

PLC Input/Output Configuration Manager What's new?



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I. Starting the Configuration Manager

The newly created *SEE PLC* plug-in replaces the former external application *PLC I/O Wizard* and the *Import PLC* plug-in. Most of the functionalities are redesigned and are accessible in a new way.

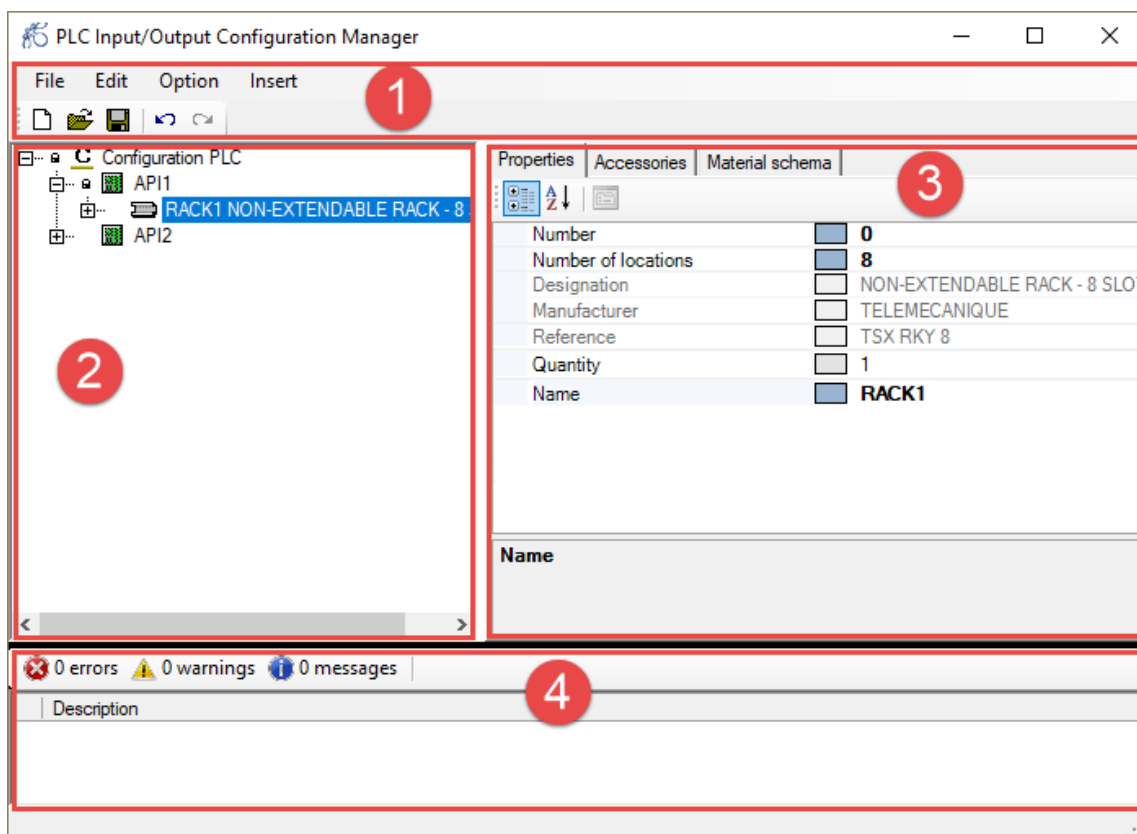
The new plug-in is launched with the existing **PLC I/O Manager** command, present in the **Process** menu of *SEE Electrical Expert*.

The **File > Import external configuration to PLC Tools** does not exist anymore. The functionalities of the old plug-in are integrated in the new one.

II. New User Interface

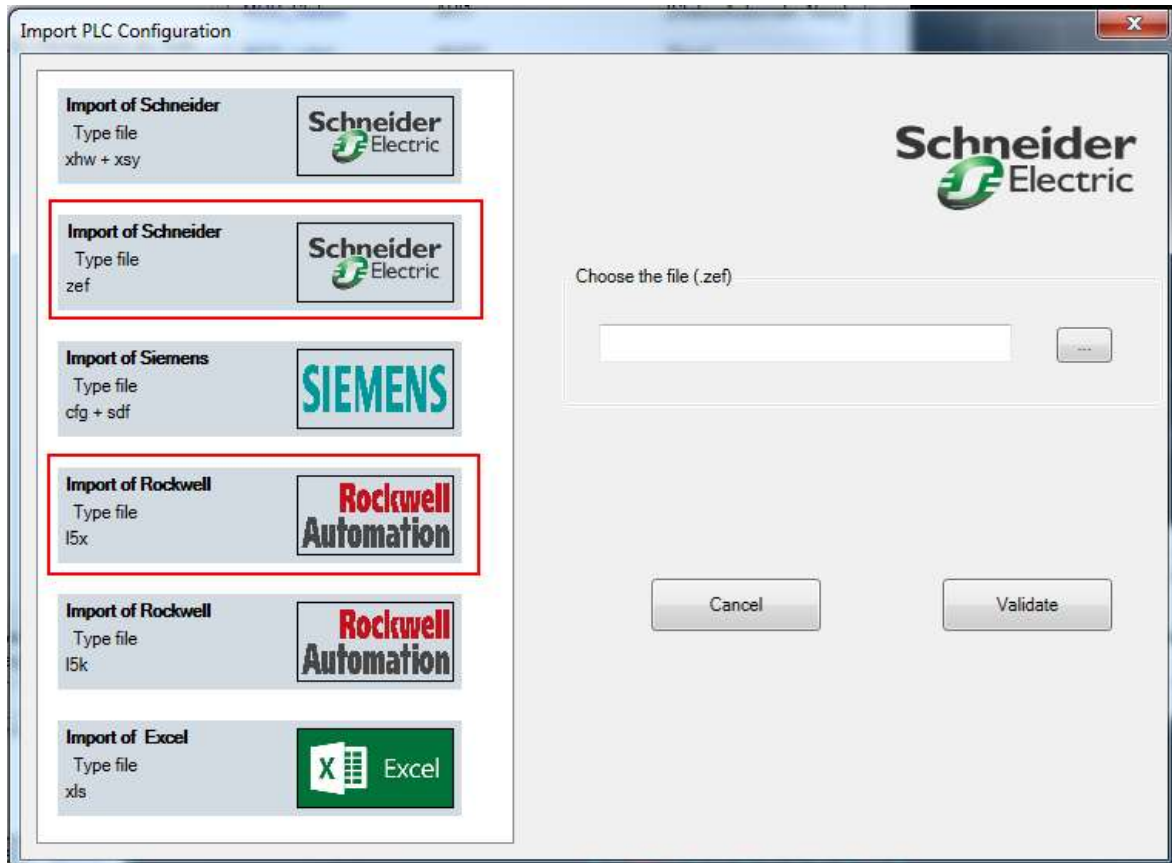
The main application window consists of:

- ✓ 1. The **Menu bar**: presenting the commands allowing the execution of the main functionalities,
- ✓ 2. The **Explorer pane**: showing the tree view structure of the controllers, existing in the project,
- ✓ 3. The **Workspace area**: to display and modify the properties of the object, selected in the **Explorer pane**,
- ✓ 4. The **Log Messages pane** showing the last executed operation, the possibly generated errors, and information messages:



III. New Configuration Formats Importation

The possibility to import externally built configurations in two new formats:



Schneider Electric

- "*.zef"

The "*.zef" file contains the complete information of an exported Unity Pro project including the used equipment (configuration), the variables (inputs/outputs), and the definitions of the I/O addresses.

Rockwell

- "*.L5x"

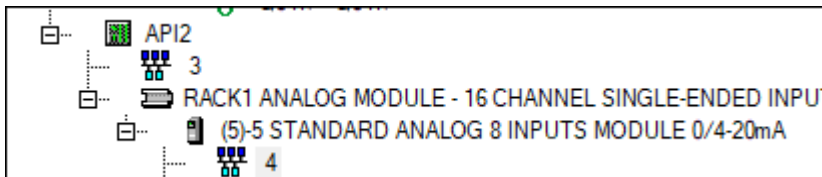
The "*.L5x" file contains the complete information of an exported Rockwell Automation project including the used equipment(configuration), the variables (inputs/outputs) and the definitions of the I/O addresses in xml format.

IV. Networks Creation Possibility

At controller level or at module level, you can define subnets. Such elements of the configuration are directly connected to the network and belong to the controller. They are intended to represent the network part managed by the respective card or controller. They are designated by a specific icon.

In the **Explorer** pane, at controller level or at module level, right-click and select the **Add > SubNet** command.

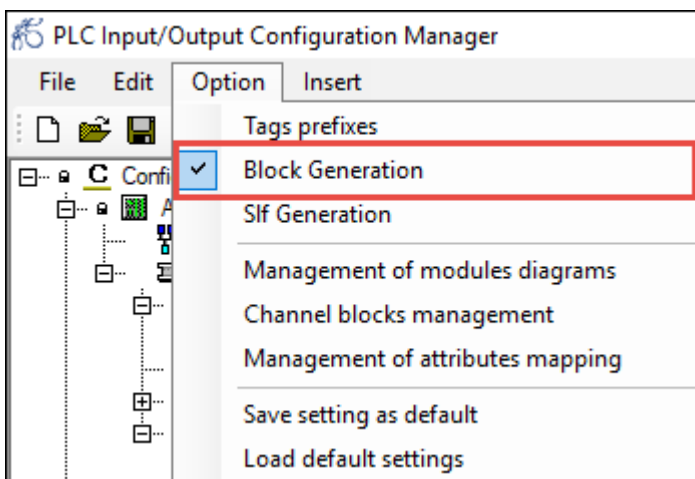
The new entity is displayed under the module level:



No sheets are generated for the networks during the sheet generation process.

V. Sheet Generation by Blocks

In addition to the existing Sheet generation based on "*.slf" files, a new sheet generation is implemented. This new method for sheet generation is based on a PLC configuration built using the blocks, and their definitions (graphics, positions, attributes), associated to each element of the designed configuration: racks, modules (slots), channels.



In the Configuration Manager, it is possible to specify block definitions for the representation of the card front view, and dedicated blocks for the start, the middle (intermediate), and the end of the card.

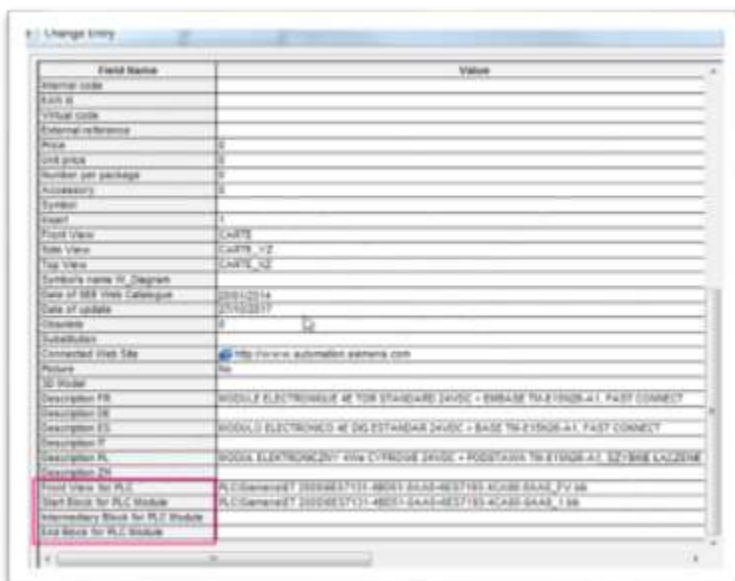
In the different tabs of the **Properties Pane**, you have to associate the needed blocks:



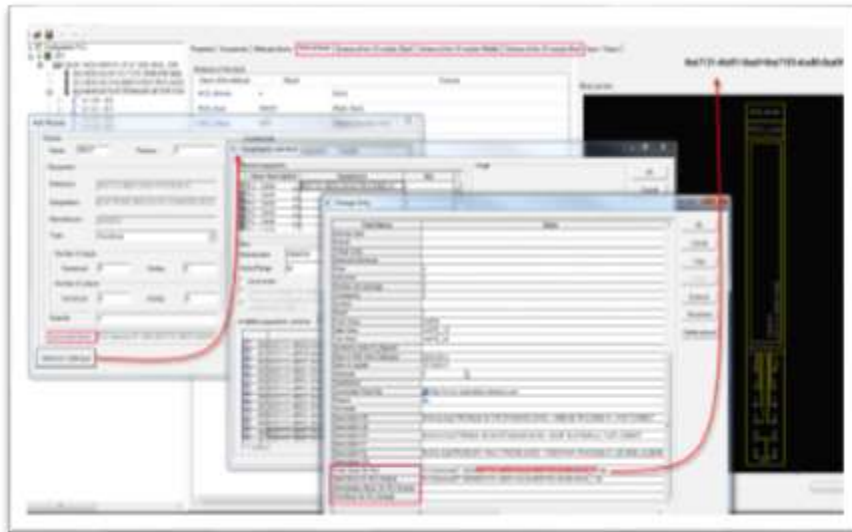
The application automatically creates the "APIGeneration.xml" file from the block associations. The file will contain one section for each definition. The sheet generation is based on the information contained in this file.

VI. New Fields in the Equipment Codes Definition

The Equipment Catalogue, provided with SEE Electrical Expert Environment installation, contains the PLC – Racks, PLC – Cards, and PLC – Controllers classes. The new fields in these classes are intended to contain the blocks assigned to the reference.



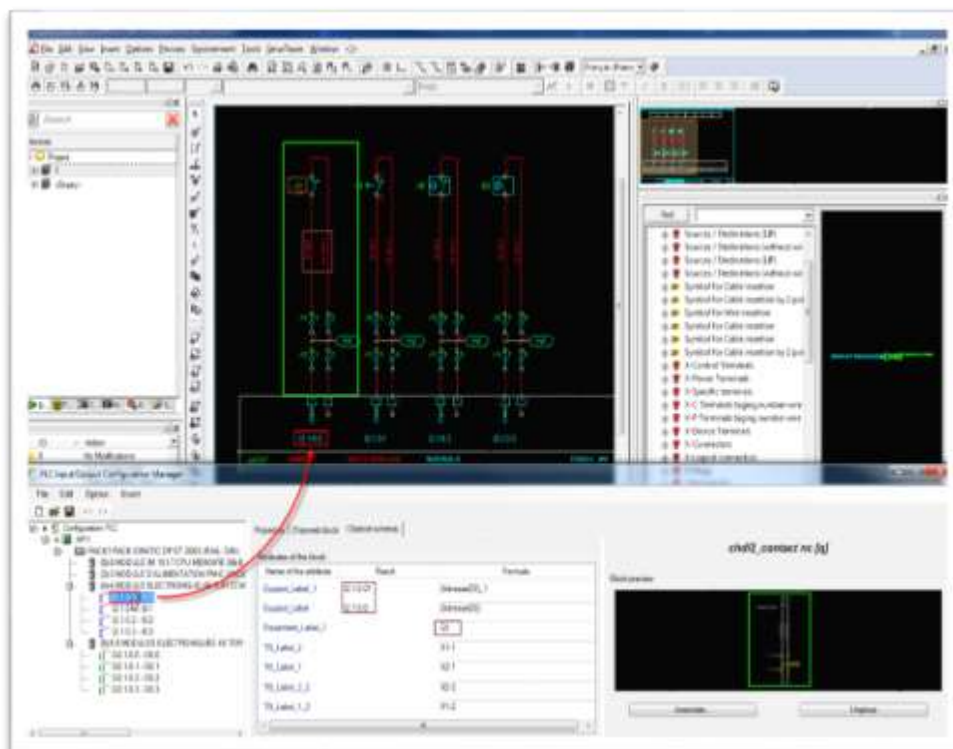
If a field with the corresponding function contains a block definition, this definition is automatically retrieved in the *PLC Configuration Manager* at equipment code selection.



VII. Assigning Blocks to Channels

The channel schema is a part of diagram stored in a block, which, generally, represents an electrical circuit or device, managed by the selected input or output channel. During the sheet generation, the associated block diagram is automatically inserted, connected to the respective channel.

This association is used in both generation methods – based on blocks and based on ".slf" file.



VIII. Block Assignment in the Mnemonics and Comments Grid

A new easy way to assign blocks is implemented in the **Input/Output** channel grid. Use the Browse button in the definition field to select the desired block.

The **Cut**, **Copy**, **Paste**, and **Delete** commands are available in the pop-up menu for a selected field with block definition. The corresponding keyboard shortcuts are also available.

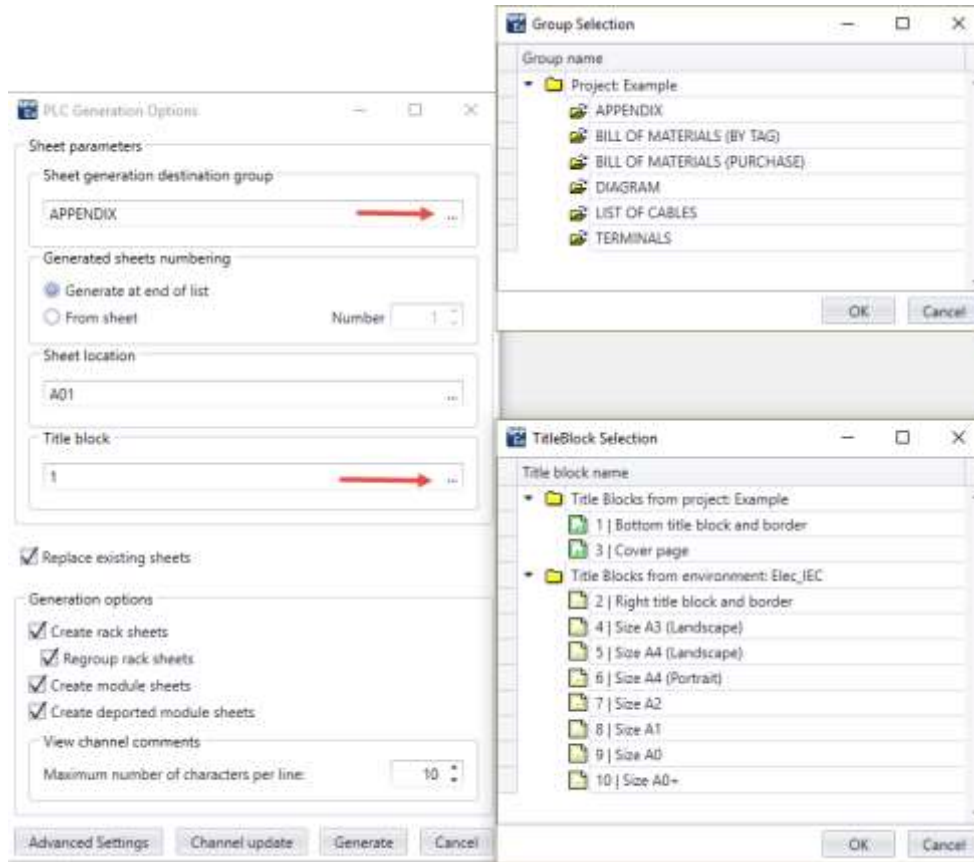


IX. Setting the Location, the Destination Group, and the Title Block

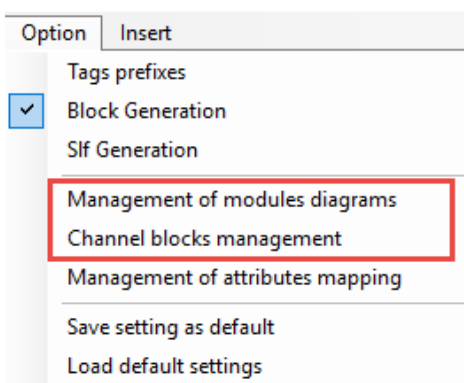
Prior to generating an I/O sheet, you have to define or modify some settings. These settings are compulsory for the sheet generation in *SEE Electrical Expert*.

The menu command **File > Sheet Generation** opens the **PLC Generation Options** dialogue:

- The "**Sheet generation destination group**" lets you specify the name of the default group that is to contain the generated I/O sheets.
- The "**Generated sheets numbering**" lets you define the number of the first generated I/O sheet.
- The "**Sheet location**" lets you specify the default location of the generated I/O sheets.
- The "**Title block**" lets you select the title block that will be associated to the I/O sheets.



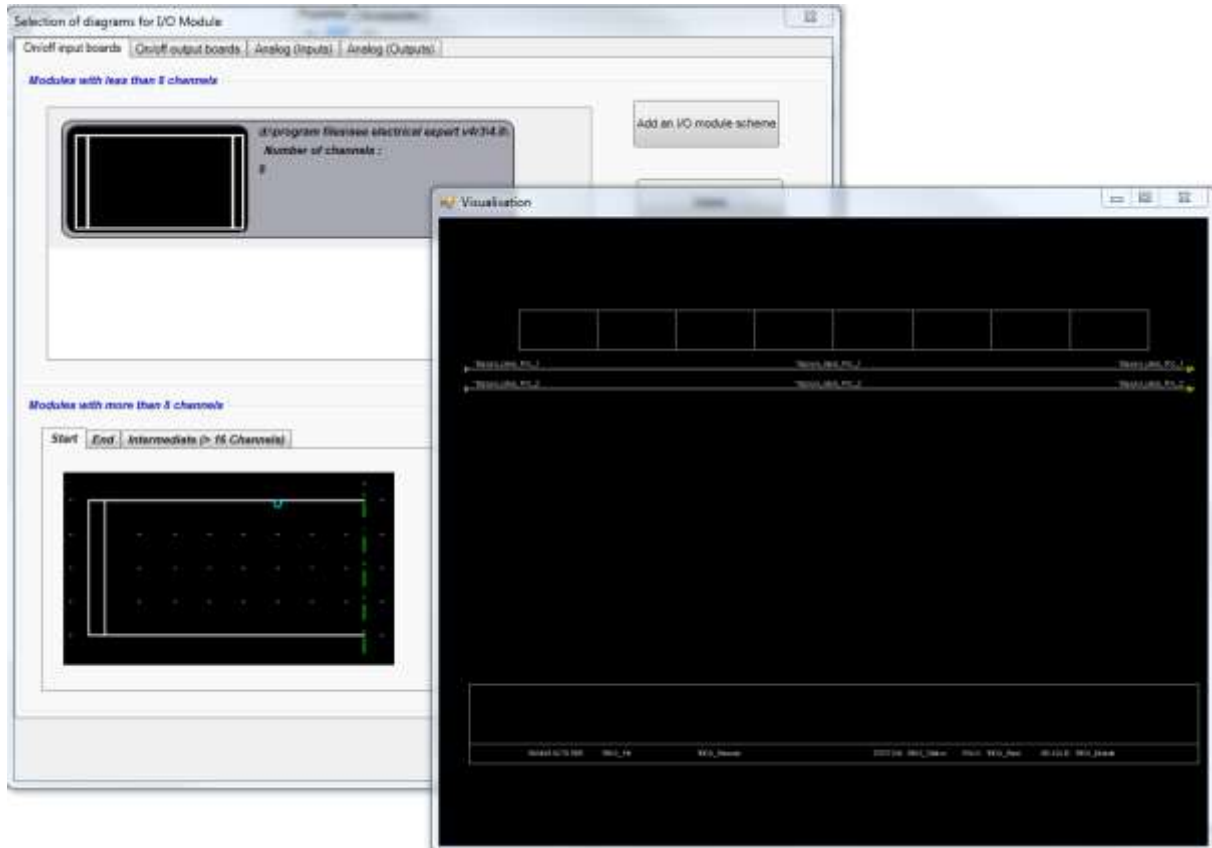
X. Setting Default Blocks Definitions



By means of these two commands you have access to the **Selection of diagrams for the I/O module** dialogue and **Channel blocks selection** dialogue, where you can set block values for the different channel and card types.

These values will be used for the sheet generation by blocks in case the block definitions are not specified in the selected equipment references or in case the automatic controller is created without choosing equipment references. Thus, the default blocks will be automatically assigned to all elements – cards and channels.

Setting the Default Blocks for Modules



The selected diagram makes possible the generation of the whole module with up to 8 channels in a single sheet.

The path to the associated ".blk" file and the number of channels is displayed in the left pane. You can associate more than one ".blk" files.

A right click on the diagram's area displays the **View** command allowing you to preview the selected block. In order to generate the representation of a I/O module with 9 or more channels, it is necessary to associate a start and an end scheme, and an intermediary scheme for the modules with more than 16 channels.

Setting the Default Blocks for Channels

