Order Information

	Description	Order No.
Model	Programmable DC Electronic Load (single channel, DC 150 V/40 A 200 W)	DL3021
	Programmable DC Electronic Load (single channel, DC 150 V/40 A 200 W)	DL3021A
	Programmable DC Electronic Load (single channel, DC 150 V/60 A 350 W)	DL3031
	Programmable DC Electronic Load (single channel, DC 150 V/60 A 350 W)	DL3031A
Standard Accessories	Power Cord	-
	Either one of the following fuses: ・ Fuse 50T-0200H 250 V 0.20 A (AC selector: 230 Vac) ・ Fuse 50T-0315H 250 V 0.315 A (AC selector: 115 Vac)	-
	Quick Guide (hard copy)	-
	Terminal Shield	-
Optional Accessories	LAN Interface	LAN-DL3
	Digital I/O Option	DIGITALIO-DL3
	High Readback Resolution	HIRES -DL3
	High Frequency Option	FREQ-DL3
	High Slew Rate Option	SLEWRATE-DL3
	9-Pin RS232 Cable (female-to-female, cross-over)	CB-RS232-A
	Terminal Shield	DL-02
	USB-GPIB interface converter	USB-GPIB
	Sense Cable	CB-SENSE
	20 A Red and Black Test Lead	CB-20A-780MM
	40 A Red and Black Test Lead	CB-40A-780MM
	60 A Red and Black Test Lead	CB-60A-780MM
	DL3000 Series Rack Mount Kit (for a single instrument)	RM-1-DP800
	DL3000 Series Rack Mount Kit (for two instruments)	RM-2-DP800

Note: When the DUT outputs large currents, please use the specified test leads provided in the optional accessories.

HEADQUARTER
RIGOL TECHNOLOGIES, INC.
No.156,Cai He Village,
Sha He Town,
Chang Ping District, Beijing,
102206 P.R.China
Tel:+86-10-80706688
Fax:+86-10-80720067
Electronic Measurement Instrument service and support
email:EMD_support@rigol.com

EUROPE
RIGOL TECHNOLOGIES GmbH
Lindbergh str. 4
82178 Puchheim
Germany
Tel: 0049- 89/89418950
Email: info-europe@rigol.com

NORTH AMERICA
RIGOL TECHNOLOGIES, USA INC.
10200 SW Allen Blvd, Suite C
Beaverton, OR 97005, USA
Toll free: 877-4-**RIGOL**-1
Office: 440-232-4488
Fax: 877-474-4651
Email: info@rigol.com

JAPAN
RIGOL TECHNOLOGIES JAPAN G.K.
MJ BLDG.3F,1-7-4 MINATO,CHUOU-KU,TOKYO,JAPAN
〒104-0043
Tel: 03-6262-8932
Fax: 03-6262-8933
Email: info-japan@rigol.com

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RIGOL
Innovation or nothing

- 150V/40A,200W;150V/60A,350W
- Dynamic mode: up to 30 kHz
- Adjustable current slew rate: 0.001 A/μs to 5 A/μs
- Superior readback resolution: 0.1 mV, 0.1 mA
- Specialized Battery Application Mode

DL3000

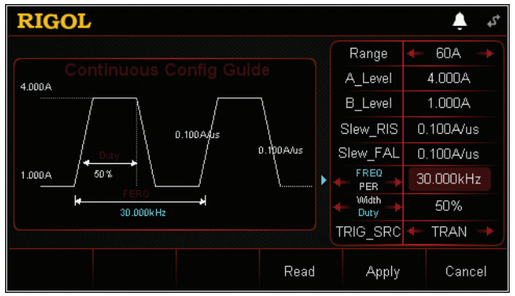
Programmable DC Electronic Load

Typical Applications

- General–purpose testing in the R&D lab
- DC power supply industry, such as regulated power supply, constant current power supply, switching mode power supply (SMPS), module power supply, power adapter, etc.
- Battery industry, such as various batteries and cell batteries
- Charger industry, such as battery charger and cell phone charger
- Power electronic device industry, such as MOSFET, IGBT, capacitor, and ballast resistor
- Teaching experiment

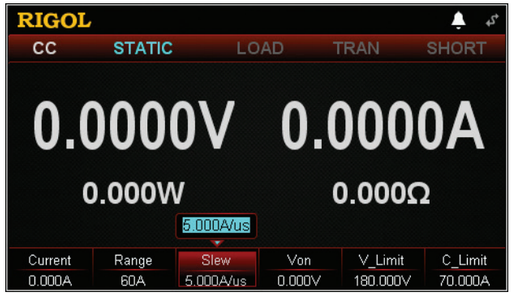
Design Features

30 kHz dynamic mode



Transient test function enables the load to periodically switch between two set currents (Level A and Level B). The highest transient frequency in CC mode can reach up to 30 kHz

5 A/μs current slew rate

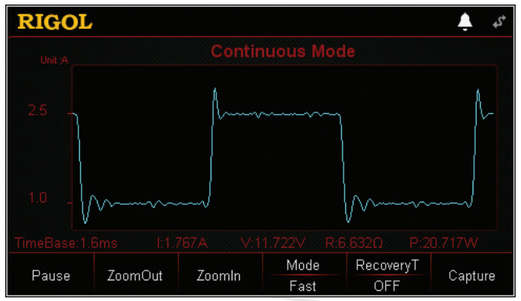


Current slew rate is defined as the rate at which the two set currents switch from one setting to another. The range of the current slew rate is from 0.001 A/us to 5 A/us.

Powerful list operation function

You can generate complex sequences by editing the setting value for each step, the dwell time, and slew rate (the slew rate can only be edited in CC mode) to meet the complex test demands.

Powerful waveform display function



The electronic load provides the waveform display function and supports the following operations for the waveform, such as pausing the waveform, enlarging and narrowing the waveform, and capturing the waveform. Therefore, you can dynamically observe the trend of parameters changes.

Easy-to-use function of file storage and recalling

The load allows you to save different types of files to the internal and external memories. You can recall and read them when necessary.

Sound OVP/OCP/OPP/OTP/Reverse Voltage Protection

When OVP/OCP/OPP/OTP/reverse voltage protection occurs, the load will immediately turn off the input automatically and stop sinking. Then, a prompt message is displayed.

Func and Spec	DL3021		DL3021A		DL3031		DL3031A	
	Low Range	High Range	Low Range	High Range	Low Range	High Range	Low Range	High Range
Power	200W				350W			
Voltage	0~150V							
Current	0~40A				0~60A			
Type Min. Operation,Voltage(DC)	40A@1V				60A@1.3V			
CC Mode								
Range	0~4A	0~40A	0~4A	0~40A	0~6A	0~60A	0~6A	0~60A
Resolution	1mA							
Accuracy	±(0.05%+0.05%FS)							
Temperature Coefficient	100ppm/°C							
CV Mode								
Range	0~15V	0~150V	0~15V	0~150V	0~15V	0~150V	0~15V	0~150V
Resolution	1mV	5mV	1mV	5mV	1mV	5mV	1mV	5mV
Accuracy	±(0.05%+ 0.02%FS)	±(0.05%+ 0.025%FS)	±(0.05%+ 0.02%FS)	±(0.05%+ 0.025%FS)	±(0.05%+ 0.02%FS)	±(0.05%+ 0.025%FS)	±(0.05%+ 0.02%FS)	±(0.05%+ 0.025%FS)
Temperature Coefficient	50ppm/°C							
CR Mode								
Range	0.08Ω ~ 15Ω	2Ω ~ 15kΩ	0.08Ω ~ 15Ω	2Ω ~ 15kΩ	0.08Ω ~ 15Ω	2Ω ~ 15kΩ	0.08Ω ~ 15Ω	2Ω ~ 15kΩ
Resolution	2mA/Vsense							
Accuracy	Vin/Rset*(0.2%)+0.2% IFS							
CP Mode								
Range	0~200W				0~350W			
Resolution	100mW							
CC Continuous Mode								
Freq Range	0.001Hz~15kHz		0.001Hz~30kHz		0.001Hz~15kHz		0.001Hz~30kHz	
Freq Accuracy	0.8%							
Freq Resolution	±0.5%							
Duty Cycle Range	5%~95%, 1%							
Slew Rate								
CC Slew Rate	0.001A/ μs~0.25A/μs	0.001A/μs ~ 2.5A/μs(>5V)	0.001A/ μs~0.3A/μs	0.001A/μs ~ 3A/μs(>5V)	0.001A/ μs~0.25A/μs	0.001A/μs ~ 2.5A/μs(>5V)	0.001A/ μs~0.5A/μs	0.001A/μs~5A/ μs(>5V)
Slew Rate Resolution	0.001A/μs							
Accuracy	5% +10μs							
Current ReadBack								
Range	0~40A				0~60A			
Resolution	1mA		0.1mA		1mA		0.1mA	
Accuracy	±(0.05%+0.05%FS)							
Temperature Coefficient	50ppm/°C							
Voltage ReadBack								
Range	0~150V							
Resolution	0.1mV							
Accuracy	±(0.05%+0.02%FS)							
Temperature Coefficient	20ppm/°C							
Protection Function	Overcurrent protection (OCP), overvoltage protection (OVP), overpower protection (OPP), overtemperature protection (OTP), as well as local/remote reverse voltage (LRV/RRV) protection.							
DRIFT STABILITY								
Current	±(0.01%±10mA)							
Voltage	±(0.01%±10mV)							
Input Resistance	350kΩ							
Interface								
USB DEVICE	●		●		●		●	
USB HOST	●		●		●		●	
RS232	●		●		●		●	
LAN	○		●		○		●	
Digital I/O	○		●		○		●	
GPIB	○		○		○		○	