

# DCS 500

DC Drive for regenerative  
or non-regenerative operation  
25 to 5150 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

**ABB**

## Power spectrum of DCS 500 Converters

### DCS 501 non-regenerative Converters

Continuous Armature Current $I_{nc}$ [A]	at supply Voltage [V AC]						Frame Size
	400	500	600	690	790	1000	
25	•	•					C1 a
50	•	•	•				
75	•	•					
100	•	•	•				C1 b
125	•	•					
180	•	•					C2 a
225	•	•					
245			•				
315	•	•					
405	•	•	•				
470	•	•					
700	•	•					C2 b
900	•	•	•	•			
1200	•	•					C3
1500	•	•	•	•			
2000	•	•					
2050			•	•	•	•	
2500	•	•	•	•			C4
2650						•	
3200					•	•	
3300	•	•	•	•			
4000	•	•	•	•	•	•	
4750			•	•	•		
5150	•	•					

### DCS 502 regenerative Converters

Continuous Armature Current $I_{nc}$ [A]	at supply Voltage [V AC]						Frame Size
	400	500	600	690	790	1000	
25	•	•					C1 a
50	•	•	•				
75	•	•					
100	•	•					C1 b
110			•				
140	•	•					C2 a
200	•	•					
250	•	•					
270			•				
350	•	•					
450	•	•	•				
520	•	•					C2 b
700	•	•					
900	•	•	•	•			C3
1200	•	•					
1500	•	•	•	•			
2000	•	•					
2050			•	•	•	•	C4
2500	•	•	•	•			
2650						•	
3200					•	•	
3300	•	•	•	•			
4000	•	•	•	•	•	•	
4750			•	•	•		
5150	•	•					

Field supply at choice:

- up to 16 A incorporated in the drive module (not for C4-converters)
- 25...520 A external



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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:  $\pm 5$  Hz; 60 Hz:  $\pm 5$  Hz  
 DC current range: 25...5150 A DC

Operating Conditions:

Ambient temperature: +5 to +40°C (-40...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			
h	d	w	h	d	w	
420	195	273	16.50	7.67	10.75	C1 a
469	228	273	18.46	8.97	10.75	C1 b
505	361	273	19.88	14.21	10.75	C2 a
652	384	273	25.66	15.11	10.75	C2 b
1493	447	548	58.77	21.57	21.57	C3
2330	624	820	91.73	24.56	32.28	C4

### I/O- connections

- 8 Digital Inputs
- 8 Digital Outputs
- 4 Analogue Inputs
- 5 Analogue Outputs
- 1 Tachogenerator input
- 1 Encoder input
- $\pm 10$  V Ref. voltage
- Multiple fieldbus adapters avail.

### Protection

- Speed feedback loss
- Overtemperature
- Overload
- Overspeed
- Armature overcurrent
- Armature overvoltage
- Armature current ripple
- Minimum field current
- Maximum field current
- Motor stalled

### Tools

#### CDP 312 Panel

Removable control and display panel with plain text display for:

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

#### CMT

PC-based commissioning tool for:

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

#### GAD

PC-based application tool for:

- Drawing
- Creating Software functions
- Documentation



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