What's New in PG5 V2.2

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1 Foreword

Thank you for purchasing the Saia PG5® V2.2 package. This file contains descriptions, information and tips to help you get the most out of the package. We recommend that you review this file before using this new version of PG5.

Saia Burgess Controls has systematically and carefully designed, developed and tested this software product in many environments. Saia Burgess Controls has acquired the confidence that this product achieves a very high reliability.

As with all other software tools, we recommend the user to regularly save and backup his project in order to minimize the risk of losing valuable work.

1.1 Standard Disclaimer

Neither Saia-Burgess Controls AG nor anyone else who has been involved in the creation, production or delivery of the software shall be liable for any direct, indirect, consequential or incidental damages (including damages for loss of business profits, business losses, business interruption, loss of data and the like) arising out of the use or inability to use the software, or any other claim by any part even if Saia-Burgess Controls AG has been advised of the possibility of such damages. In the event that Saia-Burgess Controls AG is liable for any damages, liability shall be limited to the amount paid for the software under the terms and conditions of this agreement.

The use and distribution of Saia PG5 software modules (for example, SComm DLL) with other PC applications is generally tolerated by Saia Burgess Controls, even though this use is not covered by the PG5 license agreement. However, Saia Burgess Controls cannot accept any responsibility or claims resulting from the use of parts of the PG5 by other PC software applications. Should such an application cause any commercial damage or damage to the reputation of Saia Burgess Controls, we reserve the right to prohibit the use of PG5 software modules by other PC software applications.

1.2 Manuals available on the distribution DVD

'<DVD drive>:\PG5_InstallationGuide_E.pdf'

The installation guide available on the distribution DVD informs you about, the necessary computer requirements to install this software. It contains also the description of the installation process, the licenses registration and other useful information about the installation.

'<DVD drive>:\PG5 Suite\Manuals'

In order to help you start working with this software package, you will find the main manuals on the distribution DVD.

www.sbc-support.com

This is the link to Saia Burgess Controls Product Support Website. PCD manuals can be viewed online using Acrobat Reader or downloaded and viewed locally. Downloads of service packs and PCD firmware upgrades are also available.

2 Release PG5 V 2.2.220

2.1 Installation and compatibility

2.1.1 General consideration

For the installation, licensing and compatibility with previous versions – PG5 2.1, 2.0 and 1.4, please refer to the chapter 4.1 *PG5 2.2 installation and compatibility*.

2.1.2 Compatibility with PG5 version 2.2.140

PG5 version 2.2.220 is fully compatible with the precedent version 2.2.140.

The license for the version 2.2 is valid and the user registration are still valid.

The version 2.2.220 is install in parallel with precedent versions of PG5. It means that if you are working on projects with older version, the installation of this new version will not affect the precedent versions install, including the projects, the libraries and templates.

As this new version is fully compatible with older versions, existing projects can be easily migrated in this new version using the import or restore functions.

There is no backward compatibility. It means it will not be possible to open projects done with PG5 2.2.220 with previous versions of PG5.

2.1.3 Installation

The installation of this new version will be installed in parallel with precedent version of PG5 2.2.1xx, like the version 2.2.140.

Directory names

Within PG5 version 2.2.220, the files are installed in a similar structure as in the precedent versions of PG5 2.2, like version 2.2.140, but in new folders.

The PG5 projects, libraries, templates, firmware, and S-Net '.dat' files are installed by default in the Public Documents directory. It means:

'C:\Users\Public\SBC\PG5 V2.2.2xx'

The specific user settings for the different editors and S-Comm driver are no longer saved in the Windows registry but in the directory defined specially for this kind of data:

'C:\Users\<user name>\AppData\Local\SBC\PG5 2.2.2xx'

The license file 'USER.KEY' and the '*.5at' file used to register the add-on tools are in the following directory:

'**C:\Users\Public\SBC\PG5 V2.2.2xx\LocalDir'**

It is possible to modify (not recommended) the project and libraries paths from the Project Manager using the 'Options' command under the 'Tools' menu.

2.2 General Considerations

In this new version, the focus has been given to the following points:

- Improvements and corrections in the Fupla editor.
- Enhancements of the BACnet Configurator in order to support the REV 14 and speed up the EDE file import for the configuration of client devices.
- Add support for new device in the Wiring Check Tool.
- Enhancements and corrections in the FBox Builder.

In the following chapters, you will find a description of the enhancements and the main improvements and corrections.

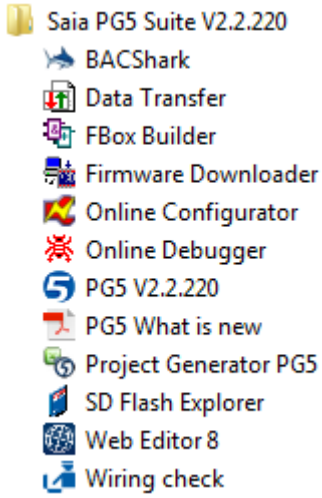
This version contains the last update of the FBox libraries that have been released since the precedent version of PG5.

Several other issues and improvements have been done in other PG5 components and are not mentioned expressly in this document.

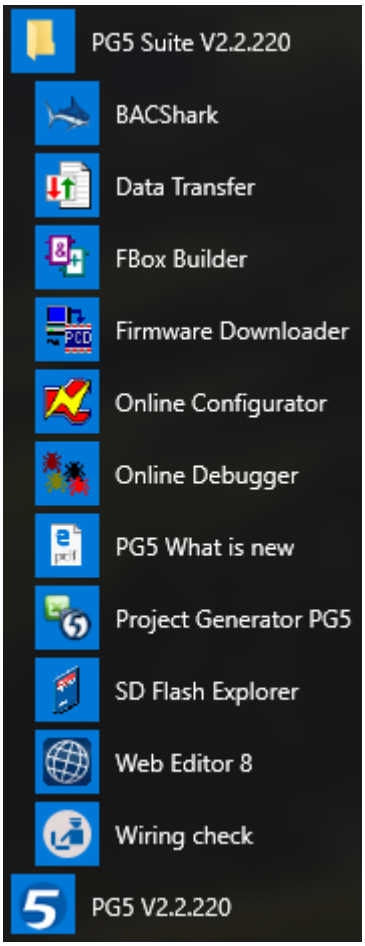
2.3 Windows Start menu

In the Windows Start menu, the Saia PG5 version 2.2.220 applications are accessible directly under the folder 'PG5 Suite V2.2.220'.

Windows 7:



Windows 10:



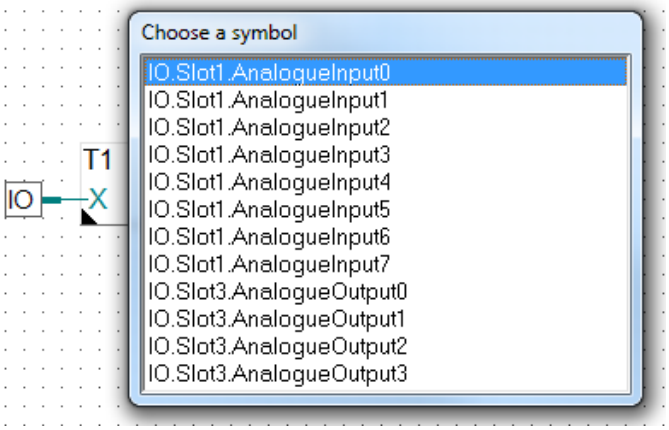
2.4 Fupla

In PG5 2.2.100, the Fupla editor has been renewed. In this version, we have continue to work on improvements in order to give the same level of functionalities as in the precedent version.

In the following, you will find a description of the enhancements and majors corrections that have been implemented in the Fupla editor.

2.4.1 Display the list of symbols in connector using 'Ctrl' + Space

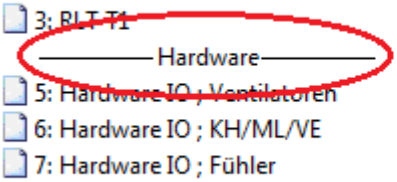
When editing the symbol name inside of a connector, it is possible to display the list of symbols that are available in using the 'Ctrl' + space key combination. When the symbol name is empty, all symbols will be displayed in the list. When some characters are already defined in the connector only the matching symbols will be displayed in the list.

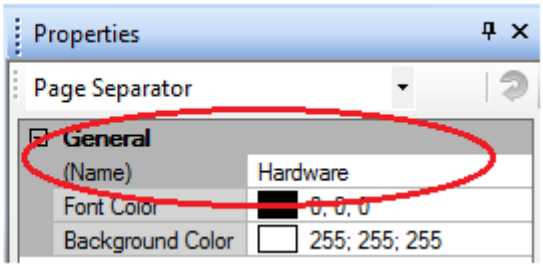


When the selector is already connected with an FBox input or output, the list will only contains the symbols of the matching type.

2.4.2 Page separator can contain a name

Inside of the 'Page Navigator' view, it is possible to define separator in order to insert a separation line between pages in the page tree view. It is now possible to define a name for the separator. The name will be then displayed in the center of the separator. To enter a name, select the separator in the 'Page Navigator' and specify the 'Name' property in the 'Properties' window.

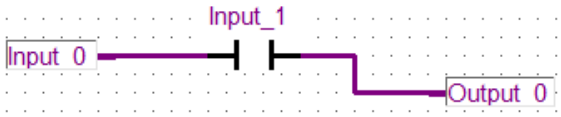




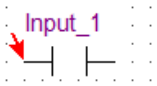
It is also possible to adjust the 'Font Color' and the 'Background Color' of the separator. For inserting separator, select the page in the 'Page Navigator' view, right click to open the context menu and then click on the 'Insert Separator' command. The separator will be inserted before the selected page.

2.4.3 Improvements regarding ladder elements

In the online mode, the ladder elements are fat when activated – when the binary state is high.



When a connection is missing, it is indicated by a red arrow, as for other FBoxes.

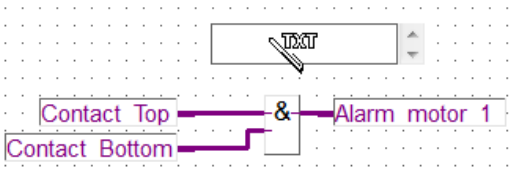


The size of the symbol name displayed on the top of the ladder is now bigger.

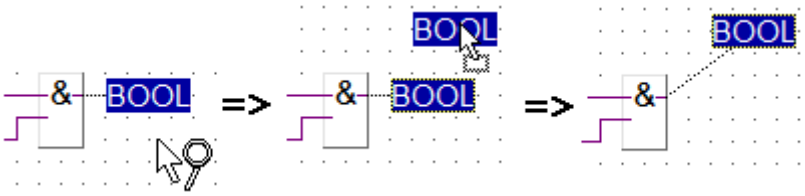
2.4.4 Other improvements

The following improvements have been implemented:

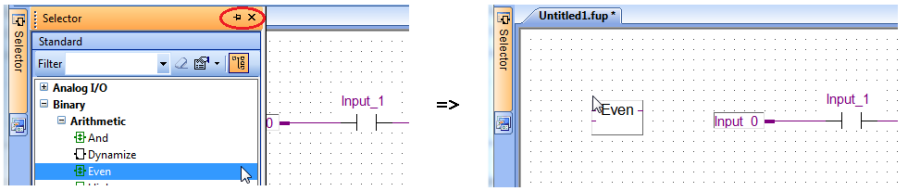
- It is now possible to add and update the comments in a Fupla page in 'Online' mode.



- In the 'Set Probes' mode, it is now possible to move probes. It is no more required to first switch into the 'Select' mode. To remove a probe, you just have to click on it. To change the format, right click on the probe and the context menu will display the different available format that can be selected.



- When the FBox 'Selector' view is in auto-hide mode, when an FBox is selected and dragged into the view, the 'Selector' view is closed automatically so that you can place the new FBox everywhere in the Fupla page.



- Improvements and corrections regarding the handling of counters, timers and constants in the connectors.

This new version of Fupla contains several others improvements and corrections.

2.5 Web Editor 8

In the Web Editor 8, the issue which caused missing entries in the properties window after selecting a layer has been fixed.

Several other corrections have been made in this new version and in the S-Monitoring template.

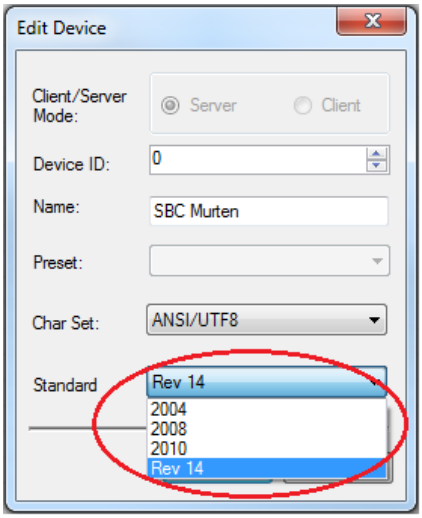
2.6 BACnet Configurator

2.6.1 Support of Rev 14

The new version of the BACnet stack that can be optionally integrated into the PCD firmware supports the Revision 14 of the BACnet standards.

The BACnet Configurator has been adapted to support this new version of the standard.

The standard can be configured in defining a new server device or when editing the server device. In the dialog box, the new standard 'Rev 14' can be specified under the 'Standard' parameter definition.



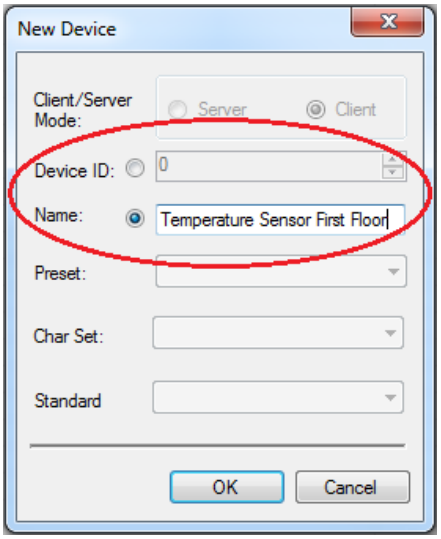
All information concerning the new standard are described in the help of the BACnet Configurator, available under the 'Help' using the 'Show Help …' command.

Notice that the content of the help is different when 'Rev 14' standard is selected. It means that if you want to look for the description of the new standard, the 'Standard' parameter has to be set to 'Rev 14' in the server device configuration.

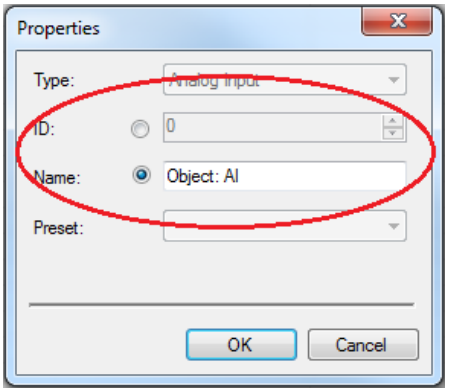
Note: The support of the new standard Rev 14 requires a new PCD firmware and a new BACnet firmware. Please refer to the support site for more information about the firmware versions.

Named device and property

When creating a new 'Client' device or when editing an existing 'Client' device, it is possible to specify if the 'Device ID' or device 'Name' has to be used to reference the device.



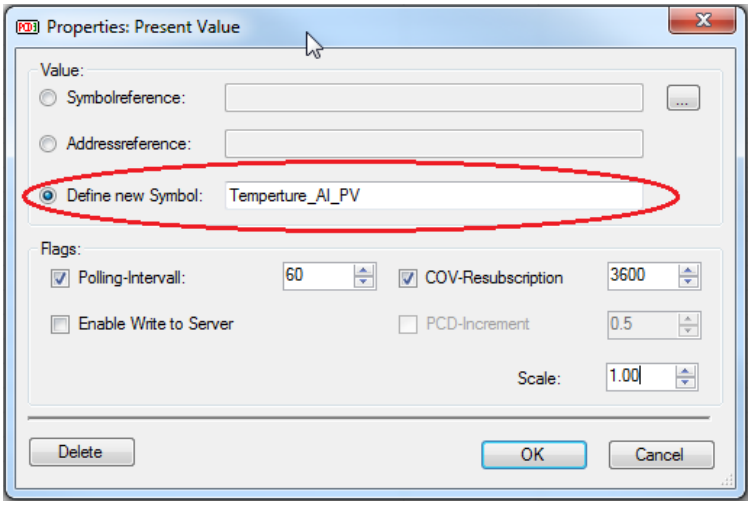
The same applies to client properties – 'ID' or 'Name'.



Symbol creation for the mapping of client properties values

When editing certain client properties, you can define automatically a new symbol for the mapping of the property's value to a symbol's value. In the precedent version, it was only possible to use already defined symbol or use address reference.

When saving the BACnet configuration, a new symbol file, named 'BACnet_cli.sy5' is automatically created under the 'Program Files' folder of the device. It is then possible to use the symbol in your user program, as symbol reference.



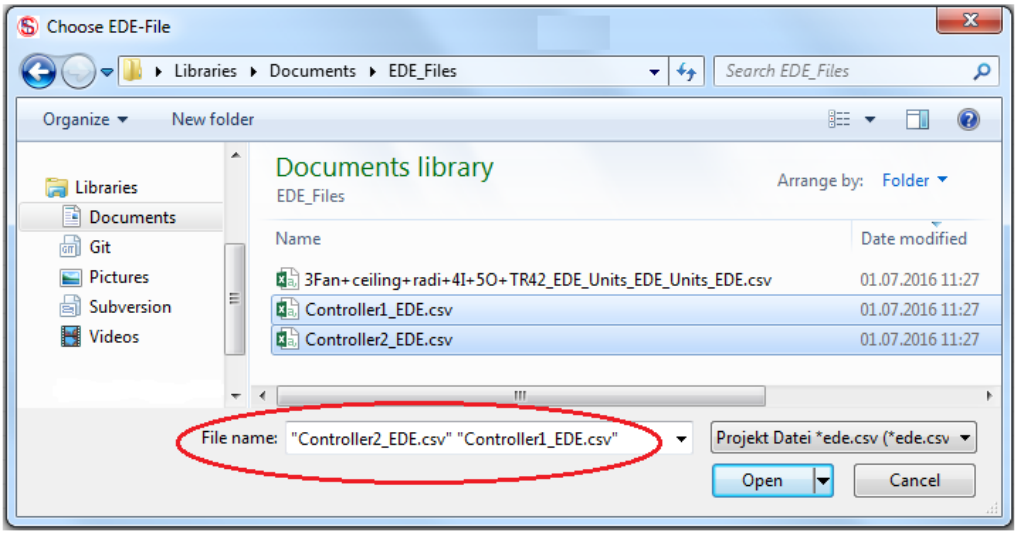
2.6.2 Enhancements of the EDE import

The EDE import feature has been improved with the possibility of importing multiple files in one go and an automatic mapping of objet properties to symbols.

Import several EDE files in one go

When you have to import several clients inside of a project, thanks to the new multiple EDE import feature, it is no more required to import them one by one.

In order to import several files in on go, you have to select the command 'Import' – 'EDE' under the 'Project' menu, then, in the 'Choose EDE-File' dialog box, select the EDE-files that you want to import as shown in the picture below. Then press the 'Open' button to start the multiple import.

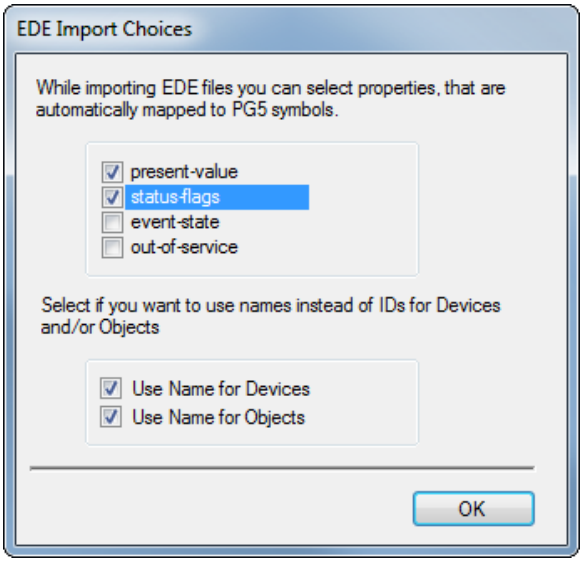


Automatic mapping of client property values to symbols

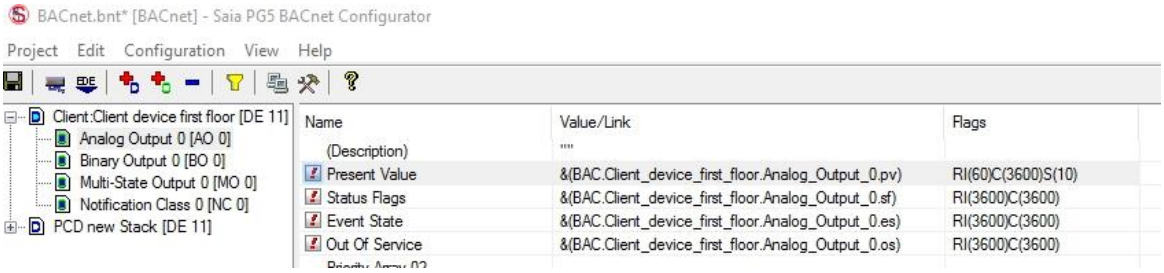
When importing an EDE file, specific properties can be automatically mapped to global symbols.
The symbol name is automatically generated base on the device name and the property name.
Some invalid characters are automatically replaced with underscore. If the symbol name is not valid it will be reported in a status dialog.

After having selected the EDE file to import, the 'EDE Import Choices' is displayed. In this dialog, you can select the type of properties that will be automatically mapped. The property type you can select are 'present-value', 'status-flags', 'event-state' and 'out-of-service'.

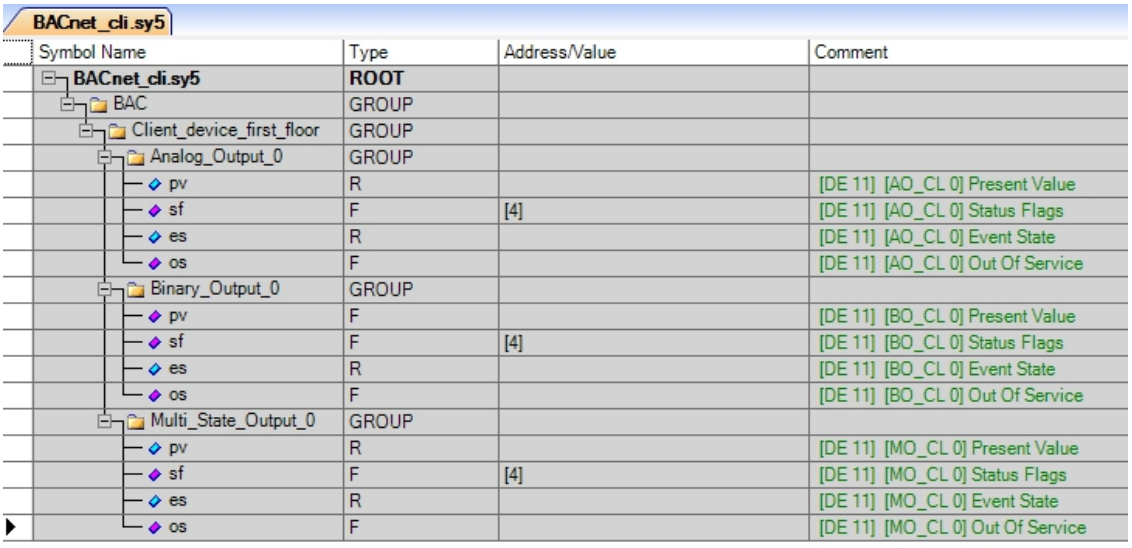
In this dialog, you can also specify if the ID or the name has to be used as identification for devices and properties.



After pressing the 'OK' button on the import dialog, the client devices will appears with the objects and properties.



At the same time, the symbol file 'BACnet_cli.sy5' is created and automatically added to the 'Program Files' folder of the device in the Project Manager. This file contains all the symbols that are associated with the object properties. Notice that this file is ready-only in order to keep the link between the symbol and the mapped property.

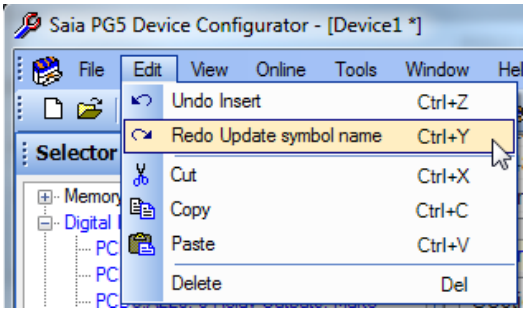


Symbol Name	Type	Address/Value	Comment
BACnet_cli.sy5	ROOT		
BAC	GROUP		
Client_device_first_floor	GROUP		
Analog_Output_0	GROUP		
pv	R		[DE 11] [AO_CL 0] Present Value
sf	F	[4]	[DE 11] [AO_CL 0] Status Flags
es	R		[DE 11] [AO_CL 0] Event State
os	F		[DE 11] [AO_CL 0] Out Of Service
Binary_Output_0	GROUP		
pv	F		[DE 11] [BO_CL 0] Present Value
sf	F	[4]	[DE 11] [BO_CL 0] Status Flags
es	R		[DE 11] [BO_CL 0] Event State
os	F		[DE 11] [BO_CL 0] Out Of Service
Multi_State_Output_0	GROUP		
pv	R		[DE 11] [MO_CL 0] Present Value
sf	F	[4]	[DE 11] [MO_CL 0] Status Flags
es	R		[DE 11] [MO_CL 0] Event State
os	F		[DE 11] [MO_CL 0] Out Of Service

2.7 Device Configurator

2.7.1 Undo/redo improvement

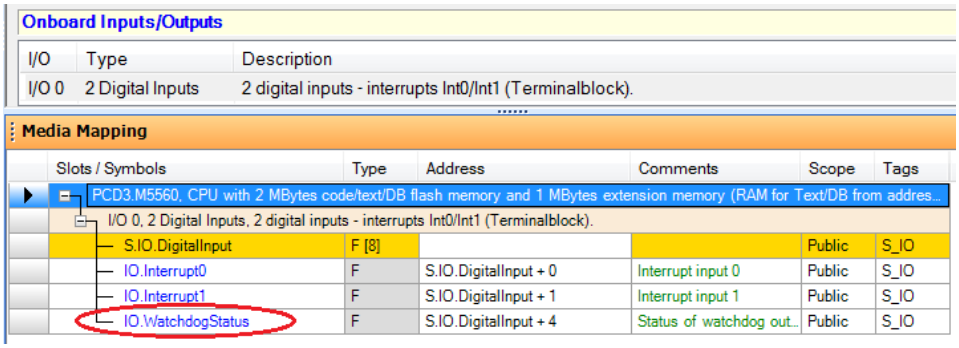
The undo/redo feature has been improve. All actions done in the main view, on the 'Properties' view and on the 'Media Mapping' view are now handled and can be undone or redone.



2.7.2 Watchdog status

For the PCD3.Mxx60 and PCD1.M2220-C15 devices, in the onboard IO slot, the watchdog status is mapped on a flag, together with the mapping of the onboard digital inputs.

This mapping is only supported by the version 1.28.xx of PCD firmware.

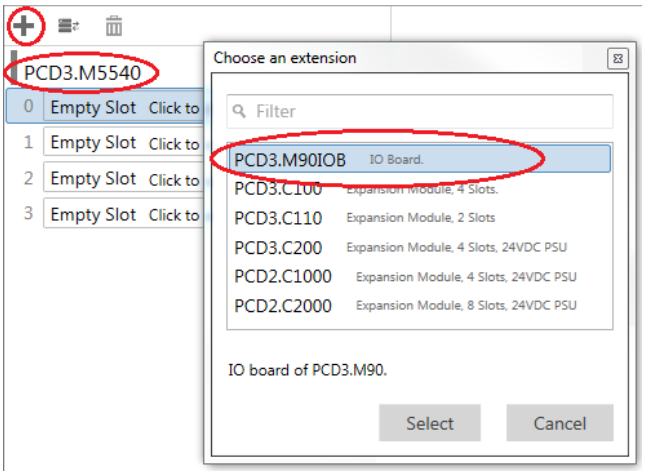


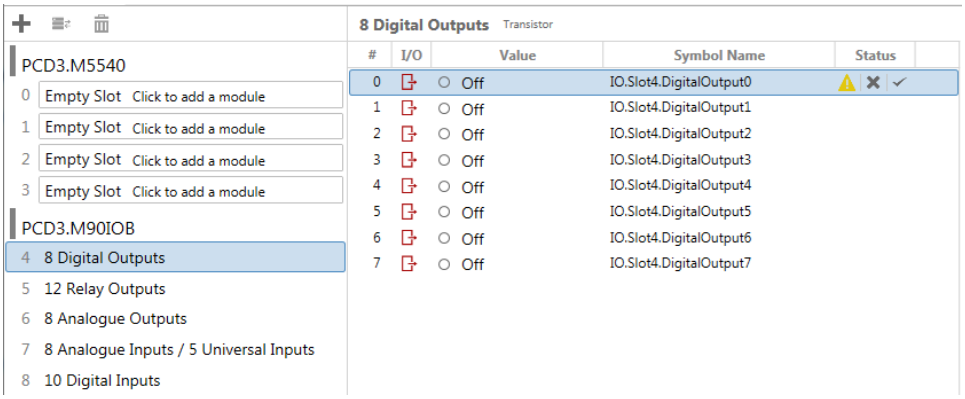
Note: On PCD1.Mxxx0 devices, the Watchdog status was already mapped.

2.8 Wiring Check Tool: support for PCD3.M90 IO board

The Wiring Check Tool has been extended to support the PCD3.M90 IO board.

As in the PG5, the PCD3.M90 device is identified as a standard PCD3.M5540 device. In order to map the onboard inputs and outputs using the Media Mapping feature, the extra PCD3.M90IO extension board has to be define in the extension slot.
No other input/output modules have to be place in the slot 0 to 3 of the PCD3.M5540 device.





Note: the PCD3.M90IO extension board is also available in the Device Configurator in order to configure the input/output channels and map their values to flags or registers.

2.9 FBox Builder

Several improvements and enhancement have been introduced in the FBox Builder. In this chapter, you will find a description of the main points.

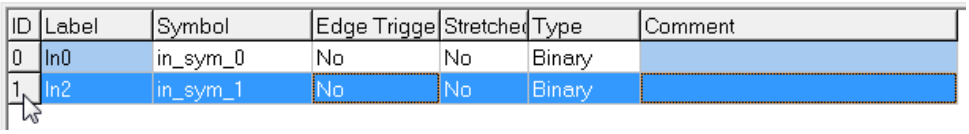
2.9.1 Copy/paste in Parameter Editor

The Parameter Editor allows the definition of the inputs, outputs, constants, dynamic, static and adjust parameters. This editor has been improved in order to support multi-cells and multi-rows selection, copy/paste and fast editing capabilities.

Selection

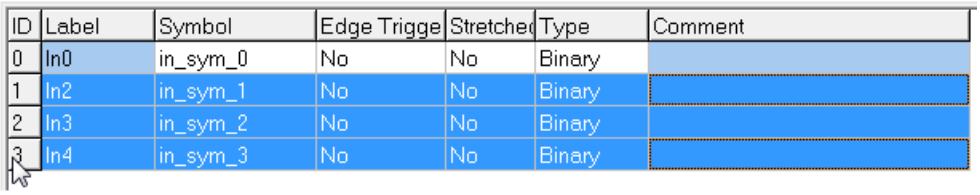
It is now possible to select multiple cells. First click on the cell then, while pressing the 'Shift' key, click on the other cell, it will select the cell range.

Row can be selected by clicking on the row header – on the 'ID' cell.



ID	Label	Symbol	Edge Trigge	Stretched	Type	Comment
0	In0	in_sym_0	No	No	Binary	
1	In2	in_sym_1	No	No	Binary	

To select multiple rows, first select the first row by clicking on row header and then press 'Shift' key while clicking on the last row header. Only consecutive rows can be selected.



ID	Label	Symbol	Edge Trigge	Stretched	Type	Comment
0	In0	in_sym_0	No	No	Binary	
1	In2	in_sym_1	No	No	Binary	
2	In3	in_sym_2	No	No	Binary	
3	In4	in_sym_3	No	No	Binary	

Copy/Paste

With the multi-selection, it is now possible to duplicate the parameters or change their properties. Select a cell, multiple cells, a row or multiple rows and copy the content using the 'Copy' command from the context menu or press 'Ctrl' + 'C', then select a range and paste using the 'Paste command from the context menu or press 'Ctrt' + 'V': it will update all the selected fields with the desired value.

It is now also possible to duplicate parameter definitions inside an FBox or copy them to another FBox. You have to select the desired rows, select the command 'Copy' from the context menu or press 'Ctrl' + 'C', select the row where the parameter have to be copied and select the command 'Paste' from the context menu or press 'Ctrl' + 'V'. All fields and language dependent texts for all languages are copied. The symbol names are automatically indexed for preventing collisions with the existing names.

Editing

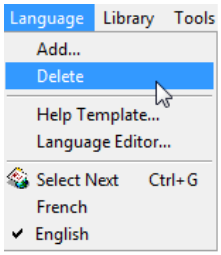
The cell content can be edited by pressing any alphanumerical key, the current cell goes to edit mode and the text can be immediately defined. Pressing the 'ESC' key will drop away the modified value.
When a range of combo boxes are selected, their value can be changed together by pressing the first character of the required value, all selected fields will be updated with the new choice.
Pressing the 'DEL' key will clear the content of the selected cells. When rows are selected, a dialog is displayed for confirmation.

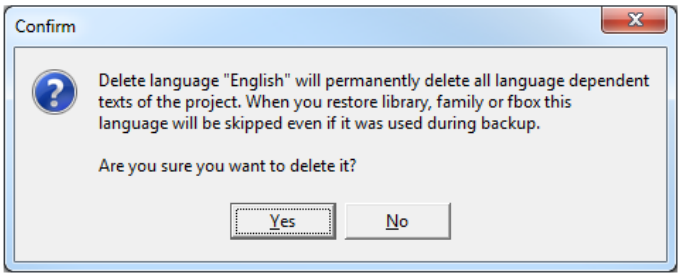
2.9.2 Improvement in the debugging

It is no more required to add an empty 'Instruction List File' into the PG5 test project for debugging. The file is now created automatically when the debugging is started the first time.

2.9.3 Language Editor

It is possible to define only one language, different as English. When an additional language is defined, the default English can be remove.





The Language Editor window keeps now his size and the position and size of the language columns.

2.9.4 Library identifier

As the library ID has to be unique, the library name is now automatically part of the ID and don't anymore generates a compilation error when the default name was used.

2.9.5 Workspace layout

The splitter position between the settings and the Parameter editor is now saved and restored.
Pressing the 'Ctrl' key while modifying the splitter position will assign the new position to all opened workspace windows.
While switch the tab in Settings (General, Source, Help...) while pressing the 'Ctrl' key will also change it in all opened workspaces and the makes the comparisons of the contents easier.

2.9.6 Help file generation

The generation of the help files has been rework and the help files are generated quickly and directly into the 'chm' format.

2.10 FBox libraries

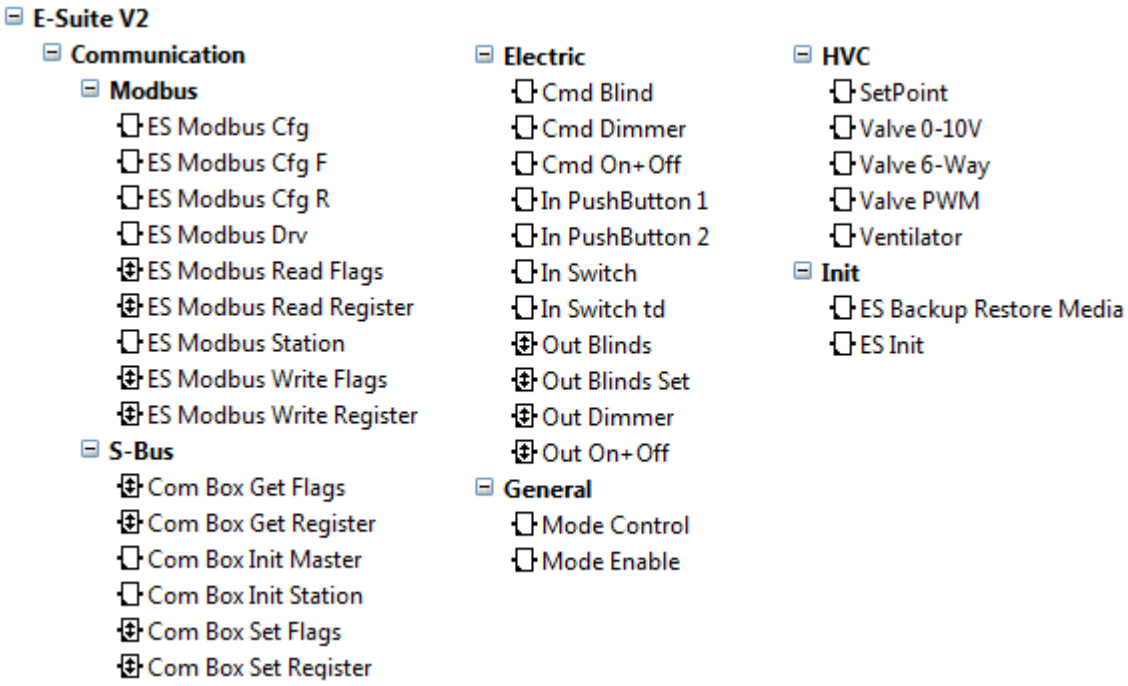
2.10.1 New E-Suite V2 library

The new E-Suite V2 library provides solutions for common tasks of room control and electrical installations.
This library is compatible with Saia PCD E-Line as well as with PCD1, PCD2 and PCD3 devices.

The following typical application FBoxes for energy efficient room control are available:

- Heating, ventilation and cooling with fan coils or VAV systems.
- Light control.
- Blind control.
- Access control.
- Energy management.
- And more…

The library is divided into sections for HVC and electrical applications.



For more information and a precise description of the functionality of those new FBoxes, please refer to the help of the FBox library.

2.10.2 New DDC Suite 2.7

The DDC Suite has become an important tool for system integrators in the recent years and has been expanded to version 2.7 and has already been successfully used.

The following new features have been introduced regarding the version 2.6:

- BACnet Trendlog: An improvement in BACnet firmware enables the view of the BACnet Trendlog data in an S-Web application with existing HDLog macro.
- System alarm groups (NC) in BACnet: NC (Notification-classes) is used in BACnet to sum up alarms and send them, with the same characteristics as priority, event/alarm or message text, to the BMS. A new FBox "System alarm" has been created for using the existing BACnet work further in the Fupla application.
- Alarm groups in the program – Single acknowledgment via S-Web: An acknowledgment of an individual alarm via S-Web is now possible.
- BACnet improvements:
    - BACnet Client: Getting connected to other BACnet station to get values, e.g. weather data, set points, heating demand, is now much easier by using FBoxes.
    - Unit: Sometimes it is necessary to use another language for units than the selected language for libraries. This can be managed by using the new FBox 'Units' defined in the 'Initialization' group.
    - Recipient List: A recipient list can be created directly in Fupla with the FBox 'NC Recipient'.
    - Alarm acknowledgement from BACnet to the FBoxes is now possible.
- New control strategies: The FBox 'Start sequence' has been created to determine which controller should be activated at the start of the ventilation system. Furthermore the FBox 'Init signal' was created to initialize a controller with a 'cold start value' or to bring the signal during operation to a specific position.
- A total of 38 new FUPLA, S-Web and Visi.Plus templates are available: ventilation with air quality, humidification, dehumidification, heat exchanger for district heating transfer stations…
- Extensive manual describes all of the templates in detail.
- DDC Suite generates the Visi.Plus database for BACnet communication. The engineering workflow is as simple as with S-Bus.

In the version SP2.70.128, the following corrections have been done:

- In the 'Initialisation' group, in the FBox 'Anti-block protection', for BACnet, 'Enable' was not correctly mapped; new 'Prio01Enable' flags; add scheduler 'Y' and '2P' for Visi.Plus.
- In the 'Initialisation' group, in the FBox 'System Alarm', the predefined symbols 'Grp4Msg' and 'Grp5Alm' are no more swapped.

- In the 'Alarming' group, in the FBox 'Set point monitoring', high alarm is now assigned to high alarm NC alarm group and low alarm is now assigned to low alarm NC group.
- In the 'Controller' group, correction concerning the PID loop function.
- Improvements and adaptations in the help.

In the version SP2.70.137, the following corrections have been done:

- In the 'Controls' group, in the FBox 'Drive Continous': correction regarding the alarm acknowledgement over 'SWeb'.
- In the 'BACnet' group, in the FBox 'Loop': checks now if 'SetPoint' has to be taken from SPR or MVR_SP.
- In the 'Set points' group, in the FBoxes 'DEC.0 (AV)', 'DEC.1 (AV)', 'DEC.2 (AV)', 'Integer (MV)' and 'Binary (BV)': initialization of PV after a download or a BACnet failure is now working correctly when 'Commandable' and 'Prio8' are enabled.
- In the 'BACnet' / 'Client' group, add the new FBoxes 'Binary Object (O/V) Write', 'Analog Object (O/V) Write' and 'MultiState Object (O/V) Write' for writing values to the server.
- In the 'BACnet' group, in the FBox 'NC Recipient': correction in order to handle correctly the IP address.
- In all FBoxes with alarm acknowledgment: if 'SWeb Ack' was disabled, 'group ack' via the 'SystemAlarm' FBox was also suppressed. This is now corrected.
- In the 'Initialization' group, in the FBox 'Alarm Header': the parameter 'Ack via SWeb' is now checked when the index is -1.
- In the 'Controller' group, in the FBoxes 'Cooler' and 'Preheater': first 'P-jump' after direct activation is now properly done (when using the 'Start Sequence' FBox).
- In the 'Controller' group, in the FBox 'Preheater': the first 'P-jump' after direct 'heat-up' has been removed.
- In the 'Controller' group, in the FBoxes 'Cooler', 'Heat recovery', 'Mixed air', 'Preheater' and 'Re-heater': the controller flags are reset at 'cold start' in order to ensure correct function of the PID after download.

2.10.3 Updated FBox libraries

The following FBox libraries have been updated between the version PG5 2.2.130 and this new version. Some of them have also been available over the Update Manager.

- **S-Fup Base, version V2.7.340**
  - The helps are available in English, German, French and Italian.
  - In the 'Floating Point' / 'Arithmetic' group, in the FBox 'Root/Power of X': the LED indicator has been implemented. When red, it is indicating an invalid operation due to a negative value on the 'Y' input and the output retains the last valid value.
  - In the 'Floating Point' / 'Logarithm' group, in the FBoxes 'Logarithm (Base 10)' and 'Logarithm (Naperian)': the LED indicator has been implemented. When red, it is indicating an invalid operation due to a negative value on the input and the output retains the last valid value.
  - In the 'Integer' / 'Binary arithmetic' group, the FBoxes 'Bitwise and', 'Bitwise exclusive or' and 'Bitwise or' are now stretchable.
  - In the 'System information' group, the new FBox 'Summer Time' indicates whether the PCD clock is in the winter or summer time. For a proper operation, the time zone must be specified in the Device Configurator.
  - In the 'Binary' / 'Arithmetic' group, in the FBox 'Dynamize': correction in the French adjust parameter text.
  - In the 'Timer' / 'Pulse' group, in the FBox 'Off delay with reset': the outputs 'Q' and 't' – time – are no more reset when inputs 'In' and 'R' are high.
  - In the 'System information' group, in the FBox 'Read IP configuration': corrections in order to read the correct information regarding the different firmware versions.
  - In the 'PWM outputs' group, in the FBox 'PWM PCD1.M0xxx / M2xxx': the range of the duty cycle input – 0 to 1000 - is now correctly handled.
- **S-Fup Communication, version V2.7.350**
  - Extension in the communication based on events: the 'Send' FBoxes support now the following configuration: 'On each cycle' – data are transmitted as fast as possible; 'On sampling time 1' – data are transmitted cyclically according the sample time 1 define in the SASI init FBox; 'On sampling time 2' – data are transmitted cyclically according the sample time 2 define in the SASI init FBox; 'On change': when one of the values has changed. The 'RCV' FBoxes support also this new configuration, except the 'On change' configuration. This new feature is compatible with the previous versions and the old 'On change' events are converted into the new 'On sampling time 1'. You will find more information about the compatibility with older projects and how to update them in the help of the library.
  - This library supports now the same events as in the 'ELine' library. It means that the S-Bus FBoxes 'Send' and 'RCV' support events when linked together with the ELine initialisation FBox 'EL+ S-Bus Master'.

- In the 'IP Protocols' / 'DNS' group, in the FBox 'Query IP Name': corrections have been done regarding the generated public symbols.
- Fix the compilation error: multi-defined symbols '_com_Event_DF_Temp' and '_com_Event_DR_Temp'.
- Fix the compilation error: new macro name '_ComSASM3' is not part of the library.

- **S-Fup Analog Module Library, version V2.7.340**
  - The helps are available in English, German, French and Italian.
- **S-Monitoring, version V1.0.130**
  - Help is available in German, French and Italian.
- **HTTP Client Library, version V1.0.130**
  - Help is available in German, French and Italian.
- **HDLog, version SP2.6.182**
  - The initialization FBox 'HDLog Init' generates a compilation error when define in a PCD7.D443WT5R – programmable panel - because the panel hasn't enough RAM space for logging on DB.
  - The FBox 'HDLog File' can now be used in PCD7.D443WT5R – programmable panel and do not more generated PCD runtime error.
- **Saia PCD Modbus, version V2.7.330**
  - In the 'Client' group, in the FBox 'Def Unit Client': corrections in order to avoid communication lock.
- **ELine, version V1.1.120**
  - Support of the new Power Quality Analyzer PCD1.P1001-J30.
  - Help is available in English, German, French and Italian.
  - The FBoxes use less program memory, registers and flags.
- **E-Suite V2, version V2.0.110**
  - For all FBoxes, add a short description that is displayed in the bottom of the Fupla FBox Selector window when an FBox is selected.
  - In the 'Init' group, in the FBox 'ES Backup Restore Media': the help has been improved for the parameter 'State'.
  - In the 'Init' group, in the FBox 'ES Init': the FBox can now be used in more than one Fupla file.
  - In the 'Communication / Modbus' group, in the FBox 'ES Modbus Read Register': correction regarding the copying of the output values.
- **EnOcean V3, version V3.0.030**
  - Add a new FBox family 'EEP' - EnOcean Equipment Profiles - with 8 new FBoxes that support the most recent EnOcean devices. As all EnOcean nodes are based on 'EEP', those new FBoxes allow access to several device types, independent of the manufacturer.

3 Release PG5 V 2.2.130

3.1 Installation and compatibility

3.1.1 General consideration

For the installation, licensing and compatibility with previous versions – PG5 2.1, 2.0 and 1.4, please refer to the chapter 4.1 *PG5 2.2 installation and compatibility*.

3.1.2 Compatibility with PG5 version 2.2.100

PG5 version 2.2.130 is fully compatible with the precedent version 2.2.100.

The license for the version 2.2 is valid and the user registration are still valid.

The projects done with version 2.2.100 are fully compatible with this new version.

3.1.3 Installation

The installation of this new version will first remove the version 2.2.100 and install the version 2.2.130.

3.2 General Considerations

The most important points of this new version are:

- Add the support for 3 new PCD3 devices.
- Improvements and corrections for the Fupla editor.
- Add support for the new devices and corrections in the Wiring Check Tool.
- Improvements and corrections in web templates and Web Editor 8.

In the following chapters, you will find a description of the enhancements and the main improvements and corrections.

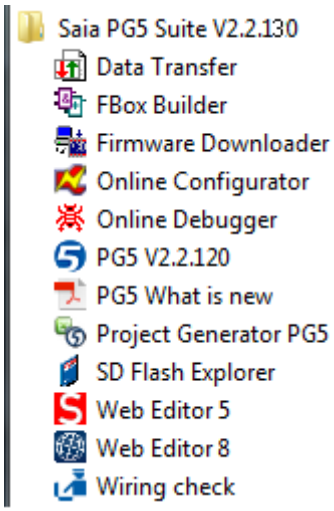
Several other issues and improvements have been done in other PG5 components and are not mentioned specifically in this document.

3.3 Windows Start menu

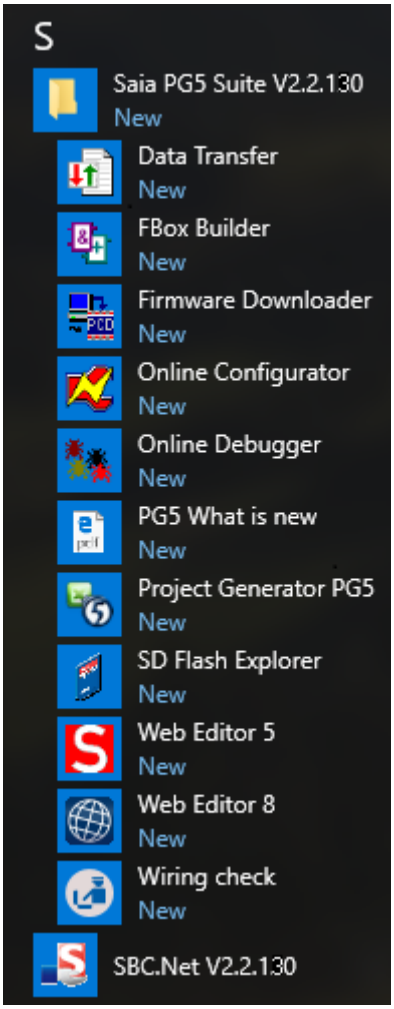
In the Windows Start menu, the Saia PG5 version 2.2.130 applications are accessible directly under the folder 'PG5 Suite V2.2.130' and no more under the folder 'Saia Burgess Controls'.

This change has been made in order to be compatible with the Windows 10 start menu that's accept only one level of folder.

Windows 7:



Windows 10:

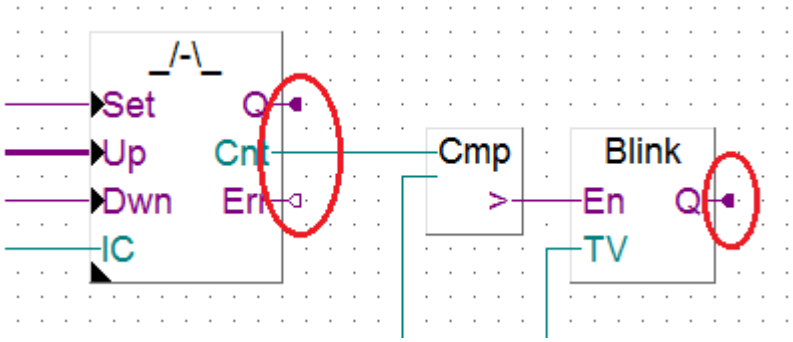


3.4 Fupla

In the following, you will find a description of the enhancements and majors corrections that have been implemented in the Fupla editor.

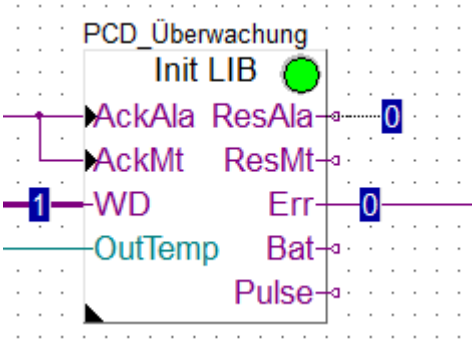
3.4.1 Status indicator of unconnected FBox binary outputs

In online mode, the status of the unconnected FBox binary outputs is displayed with an indicator. The core of the indicator is white when the level is low and is pink when the level is high, as show below.



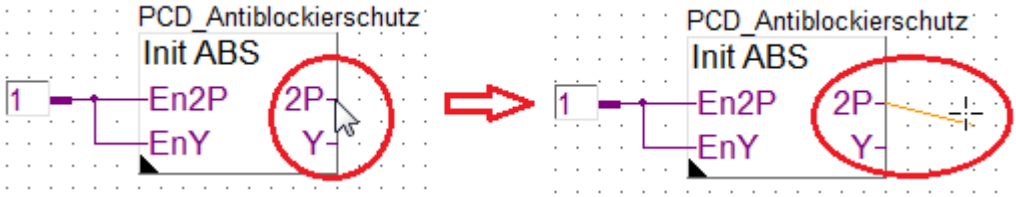
3.4.2 Probe format of binary connection

When defining a probe on a binary connection, the format is automatically set to binary.

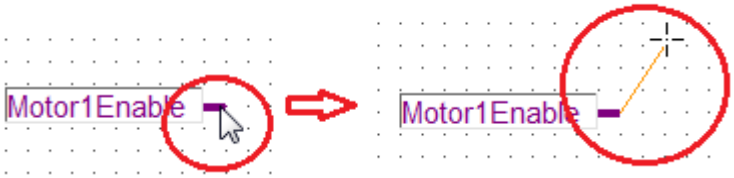


3.4.3 Double click for defining a new connection

In the Fupla page, in 'Selection mode', it is possible to directly start a new connection from an input or an output of an FBox with a double click.



It is also possible to start a connection from a connector with a double click of the connection pin.

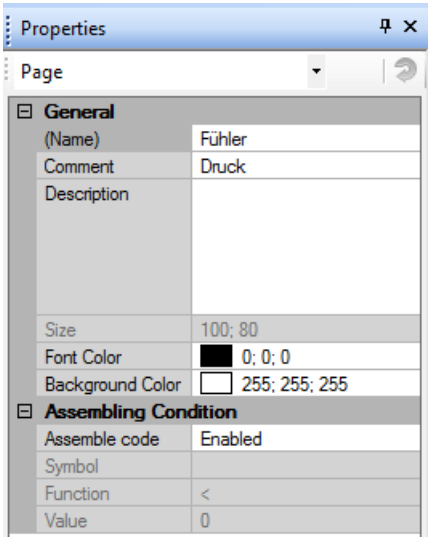


In this way it is no more necessary to first switch to the 'Draw Lines' mode for drawing a connection line.

3.4.4 Click on the page to display the page properties

In order to display the properties of the page in the 'Properties' view, you just have to click on a free space in the Fupla page.

You can also display the page properties in selecting the page in the 'Page Navigator' view and select the 'Properties' command from the context menu.



3.4.5 Corrections

When entering a symbol name inside a connector and if the space is sufficient, the size of the connector is automatically adapted in order to display the whole symbol name.

The following corrections have been made in the online mode:

- The state of the binary connection is correctly displayed, including the case where inverters are used.
- The value of the probes is correctly displayed, including the case where arrays are used.

Several corrections have been done in order to handle a correct format of the adjust parameters and avoid compilation errors, including the case when a project is imported from precedent PG5 versions.

It is again possible to connect register float to a standard register input of an FBox.

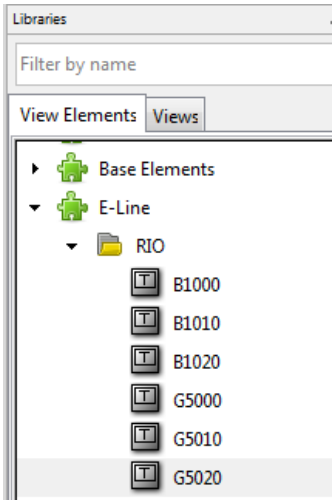
Various other issues have been fixed.

3.5 Web templates and Web Editor 8

In this chapter you will find a description of the new features and corrections done in the web templates and the Web Editor 8.

3.5.1 Templates for the E-Line RIO modules

The new E-Line RIO templates are integrated in the standard libraries. Those templates are used to control the manual mode of the E-Line RIO modules. The templates are available under the 'E-Line' category, in the 'RIO' group, in the 'Libraries' view.



As other templates, the new E-Line templates are link to the symbols generated by the E-Line RIO FBoxes in the Fupla editor.

3.5.2 Other templates

In the 'User Admin' templates, the scale mode of the images has been corrected.

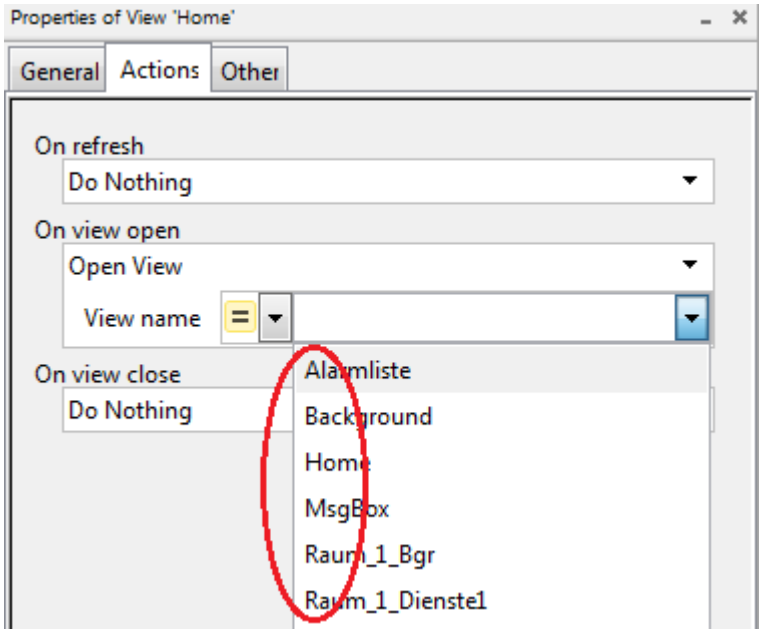
In the 'Online Trend', the selection has been improved.

The 'Animated Image' is working again.

Several translated text issues have been corrected.

3.5.3 Web Editor

In the 'Action' tab of the 'Properties' view, when a 'Open View' action is selected, the views are now sorted alphabetically in the view selector drop down list.



Various stability problems and other issues have been fixed.

3.6 Device Configurator

3.6.1 Support for new device types

The following new devices types have been integrated into the Device Configurator:

- PCD3.M3160: Power CPU with 512kByte program memory, 128kByte user memory, DB/text, USB, Ethernet, 4 IO slots.
- PCD3.M3360: Power CPU with 512kByte program memory, 128kByte user memory, DB/text, USB, Ethernet, 4 IO slots, expansion slot.
- PCD3.M5360: Power CPU with 2MByte program memory, 1MByte user memory, DB/text, RS-232, USB, Ethernet, 4 IO slots, expansion slot.

3.6.2 Extensions

It is now possible to define the PCD2.G200 – multi-functional input/output module - on PCD2.C1000 and PCD2.C2000 expansion module.

3.7 Wiring Check Tool

The Wiring Check Tool has been extended to support the following programmable E-Line devices:

- PCD1.M2220-C15: E-Line PCD.
- PCD1.F2611-C15: E-Line DALI module
- PCD1.G1100-C15: E-Line light and blind module
- PCD1.G3600-C15: E-Line room control module
- PCD1.G3601-C15: E-Line room control module + RS-485
- PCD1.W5300-C15: E-Line analogue module

The new PCD3 devices are also supported:

- PCD3.M3160
- PCD3.M3360
- PCD3.M5360

For the definition of analogue value of the output channels, the point '.' and coma ',' are now accepted as decimal separator.

Corrections have been made in order to ensure the generation of PDF reports and CSV reports.

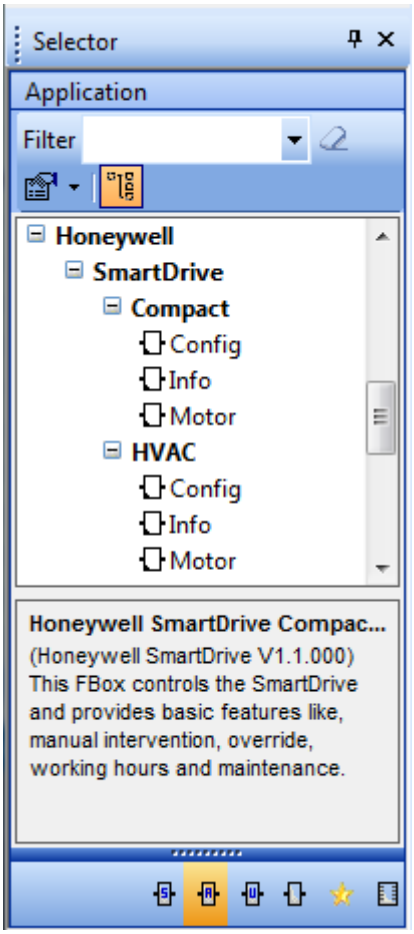
3.8 FBox libraries

3.8.1 New Honeywell SmartDrive Library

The new Honeywell SmartDrive library enables the control of the Honeywell drives via PCD. The main parameters can be accessed from the SBC PG5 Fupla editor.

The following type of drives supported:

- SmartDrive HVAC.
- SmartDrive COMP.



3.8.2 Updated FBox libraries

The following FBox libraries have been updated between the version PG5 2.2.100 and this new version. Some of them have also been available over the Update Manager.

- **DDC 2.5 Library, version V2.8.160**
  - In the 'Initialisation' group, the new 'Init Reduced' FBox is available for the devices that have no XOB, watchdog and IO access, like the programmable web panels PCD7.D4xxVT5F.
  - In the 'BACnet' group, in the FBox 'Device', the check of the 'Present Value' with the PCD user variable is only done after a delay in order to reduce COV events.
  - In the 'Set Points' group, in the FBoxes 'Integer' and 'Integer (MV)', in the French version, change the predefined symbol name from 'Flag' to 'Value'.
  - In the 'Systems' group, in the 'Redundant' FBox, the manual testing was forcing problems if 'Cnt H-Difference' was selected.
  - In the 'Initialisation' group, in 'Anti-block protection' FBox, the BACnet feature is now properly working.
  - In the 'Controls' group, in the 'Motor 2 speed' and 'Motor 3 speed' FBoxes, when BACnet is enabled, the input 'En' is now mandatory.

- **SWA alarming, version SP2.6.302**
  - All initialization FBoxes are now erasing alarm list if the option 'Clear the list after download' is selected.

- **ELine, version V1.0.140**
  - The PCD error led is no more activated.

- **File System Library, version V2.7.540**
  - Help is available in English, German, French and Italian.
  - 'Read CSV col DB' FBox: New FBox for reading a specified column of a CSV file and stores the values into a DB.
  - 'Read CSV to DB' FBox: New output 'ReadNbr' in order to get the number of lines that have been read; new adjust parameter 'Read / write mode' in order to select if only the specified number of lines or all lines until the end of the file have to be read.
  - Corrections in all 'Read CSV' FBoxes in order to detect correctly the last column and read the values correctly.
  - 'Memory Management External' FBox: fixe an assembler error when used together with the DALI 'Backup to Flash' FBox.

- **Heavac library (HVC), version V2.7.530**
  - 'Redundant command 2-8' FBox in the 'General' group: new FBox for the redundant command of 2 to 8 devices with automatic priority changeover depending on the run hours.
  - On the 'E-Master' FBox in the 'Energy' group: Assembler problem when a name was given is corrected.
  - On the 'Initialization HVC 8' FBox in the 'Init' group: the texts for the summer/winter time change are correctly displayed in French and in German.
  - On all FBoxes in 'Init' group: with a firmware version higher or equal to 1.20.00, if no Time Zone is defined, the summer/winter change is now executed, the summer/winter time status is updated and the parameter 'Automatic change' is forced to 'Device Configurator'.
  - On all FBoxes in 'Controllers' group: a static register has been defined for the set point in order to avoid errors.
  - On the 'Controller PID' FBox in the 'Controllers' group: if the value 'Yd' is very big, it can stay to this high value and cause an overflow and avoid the correct

computing of the 'T1' filter. Now the value continue to decrease (however not according to the filter settings) even in case of an overflow.

- On the 'Conversion DB 20 n points' FBox in the 'General' group: the index pointer is initialized to 0 at startup in order avoid errors.
- Corrections in the English and German helps and in the FBox description.

4 Release PG5 V 2.2.100

4.1 PG5 2.2 installation and compatibility

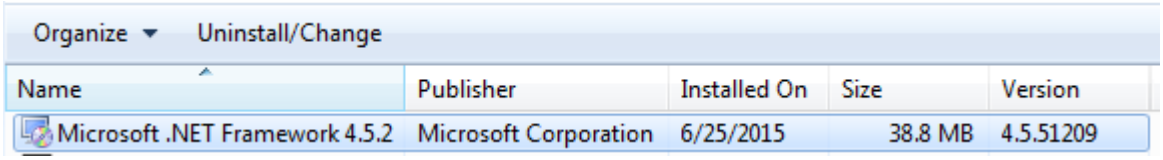
4.1.1 Minimum computer requirement

PG5 2.2, including Web Editor 8, works under Windows 7 32 and 64 bit with Service Pack 1, Windows 8, Windows 8.1 and Windows 10.

For best performance, we recommend installing PG5 2.2 on a PC with a multi-core CPU running at a minimum of 2GHz with a minimum of 4GB RAM (8GB or more are recommended). The installation package requires about 700MB of free space on your hard disk.

4.1.2 Prerequisite

Microsoft .Net framework 4.5.2 must be installed on the PC. This can be checked under the 'Programs and Features' setting in the 'Control Panel'.



If not installed, the installation package is available on the installation DVD:

'<DVD Drive>:\Windows\ DotNet\NDP452-KB2901907-x86-x64-AllOS-ENU.exe'

4.1.3 Firmware requirement for full PG5 functionality

It's important to use the latest PCD firmware versions for full compatibility with the new PG5. The latest COSinus firmware version will be available

- Into the PG5, in using the PG5 Update Manager (see below), the files are available under the following folder:

  'C:\Users\Public\SBC\PG5 V2.2.1xx\Firmwares'

- On our support site: www.sbc-support.com
- On the installation DVD: '<DVD drive>:\Firmware Files'

4.1.4 Compatibility with previous versions

Compatibility with PG5 projects version 2.1

PG5 V2.1 projects are upward compatible with PG5 V2.2, but not back again. Once a project has been opened with the new PG5 V2.2, it is not possible to open it again with the previous versions.

We recommend using different project directories for each PG5 version so they do not get mixed up. Projects made with the PG5 2.1 must be imported or restored in PG5 Version 2.2. This makes a new copy of the project and converts the files to the new format. The original project stays unchanged.

Compatibility with the user FBoxes written for PG5 2.0 and 2.1

The FBox libraries written for PG5 2.0 and 2.1 are fully compatible with PG5 Version 2.2. There is no change concerning the FBox definition files, the source files and the help files.

Compatibility with PG5 projects version 1.4

PG5 V1.4 projects are upward compatible with PG5 V2.2, but not back again. Once a project has been opened with the new PG5 V2.2, it is not possible to open it again with the previous versions (since files are converted to the new format).

We recommend to use different project directories for each PG5 version so they do not get mixed up. Projects made with the PG5 1.4 must be imported or restored in PG5 Version 2.2. This makes a new copy of the project and converts the files to the new format. The original project stays unchanged.

Saia Burgess Controls has taken all the necessary precautions to guaranty the compatibility between the PG5 projects version 1.4, 2.0, 2.1 and 2.2. For older projects written with PG5 1.3, PG4 or PG3, we strongly recommended to first to update into PG5 1.4 and then import into PG5 2.2.

Compatibility with the user FBoxes written for PG5 1.4 or previous versions

The FBox libraries written for PG5 1.4 or old versions have to be update to be used under PG5 V2.2.

This update can be supported by the library author or the end user itself. There are several ways to perform the update:

- Using the 'Library Converter' available in the 'PG5 Library Manager'.
- Import an installed library using the 'FBox Builder'
- Open the 'FBox Builder' project and convert it to the new version

For more information concerning the update of FBox library, please refers to the help of the Library Manager and the help of the FBox Builder.

PG5 compatibility restrictions

There is no compatibility restriction regarding the precedent version of PG5 version 2.

Compatibility with old Windows operating systems

PG5 2.2 is not designed to run under the following operating systems: Windows 95, 98, ME and NT, 2000, Vista and XP.

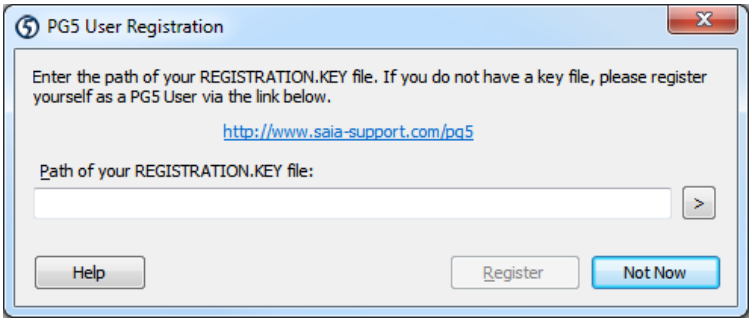
4.1.5 User licensing and developer registration

PG5 Licensing

In order to use PG5 version 2.2, a new 'USER.KEY' file is needed. Key files from V2.1, V2.0 or V1.4 cannot be used. However, you can run V2.2 as a Demonstration version for 90 days without a key file. The 'USER.KEY' file is available from your SBC representative. This key file registers your Company and enables the features of the PG5 which are needed. Use the Project Manager's **Help / Product Licensing** command for registering the license – 'USER.KEY'.

PG5 User Registration

Introduced in PG5 V2.1, the registration of individual PG5 developers is also valid for the version 2.2. When the PG5 first opens, you will be asked to register yourself as a **PG5 User**:



A PG5 user is entitled to free software updates, free technical support, and other benefits.

The registration file generated for version 2.1 is compatible with version 2.2. It is not needed to register on the web site again. You only need to enter the file path of the 'REGISTRATION.KEY' file on the 'PG5 User Registration' window.

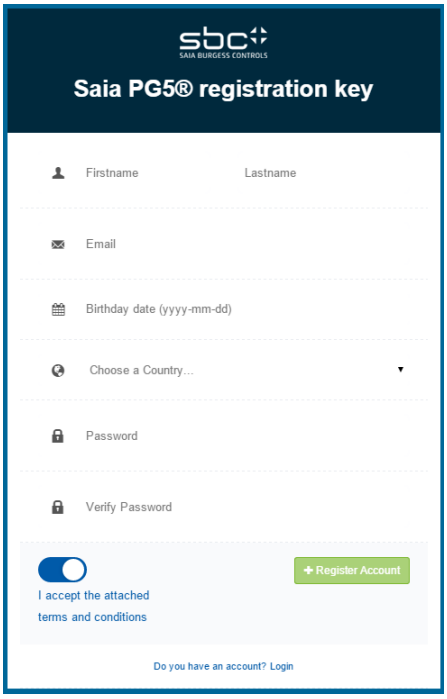
You can skip the registration by pressing **'Not Now'**.

Unregistered users of the PG5 **demonstration version** must complete the PG5 user registration before the PG5 can be used.

It means that PG5 V2.2 with a demo key will not run without having a valid user registration.

Licensed users, with a valid 'USER.KEY' file, can skip the developer registration indefinitely.

To register, click on the link and enter your information on the Saia Burgess Controls website:



You will be assigned a **S-Engineer-ID**, and a 'REGISTRATION.KEY' file will be emailed to you. Copy this file somewhere safe on your PC and enter its path on the PG5 User Registration dialog box and press '**Register'**.

You can also complete the registration from the **Help / PG5 User Registration** menu command.

4.1.6 Windows compatibility

PG5 2.1 is compatible with Windows 10, Windows 8, and Windows 7 with Service Pack 1 operating systems.

Directory names

Within PG5 version 2.2, the files are installed in a similar structure as in PG5 2.1.

The PG5 projects, libraries, templates, firmware, and S-Net '.dat' files are installed by default in the Public Documents directory. It means:

'C:\Users\Public\SBC\PG5 V2.2.1xx'

The specific user settings for the different editors and S-Comm driver are no longer saved in the Windows registry but in the directory defined specially for this kind of data:

'C:\Users\<user name>\AppData\Local\SBC\PG5 2.2.1xx'

The license file 'USER.KEY' and the '*.5at' file used to register the add-on tools are in the following directory:

'**C:\Users\Public\SBC\PG5 V2.2.1xx\LocalDir'**

It is possible to modify (not recommended) the project and libraries paths from the Project Manager using the 'Options' command under the 'Tools' menu.

4.2 General Considerations

The main new features introduced in this version are:

- Fupla Editor: internal structure and graphic interface have been renewed for better performance and usability.
- Web Editor 8: important improvements have been implemented.
- New web templates for the management of alarms – 'Alarming', graphical data visualization – 'Trending' and user management.
- 'Wiring Check tool': new tool for an easy check of the IOs wiring of a PCD. This tool doesn't require any PG5 knowledge and is dedicated for electricians and technicians building electrical cabinets.

In the following chapters, you will find a description of this new features and enhancements.

4.3 Fupla

In this new version of PG5, the internal structure and the graphical interface of the Fupla editor have been completely reworked in order to improve performance and usability. In this chapter, you will find a description of the introduced improvements and enhancements.

Note: We have try to keep the same handling and workflow as in precedent versions of Fupla, but some differences can be noticed in some actions or features due to the new implementation and internal structure.

4.3.1 New internal structure

The Fupla internal structure has been completely redesign in order to improve the performance when opening a file, when exporting or importing pages, when adding or removing pages and when applying find and replace operations.
The old Fupla structure was using temporary files that caused speed issues during various operations. The new structure is based on a model defined in RAM. This significantly improves performance and provides better consistency of all information contained in the Fupla file.

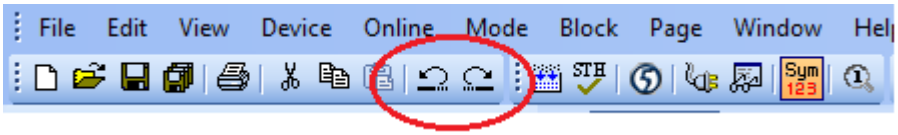
4.3.2 Undo / Redo

The Undo / Redo feature has been improved. All performed actions are now supported by the undo/redo like, for example:

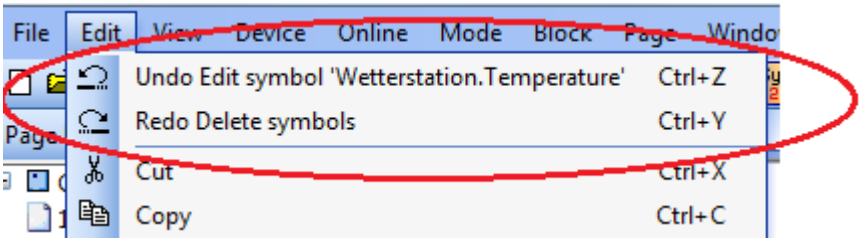
- On the graphical page:
  - Add/remove FBoxes, connectors, connections, bus, probes, and comments.
  - Move FBoxes, connectors, connections.
  - Define symbol in connector.
  - Copy FBox(es), connector(s), copy of multiple elements.
  - Replace FBox.
  - Update FBox(es).
  - …

- In the 'Page Navigator':
  - Add / delete page(s).
  - Move pages.
  - Group/ungroup pages.
  - Import pages.
  - …

- In the ''Properties' windows:
  - Define FBox name, reference and comment.
  - Set adjust parameters.
  - …



The operations that can be undone or re-done are now displayed in the 'Undo' and 'Redo' commands under the 'Edit' menu.



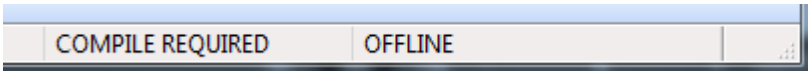
These commands are also accessible from the toolbar as well as using 'Ctrl'+'z' and 'Ctrl'+'y' shortcuts.

Symbol Editor window

Unlike precedent versions, the operations performed in the Symbol Editor window are now handle at the Fupla editor level. From now on all actions performed in the Symbol Editor window can be undone or re-done using the menu, the task bar or keyboard shortcuts of the Fupla main window. This means that the buttons 'Undo / Redo' defined in the toolbar of 'Symbol Editor' window has been removed.

Compilation required indicator

On the status bar of the Fupla window, the 'Compile required' status indicates if the previous operation(s) require(s) a new compilation of the Fupla program or not.



For example, placing a new FBox on the page required a new compilation, but placing a probe doesn't. So you can see at any time if you need a compilation or not. When applying an action that will set the 'Compile required' status, the undo action will reset this status. It means that the undo / redo also handle the 'Compile required' status.

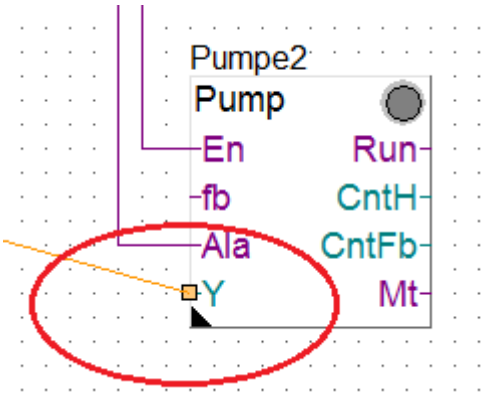
4.3.3 Page edition and graphical interface

The edition of a Fupla page has been modified for an easier and quicker programming.

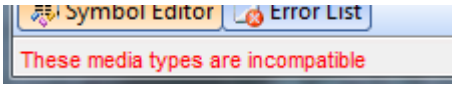
Connections

A new routing algorithm has been implemented. Priority is now given to the connection, unlike the old algorithm that gave priority to lines forming the connection. The connection represents the logical connection between a connector and an FBox or between two FBoxes.

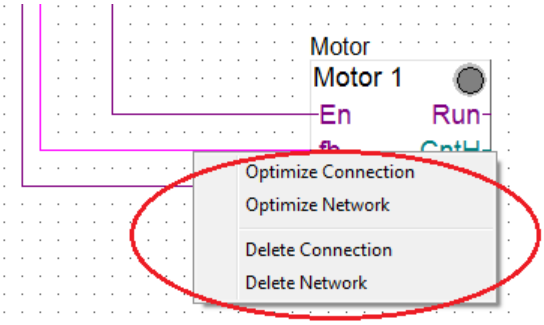
A visual assistant has been implemented in order to facilitate the drawing of the connections. When placing a connection, a small square will appear on the inputs, on the outputs of an FBox or on the connector. This square only appears when the connection is possible – like flag with flag and register with register.



When trying to make an inapplicable connection such connecting a flag output to a register input or vice versa.

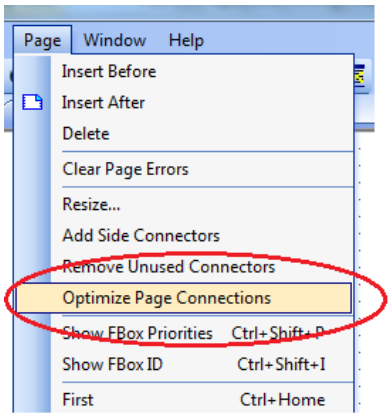


The new algorithm optimizes connections to provide a clear design of the page. It is possible to optimize a point to point connection using the command 'Optimize Connection' from the context menu.



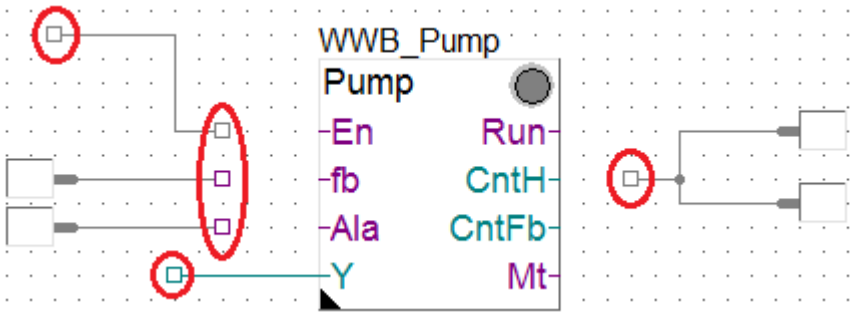
A 'Network' is a multipoint connection that links an output to several inputs. A network can be optimized by selecting the 'Optimize Network' from the context menu.

The command 'Optimize Page Connection' defined under the menu 'Page' allows the optimization of all connections defined in the page.



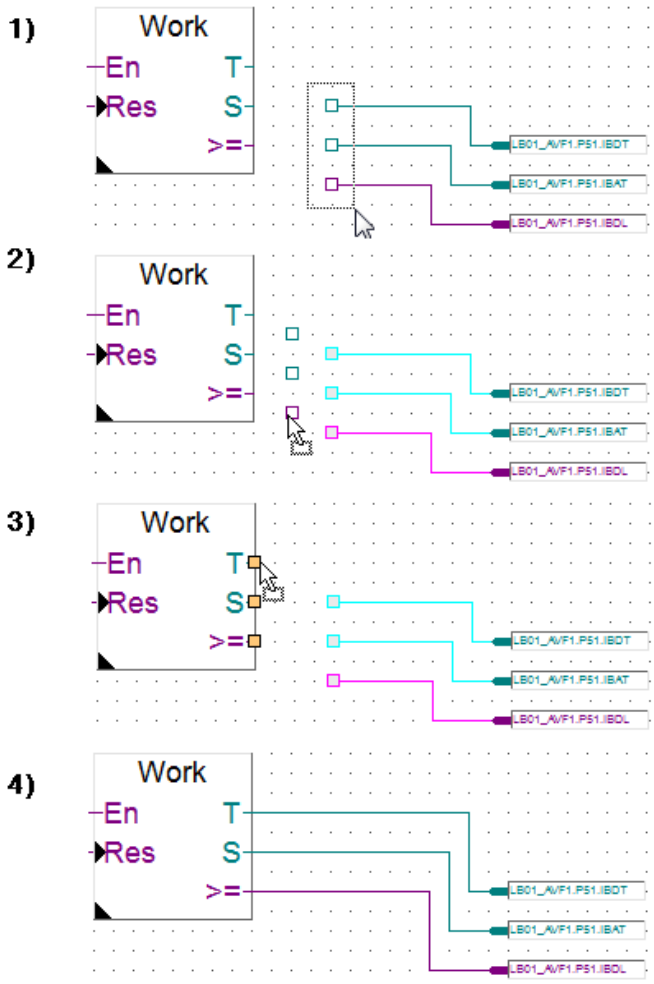
This command is also accessible from the context menu of the page.

When defining a line that is not directly connected to an FBox or connector, the end of the line are indicated by a square as 'construction point' as showed in the picture below.



The construction points can be moved in the 'Select mode' in going on it with the cursor, press the left key down, move to the desired location and release the left button. The line is then new routed. When a connection is possible with an FBox input or output or a connector, it is indicated with the visual assistant as described above.

It is also possible to select several construction points and move them together. This is useful after having removed one or several FBoxes and placed new FBoxes and then reconnect to the input or output of the FBox, as show below.

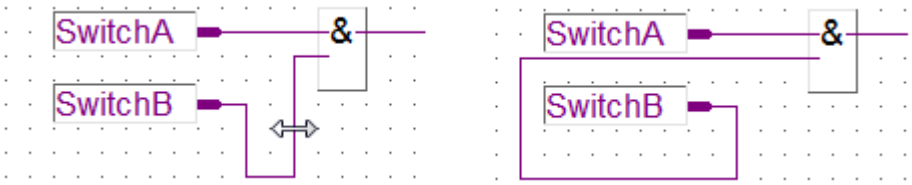


Moving connection lines

Moving connection lines has been improve and give now a lot more flexibility.

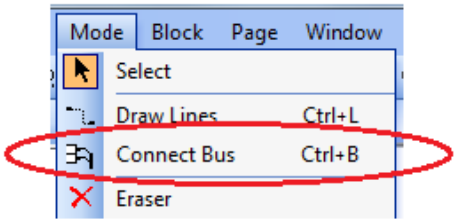
In order to move a horizontal line, go with the cursor on the line, press the left button and move up or down the line with the mouse.

For a vertical line, go on the line with the cursor, press the left button and move right or left.

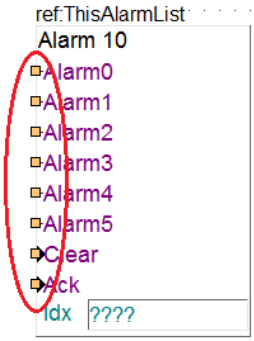


Bus connections

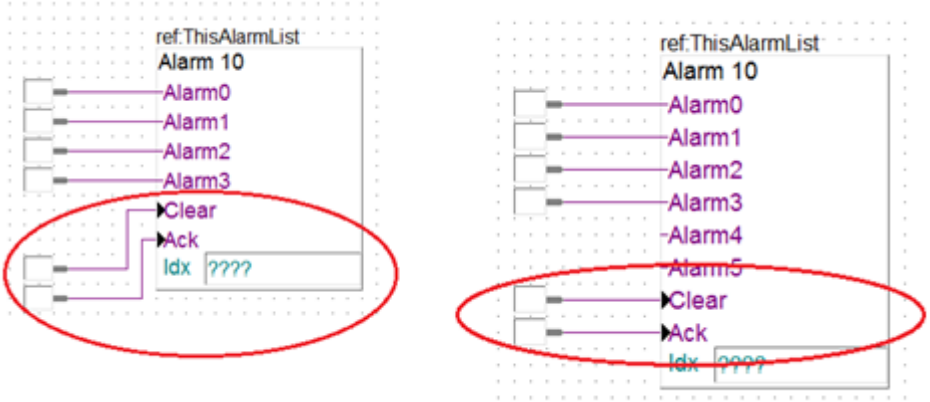
The bus connection allows connecting in one action several connectors to inputs or outputs of an FBox.



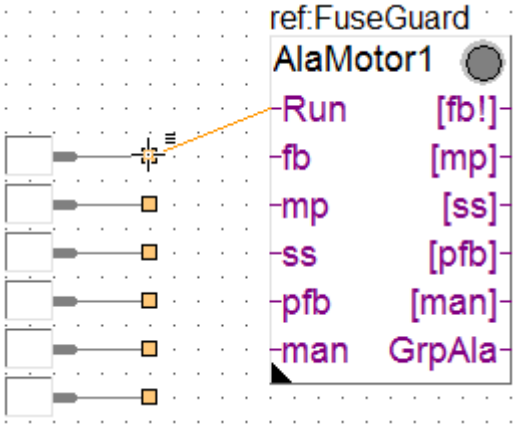
This functionality has been improved with the indication of possible connections. Squares appear on the inputs or outputs of FBoxes or a series of connectors arranged one below the other.



When the bus connection is used with a stretchable FBox, bus connections are added or removed, but connections related to fixed inputs are stored, as shown in the example below:

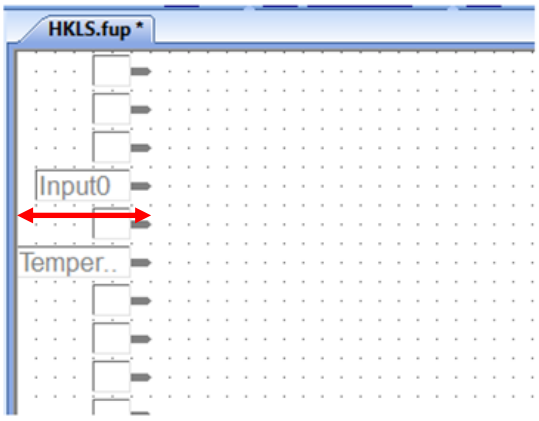


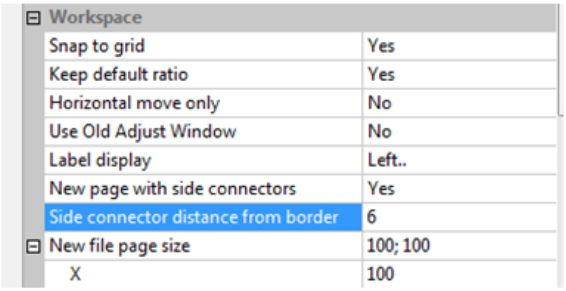
The 'Connect Bus' feature can also be used to connect several 'construction points' to multiple connectors or multiple FBox inputs or outputs, as show in the example below.



Default side connectors

In order to improve the clarity of the page, the size of the empty side connectors has been reduced, as show in the picture below.
The distance between the edge of the page and the connection point can be adjusted by changing the 'Side connector distance from border' in the 'Options' dialog box.



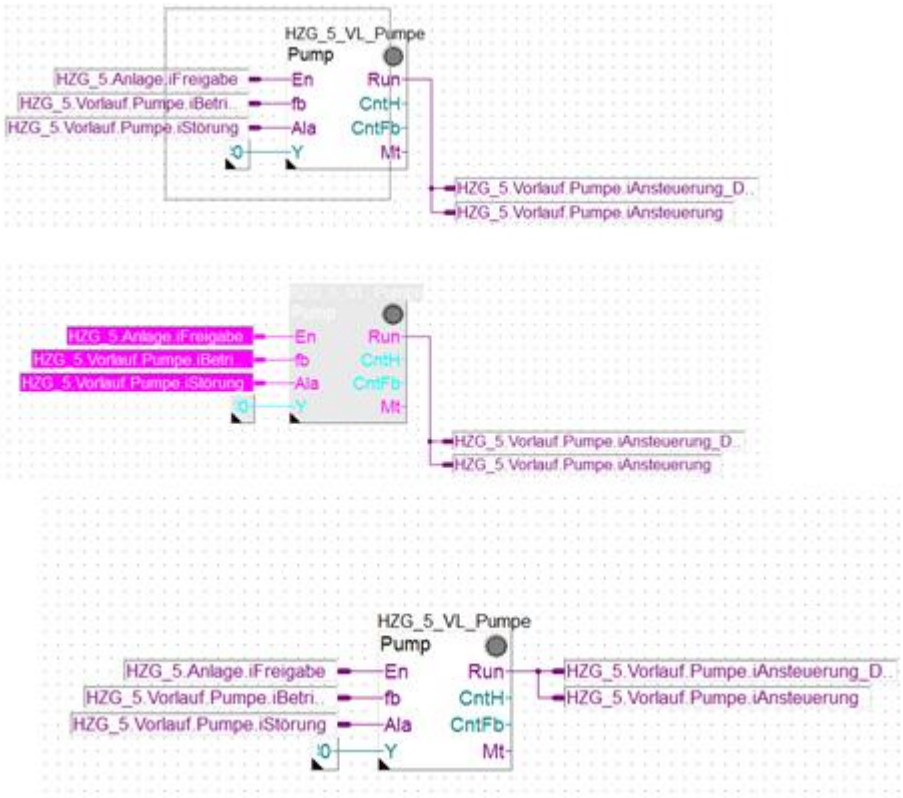


The range for the distance is between 4 and 40.

Note: Through the 'New page with side connectors' parameter defined in the 'Options' dialog box, you can specify whether a newly created page will contain or not the side connectors.

Moving several elements at the same time

It is possible to move multiple elements at the same time. Simply hold the left mouse button down and move the mouse for including the required elements in the selection rectangle. All elements that are partly or wholly included in the selection rectangle will be selected and can be moved. When moving the selection, the connections between fixed and moved elements will be retained.



It is possible to add or remove items from the selection by pressing the 'Ctrl' key and clicking on the elements. If the element is part of the selection, it will be removed. If it is not part of the selection, it will be added.

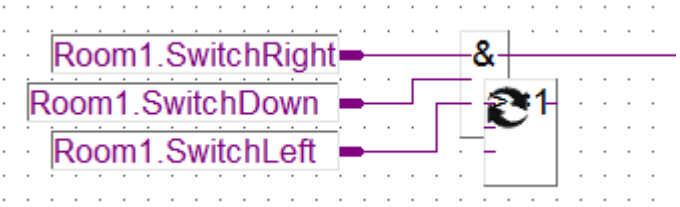
Copy / Paste

Copy/paste includes all connected elements. It is possible to add or remove items using the 'Ctrl' key and clicking on the specific element. The 'Paste' function will automatically place the items copied into an area where the space is sufficient, unlike the previous version where the items were placed on the top left of the page, regardless of the space available.

Replace FBox

It is possible to replace an FBox directly on the grid, without deleting it previously. In order to proceed, just select the new FBox in the FBox Selector and go with the mouse over the FBox that have to be replace. If the input and output connections are matching, the replacement can be done in clicking on the FBox. If the number and type of the connected inputs and outputs of the FBox are not matching, the mouse cursor indicates that the replacement is not possible

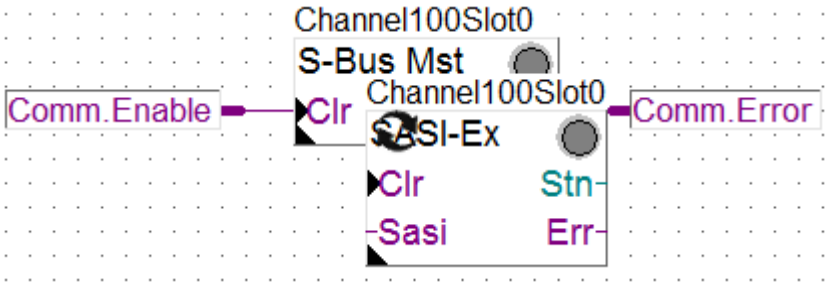
In the following case, the 'And' FBox can be easily replace by the 'Or' FBox. The type of the connected inputs and output are compatible.



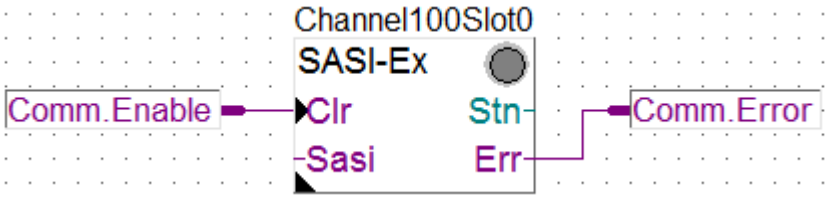
You can notice that if the FBox is stretchable – as for the 'And' and 'Or' FBoxes, the FBox size will be automatically adapted when moving the cursor on the FBox.

When replacing an FBox with bigger size/width or having more inputs or outputs, it is some time required to first make space around the existing FBox before replacing it.

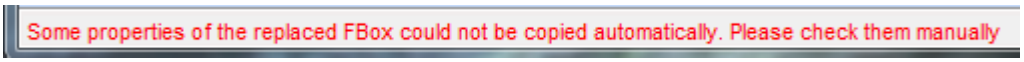
In the following case, the new FBox has two inputs. The type of the inputs are both compatible, but it will connect to the input having the same name, in our case the input 'Clr'. For the output, it will connect to the output having the same type, in our case the output 'Err'.



The result of the replacement is showed below. Notice that the old FBox name has been automatically copied to the new FBox – in this case 'Channel100Slot0'.

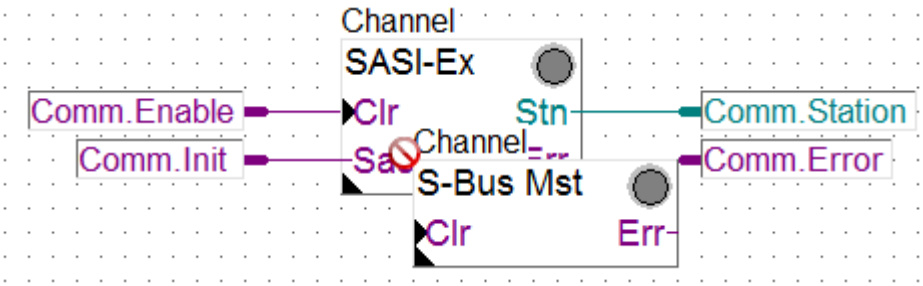


Note: When replacing FBox having adjust parameters, the replace feature is copying also the value of the adjust parameters, but only when the parameter names are the same. It means that after a replacement, the adjust parameters have to be check carefully. At this effect, a message is displayed on the status bar when the adjust parameters are not the same.

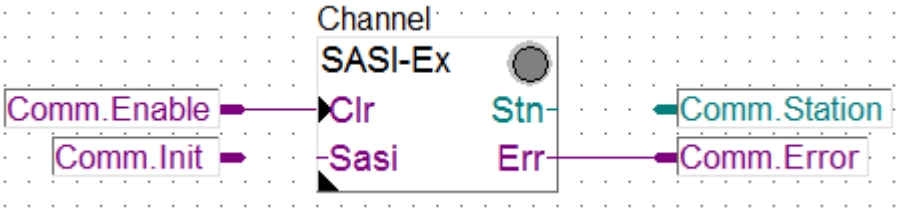


Note: For replacing an FBox with a new FBox having less inputs or outputs, you can just delete the connections that will be no more required and then do the replace, as showed below.

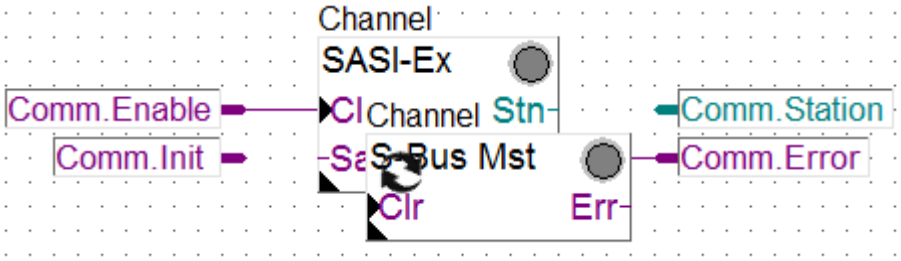
The replacement is not possible because the new FBox has less inputs and outputs.



The unnecessary connections have to be removed.



Then the replacement can be done.

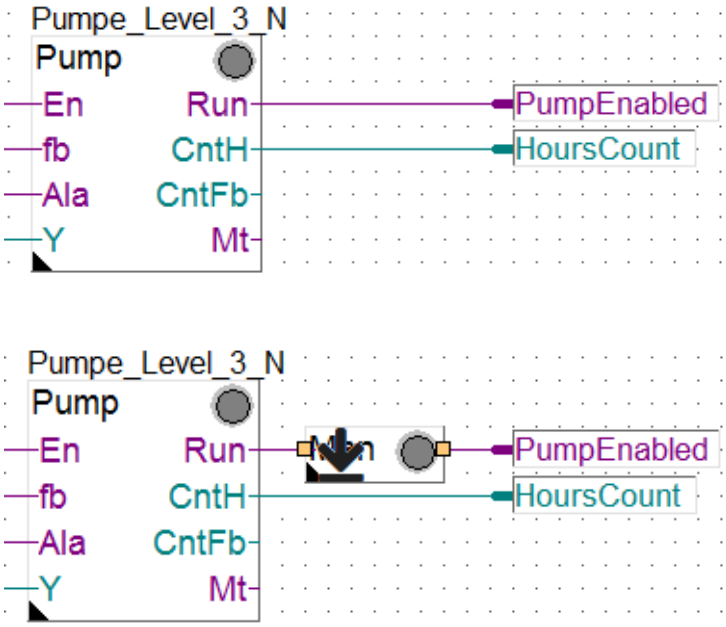


The replacement is done; don't forget to check the adjust parameters and to remove the unused connectors.

Insert an FBox on an existing connection

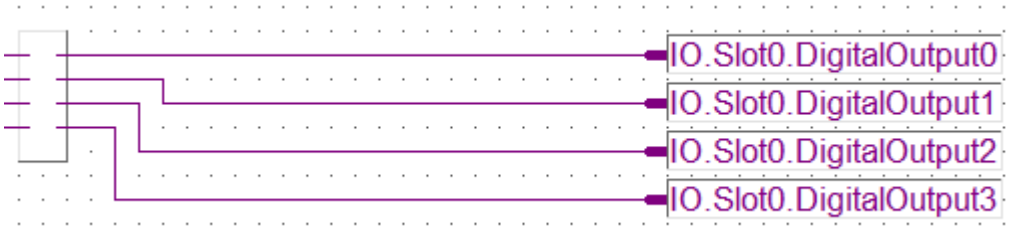
It is possible to insert an FBox on an existing connection line. The connection will be established automatically with the input and the output of the FBox.

You just have to move the FBox on the desired place, the cursor is then indicating if the insertion is possible and the visual assistant show the connection that will be done. If the insertion is possible, then just click on right mouse button. The FBox is inserted and the connection done. In order to reserve enough place around the FBox, connections may be eventually re-routed automatically.

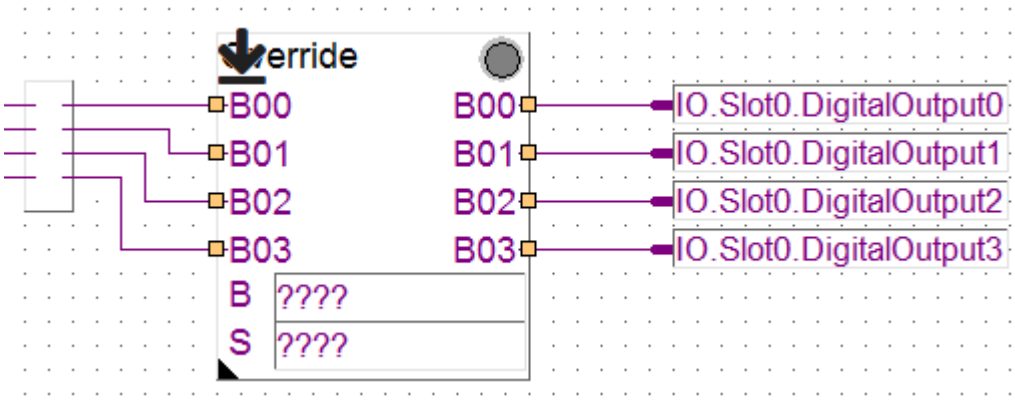


Insert an FBox on several existing connections

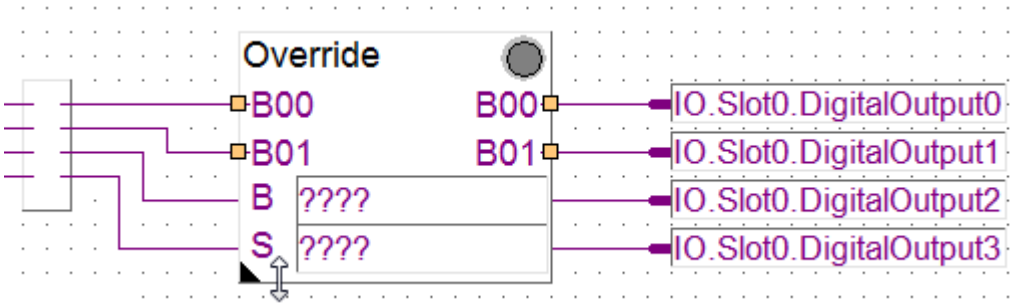
It is also possible to insert a stretchable FBox on existing connection lines. Several connections will be established in one single action.



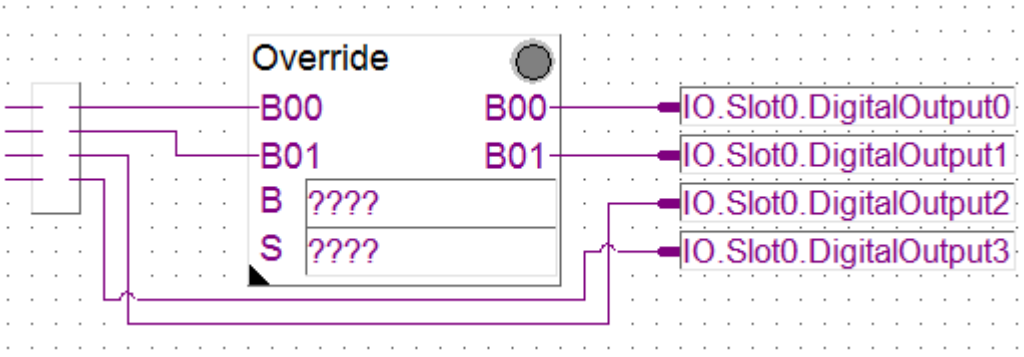
Place the FBox in the desired place. The cursor shows that the insertion is possible.



It is then possible to extend of reduce the FBox in order to connect only the required number of inputs and outputs. Possible connections are indicated by the visual assistant.



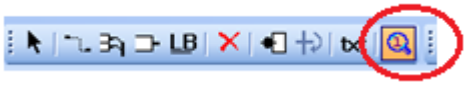
To complete the insertion, you have to click on the FBox. Then the FBox is inserted and the connections established. In order to reserve enough space for the new FBox, some connections around the FBox may be re-routed automatically.



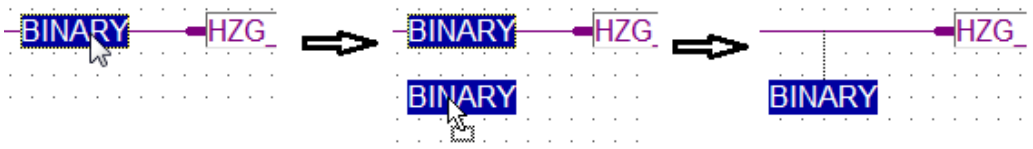
Define probes in edit mode

The probes, placed in a page, display values in online mode. It is now possible to define the probe in edit mode, and not only in online mode, as in the precedent versions. The probes can also be defined in the templates and will be automatically included when inserting the template into the file.

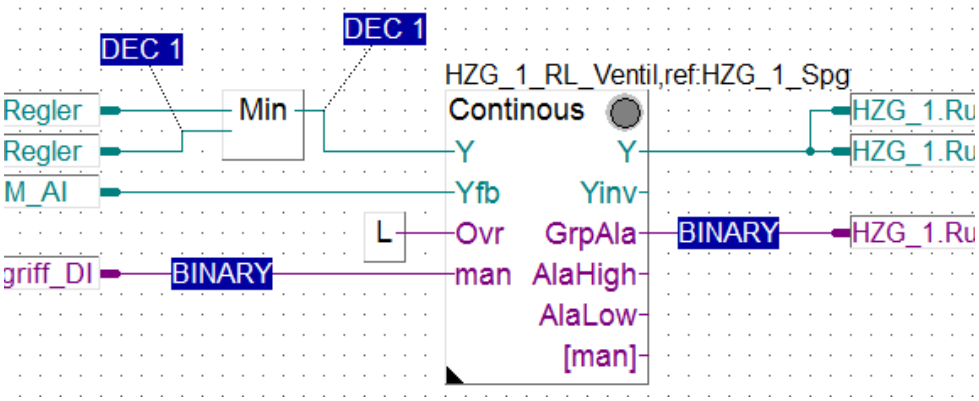
In edit mode, to add a probe, select the command 'Set Probes' defined under the menu 'Mode' or select the corresponding icon in the toolbar.



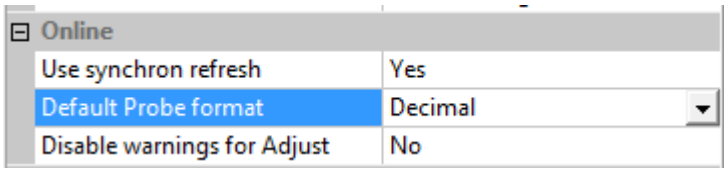
The probe will automatically place on the connection line, but it can be move in the edit mode, by pressing the left button of the mouse and move it to the desired location, as showed below.



The format can be defined using the context menu by clicking on the probe.

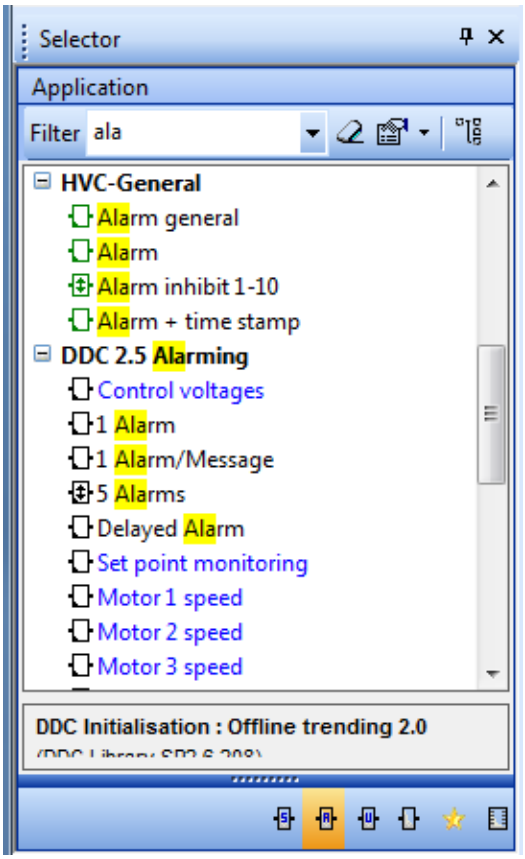


The default displayed format can be specified in the 'Options' dialog box with the parameter 'Default Probe format'. See the picture below.



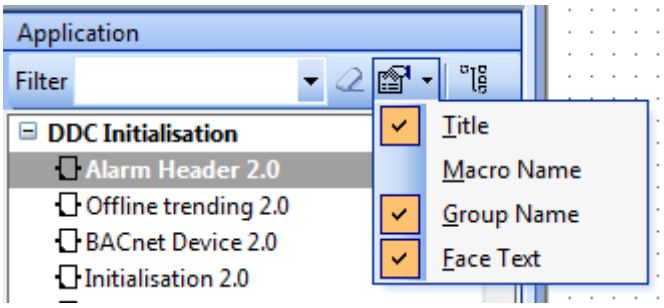
4.3.4 FBox Selector window

The FBox Selector window has a filter to quickly find the required FBox. This feature has been improved. Now the displayed FBox list is directly updated when one or more characters are entered into the text box. In the list, the corresponding characters are highlighted in yellow. When characters are not defined in the name of the FBox, but in the group name, the name of the macro or in the text displayed in the FBox, the name of the FBox is displayed in blue.



The filter can be specify in order to search for the string of characters matched in:

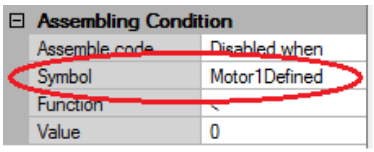
- FBox name – 'Title'.
- Name of the FBox macro – 'Macro Name'.
- Group name in which the FBox is defined – 'Group Name'.
- Text displayed on the face of the FBox – 'Face Text'.



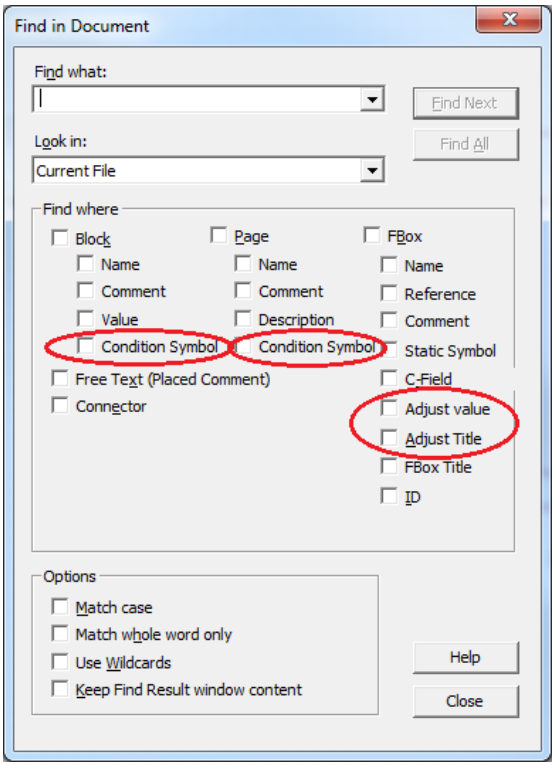
4.3.5 Find

Find has been improved with the possibility to look for:

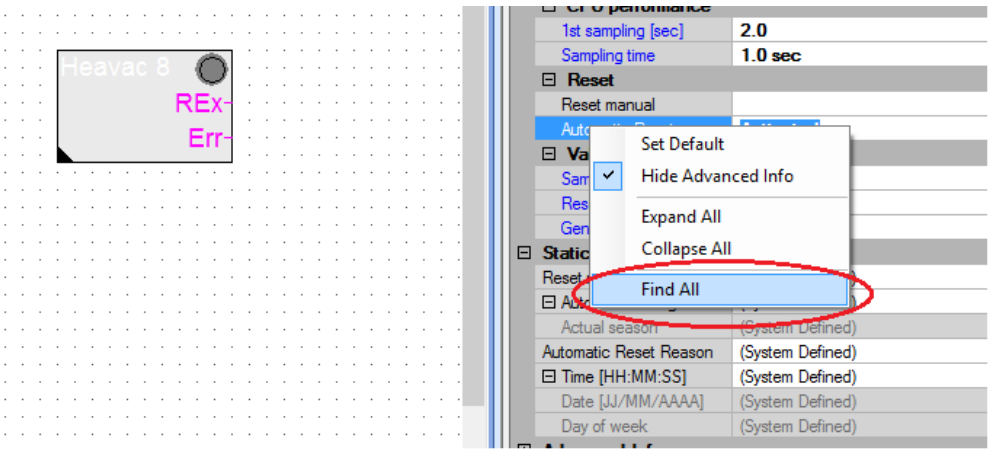
- Page or block condition symbols – 'Condition Symbol'



- Adjust parameter name – 'Adjust Title' and adjust parameter value – 'Adjust Value'.

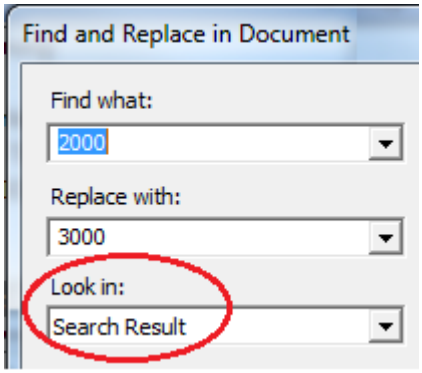


It is also possible to search for all adjust parameters of a type of FBox via the command 'Find All' defined in the context menu available in the 'Properties' window.



Note: You can modify an adjust value on all FBox of a same type using the following method:

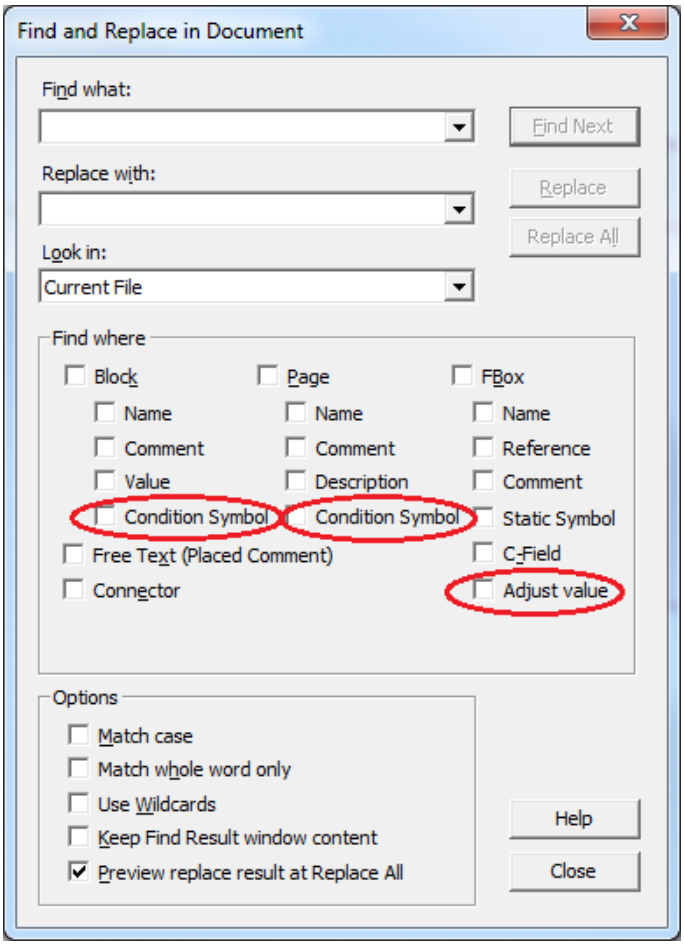
- Use the command 'Find All' from the context menu of the 'Properties' window to look for all adjust parameters and display the result into the 'Find Results' window.
- Use the 'Find and Replace' command. In the dialog, enter the value that has to be replaced and the new value, select 'Search Result' as 'Look in' parameter and select 'Adjust Value' in group 'Find where'.



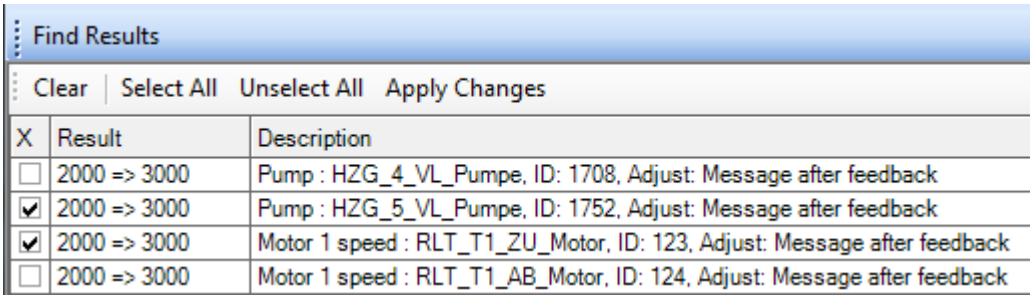
4.3.6 Find and Replace

'Find and Replace' feature has been improved with the possibility to find and replace the following elements:

- Page or block condition symbols – 'Condition Symbol'.
- Adjust parameter values – 'Adjust Value'.



Note: By selecting 'Preview replace result at Replace All', it is possible to view all the values that fit before making the update with the new values. In the 'Find Results' window, it is then possible to select or deselect each element found. You just have to select the element by using the checkbox defined in the first column and click on the 'Apply Changes' button defined in the top of the window.

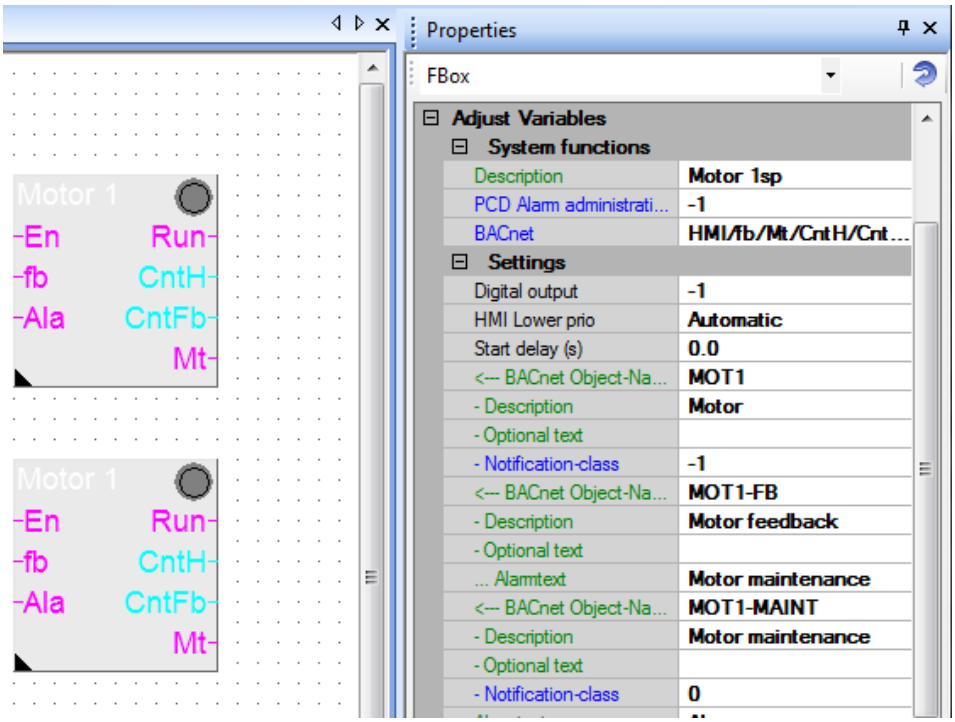


X	Result	Description
☐	2000 => 3000	Pump : HZG_4_VL_Pumpe, ID: 1708, Adjust: Message after feedback
☑	2000 => 3000	Pump : HZG_5_VL_Pumpe, ID: 1752, Adjust: Message after feedback
☑	2000 => 3000	Motor 1 speed : RLT_T1_ZU_Motor, ID: 123, Adjust: Message after feedback
☐	2000 => 3000	Motor 1 speed : RLT_T1_AB_Motor, ID: 124, Adjust: Message after feedback

4.3.7 Properties Window

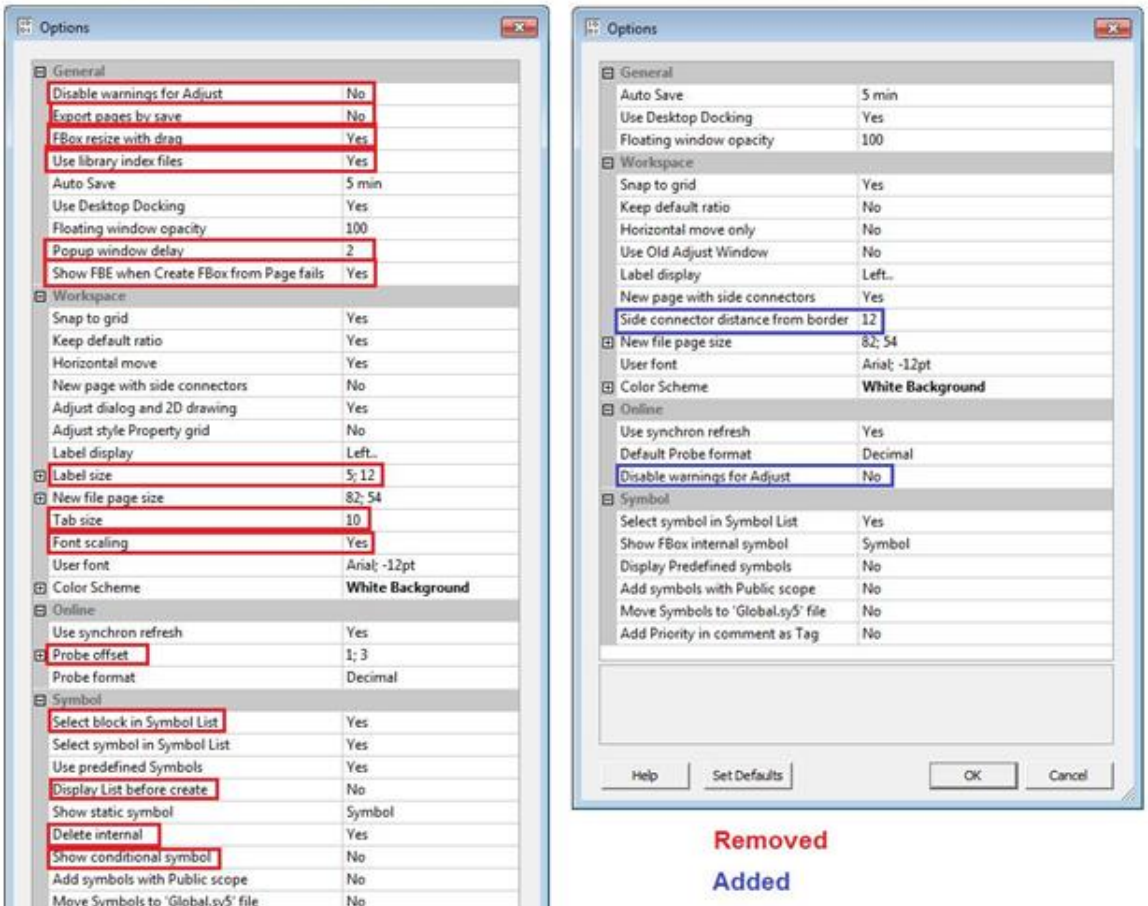
The 'Properties' window handles now multi selection of FBoxes, of pages and blocks.

This function is useful when you want, for example, disable multiple pages or more blocks or changed a setting for several FBoxes of the same type.



4.3.8 Options

The number of options available in the 'Options' window has been reduced in order to include only the most useful one. The picture below shows the comparison between the options defined in precedent version and in the new version.



The following options have been added in the new version:

- Definition of the distance between the side connectors and the border to the page – 'Side connector distance from border'.

- Disable the warning message for the adjust parameters – 'Disable warning for Adjust'.

The option 'Display List before create' defined under the 'Symbol' category has been renamed to 'Display Predefined symbol'. This option allows to display the 'Predefined Symbols' dialog in order to have the possibility to edit them before they are created.

4.4 Web Editor 8

In this chapter you will find a description of the new features that have been introduced in Web Editor 8.

4.4.1 Multipage templates

So far, the template feature was only possible at the level of elements of the same view. In this new version, the functionality has been extended at the views level. One or more views can be included in a template and then easily inserted into a project.

In addition to the selected views, multipage templates contain all resources referenced by any of its elements:

- Views (optional).
- Variable definitions.
- Translations.
- Images.
- Functions and conditions.

Creating a multipage template

To create a multipage template:

1. In the project tree, select all views that have to be exported. And select the command 'Export as View Template' from the context menu.

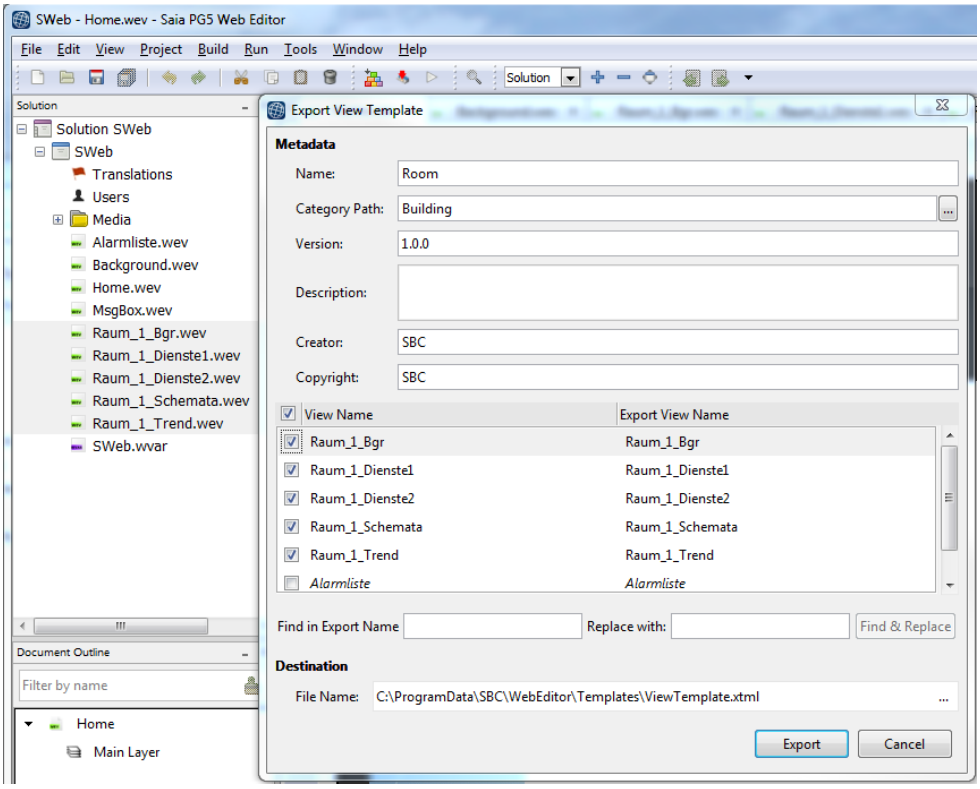
2. In the 'Export View Template' dialog, specify the name of the template, the category in which it will be displayed in the template list, the version, the description and the directory in which the template will be stored.

3. If required, exclude selected views from the export and/or include referenced views via each view's checkbox. You can also change the name of each view within the template, editing one by one or using find & replace.

4. When all information are defined, press the button 'Export' to create the template.

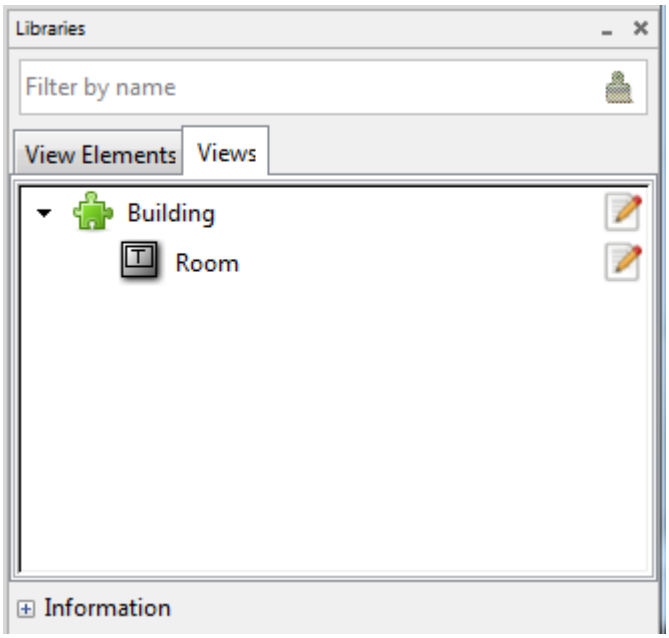
View naming

Each view name within a template can contain a placeholder character '**#**'. This placeholder is automatically replaced by an index, when adding the view template to a project later. Only one placeholder is allowed per view name.

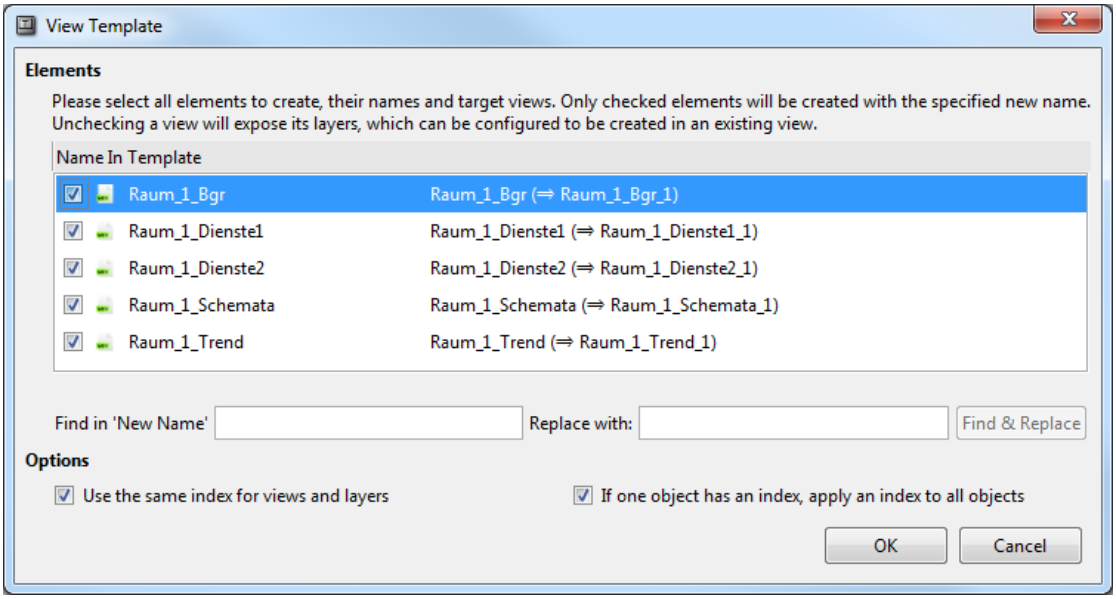


Importing a multipage template into a project

In the 'Libraries' view, the new tab 'Views' allows to show all available multipage templates.



A double-click on a template will insert it into the project. The 'View Template' dialog is displayed and it is possible to update the view names and / or select the views that will be imported into the project.



Find & replace can be used to quickly replace parts of all view names at once.

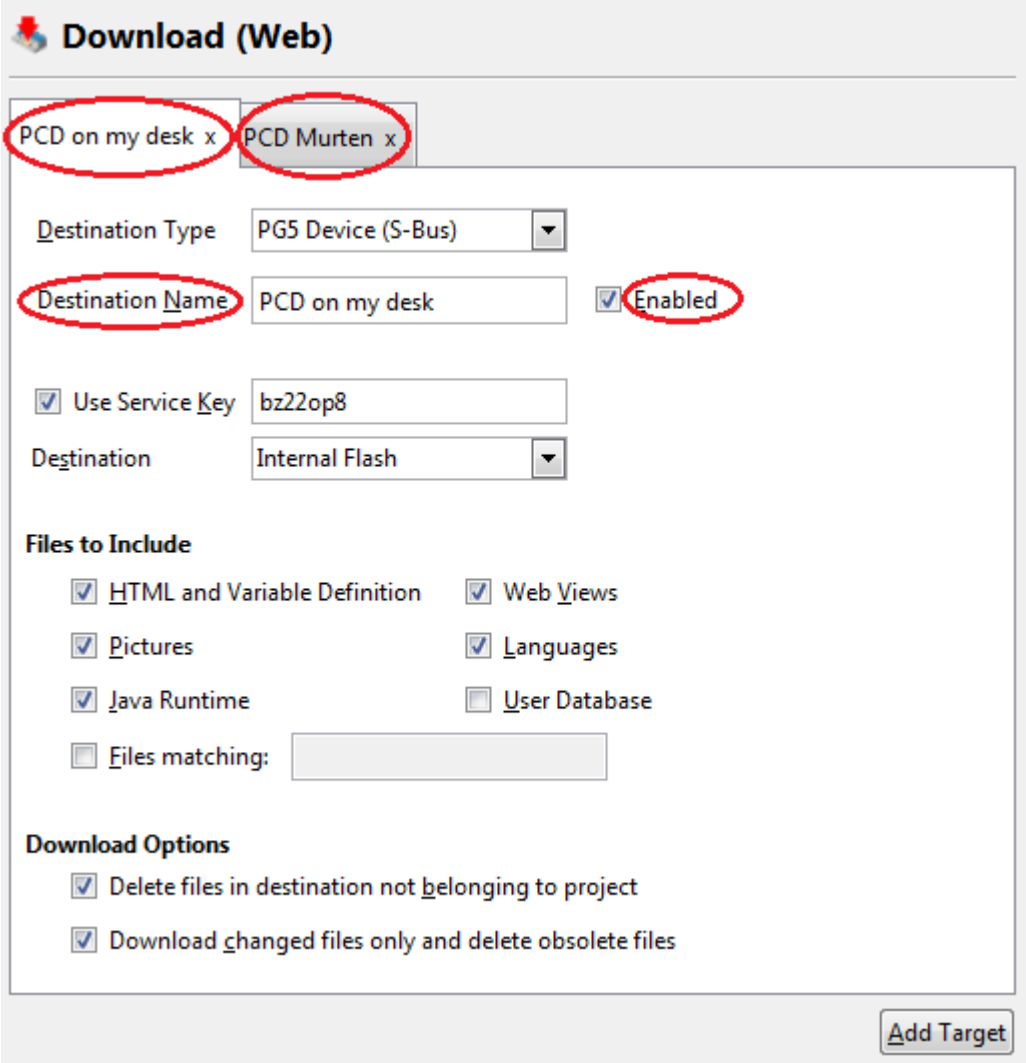
If a view name conflicts with an existing view in the project, an index is automatically appended to that name.
For view names that contain an index placeholder character '#' in the template, instead of appending the index, it is put in the place of that character.

There are two options available for automatic index generation. The first option enforces that all inserted/appended indexes are the same. This will find the first index that creates no conflicts for all views. The other option specifies that, if an index is required for any view, then every view will get an index. You will find more details in the help of Web Editor 8.

4.4.2 Extensions in the download options

The download feature has been extended with the possibility of defining multiple targets. The targets can be define in the 'Project Options' dialog, under the 'Download' view. Each target is identified by a name. The name has to be entered in the 'Destination Name' textbox. Once defined, the target name will be displayed in the tab.

Note: To create a target, press the 'Add Target' button defined at the bottom of the dialog.



Using the checkbox 'Enabled', it is possible to enable or disable each target for the download.

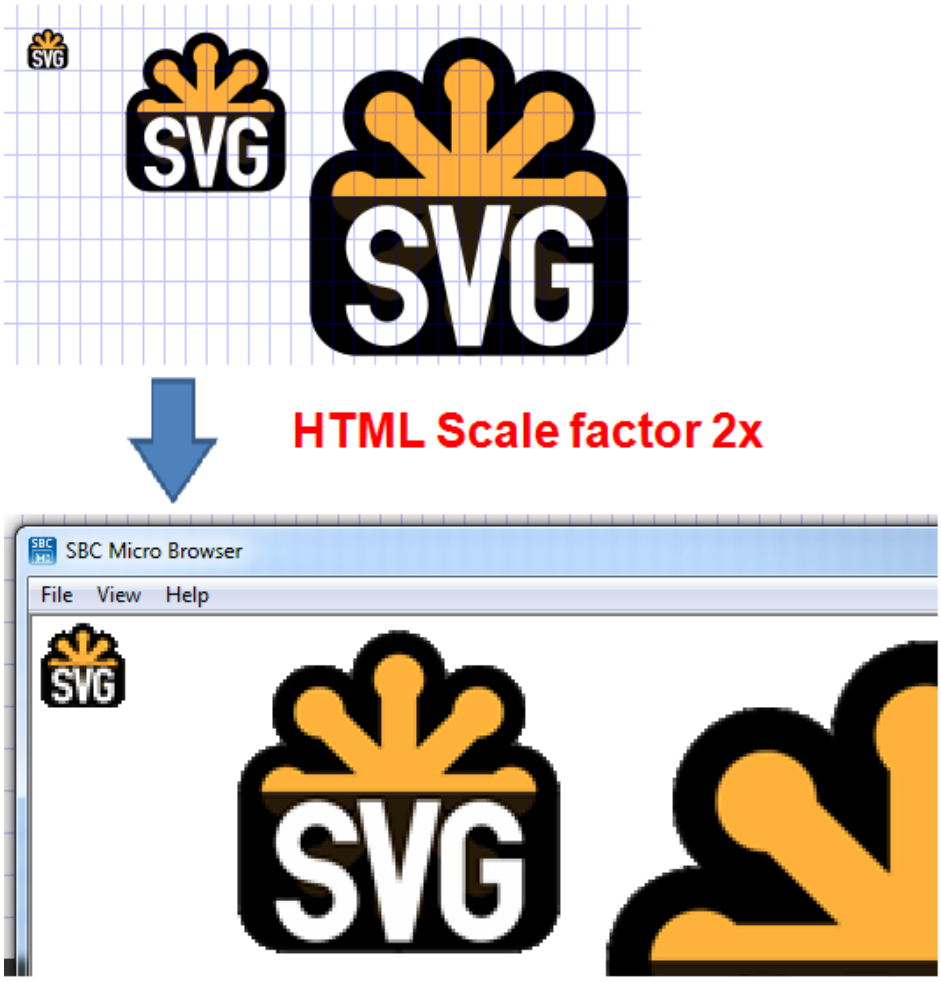
Those new features allow setting all the targets that will be used for development and commissioning - office's PCD / installation's PCD - and quickly switch from one target to another, without having to redefine each time the parameters of the target.

4.4.3 Support for SVG pictures

SVG format - Scalable Vector Graphics - is now supported. This format preserves the image quality when enlarged, reduced or rotated.

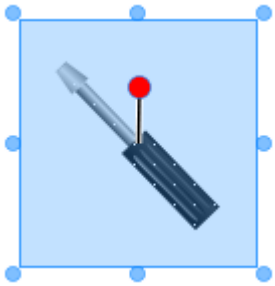
Pictures in SVG format are only used at design time. When the project is compiled, the images are converted into GIF.

This format is ideal for example to display a company logo; it is less suitable for small pictures and those that have to be pixel precise.

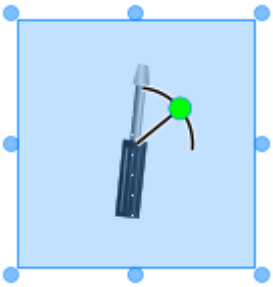


4.4.4 Rotation of picture

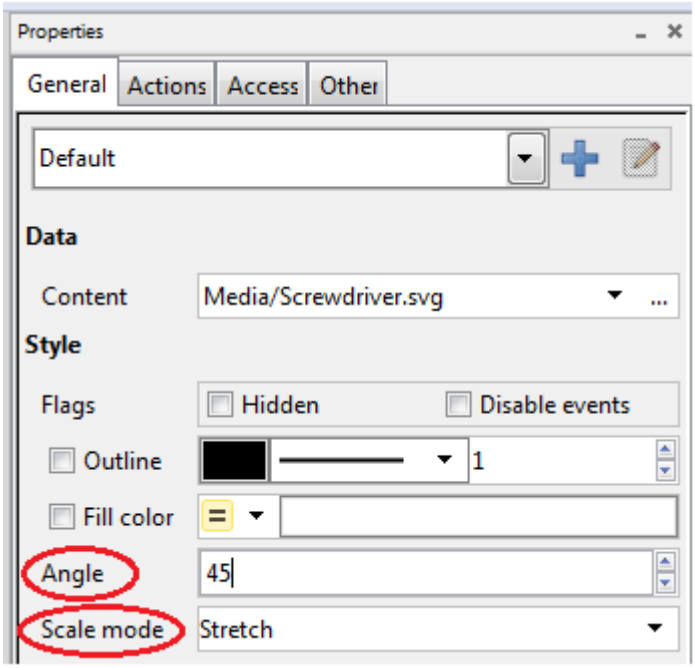
It is now possible to rotate pictures by defining an angle in the 'Properties' window.
It is also possible to rotate the picture directly in the view editor. For this, an indicator facilitates the rotation of the picture. When the image is selected, an indicator with a red dot appears.



To rotate the image, go with the mouse on the red dot - which then turns green, press the left mouse button down and hold it pressed while moving the mouse in the desired direction.



In holding the 'Ctrl' key down, the rotation will be done in steps of 15°. In holding the 'Shift' key down, the rotation will be done in steps of 45°.



The picture's 'Scale Mode' can be defined. This mode defined the way that the picture is displayed in the specified space. The following modes can be selected to adjust the image as desired:

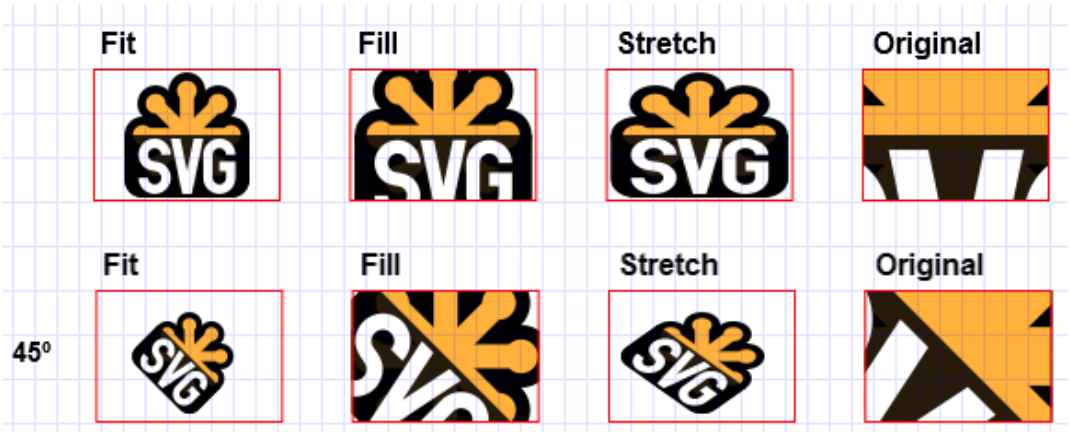
- '**Fit**': picture's dimensions adapted so that it is always fully displayed depending on the space available.

- '**Fill**': picture's dimensions adjusted to fill up the available space.

- '**Stretch**': the picture is adjusted in height and width to fill up the available space.

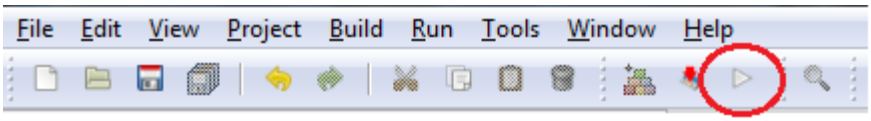
- '**Original**': the picture is displayed in its original dimensions.

The illustration below shows the different scale modes:

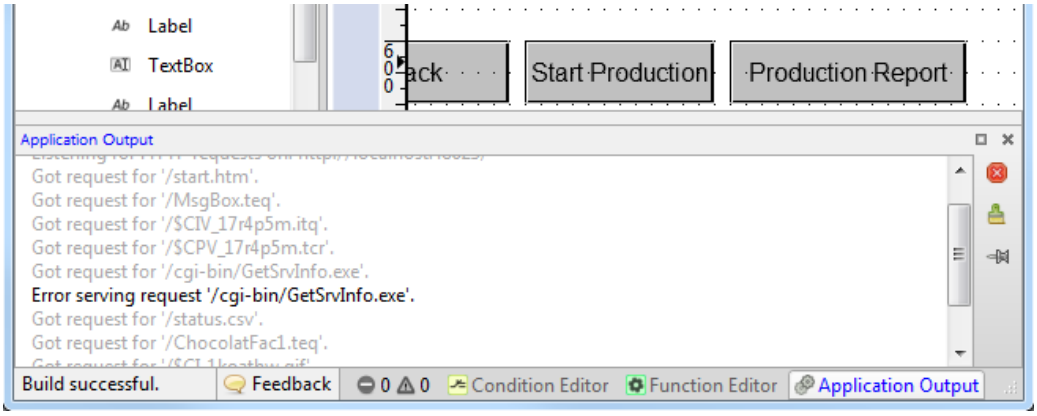


4.4.5 Run button

The 'Run' button allows in one click to test the HMI project without download the files into the PCD.



The 'Start' command defined under the 'Run' menu saves the project files, builds and displays the web pages into the 'SBC Micro Browser' application. The first displayed view is the first view defined in the HTML file. If the PCD is connected, PCD variables and users' configuration will be updated with the current PCD values.



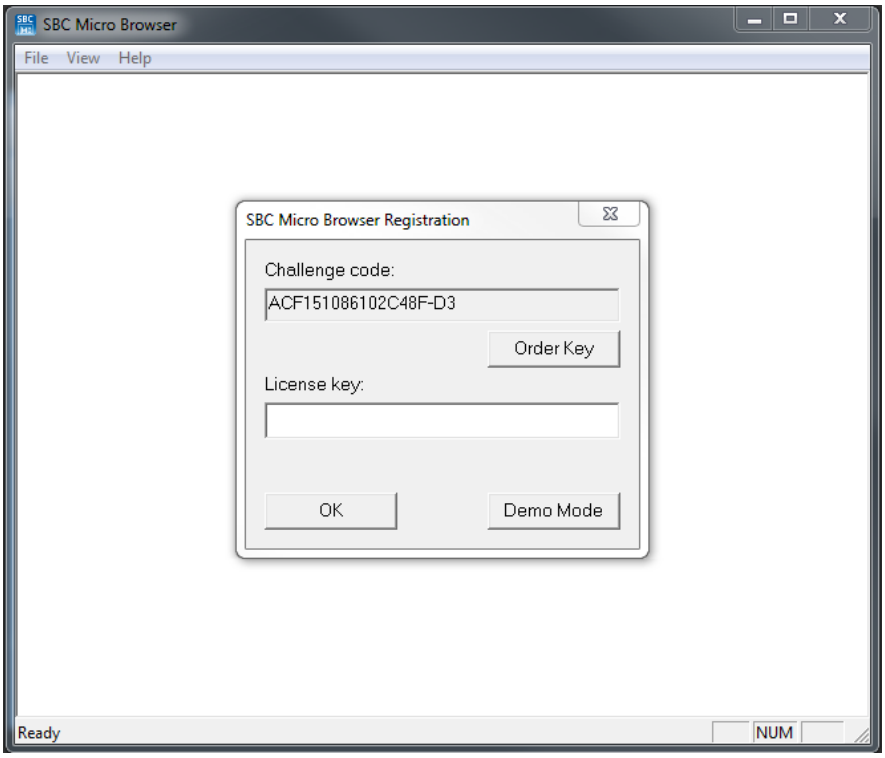
In run mode, the 'Application Output' window displays information about the data exchange between the application and the PCD. It will help to debug and check if the data defined in the web project are correct.

The 'Stop' command define under the 'Run' menu closes the 'SBC Micro Browser' application and thus interrupt the data exchange with the PCD.

At start of the 'SBC Micro Browser' application, a registration window is displayed. They are two possibilities:

1. Click the on the 'Demo Mode' button in order to start the application in demo mode. In this mode, all features are enabled. The only limitation is that the application closes automatically after 15 minutes. In this mode, the registration window is displayed at each startup.

2. Click the 'Order Key' in order to register for free. Once registered, you will receive a license by email. You need then to copy the key into the registration window and click the 'Ok' button. The next time, the registration window will not be displayed and there will be no time limit.



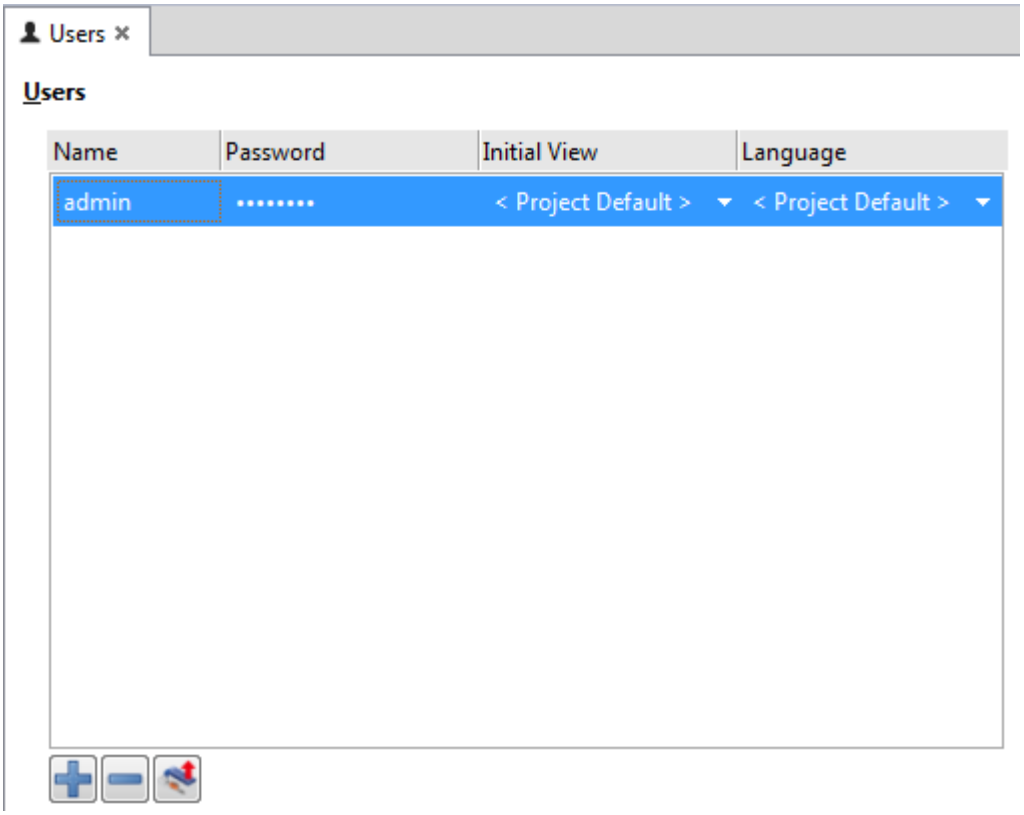
4.4.6 Extensions in the users management window

The user management window has been extended with the ability to set the initial view and language according the default settings defined in the project and with the possibility to upload the database of users already defined in the PCD.

Initial view and language automatically defined according the project settings

In the user management window - 'Users', when defining a new user, the initial view and the language are set by default to the project settings – '<Project Default>'. It means that a modification to the project initial view or language will automatically apply to the user settings.

By specifying these default settings, it is not necessary to adjust the settings for each user when the initial view and language are modified at the project level. This will be adapted automatically.



Upload users' database from PCD

An existing users' database stored in a PCD can now be uploaded into the Web Editor project.

When uploading the users' database using the new upload button defined at the bottom of the window, next to the '+' and '–' buttons, two options are available:

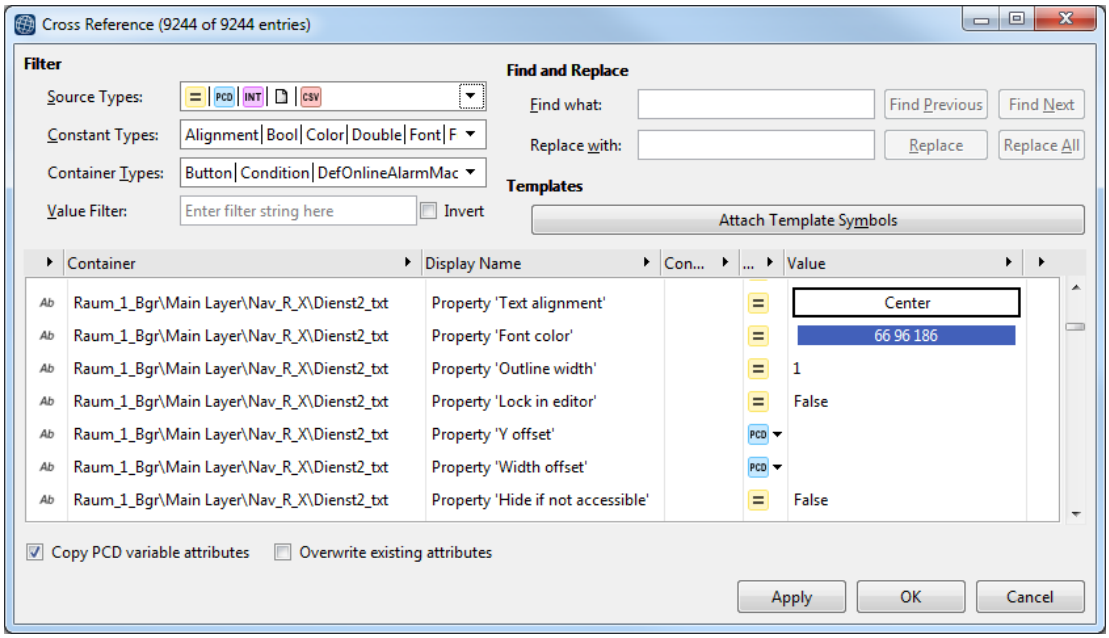
- Upload the configuration defined in the PCD and overwrite the configuration currently defined in the Web Editor project.
- Merge the configuration defined in the PCD with the configuration currently defined in the Web Editor project.

This feature makes it easy to update and download a Web Editor project without losing any changes in the user database made from a HMI interface.

4.4.7 Cross Reference window

The 'Cross Reference' window has been improved with the following features:

- The cross-reference can be used at project level, at views level or at elements level.
- Filtering options have been added and the user interface has been improved.
- Undo/redo has been implemented in this window. 'Ctrl'+'z' key combination will undo the change made and 'Ctrl'+'Shift'+'z' redo the previously undone action.



Rows of the Cross-Reference table can be filtered by each entry's source type, constant value type, by the type of object that the entry belongs to, and by a free-form text contained in an entry's value.

To set the filter for source type, value type or container type, simply open the corresponding dropdown box. Then click either on a single type to filter for, or add/remove types from the selection, using the checkboxes in front of each type.
The filtering by free-form text can now be inverted ("find entries with a value not containing the text") by checking "Invert".

The find & replace function can quickly replace whole values or parts of values in all entries at once.

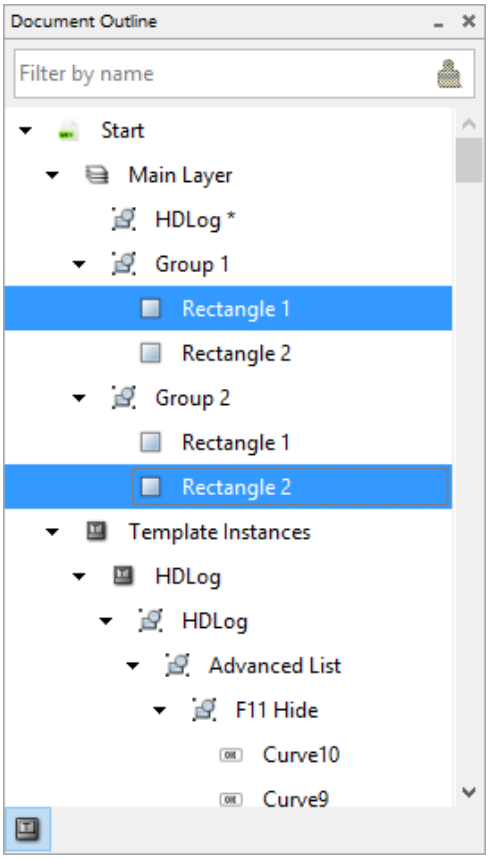
When an entry is selected in the table, the context menu provides some useful functions, like selection of similar entries, or focusing the object within the view editor / outline window.

Since text-based filtering and find & replace can be difficult on non-textual properties (colors, booleans, view references, etc.), the command 'Copy to 'Find'' from the context menu can be used to copy a text representation of each value to the 'Find what' input box. It will have the correct syntax to be used for filtering as well as replacing such data types via find & replace.

4.4.8 Improvement in the Document Outline window

On the 'Document Outline' window, improvements and changes have been done in order to represent the document structure in a clearer way and to increase the efficiency when editing:

- View elements can be filtered by their name.
- Multiple view elements, defined in different containers (groups, layers, etc) can be selected. In this way, it is possible to modify the properties of multiple elements, regardless of their position in the document's structure.
- Template elements are now displayed as single object in the document. This is a reference to the actual element within the template instance. The current view element (and all contained elements) can be viewed and edited when the option 'Show / hide template instances' is selected in the toolbar of the 'Document Outline' window. Once the option selected, the structure of the template's instance is displayed and can be modified. It displays the actual document's structure, without ignoring important information. In addition, it is possible to restore part of the template that have been deleted previously.
- With a double click on a reference element, you can jump quickly to the referenced object inside the template.



4.5 New web templates

Web templates for alarm management - 'Alarming', for graphical data visualization - 'Trending' and for user management have been completely reworked. They are available in Web Editor 8.

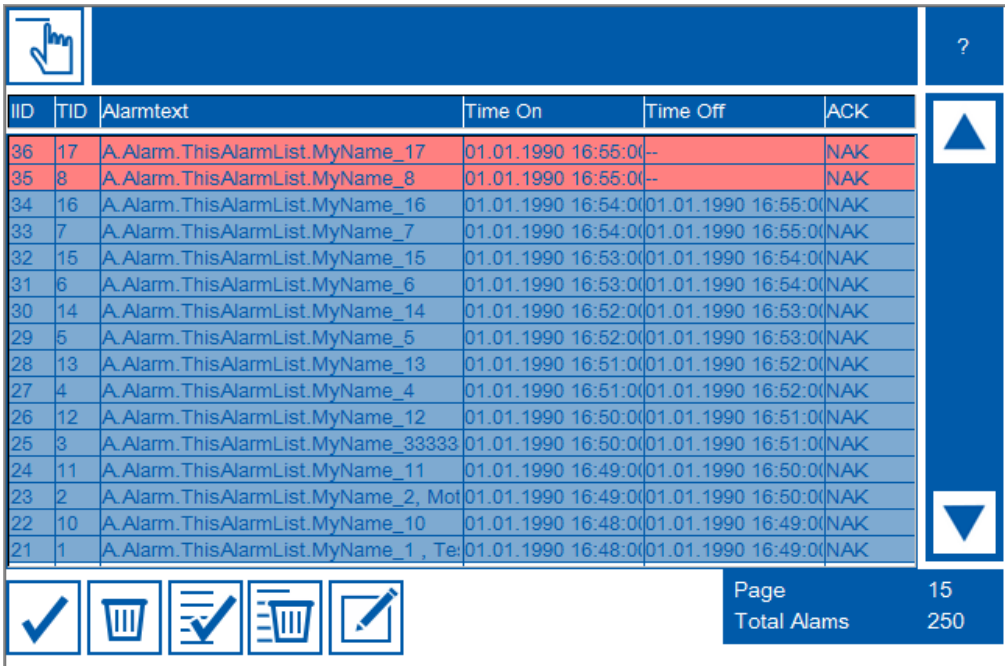
Note: To ensure compatibility with existing projects, the old templates are still available in the Web Editor 8.

The new design provides:

- More clarity.
- Proper use and simplified implementation in web project.
- Optimize for use with touch screens.
- More flexibility for the implementation thank to a structured organization of the elements integrated in the template – 'document outline'.
- Easier configuration at design time.

4.5.1 Templates for alarm management – Alarming

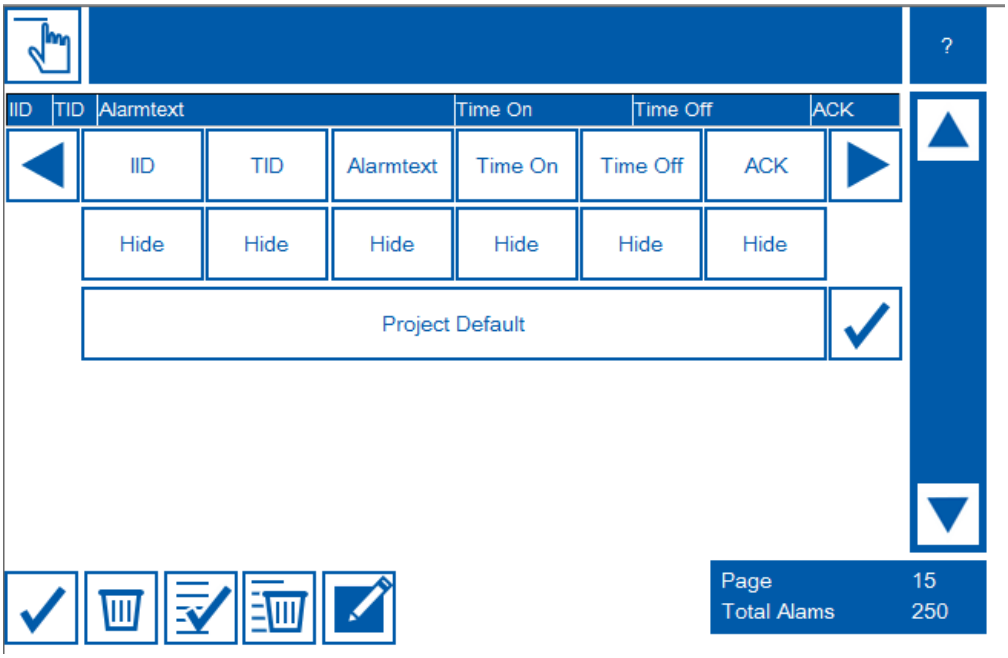
Here is the new template for the alarm management:



The main improvements are:

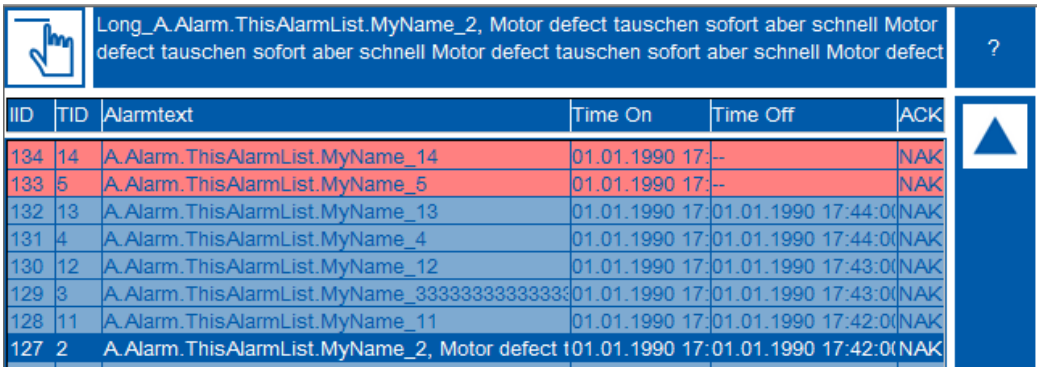
- Icons replace the large control buttons. Icons, by their shape and size are more ergonomic, especially when used with touch screens.
- The size of the alarm list has been optimized in order to display a maximum number of alarms in the window.
- The text of the selected message is displayed in a specific field, at the top of the window.
- In the alarm list, the size of the columns can be changed at design time, but also online.
- In the alarm list, each column can be hidden at design time, but also at runtime.

A configuration window has been implemented in order customize the list view online.



The 'Hide' buttons allow in one click to hide a column.
The 'Project Default' button resets the parameters with their default value defined at design time.

The text of the selected message is displayed in a separate field at the top of the window. It allows a full display of the alarm message. When multiple alarms are selected, the text of the latest alarm is displayed.



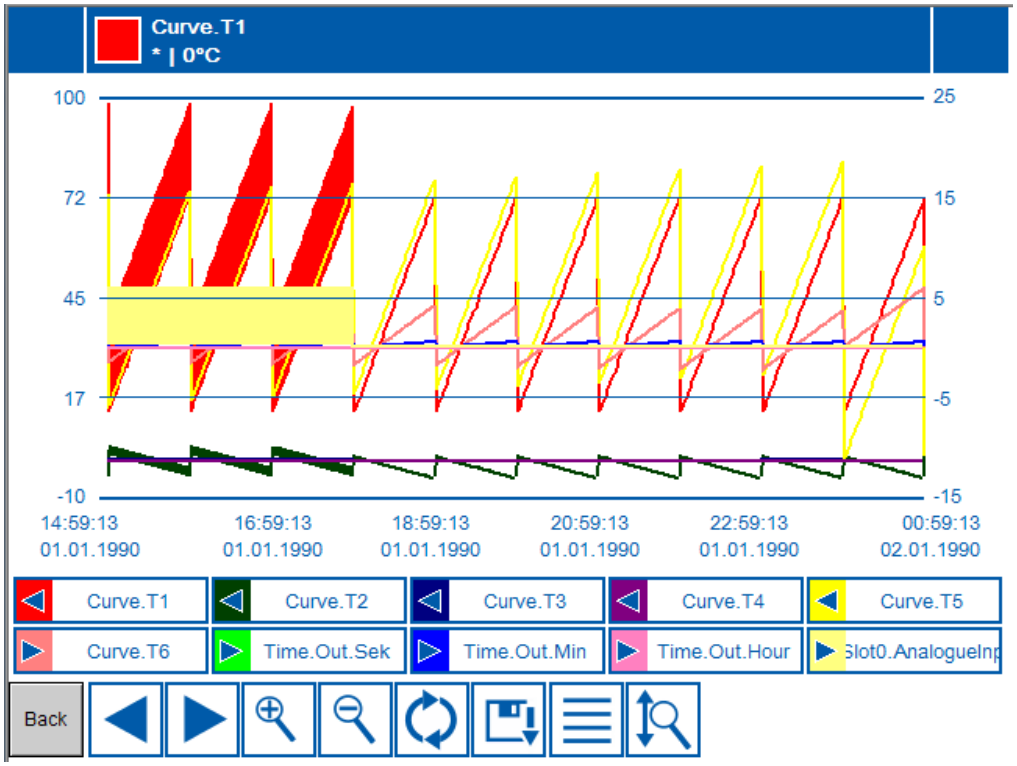
The new templates are available for the following modes:

- 'Online Alarm List'.
- 'Offline Alarm History'.
- 'Online Alarm History'.

You will find more information about the implementation and use of these templates in the help of Web Editor 8.

4.5.2 Graphical display of data – Trending

The template for the graphical display of data – 'Trending' has also been reworked, as you can see in the following picture:



The main improvements are:

- A clear layout.
- The scale of the Y axis is automatically adapted at design time.
- Two Y axes defined, with scale defined on the left and on the right of the graph.
- The scaling of the Y axis is dynamic and has a zoom function.
- When a curve is selected, the name, unit, value and time are displayed in the window.
- Each curve can be assigned to one or the other Y axis in online mode.

Using the information box, see below, you can configure whether to display each curve, the type of display - analog or multi state - and display the value of each curve for the selected time.

		Curve.T1	67	
		Curve.T2	*	
		Curve.T3	*	
		Curve.T4	*	
		Curve.T5	*	
		Curve.T6	*	
		Time.Out.Sek	*	
		Time.Out.Min	*	
		Time.Out.Hour	*	
		IO.Slot0.AnalogueInput0	*	

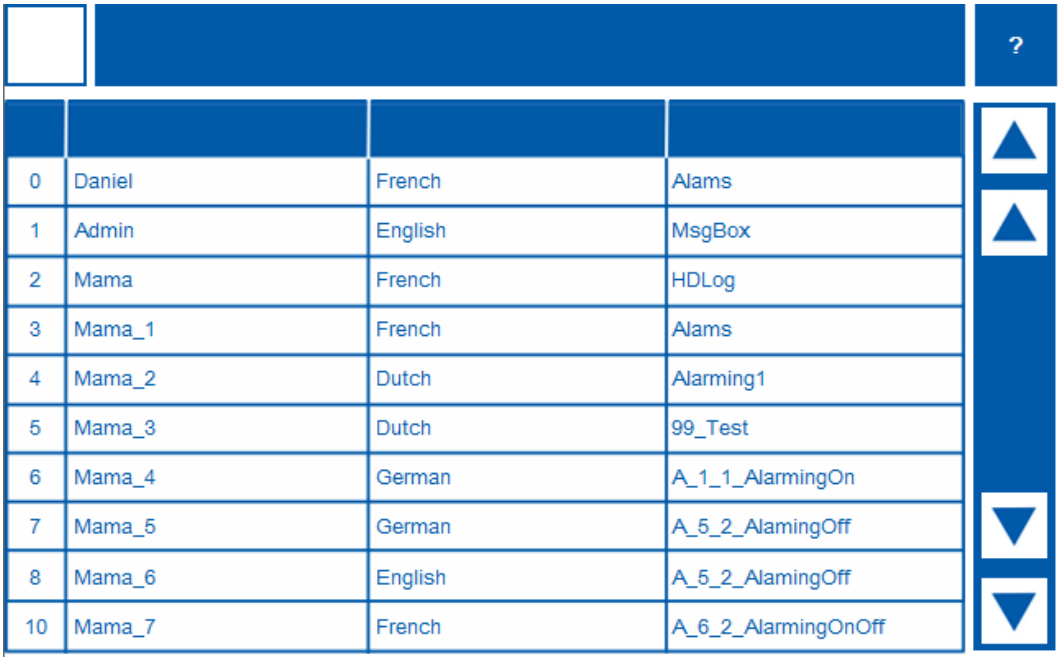
The new template replaces the three former templates namely 'Trending Mini', 'Trending Scalable' and 'Trending Complete'.

You will find more information about the implementation and use of these templates in the help of Web Editor 8.

4.5.3 User management template

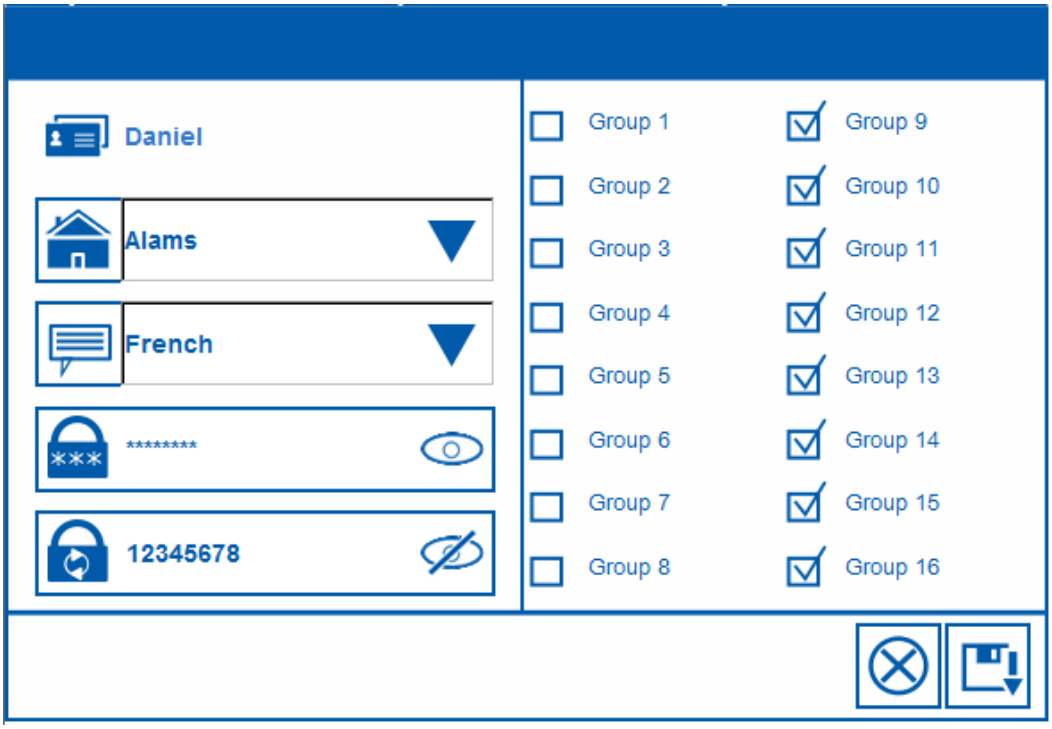
The user management template allows editing the user database defined in the PCD in online mode. During the design phase and commissioning, users can be defined in the 'User' window of the Web Editor 8.

The template displays the list of users and for each user his specific language and start page.



The second view allows, for a specific user to:

- Set the start page of the HMI project.
- Define the language of the HMI interface.
- Change the password.
- Change the access rights.
- Save changes.

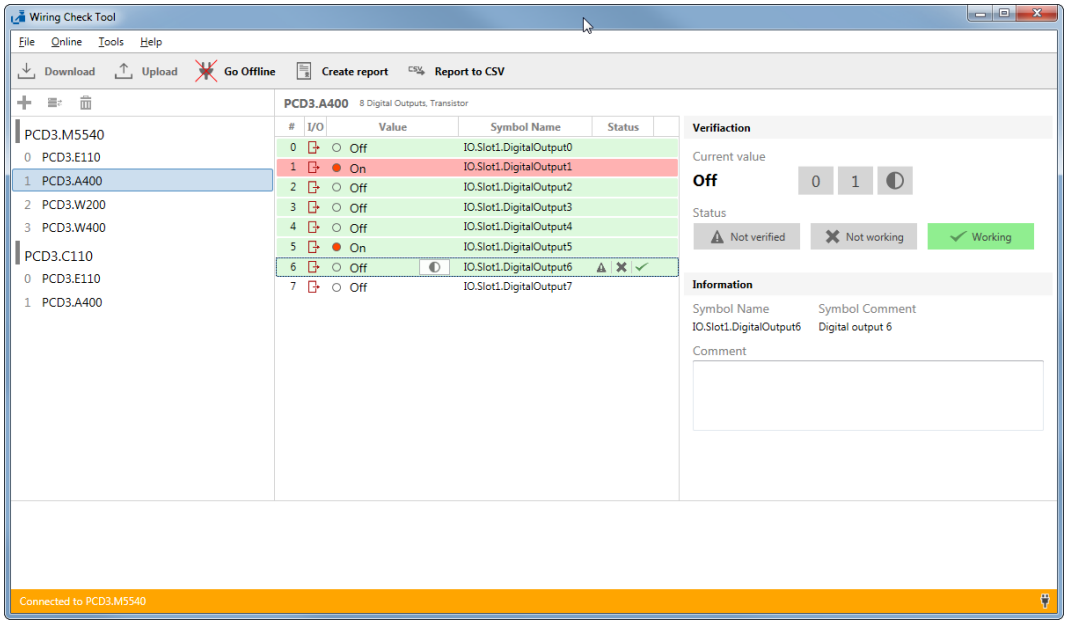


You will find more information about the implementation and use of these templates in the help of Web Editor 8.

4.6 Wiring Check tool

A new tool for the verification of inputs and outputs named 'Wiring Check tool' has been developed. This tool is intended for technicians and electricians who must check the connections inside an electrical cabinet or the connections of the final installation upon commissioning.

This tool is easy to use and doesn't require any PG5 knowledge.



This new application allows to:

- Specify the PCD type.
- Define the input/output and the expansion modules.
- Download the configuration into the PCD and go online using an USB connection.
- Check the input values and set the outputs values and verify their operation.
- Print a test report or export test data into a CSV file.

This application can be installed independently of the PG5 and requires no license or user registration. The setup is available in the PG5 Suite DVD, under the following directory:

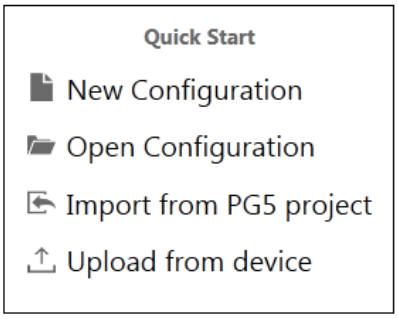
'<DVD drive>:\PG5 Stand Alone\Wiring Check Tool'

The Wiring Check tool is also integrated in PG5 Suite setup and can optionally be installed together with PG5.

4.6.1 Startup

When starting the application, it is possible, using the commands displayed in the center of the main window to:

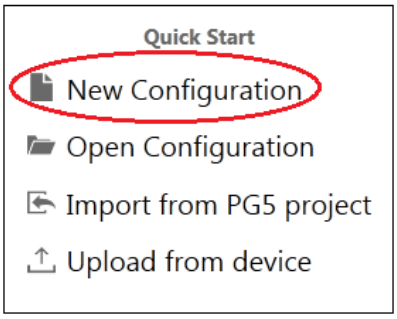
- Define a new configuration.
- Open an existing configuration.
- Import a configuration file from an existing PG5 project.
- Upload an existing configuration from a PCD.



In the following chapters, you will find a description of the different actions.

4.6.2 Define a new configuration

For defining a new configuration, click on the 'New Configuration'.

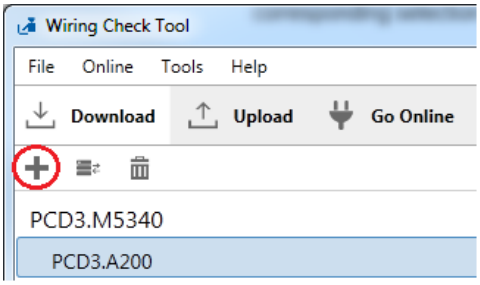


Then the 'Choose a controller' window listing all the types of PCD supported by this tool is displayed. Select the desired PCD from the list and confirm by clicking on the 'Select' button.

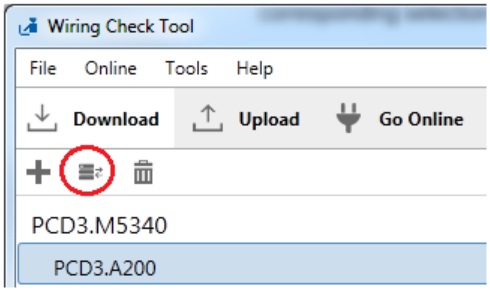
The selected PCD type is then displayed on the left side of the main window. You have then to define the inputs and/or outputs modules by clicking on the slots. The 'Choose a module' window allows selecting the desired module from the list of modules that are available for this slot. Confirm by clicking the 'Select' button.

Once the module defined, the list of inputs / outputs is displayed in the center of the main window. On the right of the window, the parameters relating to each input / output are displayed and can be configured as required.

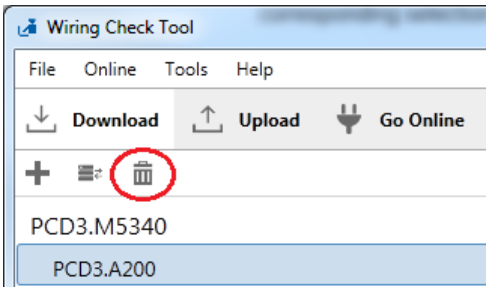
The expansion modules can be added by clicking the '+' icon displayed above the PCD type. The window 'Choose an extension' is displayed. Select the expansion and confirm by clicking the 'Select' button.



You can change the PCD type, the IO or expansion module by clicking on the 'replacement' icon define in the toolbar – see picture below – or by pressing the 'Insert' key. The corresponding selection window will be displayed for choosing the new element.

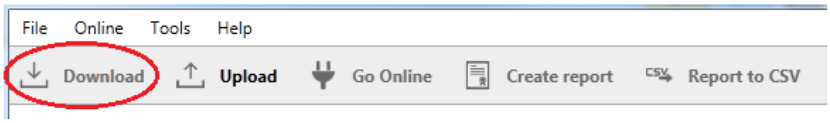


It is also possible to remove a module or an expansion by clicking on the dustbin icon defined in the toolbar – see picture below – or by pressing the 'Delete' key.



4.6.3 Go online and check inputs and outputs

Once the configuration done, it must be downloaded into the PCD. To do this, make sure that the PCD is connected to the PCD using an USB cable. When the connection is established, download the configuration by clicking the 'Download' icon defined in the toolbar.



Note: downloading the configuration **will erase any previous configuration and user program present in the PCD.**

Once the configuration downloaded, the tool goes automatically on line. It is then possible the view the status of each input and set the set the value of each output.

For setting the analogue output value, you can just select the channel in the list and directly enter the value using the numeric keys; to switch to the next or previous channel, use the up or down arrow keys.

For setting the digital values, you can just select the channel in the list and toggle the digital output using the 'Enter' key; to switch to the next or previous channel, use the up or down arrow keys.

In order to generate a test protocol, the test status has to be updated for each inputs and outputs. It is possible to select the following status:

- 'Not verified': status of the input or output has not been checked.
- 'Not working': input or output is not responding, is not working properly.
- 'Working': input or output status is according the expected value.

The protocol will contain the identification of the input or output, his value, the time stamp of the verification, the status of the verification, the associated symbol name and an optional comment.

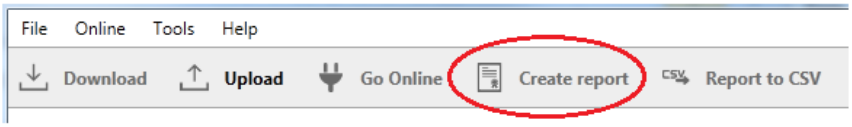
The status of the verification can be set using use the following keys:

- 'a' for 'Not verified'
- 'x' for 'Not Working'
- 'v' for 'Working'

Use the button 'Go Offline' to go offline. You can switch back online again in using the button 'Go Online'.

4.6.4 Test report

Once all checks made, a test report can be generated using the 'Create report' button defined in the toolbar.



This command will generate a protocol in PDF format and open it in a specific window. It is then possible to save or print the document.

Define file name and location in the 'Save As' dialog. The PDF document will be then displayed. In the following picture, you will find a sample of the generated test document.

Wiring check report

PCD3.M5540

Slot 0: PCD3.E110

Index	Value	Date	Status	Symbol name	Comment
0	1	12/4/2015 3:59:59 PM	✓ Working	IO.Slot0.DigitalInput0	
1	0	12/4/2015 4:00:00 PM	✓ Working	IO.Slot0.DigitalInput1	
2	0	12/4/2015 4:00:11 PM	✗ Not working	IO.Slot0.DigitalInput2	
3	0	12/4/2015 4:00:02 PM	✓ Working	IO.Slot0.DigitalInput3	
4	1	12/4/2015 4:00:04 PM	✓ Working	IO.Slot0.DigitalInput4	
5	0	12/4/2015 4:00:06 PM	✓ Working	IO.Slot0.DigitalInput5	
6	0	12/4/2015 4:00:08 PM	✓ Working	IO.Slot0.DigitalInput6	
7	1	12/4/2015 4:00:09 PM	✓ Working	IO.Slot0.DigitalInput7	

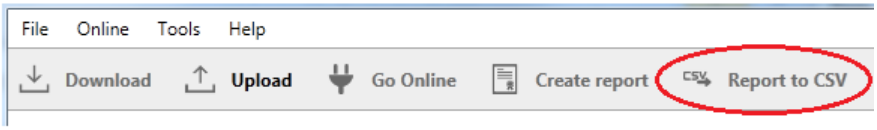
Slot 1: PCD3.A400

Index	Value	Date	Status	Symbol name	Comment
0	0	12/4/2015 3:50:12 PM	✓ Working	IO.Slot1.DigitalOutput0	
1	1	12/4/2015 3:50:15 PM	✗ Not working	IO.Slot1.DigitalOutput1	
2	0	12/4/2015 3:50:07 PM	✓ Working	IO.Slot1.DigitalOutput2	
3	0	12/4/2015 3:50:10 PM	✓ Working	IO.Slot1.DigitalOutput3	
4	0	12/4/2015 3:50:06 PM	✓ Working	IO.Slot1.DigitalOutput4	
5	1	12/4/2015 3:50:23 PM	✓ Working	IO.Slot1.DigitalOutput5	
6	0	12/4/2015 3:50:24 PM	✓ Working	IO.Slot1.DigitalOutput6	
7			⚠ Not verified	IO.Slot1.DigitalOutput7	

The setting 'Orientation' defined into the 'Settings' dialog box allows to specify the page orientation – portrait or landscape. The 'Settings' dialog box is avaiable from the command 'Settings' defined under the 'Tools' menu.

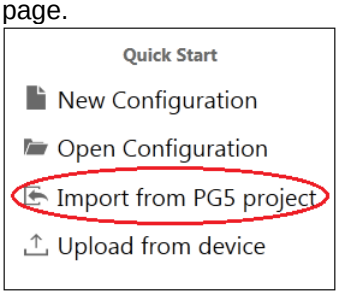
4.6.5 Export test report into CSV file

It is also possible to export the test report info into a CSV file by clicking on the 'Report to CSV' button defined in the toolbar.



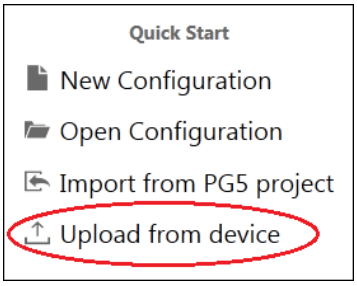
4.6.6 Import configuration from PG5 project file

If the IO configuration is already defined in a PG5 project, the Device Configurator file - *.saiadev' - can be imported. The '*.saiadev' file is define in a subdirectory of the PG5 project, specific to each device defined in the project.
For importing a configuration, click on the 'Import from PG5 project' button on the start page.



4.6.7 Upload existing configuration from a PCD

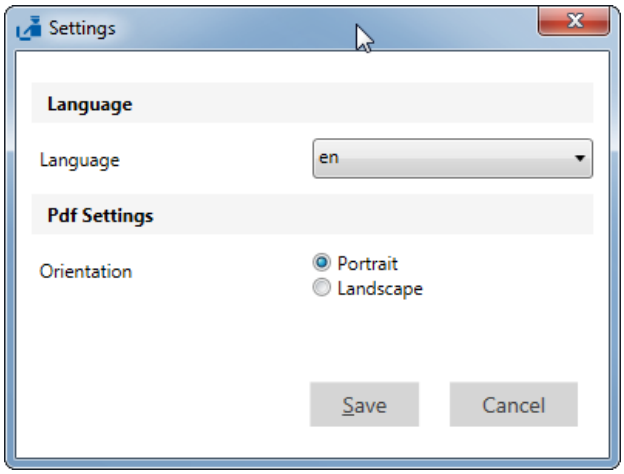
If the IO configuration is already download into a PCD, it is possible to upload it into the Wiring Check tool using the 'Upload from device' command, available in the start page.



Note: only the configuration of the IO and expansion modules will be considered. The configuration of communication and memory modules will not be shown in the 'Wiring Check tool'.

4.6.8 Language of the user interface

The user interface is available in English, German and French. To change the language, select the command 'Settings' available under the 'Tools' menu.
In the 'Settings' dialog, simply select the desired language in the selection box. A new startup of the application is necessary for switching to the appropriate language.



4.6.9 Limitations

The Wiring Check tool uses the 'media mapping' feature. It means that only PCDs and IO cards supporting this feature will be handled. The detailed list of supported devices and cards is available in the help file, accessible under the 'Help' menu.

The Wiring Check tool doesn't support communication and memory modules. General configuration parameters and communication parameters are also not handled.

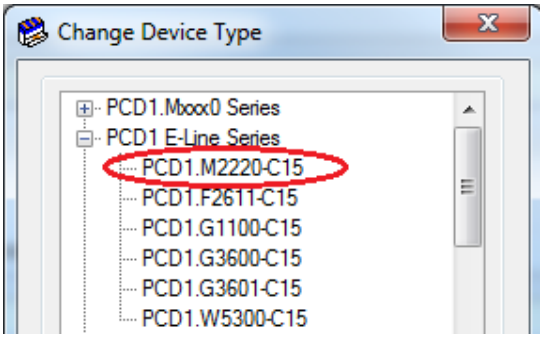
4.7 Device Configurator

4.7.1 Support for new device types

The new devices types have been integrated into the Device Configurator:

- PCD1.M2220-C15: E-Line CPU with 2 slots for IO or communication modules.
- PCD2.M4160: CPU with 4 slots for IO or communication modules.
- PCD2.M4560 : CPU with 4 slots for IO or communication modules and connector for extension modules.

Note: In the device selection dialog, the PCD1.M2220-C15 is defined under the 'PCD1 E-Line Series'.



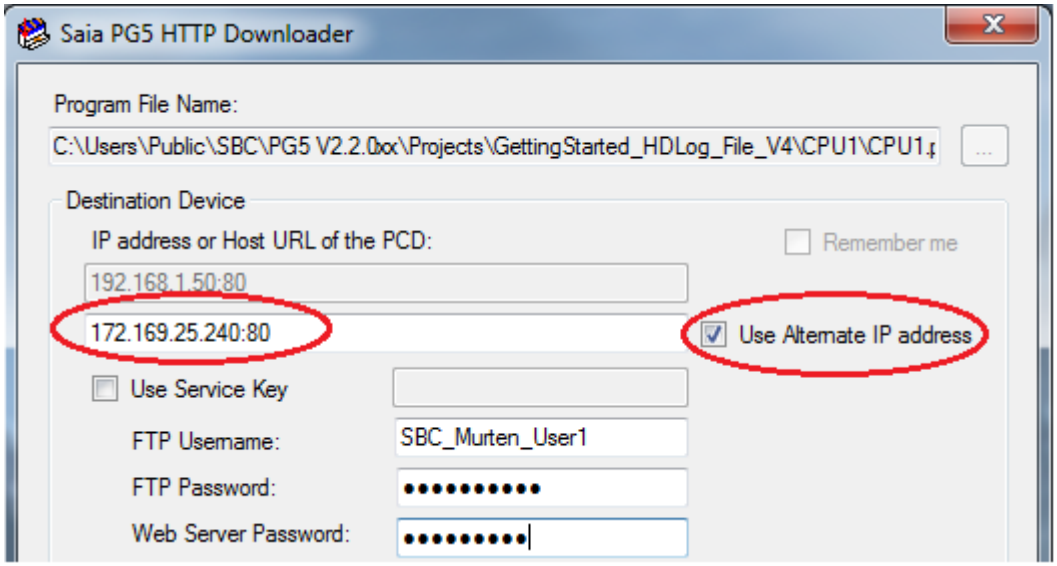
4.7.2 Modified IP configuration for PCD3.M6860

The Ethernet configuration of the PCD3.M6860 (2 x Ethernet) has been modified according the firmware capabilities. It means that the 'Default Gateway' and 'Access Control List' properties are common to the Ethernet port ETH 1 and ETH 2 and are displayed under the category 'Common ETH 1 and ETH 2 TCP/IP Parameters', as in the image below.

Onboard : 2 x Ethernet	
General	
Ethernet RIO Network	None
ETH 1 TCP/IP	
IP Address	**177.168.2.2**
Subnet Mask	255.255.255.0
Ether-S-Bus IP Node	0
ETH 2 TCP/IP	
IP Address	0.0.0.0
Subnet Mask	255.255.255.0
Ether-S-Bus IP Node 2	0
Common ETH 1 and ETH 2 TCP/IP Parameters	
Default Gateway	0.0.0.0
+ Access Control List	Hide
ETH 1 DHCP Client Protocol	
DHCP Client Enabled	No
Automatic Gateway IP Setting	**No**

4.8 HTTP Downloader: alternative IP address

When the user program has to be downloaded via HTTP through a router - for example when using a VPN connection, it is necessary to enter an IP address that is different from the target PCD for the download. In the 'HTTP Downloader' dialog, available from the 'Download via HTTP/FTP…' command, under the 'Online' menu of the Project Manager, you can now enter an alternative IP address and use it for the download when the option 'Use Alternate IP address' is checked, as show below.



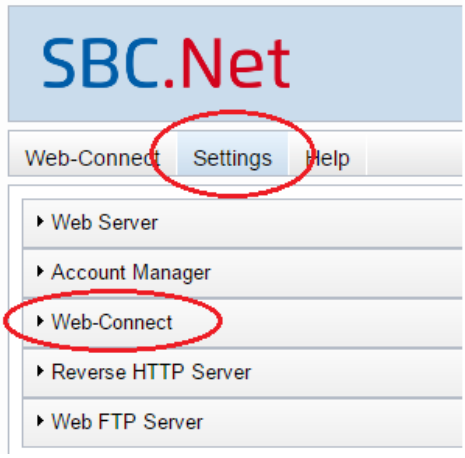
Note: It is recommended to carefully check the alternative IP address to connect to the desired PCD target.

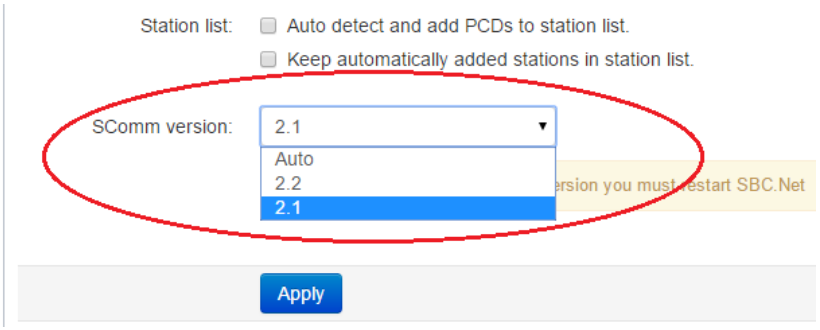
4.9 SBC.Net Web-Connect:

4.9.1 SComm version selector

SBC.Net Web-Connect is using the 'SComm' – PG5 communication interface - for the communication with the PCD devices. Web-Connect is common for the different versions of PG5. In order to use PG5 and Web-Connect in parallel, the same SComm version has to be used.

The SComm version that has to be used can be specified in the Web-Connect configuration. Select the 'Settings' tab in the SBC.Net main page. Then under the 'Web-Connect' section, specify the version of the SComm with the parameter 'SComm version' as show below.

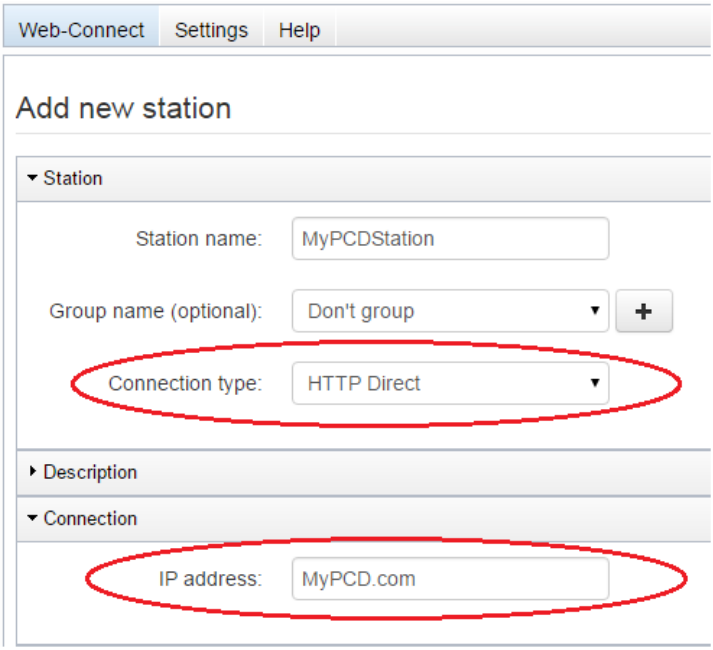




By default, Web-Connect use the most recent version of PG5 that is installed on the PC. After having changed the SComm version that has to be used, you have to restart Web-Connect in order to load the specified version.

4.9.2 Possibility to enter the host name for HTTP Direct connections

In Web-Connect, when defining a new station with HTTP Direct as connection type, it is now possible to enter the host name instead of the IP address. It is useful when using DynDNS.

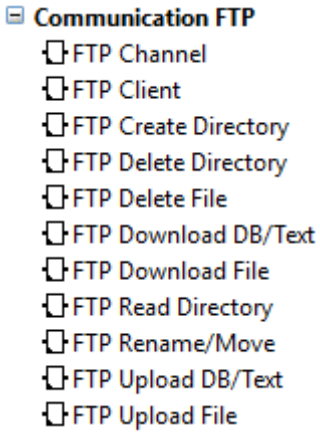


4.10 FBox libraries

4.10.1 New FTP Client FBox library

The new 'FTP Client' library enables supported Saia PCD® devices to act as FTP client. Files can be exchanged with any FTP server, including the built-in SBC web server, in the local network or over the Internet. Passive FTP data connection mode is required.

The FBoxes are available under the 'Application' group, under the 'Communication FTP' family.



In order to upload a file, the 'FTP Channel' and 'FTP Client' FBoxes have to be place first for the connection management and then the 'FTP Upload File' for handling the upload of the file. For more information, please refer to the help of the library.

4.10.2 Updated FBox libraries

The following FBox libraries have been updated between the version PG5 2.1.430 and this new version. Some of them have also been available over the Update Manager.

- **Heavac library (HVC), version V2.7.520**
  - Summer-Winter time change according configured time zone.
  - 'Load Switching' FBox: add 'Reload single group' adjust parameter.
  - 'E-Master', 'E-Group 1' and 'E-Group 2' FBoxes: add 'Unload single group' and 'Reload single group' adjust parameters and 'Reload in cycle' adjust parameter can be now modified online.
  - 'Conversion DB n points' FBox: the maximum number of points for the conversion curve has been increased from 20 to 200.
  - 'Output 3 Points with Reference' FBox: add 'No reference' option for the 'State valve closed' adjust parameter.
  - 'Analogue Input Module PCD2.W22 Pt-Ni' and 'PCD2.W22 Pt-Ni EW' FBoxes: add the option 'None' for the 'Sensor type'. When selected, the output will always be 0 and no error will be generated.
  - **'**Sunrise/Sunset' FBox: correction regarding incorrect month value that caused CPU Error LED at startup.
  - Various correction in the help.

- **Belimo MP-Bus Library, version V2.7.520**
  - 'VAV20' and 'EPIV20' FBoxes: Add restore button to send original settings.

- 'MP BS' FBox: Skip test of device type in order to support the old AF24 device.

- **DALI Library, version V2.7.520**
  - Internal adaptations regarding compatibility with PG5 2.2.

- **DALI F26x Library, version V2.7.530**
  - General improvement for the E-Line DALI.
  - Internal adaptations regarding compatibility with PG5 2.2.

- **EIB Driver Library, version V2.7.520**
  - New EIB NetIP driver with possibility to select the Ethernet port.
  - Correction regarding the Driver FT1.2.
  - Correction for sending data with more than 5 bytes (e.g. using for KNX Data point types 222.xxx with 3x16 bits Float value - 6 bytes).
  - Internal adaptation in order to ensure compatibility with PG5 2.2.

- **ELine, version V1.0.130**
  - Fix telegram transmission troubles when E-Line modules are communicating on the same S-Bus channel as standard S-Bus stations like PCD7.L60x Room Controller or S-Bus Energy meter.
  - The FBox 'High' is now working correctly together with the FBoxes of this library.
  - Fix multiple symbols definitions if more than one serial port is defined on the same device.
  - Change predefined symbol from 'DigitalInpu14' to 'DigitalInput14' for the PCD1.G5000-A20. Note that if this symbol is used in Fupla, the symbol name has to be updated manually with the new name in order to avoid compilation errors.

- **Energy Meter Modbus, version V2.7.520**
  - Internal adaptations regarding compatibility with PG5 2.2.

- **File System Library, version V2.7.530**
  - 'Read CSV' FBox: New FBox for reading values from CSV file.
  - 'Read CSV to DB' FBox: New FBox for reading CSV file and place content into a DB.
  - Internal adaptations regarding compatibility with PG5 2.2.

- **LON Network library, version V2.7.520**
  - Internal adaptations regarding compatibility with PG5 2.2.

- **Modem Library, version V2.7.520**
  - 'SEND SMS' FBox: Extend delay to 60 seconds in order to send longer messages
  - Internal adaptations regarding compatibility with PG5 2.2.

- **Wide Area Automation Library, version V2.7.520**
  - Internal adaptations regarding compatibility with PG5 2.2.

- **SWA Alarming, version SP2.6.301**
  - The Alarming FBoxes are now working correctly in the PCS1 Controllers.

- **Room Controller PCD7.L79x, version V2.6.137**
  - New 'L79xN RIO' FBox: the 'SepPtCorr' output get values from -3 to +3 for the position of the setpoint potentiometer and introduces a new predefined symbol 'P1' in order to give access to the value of the setpoint potentiometer. The value will be given between 0 and 100. Current 'L79xN RIO' FBox

becomes hidden in the Fupla FBox Selector but the compilation of existing projects is still possible without any change.

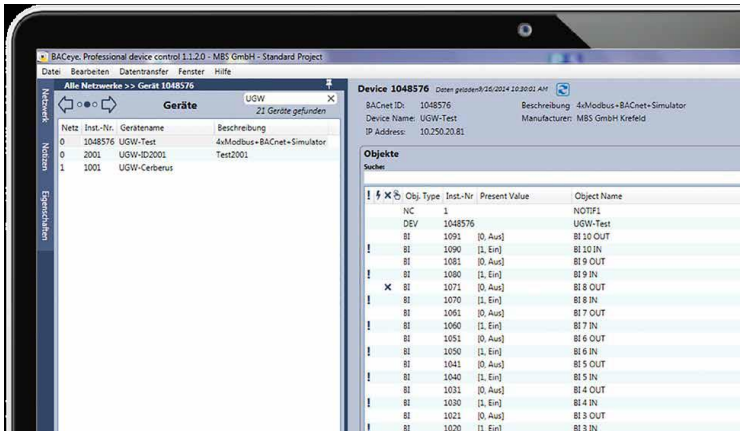
- **Room Controller V25, version V2.7.520**
  - Internal adaptations regarding compatibility with PG5 2.2.

- **Saia PCD Modbus library, version V2.7.320**
  - Add help in Italian.
  - New 'Define Unit Client' FBox: new FBox for defining a remote unit in a client program and handles the communication with this unit.
  - New 'Define Unit Client Indirect' FBoxes: new FBox for defining a remote unit in a client program and handles the communication with this unit. The IP address (only for TPC or UDP) and the unit identifier can be set using FBox inputs.
  - Adaptations in English and German helps.
  - Internal adaptations regarding compatibility with PG5 2.2.

- **S-Fup Hardware, version V1.0.010**
  - Only 'Modem' operating mode is supported; 'Repeater' mode is not possible.
  - Fixed baud rate of 9600 bauds, in advanced mode for a stable communication.
  - Only Modbus and S-Bus are supported over the RS-485 interface.

4.11 BACnet Explorer

The new BACnet explorer 'BACeye' provides an overview in a BACnet network. 'BACeye' can be connected to any BACnet network for easy analysis and switching and for testing events and alarms.



BACnet networks

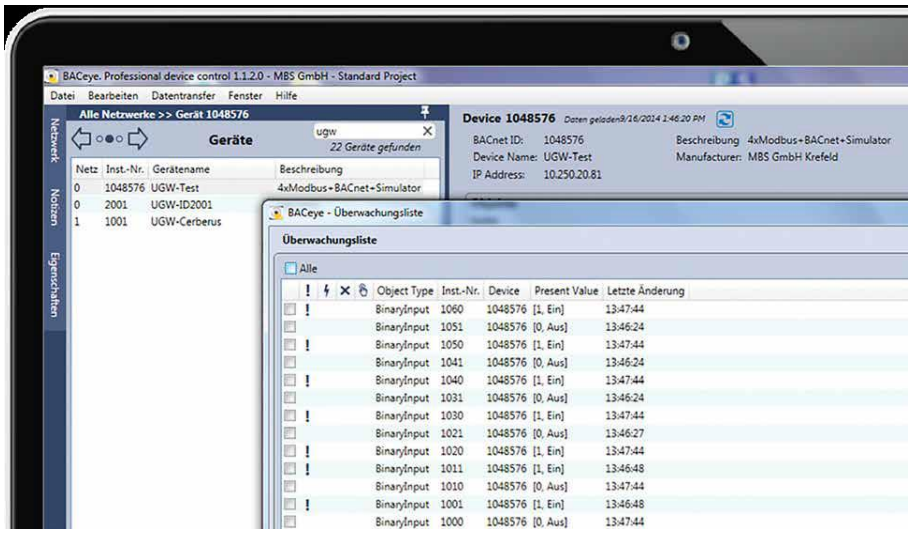
With the BACnet Who-Is/I-Am services, devices in the network can be conveniently identified and an image of the device properties and objects can be read in 'BACeye'. A detailed display of all objects allows access to the object properties.

EDE files

Generate EDE files quickly and easily. The EDE file (Engineering Data Exchange) is a format for a BACnet data point list specified by BACnet Interest Group Europe (BIG-EU).

Monitoring list

The monitoring list displays the most important properties of the selected objects. The objects can be compiled from the same or from different devices.

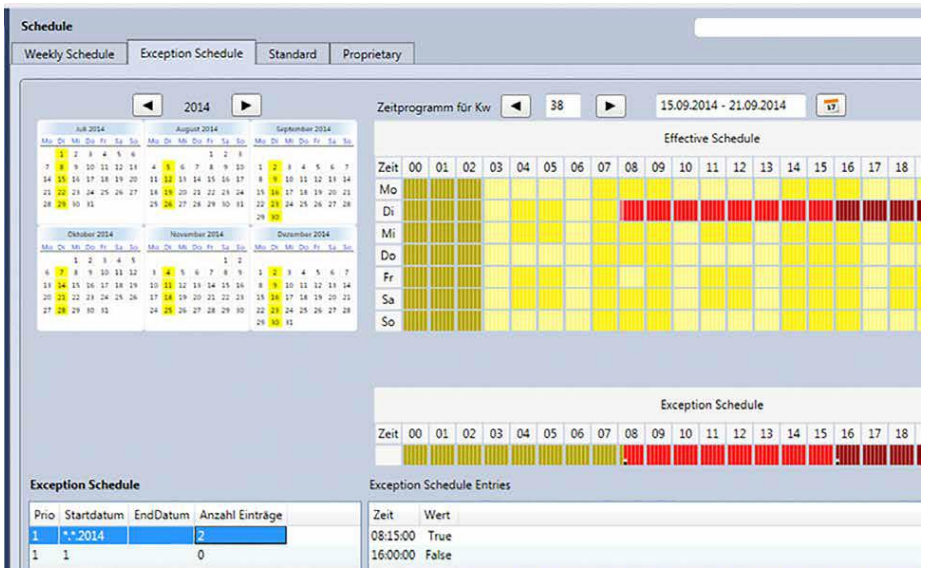


Alarms

All objects are displayed together with their status information (Status_Flags). Users can of course filter and search for status functions at any time.

Schedules

BACnet calendar and schedule objects can be conveniently displayed and edited with 'BACeye'. The weekly program (Weekly Schedule) and the Exception Schedule can be edited separately. The combined display enables an overview of the actual effective value. The Weekly Schedule and Exception Schedule can be edited separately. The combined display enables an overview of the actual effective schedules.



Installation

The installation package of 'BACeye' is available on the PG5 Suite DVD, under the following path:

'<DVD drive>:\PG5 Stand Alone\Bacnet\SBCBACeyeSetup.exe'

License

'BACeye' is licensed and requires a separated license as the PG5 license. Please contact your Saia Burgess Controls sales office or representative for price and ordering information.