

Pro-Ductor®

Insulated flat conductor bar

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AKAPP Pro-Ductor®

- The ideal flat conductor system for automated warehouses and many other applications
- Current capacity 50A, 80A, 125A, 160A, 200A and higher
- Housing for 7 uninterrupted conductors
- Adjustable to almost all heights
- Self-correcting collector trolleys without pantograph arms
- High travel speeds possible
- Particularly suitable for transmission of control and data signals
- Virtually maintenance free



AKAPP Pro-Ductor conductor system has a unique concept, permits ultimate possibilities and applications.

Pro-Ductor is specifically designed for operations in automated warehouses. The extreme high demands as set for current supply systems are the basis for this concept.

Pro-Ductor offers many more possibilities. An example is illustrated on the picture below. Here you can see a circular installation, with in the centre a control and current supply for a welder for cathode-ray tubes, made by a Finnish manufacturer and installed at a plant in Germany.

Pro-Ductor[®] conductor system PR 7:

The ultimate design!

The conductor system PR7 is specifically designed for heavy duty tasks as performed in automated warehouses.

The most important details are mentioned below.

The standard length is 4 meter. Any length less than 4 meters is possible. Connecting the sections is done by means of coupling conductors with a click and lock system. Therefore no drilling or screws!

① 7 copper channels

Due to the clearance existing between the conductors and their location, the copper channels offer sufficient room for 2 up to 7 uninterrupted, loose spaced conductors, as required, without plug connectors. No expansion problems and ideally suited for both control and data signal transmission.

② 5 different types of copper conductors

The flat copper conductors, suitable for current capacity up to 50A, 80A, 125A, 160A and 200A. With parallel-mounted systems the maximum current capacity is 400A!

③ Yellow/green uninterrupted earth-marking

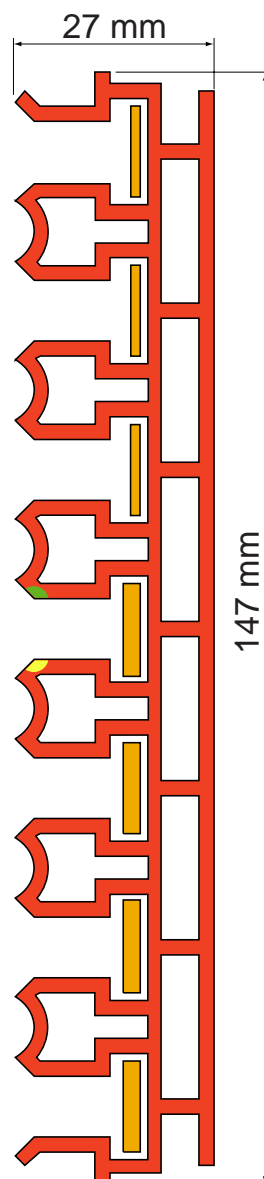
Clearly indicates the earth conductor. Safety!

④ Chute for conductor-wheels

The perfect mechanical conduction ensures the life expectancy of the cars and brushes. It also ensures optimal transmission of line and control voltage.

⑤ Easy installation

The individual lengths (max. 4 m) can easily be connected, after which the required number of copper conductors are pulled through the channels.



⑥ Compact construction

The housing has a width of only 27 mm and a height of 147 mm. It is therefore nearly always suitable for all automated warehouses. Furthermore it can be installed, starting a few centimetres above floor level!

⑦ Double-walled housing

This gives a considerable rigidity, allowing the distance of the suspension to be relatively large.

⑧ Feed and control in one single housing

Combine the feed strips with those for the control. Safely separated from one another with the earth conductor in between.

⑨ Safety first!

The PVC-housing is self-extinguishing and has a conspicuous red colour for additional safety. Furthermore the housing is contact safe (IP2X according to the standard IEC529).

⑩ No expansion problems

The copper conductors lie separately in each channel, so that these can expand and contract independently of the PVC housing.

Ultimate logistical control: uninterrupted feed at all times

For each Pro-Ductor installation, uninterrupted flat copper conductors, available in track lengths, will be delivered on rolls.

The conductors will be fitted, uninterrupted, over the track length. This offers considerable advantages!

The fixed electric feed point of the installation can be fixed at the outer end or at random points.

Even if the latter option is chosen, the copper conductors will not be interrupted!

What is the advantage of uninterrupted copper conductors?

① Optimal contact

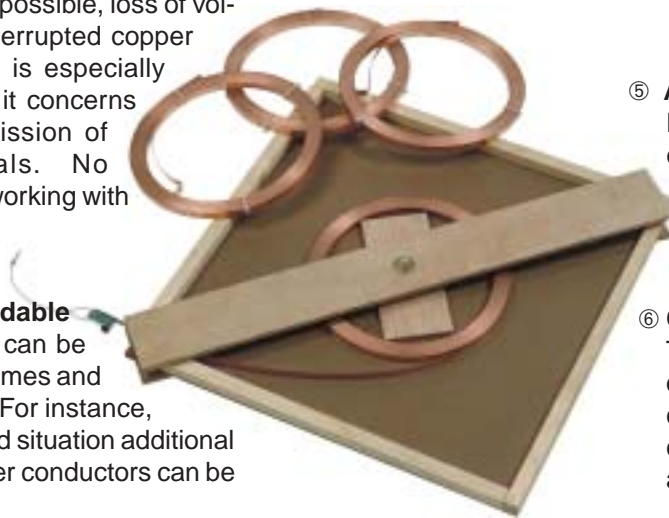
The flat, smooth copper surface guarantees an optimal contact with the carbon brush.

② No plug connectors

The best method to secure a, as low and constantly possible, loss of voltage is an uninterrupted copper conductor. This is especially essential when it concerns reliable transmission of control signals. No problem whilst working with AKAPP!

③ Capacity extendable

The installation can be extended at all times and at any moment. For instance, due to a changed situation additional or heavier copper conductors can be installed.



④ Virtually maintenance free

Due to the absence of plug connectors the surface of the copper conductors is extremely smooth, which ensures minimal brush wear. The copper conductors as well as the coal brushes are therefore virtually maintenance free.

⑤ Alternative strips

For specific applications, silver-plated or chromium-plated copper strips can be installed in the copper channels, for instance for usage in extreme weather conditions.

⑥ Quick installation

The strips, delivered on rolls, can quickly and easily be pulled into the channels, by means of the provided copper cassette (see photograph) and a copper pulling attachment.

Location of the feed systems.

Two different feed boxes are available:

1. End feed:

With this you can connect the feed cable to the outer end of the Pro-Ductor installation (see photograph). The Pro-Ductor connecting piece has pre-drilled holes for the connecting bolts for the copper conductors. Due to the fact that the holes are staggered a safe connection is guaranteed.

2. Line feed:

For connection of the feed cable on each chosen point of the installation. The copper conductors will not be interrupted, not even with this line feed!



end feed (interior)



line feed

Collector trolleys: excellent contact characteristics!

Pro-Ductor trolleys are available for a range of 2 to 7 conductors with current carrying capacities up to 60A and 120A nominal value (duty cycle (ID) 60%).

These collector trolleys are standard fitted with a feed cable of approx. 1 m with coloured and numbered cores.

The uninterrupted copper conductors of the Pro-Ductor system enable high travel speeds (standard up to 500 m / minute!).

Inspection of the carbon brushes is fairly simple, by tilting the trolley-housing upwards (see photographs on page 6).

① Automatic correcting system

By means of four leaf spring sets the spherical road wheels of the collector trolleys are kept in the grooves of the section. The trolley will therefore always follow its course perfectly.

② Perfect signal transmission

As a result of the optimal correcting characteristics the carbon brushes always glide straight on the flat, smooth copper conductors. This ensures optimal feed- and control voltage. Furthermore, each brush is equipped with a compression spring (see photograph below).

③ Quick installation

It is simple to mount the collector trolley to the mobile construction. The horizontal and vertical alignment is effected with bolts in large enough bolt slots.

④ Quick installation

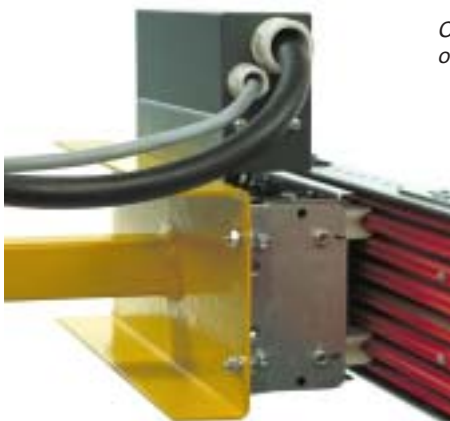
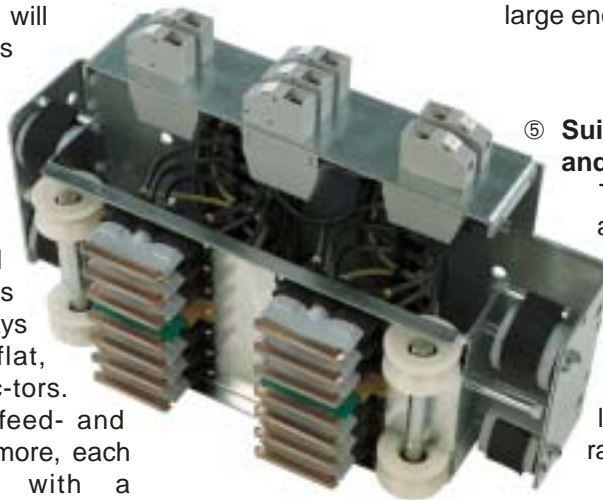
It is simple to mount the collector trolley to the mobile construction. The horizontal and vertical alignment is effected with bolts in large enough bolt slots.

⑤ Suited for curved tracks, switches and transfer switches

The collector trolleys can, without any problem, travel within or outside the rail section. For instance, when the crane travels from one corridor to the next one. In order to maintain an uninterrupted signal the two collector trolleys can be switched parallel.

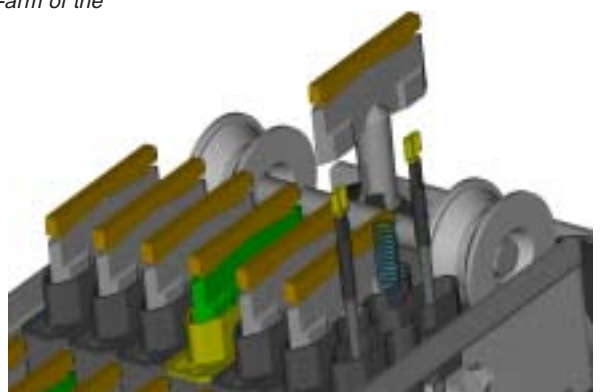
⑥ Towing construction with pull chains possible

It could be necessary to pull the collector trolley forward, aided by pull chains. In this case there is no need for the leaf spring construction. By applying angle sections the collector trolley will always move along the Pro-Ductor section smoothly.



Collector trolley, fixed to carrier-arm of the order picking unit.

The coal brushes, with in each housing a separate spring.



AKAPP Pro-Ductor[®] conductor system: efficiency per linear meter!

AKAPP Pro-Ductor saves costs. Saving starts immediately during installation. This because all components are tuned to each other, resulting in quick and efficient installation.

The Pro-Ductor housing is supported by the steel support profile SP7 and fits almost every application.

The support profile SP7 can, in most cases, be mounted direct to the storage racks, without extra construction parts. Fast and easy mounting of the insulated Pro-Ductor housing is possible without using screws. Saving time and money during installation!

The solid support profile SP7 also protects the Pro-Ductor housing against falling subjects.

Suspension of rail section

The steel support profile (standard length 4 m) can easily be fixed to the storage racks. In most cases the rail will be installed with the conductors below one another).

The shape of the support profile combines high rigidity with a low weight and minimal sizes. For an easy and quick installation, the sections are fitted with punched holes that allow free positioning of support brackets and/or joints. No more welding, drilling etc. on site!

After mounting the support profile, the insulated Pro-Ductor housing can be fixed without using any tool!

The Pro-Ductor housing is supported along the complete track, providing high stability and allowing high travel speeds.

Application of this supporting section makes a distance of up to 3.3 m between the various suspensions possible. Without a supporting section this distance is reduced to 0.8 m maximum.

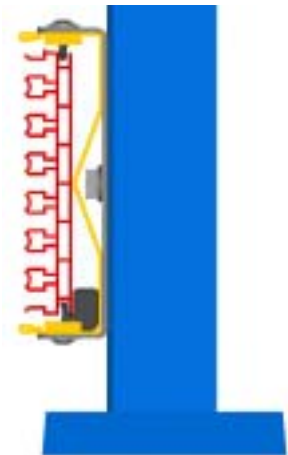
Inspection of the collector trolley

AKAPP - STEMMANN ensured the possibility for a quick and easy inspection of the collector trolley.

Quick and easy inspection of the collector trolley is achieved by removing it from its housing. Then, the carbon brushes, road wheels and wiring can be inspected at once.

Minimum brush wear is ensured, due to the smooth surface of the conductors and the absence of plug connections. The road wheels have minimum wear as well, since they are made of high quality, wear resistant, synthetic material.

Supporting the Pro-Ductor housing.



Due to the lightweight steel supporting profile SP7, a distance between the suspension of 3.3 meters is possible!



For inspection, the collector trolley can be taken off the rail easy.



Replacing the carbon brushes.

AKAPP conductor bar systems: always a perfect solution!

AKAPP Pro-Ductor is a very reliable and efficient conductor system, successfully used in many warehouses. In this brochure you will find the unique characteristics described in detail.

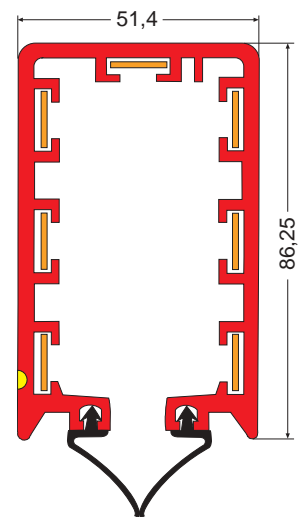
AKAPP-STEMMANN supplies many more conductor systems, to create an optimal solution for each and every application. Whatever system you opt for, you can always count on the perfect functioning of the installation.

AKAPP-STEMMANN appreciates your interest in our products and our specialised personnel will be pleased to advise you, no strings attached and without any costs.

Would you like more information? One phone call, fax or e-mail will do. You will find the relevant details on the backside of this brochure.

Multiconductor

A compact and multi purpose conductor system. The **uninterrupted** conductors ensure a perfect transmission of **current feed-** as well as **control-** and **data signals**. Current capacities from 35, 50, 80, 125 up to 160A. A flexible double sided rubber sealing prevents penetration of dust or liquids and allows functioning in extreme weather conditions. No expansion problems due to the clearance that exists between the conductors and the PVC housing. No effect on the performance of the system. Well suited for extremely long tracks and high travel speeds.

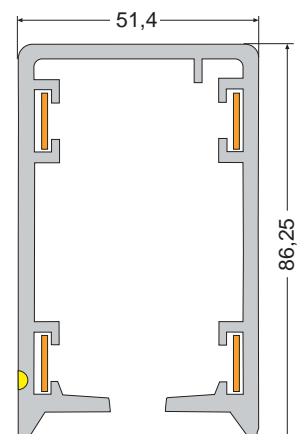


AKAPP Multiconductor is used world-wide for cranes, traverse cars, (automated) warehouses, elevators, textile production, sluices, trains etc., even under in extremely dusty, humid or even corrosive environments!

4-Ductor

If four conductors suffice, no flexible rubber sealing is required, but you do want to make use of all the advantages of the uninterrupted conductors, opt for the most ideal conductor system for your organisation, opt for the AKAPP 4-Ductor!

Ideal, for it has: no expansion problems, a constant and low voltage loss, a choice of 5 current intensities (see above) and virtually no maintenance. In all, an uninterrupted current supply for a variety of movable and/or mobile equipment at a **very profitable cost-benefit analysis**.



AKAPP - STEMMANN: Flexible with energy!



AKAPP-STEMMANN is a market leader with our made to order conductor bar systems. We offer you the best possible solution for almost any application in whatever the circumstances. Available world wide, so why not give us a try!



Our cable and hose reels prove their worth daily in numerous applications, spring driven cable reels for power consumption and control, or spring driven hose reels for the supply of water, oil, grease and air. Of course, we can also supply the correct high-flexible cable to meet your needs!



The sophisticated program of dragchains, made from metal as well as plastic, are designed for diverse applications, from automated lathes to offshore platforms.

More informations on our products can be found in our brochures. We are happy to send you the catalogues on request. You can also visit our internet site, www.akapp.com, serving you 24 hours a day!