



Elektro-Automatik



## EL 3000 B

### Programmable Electronic DC Loads | 400 W

**Multilingual Color Display:** Provides an intuitive interface with support for multiple languages, enhancing user experience.

**Integrated Function Generator:** Offers standard waveforms and full configurability for complex testing scenarios.

**Adjustable Protections:** Includes overvoltage (OVP), overcurrent (OCP), and overpower (OPP) protections to ensure safe operation.

**Multiple Operation Modes:** Supports CV, CC, CP, and CR modes, accommodating a wide range of testing requirements.

**Optional Pluggable Interfaces:** Allows for easy integration of USB, Ethernet, and analog interfaces, facilitating remote control and connectivity.

# EA-EL 3000 B 400 W

Programmable Electronic DC Load



## General

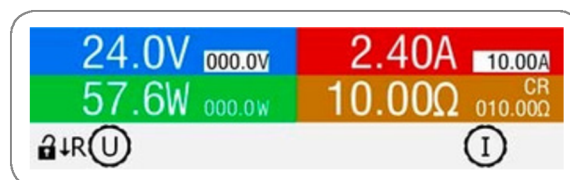
The EA-EL 3000 B Series represents the second generation of compact electronic DC loads, offering a powerful 400 W capability. Introduced in 2017, these loads are tailored for daily use in laboratories, schools, and workshops, meeting a wide range of testing and development needs. Featuring constant voltage (CV), constant current (CC), constant power (CP), and constant resistance (CR) modes, the series ensures flexibility for diverse applications. With a fast microprocessor, intuitive human-machine interface (HMI), and robust connectivity options, the EA-EL 3000 B Series provides unparalleled performance and reliability.

## Power Ratings, Voltages, Currents

The EA-EL 3000 B Series offers a steady power output of 400 W, with models supporting voltage ranges of 0–80 V DC, 0–200 V DC, and 0–500 V DC. Input currents range from 0–10 A to 0–60 A, providing users with versatile solutions for testing and validation of low to high-power devices. This ensures compatibility with a wide spectrum of operational requirements, making it a reliable choice for professionals.

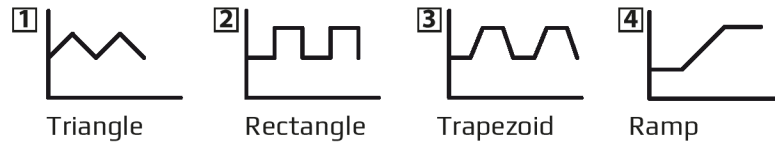
## Handling (HMI)

User interaction is simplified with a high-resolution color display, two rotary knobs, and six pushbuttons. The multilingual interface supports German, English, Russian, and Chinese, ensuring accessibility for global users. This intuitive design enables seamless control of device settings, visualization of real-time parameters, and configuration of advanced functions, all with exceptional clarity and ease.



## Function Generator

The integrated function generator offers a comprehensive range of standard waveforms, including triangle, rectangle, trapezoid, and ramp. These waveforms can be applied to either the input voltage or current, enabling complex testing scenarios without additional equipment. Users can configure and control the generator through the front panel or via digital interfaces, ensuring maximum flexibility and usability.



## Battery Test

For battery-related testing, the EA-EL 3000 B Series includes a dedicated battery test mode, which records metrics such as elapsed testing time, capacity (Ah), and energy (Wh). Data can be exported in CSV format for analysis in Excel or similar tools. Adjustable thresholds and test periods allow for precise evaluation of battery performance, providing critical insights for development and optimization.

## MPP Tracking

The EA-EL 3000 B Series features Maximum Power Point (MPP) tracking for photovoltaic systems, with four modes simulating the typical characteristics of solar inverters. The tracking function measures UMPP, IMPP, and PMPP values, offering detailed analysis of photovoltaic performance under varying conditions. This makes the series an ideal solution for renewable energy applications.

## Remote Control and Connectivity

Equipped with robust connectivity options, the EA-EL 3000 B Series supports USB, Ethernet, and optional analog interfaces. The included "EA Power Control" software provides advanced features such as sequencing, enabling semi-automated testing via CSV import. For larger setups, the optional "Multi Control" software allows users to manage up to 20 units simultaneously, enhancing scalability and operational efficiency.

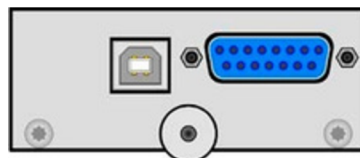


## Options

Expand the capabilities of the EA-EL 3000 B Series with pluggable, retrofittable interface cards. Available options include USB, USB + Ethernet, and USB + Analog configurations, providing seamless integration into existing setups. These accessories ensure compatibility with diverse systems and enhance the series' adaptability to specialized requirements.



USB

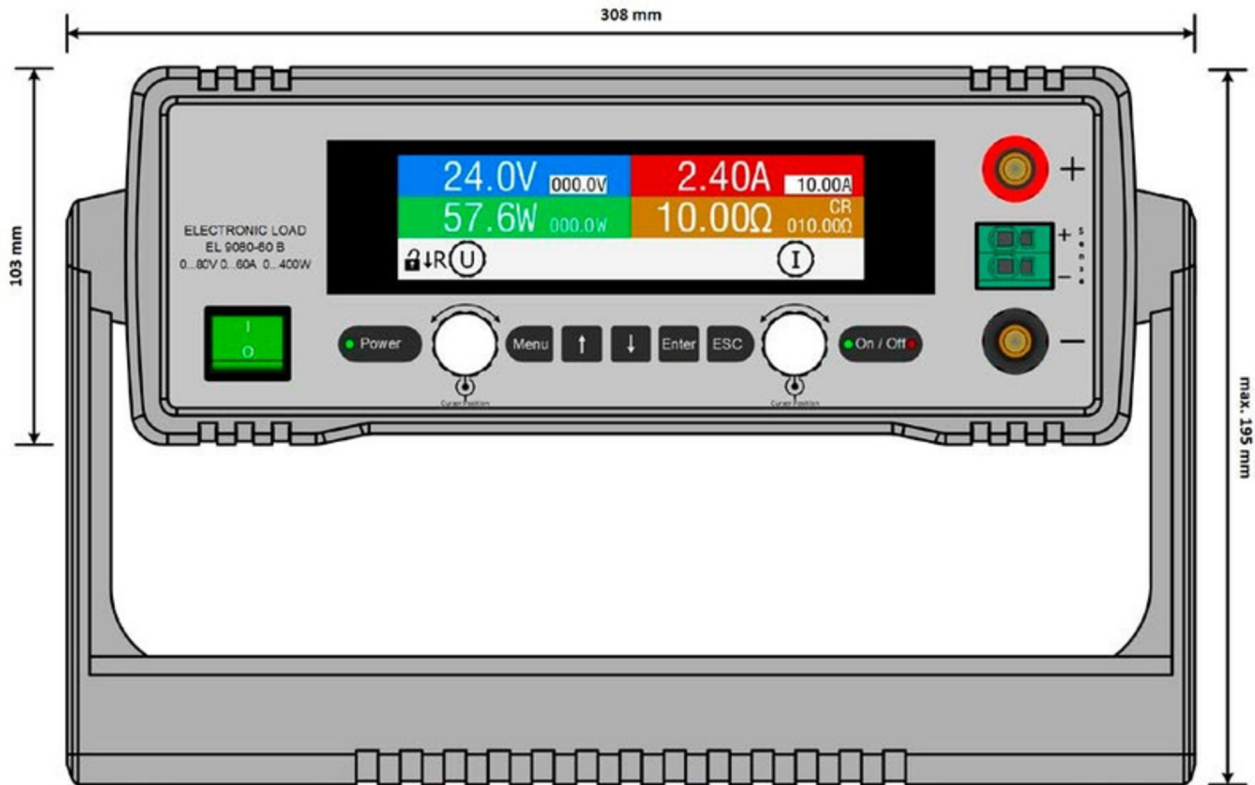


USB+Analog

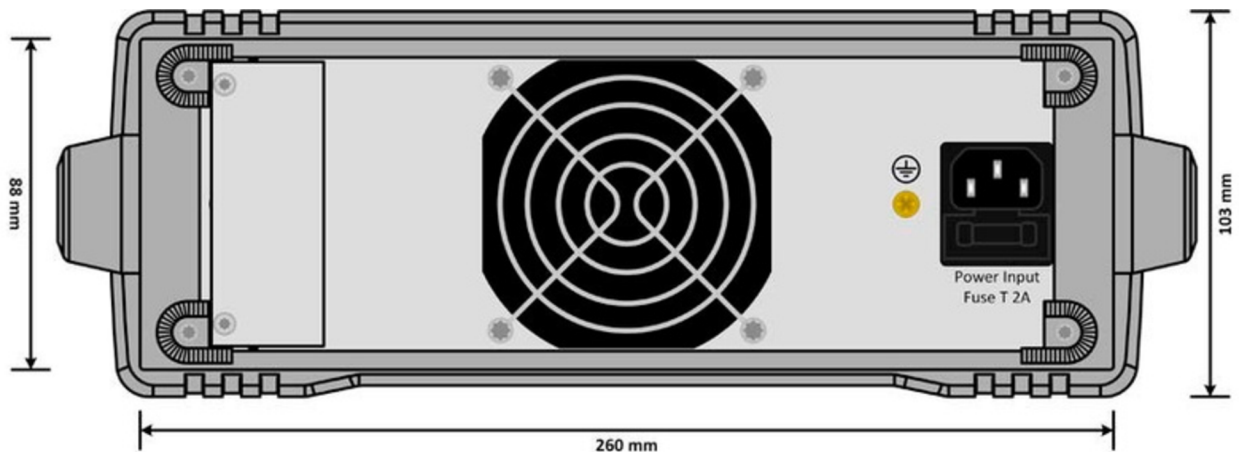


USB+Ethernet

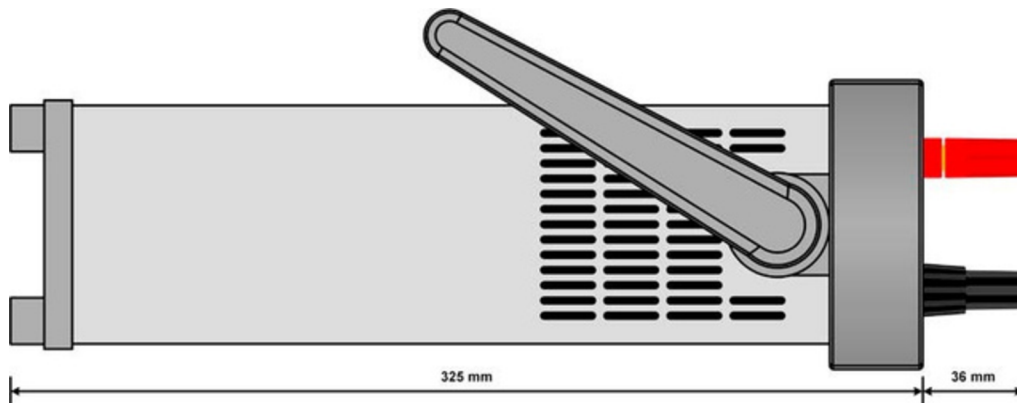
# Product Views



Front view with tilt stand in vertical position



Rear view without interface installed



Side view (160/320 W models)

# Technical Data

## AC Supply

- Voltage: 90...264 V
- Frequency: 45...66 Hz
- Power consumption: max. 40 W

## DC Voltage

- Accuracy: <0.1% of rated value

## DC Current

- Accuracy:  $\leq 0.2\%$  of rated value
- Load regulation 1-100%  $\Delta IUC$ :  $\leq 0.1\%$  of rated value

## DC Power

- Accuracy:  $\leq 1\%$  of rated value

## DC-Resistance

- Accuracy:  $\leq 1\%$  of max. resistance + 0.3% of rated current

## Display / Control Panel

- TFT display, key strip, rotary knobs

## Digital Interfaces (optional)

- Available models:
  - IF-KE5 USB: 1x USB Typ B
  - IF-KE5 USBLAN: 1x USB Typ B + 1x Ethernet (RJ45)

## Analog interface (optional)

- Available models:
  - IF-KE5 USBANALOG: 1x Analog (D-Sub 15) + 1x USB Typ B
- Signal range: 0...5 V or 0...10 V (switchable)
- Inputs: U, I, P, R, remote control on-off, DC input on-off, resistance mode on-off
- Outputs: U, I, overvoltage, alarms, reference voltage
- Accuracy U / I / P / R:
  - 0...10 V:  $\leq 0.2\%$
  - 0...5 V:  $\leq 0.4\%$

## Cooling

- Temperature controlled fan

**Operation temperature: 0...50 °C**

**Storage temperature: -20...70 °C**

## Mechanics

- Dimensions (W x H x D):
  - 308 x 103 x 325 mm (12.1" x 4" x 12.8")
- Weight:
  - 4 kg (8.8 lb)

## Available Models

Model	Steady Power	Voltage	Current	Resistance	U_min for I_max
EA-EL 3080-60 B	0...400 W	0...80 V	0...60 A	0.12...40 $\Omega$	$\approx 2.6$ V
EA-EL 3200-25 B	0...400 W	0...200 V	0...25 A	1...340 $\Omega$	$\approx 1.9$ V
EA-EL 3500-10 B	0...400 W	0...500 V	0...10 A	6...2000 $\Omega$	$\approx 4.7$ V

**W5 Engineering**  
**Phone:** (971) 244-8200  
**Email:** [help@W5engineering.com](mailto:help@W5engineering.com)  
[www.W5engineering.com/eapowered](http://www.W5engineering.com/eapowered)

**EA Elektro-Automatik Inc.**  
9845 Via Pasar  
San Diego, CA 92126 USA

