

# Divadesam DD600 Series

## 200-3500W, Programmable DC Power Supplies

POWER: 100-3500 W  
VOLTAGE: 30-200 V  
CURRENT: 2-60 A

AC	230±10%
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- High Power Density
- Comprehensive Digital and Analog Interface Options
- Scalable, Multi-Unit Design
- Multi-Channel Support
- Straightforward Front Panel Controls
- High Reliability



The Divadesam DD600 Series is an 100-3500-Watt, DC power supply. The DD600 Series is the new standard for powerful, programmable DC power systems. Designed for test, production, laboratory, OEM and quality assurance applications, the DD600 Series provides a wealth of features to ensure accuracy and greater efficiency. It puts clean, reliable power at your disposal and delivers stable, variable output voltage and current for a broad range of development, test and system requirements.

### Highest Power Density

High frequency, soft switching technology in the DD600 Series provides up to 00 Watts. This represents the highest power density available from any manufacturer. With 5 models, there is a configuration available to meet every application.

### Comprehensive Digital and Analog Interface Options

The DD600 Series comes standard with optionally RS-232 isolated and non-isolated analog interfaces to provide a comprehensive set of options to connect to a PC or other network device. This design provides the convenience of being able to accommodate a wide range of installation configurations. Ethernet interface are available as options.

### Scalable, Multi-Unit Design

DD600 Series power supplies can be connected in parallel or series to produce greater current or voltage output for your applications. This scalability allows you to build rack-mounted systems with the XG Series that exactly meet your existing requirements, while allowing for future expansion.

### Multi-Channel Support

Up to 10 DD600 Series can be connected easily via an RS-232 bus to provide the ultimate flexibility in remote programming. This provides an efficient option to centrally manage each DD600 Series needed for your applications.

### Straightforward Front Panel Controls

The DD600 Series is equipped with a unique push-button encoder and function selector dial to provide a simple, uncluttered front panel. Both voltage and current can be set quickly and easily using these two controls. Front panel access can be locked out to ensure secure remote operation. This streamlined front panel layout results in fast, intuitive set-up and operation of the DD600 Series.

### High Reliability

To guarantee long-term trouble-free performance, the DD600 Series was designed with reliability in mind. Phase-shifted ZVS Soft-switching technology ensures higher mean time between failure (MTBF) by eliminating high voltage transients found in conventional hard-switching power supplies which can cause premature failure of power components. Divadesam team also rigorously tested the DD600 Series during the design phase using Highly Accelerated Life Testing (HALT). This rigorous test procedure combines powerful thermal and vibration technologies to stress a product beyond its rated specifications. HALT testing allows our engineers to uncover and correct design issues early in the development cycle. This care in design and comprehensive testing ensures the DD600 Series exceeds the reliability and quality standards of both DIVADESAM TECHNOLOGIES and our esteem customers.



**DIVADESAM  
TECHNOLOGIES**

DD600 SERIES  
PROGRAMMABLE POWER  
SUPPLY

# DD600 Series: Product Specifications

Output: Voltage and Current			
Models	Output Voltage <sup>1</sup>	Output Current <sup>2</sup>	Output Power <sup>3</sup>
DD600 0-600	100 V	6A	600 W
DD600 0-1000	100 V	10A	1000 W
DD600 0-1200	100 V	15 A	1200 W
DD600 0-1500	100 V	15 A	1500 W
DD600 0-2000	100 V	20 A	2000 W
DD600 0-2500	100 V	25 A	2500 W
DD600 0-3000	100 V	30 A	3000 W
DD600 0-3500	100 V	35 A	3500 W
	Line Regulation Voltage	Line Regulation Current Load Regulation Voltage	Load Regulation Current
Models	(0.01% of rated output voltage +2 mV) <sup>4</sup>	(0.01% of rated output (0.005% of rated output current +2 mA to +1 mA) <sup>5</sup> voltage + 2 mV) <sup>6</sup>	(0.02% of rated output current +5 mA to +4 mA)
DD600 0-600	5.5mV	34 mA	73.1 mA
DD600 0-1000	5.5mV	23 mA	49.45 mA
DD600 0-1200	5.5mV	21 mA	45.15 mA
DD600 0-1500	5.5mV	16 mA	34.4 mA
DD600 0-2000	5.5mV	12 mA	25.8 mA
DD600 0-2500	5.5mV	<10 mA	<20 mA
DD600 0-3000	5.5mV	<10 mA	<20 mA
DD600 0-3500	5.5mV	<10 mA	<20 mA

Models	Maximum Recommended Remot Sense Line Drop Compensator Per line <sup>1</sup>	Up-Prog. Response Time,0-vmax	Efficeincy (220 VAC input) <sup>3</sup>
DD600 0-600	2 V	6A	0.89
DD600 0-1000	2 V	10A	0.89
DD600 0-1200	3 V	15 A	0.88
DD600 0-1500	3 V	15 A	0.88
DD600 0-2000	5 V	20 A	0.87
DD600 0-2500	5 V	25 A	0.87
DD600 0-3000	5 V	30 A	0.86
DD600 0-3500	5 V	35 A	0.86
Models	Down-prog. Response Time: Full Load	Down-prog. Response Time: No Load	Over-Voltage Trip Point
DD600 0-600	100 ms	2000 ms	2- 125 V
DD600 0-1000	100 ms	2500 ms	2 -125 V
DD600 0-1200	150 ms	3000 ms	3-135 V
DD600 0-1500	200 ms	3500 ms	3- 135 V
DD600 0-2000	200 ms	4000 ms	5-155 V
DD600 0-2500	250 ms	5000 ms	5-155 V
DD600 0-3000	300 ms	5000 ms	5-155 V
DD600 0-3500	300 ms	6000 ms	5-155 V

When using remote sense, the total of the load voltage and the load line drops must not exceed the rated output of the power supply. Note: The unit may operate at higher output voltages than this, but there is no guarantee that the power supply will meet performance specifications. Ultimately, the upper limit of the output voltage will be determined by internal circuitry of the power supply (non-adjustable.) With rated, resistive load. At maximum output power. Double insulation on primary to secondary isolation barriers. Basic insulation primary to protective earth ground

Note: All specifications are subject to change.

# DD600 Series: Product Specifications

Programming Mode		APG	ISOL	Digital
Voltage and Current Output Voltage Programming	0–100%. Voltage control range is 0.0 to 2.0-100.0V in 0.1V increments.			
Voltage and Current Output Resistive Programming	0-100%. Resistive control range is 0.0 to 2.0 - 100.0K in 0.1K increments.			
Output Voltage and Current Monitor	0-100%. Output voltage range is 0.0 to 2.0 - 100.0V in 0.1V increments.			
Voltage Programming Accuracy <sup>1</sup>	± 0.5% of rated output voltage, max. (0 to 4.0V / 4K Ohm range) ± 0.5% of rated output voltage, typical in other ranges			±0.1% of rated output voltage
Current Programming Accuracy <sup>1</sup>	± 1.0% of rated output current, max. (0 to 4.0V / 4K Ohm range) ± 1.0% of rated output current, typical in other ranges			±0.2% of rated output current
Power Programming Accuracy <sup>1</sup>				±0.3% of rated output power
Voltage Readback Accuracy	± 1% of range full scale			±0.1% of rated output voltage
Current Readback Accuracy	± 1% of range full scale			±0.2% of rated output current
Power Readback Accuracy				±0.3% of rated output power
		With respect to:		
Isolation (Prog and Readback Lines) Power, Voltage, OVP and Current Programming Resolution	With respect to chassis potential: 500V			0.012% of full scale
Power, Voltage and Current Readback Resolution				0.012% of full scale
Parallel Operation	Up to 4 units in master/slave mode	Up to 4 units in master/slave mode	Up to 4 units in master/slave mode	
Series Operation	Up to 2 units (with external diodes)	Up to 2 units (with external diodes)	Up to 2 units (with external diodes)	
Constant Voltage (CV)/Constant Current (CC) Indicator	CV: TTL High (4–5 V) CC: TTL Low (0–0.6 V)			
Shutdown Control <sup>2</sup>		Logic low 0.0 - 1.4V Logic high 2.0 - 15V Dry contact compatible		
AUX On/Off Control		TTL level or dry contact compatible		
Power Supply Status Signal		TTL high: OK (4–5 V) TTL low: fail (0–0.6 V)		
Interlock Enable/Disable		Dry contact. Open/Short: On or Off, programmable		
Rated AC Input Voltage/Frequency	100–240 Vac, 47–63 Hz			
Operational AC Input Voltage/Frequency	85–265 Vac continuous, single phase, 47–63 Hz, * Contact factory for details regarding this mode of operation			
Input Current (at 100/200 Vac)	13.6 A (300W)			
Inrush Current (100/200 Vac)	Less than 38A (3000W)			
Power Factor Correction	0.99@200 Vac, rated output power			
Output Performance Specifications				
Temperature Coefficient	100 PPM/° C from rated output voltage, after a 30-minute warm-up			
Drift (8 hours)	0.05% of rated output (over an 8 hour interval with constant line, load and temperature, after a 30-minute warm-up)			
Hold-up Time	Typical 20 ms at any rated input line.			
Transient Response Time <sup>4,6</sup>	Less than 1 ms for 6 V to 60 V models. Less than 2 ms for 80 V to 600 V models			
OVP Trip Point Accuracy	1% of set point			
Meter Accuracy <sup>8</sup>	0.5% of actual output voltage or current ± 1 count			
Data Readback Transfer Time <sup>7</sup>	3 ms			
Programming and Readback	Less than 300ms for the whole time loop from sending the command to getting the readback voltage and current data			
Aux output <sup>3</sup>	+5V: +0.4V, – 0.5V at 0.4A +15V: +1.2V, – 1.4V at 0.4A			
Isolation <sup>9</sup>	1500VAC or 2121Vdc between mains terminals and accessible conductive parts/chassis ground. Output to chassis <sup>5</sup> 500Vac			
Physical				
DD600 3000 watt	Enclosure Customized as per need			
Weight	11lb (5kg)			
Cooling	Forced air cooling by internal fans			

3. Current: 0.51A minimum guaranteed, 0.72A typically available. Overcurrent protection (each output) is automatic, non-latching. When OCP is tripped the aux voltage folds back and will recover to nominal condition when the over current condition is removed (typ. < 0.2A). To protect external circuits attached to the aux outputs it is recommended that customers use an appropriately rated fuse in series with the aux outputs being used.

4. Time for the output voltage to recover within 0.5% at its rated output for a load change 10–90% of rated output current. Output set point 10–100%.

5. For floating chassis ground applications, please contact applications engineering for system design assistance.

6. 3 mSec time for the output voltage to recover within 1% at its rated output for a load change 50%–100% or 100% - 50% of rated output current.

7. Time to provide data back to the controller using LAN interface option (does not include A/D conversion time)

8. 0.5% of actual output voltage or current ± 1 count, floating display dot. Contact factory for details regarding this mode of operation

9. Double insulation on primary to secondary isolation barriers. Basic insulation primary to protective earth ground.

Note: All specifications are subject to change.

For more information: mail us at [info@divadesam.com](mailto:info@divadesam.com)