



## **-G3- DC UPS 380V** **Compact, efficient and intelligent** **-Mega Watt installations-**

### **Features**

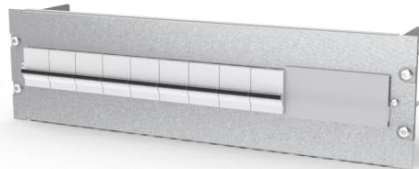
The –G3- DC UPS 380V is designed to support the new generation of high efficient data centers. By using higher voltage and reducing the electronics involved, this DC power system will provide large power plant features in a cost-effective way.

- High Efficiency, up to 97%
- High System Reliability
- High Power Quality



0.135 MW DC UPS 380V

## System Components



### Distribution

- Up to 18 x 125A - Load fuses
- Optional RCD function (Residual Current Disconnect)  
(Multiple configurations available)



### Battery fuse module / Power Control Unit

The battery fuse module is integrated with an intelligent power control unit.

Features:

- 3 x 160A Battery fuses
- Remote battery management and testing
- Embedded Web-server
- TCP/IP protocols (no specific software needed)
- Alarm monitoring
- Programmable alarms and logic functions
- Proactive off-site monitoring and control
- LCD Display



### Rectifier Modules

The power system utilizes plug-in rectifier modules with active PFC (power factor correction).

Features:

- LED indication for rectifier status.
- Thermal control and shutdown.
- Input over voltage disconnection with automatic reset.

Model	Voltage (Output)	Power (Output)	Current (max.)
RE 2500	350/380 Vdc	22.5 kW	80A

## Configurations

### Typical system configuration: (One cabinet)

System capacity:

- 135 kW (6 Rectifier shelves)
- N+1 configuration

Battery capacity / backup time:

- 132 Ah (2x68Ah) -Typical
- >10 minutes.

Input:

- 18 x 25 A / 2-pole MCB
- 0,4 - 12 kV / 3 x 230 Vac
- Max. input power: 150 kW

Output:

- 350 Vdc / 135 kW
- alt.**
- 380 Vdc / 135 kW

Mechanical dimensions:

- Cabinet: 2150 x 600 x 600 mm (HxWxD)
- Weight: ~ 100 kg
- Cable entry: Top or bottom of Cabinet

### Following optional products are available:

- DC/DC converters (48VDC)
- Intelligent Distribution Modules (kWh metered)
- Rack PDU's and Power Strips
- Fused cable sets
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Ready for shipment from factory

## Description

The –G3- DC UPS 380V is a compact and modular system designed to support the new generation of high efficient data centers. Every component is designed for highest possible reliability, energy efficiency and also offering flexibility for future expansion.

The system consists of two main parts:

- the DC UPS cabinet with rectifiers, distribution and battery with intelligent monitoring.
- 50Hz NetFormer® to isolate the system from the mains.

The –G3- DC UPS is a n +1 system dimensioned for feeding the entire load with good capacity for re-charging the battery after a power failure. Up to 3 battery strings can be connected to each cabinet. Each string has its own battery fuse and monitoring function; this gives high system reliability and facilitates battery maintenance as one of the battery strings can be disconnected without disruption of operation.

The system loads the 3-phase AC network symmetrically with pure sine wave current, without causing any current in neutral wire, creating very high power quality without harmonics or pulsating magnetic fields in the installation.

A large number of standard (AC specified) ICT equipments are tested with DC UPS.

**Note!** Before connecting unverified servers, routers, switches, PC: s, etc. to the DC UPS, please contact Netpower Labs.

An important part of the system is the NetFormer®, which is a new high-efficiency transformer. The NetFormer® "isolates" the equipment from the electric grid and creates a new neutral point (on the secondary side), connected to system ground. The NetFormer® provides an excellent protection against lightning strikes and voltage transients from the grid.

To minimize the number of components in the power chain, it is possible to connect the NetFormer® directly to the medium voltage network (typically ~11 kV), thus removing one transformer step giving even higher reliability and efficiency.

### Summary

- Simple installation and operation
- The power system is based on hot swappable rectifier modules.
- Power management system handles all control and monitoring in the system using TCP/IP based protocols.
- International standards compliant

**PATENTED**

