

## CAD standalone

Standalone electrical CAD, 2D and 3D, based on AutoCAD OEM 2025 64 bit.  
AutoCAD 2025 ".dwg" file format, with possibility to read and save as previous format.  
Functions for drawing editing: copy, move, delete, stretch, cut, cut, mirror, rotate and stretch.  
General functions for dimensioning.  
Powerful features for zooming, moving, aerial view and 3D view.  
Importing PDF vector files in the drawing.  
Full compatibility with CADElet and iDEA.

## Job orders

Job orders management, network projects sharing, backup and recovery.  
Saving, uploading, and sharing projects on EG Cloud, with the option to generate sharing links with other operators.  
Management of user profiles for conditional access to the common database and library.  
Configuration of graphical mode and diagram management.  
Portability of the project database on other work environments.

## Basic functionalities

Multisheet drawing system for managing an unlimited number of sheet; MDI for manage multiple drawings and diagrams.  
A lot of sheet type: title page, single-line, multiline, functional, cables and terminal blocks.  
Parameterization of reports according to IEC 61082-1, also by interactive wizard.  
Tracing of multi-wire lines, leads, drop line, bus, serial connection, parallel or T-junction, with the assignment of designation, color and wire section.  
Bundles of wires and equipotentiality bars.  
Dynamic connection of wires on symbol insertion.  
Identification with functional group and location according to IEC 81346; general functions to edit properties on filtered groups of components.  
Automatic positioning of topographic symbols in relation to typical entities; automatic attributes rotation.  
Editing symbols with access to the archives.  
List of sheets, copy, move and shift of sheets, revision

analysis on wiring diagram to size auxiliary power supplies.

## Symbols libraries

Library manager with advanced searching and sorting of symbols, creating groups, setting typical parameters, and automatic alignment during insertion.  
Comprehensive libraries of standard symbols according to CEI, IEC, DIN, ANSI/CSA, NEMA and P&ID.  
Library of symbols and cell in medium voltage.  
Library of symbols for pneumatic, hydraulic and heat engineering according to UNI.  
Standard symbols for security, fire alarm, intrusion detection and domotic applications.  
Wide library of 2D and 3D shapes of electrical equipments, cabinets, panels, ducts and installation details.  
Unlimited user library with wizard interactive for the creation of new symbols.  
Management of compositions of control points and accessories.  
Management of macro-symbols and typical sheet.  
Using universal symbols (black box) for functional groups or cards.

## Schema parameters and macro blocks

Management of global system parameters and schema-specific parameters, including the definition of derived variables.  
Generation of relationships and formulas between parameters, with the use of the results in managing and editing parametric macroblocks and attributes.  
Definition of dynamic parametric macro blocks with element visibility dependent on schema parameters.

## Fast Builder

Automatic generation of diagram on the base of a library of macro blocks with parametric and editable variables. Management of profiles of variables configuration. Multisheet diagram generation based on sequences of macro blocks, with variables acquired from .XLS file.

## Inspector

List of all components in the diagram and view of their properties.

tion index, global editing of titlebox.

Explosion of diagram, in order to split the multisheet and to obtain one drawing file for each sheet. Legend of symbols.  
Generation of .PDF files with the panels layout or the conduits system 3D model.

Power flow

Rapid localization of elements and editing of associated data.

## Plant drawing

Drawing of walls, doors and windows (2D or 3D), drawing of chimneys, niches, pilasters, pillars and columns. Automatic floorplan dimensioning.  
Definition of locals and interactive link with the symbols contained inside.  
Tables of locals, utilities, power loads, ...  
Labelling of conduits and layings representation according to IEC standard.  
Management of the minimum equipment on the plant according to CEI 64-8 or customizable.

## Drawing from pre-computation

Inserting on the plan of symbols related to the items required on the preliminary calculation.  
On-line check on the quantities already inserted and compared with expected quantities.  
Monitoring the amount of work in relation to the elements inserted in the drawing.

## Lighting calculation

Lighting calculation according to UNI 12464 e UNI 11826, with definable devices and their automatic layout on the floor plan.  
3D drawing of rooms with ISOLUX displayed on walls and horizontal surfaces. Check of illumination in direct mode or with more reflections on the walls.  
Large list of equipment, complete of photometric characteristics, extensible importing EULUMDAT and IESNA files.  
Report of calculation exportable to RTF files.

## Conduits definition

3D drawing conduits and rendering.  
Management of compartments inside the conduits.  
Assign materials and accessories of the conduit and list of the used materials. Table of sections and parts. Automatic determination of the optimal path for cables.  
Automatic threading of the terminal circuits with recognition of the connection diagrams.  
Reconstruction of path depending on the type of endpoint (control, socket or other).  
Verification of the packaging of the chosen conduit and filling check in according to the standard.  
Drawing details of laying of cables inside conduits.

## Electrical grid and units setup

3D drawing of electrical line distribution and assignment data about the units inside it.  
Check of consistency between laying of cables and conduit characteristics; management of multiple laid for a single unit.  
Automatic detection of length, conditions of proximity and laying of each conduit.  
Setup of electrical distribution and assignment of power loads and their electrical characteristics.  
Determination of the electric barycentre of loads according to standards.  
Labeling of units, representation of the installation details, table of cables.  
Identification of the laying method required, and summary table with the appropriate standard references.  
Bi-directional connection with Ampère (optional module, see Ampère Professional) for the electrical grid calculation.  
Automatic generation of single-line, multi-line or radial diagram as a result of the design in Ampère.

## Optional modules

**Ampère:** calculation of electrical grid.  
**Tabula:** bill of materials.

**Cablo:** wiring lists and connection.  
**Vario:** variations in diagram



### Networks and structured cabling

Setup of networks of structured cabling, alarm, EVAC, fire protection and video surveillance. Marking cables and terminations in accordance with IEC 11801. Definition of generic auxiliary networks, TV / SAT and machine cabling. Automatic recognition of conduits paths and filling check on dedicated compartment.

### Variations during construction

Processing of drawing variation, for comparison between states of the project and extraction of data for the computation of the variation.

### Blocks diagram

Management of the block diagram of the system. Automatic generation of the panels block diagram as a result of an Ampère project. Automatic layout generation of photovoltaic system as a result of a Solergo project.

### Symbols marking

Automatic symbols marking according to CEI EN 81346-2 e 61346, CEI 3-34, IEC 750, with consistency checks in real time. Setting of marking parameters (letter, function, location, sheet, row, column, index). Creation of user marking profiles.

### Cross reference

Automatic drawing of cross references among assembled elements in the diagram. Semi-automatic drawing of cross reference labels.

### Interconnection diagram

Block diagram of the interconnections among the various locations. Definition of bundles of cables and their connection to the terminal blocks defined in (interconnection diagram).

Definition of cables belonging to different bundles and their labeling. Check of consistency and orientation between cables and terminal blocks. Bidirectional connection with P&ID diagrams or other interchange file with list of equipments.

### Wire numbering

Automatic (real time) (up to 30 sheets), semi-automatic or manual numbering of connection wires. Wire analysis with recognition of phases and levels of device crossing. Equipment recognition, numbering of wires and clamps on a single-line diagram and parametric constraints with indications of the phases. Cross-reference of wires on different sheets.

### Terminal boards and connectors

Database of terminals and connectors (modular also) with over 1800 items from leading manufacturers. Automatic drawing by fence line or box and terminal numbering. Marking of terminal boards and editing of terminals numbering. Localization of terminals and connectors with automatic navigator. Automatic drawing of terminal blocks and connectors. Connection diagram between terminal blocks and components.

### Panel layout

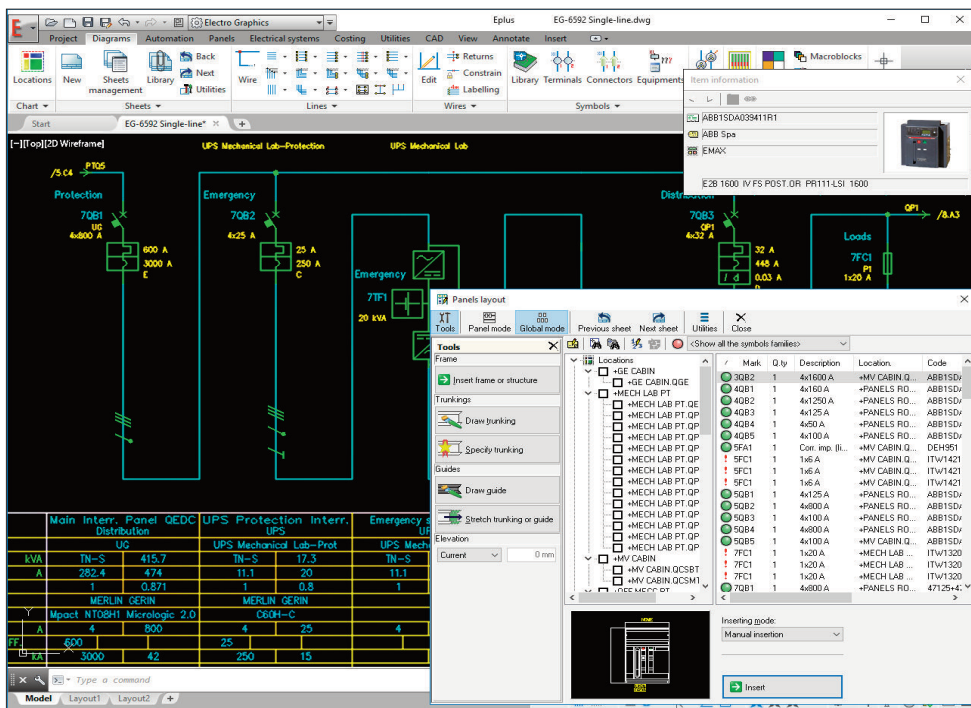
Database of carpentry and panel accessories. Drawing guides and conduits with calculation of the

length.

Arrangement of the component shapes of on the bottom plate, panel or door, with search and filter aid. Automatic insertion of shapes on DIN guide. Automatic generation of front and rear button panels and drill plates of panels. Automatic dimensioning and 3D representation. Generation of .PDF files with the panels layout or the conduits system 3D model.

### Database

Access to database in client / server mode, with a powerful search and filtering engine. Possibility of using alternative database engines, with support of SQL database servers (SQLite, MySQL or SQL Server). Managing databases in client/server mode. Stock materials database with more than 170,000 basic articles. Importing files in standard Metel@pro



### Panel thermal test

Calculation of overtemperature in the cabinet according to CEI 17-43. Verification with forced ventilation or air-cooling and calculation of air flow and power removed. Control of the working temperature limit on components inside panel.

### Multi-sheet printouts and PDF

Printing of diagram sheets or saving as PDF. Jump between command / referred elements or wire references in the diagram saved as PDF. Generation of a single technical report in PDF including diagram and attached documents with hyper-text links.

### Translation

Automatic translation of texts on drawing in several languages that can be optionally displayed and interconnection with Microsoft Translator. Dictionaries, each one with several languages, provided by thousands of translated texts. Custom dictionaries. Unicode text handling. List of the untranslated words in a temporarily dictionary for later translation. Using the dictionary as an archive of sentences, to be included as descriptive texts on the drawing. Generation of PDF files of the diagram translated into multiple languages, with choice of the language to be displayed.

vided by manufacturers and distributors of electrical material. Database with more than 5,000 items of cost feature. Database with more than 1,900 standard equipments (auxiliary and power contactors, relays, buttons, etc.). Database with more than 12,000 cables and 6,000 types of conduits and pipes. Database with all electrical characteristics of more than 93,000 devices (switches, fuses, breakers, etc.) and busbars. EGData Exchange: tool for the selective download and importation of data packages, classified by manufacturer and series, to update and enhance all database.

### Materials table

Summary table of the used materials, with customizable format. Bi-directional connection with Tabula (optional module, see Tabula), for the management of Bill of material.

### AutoSheet

Wizard to create a multisheet diagram assembling drawings previously developed, with preview of the new project. Managing sheets sorting, components marking with check and resolution of any conflicts.

### ViewSheet

Viewer of multisheet diagrams with possibility to print or save as PDF.