

DC Power Systems

Power systems for telecom applications



DC Medium and High Power Systems

AMS 48/2000-8 GFE

AMS 48/2000-8 ETS

AMS 48/2000-16 ETS

AMS 48/2000-24 ETS

DPS 7200B-48-10 ETS



Medium power system

Medium power system

High power system

High power system

High power system

-48 V

-48 V

-48 V

-48 V

-48 V

GFE cabinet

ETS cabinet

ETS cabinet

ETS cabinet

ETS cabinet

600 x 480 x 680

600 x 600 x 1800/2000/2200

600 x 600 x 2000 / 2200

600 x 600 x 2200

600 x 600 x 2000

88 ... 300 Vrms

88 ... 300 Vrms

88 ... 300 Vrms

88 ... 300 Vrms

260 ... 530 Vrms

53.5 V

53.5 V

53.5 V

53.5 V

53.5 V

16 kW

16 kW

32 kW

48 kW

72 kW

372 A

372 A

744 A

1116 A

10 x 130 A

Power limit

Power limit

Power limit

Power limit

Power limit

92 %

92 %

92 %

92 %

90 %

FR 48 V - 2000 W - E
FR 48 / 60 V - 2000 W

FR 48 V - 2000 W - E
FR 48 / 60 V - 2000 W

FR 48 V - 2000 W - E
FR 48 / 60 V - 2000 W

FR 48 V - 2000 W - E
FR 48 / 60 V - 2000 W

DPR 7200B-48
DPR 7200B-60

Integrated

Integrated

Integrated
DFU 600-DC-ETS

Integrated
DFU 600-DC-ETS

DPD 1250 ETS-BD
DPD 2500 ETS-BD
DPD 1250 ETS-D
DPD 2500 ETS-D

PSC 3 or PSC 1000

PSC 3 or PSC 1000

PSC 3 or PSC 1000

PSC 3 or PSC 1000

PSC 3

Option

Option

Option

Option

Option up to 3

Option up to 3

Option up to 3

Option up to 3

6 MCB: 125 A

6 MCB: 125 A

4 EFEN: 630 A

4 EFEN: 630 A

24 MCB: 1 ... 150 A

18 MCB: 1 ... 150 A

4 rows
DFU 600 DC-ETS

3 rows
DFU 600 DC-ETS

Yes

Yes

-5 ... 45 °C

-5 ... 45 °C

-5 ... 45 °C

-5 ... 45 °C

-5 ... 55 °C

EN 60950

EN 60950

EN 60950

EN 60950

EN 60950

DC Distribution Units

Product name	DPD 200 19IN-3U	DPD 250 19IN-5U	DFU 600DC-ETS	DPD 1250-ETS-D DPD 2500-ETS-D	DPD 1250-ETS-BD DPD 2500-ETS-BD
Distribution type	Load and battery distribution	Load and battery distribution	Modular load distribution	Load distribution	Load and battery distribution
Cabinet standard	19 inch / 3 U	19 inch / 5 U	ETS cabinet	ETS cabinet	ETS cabinet
Size (w x d x h)	444 x 275 x 131	483 x 350 x 222		600 x 600 x 2000	1000 x 600 x 2000
Maximum current per distribution unit	200 A	250 A	600 A / row	1250 A / row 2500 A / cabinet	1250 A / row 2500 A / cabinet
Controller	PSC 3	PSC 1000	PSC 1000 or PSC 3 applied in cabinet	PSC 3 for 48 V systems PSC 1000 for 60 V systems	PSC 3 for 48 V systems PSC 1000 for 60 V systems
LVD (low voltage disconnection)	Option	Option	Option		Option
PLD (partial load disconnection)	Option up to 3	Option	Option / distribution row		
Battery connections	4 MCB: 125 A	2 MCB: 125 A	Different options		Up to 4 / cabinet Different options 4 NH3: 200 ... 630 A 4 NH4a: 630 ... 1250 A
Load connections	12 MCB: 1 ... 63 A	10 MCB: 1 ... 63 A	Different options 30 MCB: 1 ... 63 A 15 MCB (2p): 100 A 10 MCB (3p): 150 A 12 NH00: 2 ... 160 A 7 NH01: 63 ... 250 A 7 NH02: 250 ... 400 A 5 NH03: 400 ... 630 A	Up to 4 rows / cabinet Different options / row 30 MCB: 1 ... 63 A 15 MCB (2p): 100 A 10 MCB (3p): 150 A 14 NH00: 2 ... 160 A 6 NH2/3: 35 ... 630 A	Up to 4 rows / cabinet Different options / row 30 MCB: 1 ... 63 A 15 MCB (2p): 100 A 10 MCB (3p): 150 A 14 NH00: 2 ... 160 A 6 NH2/3: 35 ... 630 A

Rectifiers

Product name	DPR 600B-48 DPR 300B-48		DPR 1200B-48	FR48V-2000W-E	ESR24V-50A-D	DPR 7200B-48
						
AC connection	Single phase		Single phase	Single phase	Single phase	Three phase
Input range	80 ... 300 Vrms		88 ... 300 Vrms	88 ... 300 Vrms	90 ... 300 Vrms	260 ... 530 Vrms
Power factor	~ 1.0		~ 1.0	~ 1.0	~ 1.0	~ 1.0
THD	< 5 %		< 5 %	< 5 %	< 5 %	< 5 %
Nominal output voltage	53.5 V		53.5 V	53.5 V	27 V	54 V
Maximum power	600 W	300 W*	1200 W	2000 W	1400 W	7200 W
Current limit	14 A	7 A*	28 A	47 A	55 A	150 A
Output characteristic	Power limit		Power limit	Power limit	Current limit	Power limit
Controller interface	PSC 3, PSC 1000 or PSC 1		PSC 3, PSC 1000 or PSC 1	PSC 3, PSC 1000 or PSC 1	PSC 1000 or PSC 1	PSC 3
Power density	854 W / l 14 W / inch ³	427 W / l* 7 W / inch ^{3*}	1100 W / l 18 W / inch ³	500 W / l 8.2 W / inch ³	482 W / l 7.9 W / inch ³	288 W / l 4.7 W / inch ³
Efficiency	92 %	91.5 %*	91 %	92 %	88 %	90 %
Cooling	Fan		Fan	Fan	Fan	Fan
Size (w x h x d)	40.5 x 86.4 x 231.9 mm		132 x 40.8 x 232.5 mm	65 x 212 x 346 mm	84 x 132 x 299 mm	483 x 131 x 480 mm
Weight	0.9 kg		1.25 kg	4.4 kg	3.3 kg	22 kg
Temperature range	-25 ... 75 °C		-25 ... 75 °C	-25 ... 70 °C	-5 ... 65 °C	-5 ... 55 °C
Safety	EN 60950 UL 60950 CSA-C22.2		EN 60950 UL 60950 CSA-C22.2	EN 60950 UL 60950 CSA-C22.2	EN 60950 UL 60950 CSA-C22.2	EN 60950 UL 60950 CSA-C22.2
Other versions	DPR 600B-60			FR 48 / 60V - 2000 W		DPR 7200B-60
	* = Technical data applicable to DPR 300B-48					

Power System Controllers

Product name	PSC 1000	PSC 1	PSC 3
			
Application	Small to medium power	Small power	Small to high power
Features			
Rectifier interface	Analogue	Analogue	Digital (CAN)
Number of rectifier	24	16	128
Digital input	4	4	Up to 225
Relay output	7	6	Up to 97
Temperature	2	1	Up to 96
Voltage, current	Up to 5	Up to 2	Up to 96
LED	6	2	2 + 5 configurable
Display	1 LCD	1 LCD	Up to 2 LCD
Keypad	4 keys	1 button	4 keys
Local monitoring	RS 232 PSM magic	RS 232	LAN / RS 232 Web browser
Remote monitoring	Modem PSM magic		LAN / Modem Web browser / SNMP
Functions			
Float voltage control	Yes	Yes	Yes
Battery middle point	Yes	Yes	Yes
Battery block voltage	Up to 24		Up to 256
Battery current limit	Yes	Yes	Yes, enhanced
Boost charge	Yes	Yes	Yes
Equalise	Yes	Yes	Yes
Battery test	Yes	Yes	Yes
LVD & PLD functions	Up to 3	Yes	Up to 96
Real time clock			Yes
Genset functions			Yes
Individual rectifier control			Yes
Efficiency mode			Yes
Rectifier cycling			Yes
Sequential startup			Yes
PLC functionality			Yes
Data log entries	30	20	200
Remote function upgrade			Yes

Delta Energy Systems

Delta Electronics Group is the world's leading switching power supply manufacturer and a major supplier of video displays and electronic components for the computer, telecommunications, networking, and other industries.

Delta Energy Systems empowers telecommunication, information technology, industrial automation and medical applications with reliable and innovative solutions tailored to customers needs. At Delta Energy Systems we act quickly, initiate future trends and fully understand our customers needs and future requirements.

With continuous innovation we are committed to provide innovative, energy saving products for a better quality of life.



Product Range:

- Telecom power systems (indoor and outdoor)
- Custom designed power supplies (AC/DC and DC/DC)
- Industry compatible board mounted power
- UPS
- Power management

Business Areas

The organization of Delta Energy Systems is characterized by a strong customer and market focus. Our main operations are power solutions for telecommunication (power systems), custom designed power supplies and board mounted power.

To fulfill today's and tomorrow's market requirements Delta Energy Systems is serving these business areas through different business units. Each business unit has full R&D and sales responsibility and shared operation resources.

Engineering

The convergence of telecommunications and information technology, globalization of our customers, price pressure, decrease of time to market, power integration, internet

impact and high customer requirements in logistics are the main drivers of today's technology markets.

Our experienced engineers around the globe follow one clear principle: product reliability always comes first. They are constantly seeking new and even better possibilities for our manufacturing processes and for our products.

Production & Manufacturing

Delta Energy Systems has a global manufacturing concept with competence centers close to its customers in Europe, Americas and Asia.

A full range of DC power systems provide reliable operation of the telecommunication and data transmission networks. The modular design makes the power systems applicable for the different local requirements in a global communication market.

Customer Service

Close customer relation and support is the key for the success of Delta Energy Systems. Local engineering & service organisations are close to the customer. The customers benefit is a skilled support within short reaction time in the local language.



www.deltaww.com
www.deltaenergysystems.com

North Asia

Delta Electronics, Inc.

3, Tung Yuan Road,
Chungli Industrial Zone
Taoyuan Hsien 320, Taiwan R.O.C.
Phone: +886-3-452-6107
Telefax: +886-3-452-7314
Email: tpbu@delta.com.tw

South East Asia

Delta Electronics (Thailand) Public Co., Ltd.

909 Soi 9, Moo 4, Bangpoo Industrial Estate, (E.P.Z.)
Pattana 1 Road, Tambol Phraksa, Amphur Muang
Samutprakarn 10280, Thailand
Phone: 66 2 709-2818 ext. 6322
Telefax: 66 2 709-2826, 2827
Email: powersupplies@delta.co.th

ASEAN: Australia & New Zealand

Delta Electronics (Singapore) Pte. Ltd.

8 Kaki Bukit Road 2,
#04-18 Ruby Warehouse Complex,
Singapore 417841
Phone: +65-747-5155
Telefax: +65-744-9228
Email: powersupplies@deltas.com.sg

Europe, Middle East, Africa

Delta Energy Systems (Switzerland) AG

Freiburgstrasse 251,
CH-3018 Bern-Bümpliz,
Switzerland
Phone: +41-31-998-5311
Telefax: +41-31-998-5353
Email: powersupplies@delta-es.com

North America

Delta Products Corporation

P.O. Box 12173,
5101 Davis Drive,
Research Triangle Park,
NC 27709
U.S.A.
Phone: +1-919-767-3800
Telefax: +1-919-767-8080
Email: telecompower@deltartp.com

South America

Delta Energy Systems (Brazil) S/A

1130- Bairro Afonso Pena
CEP 83040-420
São José dos Pinhais – Parana
Brazil
Phone: +55 41 3283 6363
Telefax: +55 41 3382 2227
Email: info.brazil@delta-es.com

