

Enhancing efficiency in electrical engineering

9th August 2022

When it comes to the design and engineering of electrical systems, there are many challenges. These include quick access to consistent product data, optimal parts positioning, fault-free wiring of components and the automated engineering of electrical schematics. However, a comprehensive data library and scalable software tools can make the whole design process quicker and easier.

Advances in digitalisation have unlocked new approaches to automation, expanded the intelligence of electromechanical components and promoted the construction of cyber-physical systems (CPS). Consequently, a change in approach is required, since in addition to control and mechanical design, electrical design and data features are now playing increasingly important roles in the development process. Mechanical engineering, plant design, building automation, cabinet design and electrical installation are all affected.

Modern challenges of development

The modern challenges for electrical engineering could hardly be greater: “Looking at an example from everyday life, mobile telephones used to have six functions. Today, a smartphone has thousands of functions that all have to be developed, enabling communication not only with the device but also with other handsets and equipment. This trend is mirrored when looking at machine development”, emphasises Axel Zein, Managing Director of WSCAD GmbH.

With more than 30 years of experience in the industry, WSCAD, located in Bergkirchen near Munich, is a specialist in electrical engineering CAD. It offers intuitive software tools along with its cloud-based database, wscaduniverse.com, a browser-based portal containing more than 1.4 million items of part data.

Axel continues: “Our cross-discipline electrical engineering solutions cover the complete electrical engineering process, helping our users complete their jobs better, faster and more easily. WSCAD products and services offer speed, quality and cost-effectiveness.”

With the increase in functions of individual components and the variety of connections between devices, electrical schematics and assembly plans are becoming more and more complex. Designers also have less time to complete projects, so they require up-to-date information on housing data, electrical schematics, component lists, cables and connection lists or building automation diagrams.

Powerful electrical engineering tools with comprehensive data libraries provide pre-designed macros with all possible variants, linked to symbols and the materials to be used. Not only does this save time but it also increases productivity – ideal for design projects with tight deadlines.

Stored knowledge to ensure reliable designs

The most powerful electrical CAD portal in the world, wscaduniverse.com, enables end-to-end engineering and is a digital knowledge hub suitable for almost any electrical engineering project. It contains over 1.4 million items of part data from more than 360 manufacturers in various electrical CAD formats: WSCAD,

DXF/DWG and EDZ. With additional 3D data available in other common CAD formats like STEP, the portal enables a structured and methodical approach to design, backed by standardised documentation.

“With such a high number of parts and the range of different data formats covered, we have an extremely wide reach. Users of electrical CAD systems worldwide can benefit”, explains Christian Rathgeber, Business Development Manager at WSCAD GmbH.

Free access

Electrical CAD users can access the product data they are looking for by simply registering for a free account in the WSCAD data portal. If a part data record for a specific product is unavailable, they can simply send an online request for the part direct to WSCAD.

The easily accessible 3D data stored in the online library enables realistic, exact models of whole cabinets to be displayed. As a result, assessment of the mechanical functioning of components or complete systems can be carried out. This facilitates and speeds up the engineering process as well as the reading of data from other electrical CAD systems.

“wscaduniverse.com is the only platform that provides access to electrical and 3D data free of charge”, explains Axel. “Users don’t have to create parts data themselves. They are able to find all the information they need in one place. This enables them to save a great deal of time, while also helping to improve the quality of their work. Using real 3D data will also open completely new opportunities for electrical engineering applications.”

The online portal provides quick, intuitive and text-sensitive search and filter functions. Expensive and time-consuming research – including work by third-party providers – is a thing of the past; manufacturers can also add their products without any cost.

Wiring using a smartphone or tablet

The WSCAD platform is much more than a conventional electrical CAD program with schematic diagram pages numbered consecutively including product data sheets. It enables model-based design that covers every aspect of a project, with schematic diagrams, individual checklists and process-related updates ready at the touch of a button. All documents and additional information are available as a digital twin of the real cabinet for further processing, quality assurance and approvals. Integration into existing production environments and the conversion of CAD data into control data for machinery are also features of the WSCAD platform.

Installers, service engineers and maintenance engineers can also benefit from these features. The WSCAD Augmented Reality App for iOS or Android mobile devices can be downloaded for free from the Apple App Store or Google Play. This provides access to digital wiring lists for use during cabling, making the wiring of cabinets easier. Service engineers requiring information on wiring diagrams, part data or original manufacturer data sheets no longer need to pore over manuals the size of telephone directories. They can simply scan the QR code of the component in the cabinet to see 3D models of the parts as well as up-to-date manufacturer documentation on a smartphone or tablet.

wscaduniverse.com – Facts and figures:

- Most powerful electrical CAD data library in the world

- Over 1.4 million data records from more than 360 manufacturers in WSCAD, DXF/DWG, EDZ and 3D electrical CAD formats including STEP
- Free to use after registering
- Native 3D CAD data in over 100 formats: STEP, IGES, CATIA*, SIEMENS NX*, AutoCAD* for photo-realistic 3D views and collision tests based on actual component dimensions
- eCI@ss compatibility
- Multilingual part data (manufacturer-specific)
- Quick text-sensitive search function and intelligent filter functions
- Reaches over 145,000 electrical engineering users worldwide
- Approximately 2.1 million search queries and 990,000 downloads per annum
- Annual growth: users: + 40%, manufacturers: + 35%
- Native Cloud application, integrated in WSCAD SUITE X
- Awarded Best electrical engineering symbol and part database
- Free to use for users and manufacturers

Image captions:

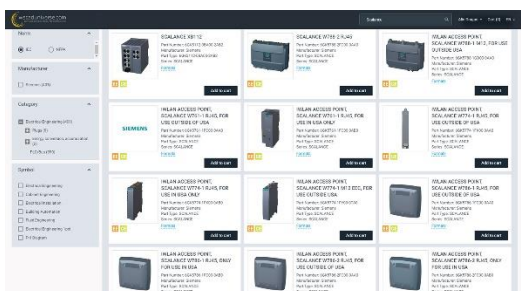
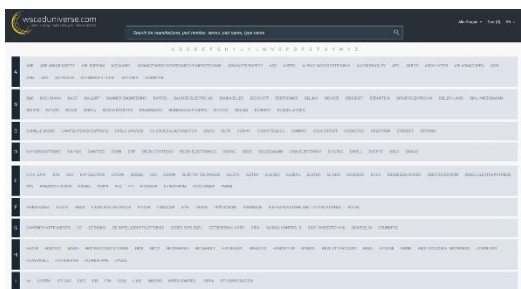


Image 1: wscaduniverse.com provides users with more than 1.4 million symbols and part data items from more than 360 manufacturers – online, up-to-date and free of charge.

Image 2: The electrical engineering solution from WSCAD ensures consistent digital electrical design by combining three elements: engineering, data provisioning and commissioning/maintenance.

Image 3: Intelligent quick search and filter functions respond to search terms entered in real time.

Image 4: Symbols and part data are either transferred directly from the WSCAD application to the plan or selected via the clearly laid-out display and downloaded using the shopping cart function.

The image(s) distributed with this press release are for Editorial use only and are subject to copyright. The image(s) may only be used to accompany the press release mentioned here, no other use is permitted.

About WSCAD

WSCAD is part of the Buhl group with more than 700 employees. WSCAD has been developing electrical CAD solutions for three decades. Customers include medium-sized companies, international corporations and engineering service providers. More than 35,000 users rely on WSCAD as their electrical CAD solution. The software is based on one core platform that covers six engineering disciplines: Electrical Engineering, Cabinet Engineering, Piping and Instrumentation, Fluid Engineering, Building Automation and Electrical Installation. Any change made to a component in one discipline immediately reflects in all the other disciplines saving time and raising quality. WSCAD methodologies for standardization, reuse and automation significantly reduce engineering time from several weeks to just a few hours or even minutes. At the same time, these practices also ensure a much higher quality of work.

wscaduniverse.com is by far the largest electrical CAD data library on the market offering over 1.4 million parts from more than 370 manufacturers. It is the only digital library that supports WSCAD, EDZ, DWG and 3D CAD data. Use and data provisioning is free of charge for all users and manufacturers of components and equipment. WSCAD also offers apps for mobile devices: maintenance engineers and service personnel are now able to scan components within the control cabinet by using the WSCAD Cabinet AR App. This way they get instant access to the schematics, device tags, part data, 3D views and even the original data sheets from the manufacturers. Building engineers can use the Building AR App on site to scan rooms and then edit the scanned floor plans in WSCAD for building automation and electrical installation.

The WSCAD portfolio is completed by eleven seamlessly integrated service offerings from WSCAD Global Business Services. Engineering and migration check-ups, consulting and training, digitization of paper

documents and conversion of third-party electrical CAD formats quickly help to shorten engineering times and increase productivity.

Press contact:

WSCAD

Zishan Shaikh

Tel: +44 (0) 203 966 2446 Fax:

Web: <https://www.wscad.com/>

Email: zishan@wscad.com

Address: WSCAD GmbH Dieselstraße 4 85232
Bergkirchen Germany

Editorial contact:

DMA Europa Ltd.

Kiki Anderson

Tel: +44 (0)1905 917477 Fax:

Web: dmaeuropagroup.com

Email: kiki.anderson@dmaeuropa.com

Address: Progress House, Great Western Avenue,
Worcester, Worcestershire, WR5 1AQ, UK