DC power supplies for anodizing applications

Latest switch-mode technology

Due to the use of high-frequency technology, switch power supply technology offers many advantages over conventional rectifiers based on electromechanical or thyristor technology. As a consequence of the proven, reliable, compact technology, switch-mode technologies are excellently suited to the demanding anodizing area.

Product specifications, water-cooled DC Power Supplies

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<tr>
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<th>Output Voltage</th>
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Optimally available: POWER STATION pe5910-AFE

Switch-mode power supplies are not limited to the basic function of converting the mains voltage to a required DC voltage. In combination with power semiconductor modules, they can be used for complex control, monitoring, and protection systems. In the case of plating systems, the use of switch-mode technology offers many advantages over conventional rectifiers.

You are interested in our range of Plating Rectifiers/DC Power Supplies, Pulse-Reverse Power Supplies or High-Current Power Supplies?

Please contact us for detailed brochures about our manufacturing programme or visit: www.plating.de.

pe Anodizing

Electroplating and PULSE-REVERSE 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 units 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.

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Fax +49 7641 93500-999 | info@plating.de | www.plating.de

plating electronic, Your specialist for Power Supplies and Control Units for anodizing and aluminium colouring processes

You are interested in our range of Plating Rectifiers/DC Power Supplies, Pulse-Reverse Power Supplies or High-Current Power Supplies? Please contact us for detailed brochures about our manufacturing programme or visit www.plating.de.
You define the colour and the process time! e.g. EURAS black (with normal concentration/metallic salt) in approx. 8 min.

Light colours:
Significantly shorten colouring times
Higher process reliability

Dark colours:
Skew long colouring times
Energy saving, productivity increase

We have proven AC pulse technology: pe Colour is the latest switch mode Power Supply technology with water cooling the ideal compact power supply for the anodizing process, as well as for electrophoretically colouring aluminium using the two-phase process AC or DC method. It is possible to increase the power output by parallel connection such that the pe! Colour series can cover a wide range of applications.

The combination peColour with our new universal Power Supply and a Colour Unit from plating electronic GmbH ensures uniform colouring results for the following processes:

• Anodizing in DC mode, e.g. in laboratories
• Modification of pore structure for interference colouring of aluminium
• Commercial Anodizing-Colour
• Colour series can cover a wide range of applications

Top quality Deep Black in less than 8 minutes!
During the construction of our Anodizing Plant we decided to use four Anodizing Power Supplies and a Colour Unit from plating electronic GmbH. I have never regretted the decision in the slightest. The dependable and competent pre-sale service, from installation to the start of series production, as well as the compact and reliable technology in this plant have totally impressed me and my staff.

"During the construction of our Anodizing Plant we decided to use four Anodizing Power Supplies and a Colour Unit from plating electronic GmbH. I have never regretted the decision in the slightest. The dependable and competent on-site service, from installation to the start of series production, as well as the compact and reliable technology in this plant have totally impressed me and my staff."
We prove AC pale technology:
pe Anodizing-Colour in the latest switch mode Power Supply technology with water cooling is the ideal compact power supply for the anodizing process, as well as for electrochemically colouring aluminium using the two-process AC or DC method. It is possible to increase the power output by parallel connection such that the pe8705 Colour series can cover a wide range of applications.

The combination pe705 and our easy to use control unit pe8705 offers you ease of operation for your process. Acid/Metal for instance the individually adjustable contact modes, the universal AC sinusoidal frequency and amplitude function, ensure high plant efficiency and optimized energy management. With the usage of this combination you can control the process and therefore define the colouring times and colour shades.

Top quality Deep Black in less than 8 minutes!
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I have never noticed the decision in the slightest. The dependable and competent on-site service, from installation to the start of series production, as well as the compact and reliable technology in this plant have totally impressed me and my staff.

• Significantly increase colouring times for light colours.
• Significantly shorter colouring times for dark colours.

In my many years of practical experience I have never obtained such good colouring results! Deep Black in less than 8 minutes, that is great! Due to the reduction in the colouring time by 30% - 40% for C-35 we save on our electricity energy costs, increase the load throughput with lower energy usage.

You define the colour and the process time!
pe Anodizing-Colour is the only device in the market which can be used for every process with both AC or DC/AC method.

• Colouring process AC- or DC/AC method / pe Anodizing-Colour

Energy saving, productivity increase
Higher process reliability

Colour series can cover a wide range of applications.

We have proven AC pale technology:
pe Anodizing-Colour in the latest switch mode Power Supply technology with water cooling is the ideal compact power supply for the anodizing process, as well as for electrochemically colouring aluminium using the two-process AC or DC method. It is possible to increase the power output by parallel connection such that the pe705 Colour series can cover a wide range of applications.

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• Colouring process AC- or DC/AC method / pe Anodizing-Colour

Energy saving, productivity increase
Higher process reliability

Colour series can cover a wide range of applications.
Integration in existing systems, data exchange, batch logging reduces colouring time C-35.

Three phase mains supply used, so no unbalanced mains load as with normal two-phase circuits.

Integration in automated control system via PROFIBUS.

Automatic adjustment for batch surface.

Excellent reproducibility of the colouring process.

The switch mode Power Supply technology in combination with the electronic GmbH ensures uniform colouring results for the following processes:

- Universal multi functioning power supply system
- Anodizing-colour

You have the advantage of better reproducibility, in particular for light colours.

As a result, we can significantly lengthen the short colouring times for dark colours.

Top quality Deep Black in less than 8 min!

During the construction of our Anodizing Plant we decided to use four Anodizing Power Supplies and a Colour Unit from plating electronic GmbH. I have never regretted the decision in the slightest. The dependable and competent on-site service, from installation to the start of production, was excellent. Thanks to the new universal Power Supply and Control System, we can shorten long colouring times and therefore significantly reduce our process costs.

We can blacken faster ...

What defines the colouring process in your works?

With our new universal Power Supply and Control System pe Anodizing-Colour you define the colouring times. Whether SIMOX C-35 or C-65 black, you define the process times and set your process. Thanks to our switch mode Power Supply technology and special, newly developed microprocessor technology, we are able to address and program universal universal power sources for the colouring process.

As a result, we can significantly lengthen the short colouring times for light colours.

You have the advantage of better reproducibility, in particular for light colours. The process diagram in the plant controller can be optimized.

In the case of dark colours, the anodizing capacity can be increased due to the shorter colouring times, for this means an increase of up to twice the load throughout with lower energy usage.

We have proven AC pulse technology:

- pe Colour in the latest switch mode Power Supply technology with water cooling is the ideal compact power supply for the anodizing area, as well as for electrolysing colouring aluminium using the two-phase process: AC or DC/DC method. It is possible to control the power output by parallel combination each of the pe Colour systems can cover a wide range of applications.

The combination pe Colour and plating electronic GmbH gives you ease of operation for your processes. A/D/Multi for instance the individually adjustable ramp range, the universal AC variable frequency and amplitude function, ensures high plant availability and optimized energy management. With the usage of this combination you can control the processes and therefore define the colouring times and colour shades.

We can shorten long colouring times.

Significantly increase colouring times for light colours.

Significantly shorter colouring times for dark colours.

Frequency and amplitude modification:

- Positive and negative sinusoidal AC voltage can be adjusted as required.
- Universal AC sinusoidal frequency and amplitude modification.


dc Colour

Product specification: pe280 anodizing / hard anodizing

Programmable controllers pe280 for anodizing, hard anodizing and titanium anodizing

Product specification: pe280 standard

Programmable controllers pe280 hard anodizing

Additional specification pe280 hard anodizing

Additional specification pe280 anodizing

You define the colours and colouring times with the aid of amplitude and frequency modification.

Frequency modification:

- Individual adjustment of the frequency within the range of 0 to 150 Hz.
- Selection of the amplitude and the frequency on the colouring times.

The process-oriented software ensures and optimizes the handling.

Your advantages: Compact, robust design / acid-resistant extra-time keyboard / navigation.
Electroplating and PULSE-REVERSE Power Supplies

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As a medium-sized enterprise, our focus is on the fast realisation of projects and maximum customer satisfaction. Whether compact standard units 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.

You are interested in our range of Plating Rectifiers/DC Power Supplies, Pulse-Reverse Power Supplies or High-Current Power Supplies? Please contact us for detailed brochures about our manufacturing programme or visit: www.plating.de.

DC power supplies for anodizing applications

Latest switch-mode technology

Due to the use of high-frequency technology, switch power supply technology offers many advantages over conventional rectifiers based on mechanical adjustment or thyristor technology. As a consequence of the proven, reliable, compact technology, switch mode systems are excellently suited to the demanding anodizing area.

Product specification, water-cooled DC Power Supplies

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Year advantages

- water cooling, IP54
- compact size
- high efficiency

Optionally available: POWER STATION pe5910-AFE

Water-cooled rectifier connected to the AC supply network, combines power peak power ratings of current and voltage

- Input: 1 phase
- Output: 1 phase
- rating: 3 kW
- General technical data: THDI < 3 %
- pictures: typical curve progression (depending on mains network)

Rectifier with integrated AFE technology reduces harmonic oscillations: THDI < 3 %.

Pictures: typical curve progression (depending on mains network)
we care for power

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Plating electronic – Your specialist for Power Supplies and Control Units for anodizing and aluminium colouring processes

Since 1048 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.

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Power Supplies and Controllers for ANODIZING and Aluminium colouring processes

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pe4206-W, max. 40 kW, max. 2000 A, max. 1000 V
Dimensions: 483 x 260 x 520 (W x H x D in mm)
Regulation error < 1%
Ripple < 1 % (related to rated DC value)
Efficiency typical 94% (AFE technology)
Digital regulation
Constant current or voltage regulation
Permanently short-circuit and open-circuit proof

pe5910-W, max. 200 kW, max. 10000 A, max. 1000 V
Dimensions: 800 x 2200 x 600 (W x H x D in mm)
Regulation error < 1%
Ripple < 1% (related to rated DC value)
Efficiency typical 94 % (AFE technology)
Digital regulation
Constant current or voltage regulation
Permanently short-circuit and open-circuit proof

pe3410-W, max. 100 kW, max. 500 A, max. 1000 V
Dimensions: 400 x 2200 x 600 (W x H x D in mm)
Regulation error < 1%
Ripple < 1 % (related to rated DC value)
Efficiency typical 94% (AFE technology)
Digital regulation
Constant current or voltage regulation
Permanently short-circuit and open-circuit proof

pe3203-W, max. 20 kW, max. 1000 A, max. 1000 V
Dimensions: 483 x 130 x 520 (W x H x D in mm)
Regulation error < 1%
Ripple < 1 % (related to rated DC value)
Efficiency typical 94% (AFE technology)
Digital regulation
Constant current or voltage regulation
Permanently short-circuit and open-circuit proof

pe5910-AFE, max. 200 kW, max. 10000 A, max. 1000 V
Dimensions: 800 x 2200 x 600 (W x H x D in mm)
Regulation error < 1%
Ripple < 1 % (related to rated DC value)
Efficiency typical 94% (AFE technology)
Digital regulation
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Permanently short-circuit and open-circuit proof

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