

Getting started



Getting started

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Introduction

You want to create great electrical designs. You want to meet client demands and do great work. You want the designs done on time, on spec and on budget. You want to take your innovative product ideas to market faster than anyone else.

But there are barriers.

Professional electrical CAD software is often far too expensive and weighty for smaller, nimbler electrical design houses. Using generic, 2D drawing software makes amending designs time-consuming and errors hard to spot. Pen and paper-based design adds unnecessary steps to the design process and leaves designs open to damage or misplacement.

Breaking down barriers

At RS Components and Allied Electronics we're committed to providing professional engineers with the tools and resources they need.

That's why - supported by Schneider Electric, the global specialist in energy management and automation - we created DesignSpark Electrical.

This free electrical design tool provides access to the functionality of electrical CAD for businesses that in many cases cannot justify the price tag of thousands of dollars per seat for existing commercial electrical CAD software.

Getting started

This Getting Started Guide is designed to help you get to grips with the DesignSpark Electrical software quickly. You'll find information on setting up a project, adding in components and placing parts orders, all from within the software.

We hope this guide helps you quickly recognise the benefits of using DesignSpark Electrical. We anticipate you'll switch to new ways of working as soon as you get acquainted with this powerful design tool.

DesignSpark Electrical

What is DesignSpark Electrical?

DesignSpark Electrical is a fully-specified electrical CAD tool that allows electrical designers and automation experts to design electrical systems for control panels and machinery.

This proven CAD system is designed to provide you with enterprise-level electrical CAD functionality. It enables you to design more quickly, accurately and effectively and provides the capability to create synoptic/single line diagrams, schematics and 2D panel layouts.

As a professional design tool, DesignSpark Electrical includes a comprehensive set of specialist electrical design tools, an integrated parts library and the option to purchase by linking your Bill of Materials (BoM) directly from the design interface to the RS online website.

Is DesignSpark Electrical for me?

If you're an electrical design engineer, or regularly design 2D panel layouts, DesignSpark Electrical is for you.

DesignSpark Electrical is the perfect solution if you're looking for a professional alternative to paper-based designing or mainstream 2D CAD software.



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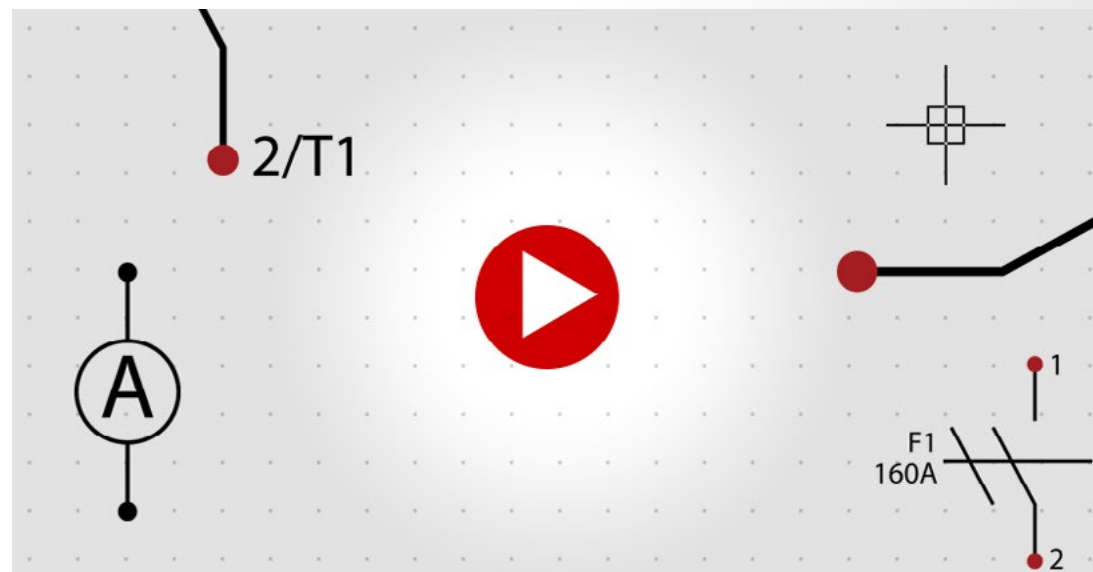
First steps with DesignSpark Electrical

First steps with DesignSpark Electrical

To help you start using DesignSpark Electrical as quickly and effectively as possible, we've produced a Quick Start Tutorial, available on our YouTube channel.

Watch the **Quick Start Tutorial video** now or visit the Automation section of designspark.com

To support the Quick Start video, this document will also cover how to start a project, adding your first components and numbering wires and components.



First steps with DesignSpark Electrical

Starting your first project

Upon opening DesignSpark Electrical you will see the Projects Manager.

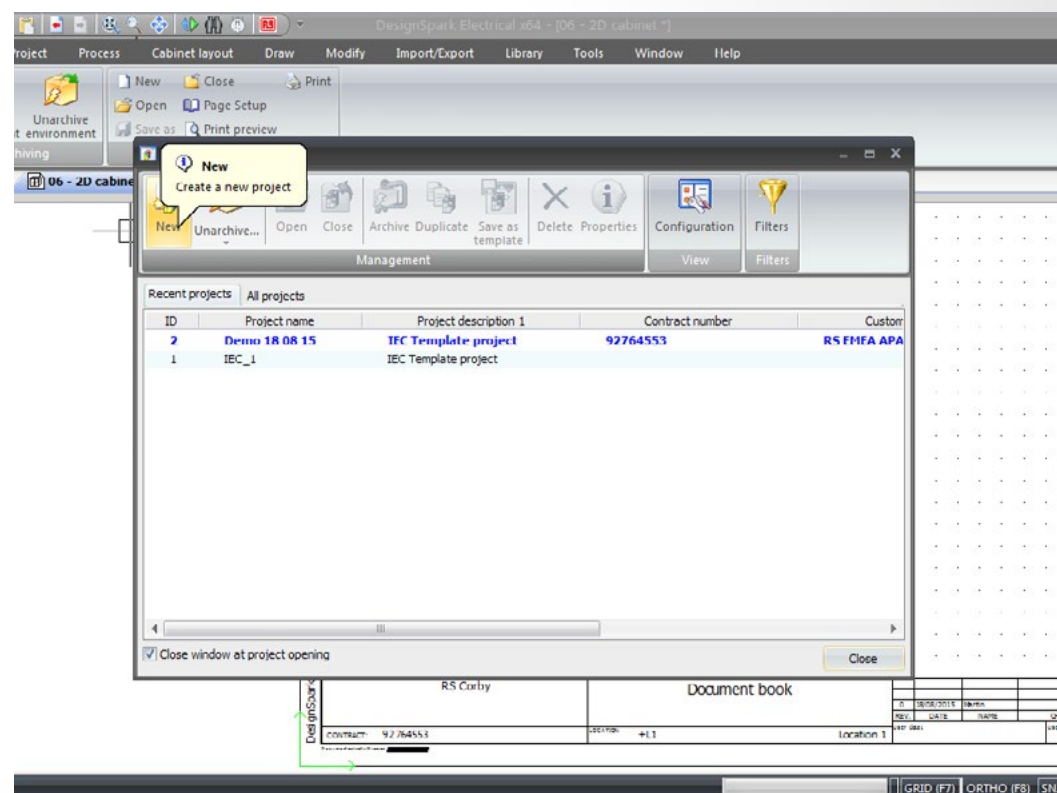
To create a new project, select **New** from the toolbar.

Choose a template from the default selection or opt for an empty project and set your own configuration.

Any created project can be saved as a template for future use.

Next, choose a project language from the options. There is a dual language capability if two languages are required. The language for the user interface can also be configured in the software settings.

The project menu also allows you to add details, such as contract number or customer details which will then appear in the project pages.



First steps with DesignSpark Electrical

Starting your first project

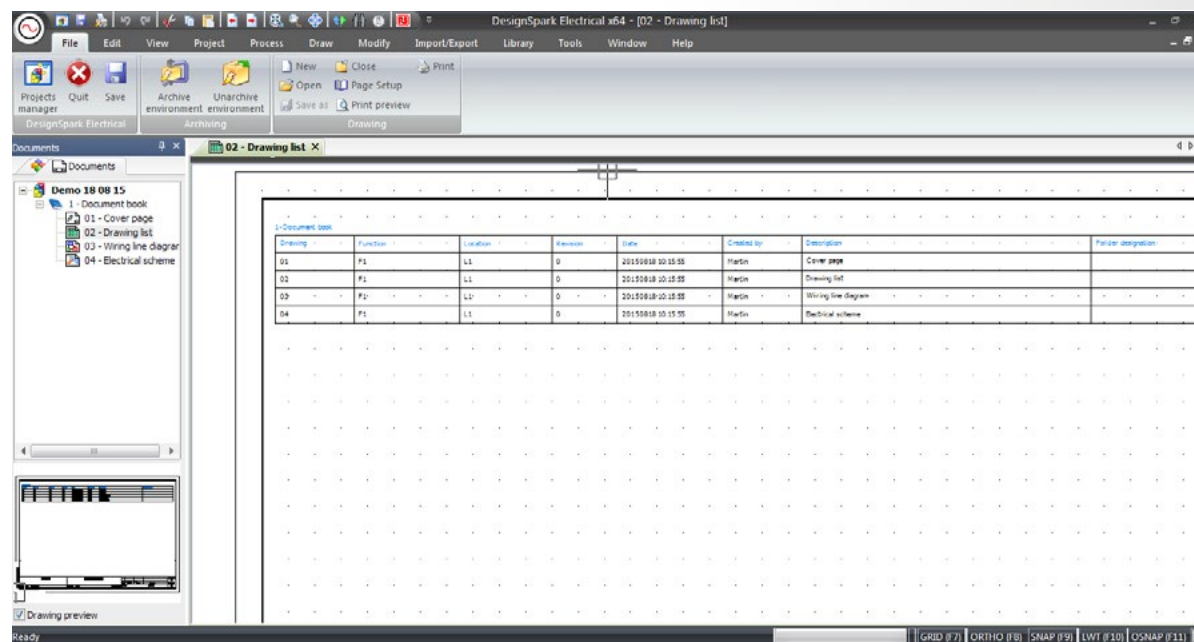
After creating your project you will see a document book on the left. Expanding this document book will show the four default page types. These are:

- Cover Page
- Drawing List
- Wiring Line Diagram
- Electrical Scheme

Additional pages can be added as needed by right clicking on the book or any page and selecting **New**, followed by the type of page you want to add.

The Cover Page to your project will feature the details you entered when you created the project.

The drawing list will show the four initial pages and, when updated, will show the new pages you create.



First steps with DesignSpark Electrical

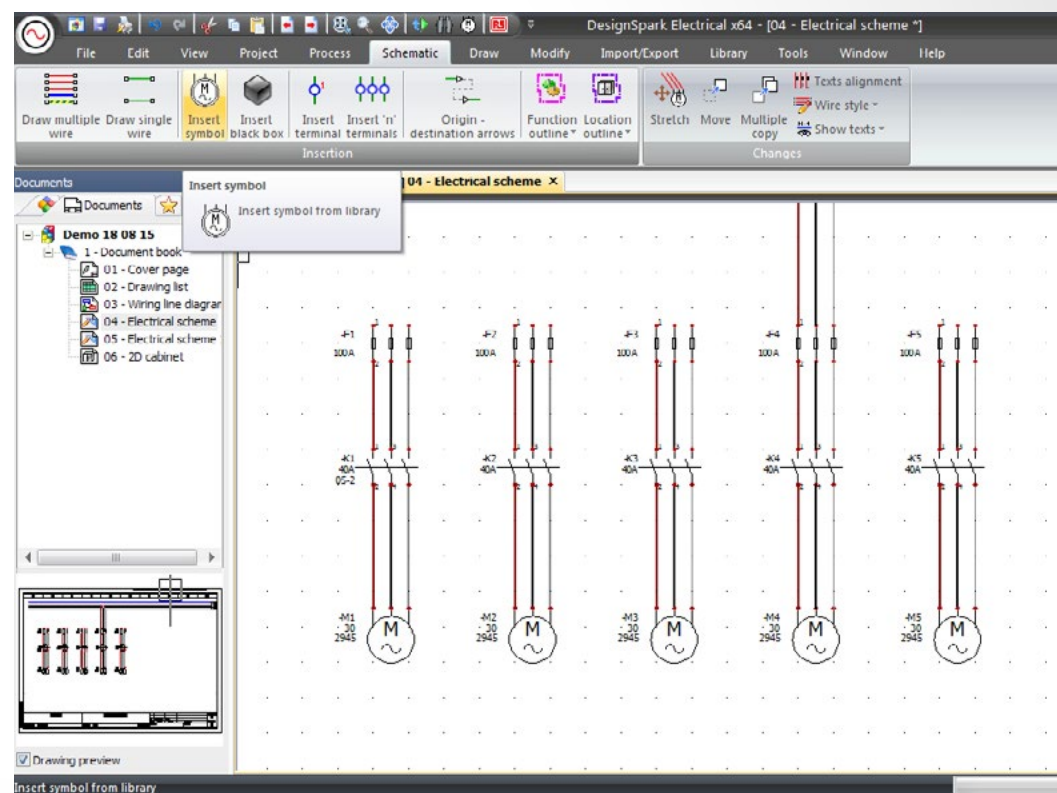
Adding components

Whether using schematic design or the wiring line diagram form (also called a single line diagram or synoptic) to build a design, simply select **Insert Symbol** from the toolbar to add devices and then connect them with cables.

The devices added will initially be generic, but can be easily converted to specific manufacturer's parts at any stage of the design process.

By right clicking on a part and selecting **Component**, then **Assign Manufacturer Parts**, you will gain access to the comprehensive integrated parts library. Here you can browse and search to find a suitable device.

You will see that as devices are added they will appear in the components browser on the left. These will be visible regardless of how they were added to the design.



First steps with DesignSpark Electrical

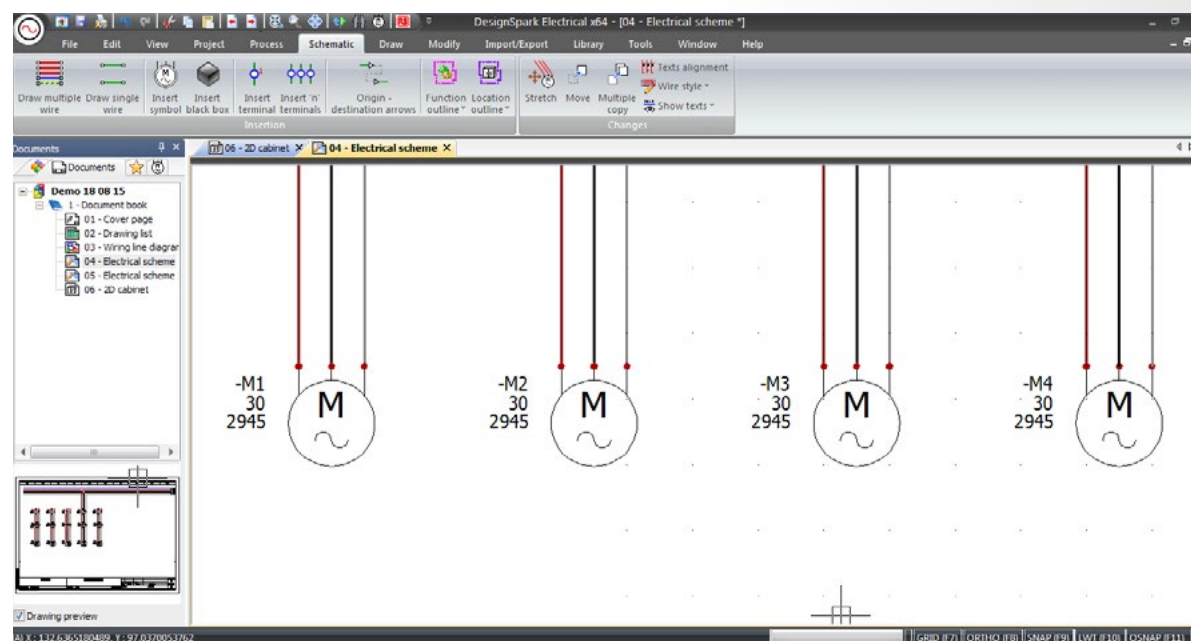
Numbering components and wires

As you add parts and cables on the wiring line diagram page, DesignSpark Electrical automatically assigns them each a number.

When placing the component, wire or device you will be prompted to select either **Automatic** (default) or **Manual**.

If you prefer to design in schematic form, you will see that, just as in the wiring line diagram, devices are allocated marks relevant to their function and are numbered sequentially as they are placed into the design.

The order of numbering can be instantly recalculated once the design is complete to present a logical sequence across the project.



Software features

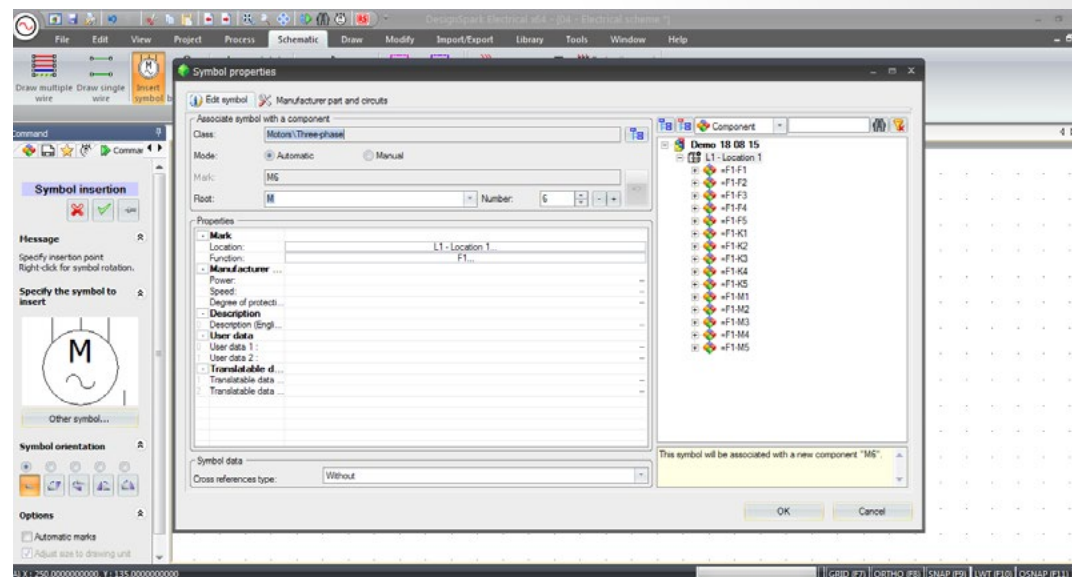
Software features

Automatic component and wire numbering

This is one of the most popular functions among our users.

Simple but effective, this feature cuts out the time-consuming manual numbering tasks that so many of you face when using 2D CAD drawing software or traditional pencil and paper design.

Simply add components, connect them with your desired wiring arrangement and DesignSpark Electrical automatically assigns a numbering scheme.



Software features

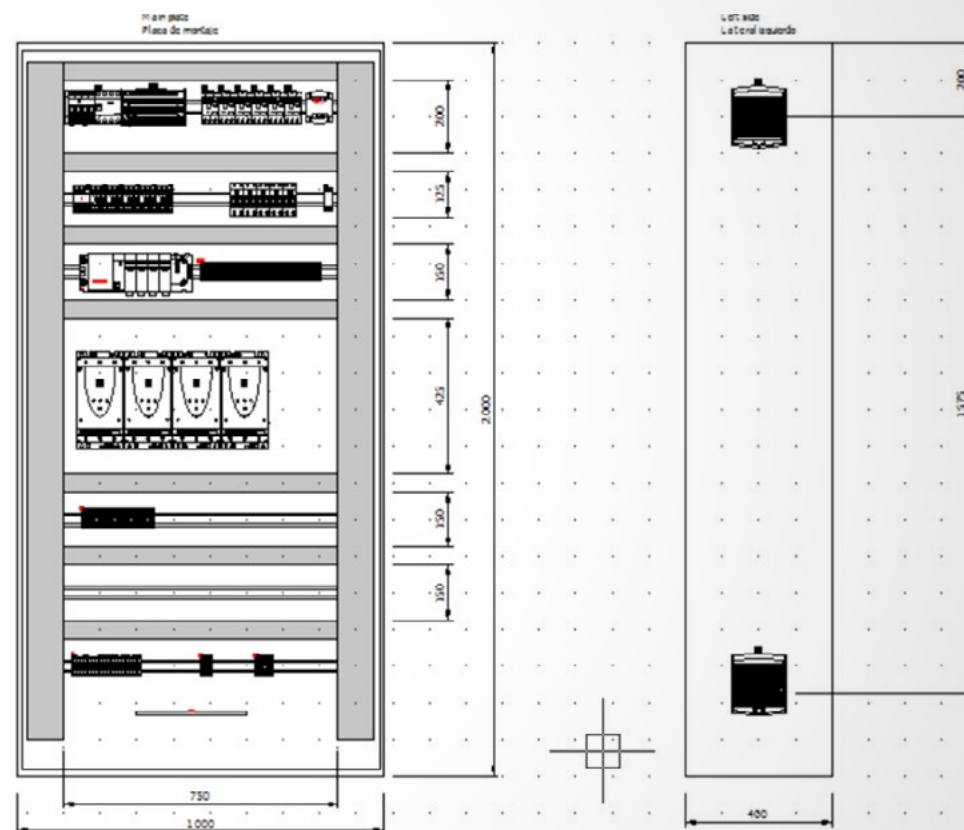
Accurate 2D panel creation

With DesignSpark Electrical you no longer need to guess the size of 2D panel required for your design, or even wait for the parts to arrive, then lay them out and measure round them.

DesignSpark Electrical provides you with the capability to produce accurate, scaled and dimensioned 2D panel layouts alongside your schematics and reports.

In fact, a range of cabinets, rails and ducting from a number of well-known manufacturers are available in our extensive parts library. So, you can quickly and easily add real products with accurately represented dimensions into your designs.

Find everything you need to create the perfect 2D panel within DesignSpark Electrical by selecting the 2D panel layout feature, assembling your design and then accessing the parts library.



Software features

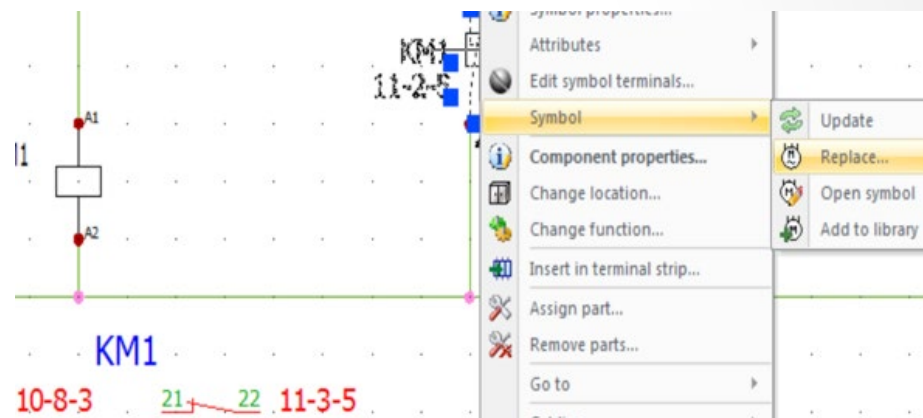
Specialist automated electrical design features

The real-time referencing and validity checking feature is all about cutting time spent fixing errors in your designs.

Unlike 2D CAD solutions, or traditional paper-based designing, DesignSpark Electrical constantly verifies your design in real-time to make sure it works.

Every component, every wire, every connection - DesignSpark Electrical will let you know everything is working as you design.

This stops any unnoticed errors causing problems late in the design process and helps you work faster, more effectively and with greater efficiency.

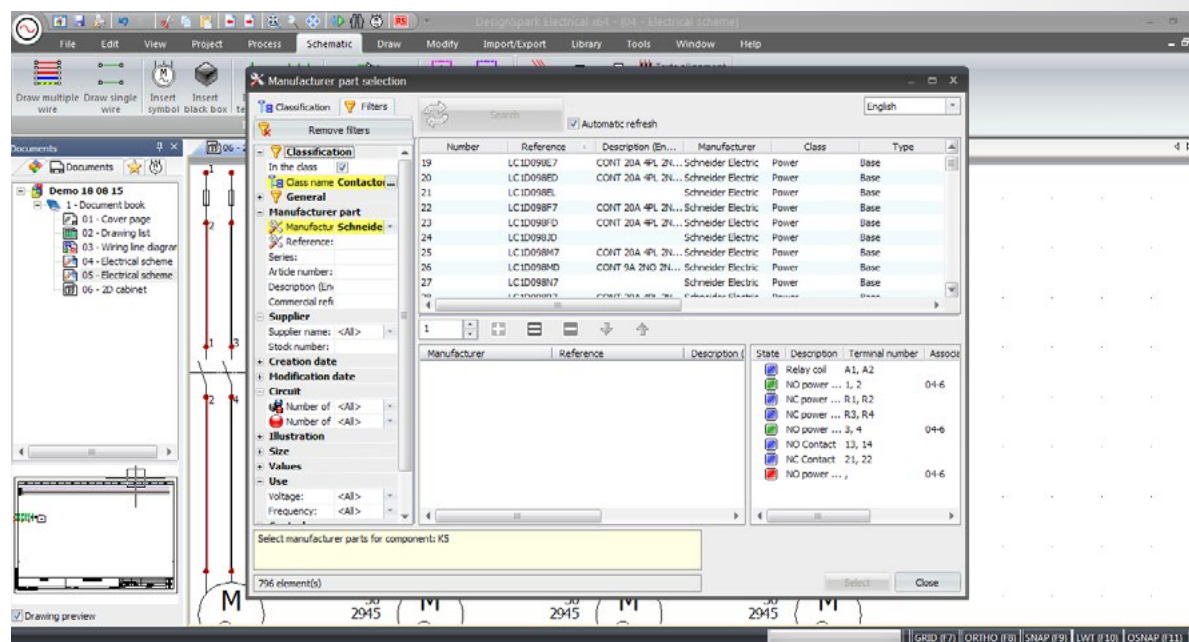


Software features

Online parts library

DesignSpark Electrical is equipped with a library of over 250,000 parts, available on or offline, allowing you to quickly and easily select the parts you need.

You can choose parts from a range of manufacturers, including over 80,000 from Schneider Electric, and the library is regularly updated to include any new products.



Software features

BoM quote function

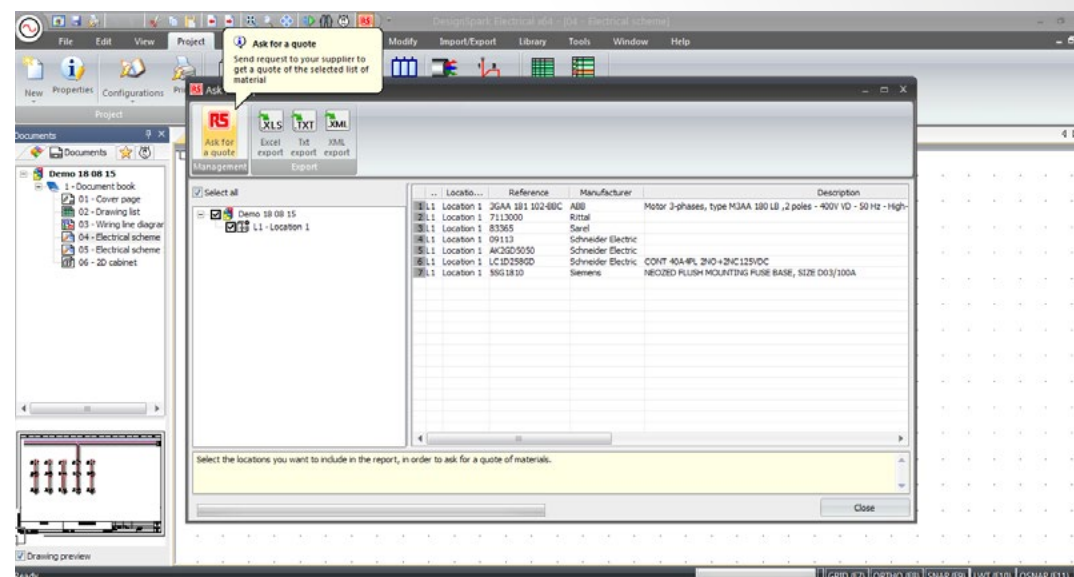
One of DesignSpark Electrical's most popular features, the Bill of Materials (BoM) function, is invaluable to professional electrical engineers.

Gone are the days of manually putting together a parts order for your designs. DesignSpark Electrical automatically generates a complete Bill of Materials as you design. Each part added will be listed in the BoM showing manufacturer and part number details.

The BoM can be used in conventional purchasing channels or can be sent directly to the RS website. Here the user would be presented with real time pricing and availability of parts for the opportunity to purchase immediately.

This function saves countless hours and time lost through wrongly sourced parts.

Plus, if you want to build your cabinets in 3D you can use the part numbers listed in the DesignSpark Electrical BoM to access 3D models through DesignSpark Mechanical, our powerful, free 3D modelling software. DesignSpark Mechanical is linked directly to an online library of 3D models which can be downloaded and assembled to illustrate your designs.





FAQs

Q. What file formats are used by DesignSpark Electrical?

DesignSpark Electrical saves all its drawing files in DWG format. All database information is saved in a unique SQL format.

DesignSpark Electrical can open any DWG file up to the 2010 release without requiring conversion (please see '**Can we import DWG files into DS Electrical?**'). Bills of Materials can be exported as Excel, text or xml formats (in addition to the direct online link to the RS website). Drawings can be exported as DWG or PDF formats.

Q. What happens if a drawing file is lost or corrupted?

Although it is unlikely to happen, you would not even notice a lost or corrupted file.

DesignSpark Electrical is an engineering tool and all its data is saved within an SQL database. Any lost or corrupted drawing file would be automatically recreated.

Q. How does DesignSpark Electrical interface with DesignSpark Mechanical?

DesignSpark Electrical produces a Bill of Materials with related part numbers. These part numbers can then be used in DesignSpark Mechanical to call down 3D parts into the design from the online parts library.

In this way a 3D cabinet layout can be created, for example, by arranging the imported parts in the 3D tool. If a 2D cabinet layout is sufficient then this can be created within DesignSpark Electrical.

Q. How does DesignSpark Electrical interface with the Product Data Library?

Essentially, the Product Data Library (PDL) gives access to all available data for a huge range of parts.

If you need additional information about a part to allow you to complete your design, please access the PDL.



FAQs

Q. Can I import DWG files into DesignSpark Electrical?

Yes you can. If you want to introduce drawings into your project, such as details of non-electrical items, these can be imported as symbols or 2D footprints using the Library function in the tool.

However, existing electrical schematics imported as DWG files would not have the intelligence to benefit from the features in DesignSpark Electrical. Our recommendation is to create new drawings using the old drawing as a guide. With the specialist electrical design features in DesignSpark Electrical this can be done quickly and easily.

Q. Do I need a license for DesignSpark Electrical?

No, you do not. DesignSpark Electrical is available to download, at no cost, from designspark.com

Q. Can I integrate DesignSpark Electrical within our IT system?

Yes, you can. All data is saved within an MS SQL server database enabling easy linking with existing standard procedures. In a multi-user environment, projects can be archived to a central server where all team members can access files and thereby maintain a central library of verified work.

Q. Can I install DesignSpark Electrical on more than one computer?

Yes. You are able to install the program on up to six concurrently operating machines per user. The registration and installation systems will track the number of machines on which the software is installed and will automatically limit the number. Repeat installations on the same computer will not be counted as part of that number. Any attempt to override this limitation will result in user rights being withdrawn.

Q. Is DesignSpark Electrical a multilingual package?

Yes. Both the project content and the user interface can be configured to display in a range of languages. It is even possible to select more than one language to display in the project.

Also from us

Put innovation back at the heart of your design process

Our unique suite of tools and resources are custom-built to help get your big ideas from concept to prototype faster than ever before.

Perfect for product developers and electronics engineers, our tools give you back the time to indulge your passion for world-changing design.

Download our free and unrestricted suite of rapid prototyping tools at designspark.com



Our highly intuitive software gives you the power to quickly design and prototype in 3D without having to learn complex CAD packages.



Packed with powerful features for schematic capture and PCB layout, DesignSpark PCB gives you the power to rapidly prototype your amazing designs.

Toolbox

Engineers need to access design reference any time and anywhere. That's why we've created the Toolbox App so you can have the tools you need, right in your pocket.

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