

RIGOL

Data Sheet

DP1308A Programmable Linear DC Power Supply

Product Overview

The DP1308A programmable linear DC power supply is designed for performance bench and system applications. The DP1308A provides up to 80W of total power output across three channels. It has a modern, innovative user interface simplifying front panel usability and provides all major computer I/O for system applications standard. In addition the DP1308A has programmable output over time easily setup from the front panel and displayed on the large color screen.



Applications

- Research and Development
- Industry Control
- Education and Training
- Radio, Television, Post and Telecommunications
- Aerospace, Defense and Transportation

Easy to Use Design

- Multiple display modes
- Clear graphical interface
- One Button Help Function
- Simplified File Management
- Chinese and English Menu and Input Method

Main Features

- Large and True Color TFT LCD
- Independent and controllable triple channel
- Up to 80W of Total Output Power
- Low Noise and High Regulation Factor
- High Precision and Resolution
- Waveform Display Function
- Overvoltage/overcurrent Protection
- Secondary Overtemperature Protection
- Timing output Function
- Track Function
- Store and Recall System Parameters
- Standard Interfaces: USB Device, USB Host, LAN, GPIB
- Support for U disc storage
- Support Remote Control via Web and Commands
- LXI-C Class Instrument Standard

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➤ Large and True Color LCD

DP1308A uses a true color TFT 4.3 inch, 16M display providing 480x272 of high resolution, clear numeric's and graphics. Up to 160° vertical and horizontal viewing angle provides an exceptionally easy to read instrument. The interactive user interface with the true color TFT provides a unique visual interface in this type of product!

➤ Independent Triple Channel

The total output power of DP1308A is 80 W. The output of voltage and current of the three channels are +6V/5A, +25V/1A, -25V/1A, respectively; among them, +6V channel and ±25V channel are completely isolated. All channels can be easily enabled or disabled simultaneously or individually. With one button, you can easily switch on or off the desired channel or channels.

➤ Low Noise and High Regulation

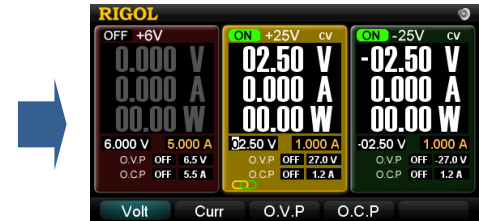
DP1308A outputs noise and ripples is <math> < 350\mu\text{Vrms}/2\text{mVpp}</math>, which provides very clean power. Additionally, the load regulation is <math> < 0.01\% + 2\text{mV}</math> and the linear regulation is <math> < 0.01\% + 250\mu\text{A}</math>, meets high precision requirements.

➤ Two-level O.T.P

The overtemperature protection includes two levels: the first level allows user to set as needed, the second level is on continuously. When the first level is engaged, the instrument will prompt the user whether to disable the output while the temperature of the device has reached the set value. When the temperature has reached the set value of the second protection level, the instrument will give out a warning and immediately shut off all the outputs to protect your DUT.

➤ Track Function

The ±25V channels of DP1308A have voltage tracking function. The voltage setting value of the tracking channel will vary with the channel being tracked.



Track Function

➤ Store and Recall Groups of Settings

You can store or recall the system setting parameters through internal (4 groups are available) or external memorizer. It will help you quickly save the current state of the instrument, or easily recall former setting parameters.



Store and Recall

➤ Waveform Display

The voltage/current waveform of the instrument can be easily shown in real time with the waveform display function. The display shows voltage, current and power, making the output state easily observable.



Waveform Display

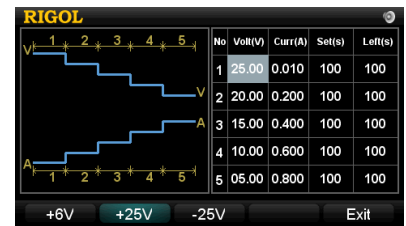
➤ Timing Output

The timing output function provides an easy way to program the DP1308A to adjust voltage or current over time without the need of a computer program.

The function is available to each channel, and up to 5 groups of outputs could be set for easy recall when needed.



Enable Timing Output



Setup Timing Parameters

Specifications

DP1308A Programmable Linear DC Power Supply specification and operating characteristics are based on the instrument having been operated continuously for 30 minutes under the specified operating temperature.

Note: All the specifications below apply to all the three channels output unless where noted.

Model	DP1308A		
Channels	+6V	+25V	-25V
DC output (@ 0°C~40°C)			
Voltage	0~+6V	0~+25V	0~-25V
Current	0~5A	0~1A	0~1A
Overvoltage Protection	0.1V~6.5V	0.1V~27V	-0.1V~-27V
Overcurrent Protection	0.1A~5.5A	0.1A~1.2A	0.1A~1.2A
Load Regulation± (output percentage + offset)			
Voltage	<0.01%+2mV		
Current	<0.01%+250μA		
Linear Regulation± (output percentage + offset)			
Voltage	<0.01%+2mV		
Current	<0.01%+250μA		
Ripple and Noise (20 Hz~20 MHz)			
Normal Mode Voltage	<350μVrms/2mVpp		
Normal Mode Current	<2mArms	<500μArms	
Common Mode Current	<1.5μArms		
Accuracy 12 Months^[1] (25°C±5°C)±(output percentage + offset)			
Programming	Voltage	0.1%+5mV	0.05%+20mV
	Current	0.2%+10mA	0.15%+4mA
Read Back	Voltage	0.1%+5mV	0.05%+10mV
	Current	0.2%+10mA	0.15%+4mA
Resolution			
Programming	0.5mV/0.5mA	1.5mV/0.1mA	
Read Back	0.5mV/0.5mA	1.5mV/0.1mA	
Meter	1mV/1mA	10mV/1mA	
Transient Response Time			
Less than 50μs for output to recover to within 15mV following a change in output current from full load to half load or vice versa.			
Command Processing Time^[2]			
<50ms			
Temperature Coefficient per °C(output percentage + offset)			
Voltage	0.01%+2mV	0.01%+3mV	
Current	0.02%+3mA	0.01%+0.5mA	
Stability^[3]±(output percentage + offset)			
Voltage	0.03%+1mV	0.02%+2mV	
Current	0.1%+3mA	0.05%+1mA	
Voltage Programming Speed(to within 1% of total variation range)			
Rising	Full Load	11ms	50ms
	No Load	10ms	45ms
Falling	Full Load	13ms	20ms
	No Load	200ms	400ms
OVP/OCP			
Accuracy ± (output percentage + offset)	0.5%+0.5V/0.5%+0.5A		

Activation Time	1.5ms (OVP \geq 3V) <10ms (OVP<3V and OCP)
Machine	
Dimension	235 mm (W) x 155 mm (H) x 384 mm (D)
Weight	8.5kg
Power Supply	
AC Output (50Hz-60Hz)	100Vac \pm 10%, 115Vac \pm 10%, 220Vac \pm 10%, 230Vac \pm 10%
Environment	
Working Temperature	Full rated value output: 0 $^{\circ}$ C ~40 $^{\circ}$ C At higher temperature: the output current falls into 50% at the maximum temperature 55 $^{\circ}$ C
Cooling Method	Fan cooling

Remarks:

- [1] Specifications are for one hour warm-up and at 25 $^{\circ}$ C.
- [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 load circuit and environment temperature are in constant conditions.

Ordering Information

Name of Product

RIGOL DP1308A Programmable Linear DC Power Supply

Model

DP1308A

Standard Accessories

- A Power Cord that fits the standard of destination country
- An USB Data Cable
- A CD (User's Guide)
- An INSTRUCTION
- Four fuses (two of 250V/T3A and two of 250V/T2A)

Contact Us

If you have any problem or requirement during using our products, please contact **RIGOL** Technologies, Inc. or the local distributors.

Domestic: Please call

Tel: (86-10) 8070 6688

Fax: (86-10) 8070 5070

Service & Support Hotline: 800 810 0002

9:00 am –5: 00 pm from Monday to Friday

Or by e-mail:

service@rigol.com

Or mail to:

RIGOL Technologies, Inc.

156# CaiHe Village, ShaHe Town, ChangPing District, Beijing, China

Post Code: 102206

Overseas: Contact the local **RIGOL** distributors or sales office.

For the latest product information and service, visit our website: <http://www.rigolna.com/>

Warranty

Thank you for choosing **RIGOL** products!

RIGOL Technologies, Inc. warrants that this product will be free from defects in materials and workmanship from the date of shipment. If a product proved defective within the respective period, **RIGOL** will provide repair or replacement as described in the complete warranty statement.

For the copy of complete warranty statement or maintenance, please contact with your nearest **RIGOL** sales and service office.

RIGOL do not provide any other warranty items except the one being provided by this summary and the warranty statement. The warranty items include but not being subjected to the hint guarantee items related to tradable characteristic and any particular purpose.

RIGOL will not take any responsibility in cases regarding to indirect, particular and ensuing damage.