O plug-in options
Special firmware functions	
Adaptive Program	16 freely programmable function blocks
PID controller	Freely usable PID controller
Macros	10 pre-defined macros for fast commissioning
winder macros	4 pre-defined winder macros
Control and communication options	
Analog & digital plug-in options	
1 * RAIO	2 AI, 2 AO
2 * RDIO	3 DI, 2 DO each
Classic fieldbusses	
RCAN-01	CANopen
RCNA-01	ControlNet
RDNA-01	DeviceNet
RMBA-01	Modbus (RTU)
RPBA-01	Profibus
Ethernet fieldbusses	
RECA-01	EtherCat
RETA-01	Ethernet/IP and Modbus/TCP
RETA-02	Profinet



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How to select the motor voltage

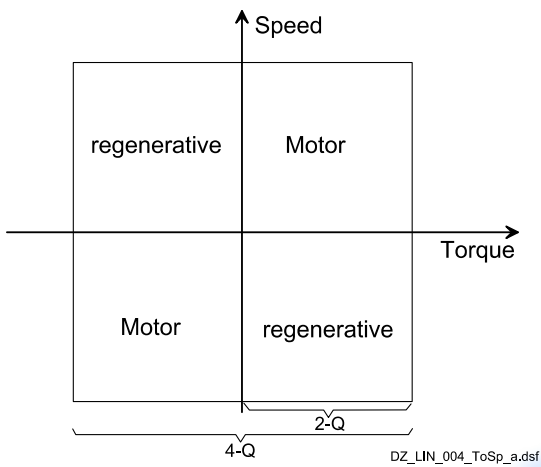
Reference variables

The voltage characteristics are shown in the table beside. The DC voltage characteristics have been calculated using the following assumptions:

- U_{VN} = rated input terminal voltage, 3-phase
- Voltage tolerance $\pm 10\%$
- Internal voltage drop approx. 1 %
- If a deviation or a voltage drop has to be taken into consideration in compliance with IEC and VDE standards, the output voltage or the output current must be reduced in accordance with the table on the right.

The bridge type 2-Q or 4-Q has an influence on the maximum motor voltage. See table below.

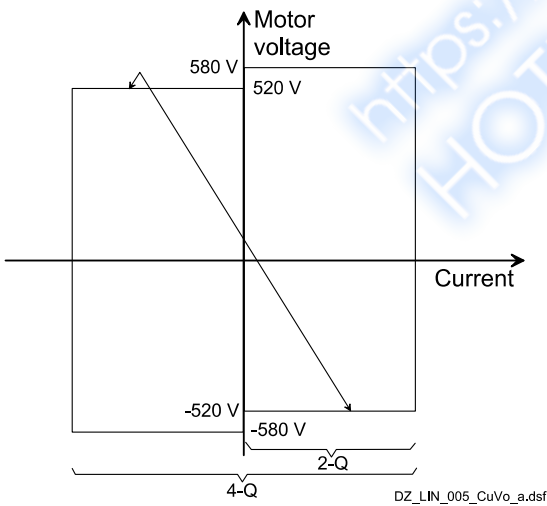
System connection voltage	DC voltage (recommended)	Ideal DC voltage with-out load	Recommended DCS800 voltage class	
U_{VN} [V]	$U_{dmax\ 2-Q}$ [V]	$U_{dmax\ 4-Q}$ [V]	U_{di0} [V]	
230	265	240	310	05
380	440	395	510	05
400	465	415	540	05
415	480	430	560	05
440	510	455	590	05
460	530	480	620	05
480	555	500	640	05
500	580	520	670	05
525	610	545	700	05



motor and regenerative operation

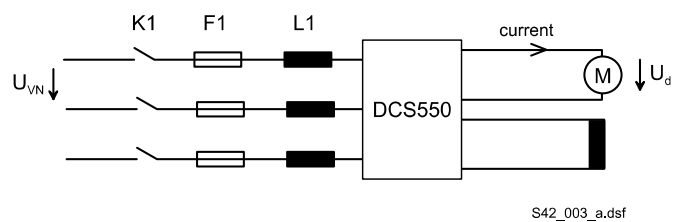
If armature voltages higher than recommended are requested, please check carefully whether your system is still working under safe conditions.

The maximum output voltage of a 4-Q drive can be increased up to the level of $U_{dmax\ 2-Q}$. Thus the torque reversal from motoring mode to generating mode increases up to 300 ms. This lowers the dynamics of the drive and is only recommended for non-dynamic applications (e.g. E-Stop function).



Example: maximum motor voltage U_{dmax} for 500 V_{AC} supply voltage U_{VN}

The power section of the converters is available as a single (2-Q) bridge or double (4-Q) bridge. 4-Q drives are required for regenerative braking.



Technical data, dimensions and weights

Single bridge (2-Q Drive), 230 - 525 V -15 / +10 %

I_A [A]	I_F [A]	Fan supply	Dimensions h x w x d [mm]	Weight [kg]	Power 400 V [kW]	Power 525 V [kW]	Losses [kW]	Type code	Size
20	1 - 12	no fan	370 x 270 x 220	11	9	12	0,18	DCS550-S01-0020-05	F1
45		internal			21	26	0,28	DCS550-S01-0045-05	
65		internal			30	38	0,32	DCS550-S01-0065-05	
90		internal			42	52	0,39	DCS550-S01-0090-05	
135	1 - 18	115 / 230 V	370 x 270 x 270	16	63	78	0,58	DCS550-S01-0135-05	F2
180		115 / 230 V			84	104	0,76	DCS550-S01-0180-05	
225		115 / 230 V			105	131	0,90	DCS550-S01-0225-05	
270		115 / 230 V			126	157	1,00	DCS550-S01-0270-05	
315	2 - 25	115 / 230 V	459 x 270 x 310	25	146	183	1,12	DCS550-S01-0315-05	F3
405		115 / 230 V			188	235	1,38	DCS550-S01-0405-05	
470		115 / 230 V			219	273	1,66	DCS550-S01-0470-05	
610	2 - 35	230 V	644 x 270 x 345	38	284	354	1,94	DCS550-S01-0610-05	F4
740		230 V			344	429	2,38	DCS550-S01-0740-05	
900		230 V			419	522	2,95	DCS550-S01-0900-05	

Double bridge (4-Q Drive), 230 - 525 V -15 / +10 %

I_A [A]	I_F [A]	Fan supply	Dimensions h x w x d [mm]	Weight [kg]	Power 400 V [kW]	Power 525 V [kW]	Losses [kW]	Type code	Size
25	1 - 12	no fan	370 x 270 x 220	11	10	13	0,20	DCS550-S02-0025-05	F1
50		internal			21	26	0,31	DCS550-S02-0050-05	
75		internal			31	39	0,36	DCS550-S02-0075-05	
100		internal			42	52	0,42	DCS550-S02-0100-05	
150	1 - 18	115 / 230 V	370 x 270 x 270	16	62	78	0,64	DCS550-S02-0150-05	F2
200		115 / 230 V			83	104	0,84	DCS550-S02-0200-05	
250		115 / 230 V			104	130	1,00	DCS550-S02-0250-05	
300		115 / 230 V			125	156	1,10	DCS550-S02-0300-05	
350	2 - 25	115 / 230 V	459 x 270 x 310	25	145	182	1,22	DCS550-S02-0350-05	F3
450		115 / 230 V			187	234	1,54	DCS550-S02-0450-05	
520		115 / 230 V			216	270	1,85	DCS550-S02-0520-05	
680	2 - 35	230 V	644 x 270 x 345	38	282	354	2,15	DCS550-S02-0680-05	F4
820		230 V			340	426	2,64	DCS550-S02-0820-05	
1000		230 V			415	520	3,31	DCS550-S02-1000-05	

$$I_{AC} = I_A * 0.82 + I_F * 0.82$$



Size: F1



F2



F3



F4

Line reactors L1

Size	Converter type (2-Q)	Converter type (4-Q)	Line choke 1 % relative voltage drop	Design fig.	Line choke 4 % relative voltage drop	Design fig.
F1	DCS550-S01-0020	DCS550-S02-0025	ND01	1	ND401	4
	DCS550-S01-0045	DCS550-S02-0050	ND02	1	ND402	4
	DCS550-S01-0065	DCS550-S02-0075	ND04	1	ND403	5
	DCS550-S01-0090	DCS550-S02-0100	ND06	1	ND404	5
F2	DCS550-S01-0135	DCS550-S02-0150	ND06	1	ND405	5
	DCS550-S01-0180	DCS550-S02-0200	ND07	2	ND406	5
	DCS550-S01-0225	DCS550-S02-0250	ND07	2	ND407	5
	DCS550-S01-0270	DCS550-S02-0300	ND09	2	ND408	5
F3	DCS550-S01-0315	DCS550-S02-0350	ND09	2	ND408	5
	DCS550-S01-0405	DCS550-S02-0450	ND10	2	ND409	5
	DCS550-S01-0470	DCS550-S02-0520	ND10	2	ND410	5
F4	DCS550-S01-0610	DCS550-S02-0680	ND12	2	ND411	5
	DCS550-S01-0740	DCS550-S02-0820	ND13	3	ND412	5
	DCS550-S01-0900	DCS550-S02-1000	ND13	3	ND413	5



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5

Fuse connections

Semiconductor fuses and fuse holders for AC and DC power lines

The DCS550 converter sizes F1, F2, F3 and F4 with rated currents up to 1000 A require external line fuses for armature bridge.

The table assigns the AC fuse types to the converter types involved. In case the converter needs to be equipped with DC

fuses according to the instructions use the same type of fuse used on the AC side now in the plus and minus line (only for sizes F1...F4). Blade type fuses are used for all the converters of construction type F1...F4 except the converters (610 A, 680 A, 740 A, 820 A, 900 A, 1000 A).

Recommended fuse connections

Size	Converter type (2-Q)	Converter type (4-Q)	Fuse Type	Fuse holder	Design fig.
F1	DCS550-S01-0020	DCS550-S02-0025	50A 660V UR	OFAX 00 S3L	1
	DCS550-S01-0045	DCS550-S02-0050	63A 660V UR		1
	DCS550-S01-0065	DCS550-S02-0075	125A 660V UR		1
	DCS550-S01-0090	DCS550-S02-0100			1
F2	DCS550-S01-0135	DCS550-S02-0150	200A 660V UR	OFAX 1 S3	2
	DCS550-S01-0180	DCS550-S02-0200	250A 600V UR		2
	DCS550-S01-0225	DCS550-S02-0250	315A 660V UR		2
	DCS550-S01-0270	DCS550-S02-0300	500A 660V UR		3
F3	DCS550-S01-0315	DCS550-S02-0350		OFAX 3 S3	3
	DCS550-S01-0405	DCS550-S02-0450	700A 660V UR		4
	DCS550-S01-0470	DCS550-S02-0520			4
F4	DCS550-S01-0610	DCS550-S02-0680	900A 660V UR	3 x 170H 3006	5
	DCS550-S01-0740	DCS550-S02-0820			5
	DCS550-S01-0900	DCS550-S02-1000			1250A 660V UR



Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Environmental conditions

System connection	
Voltage, 3-phase:	230 to 525 V acc. to IEC 60038
Voltage deviation:	±10% continuous; ±15 % short-time *
Rated frequency:	50 Hz or 60 Hz
Static frequency deviation:	50 Hz ±2 %; 60 Hz ±2 %
Dynamic: frequency range:	50 Hz: ±5 Hz; 60 Hz: ± 5 Hz
df/dt:	17 % / s
* = 0.5 to 30 cycles.	

Please note: Special consideration must be given to voltage deviation in regenerative mode.

Degree of protection	
Converter module and options (line chokes, fuse holder, field supply unit, etc.):	IP 00

Paint finish	
Converter module:	RAL 9002

Sound pressure level

Size	Sound pressure level LP (1 m distance)		Vibration
	as module	enclosed conv.	as module
F1	55 dBA	68 dBA	
F2	55 dBA	72 dBA	
F3	60 dBA	78 dBA	0.5 g, 5...55 Hz
F4	66...70 dBA, depending on fan	77 dBA	

Environmental limit values	
Permissible cooling air temperatur.	
- at converter module air inlet:	0 to +55°C
with rated DC current:	0 to +40°C
w. different DC current	+30 to +55°C
- Options:	0 to +40°C
Relative humidity (at 5...+40°C):	5 to 95 %, no condensation
Relative humidity (at 0...+5°C):	5 to 50 %, no condensation
Change of the ambient temp.:	< 0.5°C / minute
Storage temperature:	-40 to +55°C
Transport temperature:	-40 to +70°C
Pollution degree (IEC 60664-1, IEC 60439-1):	2
Site elevation	
<1000 m above M.S.L.:	100%, without current reduction
>1000 m above M.S.L.:	with current reduction

Product compliance

- CE
- Low Voltage Directive 2006/95/EC — conformity EN61800-5-1 EN60146-1-1
- Machinery Directive 2006/42/EC — in cooperation EN60204-1
- EMC Directive 2004/108/EC — conformity EN61800-3
- Quality assurance system ISO 9001 and Environmental system ISO 14001
- RoHS
- C-Tick
- Pending: UL, cUL 508A or 508C and CSA C22.2 NO. 14-95, GOST R

EMC according to EN 61800-3 (2004)

- Categories C2, C3 or C4 with external EMC filtering or dedicated transformer

Service

The ABB DriveHelp service is ABB's globally operating process for handling LV drives warranty claims. It has been exclusively tailored for international OEM customers, who have purchased LV drives manufactured by ABB for their production machinery and equipment. The service covers all LV drives manufactured by ABB, that are delivered to International machine manufacturers builder.

Efficient service

As indicated by its name, the new ABB DriveHelp service targets at supporting International machine manufacturer builder customers at all times by offering them an efficiently operating warranty service that enables them to run their business operations at an optimum maximum level. The ABB DriveHelp service defines clear procedures, which advise the machine builder customers whom to contact in case any of their ABB LV drives fails during the warranty period in order to get assistance as soon as possible from the nearest local ABB service provider.

The ABB DriveHelp team can be reached 24 hours a day and is committed to ensuring that the machine builder customers have a competent, local person available to assist them within the shortest possible time whenever help is needed.

A well defined operations model

The target of the ABB DriveHelp service is to quickly locate the official ABB service provider, which is closest to the customer. In the event a case of an LV drive failure, the end-user informs the OEM agent in his country, who forwards the message with product and customer information to the seller of the drive. After having checked the warranty, he will send a warranty claim with all necessary information to the ABB DriveHelp team.

The ABB DriveHelp team will process the warranty claim, choose the best suitable service provider, follow up the response time to the end user and finalize the case. The service

provider allocated to the case will contact the end customer within 24 hours of receiving information from the ABB DriveHelp team. The ABB service provider takes care of the warranty service request and sends a service and warranty report to the ABB DriveHelp team as well as the original ABB drives sales company.

Training

Throughout the value chain, from pre-purchase to replacement and recycling of a drive, ABB offers product, application and general technical training both in classrooms and over the internet.

Classroom training typically comprises theoretical presentations and hands-on exercises.

To meet its customers' growing interest in self-learning, ABB offers several e-learning modules for DCS550 available in the Internet. The training content includes product features, applications, installation and start-up procedures, programming, PC tools, maintenance and trouble-shooting fault finding. The majority of training is delivered by ABB training centre's. Versatile training services are also offered by local ABB sales and service companies and their channel partners. Some courses are organized at the customer's location. Benefits of professional training include enhanced personnel and plant safety, reduced downtime, improved productivity and increased employee motivation. More information about ABB's training centre's and the courses can be found from the ABB University at www.abb.com/abbuniversity.

ABB drive life cycle management model

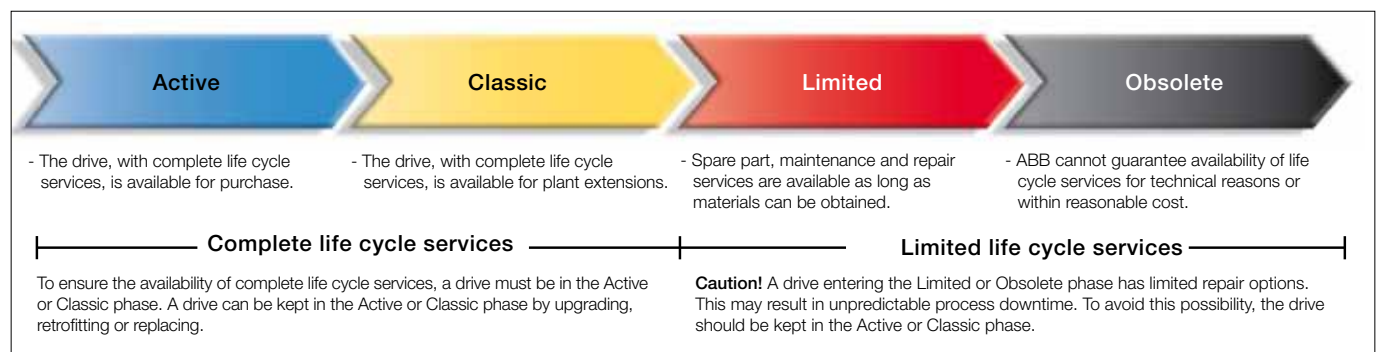


ABB follows a four-phase model for managing drive life cycles, which brings enhanced customer support and improved efficiency.

Examples of life cycle services are: selection and dimensioning, installation and commissioning, preventive and corrective maintenance, remote services, spare part services, training and learning, technical support, upgrade and retrofit, replacement and recycling.

DCS family - the range for all demands



DCS550-S modules

The compact drive for machinery application

20 ... 1,000 A_{DC}
 0 ... 610 V_{DC}
 230 ... 525 V_{AC}
 IP00

- Compact
- Robust design
- Adaptive and winder program
- High field exciter current



DCS800-S modules

The versatile drive for process industry

20 ... 5,200 A_{DC}
 0 ... 1,160 V_{DC}
 230 ... 1,000 V_{AC}
 IP00

- Compact
- Highest power ability
- Simple operation
- Comfortable assistants, e.g. for commissioning or fault tracing
- Scalable to all applications
- Free programmable by means of integrated IEC61131-PLC



DCS800-A enclosed converters

Complete drive solutions

20 ... 20,000 A_{DC}
 0 ... 1,500 V_{DC}
 230 ... 1,200 V_{AC}
 IP21 – IP54

- Individually adaptable to customer requirements
- User-defined accessories like external PLC or automation systems can be included
- High power solutions in 6- and 12-pulse up to 20,000 A, 1,500 V
- In accordance to usual standards
- Individually factory load tested
- Detailed documentation



DCS800-E series

Pre-assembled drive-kits

20 ... 2,000 A_{DC}
 0 ... 700 V_{DC}
 230 ... 600 V_{AC}
 IP00

- DCS800 module with all necessary accessories mounted and fully cabled on a panel
- Very fast installation and commissioning
- Squeezes shut-down-times in revamp projects to a minimum
- Fits into Rittal cabinets
- Compact version up to 450 A and Vario version up to 2,000 A



DCS800-R Rebuild Kit

Digital control-kit for existing powerstacks

20 ... 20,000 A_{DC}
 0 ... 1,160 V_{DC}
 230 ... 1,200 V_{AC}
 IP00

- Proven long life components are re-used, such as power stacks, (main) contactors, cabinets and cabling / busbars, cooling systems
- Use of up-to-date communication facilities
- Increase of production and quality
- Very cost-effective solution
- Open Rebuild Kits for nearly all existing DC drives
- tailor-made solutions for...
 - BBC PxD
 - BBC SZxD
 - ASEA TYRAK
 - other manufacturers

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