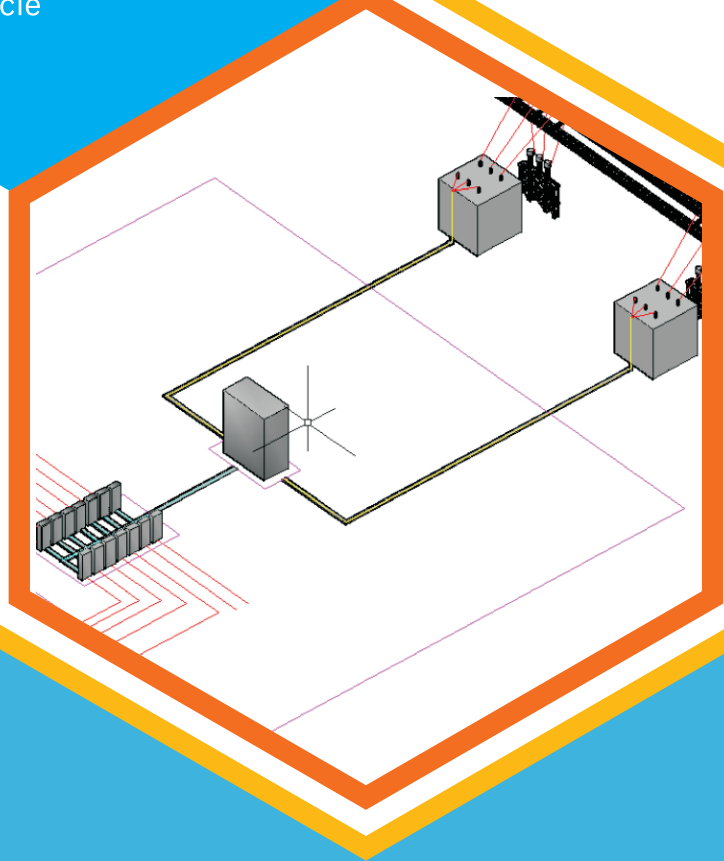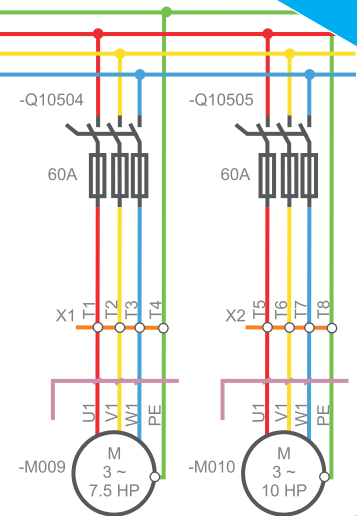# CADIS⬡N® Electrical Designer

ED

Electrical and Instrumentation
Engineering Design, Documentation
& Management for the Entire
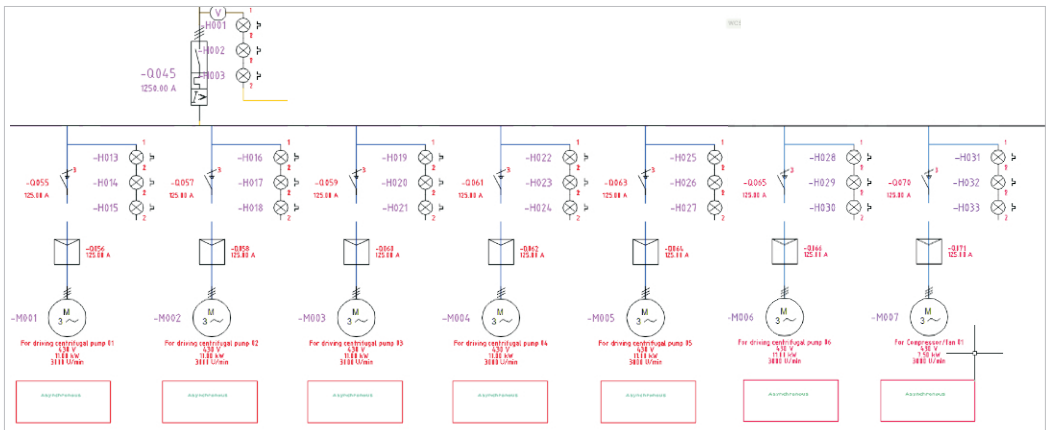Project Life Cycle

A comprehensive solution for Schematics (SLD, Circuit Diagram, etc.) & Control Design, Sizing Calculations, 3D Cable Trays, Conduits, Cable Trenches, Panel Layouts, Automatic Report Generation, Bill of Materials (BOM), and Material Take-Off (MTO).

CADISON® Electrical Designer - Electrical Designs, Schematics and Calculations Software

Built-in PDM, Revision Management

ETAP Interface

Cost Estimator

CADISON® Electrical Designer

Report Configurations

Sizing Calculations
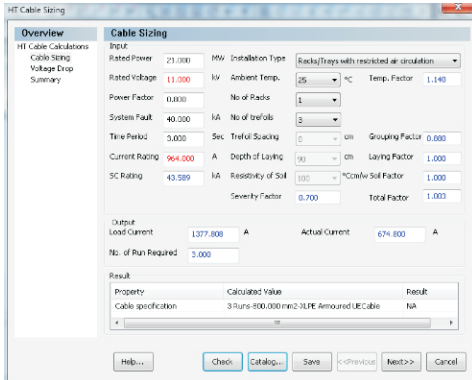
Integrated 3D Cable Trays, Conduits, Trenches

Key Features:

- Intelligent Schematics (SLD, Circuit Diagram)
- Engineering Calculations
- Automatic Device Tagging & Wire Numbering (KKS & ISA Standards)
- Automatic Terminal Drawing
- Quick Coil & Contact Cross Referencing
- Automatic Legend Creation
- Panel Layouts (2D/3D)
- 3D Cable Tray Routing and Conduits & Trenches
- GA Extraction from 3D Layout
- SLD Interface with ETAP for comprehensive Electrical Analysis and Simulation
- Automatic Reports Generation (Line List, Load List, Cable List, etc.)

Intelligent Schematics:

- Standard object libraries with more than 2000 symbols (DIN, IEC, ANSI, etc.) for creation of schematics
- Intelligent schematics and circuit diagrams based on inputs such as load list
- Automatic terminal drawings with field device information (wires, destination components, etc.) of all terminals along with 'To and From' connected objects
- Automatic generation of PLC schematics from I/O list
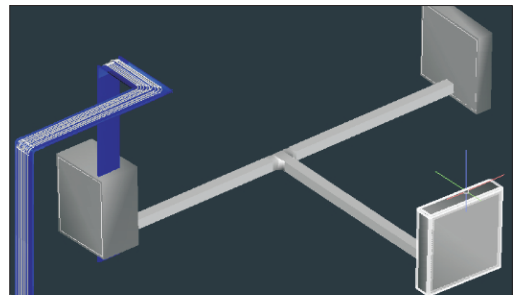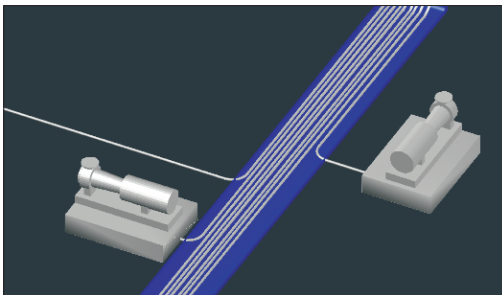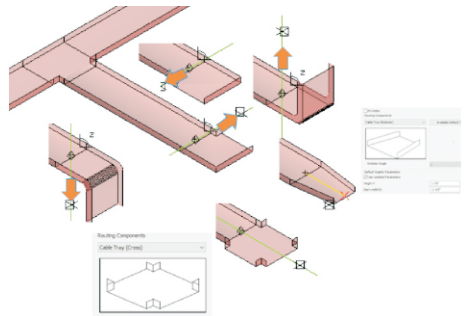- Numbering and identification system in accordance with DIN/KKS standards

Engineering Calculations:

- **Cable Sizing** based on user inputs such as rated power, rated voltage, load current, actual current and number of runs required
- **Transformer Sizing** calculates MVA rating and voltage drop of transformer as per IEC60076
- **Earthing Calculation** to calculate total earth resistance of a system
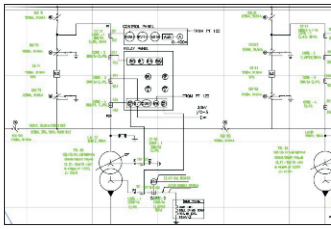- **Calculates capacity of UPS** (Uninterrupted Power Supply) and batteries as per IEEE 485 standard

3D Cable Trays, Conduits, Trenches & Panel Layouts:

- Create Conduits & Trenches analogous to existing Cable Tray or pipeline routing and Cable Trench Systems
- Create and modify the conduits with the new conduit components such as Straight segment, Tee & Cross etc.
- Space planning of components for 3D panel layout design using standard catalogs of panels/enclosures
- Accurate BOM for Cable Trays, Conduits, Trenches and Panel Layouts
- Intelligent extraction of 2D panel GA drawings from 3D model
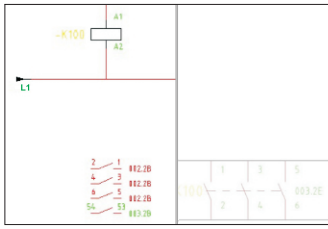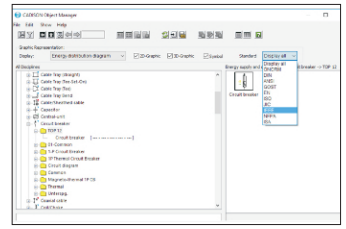

Automatic Reports:

- Configurable reports for the list of electrical input/output and automation components
- Considerable number of pre-defined report formats such as bill of materials (BOM), cable lists, cable tray lists, terminal list, wiring list, etc.
- Reports in MS Word, Excel, PDF formats at plant, machine, projects, drawing and object level
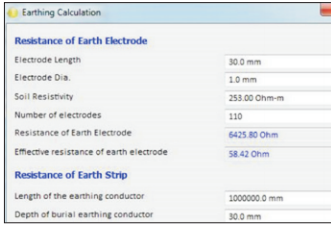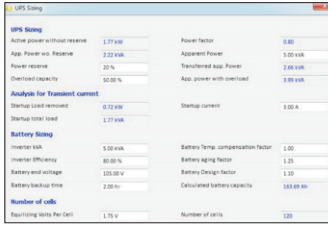- Multilingual report generation (Example: English, German)
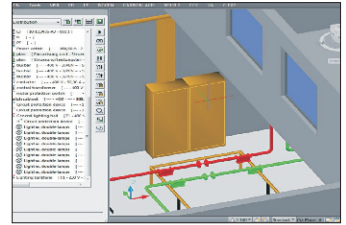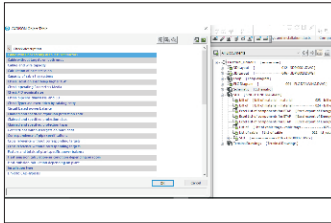
SLD

Cross Reference

Standards and Symbols

Earthing Calculation

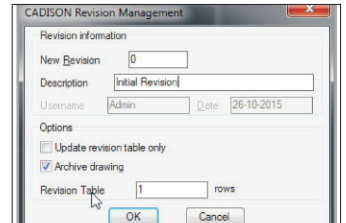UPS Sizing

3D Model and Layout

Quality Checks

Cable Tray Reports

CADISON Revision Management

Benefits:

- Single platform for schematics, calculations, 3D & 2D layouts, reports, etc.
- Built-in project/data access control and ability to define user rights
- Conceptual cost estimator with tree structure (work breakdown structure) with ERP Integration
- Sizing calculations (cable sizing, transformer sizing, UPS / battery sizing and grounding calculations)
- 3D layouts for cable trays, conduits, trenches & panel layouts, etc. (integrates with CADISON® P&ID Designer and CADISON® 3D Designer)
- Built-in version of Revision Control and Workflow Management
- Flexibility to customize reports to one's own company standards
- Built-in rule-based QA & Error Checking feature – 'Logic Analyzer'. (You can configure the Quality Checks)
- ETAP Interface for Short circuit and Voltage drop calculations