EL4900 Series Regenerative DC Electronic Loads

Power without Compromise

The EL4900 Series DC electronic loads provide precision for power device testing, from validation to transient analysis. The regenerative feature returns up to 95% of absorbed energy to the grid, reducing energy and cooling costs without disrupting grid performance. Paired with the Pathwave Advanced Power Suite software, the EL4900 Series provides robust automation of complex test scenarios, delivering deeper insights and faster analysis. Validate complex power devices faster, in less space, with no compromise on performance or programmability.

Keysight EL4900 Series DC electronic loads

Operating Modes

Current priority (CC)	Voltage priority (CV)
Power priority (CP)	Resistance priority (CR)
CV+CC	CV+CR
CC+CR	CC+CV+CP+CR (Auto)

Model	2 kW Models	4 kW Models	6 kW Models	12 kW Models
	EL491xA	EL492xA	EL493xA	EL494xA
DC Power Ratings				
Voltage	80 – 800 V	80 – 800 V	80 – 800 V	80 – 800 V
Current	8 – 40 A	16 – 80 A	24 – 120 A	48 – 240 A
Power	2 kW	4 kW	6 kW	12 kW
Load Regulation [1]				
Voltage	16 mV – 160 mV			
Current	≤ 8 mA – ≤ 40 mA	≤ 16 mA – ≤ 80 mA	≤ 32 mA – ≤ 120 mA	≤ 64 mA – ≤ 240 mA
Programming Accuracy [1]				
Voltage	0.03% + 24 mV – 0.03% + 240 mV			
Current 0.1% +	8 mA – 40 mA	16 mA – 80 mA	24 mA – 120 mA	48 mA – 240 mA
Readback Accuracy [1]				
Voltage	0.03% + 24 mV – 0.03% + 240 mV			
Current 0.1% +	8 mA – 60 mA	16 mA – 120 mA	24 mA – 200 mA	48 mA – 380 mA
Programming Resolution				
Voltage	1 mV – 10 mV	1 mV – 10 mV	1 mV – 10 mV	1 mV – 10 mV
Current	1 mA – 10 mA	1 mA – 10 mA	1 mA – 10 mA	10 mA
Line Regulation				
Voltage	≤ 16 mV – ≤ 160 mV			
Current	≤ 4.8 mA – ≤ 24 mA	≤ 9.6 mA – ≤ 48 mA	≤ 14.4 mA – ≤ 72 mA	≤ 28.8 mA – ≤ 144 mA
Typical Characteristics				
Command processing time	≤ 0.1 ms			

1. Percent of value + offset; at 23 °C ± 5 °C after a 30-minute warm-up; measurement NPLC=1; valid for 1 year.

More Information: www.keysight.com/find/EL4900

High Density, High Performance

Power that adapts to every test

- Return absorbed energy to the grid cleanly (regenerative design with ~95% efficiency)
- Multiple operating modes: (CV, CC, CR, CP, plus combinations)
- Voltage options: 80 V, 500 V, 800 V
- Power range: 2 kW — 12 kW, scalable to 16 parallel units
- Stackable parallel connections for higher total sinking current

Smarter tools for deeper insights

- Built-in waveform generation for battery testing
- Averaged and digitized measurement modes
- Amp-hour and watt-hour calculations
- PathWave software applications for analysis, control, and emulation

Safety and simplicity built-in

- Overvoltage, overcurrent, overpower, and overtemperature safeguards
- Fast hardware-level protection response
- Compact 1U and 2U rack designs
- Dedicated rack-mount kits
- Standard LAN, USB, CAN; optional GPIB and RS-232
- Built-in web interface for remote control

Accessories

Part Number	Description
PW9252A	PathWave Advanced Power Control and Analysis application
RP5901C	GPIB interface board for EL4900 Series DC loads and RP5900 Series supplies
RP5902C	Analog / RS232 interface board for EL4900 Series DC loads and RP5900 Series supplies
RP5903C	Parallel kit — Fiber optics cable and transmitter module
RP5904C	Rack-mount kit 1U for EL4900 Series DC loads and RP5900 Series supplies
RP5905C	Rack-mount kit 2U for EL4900 Series DC loads and RP5900 Series supplies

For More Information

For more information on the Keysight EL4900 Series regenerative DC electronic loads, please visit:
www.keysight.com/find/EL4900

To find a distributor in your area, visit:
www.keysight.com/find/distributors