Plating Rectifiers / DC Power Supplies

PULSE-REVERSE Power Supplies
Your benefits with plating electronic

**plating electronic – A FAMILY-RUN COMPANY AND A WORLD LEADER FOR DECADES**

- Technology leader in DC and Pulse power supplies
- Main concentration on individual customer solutions
- Meets the highest quality demands
- MADE IN GERMANY for global markets

![Karl Rieder](image)

Karl Rieder
General Manager
plating electronic GmbH

**SWITCH-MODE TECHNOLOGY**

With the use of efficient, high-frequency technology, switch-mode power supplies offer many advantages over conventional rectifiers based on output adjustment by motor control or thyristor technology. Switch-mode technology is a reliable, globally recognized and robust technology and is ideally suited for use in electroplating and industrial applications. The air or water-cooled DC and Pulse power supplies can also be easily integrated into a control system.

**DIGITAL CONTROL (DSP CONTROLLED)**

We utilize the most up to date technology and employ digital controls in our power supplies. Our devices are characterized by excellent control accuracy and extremely low ripple.

Quick and easy connection to control units or to current BUS interfaces is another advantage of the digital technology.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation inaccuracy &lt; 1% (1)</td>
<td>Better quality thanks to enhanced process sequence reproducibility.</td>
</tr>
<tr>
<td></td>
<td>Constant current and voltage regulation.</td>
</tr>
<tr>
<td>Ripple &lt; 1% (1)</td>
<td>Qualitative benefits in many plating processes.</td>
</tr>
<tr>
<td>Compact design</td>
<td>Low space requirement and therefore low power losses, because installation is possible directly at the treatment baths.</td>
</tr>
<tr>
<td>Power factor up to 0.99 (2)</td>
<td>Energy cost savings thanks to improved grid quality and reduced reactive power component.</td>
</tr>
<tr>
<td>Efficiency up to 95%</td>
<td>Low energy consumption leading to operating costs savings.</td>
</tr>
<tr>
<td>Parallel or serial connection</td>
<td>More flexibility thanks to easy multiplication of the performance range, in parallel or series.</td>
</tr>
</tbody>
</table>

1 For control range from 1%-100% and related to rated DC value.
2 Related to rated DC value
Air and Water Cooled Rectifiers

**Bench Top Rectifiers - POWER STATION up to 12 kW**

*Air cooled*

- **pe1018-2**
  - up to 750 W
  - up to 50 A
  - up to 30 V

- **pe1028**
  - up to 750 W
  - up to 60 A
  - up to 250 V

- **pe4383**
  - up to 6 kW
  - up to 300 A
  - up to 600 V

- **pe1058**
  - up to 12 kW
  - up to 600 A
  - up to 600 V

**DC Rectifiers - POWER STATION up to 48 kW**

*Air cooled*

- **pe3100-1**
  - up to 750 W
  - up to 50 A
  - up to 30 V

- **pe4606**
  - up to 6 kW
  - up to 300 A
  - up to 600 V

- **pe4606-2**
  - up to 12 kW
  - up to 600 A
  - up to 600 V

- **pe4606-3**
  - up to 24 kW
  - up to 1200 A
  - up to 600 V

- **pe4606-4**
  - up to 48 kW
  - up to 2400 A
  - up to 600 V

**DC Rectifiers - POWER STATION up to 40 kW**

*Water cooled*

- **pe4626-W**
  - up to 3 kW
  - up to 200 A
  - up to 30 V

- **pe4203-W**
  - up to 20 kW
  - up to 1200 A
  - up to 1000 V

- **pe4206-W**
  - up to 40 kW
  - up to 2000 A
  - up to 1000 V

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Are you interested in an easy and smart solution to install our DC rectifiers into a cabinet housing? Please contact us for further details on POWER STATION pe 7010-X, our customs tailored series with multiple outputs.
Cabinet Rectifiers - POWER STATION up to 200 kW

Air cooled

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Power</th>
<th>Current</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>pe5610</td>
<td>up to 90 kW</td>
<td>up to 6000 A</td>
<td>up to 600 V</td>
</tr>
<tr>
<td>pe5410-W</td>
<td>up to 110 kW</td>
<td>up to 5000 A</td>
<td>up to 1000 V</td>
</tr>
<tr>
<td>pe5910-W-X</td>
<td>up to 200 kW, up to 10,000 A, up to 1000 V</td>
<td>with optional integrated, electronic pole changer</td>
<td>pe5910-W-X with multiple outputs: up to 2x5000 A or 4x2000 A or 6x1000 A</td>
</tr>
</tbody>
</table>

Water cooled

The Output power can be individually increased by parallel or serial connection

Programmable Control Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pe280</td>
<td>multi-functional control unit</td>
</tr>
<tr>
<td>pe280</td>
<td>multi-functional control unit, flush panel mount control unit</td>
</tr>
<tr>
<td>pe8007</td>
<td>multi-functional control unit, 12” colour touch panel, with batch programming and process monitoring, data-logging</td>
</tr>
</tbody>
</table>

pe900 series Control Systems

Fieldbus interfaces
- CANopen
- CC-Link
- ControlNet
- DeviceNet
- Modbus-RTU
- Profinet-DP
- RS485

Ethernet version
- EtherCAT
- EtherNet/IP
- Modbus-TCP
- Profinet IO
- Profinet IRT

Additional accessory, as for example Pole changer, Digital/Analogue Converter, PC Software, Isolation Amplifier complete our manufacturing range. Please contact us for individual data-sheets.
PULSE-REVERSE Power Supplies

Air cooled

pe86CB series
Output power: max. 200 W
Effective and DC current: max. 10 A
Pulse current: max. 50 A
Effective voltage: max. 60 V

pe861 series
Output power: max. 6.36 kW
Effective and DC current: max. 318 A (2 x 159 A)
Pulse current: max. 720 A (2 x 360 A)
Effective voltage: max. 550 V

Water cooled

pe80CD series/pe86CWD series
Output power: max. 224 kW
Effective and DC current: max. 3392 A
Pulse current: max. 7680 A
Effective voltage: max. 800 V
Outputs: up to 16

Typical parameters

Switch mode technology
Complex waveforms
Regulation inaccuracy < 1% (relative to related DC value)
Ripple < 1% (relative to related DC value)
Constant current and voltage regulation
Fast rise and fall times (steep curve flanks)
Permanently short-circuit and open-circuit proof
Operating/programming via pe8005 control unit

Examples of pulse diagrams, schematic

Product characteristics, programmable control unit pe8005

Large, illuminated 5.7" graphic display
Clear and user-friendly guidance leading through structured pull-down menus
Controls from 1 to 16 outputs
Easy generation of complex waveforms, consisting of up to 16 steps
RS485 Bus Interface (optional: PROFIBUS, TCP/IP, Modbus)
Synchronization function
Ah-totalizer, dosage counter, timer, programmable START ramp, 2 configurable output relays, phase shifting
Parameters individually adjustable even during operation
Graphical visualization of set-values and real-time actual value curves (oscilloscope function)
Resolution: 100 mA, 0.02 mSec

The Output power range can be individually multiplied using parallel connection.
The individual outputs can be synchronised as required.
plating electronic – Your specialist for DC and Pulse power supplies

Since 1986 plating electronic has been one of the leading developers and manufacturers of compact and highly specialised DC and Pulse power supplies. Our power supplies and control systems, which are exactly tailored to the specific application profiles, are in use worldwide. Global service and on-site customer support are provided by our international subsidiaries and partners.

As a medium-sized enterprise, our focus is on the fast realisation of projects and maximum customer satisfaction. Whether compact standard unit in bench-top design, plug-in, as cabinet units or specially planned solutions for a specific customer need - every power supply is suitable for the highest day-to-day requirements and continues, of course, to be MADE IN GERMANY.

For detailed information about our partners please visit: www.plating.de

If you are interested in our range of High-Current Power Supplies or Power Supplies and Controllers for ANODIZING and Aluminium Colouring. Please contact us for detailed brochures about our programmes or visit: www.plating.de.