

Keysight BE-3 Class Battery Emulator with Battery Profiler Software

Quickly Optimize Your Device for Better Battery

The E36731A Battery Emulator supports native two-quadrant operation, enabling both source and sink functionality in a single instrument. Combined with Keysight BV9211B Pathwave BenchVue advanced battery emulation software, users can profile batteries, perform battery emulation, analyze battery drain at different charge levels and optimize battery life. The software can also create a custom charging and discharging sequence and run battery cycling tests to evaluate battery aging and reliability.



E36731A Battery Emulator with Native Two-Quadrant Operation and BV9211B Software Support

Model/Option	Description
E36731A	Battery Emulator
BV9211B	PathWave BenchVue Advanced Battery Test and Emulation Software for Single Instrument
BV9210B	PathWave BenchVue Advanced Battery Test and Emulation Software for Four Instrument
EL34GPBU	GPIO user installable interface module
SEC	NISPOM and file security
UK6	Commercial calibration with test result data

E36731A

DC Power Supply Output Rating		
Power		200W
Voltage		0 to 30 V
Current		0 to 20 A
Programming accuracy $\pm$ (% of output + offset) at 23 °C $\pm$ 5 °C for 12 months.		
Voltage		0.025% + 1.5 mV
Current		0.035% + 1.5 mA
Readback accuracy $\pm$ (% of output + offset) at 23 °C $\pm$ 5 °C for 12 months.		
Voltage		0.025% + 1.5 mV
Current	Low, 0.1 A	0.035% + 10 μ A
	Mid, 2 A	0.03% + 300 μ A
	High, 20 A	0.05% + 250 μ A
Electronic Load Input Rating		
Power		250W
Voltage		0 to 60 V
Current		0 to 40 A
Programming accuracy $\pm$ (% of output + offset) at 23 °C $\pm$ 5 °C for 12 months.		
Constant current mode	Low, 4 A	0.05% + 820 μ A
	High, 40 A	0.05% + 7.2 mA
Constant voltage mode	Low, 15 V	0.03% + 4.2 mV
	High, 60 V	0.03% + 15 mV
Constant power mode	Low, 0.08 Ω to 30 Ω	0.1% + 160 mS
	Mid, 10 Ω to 1.25 k Ω	0.1% + 16 mS
	High, 100 Ω to 4 k Ω	0.1% + 1.8 mS
Constant power mode	Low, 0.02 W to 5 W	0.08% + 18 mW
	Mid, 0.15 W to 25 W	0.08% + 150 mW
	High, 1.5 W to 250 W	0.08% + 1.5 W
Readback accuracy $\pm$ (% of output + offset) at 23 °C $\pm$ 5 °C for 12 months.		
Current	Low, 4 A	0.05% + 820 μ A
	High, 40 A	0.05% + 7.2 mA
Voltage	Low, 15 V	0.03% + 4.2 mV
	High, 60 V	0.03% + 15 mV
Power	Low, 0.02 W to 5 W	0.08% + 18 mW
	Mid, 0.15 W to 25 W	0.08% + 150 mW
	High, 1.5 W to 250 W	0.08% + 1.2 W

More Information: www.keysight.com/find/E36731A

Key Values

Battery Profiling, Emulation, and Cycling with BV9211B/BV9210B Software

- Power up to 200W, 30V, 20A
- Profile batteries through charge/discharge to create a unique battery model
- Emulate charge states to reduce test time, improve safety, and test repeatability
- Charge/discharge batteries to determine the capacity visually
- Cycle batteries to determine loss of capacity and reduction of battery life

Native Two-Quadrant Source and Sink Operation

Power supply function

- 200W, 30V, 20A
- Autoranging
- Datalogging
- LIST function
- Voltage slew control

Electronic load function

- 250W, 60V, 40A
- CC, CV, CR, CP
- Scope function
- Datalogging
- LIST function

Convenient Benchtop Capabilities and Intuitive Interfaces

- Front output terminal, including sense and ground
- 4.3-inch LCD color display
- Individual knobs for voltage and current
- LAN/LXI, USB, and GPIB (requires EL34GPBU upgrade option) interfaces



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|--|--------------------------------------|-------------------------------|
| 1. 4.3-inch LCD color display | 9. On/standby key and LED indicator | 17. Digital I/O terminal port |
| 2. Voltage and current knobs | 10. Output on/off key | 18. Fan ventilation hole |
| 3. Meter view, list run/stop, and scope/datalog keys | 11. Softkeys | 19. Sense terminals (rear) |
| 4. Navigation keys | 12. USB port | 20. Kensington security slot |
| 5. Numeric keypad | 13. AC inlet | 21. Output terminals (rear) |
| 6. Detachable binding post for output terminals | 14. GPIB port (Option EL34GPBU only) | 22. Power supply function |
| 7. Sense terminal | 15. USB port (rear) | 23. Electronic load function |
| 8. Earth ground reference | 16. LAN port | |

Learn more at: www.keysight.com/find/E36731A

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.