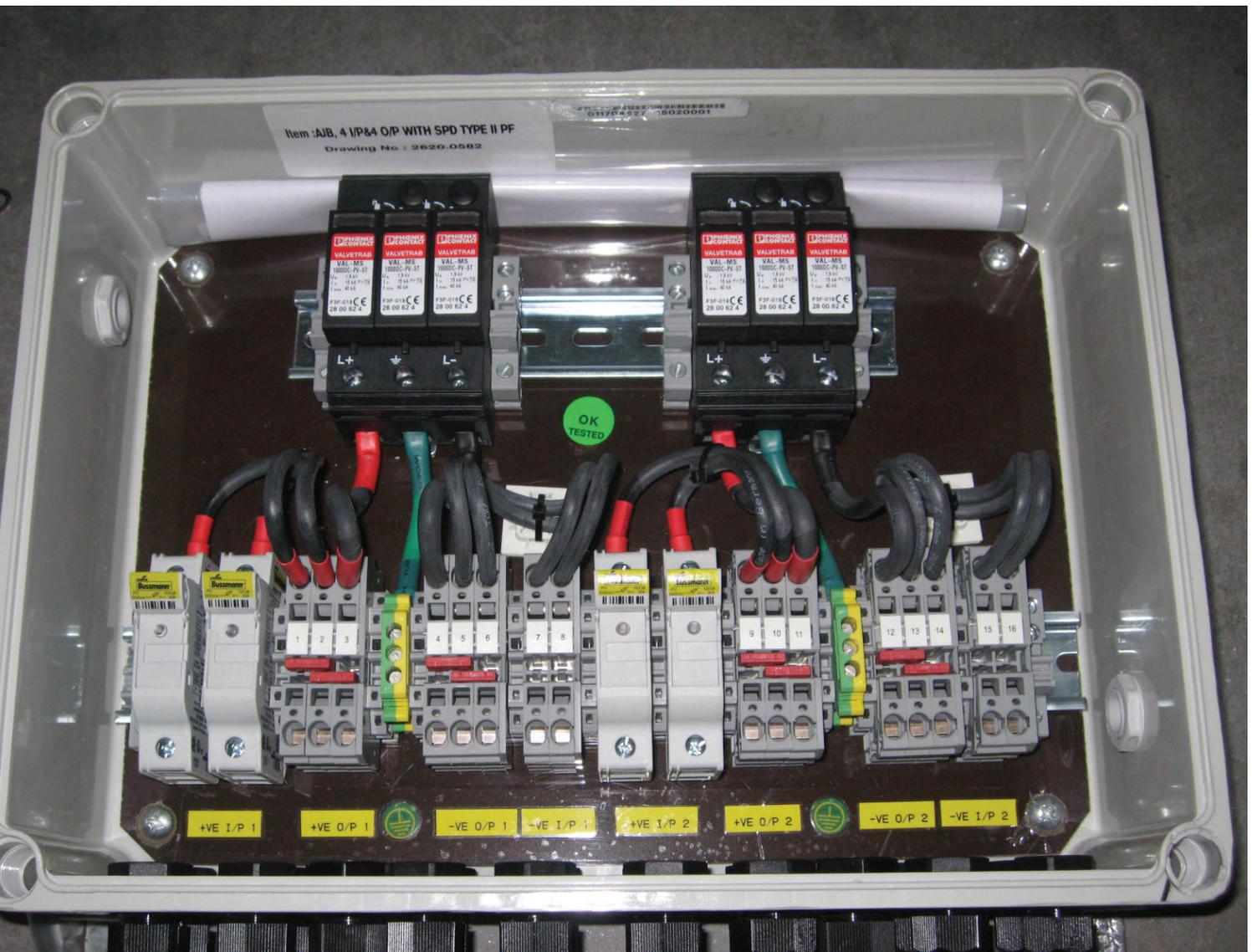


TRINITY TOUCH INDIA PVT. LTD.

IMPROVING SOLAR PANEL CONTROL BOX DESIGN WITH SOLIDWORKS ELECTRICAL SCHEMATIC



Trinity Touch relies on SOLIDWORKS Electrical Schematic software to shorten development cycles, increase accuracy, and facilitate communication, enabling the electrical components manufacturer to emerge as the leading provider of high-quality solar solutions and components in India.

Challenge:

Select the right electrical control cabinet sizes and lay out electrical components more accurately and efficiently, with optimal space clearances for assembly.

Solution:

Implement SOLIDWORKS Electrical Schematic electrical design software.

Benefits:

- Cut electrical design cycles by 40 percent
- Reduced development costs by 30 percent
- Decreased design errors by 80 percent
- Shortened product time-to-market by 40 percent

Trinity Touch India Pvt. Ltd. has supplied high-technology, electrical, and electronic systems and components to the Indian market for more than 20 years. Headquartered in the United Kingdom, Trinity Touch operates development and manufacturing facilities in India, which supply high-quality products to the transportation, shipping, energy, refinery, petrochemical, machinery, and processing industries.

While the electrical systems manufacturer has supplied a range of electrical systems, cabinets, enclosures, and accessories in the past, Trinity Touch has recently emerged as the leading provider of high-quality solar solutions and components in India. The company has grown to become the market leader in the development and production of solar string monitoring units, solar plant monitoring software, and world-class weather sensors for the solar power industry. To date, Trinity Touch has supplied more than 1,200 MWp of solar solutions to the Indian market.

Until 2013, Trinity Touch used a combination of AutoCAD® 2D design and EPLAN® electrical design software to create electrical layouts and schematics for its control cabinet designs. However, due to a lack of local support, the firm was unable to fully leverage these tools and continued to search for a better solution, according to Design Engineer Gaurav Sharma.

“Our primary challenges involve selecting the right electrical control cabinet sizes; laying out electrical components more accurately and efficiently, with optimal space clearances for assembly; and creating high-quality system schematics to support proposals and assembly documentation,” Sharma explains. “Our greatest concern was finding a solution that is easy to use and learn for new users, with active local support, so we could more efficiently use a single platform to create layouts, schematics, and related project documents.”

Because Trinity Touch’s mechanical division uses SOLIDWORKS® mechanical design software, members of that team recommended to their electrical design colleagues that they evaluate SOLIDWORKS Electrical Schematic electrical design software. After seeing a software demonstration and learning of the top-notch support provided by reseller IRIS Hightech Pvt. Ltd., Trinity Touch decided to standardize on SOLIDWORKS Electrical Schematic software to support its electrical design needs. The company chose SOLIDWORKS Electrical Schematic because it is easy to use, is compatible with SOLIDWORKS mechanical design software, and meets all of Trinity Touch’s electrical design requirements.

SHORTENING DEVELOPMENT CYCLES

Since implementing SOLIDWORKS Electrical Schematic design software, Trinity Touch has realized a range of productivity gains, including a 40 percent reduction in electrical design cycles, a 30 percent decrease in development costs, and an 80 percent drop in design errors. These accuracy and efficiency improvements have allowed the company to shorten time-to-market for its most recent product—the TRISOLAR TRICHEK 24 Input string monitoring box—by 40 percent.

“SOLIDWORKS Electrical Schematic software has enabled us to accelerate development by letting us quickly determine the best cabinet size to house selected components—based on customer specifications and finalization of the single-line diagram (schematic)—by providing the cabinet layout tools that we need to place 2D component footprints inside the cabinet while meeting assembly space requirements,” Sharma says. “Customizing the software’s symbol library to meet our needs was quite easy, and we were quickly able to use the Cabinet Layout toolbar to achieve substantial improvements in productivity.”



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— Gaurav Sharma, Design Engineer

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BETTER HANDLING OF DESIGN CHANGES

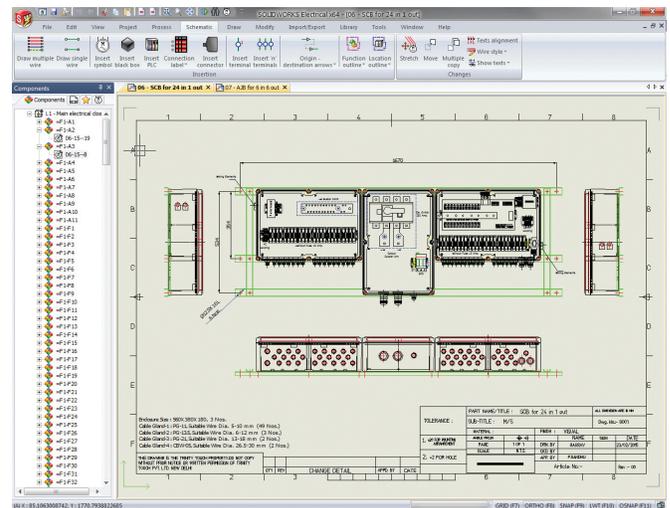
Not only has Trinity Touch shortened electrical design cycles by using SOLIDWORKS Electrical Schematic software, it can also leverage the software to expedite the handling of in-process design changes. "Our designs, such as the TRISOLAR TRICHEK 24 Input string monitoring box, change frequently, and SOLIDWORKS Electrical Schematic software makes it easy to make modifications, as well as reuse prior designs in new projects," Sharma notes.

"Using SOLIDWORKS Electrical Schematic software, we've cut drawing time in half—taking advantage of macros in the software to reuse or recreate a logic circuit, for example," Sharma continues. "Because it's so easy to use SOLIDWORKS Electrical Schematic software to make changes or copy a project, we're saving additional design time by standardizing on frequently used designs."

IMPROVED DOCUMENTATION FOR PROJECTS AND PROPOSALS

In addition to shortening development cycles and reducing drawing time, SOLIDWORKS Electrical Schematic software has allowed Trinity Touch to improve the quality and effectiveness of documentation for supporting project assembly as well as new proposal development. "The quality of our documentation—both for project assembly and new business proposals—has improved dramatically since we standardized on SOLIDWORKS Electrical Schematic software," Sharma stresses.

"The software has helped us speed up proposal documentation by quickly revising existing drawings to meet new business needs," Sharma adds. "It's also helping us save time in procurement through generation of bill of materials [BOM] information early in the development cycle."



Trinity Touch needs to make frequent changes to its designs—such as the TRISOLAR TRICHEK 24 Input string monitoring box shown here—and SOLIDWORKS Electrical Schematic software facilitates fast, easy design changes and design reuse.



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