

ESAA1500 Series

Indoor Power System



Persuading for cost effective and energy saving goals, Delta Indoor System is the solution for the challenge, and the almighty ESAA1500 Series is the typical representative with providing 1500A of the power for 48V system.

In a pair of 600*600 footprint robust cabinets, the entire system integrated with gorgeous efficiency DPR 3000B rectifiers, intelligent controller and reliable PDUs.

Due to the battery health management and the trustworthy monitoring mechanism, the battery condition is under your control and you can manage the whole system in a laid back way no matter where you are.

Key Features

- Leading Efficiency 96.4%
- 24 / 7 Monitoring and Control

Applications

- 3G / 4G / 5G
- Fixed Line
- Datacom



ESAA1500 Series



INPUT

Voltage (nominal)	3 Φ 5W (L1, L2, L3, N, PE); V _{L-L} : 380V _{AC} ; V _{L-N} : 220V _{AC}
Voltage (range)	90 - 300V _{AC} ; De-rating \leq 176V _{AC} (Line - Neutral)
Frequency	50 - 60Hz
Connections	AC Breaker - 3P with Type II SPD

OUTPUT

Voltage (nominal)	-48V _{DC}
Voltage (default)	-54V _{DC}
Voltage (adjustable range)	-42 to -58V _{DC}
Maximum Power @ nominal Input	84 kW
Power Distributions	Load: 1000A x2; Space for 1000A x1 Battery: 1000A x2; Space for 1000A x1
LVDS	LVBD: 1500A x1

CONTROL AND MONITORING

Operating Voltage	18 - 60V _{DC}
Input Power	Typical 5W, Maximum 15W
Security Access	Password Protected Levels
User Interface	Color display; LCD display; Touch panel and Web UI
Remote Access	Ethernet / SNMP
Alarm Output	Dry Contact x 8 (programmable)
Event Logs	> 10,000
Basic Alarms	Mains Failure; Rectifier Module Failure; AC/DC SPD Failure; Voltage Abnormal; Breaker/Fuse Trip; Temperature Abnormal; LVD Trip; Battery Test Fail; Over Capacity
Alarm Level	Urgent / Non Urgent
Rectifier Management	Soft Start - Optional: Redundancy Check, Active Efficiency Management; Sequence Control; Remote On/Off
Battery Management	Temperature Compensation; Charge Current Limit; Capacity Setting; Monitoring: Voltage/Current/Temperature; Boost Charge; Float/Equalized Charge; Battery Test (auto/manual) - Optional: Lifetime Prediction; Battery Stolen Alarm

MECHANICAL

Dimensions (W x H x D)	600 x 2000 x 600mm (23.62 x 78.74 x 23.62in)
Weight	approx. 400kg (881.84lb) (without rectifier)
IP Protection	IP20
Cable Entry	Top / Rear / Side accessible
Finish	Powder coating paint for anti-corrosion
Rectifier Slots	28

ENVIRONMENTAL

Operating Temperature	0 to +65 °C (+32 to +149 °F)
Storage Temperature	-40 to +75 °C (-40 to +167 °F)
Altitude	0 to +4000m
Related Humidity	0 – 95 % RH non-condensing
Acoustic Noise	\leq 65dBA

STANDARDS

Safety	CE Compliance
EMC	EN 300 386 (rectifier)
Environment	RoHS

ORDERING INFORMATION

ESAA1500 Series	1500A Indoor Power System
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* All specifications are subject to change without prior notice.

** Consult technician for the feasibility of other battery housing

*** Battery life varies according to operating temperature and charge/discharge cycle use; user shall consult battery vendors/specifications and choose the right battery according to the applications requirements

Delta Controller

Delta Controller is an intelligent controller for Telecom Power Solution. As a brain of all aspects of power chain with elegant battery management suitable for various types of batteries, ensuring with prevention before problems to enable cost reduction could not be even easier.

With comprehensive functionality, besides locally accessing the configuration and supervision unit, remote monitoring and alarming via web browser is also acceptable. With the powerful data-gathering function played as an IOT platform, improving site efficiency and ensuring the power always on-air is our promise, our insistence.



Delta Controller

INPUT

Voltage (default)	-54V _{DC}
Voltage (adjustable range)	-18 to -60V _{DC}
Current	0.8A _{DC} (Max.)

MECHANICAL

Dimensions (W x H x D)	83.4 x 40.0 x 175.0mm (3.29 x 1.58 x 6.89in)
Weight	0.6kg (1.32lb)

STANDARDS

Safety	EN / IEC 60950, class I; UL 60950; CAN / CSA-C22.2
EMC	EN 55022, class B
Cooling	Natural air flow
Operating Temperature	0 to +70 °C (+32 to +158 °F)
Relative Humidity	95%, non-condensing

FEATURES

Number of Rectifiers	Up to 128
Number of Relay Output	6
Remote Monitoring	<ul style="list-style-type: none">- Web browser, REST, SNMP, Syslog, MODBUS, customer specific protocols via Ethernet , RS232, RS485 or modem- Remote alarming dry contacts / SNMP traps / SMS; dial-out together with modem

FUNCTIONS

System	Site expansions using additional CANbus modules and additional I/O's and measurements
Battery	Temperature compensated float charge, boost and equalize charge
Rectifier	<ul style="list-style-type: none">- Efficiency mode with advanced rectifier cycling- Individual rectifier information and control

USER INTERFACE

Local User Interface	Color display; LCD display; touch panel; WLAN (option)
WEB	Web UI with configurable access rights, login control and user profiles
Languages	English, Traditional Chinese (option), Japanese (option)

ORDERING INFORMATION

Delta Controller	TPS1020028A
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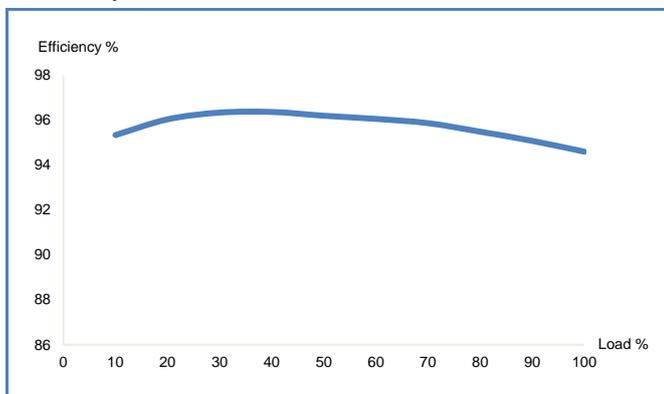
DPR 3000B EnergE

Delta's technology leading telecom rectifier DPR 2900B EnergE provides the industrial leading efficiency of 96.4%. The single phase, hot pluggable fan cooled rectifier provides the 36.5W/in³ outstanding power density. Integrated with the high efficiency rectifier DPR 2900B EnergE, Delta power solution provides an energy saving solution for network base stations, wireless applications, fixed line applications and data communications.

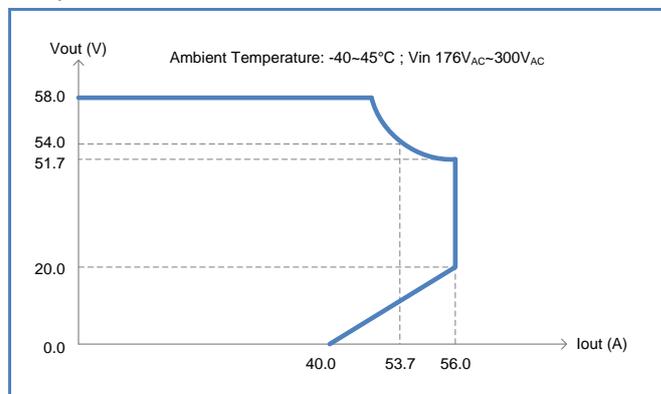


DPR 3000B EnergE

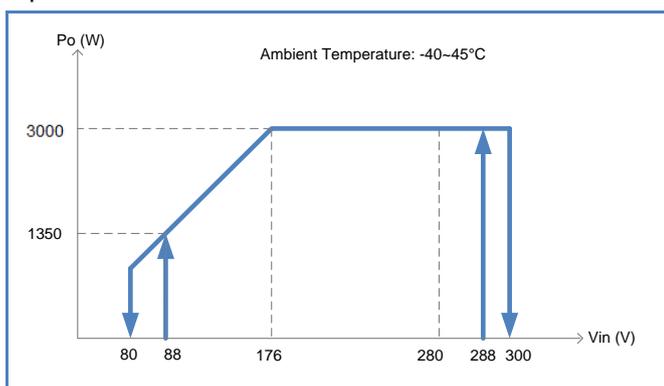
Efficiency Curve



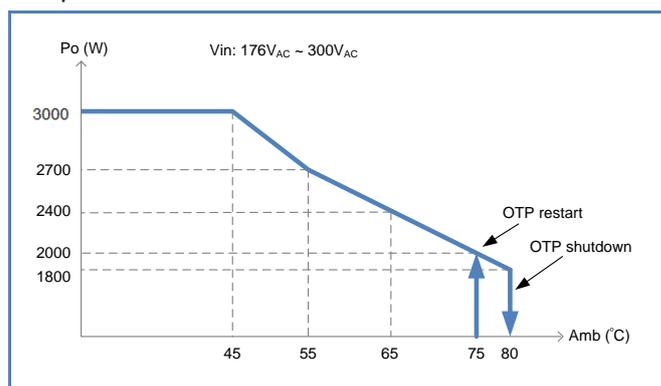
Output Characteristic



Input Characteristic



Temperature Characteristic



DPR 3000B EnergE



INPUT

Voltage (nominal)	230V _{AC}
Voltage (range)	90 - 300V _{AC} ; De-rating ≤ 176V _{AC}
Frequency	45 - 66Hz
Power Factor	> 0.99
Total Harmonic Distortion	< 5%
Lightening Protection	EN 61000-4-5

OUTPUT

Voltage (default)	-54.0V _{DC}
Voltage (adjustable range)	-42 to -58V _{DC}
Maximum Output Current	56.25A
Maximum Power @ nominal Input	3000W
Power Density	36.5W/in ³
Peak Efficiency	96.4%
Load Regulation	≤ ± 250mV
Ripple	≤ 150mV
Current Sharing	≤ ± 5%
Lightening Protection	EN 61000-4-5

USER INTERFACE

Alarm and Signaling	CANbus to System Controller		
Indications	OK	Green	Normal Operation
	NL	Yellow	Output current < 5%
	COM	Green	Communication Status

MECHANICAL

Dimensions (W x H x D)	125.5 x 41.0 x 272.9mm (4.94 x 1.61 x 10.74in)
Weight	1.8kg (3.96lb)

ENVIRONMENTAL

Operating Temperature	-40 to +75 °C (40 to +167 °F); De-rating above 45°C (+113 °F)
Storage Temperature	-40 to +80 °C (40 to +176 °F)
Altitude	0 to +4000m
Related Humidity	0 – 95 % RH non-condensing
Acoustic Noise	≤ 55dBA

STANDARDS

Safety	Passes TUV, CE, UL cUL, S-mark certifications; Catch the CB certificate; Complies with IEC/EN/UL60950-1
EMC	EN 55022 AC Class B and DC output Class A EN 300 386
Environment	RoHS
MTBF	300k hours @ 25 °C (+77 °F)

ORDERING INFORMATION

DPR 3000 Series	3000W Single Phase Rectifier
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