



OpenUtilities[®] Substation

In One Solution, Unite 3D Modeling
and Protection & Control

SAVE TIME AND REDUCE PROJECT COSTS

When you adopt 3D modeling and intelligent substation design into your workflow, you can regain control of your schedule, as well as project costs, while producing better outcomes for your stakeholders.

OpenUtilities Substation combines intuitive 3D modeling, intelligent electrical design functionality, and automatic bills of material and report generation in an integrated, stand-alone application to help you get your project completed, approved, and online in the shortest possible time.

EASILY CREATE 3D PHYSICAL DESIGNS FOR GREATER ACCURACY AND ENSURED COMPLIANCE

3D modeling makes it easier for you to visualize and document substation plans, create accurate bills of material, and execute clash detection and clearance checking. Each object in the 3D model is linked to a shared parts database, which ensures all bills of material data fields are consistent for all users. Hook points are used to automate the placement of connected objects and to reduce cable connector placement time. Conductors are easily inserted using property-driven capabilities that account for cable sag, resulting in precise tabulation of cable lengths on bills of material.

INCREASE ACCURACY WITH ERROR CHECKING

As you create drawings, OpenUtilities Substation alerts you to possible errors to significantly reduce manual checking, improve drawing accuracy, and prevent costly corrections. Examples of error conditions include duplicated equipment tags, duplicated wire and circuit numbers, test switch contact over assignment, and relay input/output over assignment.

REDUCE REDUNDANT DATA ENTRY

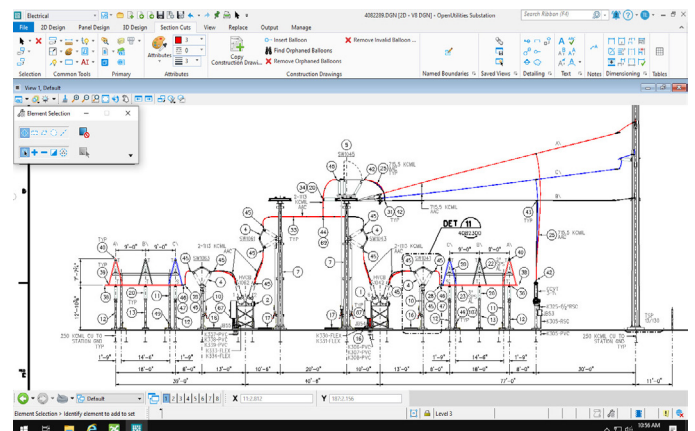
Redundant data often appears on substation deliverables such as AC/DC schematics and detail construction drawings. OpenUtilities Substation automatically synchronizes all of the changes you make to wire and equipment properties across all drawings and instances.

MAINTAIN AND ENFORCE STANDARDS

With OpenUtilities Substation, you can ensure proper application of organizational and project specific documentation standards. User roles can be implemented to control user-level access to system settings, project settings, equipment library management functions, and general editing functions.

VALIDATE BROWNFIELD PROJECT CONDITIONS

Successful brownfield designs require accurate site information. Existing design documentation can be out of date and might not match the actual conditions at the site. Now you can quickly incorporate a wide range and scale of point cloud data into your design environment. OpenUtilities Substation enables you to incorporate realistic, photo-textured 3D models or reality meshes to visualize, render, and measure point cloud data so you can improve your understanding of existing conditions to speed project dimensioning and modeling.



Automated Construction Drawing generated from 3D model.

SYSTEM REQUIREMENTS

MINIMUM: Windows 10 (64 bit), Windows 8.1 (64 bit), Windows Server2019 (64 bit), Windows Server2016 (64 bit), or Windows Server2012 R2 (64 bit)

OpenUtilities Substation At-A-Glance

GENERAL/SYSTEM FEATURES

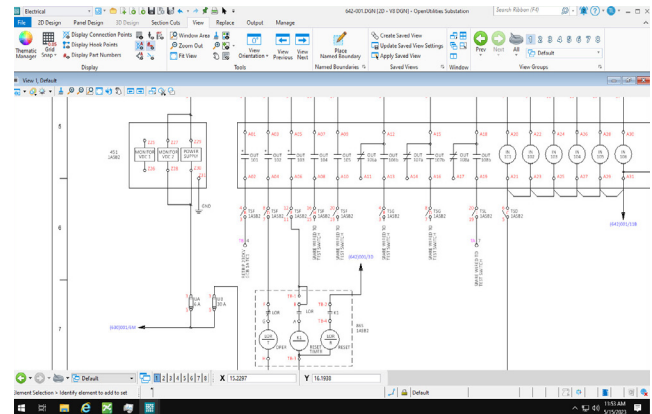
- ◆ Stand-alone product – no additional CAD software required
- ◆ Support for ProjectWise® Managed Workspaces
- ◆ One-click navigation
- ◆ iTwin® synchronization (share the design with a digital twin)
- ◆ Support for integrating and editing 2D raster drawings

PHYSICAL DESIGN FEATURES

- ◆ Create 3D models
- ◆ Generate 2D drawings from the 3D model
- ◆ Support for incorporating 3D reality models into your design.
- ◆ Intelligent objects linked to a parts database
- ◆ Hook points automatically align, rotate, and join related objects
- ◆ Automated grounding grid layout capabilities
- ◆ Conductor sag algorithms (spline and catenary)
- ◆ Lightning protection (rolling sphere method)
- ◆ Associative dimensions are placed in construction drawings. If an object is moved in 3D model, all dimensions associated to that object will automatically update in construction drawings.
- ◆ Associative balloon callouts (balloon numbers linked with bills of material item numbers)
- ◆ Dynamic views – 2D and 3D views both update dynamically when either is edited
- ◆ Dynamic section views

PROTECTION & CONTROL FEATURES

- ◆ Sample ANSI/IEEE or IEC electrical symbol catalogs included
- ◆ Sample manufacturers' parts databases
- ◆ Automated relay and test switch contact development charts
- ◆ Global find and replace wire property
- ◆ User-definable device tag formats
- ◆ User-definable wire level and tag formats
- ◆ Automated smart balloon callouts
- ◆ Panel layout mode
- ◆ Bills of material explorer
- ◆ Dynamic symbol text
- ◆ Automatic components alignment capability
- ◆ Automatic wire and page numbering
- ◆ Automatic project copy
- ◆ Page copy, rename, move
- ◆ Automatic device tagging
- ◆ Symbol creation wizard
- ◆ User-definable circuit macros and symbols
- ◆ Intelligent off-page wire references
- ◆ Automatic wire/line break and heal
- ◆ Automated circuit copy
- ◆ Wire crossing and connection preferences
- ◆ User-definable wire property display
- ◆ Catalog manager
- ◆ Cable manager
- ◆ Automated symbol rotation
- ◆ Real time cross-referencing across multiple pages
- ◆ Multi-user/multidiscipline collaboration
- ◆ Instantaneous real-time error checking



Protection & Control Schematic.

- ◆ Automatic shortest distance wire routing
- ◆ Forced wire routing
- ◆ Automatic wiring diagrams
- ◆ Import symbol graphics from third-party vendors
- ◆ Work order association
- ◆ Create or import work orders
- ◆ Associate work order with equipment
- ◆ Apply graphical styles to components of a work order
- ◆ Create work order bills of material and submit to purchasing
- ◆ Property-driven thematic display

DATA MANAGEMENT TOOLS

- ◆ Use Bills of Material Manager to quickly organize material lists, automatically assign item numbers, and manage electrical nameplate data
- ◆ Use Data Manager to find/replace/edit properties across multiple design files.

REPORTS AND DOCUMENTATION

- ◆ Automatic report generation
- ◆ Bills of material
- ◆ Wire list
- ◆ Wire labels
- ◆ Cable list
- ◆ Job costing report
- ◆ Field wire list
- ◆ Output reports to TXT, CSV, HTML, RTF, PDF, XLS, and MHT files
- ◆ Project publisher
- ◆ Report Template Designer (create user defined report templates)

SPECIAL UTILITIES

- ◆ Project builder