RIGOL
Beyond Measure

2011 No.1

DP1116A/DP1308A Programmable DC Power Supply

DP1308A:

- Separate Control and Independent Triple Outputs: +6V/5A, +25V/1A, -25V/1A, total 80W power.
- The +6V channel output is electrically isolated from ±25V channel output to minimize the interference between the circuits under test.
- Clean power with Low ripple noise: < 350 μVrms / 2 mVpp
- ±25V channels have output tracking functions
  The change of voltage value in one channel can be reflected in the other channel
- Supports up to 5 groups of timing settings
- Support Web control

DP1116A:

- Single output, dual ranges,160W power with the remote sense capability
- Clean power with Low ripple noise: < 350 μVrms / 3 mVpp
- Supports up to 100 groups of timing settings
- Provides the classical display mode: dial plates with pointer and V/A/W values
- Supports up to 100 groups of timing settings with finity or infinity repetition

DP1308A & DP1116A:

- 4.3 inch large True Color LCD Display with 480×272 high resolution: Displays multiple parameters and state graph simultaneously.
- Fast Transient Response Time: <50μs
- Overvoltage and overcurrent protection function
- Two-level over-temperature protection
- Store and recall system setups
- Real time V/A/W waveform display with V/A/W values
- On-line help, Chinese & English interface and input
- Comprehensive Connectivity and Remote Control Interface
  USB Device, USB Host, LAN, GPIB interfaces, support USB flash drive storage
- Comform to LXI-C Class instrument standard (version 1.2)
- Support SCPI commands for remote control

DP1116A/DP1308A Programmable DC Power Supply

Observable Clean Stable Reliable Affordable

4.3 inch Large True Color TFT LCD Display
Clean power with Low ripple noise
Excellent Load and Line Regulation

Product Dimension: Width×Height×Depth=235 mm×155 mm×384 mm Weight: 8.5 kg

► Typical Applications

- R&D lab General purpose testing
- Quality Assessment inspection
- Bias power for RF/MW circuits
- Automotive electronic test
- Production testing
- Device or circuit characterization and troubleshooting
- Teaching lab experiments

► Intuitive User Interface

Displays multiple parameters and state graph simultaneously

DP1116A supports up to 100 groups of timing settings

Real time V/A/W waveform display with V/A/W values

DP1116A provides the classical display mode: dial plates with pointer and V/A/W values

Store and recall system setups

On–line help

Specifications

Specifications are valid after 30 minute warm up time under specified temperature.

Model		DP1116A		DP1308A		
Output Ranges/Channels		16 V/10 A	32 V/5 A	+6 V	+25 V	-25 V
DC Output (0℃ - 40℃)						
Voltage		0 to 16 V	0 to 32 V	0 to +6V	0 to +25 V	0 to -25 V
Current		0 to 10 A	0 to 5 A	0 to 5 A	0 to 1 A	0 to 1 A
Overvoltage Protection		0.1 V to 35.2 V		0.1 V to 6.5 V	0.1 V to 27 V	-0.1 V to -27 V
Overcurrent Protection		0.1 A to 11 A		0.1 A to 5.5 A	0.1 A to 1.2 A	0.1 A to 1.2 A
Load Regulation± (output percentage + offset)						
Voltage		< 0.01% + 2 mV				
Current		< 0.005% + 250 μA		< 0.01% + 250 μA		
Line Regulation± (output percentage + offset)						
Voltage		< 0.01% + 2 mV				
Current		< 0.01% + 250 μA				
Ripple and Noise (20 Hz - 20 MHz)						
Normal Mode Voltage		< 350 μV rms/3 mVpp		< 350 μV rms/2 mVpp		
Normal Mode Current		< 2 mA rms		< 2 mA rms	<500 μA rms	
Common Mode Current		-		<1.5 μA rms		
Accuracy 12 Months[1] (25℃±5℃)±(output percentage + offset)						
Programming	Voltage	0.05% + 10 mV		0.1% + 5 mV	0.05% + 20 mV	
	Current	0.2% + 10 mA		0.2% + 10 mA	0.15% + 4 mA	
Read Back	Voltage	0.05% + 5 mV		0.1% + 5 mV	0.05% + 10 mV	
	Current	0.15% + 5 mA		0.2% + 10 mA	0.15% + 4 mA	
Resolution						
Programming		1 mV/1 mA		0.5 mV/0.5 mA	1.5 mV/0.1 mA	
Read Back		1 mV/1 mA		0.5 mV/0.5 mA	1.5 mV/0.1 mA	
Meter		1 mV/1 mA		1 mV/1 mA	10 mV/1 mA	
Transient Response Time						
Less than 50 μs is spent on recovering the voltage within 15 mV during the output current changes from full load to half load or half to full.						
Sense (only for DP1116A)						
Voltage drop: Up to 1V per each lead						
Command Processing Time[2]						
< 50 ms						
Temperature Coefficient per ℃ (output percentage + offset)						
Voltage		0.01% + 3 mV		0.01% + 2 mV	0.01% + 3 mV	
Current		0.02% + 3 mA		0.02% + 3 mA	0.01% + 0.5 mA	
Stability[3], ±(output percentage + offset)						
Voltage		0.02% + 1 mV		0.03% + 1 mV	0.02% + 2 mV	
Current		0.1% + 1 mA		0.1% + 3 mA	0.05% + 1 mA	
Voltage Programming Speed(to within 1% of total variation range)						
Rising	Full Load	50 ms		11 ms	50 ms	
	No Load	20 ms		10 ms	45 ms	
Falling	Full Load	45 ms		13 ms	20 ms	
	No Load	400 ms		200 ms	400 ms	
OVP/OCP						
Accuracy ± (output percentage + offset)		0.5% + 0.5V/0.5% + 0.5 A				
Activation Time		1.5 ms(OVP ≥ 3 V); < 10 ms(OVP < 3 V)				
		< 10 ms(OCP)				
Machine						
Dimension		235 mm (W) x 155 mm (H) x 384 mm (D)				
Weight		11 kg		8.5 kg		
Power Supply						
AC Input		100 Vac ± 10%, 115 Vac ± 10%,				
(50 Hz - 60 Hz)		220 Vac ± 10%, 230 Vac ± 10% (250 Vac Max)				
Environment						
Working Temperature		Full rated value output: 0℃ - 40℃				
Cooling Method		At higher temperature: the output current falls into 50% at the maximum temperature 55℃				
		Fan cooling				
Product Regulation		CE, cTUVus				

Remarks:
[1] Specifications are for one hour warm-up and at 25℃.
[2] The maximum time required for regulating corresponding output when received APPLy and SOURce commands.
[3] The variation of output within 8 hours after warm-up 30 minutes and both the load circuit and environment temperature are in constant conditions.

Ordering Information

	Description	Order Number
Model	Programmable DC Power (Single Channel)	DP1116A
	Programmable DC Power (Triple-Channel)	DP1308A
Standard	A Power cord	
Accessories	A USB data cable	
	Two shorted devices (only for DP1116A)	
	A CD (including User's Guide and Programming Guide)	
	Four fuses (two of 250 V/T2.5 A and two of 250 V/T4 A): DP1116A	
	Four fuses (two of 250 V/T3 A and two of 250 V/T2 A): DP1308A	
	Rack Mount Kit	RM-DP-1
	An INSTRUCTION	

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For further information, please contact
RIGOL local distributors.