

# APS DC Cabinet Systems



## High Power DC Supply & DC Regenerative Load Cabinet Systems



DC Power

For DCS, DCB or 6RL Series

90kW to 450kW

Auto Ranging Output

Up to 1500Vdc

24U or 42U Rack Height

### INTRODUCTION

For DC power test applications ranging from 90kW to 450kW. Adaptive Power Systems offers integrated cabinet systems using paralleled DC power supplies or regenerative DC loads. The systems contain all AC input power wiring and output wiring or bus bars to create turn-key high power DC power systems and loads.

Cabinets heights of 24U or 48U are offered to accommodate up to 90kW in a 24U cabinet or up to 150kW in a 42U cabinet. All cabinets are made using a 15kW master DC supply or Load and parallel connected 15kW slave units. The masters controls the entire system for ease of operation. All individual units are 19" rack mount.

Custom combinations of both DC power supply and regenerative DC load or multiple voltage range combinations per cabinet are available upon request.

Up to three cabinets can be paralleled to create systems above 150kW. Such Multi-cabinet systems are limited to 900A max DC current per cabinet or 7200A total. This means not all DCS, DCB or 6RL models qualify for such configuration. Power connections, share bus and master/slave cabling between paralleled cabinets are included with Multi-cabinet systems.



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## DC BUS CONNECTIONS

By default, the DC connection (or DC bus) connects all units in parallel with copper bars resp. additional high voltage cables for high voltage systems. The DC bus is directly accessible on specific connection points (screws). The multi-cabinet solutions can have up to three DC buses which are connected in parallel from cabinet to cabinet via cables.

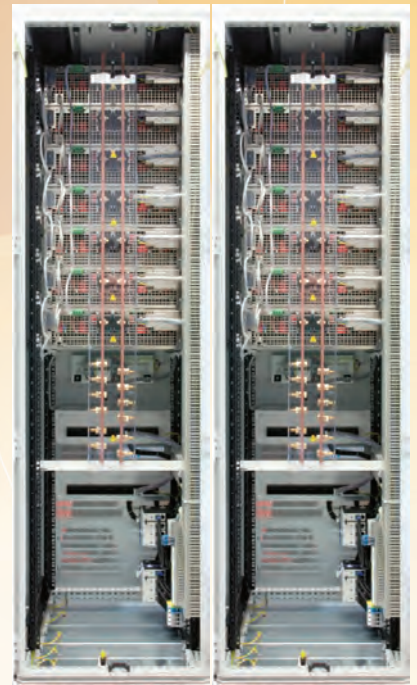
## SAFETY DESIGN

The construction of the cabinets ensures high safety for personnel. This is achieved by protective covers on the DC bus by default, as high voltage can be present there. For other situations and additional safety, the cabinets can be equipped with an optional emergency off system, designed to cut off the entire cabinet from the AC supply in case of an emergency. The cut-off is either initiated manually with a switch or by door contacts (interlock loop) when opening the cabinet's rear doors.

## CONFIGURATION EXAMPLES

For single cabinet requirements, two cabinet heights are offered. The 24U cabinet can accommodate up to six 15kW DC power supplies or up to six 15kW regenerative DC loads. Power levels to 90kW are supported by this cabinet size. For requirement up to 150kW, the 42U cabinet is needed. This cabinet height supports up to ten 15kW supplies or loads.

Above 150kW, two or three cabinets can be paralleled to create higher power systems.

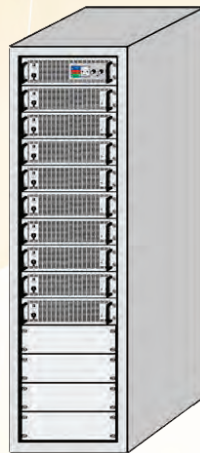


DC Bus Bar Connections

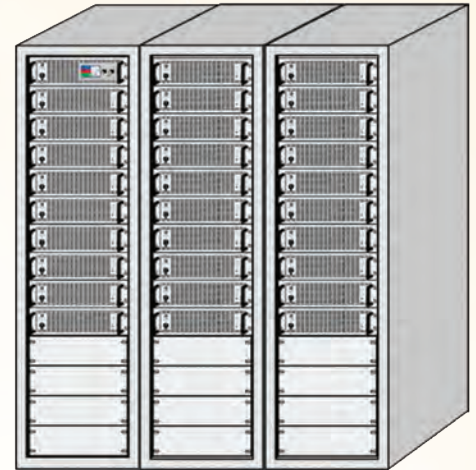
**Example 1:** The 24U cabinet is ideal for DC power systems up to 90kW. DC currents up to 2550A can be reached for testing high capacity batteries or high power DC/DC converters.



**Example 2:** The 42U cabinet supports DC power systems up to 150kW. DC currents up to 5100A can be reached for electroplating or welding applications.



**Example 3:** Multi-cabinet consist of 2 or 3 cabinets paralleled together. All control is performed by the Master unit. Output currents of 2700A @ 500Vdc are supported on 3 cabinet systems.



## SPECIFICATIONS:

PARAMETER	24U CABINET	42U CABINET
Width	600 mm / 23.6"	600 mm / 23.6"
Depth	1000 mm / 39.4"	1000 mm / 39.4"
Height	24U / 42" inside	42U / 73.5" inside
AC Input Power	Terminals, 480V, 3 Phs+N+G	Terminals, 480V, 3 Phs+N+G
Max. No. of 3U Chassis	6	10
Max. Power	90 kW	150 kW

## OPTIONS:

OPTION	DESCRIPTION
Casters	125 mm height, fixed or swivel
Remote Control	Master/Slave wiring, Analog I/O or M/S Bus.
Bus Amplifier	Required for multi-cabinet systems. Max 32 units in parallel.
Mechanical	Filler Panels, 2U, 3U or 4U. With or w/o air holes.

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