

# Professional Power Supplies

Schulz-Electronic is your specialist  
for professional power supplies.

# Solution provider and development partner

Schulz-Electronic is a solution provider and development partner for professional power supplies. Whether laboratory power supplies or battery simulation – all leading manufacturers' brands are represented in the extensive product range. In addition, Schulz-Electronic develops highly complex special solutions and complete systems from batch size one. Schulz-Electronic supplies devices, assemblies, and components for the automotive industry, the solar and photonics industry, research and development institutions, the aerospace industry, and the railway sector.



# Excerpt from our portfolio

AC grid simulation   **Customized rack solutions**  
Mobile source-sink systems  
**Laboratory power supplies**   Electronic loads  
High-voltage   **Battery simulation**   Battery testing  
Fuel cell testing   Cell testing  
PV simulation   **DC grid simulation**  
DC/DC converters   Pulse generators  
Laser diode drivers



# Powerful partners for industrial power supplies

Schulz-Electronic is your specialist for industrial power supplies. Our goal is to provide you with a wide range of high-performance manufacturers for your projects. Through strong partnerships with numerous leading manufacturers, we enable you to select exactly the components that meet your needs most suitable. Due to our broad portfolio of manufacturers for industrial power supplies, Schulz-Electronic offers you a high degree of flexibility and delivery reliability, minimizing production downtimes and delivery delays.





High-quality AC/DC switched-mode power supplies and programmable power supplies for top-hat rail or wall mounting



Leading manufacturer of high-quality DC power supplies



Specialist in the development and production of electronic loads



Wide range of power testing solutions such as programmable DC power supplies



Solutions in the field of high-power simulators, such as battery simulation, battery test systems (cell, module, pack), and fuel cells



Modular high-performance DC and AC power supplies with application-specific features



AC/DC power supplies of outstanding quality



High-voltage DC power supplies: Powerful and safe DC power supplies for global industries



Modern programmable AC sources

# DC power supplies

## Highly accurate. Programmable. Bidirectional.

- ▶ Voltages up to 3,000 VDC
- ▶ Currents up to 3,000 A
- ▶ Power > 1 MW
- ▶ For laboratories, top-hat rails, and as a high-voltage source
- ▶ Control via simulation software
- ▶ High voltage up to 350 kV, 500 kW
- ▶ Bidirectional feed-back systems up to 1 MW
- ▶ 4Q voltage and current amplifiers
- ▶ DC/DC converters up to 2 kW

## APPLICATIONS (examples)

- ▶ Simulation of solar panels
- ▶ On-board power supply simulation with grid feed-back
- ▶ Cycling of battery cells, modules, and packs
- ▶ Tests of high-voltage IGBTs



Battery simulator/battery tester  
e.g. G5.RSS from Regatron



High-precision DC source (bidirectional)  
e.g. SM15K series from Delta Elektronik



Laboratory power supply  
e.g. Genesys+ from TDK Lambda



4Q amplifier  
e.g. QL series from Höcherl & Hackl



Bidirectional DC power supply  
e.g. IT6600 from ITECH



High-voltage power supply  
e.g. SR series from Technix



Battery cell tester  
e.g. B2000 from Kewell



# AC sources

## Programmable. Flexible. Regenerative.

- ▶ Voltages up to 1,240 VAC L-N Currents
- ▶ up to 1,100 A
- ▶ Power ratings up to 50 kVA per module (cascadable to several MVA)
- ▶ 1- or 3-phase model

## APPLICATIONS (examples)

- ▶ Development and testing of onboard chargers and inverters
- ▶ Testing of “white goods”
- ▶ AC grid emulation and simulation of complex grids



AC source with mains feedback  
e.g. TC.ACS series from Regatron



AC source, single-phase  
e.g. AFV-P series from Preen



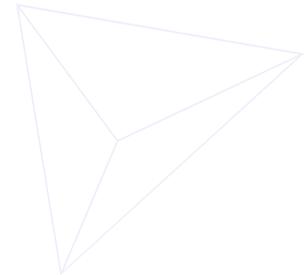
Regenerative AC source  
e.g. IT7915P from ITECH



AC+DC source  
e.g. Genesys AC from TDK Lambda



AC source with mains feedback  
e.g. A2000 from Kewell



# Electronic loads

## Highly precise. Programmable. Regenerative.

- ▶ Voltages up to 1,200 VDC
- ▶ Currents up to 600 A
- ▶ Power ratings up to 128 kW
- ▶ Bidirectional power supply/feedback systems
- ▶ Control via simulation software
- ▶ Source-sink systems

### APPLICATIONS (examples)

- ▶ Lifetime testing of solar modules, including MPP tracking
- ▶ Testing of inverters
- ▶ Testing of hybrid drives and their components
- ▶ Test systems, including software and measurement data acquisition



Regenerative DC load  
e.g. G5.RLD series from Regatron



Regenerative DC load  
e.g. G5.RLD series from Regatron



Regenerative AC+DC load  
e.g. IT8200 from ITECH



Electronic multi-channel load  
e.g. PMLA series from Höcherl & Hackl



Regenerative DC load  
e.g. TRL series from Höcherl & Hackl



# Customized solutions

## MODIFICATION EXAMPLES

- ▶ Special front panel with customer logo
- ▶ Capacitor bank with safety circuit
- ▶ Connections and switches according to customer requirements
- ▶ AC and DC distribution boxes
- ▶ Internal resistance simulation  
0 - 500 m $\Omega$
- ▶ Fast-speed option for very fast curve sequences
- ▶ Power sink option for absorbing recovered energy



Customized front design



Capacitor bank

## RACK EXAMPLES

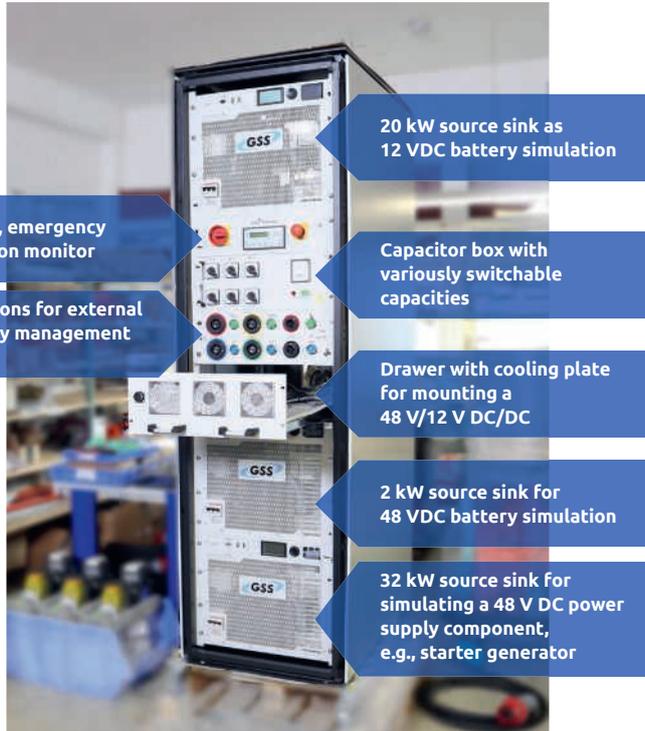
- ▶ Voltages up to 300 kV
- ▶ Currents up to 4,000 A
- ▶ Rack design according to customer specifications
- ▶ Installation of safety and monitoring systems
- ▶ Integration of discharge circuits up to 40 kW (also without system supply)
- ▶ Rack structures up to IP54 and wall housings up to IP64 possible
- ▶ Installation in special housings



## Safety control of the power supply for a test bench



## Setup of a test system for a 48 V/12 V DC/DC converter



## Step by step to the perfect rack

- 1 Development
- 2 Security level
- 3 Mechanical design
- 4 Manufacturing
- 5 Dual control principle
- 6 Transport
- 7 Support

**We plan, advise, build, deliver, and provide support.**

**Get in touch with us!**

We manufacture your customized rack system.

# Support & Service

## **What you consider essential is our standard: strategic consulting and forward-looking planning.**

As a customer of Schulz-Electronic, you benefit first and foremost from a team that is happy to advise you, show you possible solutions, develop them, and always be on your side – whether before the project starts (e.g., with test equipment), during the project (e.g., with on-site support), or afterwards (e.g. with maintenance services or an RMA system for fast repair processing).

- ▶ Competent advice before purchase & comprehensive support
- ▶ Repair service after purchase
- ▶ Commissioning
- ▶ On-site training
- ▶ Loan and replacement device service





**We're here to assist you –  
contact us anytime.**

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