



AUTO- MATION

IN CONTROL CABINET
CONSTRUCTION



komax WIRE

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CONSTRUCTION

It is very time-consuming to design and build control cabinets manually and is dependent on specialists. To slash the throughput time and make production processes more flexible and ideal, Komax Wire offers a range of optimum automation solutions. These are designed to improve the process, increase efficiency, and reduce the technical demands associated with assembly. As a result, they generate major time and cost savings while simultaneously boosting quality and economic efficiency. These perfectly coordinated solutions cover all your needs from entry-level automation right through to fully automated wire assembly – whether you are producing a single control cabinet or manufacturing small or large series.

Save with automation

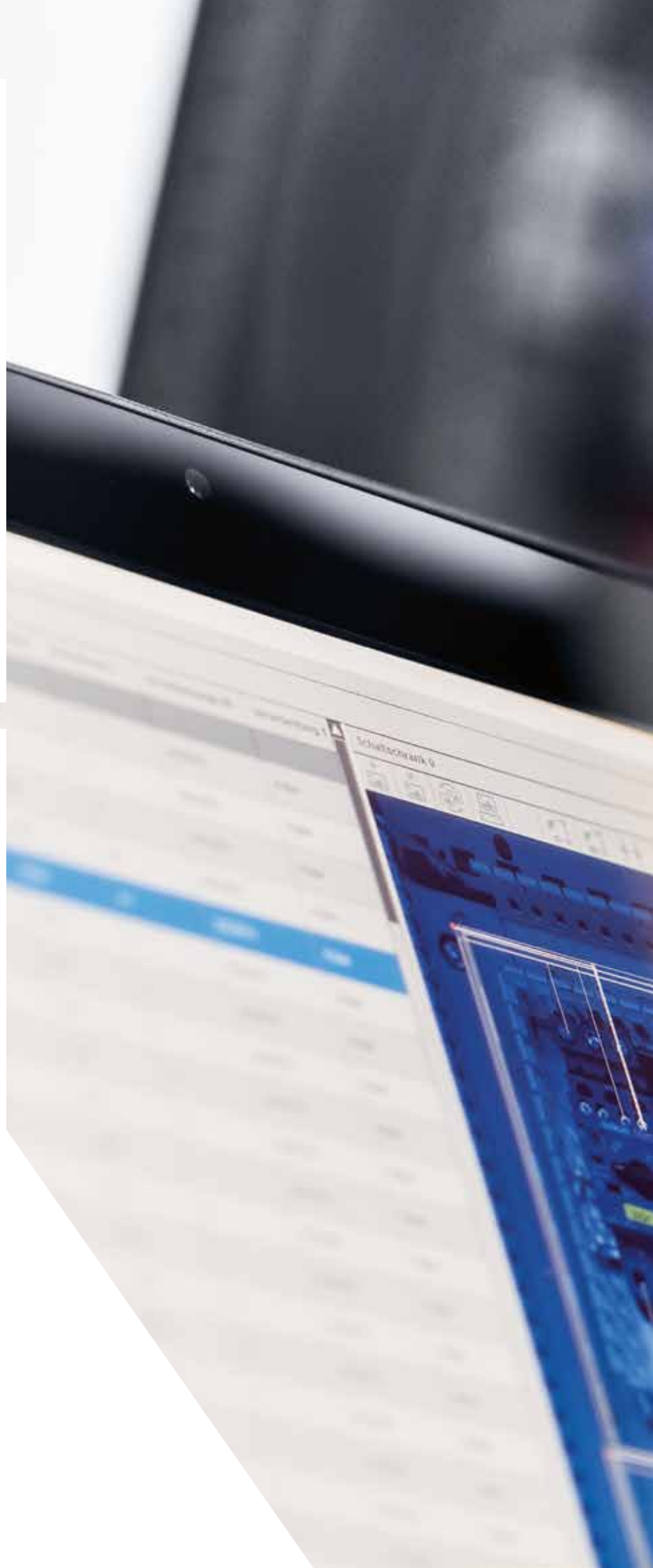
- Reduce your production costs
- Cut your production times by up to 50 %
- The savings start from a batch size of one

Flexibly increase efficiency

- Wide processing area for wire ends
- Optimized logistics
- Greater workforce flexibility, due to intuitive guidance in work processes

Achieve top quality

- Less personnel training required
- Fewer input errors
- Consistently high quality throughout





IMPROVING ECONOMIC EFFICIENCY
WITH AUTOMATION

SHORTER PRODUCTION TIMES – MAXIMUM EFFICIENCY

Cut time and costs

It takes a specialist around 105 seconds to process one wire manually. For example, if there are 500 wires inside the control cabinet, it adds up to 15 hours. With semi-automated production, you can cut the amount of time required by up to 35 percent. And with fully automated production, you can reduce it by up to 50 percent – to just 7.5 hours.

Consistent data flow

Data is prepared efficiently using the Komax DLW (Digital Lean Wiring) software or via ECAD with reference to wire lists, a wiring diagram, or 2D drawings.

Automation that relies on consistent data flow optimizes quality and reduces input errors. Within this framework, ready-to-install wires can be produced fully automatically: by cutting them to the correct length, assembling them, and labeling them. What's more, you can even produce the cables sequentially in the correct order of installation and tie them.

Greater flexibility

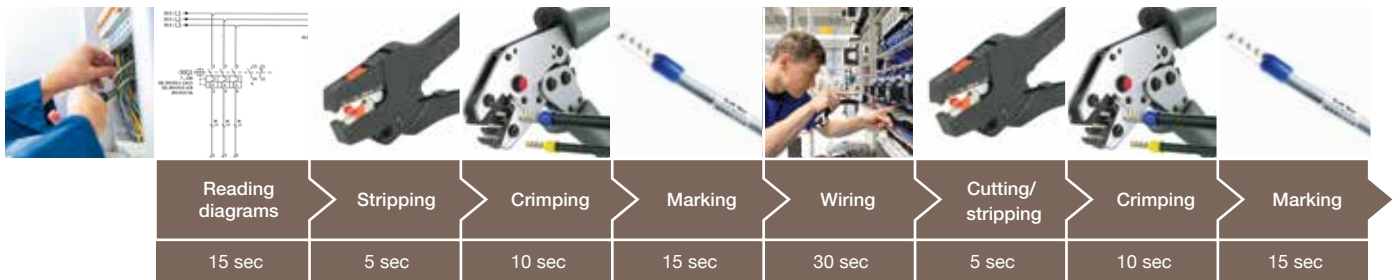
You can process the wire ends in a whole host of ways: by attaching ferrules, crimp contacts, or MIL crimps, or compacting them through ultrasonic welding. The solutions feature fully integrated

inkjet labeling systems to ensure that everything is always labeled in accordance with the diagram. This simplified approach means that control cabinet wiring can be carried out by less specialized personnel.

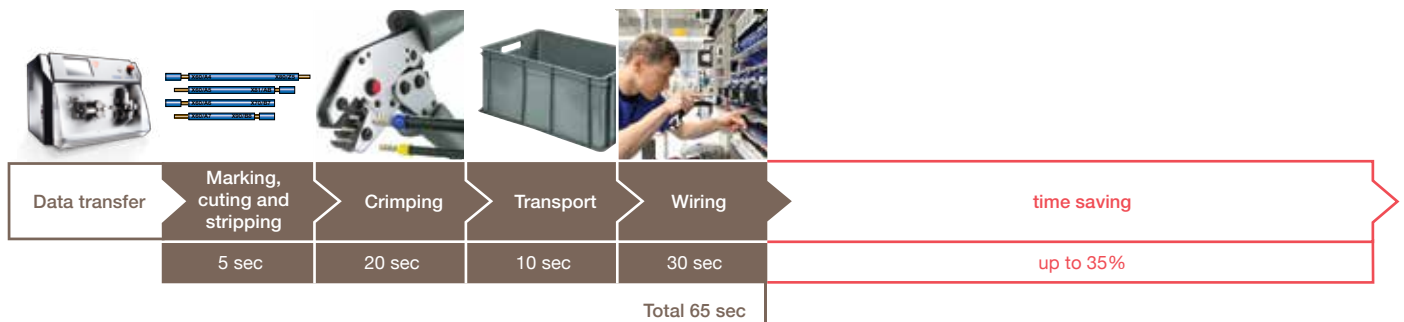
Perfectly coordinated automation

By offering solutions to match any requirements, the market leader Komax Wire is opening up the huge potential for automation in control cabinet construction. Its semi- and fully automatic state-of-the-art machines ensure maximum efficiency on any scale: from individual units through to small and large series.

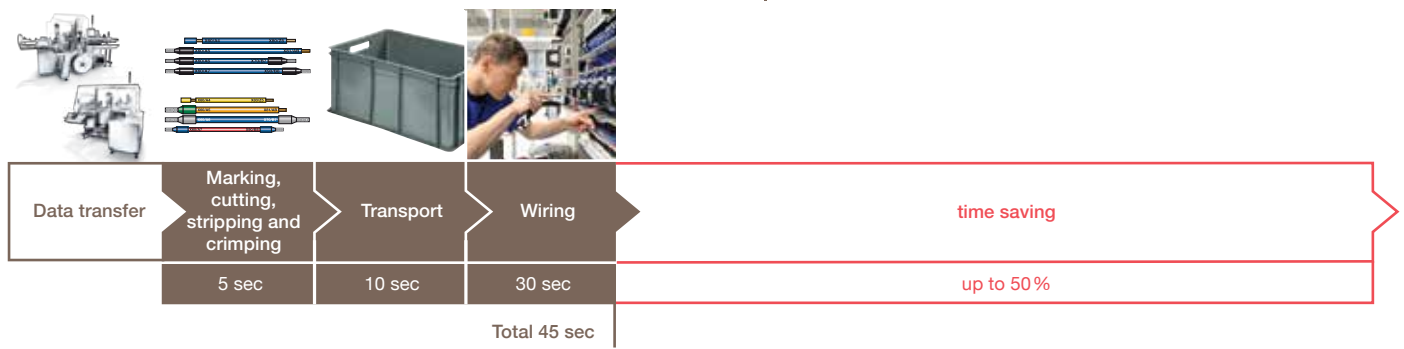
Fast, automated processes



Total 105 sec



Total 65 sec



Total 45 sec



IDEAL FOR ANY LEVEL OF AUTOMATION



Cut and strip – Low level of automation

Semi-automated production sorted according to cross-section

Processing options


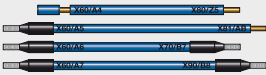

Labels	
Wire production in sequences	

Crimp to Crimp – Moderate level of automation

Fully automated production sorted according to cross-section



Processing options

Labels	
Wire production in sequences	
Process wire ends (ferrule, crimp, weld, etc.)	

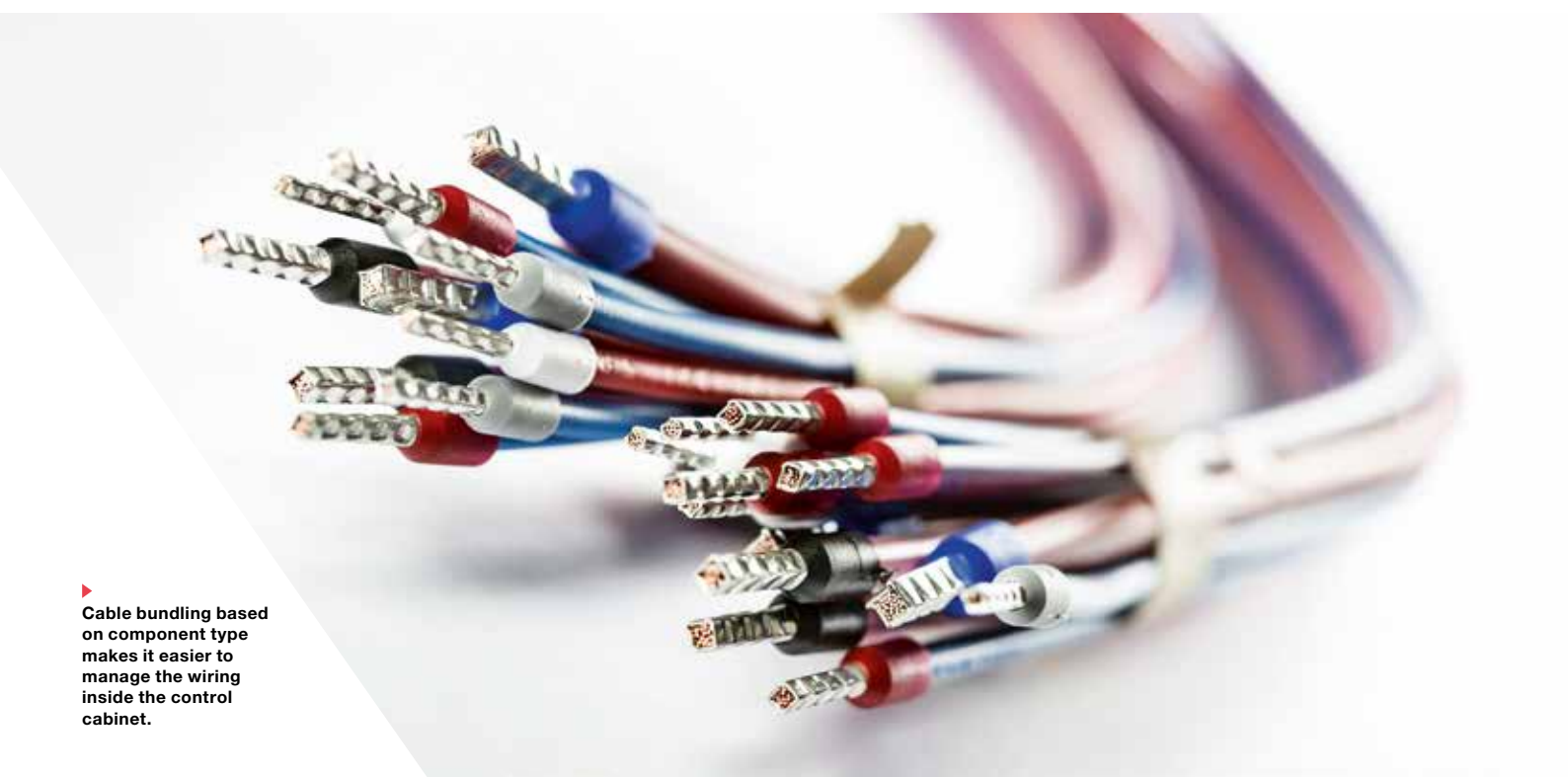


Harness manufacturing – High level of automation

- Fully automated production sorted according to assemblies (sequential production)
- Tied with tape

Processing options

Labels	
Wire production in sequences	
Process wire ends (ferrule, crimp, weld, etc.)	
Bundle wire sequence	



▶ Cable bundling based on component type makes it easier to manage the wiring inside the control cabinet.

EASIER DATA HANDLING WITH DLW



The simple alternative

In order for the control cabinet construction process to be automated, the first step is to collect the production data, including the cable length. The DLW (Digital Lean Wiring) software developed by Komax offers the ideal solution for this with its clear focus on simplicity and flexibility. It offers various options for importing and preparing the data. For instance, you can use existing wire lists to define how the connections should be marked. You can also import 2D drawings in a variety of formats with ease. If you want to avoid the high costs involved with maintaining a component database of standard ECAD systems, virtual wiring can be carried out based on a high-resolution photo. This keeps product maintenance to an absolute minimum.

Photographic dimensioning with Roundshot

A high-resolution photo of the control cabinet is a really easy way of dimensioning the lengths of the cables. This image is captured by the optionally available Roundshot camera. This takes several individual images and combines them to create one dimensionally accurate overall image, which is then imported into DLW.

Virtual wiring

In the DLW software, the technician uses this image or a 2D drawing to wire the cables virtually on the screen. This is a highly efficient method of determining the cable length per connection. After that, the production data is converted and uploaded to the wire processing machine, which produces the ready-to-install cables.

DLW Viewer – Guided assembly

The DLW Viewer features a streamlined, touch-operated interface. This guides the operator along the wiring path as they lay the pre-assembled strands virtually on the screen. As a result, this processing step can be carried out by less highly specialized personnel.

Komax Wire – industry leader today and in the future

As the pioneer and market leader in the field of automated wire processing, Komax Wire provides its customers with innovative and sustainable solutions for any situation that calls for precise contact connections. Komax Wire manufactures machinery and equipment for various industries, catering for every conceivable degree of automation and customization. Its range of quality tools, test systems and intelligent networking solutions complete the portfolio, and ensure safe and efficient production. The Swiss company, which has operations all over the world, develops and manufactures its products at various locations. Its extensive distribution and service network supports customers locally in more than 60 countries through standardized service processes, while ensuring the ongoing availability and value of these customers' investments once the equipment has been put into operation. The Swiss company Komax Wire is part of the international Komax Group, which employs approximately 1500 people.



Market segments

Komax Wire offers outstanding competence and solutions for various areas of application and draws on them to generate the desired value-added for the entire process and optimize economic efficiency in line with customer requirements. The main markets of Komax Wire are as follows: automotive, aerospace, industrial and telecom & datacom. With this breadth of experience, customers obtain expert knowledge for process optimization and access to the latest technologies.



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