EL30000 Series DC Electronic Loads

Measure, capture and display

The EL30000 Series bench DC electronic loads provide superior performance in compact bench form factor. A single and dual-channel model is available with up to 600 W – ideal for design verification of consumer power supplies, batteries, battery modules, solar panels, LED drivers, and power converters. You can easily characterize wide-bandgap semiconductor components such as MOSFET and IGBT.

The EL30000 Series bench DC electronic loads are fully SCPI programmable with built-in USB, LAN, and optional GPIB interfaces. Advance features include scope view, data logging, sequencing, and more, enabling you to measure, capture, and quickly display your results.

EL34143A 350 W bench electronic load 150 V, 60 A

EL34243A 600 W dual-input bench electronic load 150 V, 60 A

Option	Description
EL34GPBU	GPIB user-installable interface module
UK6	Commercial calibration with test result data
SEC	NISPOM and file security

www.keysight.com/find/el30000

Performance specifications		EL34143A	EL34243A	
Input power		350 W	300 W	300 W
Channel		1	1	2
Input ratings (0 to 40ºC)		0 to 150 V	0 to 150 V	0 to 150 V
		0 to 60 A	0 to 60 A	0 to 60 A
Parallel mode current		NA	120 A	
Typical minimum operating voltage at full scale current		1.5 V		
Command processing time		< 10 ms		
Programming accuracy ± (% of output + offset)				
Constant current (CC) mode	Low, 0.6 A	0.04% + 130 uA		
	Medium, 6 A	0.04% + 2 mA		
	High, 60 A	0.04% + 12 mA		
Constant voltage (CV) mode	Low, 15 V	0.02% + 3 mV		
	High, 150 V	0.02% + 15 mV		
Constant resistance (CR) mode	Low, 0.05 Ω to 30 Ω	0.1% + 230 mS		
	Medium, 10 Ω to 1.25 kΩ	0.1% + 18 mS		
	High, 100 Ω to 4 kΩ	0.1% + 3.5 mS		
	Ultra-high, 250 Ω to 100 kΩ	0.1% + 400 uS		
Constant power (CP) mode	Low, 0.02 W – 8 W[1] / 7 W[2]	0.06% + 4 mW		
	Medium, 0.3 W – 35 W[1] / 30 W[2]	0.06% + 260 mW		
	High, 2 W – 350 W[1] / 300 W[2]	0.06% + 1.6 W		
Programming accuracy ± (% of output + offset)				
Current	Low, 0.6 A	0.04% + 120 uA		
	Medium, 6 A	0.04% + 1.8 mA		
	High, 60 A	0.04% + 9.6 mA		
Voltage	Low, 15 V	0.02% + 3 mV		
	High, 150 V	0.02% + 15 mV		

[1] Power range of E34143A
[2] Power range of E34243A

Key Values

Measures accurately

- integrated voltmeter and ammeter
- precise programming / readback accuracy
- built-in 2-wire or 4-wire remote sense technology

Captures, stores, and transfers dynamic waveforms

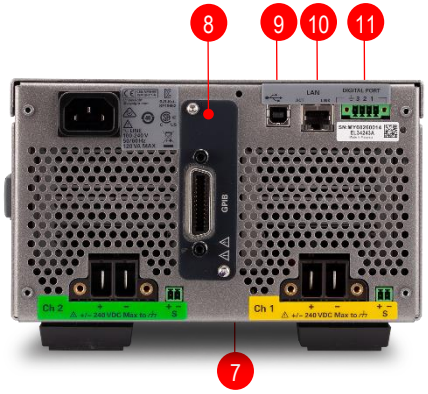
- data logger that is configurable
- log voltage, current and energy
- internal or external memory storage
- export to .CSV for post analysis

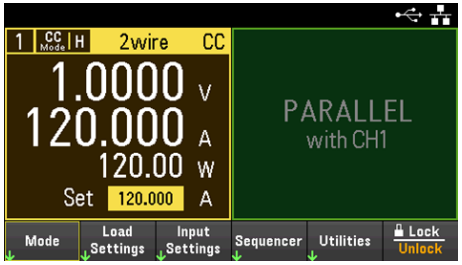
Displays like an oscilloscope for precise analysis

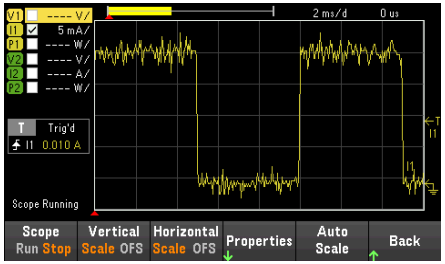
- performs precise transient analysis with scope function
- digitizes voltage and current
- displays results on a 4.3-inch color LCD screen

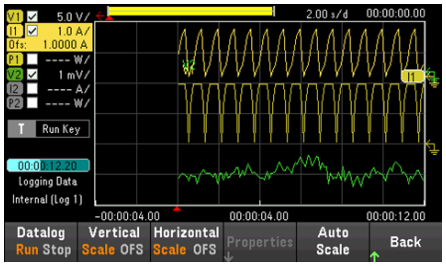
Advanced characterization

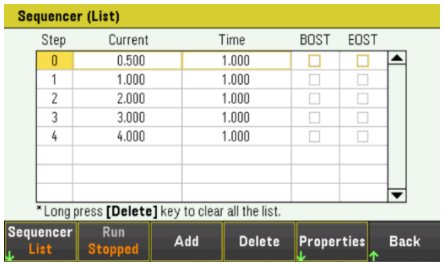
- use operating modes: constant current (CC), constant voltage (CV), constant resistance (CR), constant power (CP)
- improve measurements with low current range
- dynamic load profiles with *List* (continuous, pulse, or toggle)
- adjust transient steps with programmable slew rate
- modern connectivity: LAN (LXI Core), USB and GPIB (optional)











1. Front USB host port for external USB drive
2. Color display shows readback voltage, current and power simplifying setup and monitoring
3. Channel selection and control knobs for quick adjustments
4. Function keys and keypad provide intuitive interface
5. Two electronic load inputs allow individual on/off control (EL34243A only)
6. Color coded input channels, controls, and display allow at a glance verification
7. Rear output terminals for clean wiring in a system
8. Optional GPIB
9. USB communication port
10. LXI LAN port
11. Digital I/O
12. Parallel input connection for 120 A, 600 W input (EL34243A)
13. Scope function captures transients
14. Data logger records seconds to hours
15. Transient LIST creates a dynamic load profile

Learn more at: www.keysight.com

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