Data Sheet

# PTC® Creo® Spark Analysis Extension

**Automate your clearance and creepage analysis**

## Electrical product safety is a necessity in today's competitive market. It is a growing challenge across industry verticals such as Automotive, Aerospace & Defense, and Electronics & High Tech, as more products now have mechatronic elements incorporated into their designs.

The smallest electromechanical design errors can cause circuit damage, overheating, and even fires or explosions. While companies must get products to market faster and more cost efficiently than ever before, they must also minimize the increasing risks of product failure and injury.

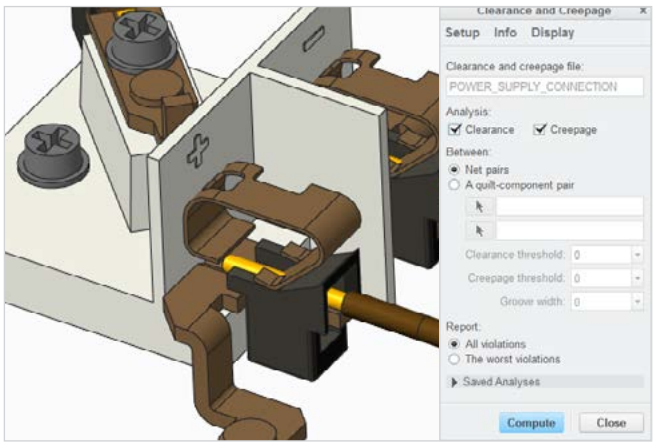
Electromechanical product safety is often plagued by inefficient design processes due to the use of "rule of thumb" design for safe electrical clearance and creepage distances. This often results in products that are over-designed, yielding designs that are too large, too expensive, or simply unable to meet space and performance requirements as the complexity of products increases. In addition, manual calculations are still frequently used to analyze clearance and creepage characteristics. These calculations are not only error-prone, but they become impractical as the number of components increases to over 1,000 or even 10,000 for products such as networking communications equipment. Thus, many companies rely either on time-consuming and expensive physical prototyping and testing or on less-rigorous analyses, which can result in costly field failures and product recalls.

Today, in order to streamline your design process to get winning products to market faster and ensure product safety, traditional clearance and creepage analysis methods are no longer suitable. The PTC Creo Spark Analysis Extension is the only solution that can help improve the speed and accuracy of your analysis.

With the PTC Creo Spark Analysis Extension, you can ensure product safety and optimize your electromechanical detailed design process.

### Key Benefits

- Automates electrical clearance and creepage analysis directly on the digital model
- Clearly identifies product safety issues
- Improves design quality by helping optimize designs for electrical product safety
- Saves time and reduces prototype costs
- Reduces production rework and scrap




PTC Creo Spark Analysis Extension helps you automate electrical clearance and creepage analyses of 3D designs.

## Capabilities and Specifications

### Easy-to-use, Automated Clearance and Creepage Analysis

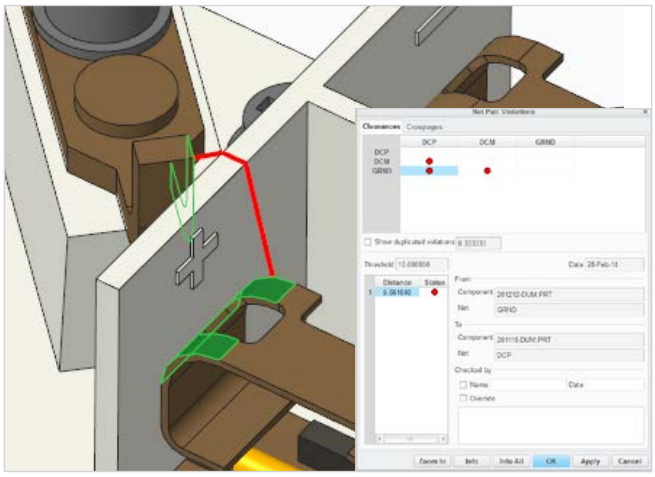
- Provides easy model setup
- Defines the minimum distances required to provide proper insulation
- Verifies that measured distances comply with clearance and creepage files for nets (a group of conductive components and/or quilts), components, and assembly quilts

### Model Setup

- Quickly define the conductivity of components by adding the Comparative Tracking Index (CTI) parameter to parts
- Temporarily colorize components and quilts based on the CTI to enable fast visual feedback
- Use Microsoft® Excel® to define nets and associated clearances

### Flexible Analysis

- Easily investigate violations in the results window; when a violation is selected, the path will be displayed in the graphics window to help the user better understand the failure



PTC Creo Spark Analysis Extension helps you easily identify product safety violations.

- Quickly determine whether a net has been analyzed, passed, or failed, or whether a failure has been overridden, by viewing the status of all nets listed in the results window
- Gain greater insight into design decisions; results that have been overridden automatically save the user name in the assembly, along with information that describes why the violation was overridden
- Save analysis results with the top-level assembly for design reviews

### Language Support

English, German, French, Italian, Spanish, Japanese, Chinese (Simplified and Traditional), and Korean

### Platform Support and System Requirements

For more information and system requirements, visit: PTC support page

### To Learn More

Visit: PTC.com/products/creo/spark-analysis-extension or contact your local sales representative.

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