

Thyristor Power Converters in Standard Cabinets for DC Drive Systems

EASY DRIVE

DCS 500

PRE-ENGINEERED

PROFESSIONAL SOLUTION

FAST CONNECTIVITY



ABB

EASY DRIVE: DCS 500 Thyristor Power

User's advantages

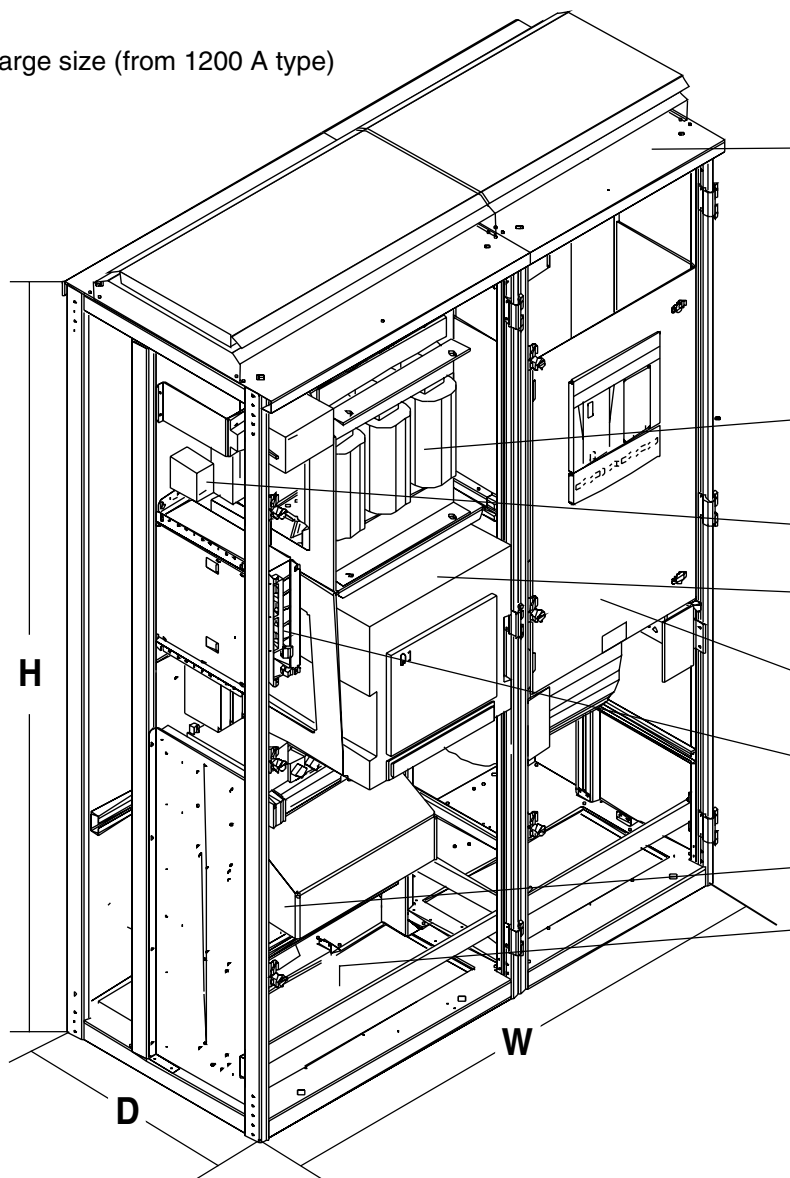
- Only 3 sizes for a rated DC current range from 75 ... 2000 A:
DCS 501-...-51-S = Standard cabinet with 2-quadrant (2-Q) thyristor power converter (single bridge)
DCS 502-...-51-S = Standard cabinet with 4-quadrant (4-Q) thyristor power converter (double bridge)
- Fast delivery
- Preengineered, standardized and type tested cabinets
- Additional free space for user's purposes
- Drive Cabinets according to EMC directives (Line filters optional)
- Cost-saving and competitive solution, ready for connection
- High application flexibility using free programmable DCS 500 software
- Control Panel CDP 312 in front door
- Switch fuse with door interlocking
- Interface relays for selfholding function

Technical Data

(All sizes)

- Supply voltages (AC/3-ph):
 230*/380/400/415/440/460/500V
 [*] up to 1000 A type]
- Frequency: Same design for both 50 and 60 Hz
- Field supply units (1-quadrant):
 Size C1, C2 → *SDCS-FEX-2*
 ($I_{DC} = 0.3 \dots 16 \text{ A}$;
 half-controlled)
 Size A5 → *DCF 503-0050*
 ($I_{DC} = 0.3 \dots 50 \text{ A}$;
 half-controlled)
- Protection class IP 21

Large size (from 1200 A type)



**Sizes
Only**

Type

DCS 501-... type

DCS 502-... type

C1	0075-51-S
	0140-51-S
C2	0350-51-S
	0520-51-S
	0680-51-S
	1000-51-S
A5	1203-51-S
	1503-51-S
	2003-51-S

Converter for DC Drive Systems

Scope of Delivery

Small and medium size (up to 1000 A type)

Enclosed MNS Cabinets; Front door equipped with: EMERGENCY STOP button, Volt/Ampere meters, Control Panel CDP 312;
Hot zinc galvanized frame body;
Protection: IP 21;
Colour: Light grey (RAL 7035)

Line choke (3-ph)
[up to 1000 A type at the rear of mounting panel]

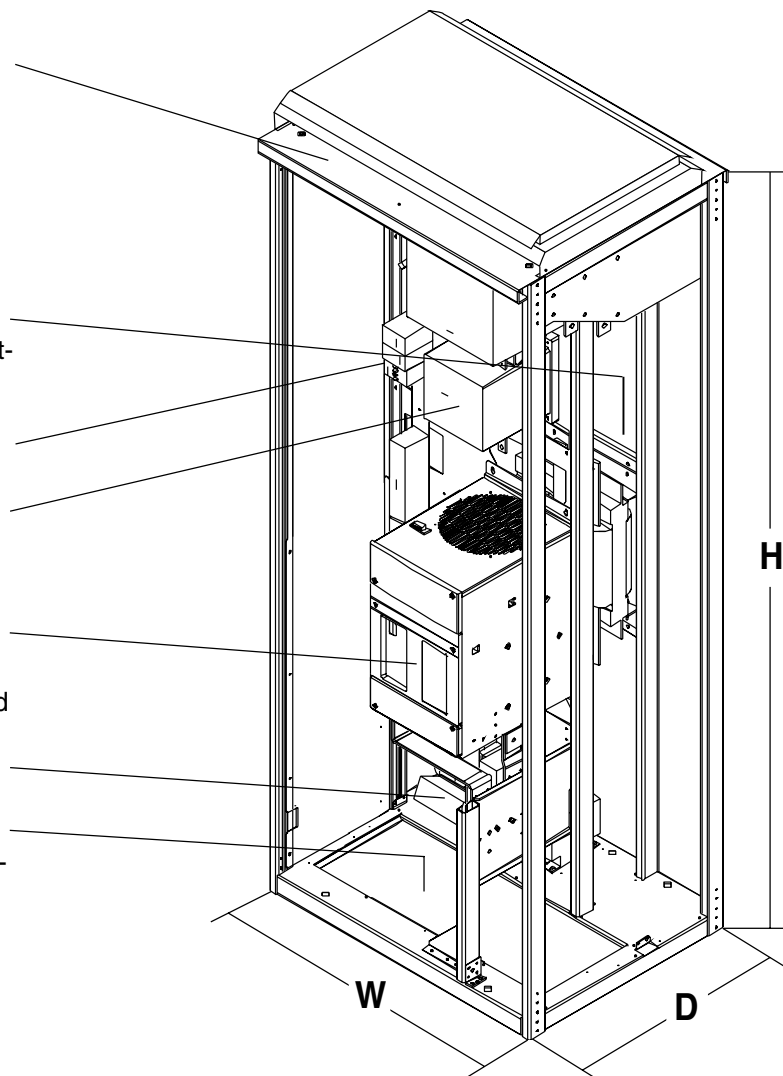
Control circuit F60 of motor fan

AC mains contactor with fuse-disconnector (up to 1200 A DC)
Power circuit-breaker (from 1500 A DC)

Thyristor Power Converter series DCS 500B with Standard Software and Field Supply Unit

Auxiliary transformer

Entry for power supply, motor and control cables



Delivery Program

Rated armature current		Rated field current	F60 range	Dimensions	Weight
$I_{DC(2-Q)}$	$I_{DC(4-Q)}$	I_F	Motor blower	H x W x D	
A	A	A	A	mm (approx.)	kg (approx.)
67	67	0.3...16	0.40 ... 0.63	2120 x 630 x 636	200
115	125	0.3...16	1.50 ... 1.70	2120 x 630 x 636	220
285	300	0.3...16	1.70 ... 2.40	2120 x 830 x 636	270
400	450	0.3...16	3.50 ... 5.00	2120 x 830 x 636	280
540	600	0.3...16	7.50 ... 11.00	2120 x 830 x 636	430
810	900	0.3...16	7.50 ... 11.00	2120 x 830 x 636	430
1140	1140	0.3...50	7.50 ... 11.00	2120 x 1430 x 636	610
1425	1425	0.3...50	10.00 ... 14.00	2120 x 1430 x 636	690
1850	1850	0.3...50	13.00 ... 19.00	2120 x 1430 x 636	710

