



**Premium**  
Powering Your Challenge

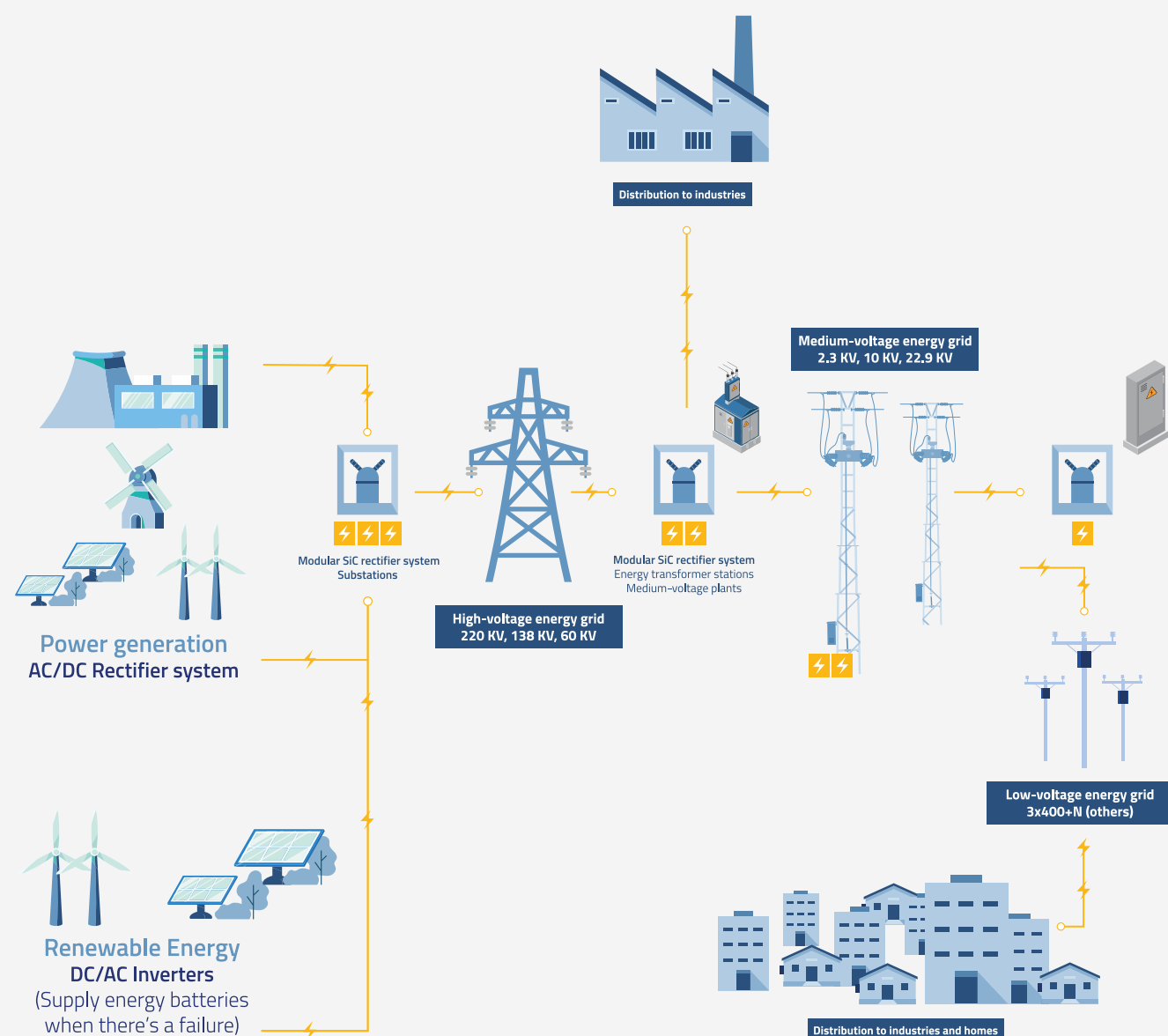
# POWER SOLUTIONS FOR ENERGY





## ¿ARE YOU READY TO SAIL THROUGHT THE PERFECT STORM?

Industrial environments face present and future challenges in which the power conversion systems play a crucial role, and must be able to withstand the harshest and fast-changing conditions.



At Premium PSU we have been imagining new solutions to the upcoming challenges for more than 40 years and offering state-of-the-art and reliable products to satisfy any need or requirement of our customers, in a wide range of activities like power generation, high and medium voltage substations, power utility, telecommunications, control & signalling centres, mining & oil, or railway.

WE INVITE YOU TO JOIN US AND SET SAIL  
ON AN EXCITING JOURNEY TO EXPLORE THE OPTIONS  
WE CAN OFFER YOU TO HELP YOU REACH YOUR  
DESTINATION, NO MATTER HOW ROUGH THE WATERS  
ARE, OR THE HARD WEATHER CONDITIONS THAT  
AWAIT YOU AHEAD.

ARE YOU READY?



# FlexStorm Series: Modular SiC Rectifier System

- Modular solution
- 100% flexible and scalable
- Compact and robust design
- High efficiency
- Web server
- Configurable redundant system: N+N
- Active current sharing
- MTTR less than 10 minutes
- Output short circuit protection
- Overtemperature
- Overvoltage protection

  
Communications

  
3 YEAR WARRANTY

  
Efficiency

  
Hot Plug & Hot Swap

  
Modular/Scalable

  
SiC Technology

The FlexStorm Series is our cutting-edge proposal to face any challenge in any industrial environment. Our extensive experience in power electronics has allowed us to develop a robust and scalable solution ready to operate in harsh conditions, bringing the flexibility, reliability and power density that industrial environments require. With configurations that go from the power module, to the sub-rack that includes the control module and display, and the entire solution as an integrated cabinet, the FlexStorm series can adapt its capacity to changing load requirements

and offer a high level of efficiency that results in very low energy consumption. The FlexStorm FDS-3K power module is a 3kW parallelable single-phase rectifier that allows up to 6 modules to operate in parallel in a 19" sub-rack that can control up to 24 rectifiers achieving systems up to 72kW, with redundant N+N configuration, while the FlexStorm Cabinet allows to include up to 4 sub-racks and the possibility of being accompanied by batteries.

Configurable cabinet:  
Up to 72kW 110/125Vout  
High Efficiency Modular Rectifier



Input

AC input voltage (nominal)	3 x 400 Vac + N
AC input voltage (range)	340...460 Vac
AC input frequency (range)	45 ... 65 Hz
Power factor	>0.94 (> 50 % Load)
Efficiency	>89 % (> 25 % Load) >93 % (> 100 % Load)

Output

Output type	DC
Default output voltage	125 Vdc
Output voltage adjustment	86 ... 157 Vdc
Maximum output current	20...480 A
Current sharing	Parallel Active
Battery type	NiCd & PbCa
Static voltage regulation	< ±1 % typical
Dynamic voltage regulation	< ±1 % (Δ 20% - 100% - 20% Load)
Response time	< 10 ms (Δ 20% - 100% - 20% Load)
Ripple (BW: 20 mHz)	< 90 mVpp

EMC

Emission according to	EN 61000-6-4:2019
	EN 61000-3-2:2019
Cooling	EN-61000-6-2:2019





3kW Parallelable  
Single Phase Rectifier Moduler



Dimensions

FDS-3kW Rectifier Module	67 x 130 x 400 mm
LMS Control Module	40 x 130 x 400 mm

Environmental

Storage temperature	-40 °C ... 85 °C
Operating temperature range	-10 °C ... 60 °C
Cooling	Internal forced air controlled (modules)
Maximum Relative humidity	95 % with no condensation
Installation height	up to 2000 m
MTBF	250.000 h @ 25 °C according to EN29500

Safety

Safety according to	EN62368-1:2020
Dielectric strength Input-Output	2000 Vac, 50 Hz, 1 min.
Dielectric strength Input-Earth	4000 Vac, 50 Hz, 1 min.
Dielectric strength Output-Earth	2000 Vac, 50 Hz, 1 min.

FlexStorm Series Communication  
and Control system



Control

Local control	RS-232
Remote control	Ethernet & SNMP
Alarm contacts	6 low voltage analog inputs 4 digital inputs
LEDs	Green: Vin-Vout OK, Yellow: Warning, Red: Alarm

FlexStorm optional features

With the FlexStorm series we can go one step beyond standard solutions, with a high level of adaptation to the specific needs of each client that allows us to offer added value when facing any challenge in sectors like power generation, high and medium voltage substations, power utility, telecommunications, control and signalling centres, mining & oil, or railway.

- Battery low voltage disconnecter
- Output circuit breaker distribution
- Voltage drop diodes
- Anti-reverse diode
- IP grade ▪ Cabinet colour ▪ Special documentati on
- Seismic grade protection
- Other input voltages available
- Output distribution with DC/DC
- Output inverter ▪ Batteries



# ThyriStorm Rectifier System

## Secure DC power for MV/LV substations

- Robust design for industrial environments
- Natural convection cooling - Low Maintenance
- High input-output isolation - Input voltage adjustable
- Full working without batteries
- 4.3” Colour Touch Screen (optional)
- RJ45 & RS-232 standard ports
- Remote monitoring with 8 alarms relays
- Local settings and monitoring though optional touch pannel

The Premium PSU's ThyriStorm is our latest rectifiers family, an uninterruptible power supply based on a thyristor technology, the most reliable and lasting technology due to the robustness of its power elements. These semiconductor devices are aimed to control electric power and current by acting as a switch, bringing a sturdy and free-of-maintenance solution for a wide range of industrial environments. Its innovative technology minimizes charging time and maximizes the battery life by adjusting the voltage

in floating and fast-changing conditions, according to the ambient temperature and avoiding deep battery discharges. The ThyriStorm Series also allows us to offer a high-level layer of security, as well as the charger-rectifier can operate with or without the battery as long as the electrical grid is present, and brings protection from normal operations as start-up or punctual overloads, to exceptional phenomena as short-circuits or constant overloads.



### 4.5 & 6.5kW Thyristor Technology Battery Charger

#### Input

AC input voltage (nominal)	See table pag 10
AC input voltage (range)	± 15 %
AC input frequency (range)	42.5 ... 69 Hz
Efficiency	>85 % at full load
Inrush current	< 180 A

#### Output

Default output voltage	See table pag 10
Output voltage adjustment range	-20 ... +32 %
Static voltage regulation	< ±1 % typical
Line voltage regulation	< ±1 % typical
Dynamic voltage regulation	< 15 % (Δ 20 % to 100 % to 20 % Load)
Response time / Stabilization time	< 100 ms
Ripple (BW: 20mHz)	< 1 % with battery < 3 % without battery

#### Environmental

Storage temperature	-40 °C ... 85 °C
Operating temperature range	-10 °C ... 40 °C
Cooling	Natural Convection
Maximum Relative humidity	5 ... 95 % with no condensation
Altitude	1000 m
Audible noise (dB)	TBD

#### Proteccions

Against overloads and short-circuits	Current limiting
Battery over-temperature	With ACC-TESE-0001 accessory
Against Input over-current	MCB bipolar
Against Output over-current	Fuse
Against Battery over-current	Fuse at both poles



Safety

Safety according to	EN62368-1A
Dielectric strength Input-Output	2000 Vac, 50 Hz, 1 min.
Dielectric strength Input-Earth	4000 Vac, 50 Hz, 1 min.
Dielectric strength Output-Earth	2000 Vac, 50 Hz, 1 min.

EMC

Emission according to	EN61000-6-4:2019 (optional EN61000-6-5)
Immunity according to	EN61000-6-2:2019 (optional EN61000-6-5)

Mechanical

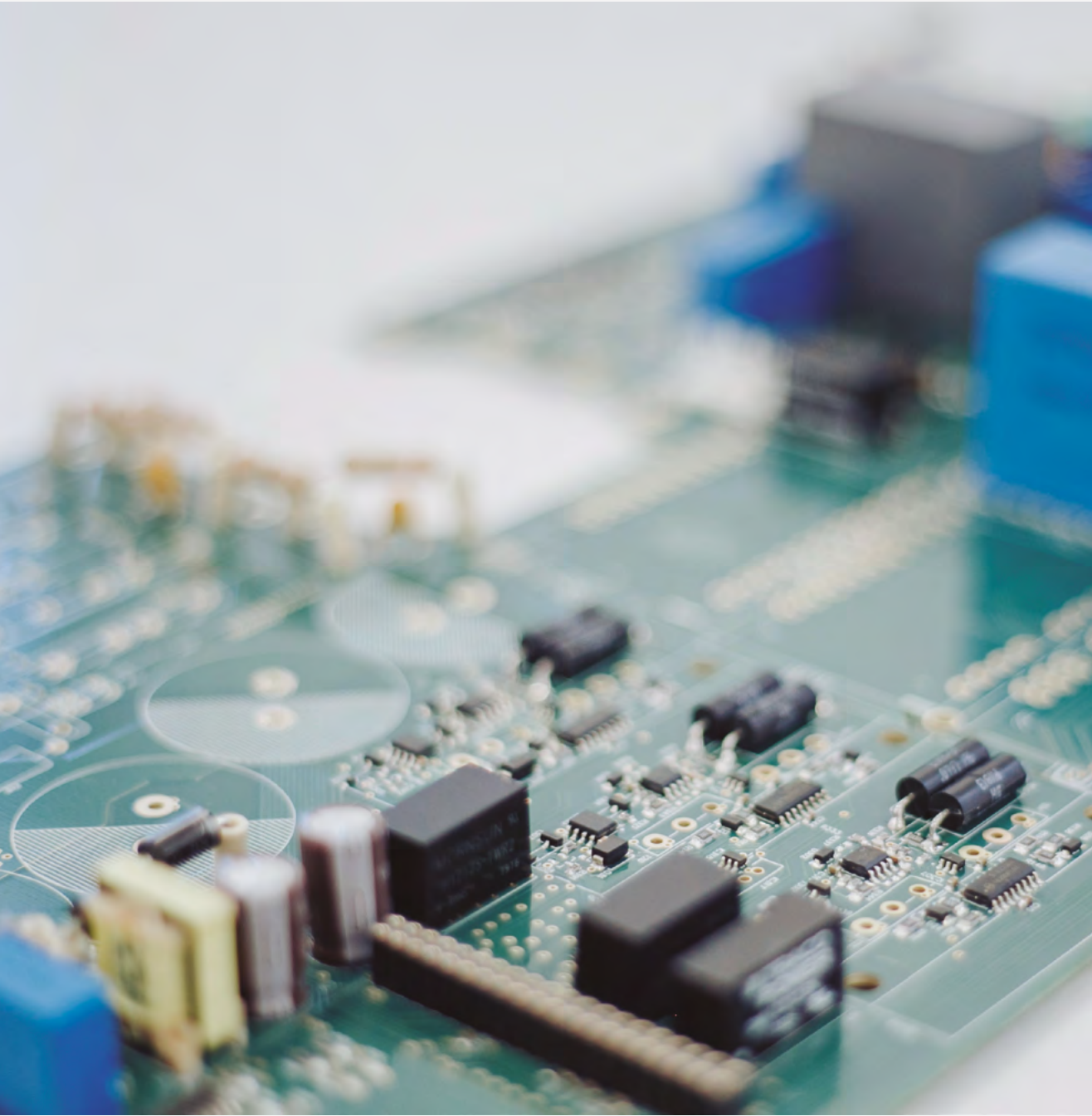
Dimensions (H x W x D)	2000 x 600 x 600 mm (Feet not included)
Approximate weight without batteries	~200 kg
Paint	RAL 7035 o 9002
IP Grad	IP21

Control

Dimensions (H x W x D)	16x2 LCD display or 4.3' Touch Screen
Local control	RS-232 MODBUS/ RS-485 MODBUS
Alarm contacts	2000 Vac, 50 Hz, 1 min.
Alarms Dielectric Strength	6 relays with contacts NO: - Grid Failure - Non urgent failure - Urgent Failure - Battery end of autonomy - Rest: Configurable
Alarms Maximum Supply Voltage	100 VDC
Optional remote control	Monitored parameters: - Input voltage - Input current - Output voltage - Output current - Battery voltage - Battery current - Battery temperature (optional) - Battery electrolyte level (optiona)

ThyriStorm Optional features

- 4.3" Touch Screen with built-in WEB server
  - NiCd battery electrolyte level alarm
  - Input current monitoring
  - Anti-reverse output diode
  - End of autonomy contactor
  - Input voltage 277V / 3x480V
  - Open brakers/fuses detection
- Relays module (NO, C or NC)
  - Molded Case Circuit Breakers + auxiliary contact
  - Output voltage reduction by diodes
  - Selectable ground shunt monitoring
  - Battery temperature probe
  - Output insulation monitoring device
  - Fixed or Sliding tray for batteries



\* Maximum Input Current is calculated at maximum output power considering a power factor of 0.85  
\*\* Min. order quantity





# STANDARD SOLUTIONS

AT PREMIUM PSU WE HAVE BEEN WORKING IN POWER SOLUTIONS FOR MORE THAN 40 YEARS, ACQUIRING A DEEP EXPERIENCE AND KNOWLEDGE FROM OVER 900 PREVIOUS DESIGNS IN A WIDE RANGE OF INDUSTRIAL APPLICATIONS.

AND THANKS TO THIS, WE CAN OFFER YOU A COMPLETE PORTFOLIO OF STANDARD SOLUTIONS IN AC/DC BATTERY CHARGERS AND UPS, DC/DC CONVERTERS AND DC/AC INVERTERS, WITH THE GUARANTEE OF RELIABILITY AND QUALITY OF ONE OF THE LEADING INDUSTRY FIRMS.



# AC/DC UPS BATTERY CHARGERS

Power from 100W to 500W  
Limitless communication possibilities  
SMART functionalities

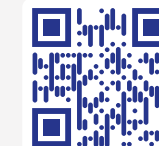
#WEAREPREMIUMPSU

## ECS-100

100W AC/DC UPS BATTERY CHARGER



Power [W] 100  
Input Voltage Range [V] 88 - 264  
Output Voltage Range [V] 12 - 57.6  
Cooling: Natural convection  
Dimensions [LxWxH in mm]: 100 x 160 x 45



### Key Features

High reliability  
Discharged battery cut off

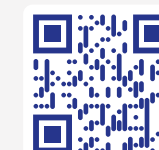
	Nominal Voltage	Maximum Rectifier Power	Maximum Rectifier Current	Maximum Battery Current	Battery Floating Voltage	Battery Cut off Voltage	Charging current selection 1	Charging current selection 2	Charging current selection 3	Charging current selection 4
ECS-100-5173	12 V	100 W	7.35 A	12 A	13.6 V	10 V	1.0 A	1.2 A	2.4 A	4.8 A
ECS-100-5177	24 V	100 W	3.68 A	6 A	27.2 V	20 V	0.5 A	0.6 A	1.2 A	2.4 A
ECS-100-5179	48 V	100 W	1.84 A	3 A	54.4 V	40 V	0.22 A	0.3 A	0.6 A	1.2 A

## ECS-200

200W AC/DC UPS BATTERY CHARGER



Power [W] 200 - 230  
Input Voltage Range [V]  $\pm 20\%$   
Output Voltage Range [V] 12 - 57.6  
Cooling: Natural convection  
Dimensions [LxWxH in mm]: 100 x 220 x 45



### Key Features

High reliability  
Discharged battery cut off

ECS-200	Nominal Voltage	Maximum Rectifier Power	Maximum Rectifier Current	Maximum Battery Current	Battery Floating Voltage	Battery Cut off Voltage	Charging current selection 1	Charging current selection 2	Charging current selection 3	Charging current selection 4
ECS-200-5183	12 V	200 W	14.7 A	20 A	13.6 V	10 V	2.0 A	2.4 A	4.8 A	9.6 A
ECS-200-5187	24 V	225 W	8.30 A	15 A	27.2 V	20 V	1.0 A	1.2 A	2.4 A	4.8 A
ECS-200-5189	48 V	230 W	4.20 A	6 A	54.4 V	40 V	0.44 A	0.6 A	1.2 A	2.4 A



# EPS-120

120W SMART UPS BATTERY CHARGER



Power [W] 120  
Input Voltage Range [V] 184 - 265  
Output Voltage Range [V] 0 - 57.6  
Cooling: Natural convection  
Dimensions [LxWxH in mm]: 247 x 115 x 115



- Key Features**
- Ethernet network controlled (Web services & SNMP)
  - Battery test, temperature sensor, 10kV I/O isolation
  - Especially designed for IoT applications

EPS-120	OUT-1	Total power	Peak power	Battery	Input isolation	Housing
EPS-120-5192	48 V / 3 A 4.6 Apk	120 W	180 W	48 V	10000 Vrms	Plastic case

# EDT-150

150W 3 OUTPUTS SMART UPS BATTERY CHARGER



Power [W] 150  
Input Voltage Range [V] 184 - 264  
Output Voltage Range [V] 0 - 57.6  
Cooling: Natural convection  
Dimensions [LxWxH in mm]: 247 x 115 x 115



- Key Features**
- Ethernet network controlled (Web services & SNMP)
  - Battery test, temperature sensor, 10kV I/O isolation
  - Especially designed for IoT applications

EDT-150	OUT-1	OUT-2	OUT-3	Total power	Peak power	Battery	Input isolation	Housing
EDT-150-5191	12 V / 16 A 25 Apk	48 V / 2.2 A 5.2 Apk	48 V / 0.83 A 0.83 Apk	150 W	275 W	12 V	3000 Vrms	Aluminium case

# EPS-200

200W SMART UPS BATTERY CHARGER



Power [W] 200  
Input Voltage Range [V] 184 - 265  
Output Voltage Range [V] 0 - 57.6  
Cooling: Natural convection  
Dimensions [LxWxH in mm]: 247 x 115 x 115



- Key Features**
- Ethernet network controlled (Web services & SNMP)
  - Battery test, temperature sensor, 10kV I/O isolation
  - Especially designed for IoT applications

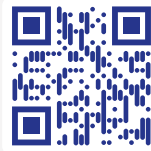
	OUT-1	Total power	Peak power	Battery	Input isolation	Housing
EPS-200-5193	48 V / 5.2 A 10.3 Apk	200 W	400 W	48 V	10000 Vrms	Plastic case

# EDS-500

500W DC UPS BATTERY CHARGER



Power [W] 500  
Input Voltage Range [V] 90 - 264  
Output Voltage Range [V] 0 - 57.6  
Cooling: Natural convection  
Dimensions [LxWxH in mm]: 186.5 x 87 x 124.4



- Key Features**
- Battery test
  - Temperature sensor
  - CAN communication

NEW

EDS-500	Input Voltage	Nominal output voltage	Maximum output power	Maximum output current	Maximum output peak current from battery
EDS-500-5243	90 ... 264 Vac	12 V	500 W	36.7 A	50 A 30 s
EDS-500-5247	90 ... 264 Vac	24 V	500 W	18.4 A	30 A 30 s
EDS-500-5249	90 ... 264 Vac	48 V	500 W	9.19 A	15 A 30 s
EDS-500-5251	90 ... 264 Vac	110 V	500 W	4 A	6.5 A 30 s

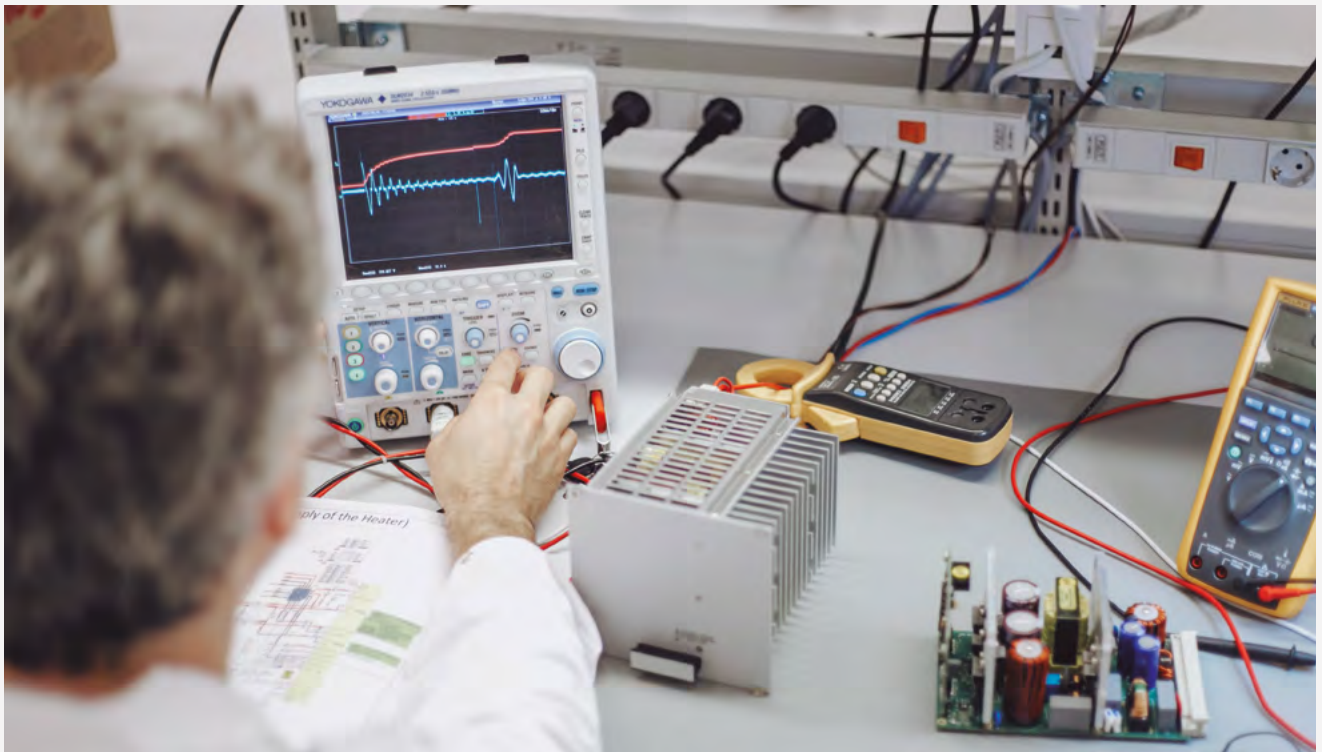


# DC/DC CONVERTERS

High efficiency and high reliability in a compact size  
Power range from 60W to 2000kW  
Wide variety of input/output combinations  
Temperature range from -40°C to +85°C (OT6 class)  
Easy install options

#WEAREPREMIUMPSU

DC/DC Converters								
Product series		Power [W]	Input voltage range [V]		Output voltage [V]	Temperature range [°C]	Cooling	
	CRS-60	50 - 60	9,5 ... 15 18 ... 30 36 ... 60	50,4 ... 90 77 ... 144	5, 12, 24, 48	-25 ... 80	Natural convection	
	CKR-2000	1920 - 2240	28 ... 60	66 ... 144	12, 24, 48	-25 ... 70	Natural convection	
	CRS-120	100 - 140	9 ... 15 18 ... 30 36 ... 72	50,4 ... 90 77 ... 144 165 ... 275	5, 12, 24, 48	-25 ... 80	Natural convection	
	CRS-240	180-280	9 ... 15 18 ... 30 36 ... 60	50,4 ... 90 77 ... 144 165 ... 275	5, 12, 24, 48	-25 ... 80	Natural convection	
	CRS-500	500	14,4 ... 30 21,6 ... 47 28,8 ... 60	43,2 ... 90 66 ... 144	24, 48, 110	-25 ... 70	Natural convection	
	CRS-1000	1000	14,4 ... 30 21,6 ... 47 28,8 ... 60	43,2 ... 90 66 ... 144	24, 48, 72, 110	-25 ... 70	Natural convection	
	CRS-2000	2000	14,4 ... 33,8 21,6 ... 50,4 28,8 ... 67,2	43,2 ... 100,8 66 ... 154	24, 48, 72, 110	-25 ... 70	Internal fan Natural convection	























# DC/AC INVERTERS

Sine wave output voltage  
Compact design, very high power density  
Power range from 260V to 30kW  
Up to 94% efficiency

#WEAREPREMIUMPSU

DC/AC Inverters							
Product series	Apparent Output Power [VA]	Input Voltage Range [V]		Output Voltage [V]	Temperature Range [°C]	Cooling	
 OCS-260	260	9,5 ... 15 16,8 ... 30 25,2 ... 45	33,6 ... 60 50,4 ... 90 77 ... 138	120, 230	-40 ... 70	Natural convection	
 OPS-260	260	9,5 ... 15 16,8 ... 30 25,2 ... 45	33,6 ... 60 50,4 ... 90 77 ... 138	120, 230	-40 ... 70	Natural convection	
 ODS-750	750	9,5 ... 15 16,8 ... 30 25 ... 45	33,6 ... 60 50,4 ... 90 77 ... 138	120, 230	-25 ... 70	Internal fan	
 ODS-1500	1200 - 1500	10 ... 15 16,8 ... 30 25,2 ... 45	33,6 ... 60 50,4 ... 90 77 ... 138	120, 230	-25 ... 70	Internal fan	
 ODS-3000	2400 - 4000	16,8 ... 30 25,2 ... 45 33,6 ... 60	50,4 ... 90 77 ... 138	120, 230	-25 ... 70	Internal fan	
 ODX-1300	1300	16,8 ... 30 50,4 ... 90 77 ... 138		250, 400	-25 ... 85	Internal fan	
 ODX-3000	2400 - 3000	16,8 ... 30 25,2 ... 45 33,6 ... 60	50,4 ... 90 77 ... 138	230, 400	-25 ... 85	Internal fan	
 ODX-4500	4500	50,4 ... 90 70 ... 125 77 ... 138		400	-25 ... 85	Internal fan	
 ODX-6000	4500 - 6000	16,8 ... 30 33,6 ... 60	50,4 ... 90 77 ... 138	400	-25 ... 85	Internal fan	

## ACB-3000

REDUNDANCY STATIC TRANSFER SWITCH



### KEY FEATURES

- Suitable for DC/AC series: ODS-750, ODS-1500 and ODS-3000
- Compatible with any 120/230V mains line
- 2ms high speed failure detection and transfer time
- Does not require a synchronised network



MODEL	ACB 3000-9431			ACB 3000 9576		
Voltage lines	230 Vac			120 Vac		
Suitable for inverters	ODS-750	ODS-1500	ODS-3000	ODS-750	ODS-1500	ODS-3000



A low-angle, upward-looking photograph of several high-voltage electrical transmission towers and their associated power lines. The towers are constructed from a complex lattice of metal beams. The power lines stretch across the frame, creating a sense of depth and scale. The background is a clear, bright blue sky. The overall image has a professional, industrial feel.

# CUSTOM-MADE SOLUTIONS

IMAGINATION, BOLD ATTITUDE AND SPIRIT OF OVERCOMING  
ARE NECESSARY CONDITIONS TO DEVELOP SOLUTIONS THAT  
GO BEYOND STANDARD PROPOSALS AND TO BE ABLE  
TO DESIGN CUSTOM-MADE PRODUCTS THAT FIT ANY NEED.  
AND THE ENTIRE PREMIUM PSU IS COMMITTED TO GOING  
BEYOND OUR LIMITS TO OFFER CUSTOM-MADE SOLUTIONS  
THAT FIT ANY REQUIREMENT OF OUR CUSTOMERS.  
BECAUSE IF YOU CAN IMAGINE IT, WE CAN DESIGN IT.





**Premium**  
Powering Your Challenge

**#SHAPINGTHEFUTURE**



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