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Weidmüller achieves an increase in efficiency of up to 75% in cabinet engineering

Weidmüller

"The engineering phase is decisive for the success and efficiency of control cabinet production. An intelligent coordination of digital product data and networked engineering tools provides a solid basis for efficient assembly."

Dr. Bernhard Gorny,
Head of Product Lifecycle
Management,
Weidmüller Group

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Weidmüller is a global leader in electronics and automation for industrial applications in the power, signal and data sectors. To support the introduction of its new Klippon Connect® product line, the company decided to develop an intelligent configuration tool to significantly enhance their users' product selection experience. The result - the Weidmüller Configurator – is a next-generation terminal block configurator that guides the user through a choice of 5,000 products and reduces cabinet engineering time by up to 75%.

With manufacturing plants, sales companies and representatives in more than 80 countries, Weidmüller is a global leader in electronics and automation products, solutions and services for industrial applications in the power, signal and data sectors. Their customers are typically in the machinery, process industry, technical equipment, energy and transportation markets.

Alongside a strong commitment to technology leadership, Weidmüller is dedicated to supporting international customers with comprehensive consulting and support services.

An important element in their customer support is providing intelligent configuration tools that guide the user through all of products on offer, helping

them to identify the best fit for their requirements.

Tools such as this are also valuable in reducing costly sales support time. They can be used to support a wide range of configuration and ordering activities: from ordering sensor-actor cables and configuring industrial Ethernet cables, to selecting terminal blocks and connectors for device connectivity.

New product line – new configuration tool

At Hannover Fair 2016 Weidmüller unveiled the Weidmüller Configurator (WMC) alongside the latest addition to its portfolio – the Klippon Connect® series of terminal blocks. According to the company, this software solution streamlines the process of selecting, planning and ordering terminal rail components enhancing the efficiency in the engineering process by up to 75%. The new configurator was developed in a three-year collaboration with Zuken.

"This impressive productivity increase was achieved because the Weidmüller Configurator provides automatic filter functionality that guides the customer through a choice of more than 5,000 Weidmüller products," says Dr. Bernhard Gorny, Head of Product Lifecycle Data Management at Weidmüller.

The new Klippon® Connect Portfolio from Weidmüller is supported through an intelligent Configurator.
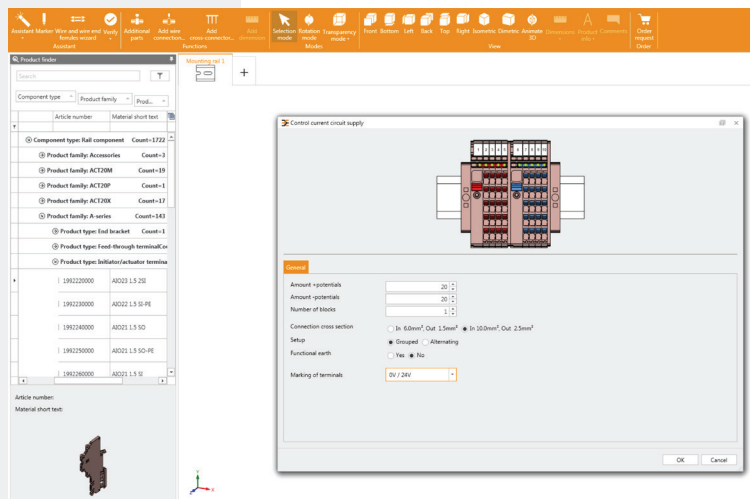
Results

- Using the configurator, customers can achieve a reduction in cabinet engineering time by up to 75%.

- By separating the data and user interface the content can be updated at any time in a simple library update.

- Zuken and Weidmüller collaborated closely to achieve impressive results, with Zuken bringing comprehensive know-how in product taxonomy and software engineering as well as Agile project management experience.

- The Weidmüller Configurator can be used alone and with an ECAD system such as Zuken's E^3.series.

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For more than 160 years Weidmüller has been synonymous with power, competence and reliability in the machinery, process, device manufacturing, energy and traffic engineering sectors. In more than 80 countries, Weidmüller is a dependable partner supporting customers and partners by supplying innovative solutions and services.

"It was our objective to enhance the control panel engineering process by providing comprehensive product information and data"

The Weidmüller Configurator automatically guides the user through a choice of more than 5,000 products.

to enhance the control panel engineering process by providing comprehensive product information and data. This left the user to focus on the product performance in an end-to-end engineering process," summarizes Dr. Gorny.

To ensure maximum ease-of-use, no up-front knowledge about Weidmüller Products is required: "For example, if I want to design a control power supply, I only need to specify the number of plus and minus potentials and select wire cross-sections and a labelling scheme to automatically receive a configuration that contains all components and accessory parts in a realistic 3D representation," explains Dr. Gorny.

"Erroneous configurations are automatically identified and corrected. This combines to offer improved planning and enormous time savings."

After the components have been selected, the order process can be initiated directly from within the configuration tool. The user can request quotes directly from the configuration tool: Products can be delivered both as discrete components or as pre-assembled rails, ready to be fitted into the cabinet.
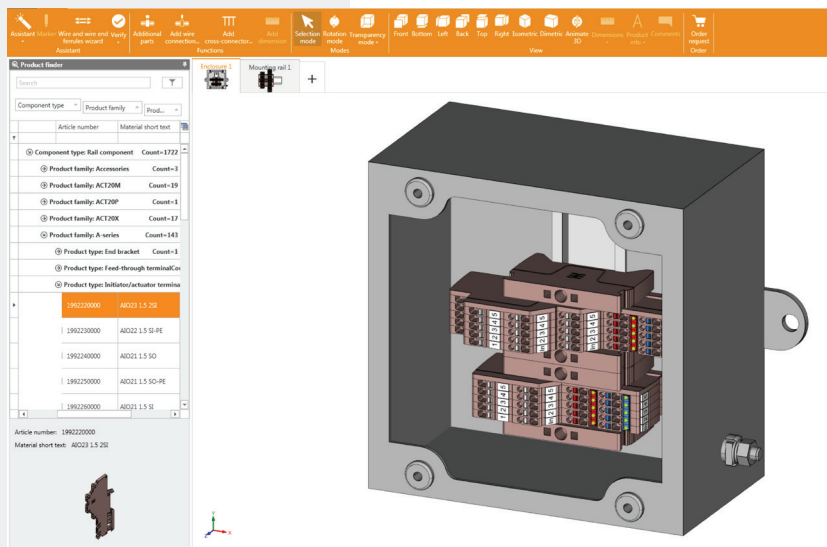
Intuitive use with realistic 3D components

Much attention was dedicated to ensuring an intuitive user experience: "Our objective was

In addition to the challenge of covering a comprehensive set of combination from a catalogue of more than 40,000 items, regular updates to reflect a rapidly growing product portfolio are a major challenge. This is where Zuken came in to the equation. "Through our joint support of eCl@ss, a standardized exchange format for product data, we had the opportunity to discuss requirements and implementation concepts for our future configuration tools with Zuken experts," says Dr. Gorny. "In addition to their comprehensive experience in the development of electrical CAD tools, Zuken also impressed us with their expertise in the area of Agile project management."
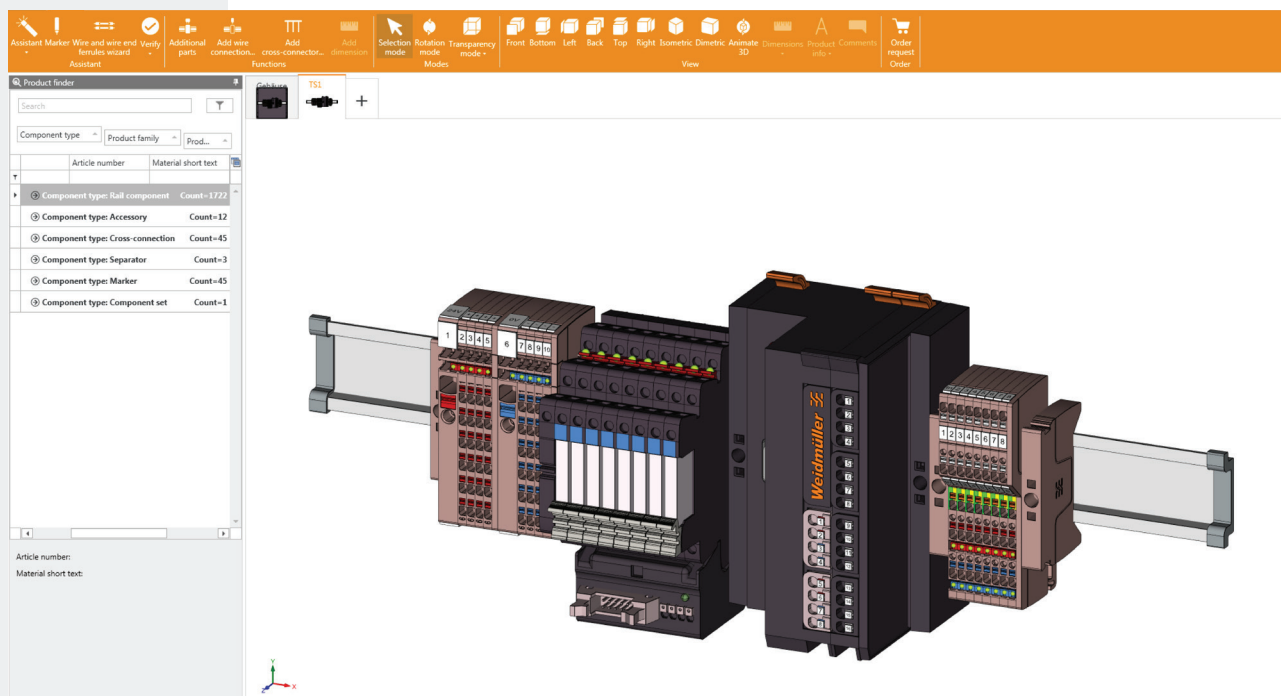
Eligible components can be selected from a choice of realistic 3D representations.

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The order process can be initiated directly from within the configuration tool.

The result of the joint efforts of Weidmüller and Zuken experts is a tool in which particular emphasis was placed on the separation of data and user interface. "In this way, the content can be updated at any time in a simple library update," explains Achim Stirner, manager of the Weidmüller Configurator project at Zuken. "The possibility of running library updates without any programming effort is invaluable in a fast-paced industry such as industrial automation," added Stirner.

By adopting a Scrum-oriented engineering methodology, the required functionality could be divided into numerous sub-projects, which enabled a fast software maturation process in which single enhancements could be tested in advance by product experts.

The user perspective

In the past, users had to browse through endless catalogues, select components, compare product numbers, look up specifications and verify the compatibility of accessories. The Weidmüller Configurator offers a significantly improved experience: the user can select the required components from a selection of realistic 3D models, while the software automatically checks the compatibility of the selected components.

In addition to component selection, the tool also supports the complete process down from documentation to production, by providing comprehensive specifications, labelling tool support, generating information for automatic mounting-rail assembly, and directly sending requests to vendors.

The Weidmüller Configurator can be used both as a standalone application, and with an ECAD system like Zuken's E³.series. In the latter case, all electrical components are handed over to the configurator where accessory parts can be added, manufacturing documentation can be compiled, and the complete assembly is submitted for logical verification. After completion, the bill-of-material is handed back to the ECAD system for further processing.

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