



RFP: DC

- Near Linear Power Supply
- Modular
- 0.95 PFC
- High Power Density (3.5 watts/cubic inch)
- "Virtual Assets" by:
 - Series operation
 - Parallel operation
 - Combined operation with loads
- Simple integration
- DC coupled output
- Control up to 95 assets
- C.O.T.S.
- Universal AC/DC input
- Web browser control
- User configurable
- Low C.O.O.

PRODUCT OVERVIEW

ReFlex Power™ DC Modules are high density, modular programmable power supplies. RFP™ modules can be controlled to operate in parallel or series, permitting the creation of virtual assets with voltage/current combinations required for a wide range of test regimes. In addition, the 16 bit precision inherent in the digital control provides accurate setpoint control and output readback without discrete range switching. This enables accurate use of a high power supply at a small percentage of full power capability, again, reducing the number of module types required.

The DC power modules offer the highest density available in the industry. The available power modules include

- Single slot, 330 Watt programmable DC supplies
 - 16V, 20 A
 - 65V, 5.1 A
- Dual slot, 1 KW programmable DC supplies
 - 33V, 30A
 - 450V, 2.3A

SYSTEM OVERVIEW

RFP™ provides a reconfigurable, flexible platform ideal for ATE and production test environments where it can provide programmable stimulus and bias power as well as programmable loads for the device(s) under test.

The EIA 4U high RFP™ mainframe can hold up to 12, single slot modules or combinations of the variety of single, dual and triple slot wide modules to configure (or reconfigure) the system for the particular requirements at hand. The mainframe can support up to 6 KW of output power providing the highest power density available.

Up to 8 chassis of modules, potentially up to 95 assets, can be controlled via a single controller. The controller communicates to the individual modules via a high speed proprietary bus protocol providing very high data rates and a high degree of deterministic control. The RFP™ controller communicates to the host controller via an Ethernet LAN connection compliant with the LAN Extension for Instrumentation (LXI™) standard, assuring interoperability and ease of integration.

BENEFITS

- Reduced Cost of Ownership (COO)
 - Control multiple AC and DC power supplies and loads in one mainframe
 - "Virtual Assets"
 - Series and parallel operation allows large voltage and current test coverage with a single solution
 - 3.5 Watt/cubic inch power density
 - Controlled by RFP™ controller which is compliant with LXI™ standard for assured interoperability and ease of integration
 - IVI compliant drivers
 - TCP/IP network protocols
 - Up to 95 assets controlled through a single IP address
- Near Linear Specifications
- Reduced space and logistics problems
 - High power density
 - C.O.T.S. availability
 - RFP™ also handles AC power and load modules
 - User configurable
 - Universal AC and DC input to mainframe

BENEFITS (continued)

- Ease of integration
 - Web browser control
 - Trigger operation
 - PFC to 0.95
- Brown-out simulation
 - Fast slew rate
 - Sequencing

SPECIFICATIONS

Voltage Regulation

Steady State Regulation: 0.01% of full-scale plus 10mV for 10% line or 100% load change (330W)

Steady State Regulation: 0.03% of full-scale 10% line or 100% load change (1kW)

Load Transient: 5% of full-scale to within 0.5% of set point in 2msec for 50% load change

Line Regulation: 0.1% within 500µsec for 10% line change

Current Regulation

Line Regulation: 0.05% of full-scale for 10% line change (330W)

Line Regulation: 0.1% of full-scale for 10% line change (1kW)

Load Regulation: 0.1% of full-scale for 100% load change

Parallel

Up to 6 like modules. Must be adjacent (to the right) and may go across mainframes.

Series

Up to 3 like modules. Float not to exceed 200V. 450V module may float to 450V

Sag/Surge

Sag to 65% of nominal for 450ms at full output power with AC input at $\geq 200VAC$.

Surge to 135% of nominal for 450ms at full output with AC input $\leq 230VAC$.

Environmental

Temp. Range, Operating: -10° C to 55° C

Temp. Range, Storage: -40° C to 70° C

Humidity, Operating: 95%

Altitude, Operating: Up to 15,000 Feet

Power Factor > 0.95 at full load

Connectors

Trigger: 9-pin D-sub

Positronic MD9F5R800X

Output

330W: Positronic CBD13W6F5R800X

1kW Positronic CBD21WA4F5R800X

Physical

330W Single Slot (from mainframe)

1.4" (35.6mm) W x 6.75"

(171.5mm) H x 15" (381 mm) D

Weight 4.2 lbs

1000W Dual Slot (from mainframe)

2.8" (71.1) W x 6.75"

(171.5mm) H x 15" (381 mm) D

Weight 8.7 lbs

Regulatory

Certified to UL 61010-1, CSA C22.2 No.

61010.1 and IEC/EN 61010-1.

Compliance with EN61326 and FCC 21 CFR, Subpart J

CE Mark is to EMC and LVD

All specifications: 25° ± 5° C.

All specifications are subject to change without prior notification

Model Number	LPDC16V20	LPDC65V5.1	HPDC33V30	HPDC450VA2.3
Output Voltage	16V	65V	33V	450V
Output Current	20.6A	5.1A	30A	2.3A
Maximum Power	330W	330W	1000W	1000W
Number of Rack Slots	1	1	2	2
Ripple/Noise				
RMS	5 mV	6 mV	15 mV	40 mV
Peak-Peak	25 mV	18 mV	60 mV	200 mV
Programming Accuracy				
Voltage 0.05%+	8mV	32.5mV	16.5mV	225mV
Current	20mA	5.1mA	30mA	2.3mA
Temperature Coefficient				
Voltage /°C	1.6mV	6.5mV	3.3mV	45mV
Current /°C	5mA	1mA	7.5mA	0.6mA
Output rise/fall time	20msec	20msec	20msec	20msec