

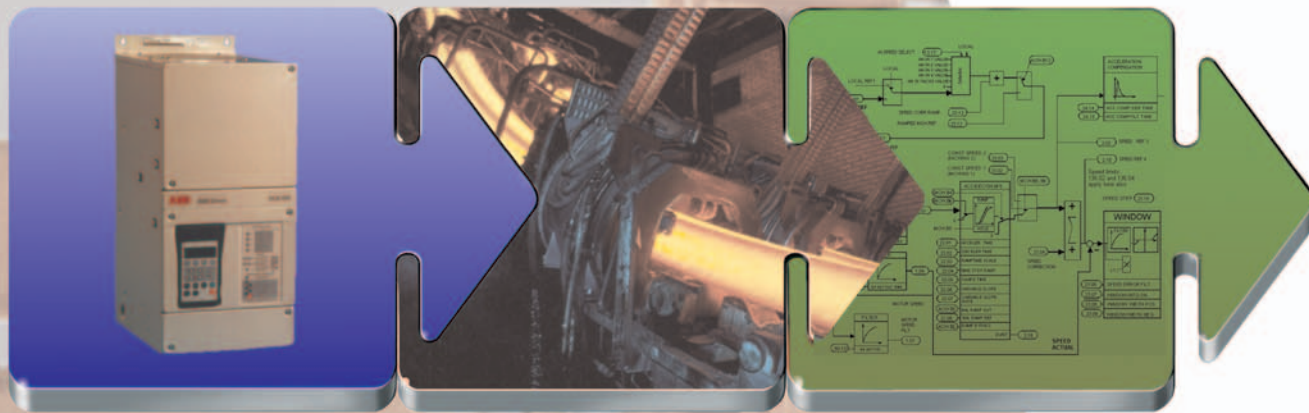
DCS 500

DC Drive for regenerative
or non-regenerative operation
25 to 5200 A DC
230 to 1000 V AC 3-phase

MODERN DESIGN

DEMANDING APPLICATIONS

PROCESS FOCUSED



Standard Features

- Design and commissioning tools
- Monitoring functions
- Communication via databus
- Human-machine interface
- More than 300 additional functions blocks programmable under Windows
- Graphical Application Designer
- Plain text display
- FOR HIGH POWER

New A6 Power Tower
up to 3000 A - 2.6 MW
2- and 4-quadrant
operation



ABB

Power spectrum of DCS 500 Converters

DCS 501 non-regenerative Converters (2-Q)

Continuous Armature Current I_{cr} [A]	at supply Voltage [V AC]						Frame Size
	400	500	600	690	790	1000	
25	•	•					C1
50	•	•	•				
75	•	•					
100	•	•	•				
125	•	•					
180	•	•					C2
225	•	•					
245			•				
315	•	•					
405	•	•	•				
470	•	•					C2b
610	•	•					
740	•	•					
900	•	•					
900			•	•			
1200	•	•					
1500	•	•	•	•			
2000	•	•	•	•			
1900					•		A6
2050		•	•	•	•		
2500	•	•	•	•	•		
3000	•	•	•	•	•		
2050						•	
2600						•	
3300	•	•	•	•	•	•	
4000	•	•	•	•	•	•	
4800	•	•	•	•	•	•	
5200	•	•				•	

DCS 502 regenerative Converters (4-Q)

Continuous Armature Current I_{cr} [A]	at supply Voltage [V AC]						Frame Size
	400	500	600	690	790	1000	
25	•	•					C1
50	•	•	•				
75	•	•					
100	•	•					
110			•				
140	•	•					C2
200	•	•					
250	•	•					
270			•				
350	•	•					
450	•	•	•				C2b
520	•	•					
680	•	•					
820	•	•					
1000	•	•					
900			•	•			A5
1200	•	•					
1500	•	•	•	•			
2000	•	•					
1900					•		
2050		•	•	•	•		
2500	•	•	•	•	•		
3000	•	•	•	•	•		
2050						•	A7
2600						•	
3300	•	•	•	•	•	•	
4000	•	•	•	•	•	•	
4800	•	•	•	•	•	•	
5200	•	•				•	



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Technical Data of DCS 500 Converters

Converter Ratings

Rated supply voltage: 230 to 1000 V AC $\pm 10\%$, 3-ph
 Rated frequency: 50 Hz or 60 Hz
 Dyn. frequency range: 50 Hz: ± 5 Hz; 60 Hz: ± 5 Hz
 DC current range: 25...5200 A DC

Operating Conditions:

Ambient temperature: 0 to +40°C (32...104°F)
 Storage temperature: -40 to +55°C (-40...130°F)
 Relative humidity: 5 to 95%, no condensation
 Degree of protection: IP 00

Dimensions							Module frame size
mm			inches			kg	
h	w	d	h	w	d		
420	273	195	16.54	10.75	7.67	8	C1 (25...75 A) C1 (100...140A)
469	273	228	18.46	10.75	8.97	12	
505	273	361	19.88	10.75	14.21	29	C2
652	273	384	25.66	10.75	15.11	42	C2b
1050	510	410	41.34	20.07	16.14	110	A5
1750	460	410	68.90	18.11	16.14	180	A6
1750	760	570	68.90	29.92	22.44	315	A7

Field supply

- up to 16 A incorporated in the drive module (not for A6 and A7-converters)
- 25...520 A external

I/O- connections

- 8 Digital Inputs
- 8 Digital Outputs
- 4 Analogue Inputs
- 3 Analogue Outputs
- 1 Tachogenerator input
- 1 Encoder input
- ± 10 V Ref. voltage
- Multiple fieldbus adapters avail.

Protection

- Speed feedback error
- Overtemperature
- Overload
- Overspeed
- Zero speed
- Armature overcurrent
- Armature ripple
- Armature overvoltage
- Minimum field current
- Field overcurrent
- Motor stalled
- Mains over- and undervoltage
- Auxiliary undervoltage
- Incorrect mains phase sequence

Tools

CDP 312 Panel

Removable control and display panel with plain text display for:

- Reference and feedback display
- Drive control
- Parameter programming
- Fault detection
- Parameter upload and download
- Lockable operation

GAD

PC-based application tool for:

- Drawing
- Creating Software functions
- Documentation

CMT

PC-based commissioning tool for:

- Online Start-up
- Diagnosis
- Maintenance
- Troubleshooting
- Programming

Serial Communication

- Profibus
- CS 31
- ModBus
- ModBus+
- CANopen
- ControlNet
- DeviceNet

DCS 500 converters are available as modules or in cabinets as DCA 500 Enclosed converters.



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