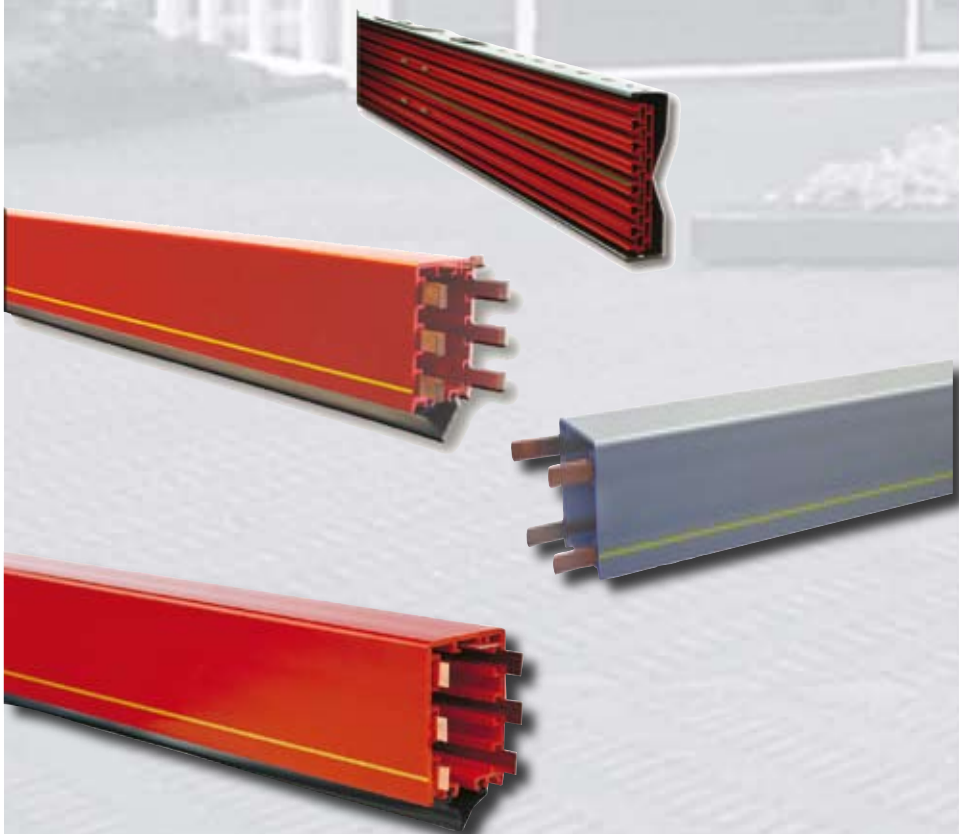


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Conductor bar systems for movable machines



AKAPP-STEMMANN
Member of the Fandstan Electric Group

Development - Production - Service

Our solutions move you further...

Our solutions move you further...

Since 1953 AKAPP-STEMMANN has been the specialist in developing and creating flexible power supply for movable equipment. We advise and design solutions for a wide variety of applications such as cranes, AS/RS industry, assembly lines, blast-furnace applications, concrete factories, production machines and many more.



AKAPP-STEMMANN: the world-wide supplier.

The AKAPP-STEMMANN head office is situated in Barneveld, the Netherlands. World-wide AKAPP-STEMMANN is represented in more than 50 countries, which ensures you short delivery times, a world-wide availability of components and technical support.

Naturally we communicate by means of the most modern equipment. Solutions can therefore be sent within seconds to almost every corner of the world. Speaking of efficiency.



AKAPP-STEMMANN: flexible all the way ...

For product improvement and development we use the most modern design technologies and testing facilities. This ensures the best possible solutions technically as well as economically for your projects. Flexibility in solutions for applications and tailor made installations make us your specialist. Quick and very accurate.

AKAPP-STEMMANN: in good company!

We are member of the British Fandstan Electric Group, specialized in electrification of movable (rail-bound) equipment.

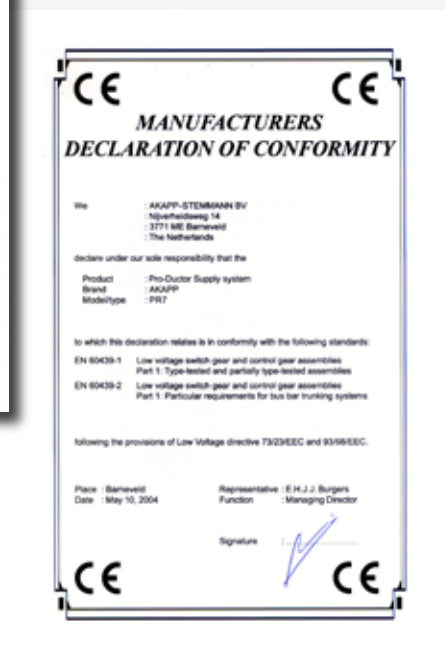
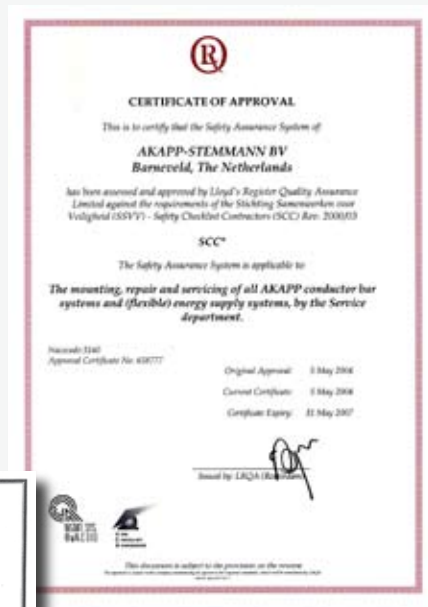
We offer you continuity as your partner in business. With affiliated companies in Great-Britain, Germany, Poland, France, USA and Australia.

Quality

The AKAPP products are designed by the highest standards and are certified by CSA, UL and CE.

The Quality Management System of AKAPP-STEMMANN BV is approved by Lloyd's Register Quality Assurance to the following Quality Management System Standards: NEN-EN-ISO9001:2000

The AKAPP Safety Assurance System is certified by Lloyd's Register Quality Assurance against the requirements of the Safety Checklist Contractors (SCC) Rev. 2003



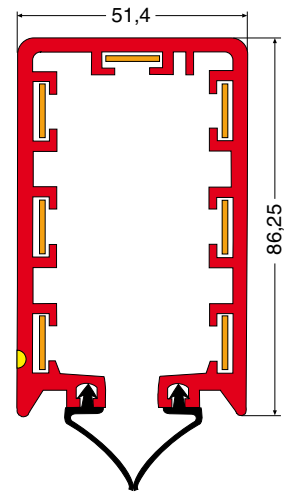
AKAPP-STEMMANN is reliable
Our quality is a standard feature !

AKAPP Multiconductor

The extremely reliable and versatile conductor bar

AKAPP Multiconductor

AKAPP Multiconductor is the compact, reliable and safe conductor bar for cranes, automated warehouses, transfer cars, conveyors and many other applications. AKAPP Multiconductor has a unique concept, based on free expansion of housing and conductors and is using continuous copper conductors. Due to the absence of joints in the conductors it offers the most reliable transmission of power and data even under extreme dusty, humid or even corrosive conditions.



AKAPP Multiconductor consists of a housing with 7 slots in which up to 7 uninterrupted copper conductors can be pulled. In addition, a flexible double sided rubber sealing prevents penetration of dust or fluids and brings superior performance in aggressive environments. This, together with the modular collector trolley, makes it the perfect system for the most challenging conductor bar applications.

AKAPP Multiconductor is well suited for extreme long tracks, high travel speeds, curves, switches and non-stop operation. Despite the wide range of applications the modular design and the multi functional parts keep the (spare parts) stock small.



AKAPP Multiconductor

The extremely reliable and versatile conductor bar

Some important features of AKAPP Multiconductor

- **Continuous copper conductors.** The flat copper conductors can be pulled from rolls into the previously installed PVC housing without any connections in the conductor. The absence of conductor joints ensures trouble free operation and exceptionally long brush life.
- **Volt drop absolute minimum and constant.** Multiconductor has continuous copper conductors and thus it does not have the problems of joints like added resistance at joints and increased volt drop when joints loosen or corrode. Reliable under extremely dusty, humid or even corrosive conditions!
- **High current capacity.** Copper conductors with a capacity of 35A, 50A, 80A, 125A or 160A can be pulled into the channels in the housing. Even systems up to 320A are possible. For higher ratings please consult our sales office.
- **Track lengths unlimited.** The concept of AKAPP Multiconductor enables free expansion and eliminates the difference in expansion of copper and PVC. This makes extremely long track lengths possible.
- **High travel speeds.** Standard up to 250 meters/minute. Higher speeds on request.
- **Sealing strips.** This option keeps dust and moisture away from conductors (IP44 certified), ideal for aggressive environments and out doors applications.
- **Integrated Positioning System optional.** For the easy positioning of movable equipment such as concrete skippers and transfer cars, AKAPP Multiconductor can be fitted with a special pulse strip and pulse detectors. With this a fully automated transport system can be realised.
- **Optimal transmission of data signals.** Because of the continuous copper conductors AKAPP Multiconductor is ideally suited for data transmission e.g. very important for computerized systems. Numerous Profibus applications prove it!



AKAPP 4-Ductor

A simple matter of quality and economy...

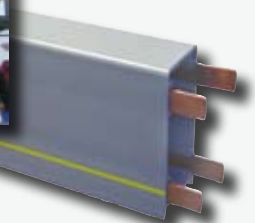
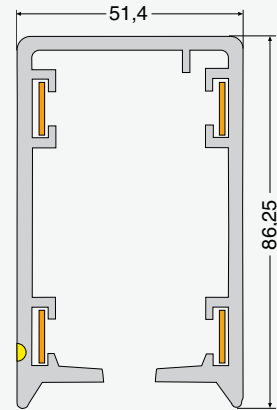
AKAPP 4-Ductor

If 4 conductors suffice and no flexible rubber sealing is required then the AKAPP 4-Ductor is the ideal power supply system.

4-Ductor is compact, reliable and safe. This conductor bar system is used to supply power to numerous cranes and hoists all over the world.

The basic design of AKAPP 4-Ductor is a channel housing, in which 4 copper conductors can be pulled. The flat conductors are installed without joints ensuring a trouble free operation.

4-Ductor provides all the advantages that are part of the unique AKAPP-concept: uninterrupted conductors! Which also means uninterrupted operational safety and efficiency.



AKAPP 4-Ductor

A simple matter of quality and economy...

Some important features of AKAPP 4-Ductor

- **Excellent price/quality ratio.** The concept of the continuous conductors and the use of only high quality components result in a trouble free feeding system against an agreeable price.
- **Continuous copper conductors.** The flat copper conductors can be pulled from rolls into the previously installed PVC housing in long continuous lengths, without any connections in the conductor. Thus 4-Ductor does not have the problems of joints like added resistance and contact problems when joints loosen or corrode.
- **Exceptionally long carbon brush life.** The absence of conductor joints ensure an exceptionally long brush life and trouble free operation.
- **Track lengths unlimited.** The concept of AKAPP 4-Ductor enables free expansion and eliminates the difference in expansion of copper and PVC. This makes extremely long track lengths possible.
- **Simple installation.** Due to the light weight of the PVC housing, copper conductors without connections and the design of the other components, system installation is a quick and easy operation.



AKAPP Click-Ductor

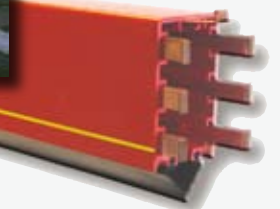
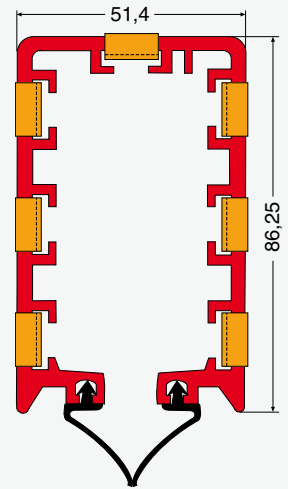
Progress by innovation!

AKAPP Click-Ductor

Click-Ductor is AKAPP's conductor bar with pre-installed copper and is specially designed for standard crane applications. At every joint the copper conductors are connected through a clamp or screw connection and protected by a clicked joint cover making mounting easy.

Click-Ductor is available in 4, 5 and 7 pole versions and the copper conductors range from 50 to 200 Amp. For outside applications a rubber sealing is available.

Click-Ductor means pre-installed copper, simple installation and AKAPP quality.

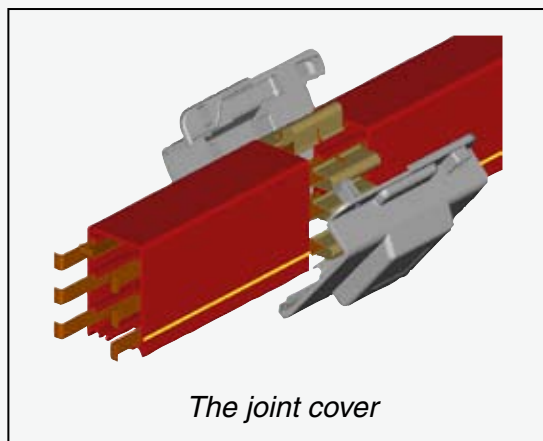
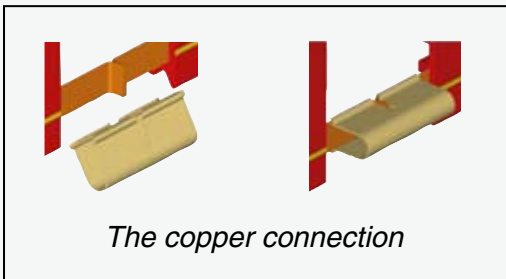


AKAPP Click-Ductor

Progress by innovation!

Some important features of AKAPP Click-Ductor

- **Pre-installed copper conductors.** At the factory the copper conductors are pre-installed in the housing.
- **High current capacity.** Click-Ductor is available 4, 5 or 7 pole versions with copper conductors of 50A, 80A, 125A, 160A and 200A. Even systems up to 400A are possible. For higher ratings please consult our sales office.
- **Easy-to-connect conductors.** The pre-installed copper conductors are connected quickly and easily by means of a simple, patented clamp. Unique!
- **Joint covers without screw connection.** The joint covers are clicked on effortlessly, whilst no tools are used.
- **Quick and easy installation.** Clicked conductor connections, clicked joint covers and pre-assembled hangers results in quick and easy installation.
- **Easy exchange of rail sections.** The unique AKAPP copper connection can be removed sideways. This ensures easy exchange of a housing section without moving the other rail sections.



AKAPP Pro-Ductor

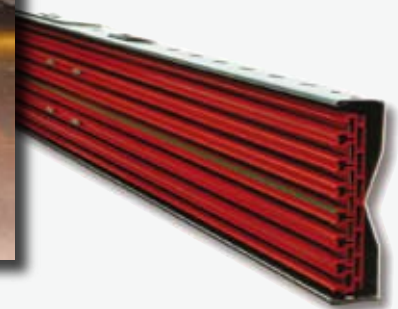
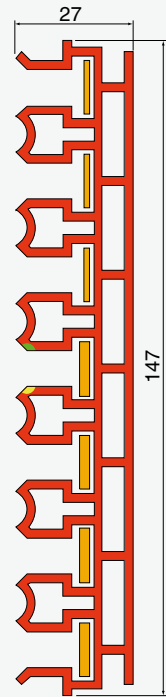
The logical solution for automated storage and retrieval

AKAPP Pro-Ductor

The highest demands regarding efficiency and operational safety are to be found in the automated warehouses. Everything must function trouble free 24h a day, which includes the power supply of the stacker cranes. AKAPP Pro-Ductor is specially designed for this task and meets all these demands.

AKAPP Pro-Ductor consists a flat housing suitable for up to 7 uninterrupted copper conductors. A collector trolley runs over the housing guided by special wheels. A suspension compensates for stacker crane movements. Moveable brushes ensure optimal contact with the copper conductors and the guided trolley prevents the brushes from touching the PVC housing. This concept results in a remarkable long brush life and unprecedented electrical performance.

The continuous copper conductors and the unique wheel guided collector trolley result in a superb technical performance and the lowest total cost of ownership. In addition, simple installation is ensured through click assembly and using the uprights as support. That makes this power feed system most reliable and economical.



AKAPP Pro-Ductor

The logical solution for automated storage and retrieval

Some important features of AKAPP Pro-Ductor

- **Continuous copper conductors.** The flat copper conductors can be pulled from rolls into the previously installed PVC housing without any connections in the conductor. The absence of conductor joints ensures trouble free operation and exceptionally long brush life. The copper conductors are available in a variation of sections, standard up to 400A. For higher ratings please consult the AKAPP sales office.
- **Volt drop absolute minimum and constant.** Pro-Ductor has continuous copper conductors and thus it does not have the problems of joints like added resistance at joints and increased volt drop when joints loosen or corrode.
- **Optimum transmission of data signals.** Because of the continuous copper conductors AKAPP Pro-Ductor is ideally suited for data transmission e.g. very important for automated systems.
- **Wheel guided trolley.** The trolley with the trapezoid wheels and unique spring construction follows every movement of the stacker crane, without losing contact. The electrical characteristics are unprecedented, brush wear is amazingly low.
- **High speed.** The trolley is designed for high speeds, standard up to 500 meter/minute, higher speeds on request.
- **Simple installation.** Using storage racks, an integrated support profile and click assembly makes mounting is a quick and easy operation, saving time means saving cost.
- **Aisle changing applications.** All brushes on one trolley, special guiding wheels and unique funnels result in superb performance for aisle changing cranes.
- **Coldstorage applications.** The continuous copper conductors ensure that the difference in expansion between PVC housing and copper is eliminated. This makes the system excellent for cold storage applications.



Our mobile power supply systems: Your way to optimal reliability!



AKAPP-STEMMANN is established in 1953 and is a member of the Fandstan Electric Group. We are represented worldwide in over 50 countries. Our tremendous experience in the area of mobile power supply systems throughout the years is a big advantage for you as our customer.

AKAPP-STEMMANN is a world-wide market leader with our made to order conductor bar systems: Multiconductor, 4-Ductor, Click-Ductor and Pro-Ductor.

Our high standard products are designed to offer you the best possible solution for almost any application in whatever the circumstances.

More information on our products can be found in our brochures, which we are happy to send you on request. Or visit our website www.akapp.com, where you can find more relevant information, download brochures and make on-line inquiries; fast and easy!



AKAPP-STEMMANN

Member of the Fandstan Electric Group