

Flyer

## ABB DC Drives DCS800-A, 18 A to 9800/19600 A Enclosed converters

## DCS800-A Enclosed Converters

# Latest Technology, High Performance and a User-Friendly Concept

DCS800-A are DCS800 converter modules mounted in an enclosure

The series is a complete range of enclosed converters intended for the supply and control of DC machines. DCS800-A provides maximum flexibility in the firmware, the drive itself is programmable as well as a serial communication (e.g. Profibus) interface plus 12-pulse parallel, serial and sequential.

DCS800-A enclosed converters are fully digital. Optional equipment is available to meet different safety standards. The converter can be used for standard applications but has the flexibility to be customized for the most demanding applications.

### Comprehensive Product Range

DCS800-A enclosed converters are available as 6-/ 12-pulse and in 2- or 4-quadrant, with current ranges from 18 to 9800/19600 A and supply voltages of 230...990 (1200) V AC. A selection of options is available to provide the user with a system meeting the most demanding technical requirements and performance expectations.

Common control electronics throughout the product range reduces spare parts inventory and training requirements.

#### DCS800-A Concept

- A single drive control technology is available for a wide power range to reduce training costs and meets the requirements of various applications.
- Common AC busbar designs for group drives are available for the most cost-efficient and functional system structure.
- Incoming supply section for group drives can be equipped with air circuit breakers or insulation switches.
- Control cubicles offer various I/O solutions in combination with ABB controls e.g. AC800M.
- Approval for many application specific standards (e.g. ABS, DNV, Loyd, UL, CSA) can be ordered as option.
- Flexible design of power cable entry provide simple installation and minimum power down time especially for upgrades.

### **Digital Control**

To meet the most stringent control requirements, the DCS800-A features speed control, which reduces the effects from gear backlash and torsional vibration arising in mechanical systems. High-performance speed and torque control will fulfill all requirements for rapid response and high control accuracy. Autotuning for armature, field current and speed controller simplifies the commissioning.

#### What is a DCS800 DC drive?

The DCS800 DC Drive is simple to buy, install, configure and use, saving considerable time.

- Precise delivery
- Quick installation
- Rapid start-up

The drive has common user and process interface with fieldbus, common software tools for sizing, commissioning, maintenance and common spare parts.

#### Where can it be used?

DCS800 can be used in the wide range of all industrial application of

- MetalsMining
- VesselsFood & Beverage
- Pulp & PaperElectrolysis
- Ski liftsPrinting
- Material handlingBattery Chargers
- MagnetsPlastic & Rubber
- Test rigs and more

### DCS800 DC drive promises

The drive meet the requirement of all demanding drive application like: testrig, mine hoist, rolling mill as well as none motoric applications like: electrolysis, magnetics, battery charger ...

Embedded software functions offer the upgrades of all classic installations 12-pulse, shared motion, double motor operation, field reversal control.







#### Highlights

- Assistant control panel providing intuitive use of the drive
- Excellent control performance up to highest dynamic application in field weakening operation.
- All ACS800 PC tools (via DDCS) can be connected.
- Reduced installation and commissioning work.
- Internal three phase field exciter without additional external hardware.
- Prepared for additional software function by adaptive programming and IEC61131 programming.
- Flexible fieldbus system with built-in Modbus and numerous internally mountable fieldbus adapters.

#### **Software Tools**

#### Start-up assistant

Faster and easier commissioning

The Start-up assistant serves in DCS800 DC Drives. It guides you actively through the commissioning procedure either by the control panel or ABB PC tools. It is multilingual, requests data with clear and plain text messages, and sets the required parameters to your needs. It also comes with an online info system with step-by-step reference to printed manuals.

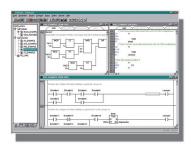
#### IEC 61131 programming

ControlBuilder DCS800

The ControlBuilder is a user-friendly tool based on the IEC61131-3 standard for programming the DCS800. With the ControlBuilder it is possible to develop - in a fast and easy way - new function e.g. winders, decentralized controls, safety functions, ... directly in the drive.

#### Fieldbus control

Gateway to your process



DCS800 DC Drives have connectivity to major automation systems. This is achieved with a dedicated gateway concept between the fieldbus systems and ABB drives. The fieldbus gateway module can easily be mounted inside the drive. As a result of the wide range of fieldbus gateways, your choice of automation system is independent from your decision to use first-class ABB drives.

### Start-up and maintenance tool

DriveWindow Light 2

PC tool for ABB drives

DriveWindow Light 2 is an easy-to-use start-up and maintenance tool for ABB drives. Supported drives are ACS140, ACS160, ACS350, ACH400, DCS400, ACS550, ACH550, DCS800 and ACS800.

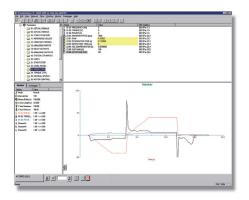
- Viewing and setting parameters in offline and online mode
- Editing, saving and downloading parameters
- Comparing parameters
- Graphical and numerical signal monitoring
- Drive control
- Start-up assistants
- DWL AP tool for DCS800
- All DCS800 DC drives are equipped with DriveWindow Light

#### Start-up, maintenance and integration

DriveWindow 2

ABB's DriveWindow is an advanced, easy-to-use PC software tool for the start-up and maintenance of ABB DCS800 DC Drives. Its host of features and clear, graphical presentation of the operation make it a valuable addition to your system providing information necessary for troubleshooting, maintenance and service, as well as training.

With DriveWindow the user is able to follow the co-operation of several drives simultaneously by collecting the actual values from the drives onto a single screen or printout.



#### DriveOPC

Integration tool

DriveOPC is a software package which allows OLE for Process Control (OPC) communication between Windows applications and DCS800 DC drives. It allows Object Linking and Embedding (OLE) for Process Control (OPC) communication. This OPC server is an ideal tool for integrating DCS800 DC drives and commercial PC software and creating PC-based controlling and monitoring systems.

#### DCS800-A enclosed converters

DCS800-A enclosed converters are suitable for three-phase supply voltages from 230 V to 990 (1200) V, 50 or 60 Hz. The rated DC current range is from 18 to 9800/19600 A. DCS800-A enclosed converters with rated DC current from 18 A up to 1850 A are available in two different layouts:

- Single drive configuration without horizontal busbars therefore AC cable connection
- Group drive configuration with horizontal busbars (sizedepending on rated amps)

The standard configuration is protection class IP21 and cable connection from bottom.

Group drives from sizes D6 and D7 on request. DCS800-A can be tailored to meet different needs by using combinations of the following options:

• Earth Fault Detection (current sensitive) • Insulation Monitor (voltage sensitive) • Motor Fan Starter • Galvanic Isolation of converter voltage measurement • Cabinet design according to EMC-regulations • EMC Filters • Protection Class IP 21-Standard • Protection Class IP 31 with filter (insect screen) in air inlet and outlet • Protection Class IP 42 with filter in air inlet; air outlet same as IP 21 • IP 54 on request • Gland plate and bottom plate • Special Colour (only outside) acc. to RAL standard • Heater • Lighting • Horizontal Busbars

#### DCA 650 Control Cabinet

Advant controller AC 800 • Fieldbus interface FCI (AF100)

• Location of full range of S800 I/O modules.

The S800 I/O system consists of the control module (AC 80, FCI, AC 800M), digital and analogue I/O modules.

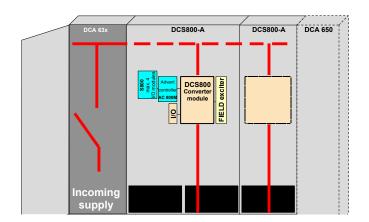
#### Digital inputs and outputs

8 channels • input voltages from 24 V...250 V

Analogue inputs and outputs (12 bit resolution) 8 channels

#### **Drive Bus Communication**

CI854 provides fast optical DDCS communication



#### **Incoming Supply Sections for Group Drives**

Incoming supply sections (DCA 63x) are used to supply several droup drives connected by horizontal busbars. The connection to the AC supply can be made by cables or busbars. The cable / busbar entry is at the bottom of the incoming supply section.

The incoming supply section can be located preferable left side of line-ups, but also right side and even in the middle of line-ups.

#### Options

 Cabinet design according to EMC-regulations • Isolation Switch (DCA 631) • Breaker (DCA 632) • Earthing switch •
 Residual Current Detection • AC Current Measurement • AC Voltage Measurement • Arc Detecting Relay • Emergency stop relays, tripping circuits

#### **Field Exciters**

#### Several Solutions available

- Ratings from 6 to 450 A Integrated, separate or external
- 2-phase or 3-phase versions 1-; 2-; 4-quadrant Digital control Auto/manual tuning

The field exciters are controlled via a serial DCS-Link with a speed of 500 kBaud for fast and accurate control.

On board field exciters are 3-phase half controlled field exciters 6 A / 15 A / 20 A / 25 A in D1 up to D4 converter modules (525 V).

**FEX-425** field exciter is also a 25 A 3-phase half controlled unit assembled in a D5 converter module.

DCF803: 0050 B

2-phase, 1-quadrant, half controlled

DCF804: 0050 B

2-phase, 4-quadrant, full controlled (field reversal)

**DCS800-A21: 18...400 A** (2-Q), DCS800-A22: 22...450 A (4-Q), 18...400 (22...450) A, 3-phase, full controlled, separate cabinet including overvoltage protection

**DCS800-F01: 18...285 A** (2-Q), DCS800-F02: 22...300 A (4-Q), 18...285 (22...300) A, 3-phase, inside D6 / D7 armature cabinet is possible; including overvoltage protection

### **DCS800 Converter modules**

#### Basic design

The DCS800 flexibility allows the user to configure functions of the drive easily, suitable for different applications. The basic firmware includes following options:

Processing the speed reference with a speed ramp generator (S-ramp capability, accel/decel ramp) • Processing the speed feedback • Speed controller • Torque reference processing

• Current controller • Field weakening • Automatic/manual field reversal • Autotuning of current controller • Autotuning of speed controller • Speed monitor • Drive control logic • Remote/local operation • Emergency stop • Electronic circuits are not sensitive to line phase sequence • Motor overload protection • Dual field • Programmable analogue outputs • Field supply • Master/follower via fibre optics • 12-Pulse link

#### I/O's of the converter module

• SDCS-IOB-23 + IOB-3 standard configuration • RDIO, RAIO, AMIA as option

#### DCS800-A Enclosed Converter unit types

Init type	DC I *	DC II current		DC III cu	DC III current		DC IV current		Power- loss	Frame size
	[A]	100 % 150 % 15 min 60 sec [A] [A]		100 % 150 % 15 min 120 sec [A] [A]		100 % 200 % 15 min 10 sec [A] [A]		current [A]	ioss [kW]	
00 V / 525 V										
CS800-A01-0020-04/05-D	18	17	25	16	25 31	14	28 35	6	<0.58	D1
CS800-A02-0025-04/05-D	22 40	21 35	32 52	20	31	18	35 62	6	<0.58	D1
CS800-A01-0045-04/05-D CS800-A02-0050-04/05-D	45	40	52 59	32 37	48 56	31 36	72	6	<0.65 <0.65	D1 D1
CS800-A01-0065-04/05-D	60	46	69	43	64	43	86	6	<0.72	D1
CS800-A02-0075-04/05-D	67	46 53 87	80	43 50	75	:50	100	6	< 0.72	D1
CS800-A01-0125-04/05-D	115 125		130	83	123	83	166	6	<1.00	D1
CS800-A02-0140-04/05-D	125	95	142	91	136	91	186	6	<1.00	D1
CS800-A01-0230-04/05-D CS800-A02-0260-04/05-D	200 230	140 159	239	130 150	225	120 132	248 264	15 15	<1.51 <1.51	D2 D2
CS800-A01-0315-04/05-D	285	219	329	211	316	192	384	20	<1.89	D3
CS800-A02-0350-04/05-D	300	228	342	222	333	200	400	20	<1.89	D3
S800-A01-0470-04/05-D	400	308	462	290	435	275	550	20	<2.57	D3
CS800-A02-0520-04/05-D	450	345	517	330	495	308	616	20	<2.57	D3
CS800-A01-0610-04/05-D	540	432	648	427	641	391	781	25	<3.01	D4
CS800-A02-0680-04/05-D	600	480	720	475	712	434	868	25 25	<3.01	D4
CS800-A01-0740-04/05-D CS800-A02-0820-04/05-D	680	551 607	826 911	537 593	806 889	488 539	977 1077	25	<3.65 <3.65	D4 D4
S800-A01-0900-04/05-D	750 810	620	931	596	894	547	1094	25 25	<4.80	D4
S800-A02-1000-04/05-D	900	689	1034	662	994	608	1215	25	<4.80	D4
0 V / 500 V										
S800-A0x-1200-04/05-D	1140	843	1265	820	1230	731	1461	25 ©	<7.64	D5
CS800-A0x-1500-04/05-D	1425	1140	1709	1048	1573	1048	2097	25 ⑤	<10.34	D5
CS800-A0x-2000-04/05-D CS800-A0x-2050-05-D ③	1850 1950	1368	2052	1259	1889	1259 1450	2518	25 ⑤	<10.62	D5
S800-A01-2500-05-D 3	2450	1550 1980	2325 2970	1480 1880	2220 2820	1920	2900 3840		<9.70 <10.20	D6 D6
S800-A02-2500-04/05-D 3	2450	2000	3000	1930	2895	1790	3580		<11.20	D6
CS800-A01-3000-04/05-D	3000	2350	3525	2220	3330	2280	4560		<11.90	D6
CS800-A02-3000-04/05-D	3000	2330	3495	2250	3375	2080	4160		<13.70	D6
CS800-A0x-3300-04/05-D ①	3300	2300	3450	2250	3375	2130	4260		<17.20	D7
CS800-A0x-4000-04/05-D ②	4000	2800	4200	2730	4095	2600	5200		<18.00	D7
CS800-A0x-5200-04/05-D ②	5100 ④	3850	5775	3750	5625	3650	7300	<del>.</del>	<23.50	D7
S800-A0x-6600-04/05PD ② S800-A0x-8000-04/05PD ②	6200 7600	4370 5320	6555 7980	4275 5187	6412 7780	4047 4940	8094 9880		<34.40 <36.00	D7P D7P
S800-A0x-10400-04/05PD ②	9800	7315	10971	7125	10687	6935	13870		<47.00	D7P
0 V / 690 V			- !							
CS800-A01-0290-06-D	220	174	260	152	228	152	304		<1.81	D3
S800-A02-0320-06-D	240	190	285	166	249	166	332		<1.81	D3
CS800-A01-0590-06-D	370	290	435	258	387	258	516		<2.47 <2.47	D4
CS800-A02-0650-06-D CS800-A0x-0900-06/07-D	400 855	313 650	469 974	279 565	418 847	279 565	558 1129	25 (E)	<7.20	D4 D5
S800-A0x-0900-06/07-D	1425	1140	1709	1048	1573	1048	2097	25 ⑤	<10.34	D5
CS800-A01-2000-06/07-D	1850	1368	2052	1259	1889	1259	2518	25 ⑤ 25 ⑤	<10.62	D5
CS800-A0x-2050-06/07-D 3	1950	1520	2280	1450	2175	1430	2860		<10.70	D6
S800-A01-2500-06/07-D 3	2450	1940	2910	1840	2760	1880	3760		<11.70	D6
CS800-A02-2500-06/07-D 3	2450	1940	2910	1870	2805	1740	3480		<12.80	D6
S800-A01-3000-06/07-D	3000	2530	3795	2410	3615	2430	4860		<13.10	D6
S800-A02-3000-06/07-D S800-A0x-3300-06/07-D ①	3000 3300	2270 2360	3405 3540	2190 2310	3285 3465	2030	4060 4360	<u>.</u>	<14.50	D6 D7
S800-A0x-4000-06/07-D ②	4000	3000	4500	2850	4275	2180 2900	5800		<17.90 <20.10	D7
S800-A0x-4800-06/07-D ②	4700 ④	3600	5400	3500	5250	3600	7200		<23.70	D7
S800-A0x-6600-06/07PD ②	6200	4484	6726	4389	6583	4142	8284		<35.70	D7P
S800-A0x-8000-06/07PD ②	7600	5700	8550	5415	8122	5510	11020		<40.20	D7P
S800-A0x-9600-06/07PD ②	9000	6840	10260	6650	9975	6840	13680		<47.30	D7P
OV 1000 00 D @	1000	1500	2050	1400	0145	1400	2000		-0.00	De
S800-A0x-1900-08-D ② S800-A01-2500-08-D ②	1900 2500	1500 1920	2250 2880	1430 1820	2145 2730	1400	2800 3720		<9.90 <11.00	D6 D6
S800-A02-2500-08-D ②	2500	1910	2865	1850	2775	1710	3420		<11.50	D6
S800-A01-3000-08-D ②	3000	2500	3750	2400	3600	2400	4800		<12.50	D6
S800-A02-3000-08-D ②	3000	2250	3375	2400 2160	3240	2000	4000		<13.90	D6
S800-A0x-3300-08-D ②	3300	2350	3525	2300	3450	2170	4340		<18.10	D7
S800-A0x-4000-08-D ②	4000	2950	4425	2800	4200	2800	5600		<20.30	D7
\$800-A0x-4800-08-D @	4700 <b>④</b>	3600	5400 6697	3500	5250 6555	3500	7000		<23.90	D7 D7P
S800-A0x-6600-08PD @ S800-A0x-8000-08PD @	6200 7600	4465 5605	6697 8407	4370 5320	6555 7980	4123 5320	8246 10640		<36.00 <40.50	D7P D7P
S800-A0x-9600-08PD ②	9000	6840	10260	6650	9975	6650	13300		<46.50	D7P
) V		55.10							1.0.00	
S800-A0x-2050-10-D ②	2050	1500	2250	1450	2175	1350	2700		<15.10	D7
S800-A0x-2600-10-D ②	2600	1850	2275	1800	2700	1700	3400		<18.50	D7
S800-A0x-3300-10-D @	3300	2450	3675	2350	3525	2300	4600		<22.80	D7
CS800-A0x-4000-10-D ②	4000	2850	4275	2800	4200	2750	5500		<23.50	D7
CS800-A0x-5200-10PD ② CS800-A0x-6600-10PD ②	4900 6200	3515 4655	5272 6082	3420 4465	5130 6607	3230	6460 8740		<36.80 <45.60	D7P D7P
S800-A0x-8000-10PD @	7600	5415	6982 8122	5320	6697 7980	4370 5225	10450		<46.80	D7P
00 V	7000	:0410	:0122	:0020	on reques		10400	-	10.00	DIT
S800-A0x-2600-12-D ②	2600	1900	2850	1830	2745	1850	2775		<21.20	D7
S800-A0x-3300-12-D ②	3300	2390	3885	2310	3465	2310	4620		<22.80	D7
S800-A0x-4000-12-D ②		3800 A at 7	0/ 11/2		4000 A	at 14 % uk			<24.50	D7

Table 1: DCS800-A types

 $x = 1 \Rightarrow 2-Q$  converter

 $x = 2 \Rightarrow 4-Q$  converter

 $\mathbf{P}$   $\Rightarrow$  hard parallel (two conv. mod. in parallel)

Voltage class: (example: DCS800-A0x-0025-04y-D)

**04** ⇒ 400V **05** ⇒ 500/525V 06 ⇒ 600V **07** ⇒ 690V

**08** ⇒ 800V **10** ⇒ 990V **12** ⇒ 1200V

- \* Ratings are valid for IP 21; for IP 31 and IP 41 the current derating is calculated by DriveSize
- 1 = Air circuit breaker on request
- ② = Air circuit breaker not available
- ③ = Reduced current due to standard air circuit breaker. Larger air circuit breakers are available on request ④ with air exit IP20 ⇒ plus 100 A

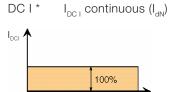
⑤ FEX-425 internal field exciter as option; three-phase or single phase, separate supply max. 500 V AC

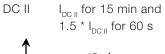
DCS800-A enclosed converters are suitable for three-phase supply voltages from:

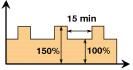
### 230...990 (1200) V AC 50 or 60 Hz

Select the DCS800-A type from Table 1, according to the nominal supply voltage and the rated DC current.

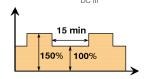
#### Load cycles



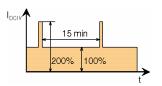




DC III  $\rm I_{\rm DC\,III}$  for 15 min and 1.5 \* I<sub>DC III</sub> for 120 s



 $I_{\rm DC\,IV}$  for 15 min and DC IV 2 \*  $I_{DC\,IV}$  for 10 s



## **Enclosed 3-phase Field** exciters

Unit type	DC I	Power	Size
		loss	
525 V	[A]	[kW]	
	16		D1
	22	0.58	
DCS800-A21-0045-05-D	40	0.65	
DCS800-A22-0050-05-D	45	0.65	
DCS800-A21-0065-05-D	57	0.72	
DCS800-A22-0075-05-D	67	0.72	
DCS800-A21-0090-05-D	84	0.85	
DCS800-A22-0100-05-D	92	0.85	
DCS800-A21-0180-05-D	160	1.40	D2
DCS800-A22-0200-05-D	180	1.40	
DCS800-A21-0315-05-D	285	1.89	D3
DCS800-A22-0350-05-D	300	1.89	
DCS800-A21-0405-05-D	340	2.40	
DCS800-A22-0450-05-D	380	2.40	
DCS800-A21-0610-05-D	520	3.00	D4
DCS800-A22-0680-05-D	520	3.00	

#### **Dimensions Converter cabinet**

Height   Depth   Width   Width   Weight   Depth   Width   Width   Weight   Depth   Width   Width   Weight   Depth   Dept				Single di	rive		Group drive					
DC-Converter, Size D1			Depth	Width		Weight	Height	Depth	Width	Width		
DCSS00 AAb CO200 64405 P		1		2	3	[kg]	1		2	3	7	
DCSB00.AAA.OLOG-54406-D												
DCSB00 AAA: 0600-6 A4046-D												
DCSB00 AAR OSO - AAR OSO					-	220				-		
DCSB00_ADx_0055-04(05-D			600		<u> </u>		2120		600	-	200+z	
DCSB00_ADx_0055-04(05-D	DCS800-A0x-0050-04/05-D	2120	600	600	<u>-</u>	230	2120	600	:600	-	200+z	
DCSB00 Ab 01025-0405-D	DCS800-A0x-0065-04/05-D	2120	:600	600	-	230	2120	600	:600	-		
DCSB00 Ab 01025-0405-D	DCS800-A0x-0075-04/05-D	2120	600	600	-	230	2120	600	600	-	200+z	
DC-Converter, Size D2/D3	DCS800-A0x-0125-04/05-D	2120	600	600	-	250	2120	600	:600	-	220+z	
DCSB00 A0x-0200-0405-D	DCS800-A0x-0140-04/05-D	2120	600	600	·	250	2120	600	600	:-	220+z	
DCSB00 Adv. C250 -04 (05-1)	DC-Converter, Size D2/D3											
DCS800-A0x-0316-04(05-D	DCS800-A0x-0200-04/05-D	2120	600	600	-	250	2120	600	600	-	220+z	
DCS800-A0x-0316-04(05-D	DCS800-A0x-0250-04/05-D	2120	600	600	-	250	2120	600	:600	-	220+z	
DCS800-A0x-0350-04/05-D						300						
DCS800-A0x-0870-04/05-D												
DCS800-A0x-0520-040/5-D												
DC-Converter, Size D4					··· <del>!</del>							
DCS800 -A0x - 6610 - 9405-D		2120	:000	:000		:010	2120	000	:000		200+2	
DCS800 A0x-0680-04/05-D		2120	600	800		360	2120	600	900		22017	
DCS800 A0x -0740 0-405-D												
CS800-AQx-0820-04/05-D					··· <del>;</del> -····							
DCS800-A0x-1000-04/05-D												
DCS800-A0x-1000-04/05-D												
DC-Converter, Size D5   DC-S800-A(0x-0900-06/07-D   2120   600								•				
CS800-A0x-0900-06/07-D		2120	:600	:800	-	:360	2120	600	:800	-	330+z	
DCS800-A0x-1200-04/05-D												
DCS800-A0x-1500-04/05/06/07-D   2120   600   1400   720   2120   600   1400   690+z					<u>-</u>					<u>-</u>		
DCS800-A0x 2000-04/05/06/07-D	DCS800-A0x-1200-04/05-D	2120	:600	1400	-	640	2120	600	:1400	-	610+z	
DC-S000-A(N-1900-08-D ⊕)	DCS800-A0x-1500-04/05/06/07-D	2120	600	1400	-	720	2120	600	1400	-	690+z	
DCS800-A0x-1900-08-D	DCS800-A0x-2000-04/05/06/07-D ®	2120	600	1400	-	740	2120	600	1400	-	710+z	
DCS800-A0x-2050-05/06/07-D ®   2120   600   2400 -   1100   DCS800-A0x-2500-04/05/06/07-D ®   2120   600   2400 -   1100   DCS800-A0x-2500-08-D ®   2120   600 -   2000   850   DCS800-A0x-3000-04/05/06/07-D ®   2120   600   2400 -   1250   on request   DCS800-A0x-3000-04/05/06/07-D ®   2120   600   2000   950   DC-Converter, Size D7   DCS800-A0x-2500-10-D ®   2120   600   2100   790   DCS800-A0x-2500-10-D ®   2120   600   2100   850   DCS800-A0x-2600-10/12-D ®   2120   600   2100   850   DCS800-A0x-2600-10/12-D ®   2120   600   2100   850   DCS800-A0x-2600-10/12-D ®   2120   600   2100   950   DCS800-A0x-2500-04/05/06/07/08/10/12-D ®   2120   600   2700   9100   DCS800-A0x-2500-04/05/06/07/08/10/12-D ®   2120   600   2700   91200   DCS800-A0x-4500-06/07/08-D ®   2120   600   2700   91200   DCS800-A0x-5200-04/05-D ®   2120   600   2700   91200   DCS800-A0x-5200-04/05-D ®   2120   600   2700   91200   DCS800-A0x-5200-04/05-D ®   2120   600   3600   1430   Not available   DCS800-A0x-6600-04/05/06/07/08/10PD   2120   600   3600   3600   1630   DCS800-A0x-6600-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-8000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-8000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-6000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-6000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-6000-04/05/06/07/08/10PD   2120   600   2000	DC-Converter, Size D6											
DCS800-A0x-2050-05/06/07-D ®   2120   600   2400 -   1100   DCS800-A0x-2500-04/05/06/07-D ®   2120   600   2400 -   1100   DCS800-A0x-2500-08-D ®   2120   600 -   2000   850   DCS800-A0x-3000-04/05/06/07-D ®   2120   600   2400 -   1250   on request   DCS800-A0x-3000-04/05/06/07-D ®   2120   600   2000   950   DC-Converter, Size D7   DCS800-A0x-2500-10-D ®   2120   600   2100   790   DCS800-A0x-2500-10-D ®   2120   600   2100   850   DCS800-A0x-2600-10/12-D ®   2120   600   2100   850   DCS800-A0x-2600-10/12-D ®   2120   600   2100   850   DCS800-A0x-2600-10/12-D ®   2120   600   2100   950   DCS800-A0x-2500-04/05/06/07/08/10/12-D ®   2120   600   2700   9100   DCS800-A0x-2500-04/05/06/07/08/10/12-D ®   2120   600   2700   91200   DCS800-A0x-4500-06/07/08-D ®   2120   600   2700   91200   DCS800-A0x-5200-04/05-D ®   2120   600   2700   91200   DCS800-A0x-5200-04/05-D ®   2120   600   2700   91200   DCS800-A0x-5200-04/05-D ®   2120   600   3600   1430   Not available   DCS800-A0x-6600-04/05/06/07/08/10PD   2120   600   3600   3600   1630   DCS800-A0x-6600-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-8000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-8000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-6000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-6000-04/05/06/07/08/10PD   2120   600   4800   2070   DCS800-A0x-6000-04/05/06/07/08/10PD   2120   600   2000	DCS800-A0x-1900-08-D @	2120	600	-	2000	850						
DCS800-A0x-2500-04/05/06/07-D	DCS800-A0x-2050-05/06/07-D ®		600	2400	-	1100	··· <u>·</u>					
DCS800-A0x-2500-08-D	DCS800-A0x-2500-04/05/06/07-D ®	2120	600	2400	-	1100						
DCS800-A0x-3000-04/05/06/07-D			600	-	2000	850						
DCS800-A0x-3000-08-D		2120		2400			on reguest					
DC-Converter, Size D7         2120         600         - 2100         790           DCS800-A0x-2600-10/12-D ⊕         2120         600         - 2100         790           DCS800-A0x-2600-10/12-D ⊕         2120         600         - 2100         950           DCS800-A0x-3300-04/05/6/07/08/10/12-D ⊕         2120         600         - 2700 ⊕         1170           DCS800-A0x-4800-06/07/08-D ⊕         2120         600         - 2700 ⊕         1200           DCS800-A0x-4800-06/07/08-D ⊕         2120         600         - 2700 ⊕         1200           DCS800-A0x-4800-06/07/08-D ⊕         2120         600         - 2700 ⊕         1200           DC-Converter, Size D7P         DCS800-A0x-5200-10PD         2120         600         - 3600         1430         not available           DCS800-A0x-6600-04/05/06/07/08/10PD         2120         600         - 3600         1630         not available           DCS800-A0x-8000-04/05/08/07/08/10PD         2120         600         - 4800 ⊕         2070         2140           DCS800-A0x-9600-06/07/08/PD         2120         600         - 4800 ⊕         2140         20           DCS800-A0x-10400-04/05/DPD         2120         600         - 4800 ⊕         2140         20 <t< td=""><td></td><td></td><td></td><td></td><td>2000</td><td></td><td colspan="4"> orrioquosi</td><td></td></t<>					2000		orrioquosi					
DCS800-A0x-2050-10-D		12.20										
DCS800-A0x-2600-10/12-D		2120	600		2100	700						
DCS800-A0x-3300-04/05/06/07/08/10/12-D				··· <del>!</del> ·····								
DCS800-A0x-4000-04/05/06/07/08-D					2100							
DCS800-A0x-4800-06/07/08-D								···•	····•	····•	·····	
DCS800-A0x-5200-04/05-D							· <del>:</del>					
DC-S00-A0x-5200-10PD												
DCS800-A0x-5200-10PD		:2120	DUU		2100 9	:1200	-					
DCS800-A0x-6600-04/05/06/07/08/10PD 2120 600 - 3600 1630 DCS800-A0x-8000-04/05/06/07/08/10PD 2120 600 - 4800 9 2070 DCS800-A0x-9600-06/07/08PD 2120 600 - 4800 9 2140 DCS800-A0x-10400-04/05PD 2120 600 - 4800 9 2140  Incoming Supply Sections  DCA 63u-1000-04/05/06/07-D 2120 600 600 600 600 300 DCA 63u-2000-4/5/6/7-D 60 not available 2120 600 800 800 340 DCA 63u-4000-4/5/6/7-D 60 2120 600 800 800 340 DCA 63u-4000-4/5/6/7-D 60 2120 600 800 800 340		0100	600		0000	1400	<del>-</del>		not '	labla		
DCS800-A0x-8000-04/05/06/07/08PD 2120 600 - 4800 © 2070 DCS800-A0x-9600-06/07/08PD 2120 600 - 4800 © 2140 DCS800-A0x-10400-04/05PD 2120 600 - 4800 © 2140  Incoming Supply Sections  DCA 63u-1000-04/05/06/07-D 2120 600 600 600 600 300 DCA 63u-2000-4/5/6/7-D 60 1000 available 2120 600 800 800 340 DCA 63u-4000-4/5/6/7-D 60 2120 600 800 1000 380									not avai	lable		
DCS800-A0x-9600-06/07/08PD         2120         600         - 4800 @ 2140           DCS800-A0x-10400-04/05PD         2120         600         - 4800 @ 2140           Incoming Supply Sections         2120         600         600           DCA 63u-1000-04/05/06/07-D         2120         600         600         600           DCA 63u-2000-4/5/6/7-D         2120         600         600         600         320           DCA 63u-3000-4/5/6/7-D 60         not available         2120         600         800         800         340           DCA 63u-4000-4/5/6/7-D 60         2120         600         800         1000         380												
DCS800-A0x-10400-04/05PD   2120   600   4800												
National Supply Sections												
DCA 630-1000-04/05/06/07-D     2120     600     600     600     300       DCA 630-2000-4/5/6/7-D     2120     600     600     600     320       DCA 630-3000-4/5/6/7-D     not available     2120     600     800     800     340       DCA 630-4000-4/5/6/7-D     600     800     1000     380		2120	600	-	4800 ⑨	2140						
DCA 63u-2000-4/5/6/7-D         2120         600         600         320           DCA 63u-3000-4/5/6/7-D ©         not available         2120         600         800         800         340           DCA 63u-4000-4/5/6/7-D ©         2120         600         800         1000         380												
DCA 63u-3000-4/5/6/7-D 10         not available         2120         600         800         800         340           DCA 63u-4000-4/5/6/7-D 10         2120         600         800         1000         380												
DCA 63u-3000-4/5/6/7-D 10         not available         2120         600         800         800         340           DCA 63u-4000-4/5/6/7-D 10         2120         600         800         1000         380	DCA 63u-2000-4/5/6/7-D						2120	600	600	600		
	DCA 63u-3000-4/5/6/7-D ®			not avail								
	DCA 63u-4000-4/5/6/7-D ®	T					2120	600	:800	1000	380	
Busbar joining cabinet © 2120 :600 :200 : 30+z		1						··· <del>·</del>	···· <del>·</del>	···· <del>·</del>		
	Busbar joining cabinet ®	Ī					2120	600	200	:-	30+z	

### Ean data

Fan data								
Fan type	Air vo freely blowir [m³/h]		Converter Size					
- OVIDE		60 Hz						
2x CN2B2	320	360	D1 D2 D3					
4x CN2B2	640	720	D3 04050520					
W2E200 (230 V)	925	1030	D4					
W2E200 (115 V)	925	1030	06100820 D4					
W2E250 (230 V)	1860	1975	06100820 D4 09001000					
W2E250 (115 V)	1835	1940	D4 09001000					
D2E 160	800	750	D5					
GR31M 400500 V	1500	1600	D6 *					
GR31M	1500	1600	D6 *					
500690 V GR35C	4200	4250	D7 *					
400/690V 2x GR35C 400/690V	8400	8500	D7P *					

Table 2: Dimensions of the DCS800-A series

x=1 ⇒ 2-Q converter  $u=\mathbf{0} \Rightarrow$  incoming without switch x=2 ⇒ 4-Q converter  $u=1 \Rightarrow$  incom. w. insulation switch

 $u=2 \Rightarrow$  incom. w. circuit breaker  $P \Rightarrow$  hard parallel (two conv. mod. in parallel)  $u=5 \Rightarrow$  incom. without options

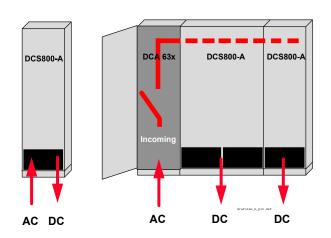
Please add for each end panel 15 mm and for a door (without buttons) 20 mm

- ① Height is including detachable hood (120 mm)
- 2 with circuit breaker or contactor
- without circuit breaker or contactor
- $\ \, \ \,$  DCS800-A with AC supply voltage 3 x 800 V...1200 V or current  $\geq$  3300 A are generally without circuit breaker.
- Max length of a shipping split is 3.40 m. If the line-up width is longer than 3.40 m busbar joining cabinets are required.
- at 600 V (6) and 690 V (7) only available as 2-Q converter
   z: Weight for busbars: 1000 A / 2000 A = 35 kg/m; 3000 A = 70 kg/m
- The air circuit breaker stands out of the line-up's front.
  - Thus 78 mm have to be added to the total depth of the line-up. Listed width for cable connection
- reduced width for busbar connection on request
- DCA 632 rated current as IEC rating 3000 A UL type on request

Voltage class: (example: DCS800-A0x-0025-04y-D)

 $\mathbf{04} \Rightarrow 400 \, \text{V}$   $\mathbf{05} \Rightarrow 500 \, / \, 525 \, \text{V}$   $\mathbf{06} \Rightarrow 600 \, \text{V}$   $\mathbf{07} \Rightarrow 690 \, \text{V}$ 

**08** ⇒ 800 V **10** ⇒ 990 V **12** ⇒ 1200 V



Single Drive

Group Drive

## DCS family



#### DCS550-S modules

The compact drive for machinery application

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



#### DCS800-S modules

The versatile drive for processindustry

- 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



## DCT880 Thyristor power controller

Controlling electrothermal processes

16 ... 4,160 A<sub>DC</sub> 14 kW... 5 MW 230 ... 690 (1200) V<sub>AC</sub>

- Resistive and inductive loads, infrared heaters
- Phase angle, full wave burst and half wave mode
   U, I, P, I<sup>2</sup> control
- Clear text display with USB port
- Load monitoring
- For all typical load configurations star, delta, open delta, single phase, and multitap
- Reduces energy costs by power optimizer function



#### DCS800-E series

Pre-assembled drive-kits

- 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

- 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

## Contact us

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