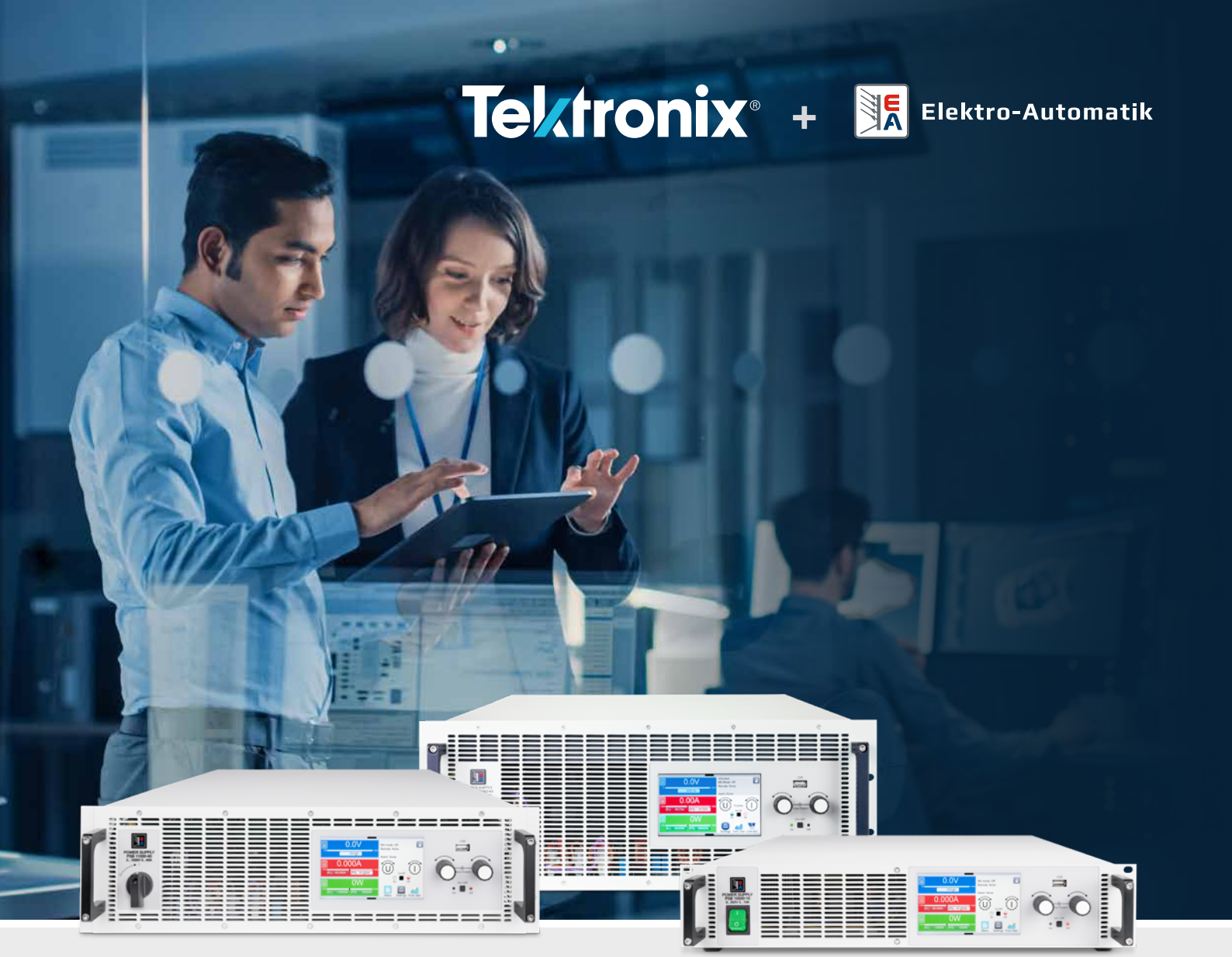
Tektronix® + Elektro-Automatik



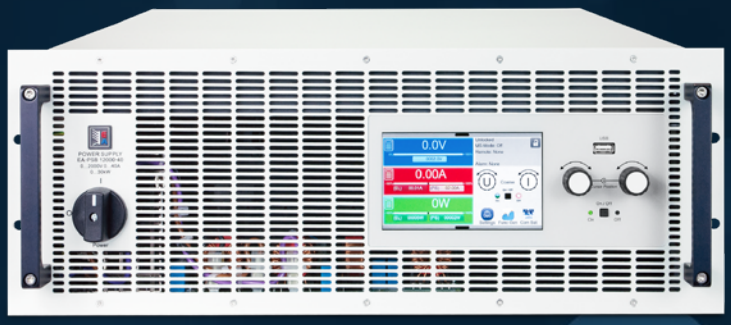
AUTOMOTIVE | RAILWAY TECHNOLOGY | AVIONICS | MARINE & OFFSHORE | AUTOMATIC TESTING EQUIPMENT | BATTERY | FUEL CELL | RENEWABLE ENERGY | MANUFACTURING AND PROCESS INDUSTRY

YES TO EA-10000 Series

Wide range of DC power supplies and electronic loads

The EA-10000 Series

The most versatile range of bidirectional power supplies (PSB), programmable laboratory power supplies (PSI, PS) and electronic loads (ELR) with regenerative mains feedback with common fittings and operation.



EA-10000 4U Series

The flagship unit, 10000 4U is, in this form and performance range, the market leader. With 30 kW power all models are available either air or water cooled. Thus, they are available for operation in hostile conditions. With a factor of 3.83 our 920 V 125 A model, which was specially developed for automotive applications (800 V powertrain), offers the widest autoranging range. Thus, with a single device, multiple applications can be covered, saving costs. With the best efficiency in the market no energy is wasted in unnecessary heat generation and hence contributes to CO_2 reduction.

Power Supply Bidirectional	**EA-PSB 10000 4U**
Power Supply	**EA-PSI 10000 4U**
Power Supply	**EA-PS 10000 4U**
Electronic Load Regenerative	**EA-ELR 10000 4U**

Model	Voltage	Current	Power
10010-1000*	0 – 10 V	0 – 1000 A	0 – 10000 W
10060-1000	0 – 60 V	0 – 1000 A	0 – 30000 W
10080-1000	0 – 80 V	0 – 1000 A	0 – 30000 W
10200-420	0 – 200 V	0 – 420 A	0 – 30000 W
10360-240	0 – 360 V	0 – 240 A	0 – 30000 W
10500-180	0 – 500 V	0 – 180 A	0 – 30000 W
10750-120	0 – 750 V	0 – 120 A	0 – 30000 W
10920-125	0 – 920 V	0 – 125 A	0 – 30000 W
11000-80	0 – 1000 V	0 – 80 A	0 – 30000 W
11500-60	0 – 1500 V	0 – 60 A	0 – 30000 W
12000-40	0 – 2000 V	0 – 40 A	0 – 30000 W

* Only available as a bidirectional device (EA-PSB 10000)

Features

- Uniform device series across all power classes
- Nominal power 10000 4U with 30 kW
- AC mains input with extended range (208 V – 480 V, 3 ph AC)
- DC input / output with autoranging
- Digital (FPGA) controlled DC input / output U – I – P – R
- Colour 5“ TFT Touchscreen display
- Common intuitive user interface
- Built-in interfaces: Ethernet, USB, Analog
- Optional interfaces: CAN, CANopen, RS232, Profibus, Profinet, Modbus, Ethercat, Ethernet
- USB-Host for LUT, logging, sequencing
- Galvanically isolated Share-Bus for all power classes
- Master-Auxiliary bus for up to 64 participating devices of Series 10000
- Integrated function generator: with predefined curves
- Predefined functions for LV123, LV124 and LV148
- Battery test mode, battery and fuel cell simulation
- PV test mode, MPP tracking, EN50530
- Command languages: SCPI and ModBus
- VI driver, IVI driver, control software for Windows
- Optional stainless steel water cooling

EA-10000 3U Series

Our series 10000 3U offers the established devices with 5 kW, 10 kW and 15 kW power in a new dimension. The AC variable input range of 3 phase 208 V to 480 V for global use is achieved with the latest SiC technology. Efficiency of up to 96% make these devices highly economic. These devices can be expanded with a 2000 V DC variant for applications in e.g., the PV industry. Thanks to the new intelligent Master-Auxiliary bus all power classes with the same output voltage can be combined (2U, 3U and 4U). Thus, a system can be exactly configured to meet your performance needs.

Power Supply Bidirectional	**EA-PSB 10000 3U**
Power Supply	**EA-PSI 10000 3U**
Power Supply	**EA-PS 10000 3U**
Electronic Load Regenerative	**EA-ELR 10000 3U**

Model	Voltage	Current	Power
10010-510*	0 – 10 V	0 – 510 A	0 – 5100 W
10060-510	0 – 60 V	0 – 510 A	0 – 15000 W
10080-510	0 – 80 V	0 – 510 A	0 – 15000 W
10200-210	0 – 200 V	0 – 210 A	0 – 15000 W
10360-120	0 – 360 V	0 – 120 A	0 – 15000 W
10500-90	0 – 500 V	0 – 90 A	0 – 15000 W
10750-60	0 – 750 V	0 – 60 A	0 – 15000 W
11000-40	0 – 1000 V	0 – 40 A	0 – 15000 W
11500-30	0 – 1500 V	0 – 30 A	0 – 15000 W
12000-20	0 – 2000 V	0 – 20 A	0 – 15000 W

* Only available as a bidirectional device (EA-PSB 10000)

The table shows the 15 kW models. 5 kW and 10 kW models are also available, please see series datasheets.

Features

- Uniform device series across all power classes
- Nominal power 10000 3U with 5 kW, 10 kW and 15 kW
- AC mains input with extended range (208 V – 480 V, 3 ph AC)
- DC input / output with autoranging
- Digital (FPGA) controlled DC input / output U – I – P – R
- Colour 5“ TFT Touchscreen display
- Common intuitive user interface
- Built-in interfaces: Ethernet, USB, Analog
- Optional interfaces: CAN, CANopen, RS232, Profibus, Profinet, Modbus, Ethercat, Ethernet
- USB-Host for LUT, logging, sequencing
- Galvanically isolated Share-Bus for all power classes
- Master-Auxiliary bus for up to 64 participating devices of Series 10000
- Integrated function generator: with predefined curves
- Predefined functions for LV123, LV124 and LV148
- Battery test mode, battery and fuel cell simulation
- PV test mode, MPP tracking, EN50530
- Command languages: SCPI and ModBus
- VI driver, IVI driver, control software for Windows

EA-10000 2U Series

With the series 10000 2U has expanded its product portfolio for applications needing less power but still high flexibility. Starting with 3 kW uni- and bidirectional devices are available, as laboratory power supply, electronic load with power feedback and as a bidirectional power supply.

All devices are programmable via analogue and digital interfaces as well as via the 5" TFT touch display. They offer the same configuration and functionality as those in this series with higher power.

Power Supply Bidirectional	**EA-PSB 10000 2U**
Power Supply	**EA-PSI 10000 2U**
Power Supply	**EA-PS 10000 2U**
Electronic Load Regenerative	**EA-ELR 10000 2U**

Model	Voltage	Current	Power
10010-60*	0 – 10 V	0 – 60 A	0 – 600 W
10060-60	0 – 60 V	0 – 60 A	0 – 1500 W
10080-60	0 – 80 V	0 – 60 A	0 – 1500 W
10200-25	0 – 200 V	0 – 25 A	0 – 1500 W
10360-15	0 – 360 V	0 – 15 A	0 – 1500 W
10500-10	0 – 500 V	0 – 10 A	0 – 1500 W
10750-06	0 – 750 V	0 – 6 A	0 – 1500 W
10010-120*	0 – 10 V	0 – 120 A	0 – 1200 W
10060-120	0 – 60 V	0 – 120 A	0 – 3000 W
10080-120	0 – 80 V	0 – 120 A	0 – 3000 W
10200-50	0 – 200 V	0 – 50 A	0 – 3000 W
10360-30	0 – 360 V	0 – 30 A	0 – 3000 W
10500-20	0 – 500 V	0 – 20 A	0 – 3000 W
10750-12	0 – 750 V	0 – 12 A	0 – 3000 W
11000-10	0 – 1000 V	0 – 10 A	0 – 3000 W
11500-06	0 – 1500 V	0 – 6 A	0 – 3000 W

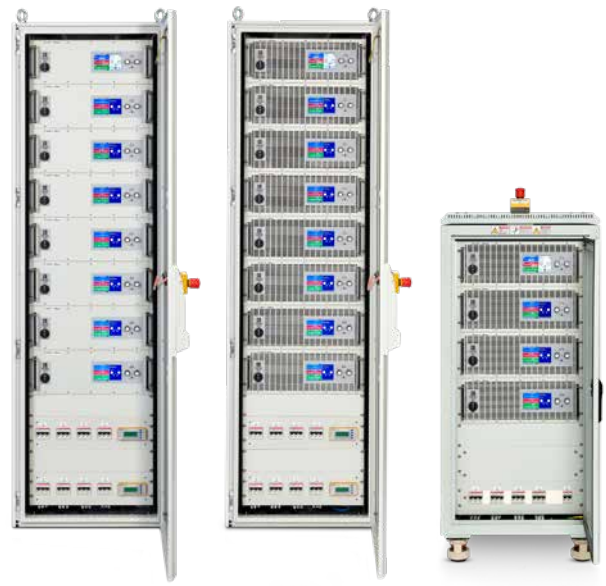
* Only available as a bidirectional device (EA-PSB 10000)

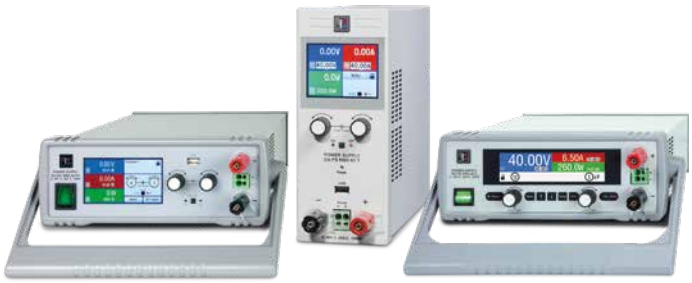
Features

- Uniform device series across all power classes
- Nominal power 10000 2U with 1.5 kW and 3 kW
- AC mains input with extended range (110 V – 240 V AC)
- DC input / output with autoranging
- Digital (FPGA) controlled DC input / output U – I – P – R
- Colour 5" TFT Touchscreen display
- Common intuitive user interface
- Built-in interfaces: Ethernet, USB, Analog
- Optional interfaces: CAN, CANopen, RS232, Profibus, Profinet, Modbus, Ethercat, Ethernet
- USB-Host for LUT, logging, sequencing
- Galvanically isolated Share-Bus for all power classes
- Master-Auxiliary bus for up to 64 participating devices of Series 10000
- Integrated function generator: with predefined curves
- Predefined functions for LV123, LV124 and LV148
- Battery test mode, battery and fuel cell simulation
- PV test mode, MPP tracking, EN50530
- Command languages: SCPI and ModBus
- VI driver, IVI driver, control software for Windows

EA Power Racks

- 19” cabinet system with up to 1.92 MW
- Systems with programmable laboratory power supplies, electronic loads with energy recovering and bidirectional laboratory power supplies
- Optionally available:
  Fast stop (machine standards EN60204-1)
  Grid monitor (ENS) and insulation monitor
  Stainless steel water cooling
  Copper busbar for DC output
- Special construction for various applications



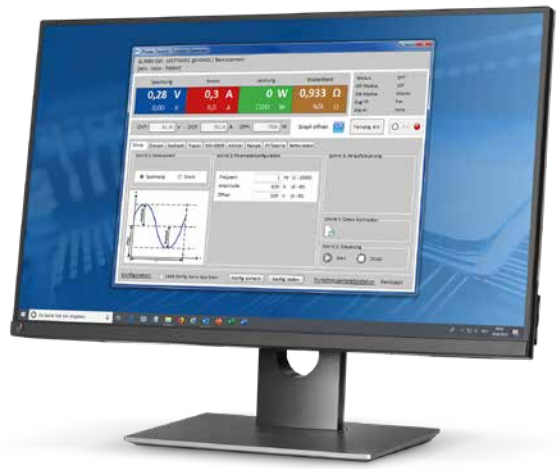


Space saving bench devices

- Programmable laboratory power supplies
- Programmable electronic loads
- Nominal power up to 1500 W
- Colour TFT touchscreen display
- Intuitive user interface
- Available connections: Ethernet, USB, and analog

Interfaces, ports / software

- **Extensive portfolio of interfaces:**
  Analog, USB, CAN, CANopen, DeviceNet, RS232, EtherCAT, Ethernet 1 and 2 port, Profinet 1 and 2 port, Modbus 1 and 2 port, Profibus, USB-Host
- **Operating software EA-Power Control:**
  Monitor and control up to 20 devices simultaneously. Set and actual values in one graphic
- **Software EA-Battery Simulator:**
  Simulates Li-Ion and lead batteries



Leading-edge power electronics made by EA

Wide application spectrum. Technological excellence. Global customer reach.

The EA Elektro-Automatik Group is Europe's leading supplier in the area of power electronics for R & D and industrial applications. At the headquarters in Germany in the industrial center of North Rhine-Westphalia, 450 qualified associates, in a facility of 19000 m², research, develop and manufacture high-tech devices such as programmable power supplies, high-power supplies and electronic loads with and without mains feedback.

Development partner in forward looking sectors

With high performance criteria and a broad application spectrum, EA has established itself as the development partner in forward looking industries. Thus, EA equipment is being used in battery and fuel cell technology. It is used in wind and solar energy, electrochemicals, process technology, telecommunications, automobile industry and many more future orientated sectors.

Automated quality assurance

Results and experience from decades of R & D flow continually into new solutions. Automatic test systems with specially developed soft- and hardware assure consistently high product quality. Flexible production processes support fast reaction to changing customer requirements.

Global customer reach, value sharing

As a globally active company, EA maintains close contact with national and international customers and partners. The sales network includes branches in China, USA and Singapore, a sales office in Spain and an extensive service and partner network. EA continues to expand and, as a mid-size employer, takes full responsibility for development and production in Germany. Value based joint working is characterised by mutual respect and open communication.

Technological excellence is driving innovation of tomorrow

The foundation of the company in 1974 was based on innovation, a tradition which is maintained today. What started with the development of simple mains adaptors is continued today in the overall concept of technology leadership. With highly specialised power supply systems for a multitude of applications, EA is driving the future of power electronics – technologically excellent for high performance and designed for resource protection and energy saving.