2022 Series Update 1

This package includes all updates for Electro Graphics products 2022 Series.
Following a description of the new features and corrections.

CADelet, iDEA, Eplus

Units diagram

• Fixed failure to fill the following values in the table of the single-line units diagram:
- Thermal / LR adjustment range
- Temporary thermal / LR adjustment range
- Temporary short delay / CR adjustment range
- Temporary magnetic / IST adjustment range
- Temporary differential adjustment range / GT

• Fixed compilation in the table of the single-line units diagram of some negative power values relating to photovoltaic generators and modules (ex. Absorbed power *POTASS*).

Insertion of system symbols

Improved the automatic spacing of system symbols from architectural elements, during their positioning in a plan with xrefs.

Single-line general scheme

In the automatic drawing of the single-line general diagram (SGU command), the filling of poles and rated current is now reactivated in the *FUNCTION* attribute of the protections.

Aspect of the palettes

Aligned the aspect of the palettes, for example Sheet List pallete, in coordination with the color theme active in the CAD.

Cable representation on drawing and wire returns

Reintroduced the detection of the cables traced with the *CAVO* command in order to insert any wire returns.

Utility

The *CLEAN* command has been modified to also delete the wire and text layers not associated with valid sheets of a multisheet scheme. Such spurious layers could give rise to the insertion of random nodes by running the NODI command.

Wire constraints

Improved the management of parametric and automatic constraints in the case of identification by complete triad (function + location + abbreviation) of the diagram sheets.
- The new parameter *Sheet ref-mark* (% p) has been introduced; in the case of identification by complete triad of the diagram sheets, it allows to characterize the wire numbers with only the sheet reference data without the location and function values of the sheet.
- Improved the management of automatic constraints in the case of identification by complete triad of diagram sheets with particular configurations of customized numbering.

Terminals

Fixed anomalous cases of terminal numbering with active option *Terminal number = wire number*.

Translation of texts and attributes

Fixed the option *Keep the content of untranslated entries* working in Multilayer translation mode. Translation empty is now assimilated to an translation not available.

Duplicate sheets
Fixed an anomaly whereby executing the Duplicate Sheets command, in the Sheet List palette, and then canceling the function, however, some elements were duplicated in the current sheet.

Symbol legend
Adjusted the size of symbols with a scale greater than 1 in the symbol legend.

PLC
• In the operations of exporting and importing PLC data, to and from a spreadsheet, the pin data of the PLC boards in the project are now included. In the spreadsheet, the board pins are shown in the “Board Pin” column, separated by the ':' character.

• Fixed an anomaly in the automatic assignment of configurable operands, in the case of a mixed input / output configuration.

Cablo

Cable list (Cable started in CAD)
Fixed anomaly in the generation of the cable list in the drawing; the sheet change was applied even if the option of grouping by cable function was not selected.

Tabula

Multitasking
It is now possible to launch more instances of Tabula to operate on different projects at the same time.

Export of materials to spreadsheet
Fixed the synchronization between data and column titles, when exporting from the materials archive to a spreadsheet.

Search for articles
Fixed anomaly in the selection and research of the articles of the project.

Tables in CAD
Fixed the use of the language for the description of the articles during the update of tables in a drawing.

Ampère line

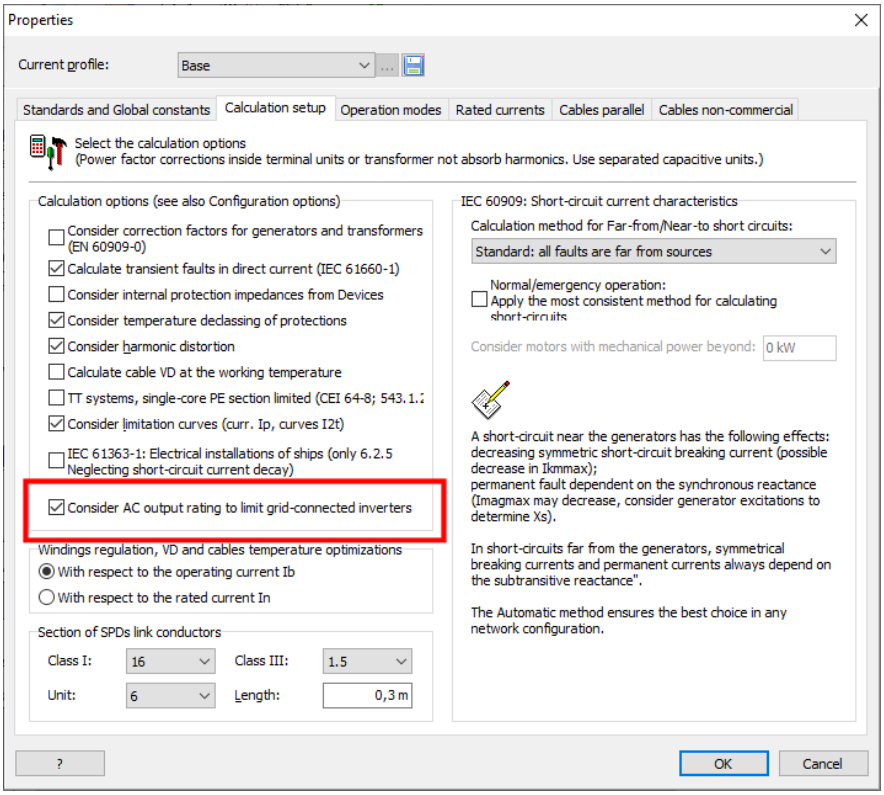
BT calculation
Fixed power propagation in sections of electrical networks with several groups of converters connected in parallel or in a ring.

Print on Pdf
Fixed anomaly on mesh printing on Pdf; the images representing panels and point of supply were printed as black boxes.

Capability curve
Improvements in the calculation of the capacity curve. In some situations, after calculating the curve, the asynchronous generators had zero currents, and therefore it was necessary to open the data windows to restore the correct value.

Photovoltaic system network
Photovoltaic panels and strings work at calculated voltages with respect to the voltage of the panels. If optimizers are present, the working voltage is calculated according to the maximum absorbed current.
It may be necessary to make a choice if there are loads that would impose different voltages under the same MPPT, therefore the last panel / string unit in mesh controls the voltage for all the units of the same branch. Furthermore:
- the software no longer checks if the working voltage corresponds to the total voltage of the panels;
- a note is inserted in the optimizer data, to highlight that the last unit under an MPPT controls the working voltage.
In order to keep up with the increasingly common practice of oversizing photovoltaic modules in relation to the maximum power of the inverters, the calculation option *Consider AC output nominal power to limit grid-connected inverters* has been added. This option can be set in the dialog Properties - Calculation setup.
When the option is selected, the total power (including all possible MPPTs) transferred to the AC side of an inverter is limited to the rated AC output power.

If the option is not selected, (default for old projects) the inverter limits the power that passes through each MPPT compared to the Maximum power PV recommended for MPPT. The sum of the contributions of each MPPT is limited by the maximum recommended PV power (total inverter parameter).
Remember that if the power of the photovoltaic field does not exceed the maximum values set by the MPPT and the inverter, the power transferred to the AC side of the inverter is equal to the power of the photovoltaic field applied for the efficiency of the inverter.



Protection calibration

Fixed anomaly for which protections with (non-calibratable) releases working as a function of thermal release (Ir), could not maintain the set calibration value, also reporting its maximum value. Added check to the Short delay, Instantaneous release and to the three residual current releases.

Selectivity verification

Fixed possible error in total selectivity verification if the option *Consider protections tolerances* is set; partial overload selectivity was incorrectly reported.

Printouts

Now you can open image files with .JPEG and .PNG extensions to add a logo to the headers of printed documents.
Wrong format file now does not generate an exception error.

EgLink

Data exchange

Facilitates the recognition of a transformer element: the type of part "*Transformer*" of the "*Electrical equipment*" family category is now correctly interpreted.

Routing

Improved the management of exclusions in the routing of utilities depending on the system to which they belong.
Restored the assignment of the typology Center load.

Solergo

Google Maps

Updated the handle of satellite images from Google Maps in Solergo in Windows 7 and 8.1 environments, following the end of support by Google Maps of the Explorer browser.

Storage system in AC

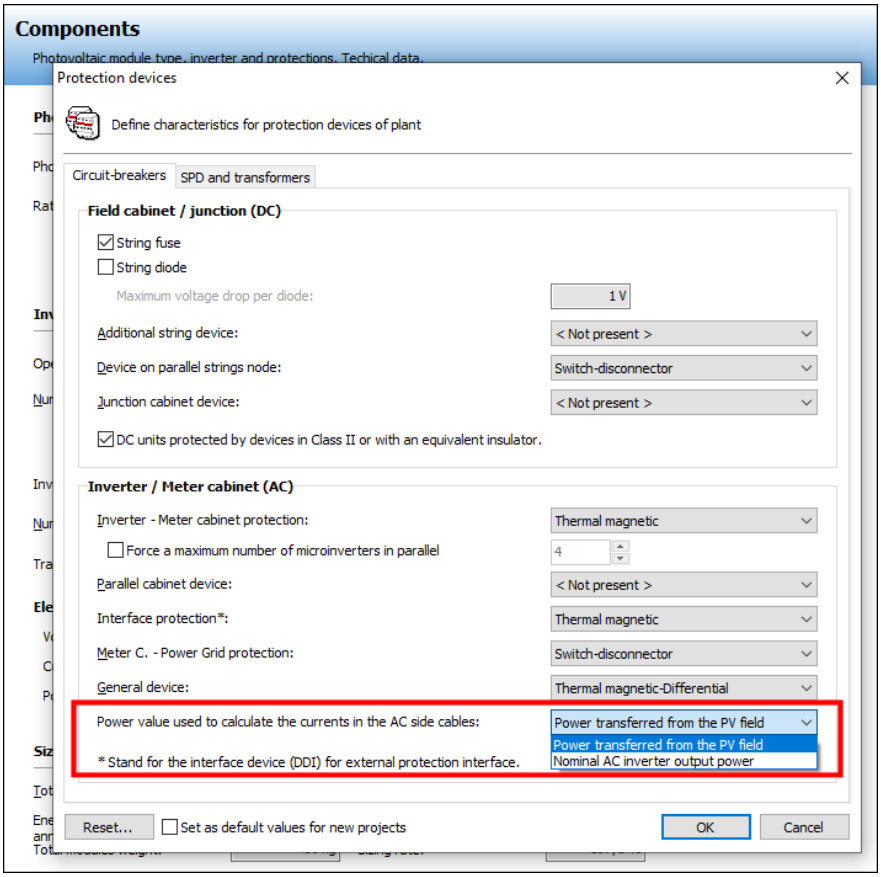
If there is a storage system on the AC side, the value of the total rated power of the system is now increased by the active power supplied by the storage.
If the storage system is installed on the bidirectional AC production side, the sizing of the cable and protection at the entrance to the measurement panel now considers the active power of the storage system.
No design changes for the storage systems installed on the post-production side.

Plant layout

Fixed anomaly for which, in some circumstances, the layout of the plant shown in the report document could differ from that displayed in the graphic editor.

Calculation of the current upstream of the inverters

In order to keep up with the increasingly common practice of oversizing photovoltaic modules in relation to the maximum power of the inverters, you can now choice the method for calculating the AC current upstream of the inverter. The choice can be set in the Protection devices dialog (Components page) and the possible options are:
- *Nominal AC output power of the inverter* (default for new projects)
- *Power transferred from the PV field*

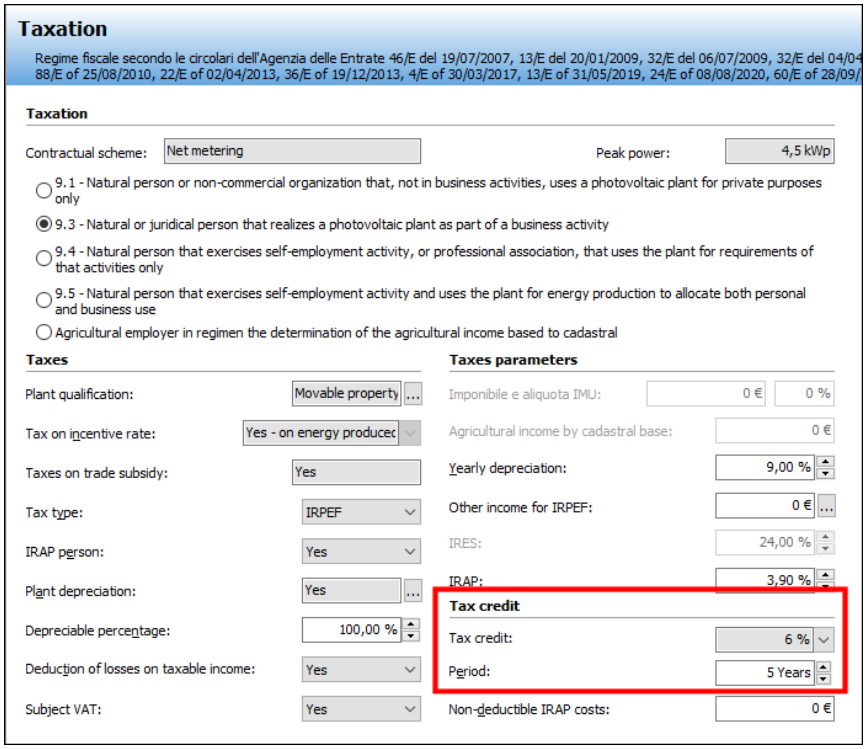


Remember that previously and for old projects, the calculation of the maximum AC power transferred upstream of the inverter was linked to the maximum applicable or applied photovoltaic field.

In case of modification of old projects with inverter change, since the option is set on *Power transferred from the PV field*, the software could recognize in the technical data an excessive gap between nominal power and maximum accepted photovoltaic field power, and automatically change the setting to AC output nominal power of the inverter.

Tax credit for the purchase of new capital goods as required by the budget law 2021 (Only for plant in Italy)

Companies that purchase new capital goods such as a photovoltaic system in 2021 and 2022 can apply for a tax credit equal to 10% in 2021 and 6% in 2022 usable in 5 years. The maximum limit of eligible costs is € 2 million.
On the Taxation page of the Solergo project, for authorized tax subjects, the *Tax credit* section is displayed where you can select the percentage of credit allocation and the duration in years.
The calculated tax credit is included in the Economic return page, inside the *Tax credit and incentive* box.



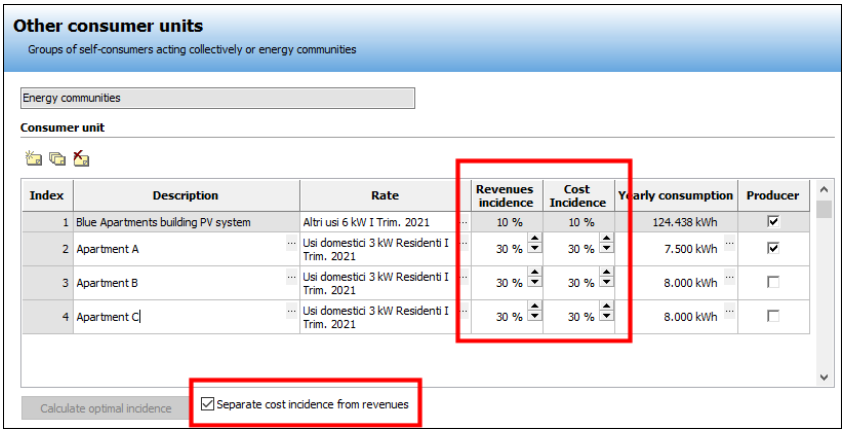
Taxation (Only for plant in Italy)

• Updated the IRPEF ranges for plants that come into operation from the year 2022.

• Restored tax deduction for collective self-consumption or energy communities in plants with Power > 20 kW.
• For power plants <= 200 kW it is possible to select the tax subject:
- 9.2 Individual or non-commercial istitution (...).
- 9.2.1.1 Plants placed at the service of the home or headquarters of the non-commercial entity.

Energy communities or collective self-consumption

The members of an energy community participate in the cost and revenue of the photovoltaic system based on the percentage of incidence of cost and revenue.
On the *Other consumer units* page of a project in Solergo, the new option *Separate the cost incidence from the revenues* allows you to differentiate the participation of costs from that of revenues. This mode, for example, makes it possible to zero the costs for end-user users, which do not contribute to the operating costs of the plant, but who can obtain an advantage from participating in the energy community.



The Revenues incidence is applied to the calculation of the amounts: Incentive, Energy sales, Interest income.
The Cost incidence is applied to the calculation of the amounts: Tax deduction or Tax credit, Costs.
If the option is not selected, the incidence of costs and revenues are the same.

All products

Archives update from previous versions

In the Archive Update from previous versions utility, in the *Manual path selection* window, it is now possible to select the path of the databases from which to import data. From the *Database path* drop-down list, select *Same archive path* (default) to get the data from the selected archive folder, or the data source server where the databases reside.

Orders

Fixed minor anomalies on the management of authorized user groups.

Dictionaries

Fixed the Duplicate dictionary voice function.

Materials archive

Fixed an anomaly in the copy to the clipboard to export a selection of articles to Excel; item descriptions in additional languages were not exported to the appropriate language column.

Other fixes and improvements

Fixed additional specific anomalies related to isolated cases.