



# What's New in PG5 V2.3

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# **1 Foreword**

Thank you for purchasing the Saia PG5® V2.3 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](http://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 V2.3.113

### 2.1 PG5 2.3 installation and compatibility

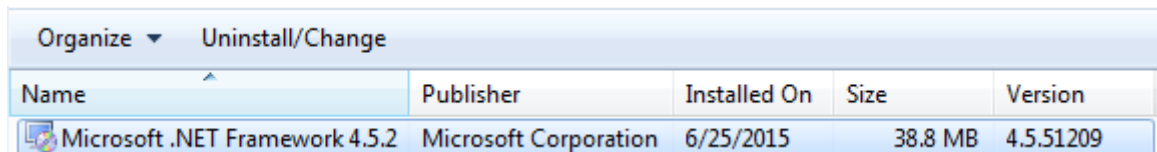
#### 2.1.1 Minimum computer requirement

PG5 2.3, including Web Editor 8, works under Windows 7 32 and 64 bit with Service Pack 1 and Windows 10.

For best performance, we recommend installing PG5 2.3 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.

#### 2.1.2 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'.



Name	Publisher	Installed On	Size	Version
Microsoft .NET Framework 4.5.2	Microsoft Corporation	6/25/2015	38.8 MB	4.5.51209

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

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

#### 2.1.3 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 is available with the PG5.

- When using the PG5 Update Manager (see below), the files are available in the following folder: C:\Users\\SBC\PG5 V2.3.1xx\Firmware
- On our support site: [www.sbc-support.com](http://www.sbc-support.com)

## 2.1.4 Compatibility with previous versions

### **Compatibility with PG5 projects version 2.2**

PG5 V2.2 projects are upward compatible with PG5 V2.3, but not back again. Once a project has been opened with the new PG5 V2.3, 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 2.2 must be imported or restored in PG5 Version 2.3. 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, 2.1 and 2.2**

The FBox libraries written for PG5 2.0, 2.1 and 2.2 are fully compatible with PG5 Version 2.3. 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 V2.3, but not back again. Once a project has been opened with the new PG5 V2.3, 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 2.3. 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, 2.2 and 2.3. 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 2.3.

### **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 V2.3.

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, XP and Windows 8 and 8.1.

## 2.1.5 User licensing and developer registration

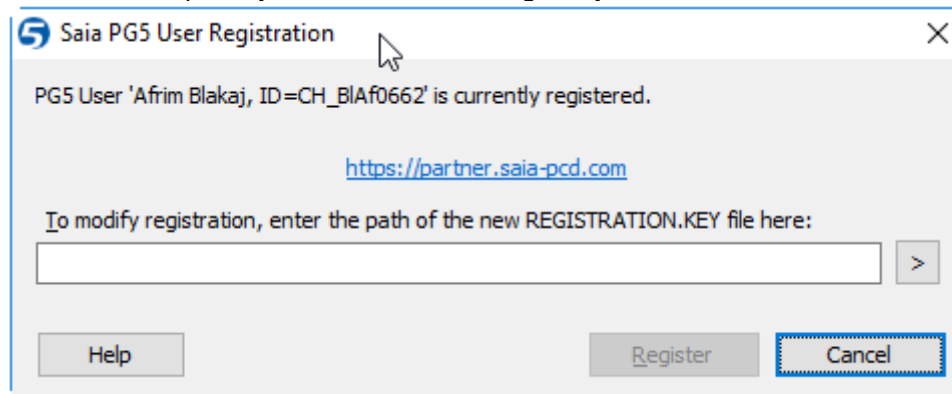
### PG5 Licensing

In order to use PG5 version 2.3, a new 'USER.KEY' file is needed. Key files from V2.2, V2.1, V2.0 or V1.4 cannot be used. However, you can run V2.3 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 2.3. 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 and 2.2 is compatible with version 2.3. 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 V2.3 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 to login into the SBC partner portal.

Address  
Saia-Burgess Controls AG  
Bahnhofstrasse 18  
3280 Murten

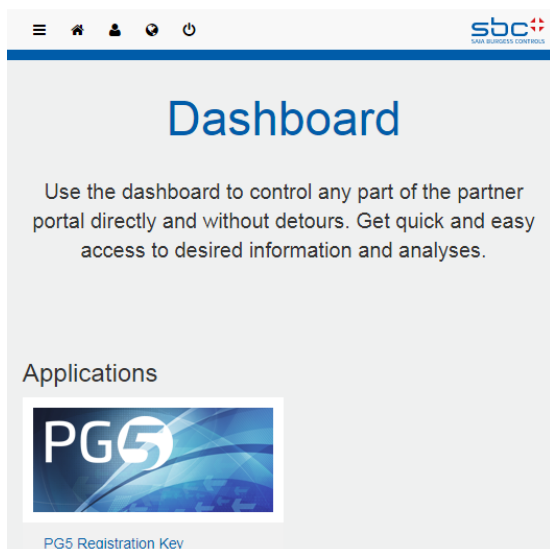
If you already have an account, enter your email and your password.

If you are not already registered, click on 'Create new account' and enter the requested information in order to create your account.

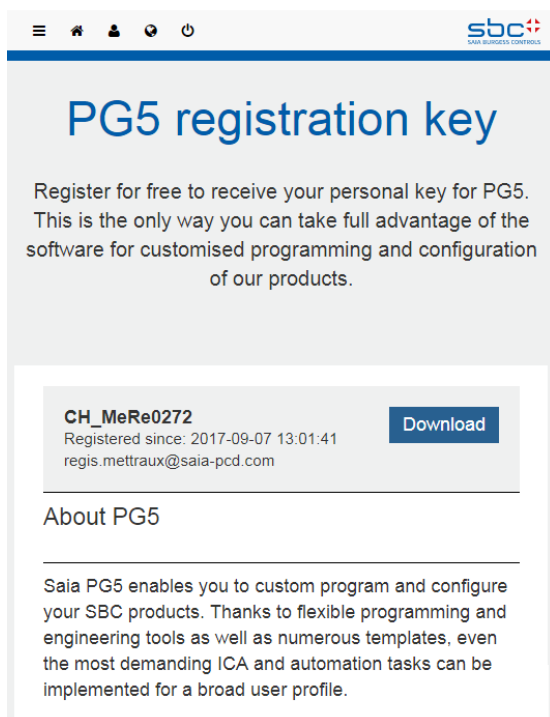
Note: For the registration all fields are required.

When logged in the SBC partner portal, you have access on the dashboard. Click on 'PG5 Registration Key' in order to generated your PG5 registration information.





The following page will be displayed and you only have to press the 'Download' button in order to get your 'REGISTRATION.KEY' file.



Then enter its path on the 'PG5 User Registration' dialog box of the PG5 Project Manager and press '**Register**'.

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

## 2.1.6 Windows compatibility

PG5 2.3 is compatible with Windows 10 and Windows 7 with Service Pack 1 operating systems.

### Directory names

Within PG5 version 2.3, the files are installed in a different structure as in PG5 2.2. For security issues, the projects and libraries folder are now define under the user document directory.

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

**'C:\Users\<<user name>\SBC\PG5 V2.3.1xx'**

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 2.3.1xx'**

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

**'C:\Users\<<user name>\SBC\PG5 V2.3.1xx\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.

## 2.2 General Considerations

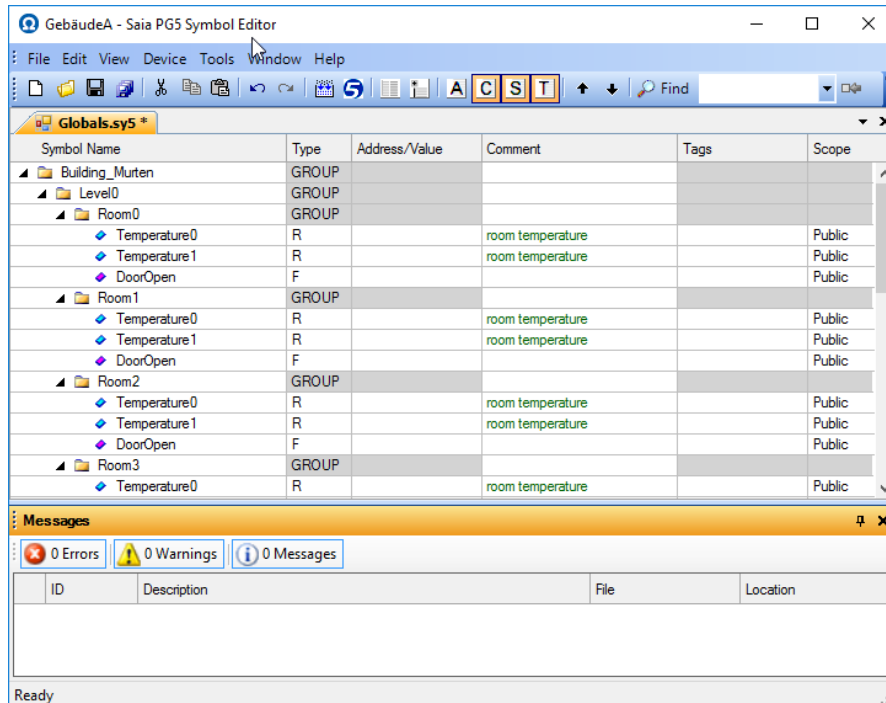
The main new features introduced in this version are:

- Symbol Editor: the symbol editor grid, integrated in the Fupla and IL editors and the standalone version has been completely renewed. The general symbol handling, introduced with PG5 2.0 has not been changed.
- Fupla Editor: the 'Adjust Window' has been completely redesign in order to improve the usability. The import of pages has been improved for better performances and the new symbol grid has been implemented.
- IL Editor: the new symbol grid has been implemented into the IL editor.
- Web Editor 8: The Web Editor 8 has been enhanced in order to generate HTML5 output in parallel to the Micro browser outputs.

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

## 2.3 Symbol Editor

The symbol editor grid has been completely renewed. This include the 'Symbol Editor' view in Fupla and IL editors and also the standalone version used for the edition of global symbol files or other symbol files with specific formats.



### Creating a new symbol

For entering a new symbol, the 'Insert' key has to be used. It will insert a new symbol line below the current selected line and set the focus on the symbol name cell. The symbol name can be directly entered.

In the first cell, it is possible to enter the symbol name, but also the complete symbol definition in the following order:

Symbol name, can also contain group name – separated by '.'  
 Symbol type, for example 'r' for register or 'f' for flag  
 Symbol address  
 Symbol comment, with ';' as first character

Once the symbol name defined, you can switch to the next cell using the 'Tab' key.

For the symbol type, you can open the combo box list in pressing the 'Enter' key. You can also directly enter the first character of the type:

'f'	F – flag
'f' + 'f'	F VOL - volatile flag
'r'	R - register
'r' + 'r'	R FLOAT - register float
'i'	I – input
'o'	O – output
't'	T - timer
't' + 't'	TEXT – text
't' + 't' + 't'	TEXT RAM – text RAM
'c'	C – Constant

For the symbol scope, pressing the 'Enter' key will open combo box list. You can also directly enter the first character of the scope:

- 'p' Public
- 'e' External
- 'l' Local

**'Ctrl' + 'Enter' key**

After editing a new symbol, you can enter the next one directly by pressing the 'Ctrl' + 'Enter' keys. This command will create a new line and you can directly edit the next symbol by entering the symbol name.

**Creating multiple symbols**

As in the precedent version, it is possible to define multiple symbols in one line in using the '..' characters in order to define the range of the indexes. This feature has been extended in order to support group indexing. It is now possible to enter such string:

*'Level1..2.Room0..1.Temperature0..1 r 100.. ; Room temperature'*

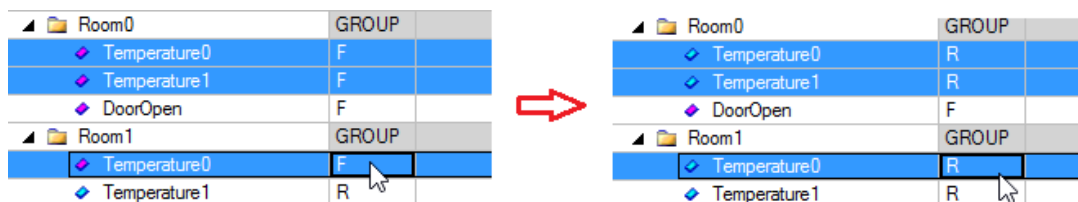
And the result will be:

Level1	GROUP			
Room0	GROUP			
Temperature0	R	100	Room temperature	Public
Temperature1	R	101	Room temperature	Public
Room1	GROUP			
Temperature0	R	102	Room temperature	Public
Temperature1	R	103	Room temperature	Public
Level2	GROUP			
Room0	GROUP			
Temperature0	R	104	Room temperature	Public
Temperature1	R	105	Room temperature	Public
Room1	GROUP			
Temperature0	R	106	Room temperature	Public
Temperature1	R	107	Room temperature	Public

The symbol addresses will be automatically incremented if the first address is defined followed by '..' – the end address is not required.

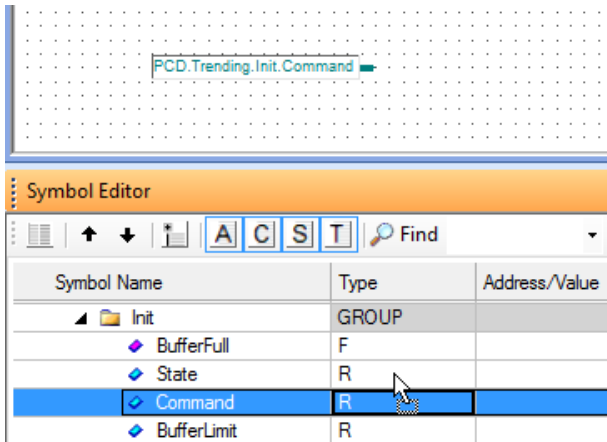
**Modifying several symbol settings at the same time**

It is now possible to modify settings of several symbols at the same time. For example, switch the type or define a tag. Press 'Shift' or 'Ctrl' key and select the different symbols in the grid by clicking on the different symbol line, modify the value the desired cell and exit the cell.



**Drag and drop of symbols**

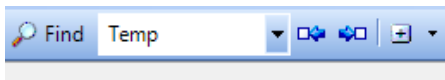
For dragging a symbol from the grid into the main view of the editor, select the symbol line and drag it from any point of the line. You don't need to select the first row as in the precedent version.



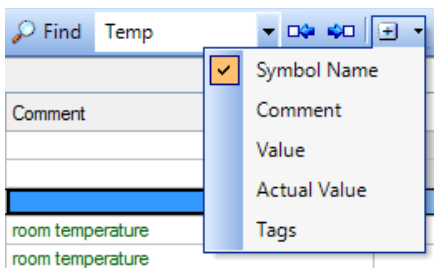
It is also possible to select multiple symbols and drag and drop them into the Fupla page or IL page.

**Quick search**

The quick search feature is accessible directly from the tool bar. You only have to type the string you want to find and press the right arrow to start searching above the current selected symbol or the left arrow to start searching below the current selected symbol.

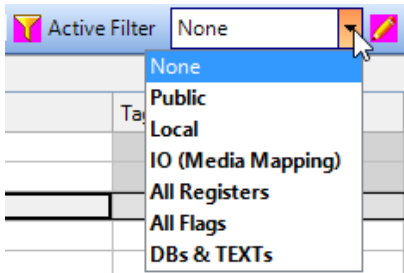


It is possible to select on which column the search will be applied using the selection list in pressing the '+' icon and select the requested columns to search in.

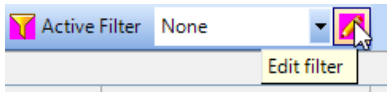


**Symbol filtering**

The filtering function is accessible from the toolbar. Predefine filters are available in the combo box list. Just select one filter in the list and it will be directly applied to the current view.

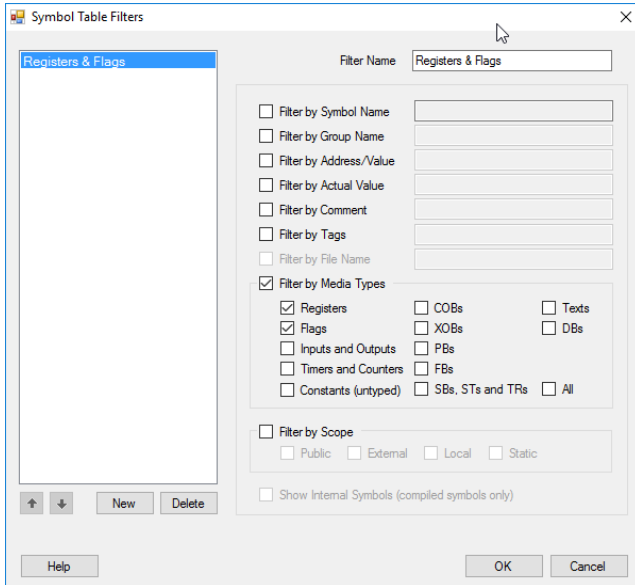


For editing specific filter(s), click on the 'Edit filter' icon at the left of the filter list.



The 'Symbol Table Filters' dialog box is then displayed.

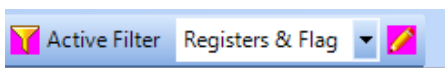
In order to create a new filter, press the 'New' button at the bottom of the filter list, enter a name in the 'Filter name' text box and select the filter criteria.



In case of multiple filter, you can define their order using the up and down buttons define below the filters' list.

You can remove a filter from the list in selecting it and press the 'Delete' button.

Press the 'OK' button and the filter will appear as 'Active Filter' in the toolbar and will be directly applied to the symbol grid.



To disable filtering, select the 'None' entry in the list.

**Group comment**

It is possible to define comment for groups.

Symbol Name	Type	Address/Value	Comment
▲ Building_Murten	GROUP		
▸ Level0	GROUP		
▲ Level1	GROUP		
▸ Room0	GROUP		Nord West
▸ Room1	GROUP		South West
▸ Room2	GROUP		Nord
▲ Room3	GROUP		
◆ Temperature0	R	100	Room temperatures

**Symbol grid**

The size of the columns is automatically adjusted to the window size. It is also possible to adjust the size of the column manually in placing the mouse cursor on the header of the table, on the right side of the column you want to modify, then the cursor icon will switch to the double arrow icon, then press the left mouse button and adapt the size by moving the mouse to the right or to the left.

Symbol Name	Type
Building_Murten	GROUP
Level0	GROUP
Level1	GROUP
Level2	GROUP
Level3	GROUP
Room0	GROUP
Temperature0	R

**Indication of invalid symbol**

When a symbol definition is not valid, an error is displayed in the message box and the symbol line is highlighted.

Symbol Name	GROUP				
Temperature0	R	100	Room temperatures	100	
Temperature1	R	100	Room temperatures	100	
Temperature2	R	100	Room temperatures	100	
DoorStat***	F		Door state		
Humidity	R				

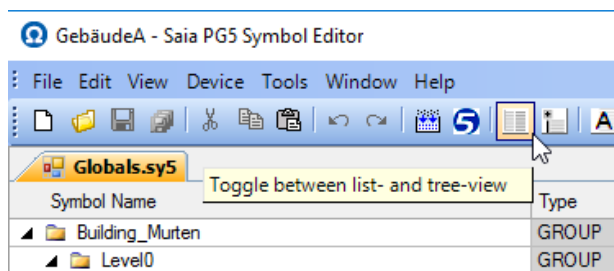
  

Messages			
1 Error	0 Warnings	0 Messages	
ID	Description	File	Location
6006	Symbol name contains invalid characters	Untitled1.sy5	

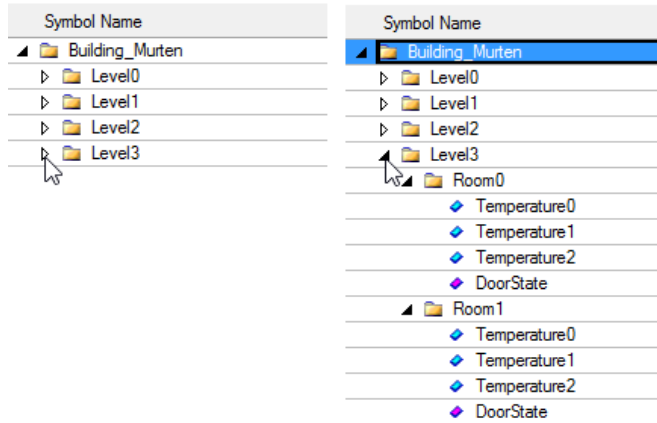
When the error is corrected, the error is automatically removed from the error list.

**Group view / list view**

It is possible to display the symbols in a group view (tree) or list view (complete symbol name with groups). To switch between the two views, you just have to click on the 'Toggle between list- and tree-view' icon on the toolbar.



In the group view, it is possible to expand and collapse the groups by clicking directly on the triangle displayed in the front of the group.



**Undo / redo**

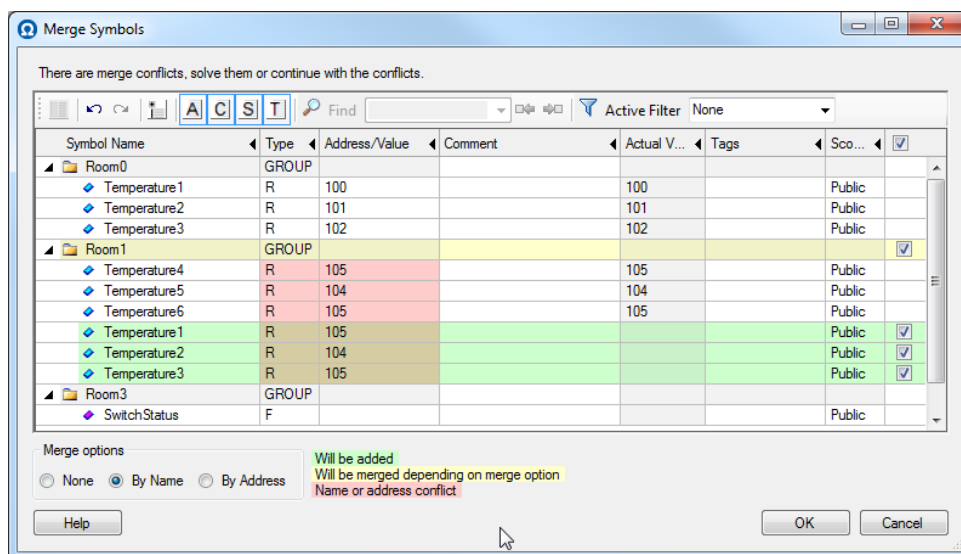
All actions done in the symbol editor grid can be undone / redone. For the standalone version, the 'Undo' and 'Redo' command are available under the 'Edit' menu. For the symbol editor integrated in the Fupla and IL editors, the actions are logged together with the general editor actions and can be undone / redone using the editor 'Undo' and 'Redo' commands.

**Merging of symbols when import or paste symbol with merge**

A new merge dialog box has been implemented to solve the merge conflicts that can happen during copy and paste of symbols or when importing symbols. The merge dialog box is displayed when conflicts appear during symbol import or when using the new 'Paste with Merge' command from the context menu, or using the Ctrl+Shift+V shortcut.

The symbol import feature allows to import symbol defined specific file into the current symbol file. The symbol import feature is available under the 'Import ...' command available under the 'Tools' entry in the context menu of the symbol editor grid.

When a symbol definition conflict is found during import or with the new 'Paste with Merge' command, the following dialog box is displayed.



The 'Merge Symbols' dialog is used to compare and merge two sets of symbols. The first set are the existing symbols and the second set are the symbols which should be inserted - imported or copied.



Inside this dialog box you have the possibility to modify all the symbols, as in the standard 'Symbol Editor' grid.

On the right side, there is a column containing checkboxes to select the symbols that have to be added, merged or ignored. The checkboxes are only available for the imported symbols.

When merging symbols, conflict can appear when the symbol name, including the group and symbol type are the same. In this case we call it 'name conflict'. Conflict can also appear when the symbol type and address are the same. In this case will call it 'address conflict'.

In order show the merged symbols and the possible conflicts, the following colors are applied:

Green: Symbols which will be added.

Yellow: Merge symbols depending on the selected merge option.

Red: Merge conflicts. The cells where the conflict reason appears are highlighted in red.

In order to merge the new added symbols in an easy way, the following merge options are available in the 'Merge options' radio buttons:

'None': No merge option, all new symbols will be added to the symbol grid.

'By Name': symbols will be merged by the symbol name including path and type. It means that if an existing symbol has the same name and type as a new one, it will be updated with the new symbol address and comments.

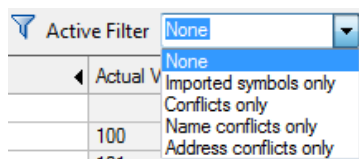
'By Address': symbols with the same type and address will be merged. Undefined addresses cannot be merged. It means that if an existing symbol has the same type and address as a new one, the name and comment of the existing symbol will be updated with the new values.

Merged symbols means, that the original symbol will be updated with new settings.

The selected merge option will be stored and the next time the dialog appears, the symbols will be merged depending on the last selected option.

The root of having a merged symbol is always the unmodified symbol, means that if you merge by name and change the name to another existing symbol, the symbol will not be merged with the new name.

In order to have a better overview on the different symbols, it is possible to filter the symbol list using predefined filters defined in the 'Active Filter' combo box.



The following predefined filter are available:

'None': display the entire symbols list, including the new symbols.

'Imported symbols only': display only the new imported or copied symbols.

'Conflicts only': display only the symbols that have conflicts – name or address conflicts.

'Name conflicts only': display only the symbols that have name conflicts.

'Address conflicts only:' display only the symbols that have address conflicts.

Press the 'OK' button to do the merge and update the symbol list with the new and merged symbols. Press the 'Cancel' button to cancel the merge.

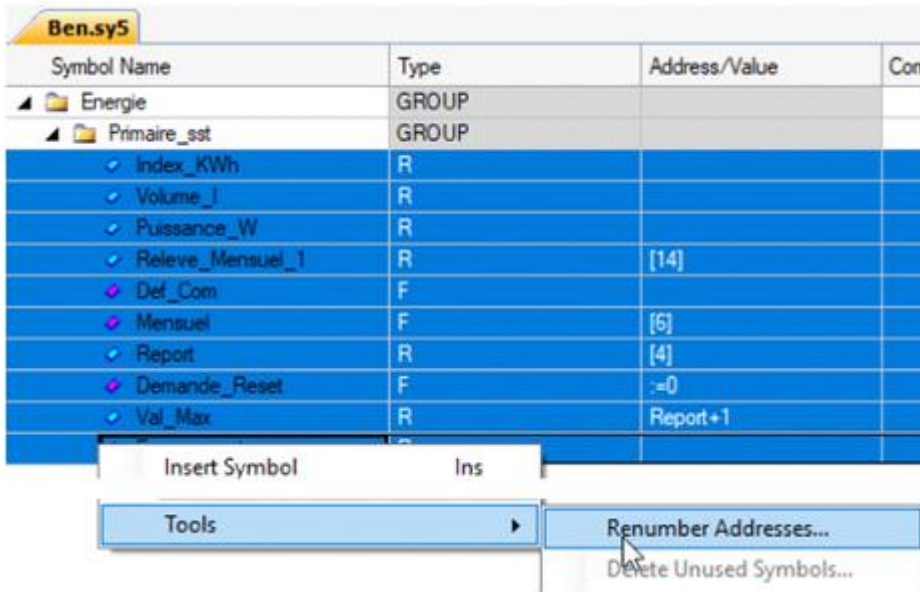
### **Renumbering Addresses**

The old "Excel drag" feature for renumbering addresses has been replaced by a new "Renumber Addresses" command.

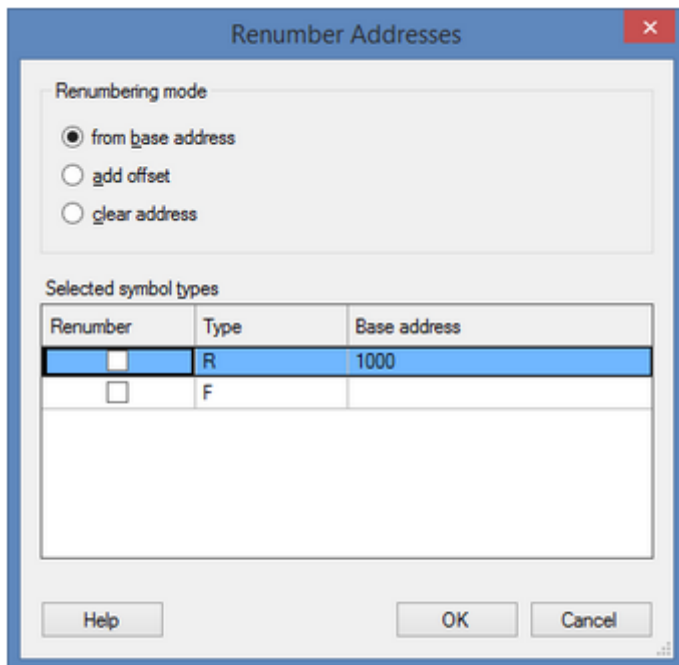
First, select the symbols to be renumbered. These can be the same types, or mixed types. You can even select all the symbols (Ctrl+A) and renumber all of them. A different base address can be defined for each type.

**Tip:** You can filter and/or sort the symbols first to make it easy to select the symbols you need.

In the example below, Register and Flag types have been selected:



Now run the context menu's the "Tools > Renumber Addresses..." command to open the «Renumber Addresses» dialog box. This shows a list of the selected symbol types, e.g. "R" and "F", and allows the types to be selected with the checkbox, and a new base address to be defined for each type.



You can also select the "Renumbering Mode" which defines how the addresses will be created.

- from base address      Selected symbols are renumbered consecutively starting from this address. The value column title shows "Base address" when this option is selected.
- add offset              An offset is added to the addresses of the selected symbols. The value column title shows "Offset to add".
- clear address          This converts the selected symbols from an "absolute address" to a "dynamic address". The addresses of the selected symbols are removed, so the addresses are generated dynamically when the program is built. The value column is hidden when this option is selected.  
**Tip:** Dynamic addresses are renumbered using Project Manager's "Device > Advanced > Clean Files" command to delete the "Symbol information files".

In the example, we will renumber the selected Registers starting from base address 1000. The Flags, even though some flags are selected, are not renumbered because the checkbox is clear.

Below is the result. Symbols which were modified are selected.

Ben.sy5 *			
Symbol Name	Type	Address/Value	Commer
▲ Energie	GROUP		
▲ Primaire_sst	GROUP		
Index_KWh	R	1000	
Volume_I	R	1001	
Puissance_W	R	1002	
Releve_Mensuel_1	R	1003[14]	
◆ Def_Com	F		
◆ Mensuel	F	[6]	
Report	R	1017[4]	
◆ Demande_Reset	F	:=0	
◆ Val_Max	R	Report+1	
Espacement	R	1021	

**Notes**

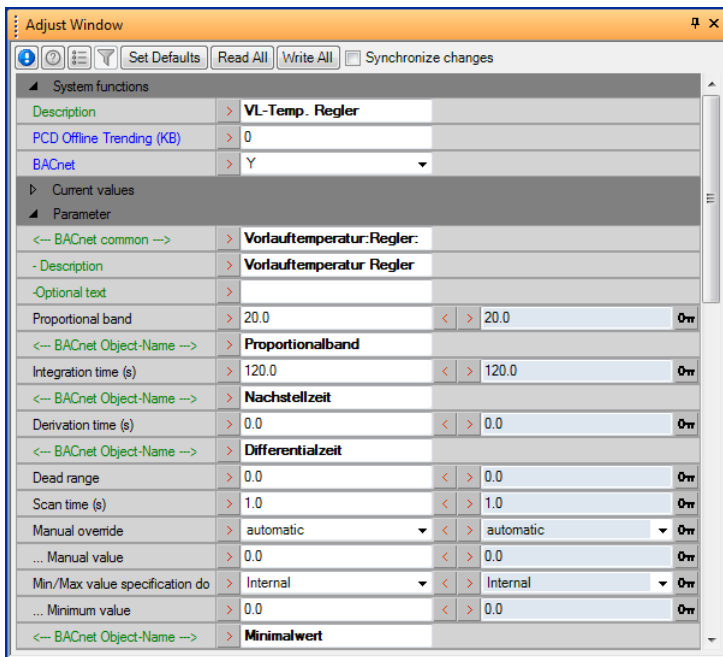
- Symbol array sizes are taken into account, but only if the size can be evaluated (maybe it's an external symbol or expression). In the above example, Releve\_Mensuel\_1 R 1003[14] skips 14 addresses, so Report gets address R 1017.
- If a symbol already uses a symbol for a base address then it is not renumbered. See Val\_Max R Report+1 above. "Report" is renumbered, so the Address/Value of Val\_Max does not need to be changed.
- Renumbering addresses may cause conflicts - other symbols may have the same address. This can have unpredictable effects.  
**Tip:** Check for conflicts by enabling the Build Option "Warn on symbols with the same type and value". Or use the "All Symbols" view or Project Manager's "Data List view", sort by type/address and examine the assigned addresses.
- Dynamic addresses are renumbered using Project Manager's "Device > Advanced > Clean Files" command to delete the "Symbol information files".
- Addresses inside the dynamic address ranges defined in the Build Options should not be used.
- If you are unhappy with the result, use 'Undo' to restore all the addresses to their original values.

## 2.4 Fupla

In this new version of PG5, several features have been redesigned or improved. The main parts are the redesign of the 'Adjust Window' for a better handling, the rework of the 'Page Import' feature for better performances and the integration of the new symbol editor grid. In the following subchapters, you will find a description of the new features and enhancements.

### 2.4.1 New Adjust Window

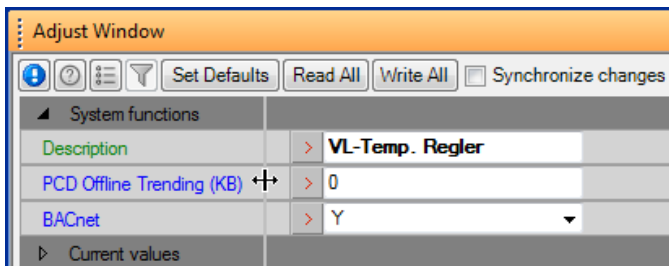
The new 'Adjust Window' is has been redesign in order to improve his usability. It combines the advantages of the 'Adjust' parameter dialog box and precedent version of the 'Adjust Window'.



The new 'Adjust Window' display the FBox adjust parameters in offline and online mode, in a similar way as the 'Adjust' parameter dialog box.

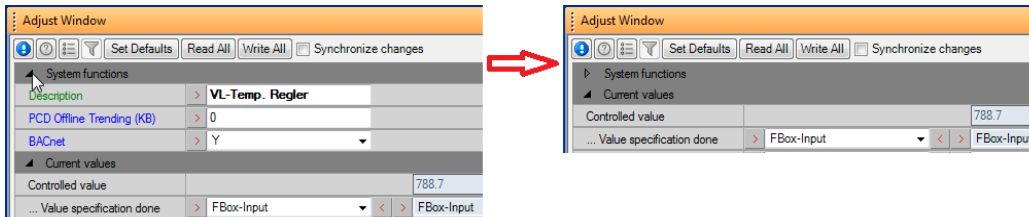
The size of the parameter description is automatically adjusted to the size of the longest text in order to ensure displaying the whole text.

The size can also be manually adjusted in placing the mouse cursor on the right of the description column, then the mouse cursor switch to the double arrow icon and you can adapt the size by pressing the left mouse key and move left or right.



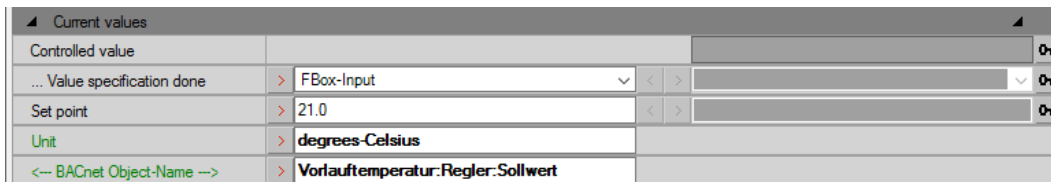
**Expand/collapse parameters' group**

The different adjust parameter's groups can be collapse in order to reduce the number of displayed parameters. To collapse or expand a group, click on the triangle displayed in the left of the group name.



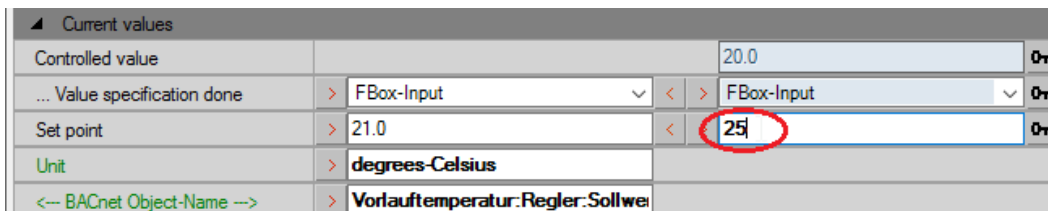
**Offline mode**

In offline mode, only the offline value can be edited. The individual default value can be set using the arrow button, in the left of the offline value entry box. When the current value is different than the default value, the value is displayed in bold.



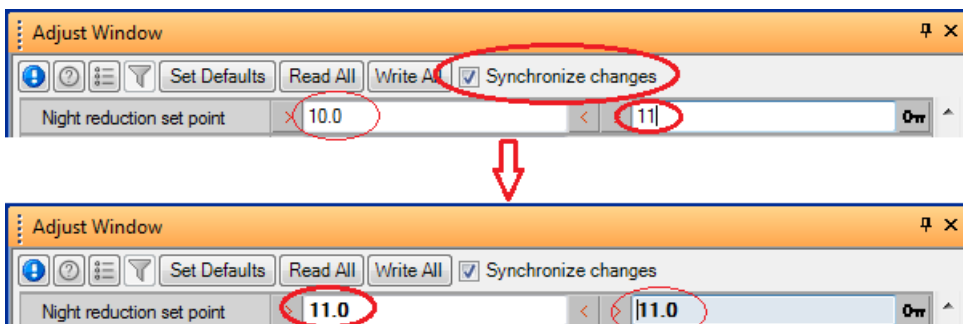
**Online mode**

In online mode, it is possible to edit the online value directly and send it to the PLC. Select the parameter you want to edit in the third column, specify the new value and press 'Enter'.



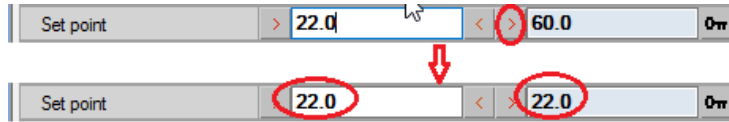
**Online synchronized mode**

When the new option 'Synchronize changes' is activated, the modified online value is also written to the Fupla source file at the same time. The synchronization will also take place when a source file value is modified, the new value will be automatically copied to the online value and transmitted to the PLC.

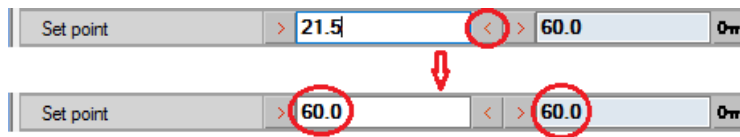


When the option 'Synchronize changes' is not activated, changing the value of the online value will not change the source value and changing the value of the source value will not change the online value.

For updating the online value with the source value, click on the arrow key button defined on the left of the online value entry box.

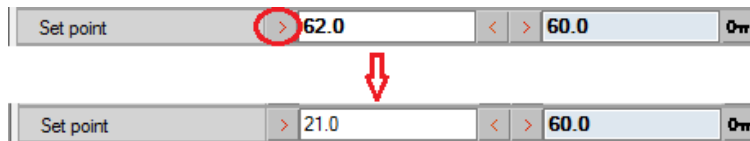


For updating the source value with the online value, click on the arrow key button defined on the right of the source value.

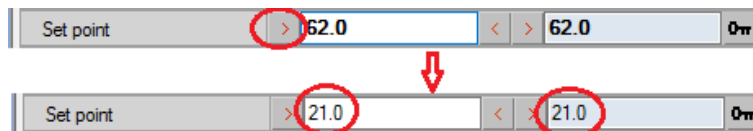


**Set default value**

In pressing on the arrow button on the left of the source file value, the default value will be set to the source file value.



If the 'Synchronize changes' is activated, the default value will also be written to the online value and directly transmitted to the PLC.



**Note:** In synchronize mode, if the online value is the same as the default value, but the online value is different, pressing the set default button will only update the online value and transmit it to the PLC.

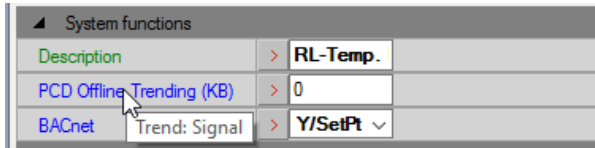
**Invalid entry**

When an invalid value is entered, a tooltip is displayed containing the error description. To switch back the original value, press the 'Esc' key.



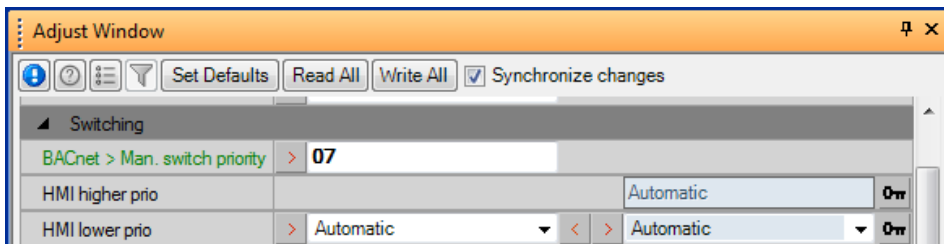
**Parameter information**

Some adjust parameters have an additional text information. This information is shown as tooltip when the mouse is placed of the parameter text.



**Toolbar commands**

The window tool bar contains several buttons for general functions.



Clicking on the first button – ‘FBox information’ - will display the help of the FBox to which the displayed parameter belong.

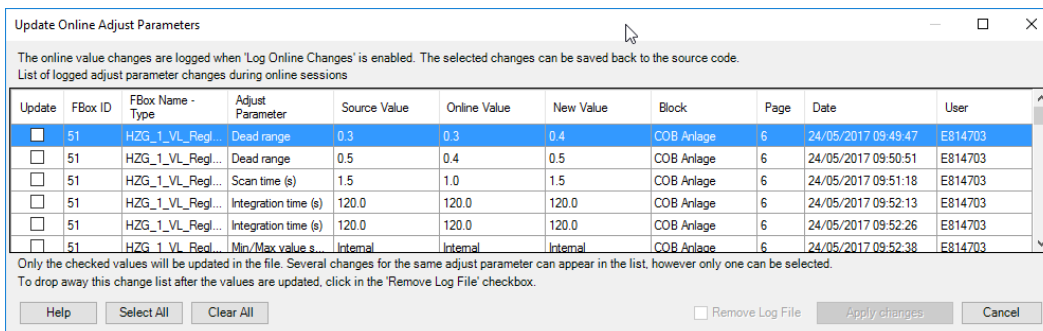
Clicking on second button - ‘Adjust window help’ - will display the help about the ‘Adjust Window’.

Clicking on the ‘Set Default’ button will set all default values to the source file values. If the ‘Synchronize mode’ is enabled, all default values will be transmitted to the PLC.

Clicking on the ‘Read All’ button will read the online values from the PCD and write them to the source values. This command is only available in online mode.

Clicking on the ‘Write All’ button will write all source values into the online values and transmit them into the PCD. This command is only available in online mode.

Clicking on third button – ‘Show this FBox adjust log’ - will display the ‘Update Online Adjust Parameters’ dialog. This view shows a list of all changes that have been done concerning the online values. In order to start the login, the command ‘Log Adjust Changes’ available under the ‘Online’ menu.



In the history list, the ‘FBox ID’, the ‘Block’, the ‘Page’, the ‘Date’ and the ‘User’ have been added in comparison with previous version.

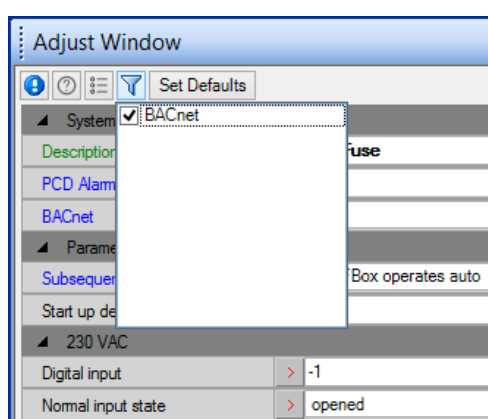
From this list, it is possible to see all changes made to the adjust parameter and re-apply changes that have been done previously into the Fupla source file.

When call from the Adjust window tool bar, the list will contain only the changes relative to the current selected FBox. To see all the parameters changes, select the 'Show Adjust Log...' command under the 'Online' menu.

### **Show/hide adjusts by category**

With the new 'Show/hide adjusts by category', it is now possible to hide some adjust parameters. This is especially useful for FBox having a lot of parameters.

Clicking on the forth button - 'Show/hide adjusts by category' - displays a list containing the categories. To hide a category, unselect the checkbox define on the left of the category name. Then the adjust parameter that belong to this category will be hidden.



As the categories are defined inside of the FBox libraries, this filtering feature will only be available with new version of FBox libraries. If you are using your own FBox libraries, you will be able to defined categories using the new version of the FBox Builder. See chapter regarding the FBox Builder.

Note: new updated versions of FBox libraries containing the definition of adjust parameter categories are in preparation and will be available soon.

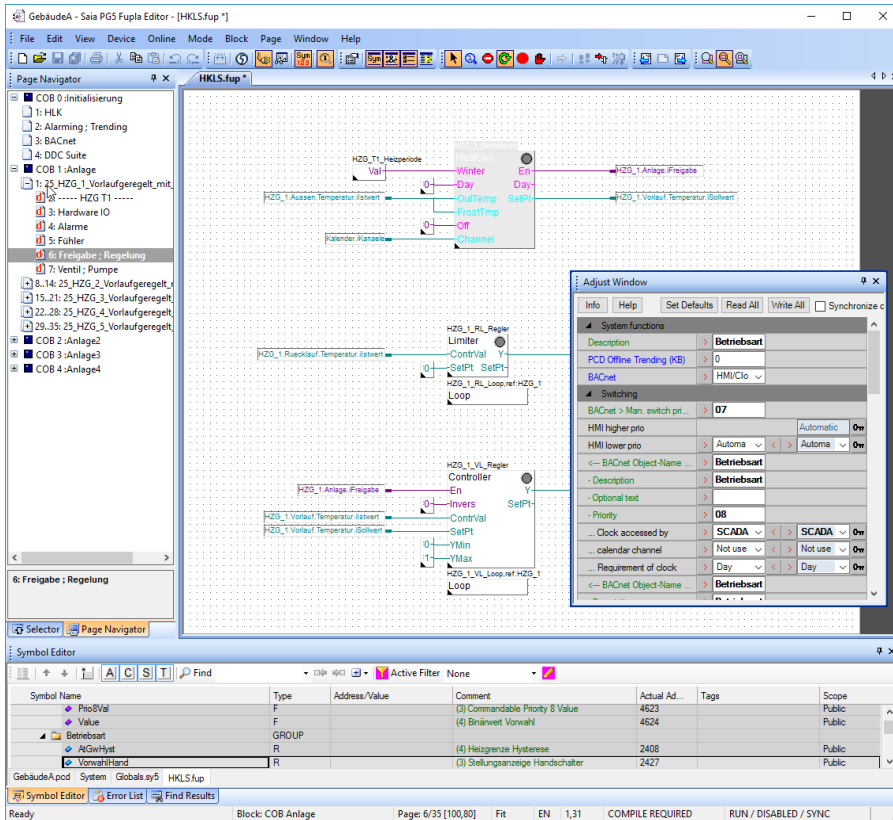
### **Undock view**

The 'Adjust Window' is a 'dockable' window, integrated into the Fupla main window. It is also possible to undock this window and place it in your most common place in your screen.

To undock the window, go over the title bar of the 'Adjust Window' with the mouse cursor, press the left button of the mouse and move it to the desired location.

To dock it back to the main view, press the left button of the mouse and move it to one of the icon displayed in the screen.

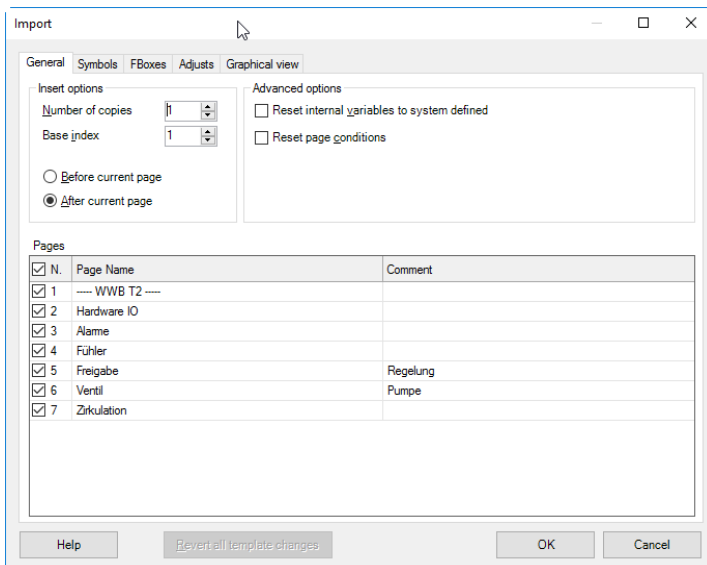




The window stay open when switching from one FBox to the other and switching between pages. You don't need close and reopen it as with the 'Adjust' dialog box.

### 2.4.2 Template import improvements

The template import feature has been completely rework for better performances, but the look and feel and handling are similar to previous versions.



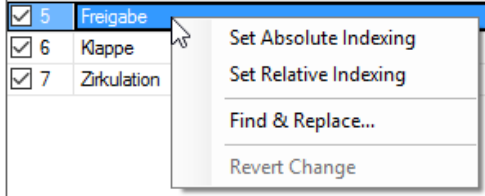
When the template contains groups of pages, it is possible to deselect group. In this case all the pages define under the group will not be imported.

**Indexing**

The indexing – absolute or relative - is available on all editable fields using the ‘Set Absolute Indexing’ or ‘Set Relative Indexing’ commands from the context menu.

The ‘Set Absolute Indexing’ is adding a ‘\$’ character at the end of the selected string.

The ‘Set Relative Indexing’ is adding a ‘#’ character at the end of the selected string.

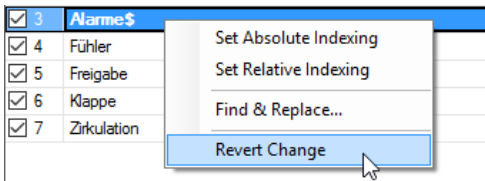


Absolute indexing means that the index range will start from 0 and up to the number of copies minus one.

Relative indexing means that the index range will start from the base index and up to the base index plus number of copies minus one.

**Revert changes**

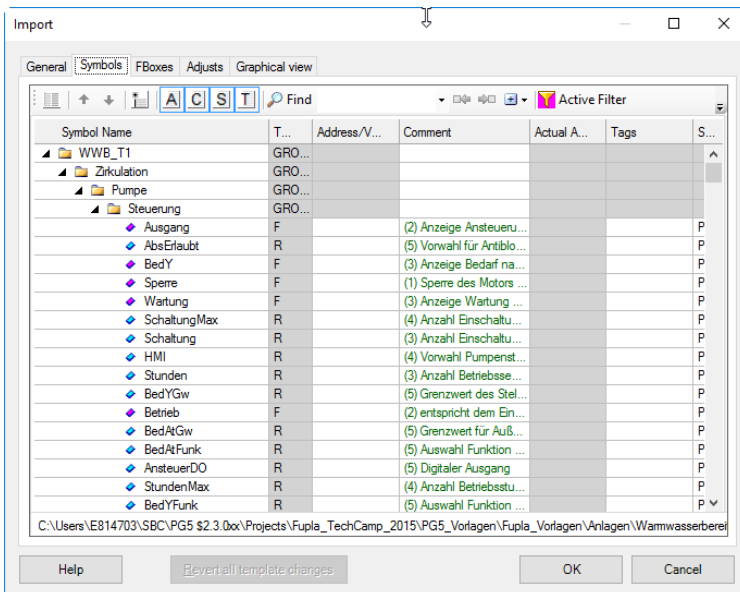
It is possible to revert individual changes using the ‘Revert Change’ command available in the context menu.



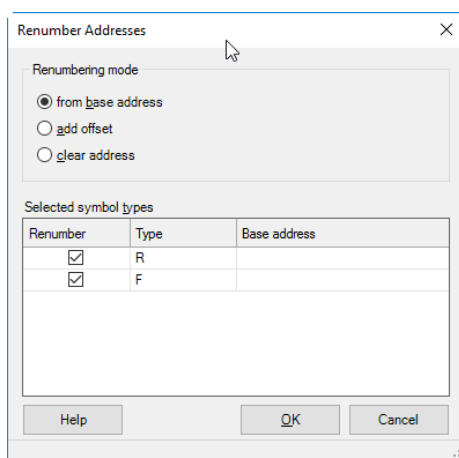
Every changes done in the ‘Import’ dialog can be reverted using the ‘Revert all template changes’ button available in the bottom of the dialog box.

**Symbol tab**

The ‘Symbol’ tab has been renew with the integration of the new symbol editor grid.



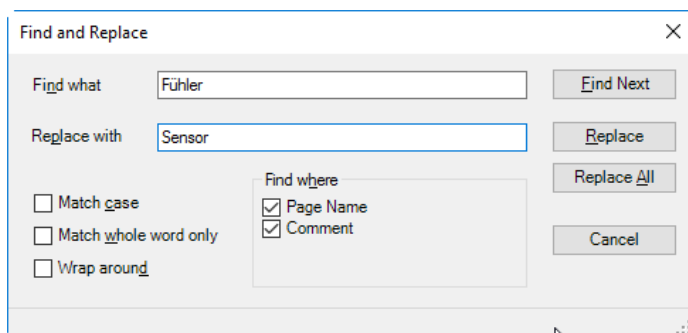
The renumbering of symbol addresses is available in using the 'Renumber Addresses ...' command from the context menu. It will display the 'Renumber Addresses' dialog boxes where the renumbering mode can be selected and the related settings.



On pressing the 'OK' button, the selected symbol addresses will be renumbered using the defined settings.

## **Find and replace**

The find and replace function has been generalize for all tab of the import dialog. The 'Find and Replace' dialog stay open when moving from one tab to another.



The 'Find where' parameters are dependent of the selected tab.

On the 'General' tab, find and replace can be applied on:

- Page Name
- Comments

On the 'Symbols' tab, find and replace can be applied on:

- Symbol Name
- Address/Value
- Comments
- Tags

On the 'FBoxes' tab, find and replace can be applied on:

- FBox Name
- Reference
- Comments

On the 'Adjusts' tab, find and replace can be applied on:

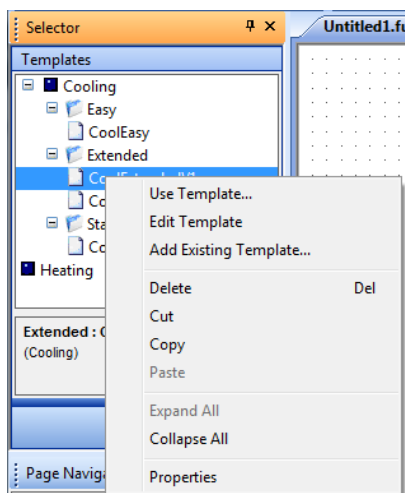
- Adjust Value

### **Undo / redo import**

Once the template is imported into the Fupla file, it is possible to undo / redo the import using the Fupla 'Undo' / 'Redo' commands available under the 'Edit' menu.

## **2.4.3 Template management improvements**

The 'Template' tab, available in the 'Selector' view display the list of available templates and allows organizing templates in different groups. Several templates can also be grouped into one or several template libraries for an easy exchange between users.



The different actions available under the context menu of the view have been improved in order to ensure a correct behavior in all use cases.

## 2.5 **Web Editor 8 – HTML5**

In this new version of PG5, the Web Editor 8 has been enhanced in order to generate HTML5 output files in parallel with the Micro Browser web files - TEQ.

Your projects done with precedent version of Web Editor 8 will not have to be modified, you will only have to define the specific configuration on order to generate the HTML5 web pages. The look and feel and the handling of the displayed web pages will be the same as with the TEQ engine.

### 2.5.1 **Compatibility**

The new version of Web Editor 8 is able to generate 3 different types of outputs:

TEQ output, compatible with the Saia PCD Web Panel MB and the SBC Micro Browser application.

HTML5 output, compatible with the following browsers:

- Google Chrome
- Microsoft Edge
- Mozilla Firefox
- Apple Safari

**Note:** Microsoft Internet Explorer is not supported.

Hybrid output, TEQ and HTML5, a single HTML file that is compatible with TEQ or HTML5 requests. Depending on the type of the browser that is requesting data, the corresponding web format file will be transmitted.

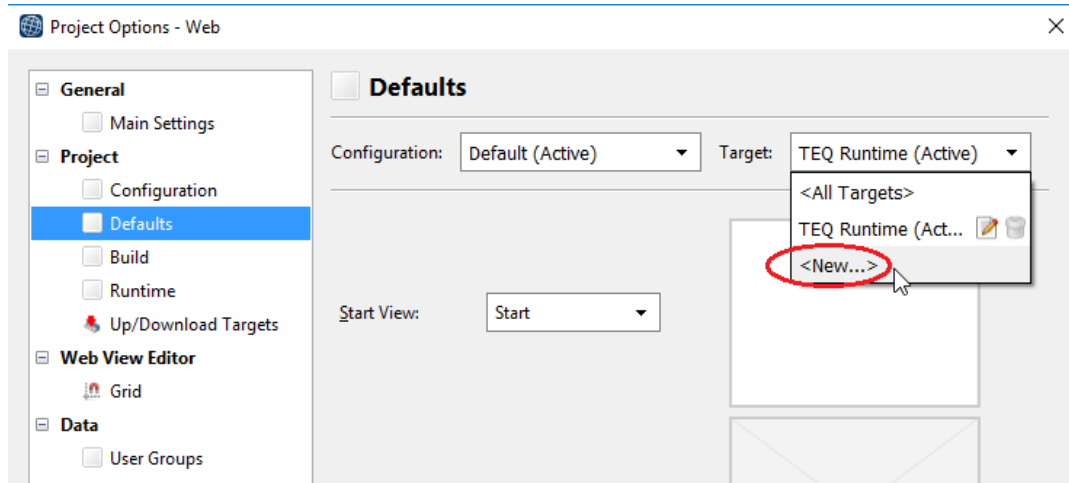
The generated HTML5 files are compatible with any Saia PCD devices containing a web server.

### 2.5.2 **Configuration and settings**

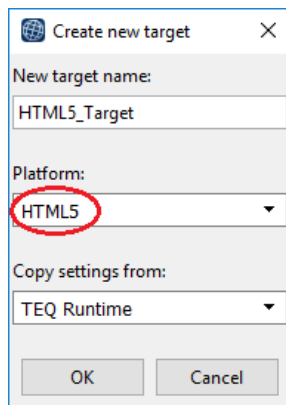
In order to specify the HTML5 output, open the project settings using the 'Web Options' command under the 'Project' menu.

The configuration of the different outputs – HTML5, TEQ runtime or hybrid - has to be done under the options defines under the 'Defaults' and the 'Build' tabs.

On the top of those tabs, you can define a configuration and for the configuration, specific targets. This will be the place where the different Web Editor output type can be specified.

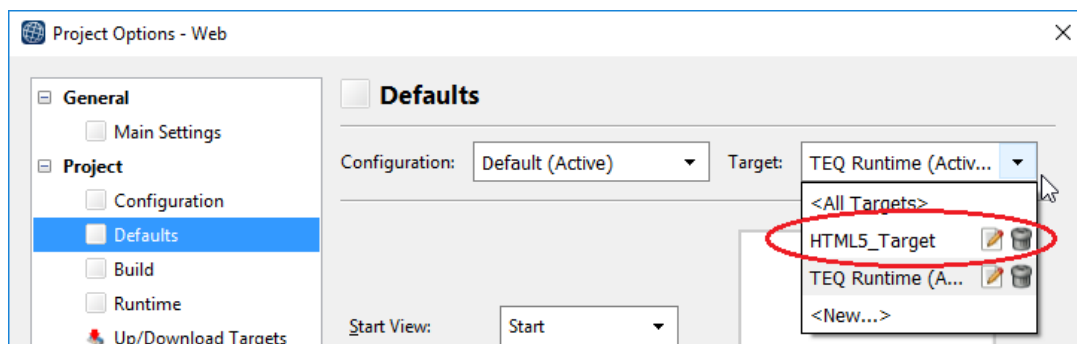


In order to specify the HTML5 output, open the 'Target' combo box list and select '<New...>'.  
 The 'Create new target' dialog box is displayed.



Enter a name for the new target in the 'New target name' text box and, under the 'Platform' combo box, select the 'HTML5' item. The 'Copy settings from' is used to copy the existing settings when one or several targets are already defined. In our case, there is only one target defined and those settings will be taken. Press 'OK' to save the new target and close the dialog box.

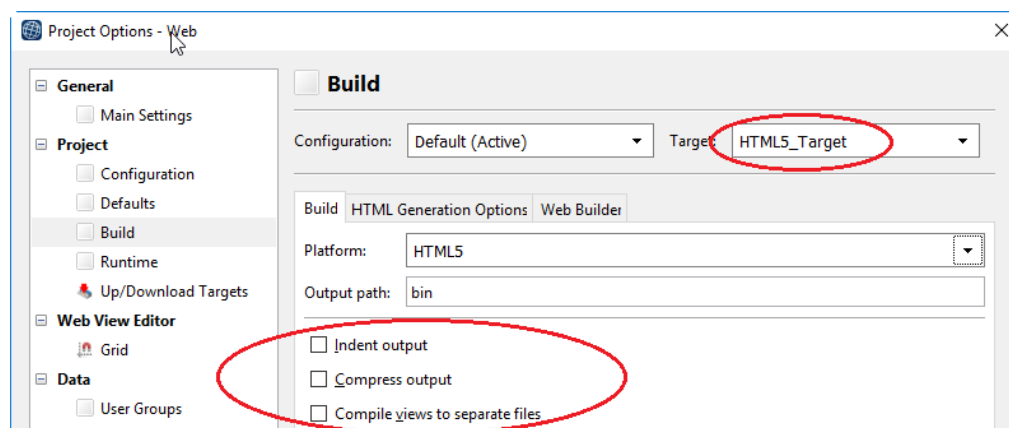
You will see the new created target in the 'Target' combo box list. You can use the 2 icons defined on the right of the target name to edit it or to delete it.



Now select the new created target and you can specify the specific 'Defaults' options for this target – 'Start View', 'Foreground View' and 'Background View'.

It means that you can specify different start, foreground and background views for the HTML5 output as for the TEQ Runtime.

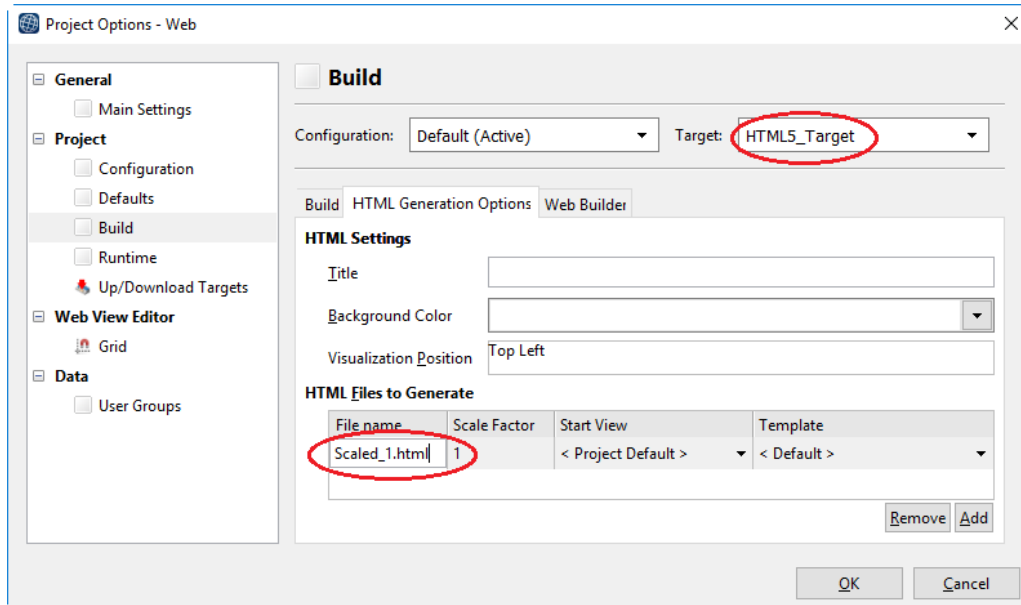
The second tab who is depending on the target is the 'Build' tab. You will also find the 'Configuration' and 'Target' combo box with the new created 'HTML5\_Target' target.



Under the 'Build' sub-tab, the following options regarding HTML5 are available:

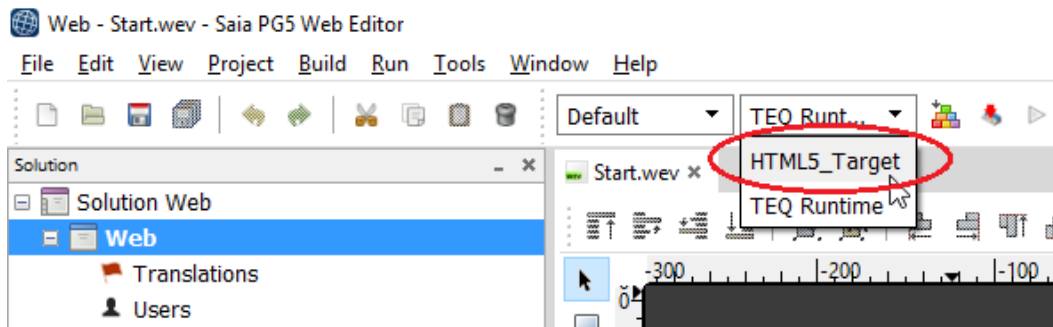
- Output path: specific output path can be specified for each target.
- Indent output: if this option is selected, the HTML file will be generated in a readable HTML format. If not, the file will be generated without indent in order to reduce a bit the size of the file.
- Compressed output: if this option is selected, the generated HTML file will be compressed in order to reduce the file size and reduce the upload and download time. Note: in order to support the compressed file, the Saia PCD Web server has to support this feature. This is not the case with the last official firmware version.
- Compile views to separate files: possibility to generate a specific HTML5 file for each view.

Under the 'HTML Generation Options' sub-tab, there is no specific HTML5 options. The already existing options can also be specified for HTML5 target.



It is necessary to specify the name of the HTML file to generate, the scale factor, the start view and the template. You can add an entry using the 'Add' button at the bottom of the dialog box. At least one entry has to be defined in order to avoid compilation error.

Once all of these settings specified, the generation of the HTML5 output can be done. You have to specify the desired target in the toolbar and build and download the project.

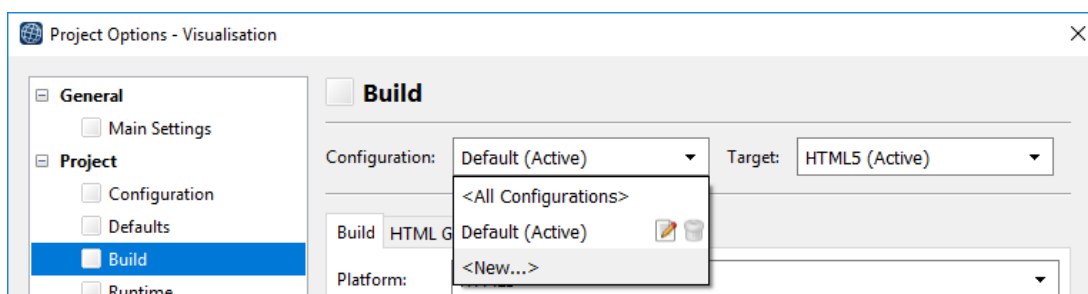


**Use several configuration**

As complement of the definition of targets, several configurations can be defined and easily selected from the toolbar.

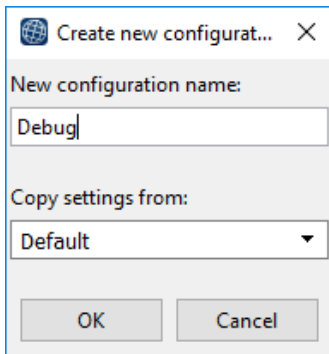
For example, a specific configuration can be a debug configuration, where the start page is not the start view of the project, but a specific view in which you are working on. In defining a specific configuration, you not have to go to the 'Project Options' to adapt the setting.

To create a new configuration, open the 'Project Options' dialog box, in the 'Defaults' tab, under the 'Configuration' combo box, select the '<New...>' item in the list.

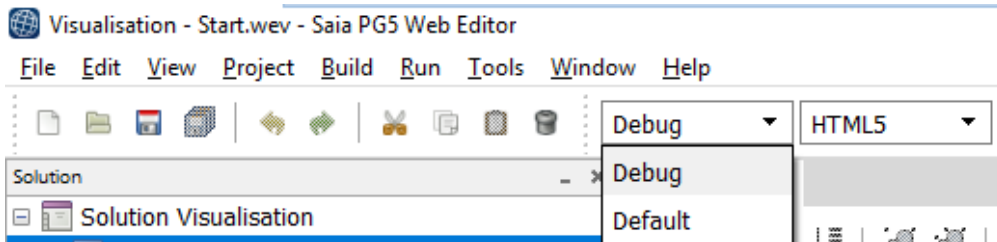




The 'Create new configuration' dialog box is displayed.



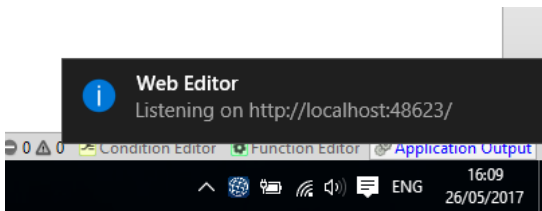
Once the different configurations defined, you can select the configuration from the toolbar. In this way you can easily switch between the different configurations without having to adjust other parameters or settings.



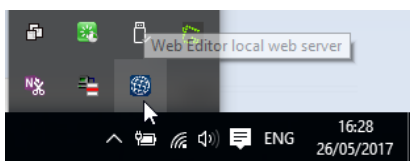
### 2.5.3 Simulation / run button

In this new version, the simulation – 'Run' button – has been improved. The simulation is as before available for the TEQ runtime over the SBC Micro Browser application and also for HTML5 outputs. The principle is the same for HTML5 and TEQ runtime, a local web server is started for handling the http requests and the communication with the Saia PCD.

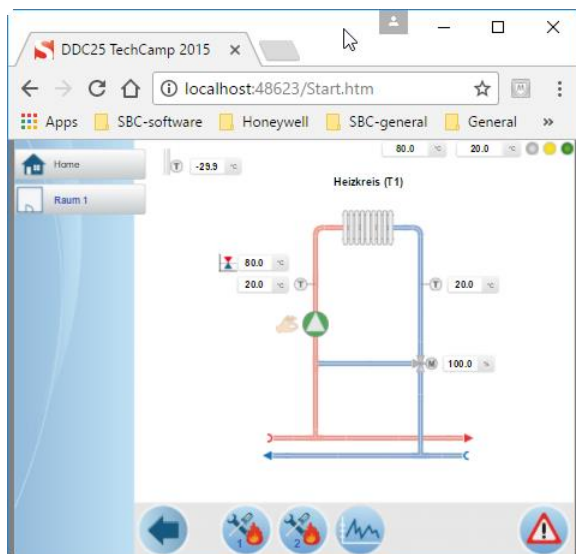
When the 'Run' button is started, the local web server is started and a notification is displayed on your screen.



An icon is displayed in the notification area of the Windows taskbar.

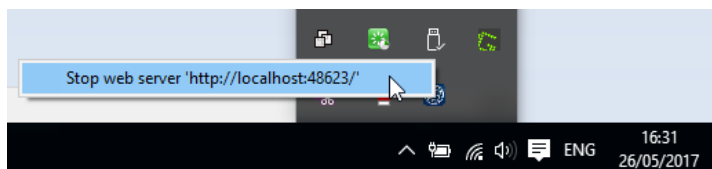


In case of HTML5 target, the default browser is started and the start page of the project is automatically displayed.



**Note:** If Microsoft Internet Explorer is your default browser, the HTML5 simulation will not behave correctly, because this browser is not supported. In this case, install a supported browser, define it as default browser and restart the simulation.

In closing the browser window, the local web server will not stop automatically. You can stop it in going to the taskbar, right clicking on the 'Web Editor local web server' icon and then clicking on the 'Stop web server 'http://localhost:xxxx'' button.



## 2.5.4 HTML5 output considerations

### Output page size

The size of the output page is automatically adjusted to the browser window size. The position of the window can be define under the setting page of the project.

### Images

For HTML5 output, the images are download in their original size and are automatically adjusted to fit the size of the image define in the page. When the image is used several times, the size of the project will be smaller in comparison with TEQ project.

## 2.5.5 HTML5 Trending improvements

In the HTML5 output format, the following improvement have been done regarding the chart element visible in all trending templates.

**Note:** those improvements are not available in TEQ output format / on the Saia PCD Web Panels.

### **X-scale zooming**

The size of the output page is automatically adjusted to the browser window size. The position

### **Cursors**

The value at mouse position is indicated with circle. The cursor is following the mouse position. If the value at mouse position is displayed, the value will be update when the mouse position has changed.

## 2.6 FBox Builder

### 2.6.1 Adjust parameter categories

Adjust categories can be used to filter out adjust parameters in the Fupla adjust window, see the 'New adjust window' chapter.

Any adjust parameter can be assigned to one or more categories, and the parameter is displayed when all categories are active. When the parameter has no category assigned, it will be always displayed.

The predefined categories are listed in the context menu of Adjust Parameter Window, they can be assigned/removed to/from the selected items.

The category can be also edited in the Category column of the Adjust tab, here the categories are listed by name, and must be separated by ';':

ID	Label	Symbol	Type	Visible	DownloadInRun	Category	Default Symbol	Comment
0	ADJ0	adj_ADJ0	Online	Yes	No	BACnet		
1	ADJ1		Comment	Yes	No	Online;BACnet		

Input  
 Output  
 Constant  
 Dynamic  
 Static  
 Adjust

### 2.6.2 Updated FBox libraries

The following FBox libraries have been updated between the last version of PG5 2.2 and this new version. Some of them have also been available over the Update Manager.

#### S-Fup Communication V2.7.380

- The event communication implemented on the FBoxes SASI, Send and RCV is no more frizzling in case of a system counter overflow or a cold start. The system counter overflow happen every 24 days if the counter reaches the maximum value and is reset to zero.

#### ELine V1.2.110

- The event communication is no more frizzling because of a system counter overflow. The system counter overflow happen each 24 days when the counter reaches the maximum value and is reset to zero.
- In the group 'Mixed Rio', in the FBox 'EL-PCD1.G2000': the adjusts parameter for the configuration of the LED have be removed - LED frequency and color triac – because this is not supported by the firmware. Existing projects which use the old FBox will continue to work in using the old configuration parameters, but it is recommended to update the FBox in order to use the new configuration parameters.
- In the help, the 'Mixed Rio serie 1' and 'Mixed Rio serie 2' are renamed in 'L-Series' and 'S-Series'.

#### DDC Suite 2.7 V2.70.200

- Preparations for Advanced Alarming to generate PCD texts and process new alarms for sending via email or SMS. Advanced Alarming can be used as soon as the Advanced Alarming FBoxes will be available.
- Correction regarding the alarm handling with BACnet Rev. 14 when 'Normally Closed' is selected.

#### SWA alarming V2.9.100

- Two groups are now available in the library. The 'Classic' group contains all FBox that have been available in the precedent version of the library. The new 'Advanced' group contains new FBoxes for organizing the alarms in groups and priorities. All of those new FBoxes are based on the Alarming 2 firmware enhancements.

#### **Heavac library (HVC) V2.7.560**

- In the group 'General', in the FBox 'Conversion DB n points': the conversion function is faster and more efficient. The consistency of the conversion values is only checked once at startup or on user request using the button in adjust window. The minimal DB size is correctly checked and the conversion is correctly processed on cold start.
- In the group 'Controllers', in the FBox 'Sequence Master B': the adjust parameter 1 to 4 have been re-arranged according to information defined in the FBox help.
- In the group 'Init', in the FBox 'Heavac Reset': the width of the FBox face has been increased in order to display the full FBox title.
- In the group 'Energy', in the FBox 'Monthly report': fix in the German texts regarding the months.
- In the group 'Clocks', in the FBox 'Easter Day': the startup initialization has been removed; the configuration is kept after the restart.
- In the group 'Clocks', in the FBox 'Sunrise / Sunset': correction for the case where Sunset is after 23:59. It was showing '12xx' instead of '00xx'; corrections regarding some other special cases.

#### **EnOcean V3 V3.0.050**

- In the 'PEHA' group, in the '450 ANT' FBox: new parameters 'received date/time' and 'received telegrams last hour' have been implemented for better statistics and analytics of radio communication. The old FBox has been disabled.
- In the 'Thermokon' group, in the 'SxC Ethernet' FBox: new parameters 'received date/time' and 'received telegrams last hour' have been implemented for better statistics and analytics of radio communication. The old FBox has been disabled; an automatic re-connect is now done when no telegram has been received during a certain period of time.
- In the 'EEP' group: 4 new FBoxes have been implemented: 'A5-10-0x (01..0D)' FBox for room device, this FBox handles 13 profiles; 'A5-10-1x (10..14)' FBox for room device, this FBox handles 5 profiles; 'A5-10-22/23' FBox for room device, the FBox handles 2 profiles; 'A5-10-11' FBox for actor for light.

#### **Saia PCD Modbus library V2.7.500**

- In the 'Server' group, in the 'Define Unit Server' FBox, update the supported media type and ranges in the help.
- Internal changes for compatibility with PG5 2.3.

#### **Belimo MP-Bus Library V2.7.530**

- In the 'Energy Valve P6xx' FBox, correction regarding the energy cool and heat; correction regarding the FBox label, add relative and absolute positions; add relative and absolute flow; the error byte is now containing all 8 errors bits; the parameters can be protected by the login code; handling of read only and write only parameters; add FBox input SPEnable to control of the sending of the setpoint.
- In the 'MP Actuator EPIV20' FBox, correction regarding the unit in the FBox definition file (Fupla could show different values).
- In the 'MP Actuator EPIV' and 'MP Actuator EPIV20' FBoxes, the help has been improved.
- In the 'MP Actuator VAV' FBox, correction in the FBox parameter definition.
- In the 'MP Actuator VAV20' FBox, get Vmax and Vmin value from the corresponding telegram.
- Internal changes for compatibility with PG5 2.3.

#### **EIB Driver Library V2.7.540**

- In the 'Send' and 'Receive' groups, the new 'EIB SEND Float' and 'EIB RCV Float' FBoxes have been implemented for the support of sending and receiving floating point values. Internal adaptations regarding compatibility with PG5 2.3.

- In the 'EIB Driver' group, in the 'EIB FB Buffer' FBox, all texts are now displayed in the FBox; clear errors and counters is now working.
- In the 'EIB Driver' group, corrections in internal functions in order to return correction address when the driver is unloaded and avoid to return bad value over FB buffer with loopback.
- In the 'Send' group, in the 'EIB SEND Switch' FBox, an assembler error has been fixed when the option 'Toggle+RCV' was set and no address was defined.
- In the 'EIB Driver' group, in the 'EIB Driver FT1.2', the help has been completed with the description of errors 24 and 25.
- In the 'Receive' group, in the 'EIB RCV Value', 'EIB RCV Value Rcv' and 'EIB RCV Value Mux', 'EIB POL Value' FBoxes and in the 'Send' group, in the 'EIB SEND Value' FBox, the new formats Float\*100 and Float \*1000 have been added.
- In the 'EIB Driver' group, in the 'EIB Driver' FBox, an assembler error on symbol \_SND.VALUE1 with old driver for BCU1 as been corrected.
- In the 'EIB Driver' group, FT1.2 has been extended to be able to receive 8 data bytes.
- A correction regarding lost of bytes 7 and 8 when receiving 8 bytes messages has been done and the unused registers are now cleared when receiving data with User FB.
- In the 'EIB Driver' group, in the 'EIB Driver FT1.2' and 'EIB Net/IP Driver' FBoxes, extension for the support of 16 bits addresses. Additional build option to force priority code: /D\_EIB\_PRIORITY=x (x=0..3). Note that 16 bits address is not yet supported by the FBoxes. It can only be used by the FB calls and the KNX Configurator from Engiby.
- In the 'EIB Driver' group, in the 'EIB Net/IP Driver' FBox, the handling of response on disconnect request has been improved. No repetition on NAK or timeout. Continue with Connect request.
- Internal changes for compatibility with PG5 2.3.

#### **DALI Library V2.7.530**

- Internal changes for compatibility with PG5 2.3.

#### **DALI F26x Library V2.7.540**

- Internal changes for compatibility with PG5 2.3.

#### **Heavac library (HVC) V2.7.550**

- Internal adaptations regarding compatibility with PG5 2.3.

#### **LON Network library V2.7.530**

- Internal changes for compatibility with PG5 2.3.

#### **Energy Meter Modbus V2.7.530**

- Correction regarding a problem when the help was opened from Saia PG5 Library Manager.
- Internal changes for compatibility with PG5 2.3.

#### **Modem Library V2.7.530**

- New 'Compare ID List' FBox for searching a Caller ID in a long list stored in DB.
- In the 'SMS' group, in the 'Poll SMS' FBox, max time set to 30 seconds; receive now more characters per cycle (100 on NT systems and 20 on non NT systems); the code is also tolerant against slow applications and also able to delete messages even if an error (e.g. reception buffer overflow) occurred during reading.

- In the 'Base' group, in the 'Modem Driver' FBox, the Receive Caller ID (mode 22) is implemented for ZyXel Elite 2864i; an assembler error with standby mode=PPP has been corrected.
- In the group 'DTMF', in the 'DTMF Driver' FBox, a delay of 1.5 seconds between DTMF hangup command and sending hangup to Modem has been introduced (some modems need time to finish the last DTMF signal).
- In the 'DTMF' group, in the 'DTMF User Ack' FBox, the DTMF User Ack (Vers=2) allows command codes from 0 to 999. This may solve problem with modem on VoIP (use command 0 key tone are received twice).
- In the 'SMS' group, in the 'Poll SMS' FBox, the poll SMS with Ludwig GSM modem G736-AS2 is now working also without sending SMS; several corrections regarding slow timing have been implemented.
- Internal changes for compatibility with PG5 2.3.

**Room Controller V25 V2.7.530**

- Internal changes for compatibility with PG5 2.3.

**Wide Area Automation Library V2.7.530**

- Internal changes for compatibility with PG5 2.3.

## **3 Release PG5 V2.3.119**

### **3.1 PG5 2.3 installation and compatibility**

#### **3.1.1 General consideration**

For the installation, licensing and compatibility with previous versions – PG5 2.2, 2.1, 2.0 and 1.4, please refer to the chapter 2.1 '*PG5 2.3 installation and compatibility*'.

#### **3.1.2 Compatibility with PG5 version 2.3.113**

PG5 version 2.3.119 is fully compatible with the precedent version 2.3.113. The license for the version 2.3 is valid and the user registration are still valid. The projects done with version 2.3.113 are fully compatible with this new version.

#### **3.1.3 Installation**

The installation of this new version will first remove the version 2.3.113 and install the version 2.3.119.

## **3.2 General Considerations**

This Patch does contain following corrections:

#### **Fupla**

- For E-line and IRM devices: Does not create a backup of DBs used as Adjust parameters (DBs are not assigned the S\_ADJUST tag name)
- FBox Adjust Parameters should not read the parameter on disabled pages
- Floating point not changeable for NL and DE country settings in OS
- Modifying adjusts in the Import dialog can produce a compiler error
- Symbols from XLS file, ListView are used without groups
- When exporting Symbols in the list view, the groups are missing
- Text Format can't be loaded in Symboleditor, more than 6 conflicts when the merge option by adress in PG5 2.3.115
- Using the Symbol editor: file is saved only the first time that the Save Button is pressed
- Unhandled Exception when Merge symbols in Text Format
- Symbol Editor - Crash during global symbol renaming after renaming public symbol (excel only)
- Read All Adjust Parameters sets all the Adjust Values to Zero
- Export/Import of \*.txt symbol File give problem with DBs
- Excel Format Handles only 680 Symbols
- No description in Adjust window for some FBoxes
- Copy & Past Graftec steps
- Symbol Editor cuts multiline text definitions in Fupla
- Excel Symbol file crashes when Build after a change
- Compiler errors can happen when using network labels



**BACnet**

- BACnet compiler handles Calendar datelist wrong
- BACnet Compiler (Checker) remove some properties

**S-Web Editor 8.3.7.23:**

- Symbols in group were not visible from WebEditor.
- WebEditor 8 + HTML5 property Hide if not accessible, handling of user groups in TEQ and HTML5 different corrected ok
- Rename functionalities and the link to PCD variables with offset corrected
- Dropdown button image is disabled but still visible
- Variable with container offset ( Haus@CO\_Haus@.Floor@.....) are not displayed on HTML5 view, even if the variable exist in PG5
- Webeditor Error when sorting by column in variable editor
- Online Alarm macro doesn't show the texts in HTML5
- Working with layers, copy paste of elements do paste the element to locked layer
- Arrows of line elements have wrong color, if multiple lines with arrows exist with different colors
- File selection dialog for 'Add files...' has wrong file type by default
- Lock the element from properties and group the elements which disables all the options
- WE5 --> WE8 project migration: WE8 adds additional string (PDP:) as prefix to X and Y OFFSET field values - so will not behave as expected in run time
- Teq runtime / PPO@CO\_ returns an error no build possible

## **4 Release PG5 V2.3.165 Service Pack 1**

### **4.1 PG5 2.3 installation and compatibility**

#### **4.1.1 General consideration**

For the installation, licensing and compatibility with previous versions – PG5 2.2, 2.1, 2.0 and 1.4, please refer to the chapter 2.1 '*PG5 2.3 installation and compatibility*'.

#### **4.1.2 Compatibility with PG5 version 2.3.119**

PG5 version 2.3.165 is fully compatible with the precedent version 2.3.119. The license for the version 2.3 is valid and the user registration are still valid. The projects done with version 2.3.119 are fully compatible with this new version.

#### **4.1.3 Installation**

To install a new version user need, first remove the version 2.3.113/2.3.119 using Add/Remove programs in Control Panel, then install the version 2.3.165.

## **4.2 General Considerations**

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

- Graftec: The Graftec Editor didn't support the complete range of functions as usual with PG5 2.3.113. The Graftec communication with Fupla wasn't implemented. The missing functions are now available in the PG5 2.3 Service Pack 1.
- Project Generator: The Project Generator Wizard was disabled for the first PG5 v2.3 version due to an issue of the project creation. The Project Generator is now available in the Service Pack version again.
- Ipad performance: The Ipad ran into performance issues. It took a long time to load a new page if you click on a button that has a view jump. Corrections are implemented and available in the PG5 2.3 Service Pack.
- Major issues: Over 100 issues were fixed with the Service Pack 1.

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.

## 4.3 Graftec Editor

### Complete functionality of Graftec in Service Pack 1

The communication with Fupla wasn't implemented in PG5 v2.3.113 and 2.3.119 version. In the Saia PG5 2.3.165 Service Pack 1 version the Graftec can be used with the complete range of functions again.

### Graftec optimization with PG5 2.3

The Symbol Editor has been removed from the Graftec editor (S-Graf). The Fupla or IL editor now has exclusive access to the symbols. S-Graf is for editing the state machine, not the program itself, so it does not need the program's symbols. To edit symbols, open a Step or Transition in Fupla or IL. When symbols are modified, changes are only made to the symbols in other Steps and Transitions when the editor's files are saved. Saving one ST/TR file will now save **ALL** the modified ST/TR files which are open for that Graftec module.

This improves the speed, and solves many of the issues that were caused by having the symbol table open in two, or even three, different editors. For example, renaming symbols could modify the symbol names in all the Steps and Transitions in the Graftec, even if they were not open. This caused difficulties with Undo/Redo, and closing an editor or ST/TR file without saving did not roll back the changes made in the other Steps and Transitions or in the other editor if both editors were open.)

It is not possible to have the Fupla and the IL editors open at the same time. If you mix Fupla and IL code in your Graftec, then you must open each editor separately.

### **New Block List view**

Graftec has a new "Block List" view, which shows only the block symbols. The block list can be sorted, and has useful commands on its context menu. The "Actual" column now shows the start and end addresses in square brackets, e.g. "[17..24]" which is useful when debugging in IL or with S-Bug. New columns show the "Owner SB" and the "Editor" (IL/Fupla). Sorting by Owner SB is very useful if you have many SBs.

Type ▲	Name	Number	Actual	Comment	Scope	Owner SB	Editor
SB	PULSE.PULSE	0	SB 0 [0..56]		Local		Graftec
IST	PULSE.ST_0		IST 0 [1..7]	Set the counter \nto 3	Local	PULSE.PULSE	IL
ST	PULSE.ST_1		ST 1 [8..16]	Turn the output\non	Local	PULSE.PULSE	IL
ST	PULSE.ST_2		ST 2 [17..24]	Turn the output\noff	Local	PULSE.PULSE	IL
ST	PULSE.ST_3		ST 3 [25..30]		Local	PULSE.PULSE	IL
TR	PULSE.TR_0		TR 0 [31..35]		Local	PULSE.PULSE	IL
TR	PULSE.TR_1		TR 1 [36..40]		Local	PULSE.PULSE	IL
TR	PULSE.TR_2		TR 2 [41..45]		Local	PULSE.PULSE	IL
TR	PULSE.TR_3		TR 3 [46..50]		Local	PULSE.PULSE	IL
TR	PULSE.TR_4		TR 4 [51..55]	Counter > 0	Local	PULSE.PULSE	IL

Double-click on a block to select it in the view and show its properties. The block name, number and comment are edited from the Properties window.

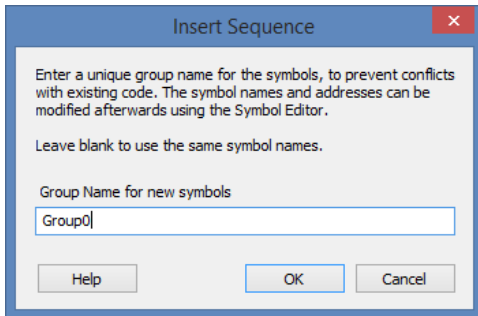
The "Scope" of a block symbol name is usually "Local". But if you do want to access the block name from another module, then you can use the "Public" option from the context menu, or the "Scope" in the Properties window. Public symbols are usually needed if you want to use the CSB or RSB instructions (Call/Restart Sequential Block) in an IL program.

**Pasting or importing a sequence or template**

When new code is pasted or imported, you will need to use new symbol names for the data, unless you want to use the same symbols. A simple way to do this has been introduced, where you define a Group name for all the new symbols. This insures all symbol names are unique. You can either keep the new symbol names in the new Group, or you can edit them later from the Symbol Editor.

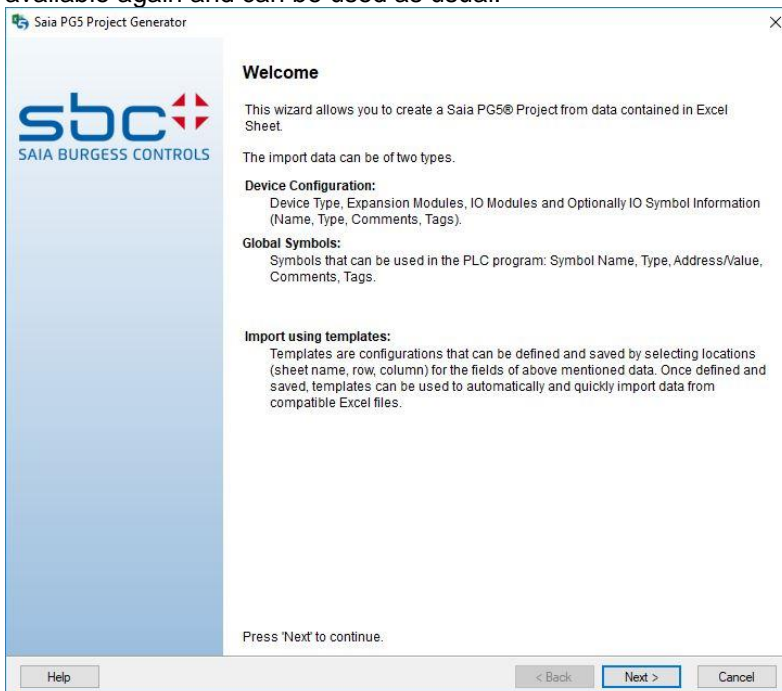
To keep the same symbols names, just delete the Group name for the dialog box. But note that if you use the same symbols names, they will be treated as the same data, and if you rename them, then it will rename the existing symbols too.

If using FBoxes in Graftec , you may need to rename them to prevent conflicts with existing FBoxes because the Group name does not affect the names of the Adjust Parameters.



**4.4 Project Generator**

The Project Generator Wizard was disabled in PG5 v2.3.113 and 2.3.119 version due to an issue of the project creation. In the Saia PG5 2.3.165 Service Pack 1 version the Project Generator is available again and can be used as usual.



## 4.5 **Web Editor 8 – HTML5 performance improvement**

The speed loading pages with an iPad was very slow (up to 30seconds in worst case). For this reason, the backend has been improved by using new library versions. Now in worst case it takes only few seconds to load the page, depending on the speed of the web server and the data to transmit.

## 4.6 **Major Issues**

More than 100 issues have been corrected. These are the major corrections.

### **Symbol Editor**

- Excel format now handles large numbers of symbols correctly.

### **BACnet**

- If the BACnet Compiler took more than 2 minutes, Project Manager terminated the build process due to the long reaction time.

### **Graftec**

- Graftec IL code was sometimes lost after upgrading a project from PG5 2.2 to 2.3.

### **Fupla**

- Missing description in Adjust window for some FBoxes' Adjust Parameters.
- Symbol Editor truncated multi-line text definitions.
- Find and Replace Symbols did not copy the symbol's comment.
- Corrected handling of inverter on page output connector.

### **Web Editor**

- HTML5 property hidden if not accessible, handling of user groups in TEQ and HTML5 different.
- The Rename feature caused problems with links to PCD variables.
- Dropdown button image was disabled but still visible.
- Variables with a container offset (Haus@CO\_Haus@.Floor@...) were not displayed on HTML5 view, even if the variable exists in PG5.
- The font of dropdown box was wrong in the Safari browser.
- Online Alarm macro doesn't show the texts in HTML5.
- Improved iPad performance.

## **5 Release PG5 V2.3.175 Service Pack 2**

### **5.1 PG5 2.3 installation and compatibility**

#### **5.1.1 General consideration**

For the installation, licensing and compatibility with previous versions – PG5 2.2, 2.1, 2.0 and 1.4, please refer to the chapter 2.1 'PG5 2.3 installation and compatibility'.

#### **5.1.2 Compatibility with PG5 version 2.3.165**

PG5 version 2.3.175 is fully compatible with the precedent version 2.3.165.  
The license for the version 2.3 is valid and the user registration are still valid.  
The projects done with version 2.3.165 are fully compatible with this new version.

#### **5.1.3 Installation**

To install this new version, user needs first uninstall the version 2.3.165 using Apps&features in Configuration Pannel, then install the version 2.3.175.

### **5.2 Major Issues**

This Patch does contain following corrections:

#### **Fupla**

- Type changes in .sy5 file are not applied in Fupla connectors
- Turn off FBox IDs in print preview
- Replacing a FBox in Fupla Editor with same group name does not work
- Imported Favorite FBox list is lost after Fupla restart
- Multiline descriptions are lost
- S\_Adjust Tag in FUPLA FBoxes is also set if the parameter is a Timer
- Floating point with negative exponent is not accepted when decimal separator is comma.
- R Float symbol in Fupla is seen as R (integer) in Symbol Editor "All Publics" tab.
- Create FBox from Fupla page fails

#### **SPM**

- Project backups with S-Net files
- Incomplete import of PG5 1.4 projects
- Added files into the documentation file folder disappear when a device is restored
- Online debug information missing
- PG5, Project online command does not work correctly
- S\_Adjust Tagging for Backup/Restore not working in PG5 2.3.165.

#### **BACnet**

- PG5, BACnet Configurator, Upload/merge not possible and generate disassemble failed error message.
- Online error message in DDC Suite / BACnet project

#### **Graftec**

- SEdit Stays in processes and not closed after Going Online With Graftec/IL
- Not possible to compile Graftec file developed in PG5 2.2

#### **Device Configurator**

- Not possible to put the PCD7.D443WT5R in RUN after a download of Device Configurator
- Configuration not consistent PCD7.LRL4-P5

#### **Symbol Editor**

- Symbols with accentuated characters no longer working
- PG5 AccessDatabaseEngine\_2007.exe is not installed during setup
- Indexed symbols are not refreshed on parent symbol update
- Not possible to delete unused symbols from PG5 symbol editor
- PG5 V2.3 is not able to read \*.rxp file from VisiPlus.

#### Assembler

- Incorrect address resolution by array if the syntax "ArrayName[ElementN°]" is used.
- Build error from version PG5 V2.0
- Symbol \_ArraySize\_.myArray no more available

#### Easy Update

- Restoring \*.SPRG clear all media (easyupdate & HTTP download)
- Easy Update does not download Users also when chosen in wizard, if there are some users already in the PCL they are not overwritten or delated.
- Now in the source dialog, the checkbox "Device Program" is checked and disabled

#### Installer

- The installer of PG5 V2.3.175 do install the .Net version 4.6.2
- Web Editor 8 cannot be opened:The error 'libgtk-win32-2.0-0.dll module cannot be found.

#### S-Web Editor 8.3.8.1185:

- Copy and Paste issues from Objects between different pages or projects
- Web-Editor Bar Graph is not working in HTML5
- Historic Data Logging in DBs (RAM logging) can't be displayed in HTML5 using WE8 Makro
- Web-Editor, Tacho scaling are always visible in HTML5
- Web-Editor in HTML5, not possible to write special char like éèüöä to PCD texts
- Float2DEC.2 and DEC.1 ... does not work on HTML5
- Offset of the decimal point on integer numbers on HTML 5.
- BACnet Web scheduler/calendar templates do not work for HTML5
- When in buttons Text alignment set to "Top" or "Bottom" the Text are shifted upwards or downwards.
- Required format for read and write different values not written or updated on view
- Configured "Display Time" not used in HTML5 TrendLog Macro
- S-Monitoring FW variable are not functional because of : character is cut from PCD medias
- Using a Condition in a Condition does not work in HTML5
- Settings rights to a layer they are ignored in HTML5
- HTML5 Date/Time format is not captured to min/max values
- Small polygon position shifts in HTML5
- Empty CSV tags are not handled identically on HTML5 and TEQ runtime
- Webserver not generated / Build error in TEQ.
- PCD Variables are 2 times added in the tcr file, the file grow by 2
- WE8 crashes when you create a new target (build menu)
- Condition Sequence cannot be changed Webeditor
- In case of resolving groups below a template instace a wrong typ id is generated

## **6 Release PG5 V2.3.192 Service Pack 3**

### **6.1 PG5 2.3 installation and compatibility**

#### **6.1.1 General consideration**

For the installation, licensing and compatibility with previous versions – PG5 2.2, 2.1, 2.0 and 1.4, please refer to the chapter 2.1 'PG5 2.3 installation and compatibility'.

#### **6.1.2 Compatibility with PG5 version 2.3.175**

PG5 version 2.3.192 is fully compatible with the precedent version 2.3.175.  
The license for the version 2.3 is valid and the user registration are still valid.  
The projects done with version 2.3.175 are fully compatible with this new version.

#### **6.1.3 Installation**

To install this new version, user needs first uninstall the version 2.3.175 using Apps&features in Configuration Pannel, then install the version 2.3.192.

### **6.2 General Considerations**

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

- Web Editor 8 – HTML5 performance improvement  
The performance of the HTML5 runtime was improved.  
First page loading or page changes takes now half of the time as it has taken before.  
Visual indication of page loading by showing a spinner.



- Major issues: Over 200 issues were fixed with the Service Pack 3.

### **6.3 Corrections**

#### **Fupla**

- Read Online Parameters does no more set the parameter to "0" if it is a Text
- When clipboard contains "EQU", fupla doesn't crash anymore
- The "replace symbol" function does now work when importing a Fupla page
- Fupla does now prints the Page description information
- Download in Run is now enabled when changing parameters of a new FBox
- Download in Run is now enabled when duplicating a DIR FBox
- When a non-DIR Fbox is placed on a line, a DIR-broken warning is now displayed

#### **BACnet**

- BACnet Error after Upload/Merge
- BACnet Rev 14 is now working with Name based Client (Needs FW Update)
- Imported PG5 1.4 BACnet file does no more create incomplete BACnet configuration
- Upload Merge PG5 2.2 and 2.3 with standard 2010 does no more overwrite symbol references with fix registers/flags message.



- BACnet configurator in Loop object Output-Units Symbol Reference is no more grayed out

### SPM

- Now, it is possible to use breakpoints Flag address > 14335
- Now, it is possible to select Backup to INTFLASH on PCD2.M4x60
- Self downloadable files or downloader PG5 2.3.175 and higher does now create a backup to onboard flash
- Project backups with S-Net files

### Device Configurator

- IRM Min Max scale in device configurator can now be changed
- Device Configurator does no more return an error when Ethernet Rio Network is selected on a PCD3.M3160
- Device Template of PCD3.M5360 is now correct in the Device configurator RAM Disk Size
- It's now possible to edit the min/max value of analogue inputs E-Line devices (ex: PCD1.G3600-c15)
- Using a ! in the Webserver Password level 1 (file access) does no more causes the problem in HTML5
- SBUS IRM PCD7.LRL.PXwith FW 1.10.08 when going online with Fupla warning pops up "You may be connected with the wrong PCD" also when the configuration is ok

### Watch Windows

- Trend View are now displayed according to the selected time scale and are no longer limited to 30 minutes

### Easy Update

- Easy Update Wizard does now find Web Projects of Copied devices
- Easy Update Factory checkbox is no more choosable (risky) should only be chosen if no Service key is defined in the package
- HTTP Download and Easy Update does now include BACnet configuration
- Easy update tool does now work properly on unconfigured PCD.

### S-Web Editor

The performance of the HTML5 runtime was improved.

First page loading or page changes takes now half of the time as it has taken before.

Visual indication of page loading by showing a spinner.



### Fixed issues:

- Copy and Paste issues from Objects between different pages or projects
- Container MB\_InactivityCounter is now set back to 0 in case of pressing buttons
- When Start the Play mode in Hybrid, correct display in Firefox
- Popup is now working on foreground
- The PCD Variables are now displayed right (no structure and not all symbols)
- Static CSV is now added to the HTML 5 base-csv-entries
- The offset with a CSV works as described in the WebEditor help
- Translation is done in Popup & Hybrid
- Condition Sequence can be changed Webeditor
- PCD Variables are now added only once in the tcr file
- In case of resolving groups below a template instace are correct typ id is generated
- Empty CSV tags are now handled identically on HTML5 and TEQ runtime
- Required format for read and write different values is now written and updated on view
- HDLog / HTML5 runs on / asterix webserver request
- Webserver is now generated / no more Build error in TEQ
- HTML5 Date/Time format is now captured to min/max values
- Straight lines are no more tilted in HTML5

- Web-Editor Bargraph behaves on the same way if displayed in Java and HTML5
- Web-Editor in HTML5, it is now possible to write special char like éèüöä to PCD texts
- Exported library files in a zip file are store with correct extension
- On HTML5 runtime, PCD value -0,5 is now correctly displayed
- Web-Editor, S-Monitoring template Bargraph correctly displayed on X axis
- Web-Editor, S-Monitoring template Bargraph Year is no more missing information displayed
- Webeditor Icons are correctly displayed in Webeditor started from PG5
- HTML5 Performance improved on communication level of PDP in case of @ syntax
- Float2DEC.2 and DEC.1 ... does now work on HTML5
- Web-Editor, Alarm templates, Header info Time on/off are now translated in HTML5 view
- Web-Editor8, PCD7.D5xxCF web-panel, faster first loading of web-page and on view jumps

## **7 Release PG5 V2.3.193 Service Pack 4**

### **7.1 PG5 2.3 installation and compatibility**

#### **7.1.1 General consideration**

For the installation, licensing and compatibility with previous versions – PG5 2.2, 2.1, 2.0 and 1.4, please refer to the chapter 2.1 'PG5 2.3 installation and compatibility'.

#### **7.1.2 Compatibility with PG5 version 2.3.192**

PG5 version 2.3.193 is fully compatible with the precedent version 2.3.192.

The license for the version 2.3 is valid and the user registration are still valid.

The projects done with version 2.3.192 are fully compatible with this new version.

#### **7.1.3 Installation**

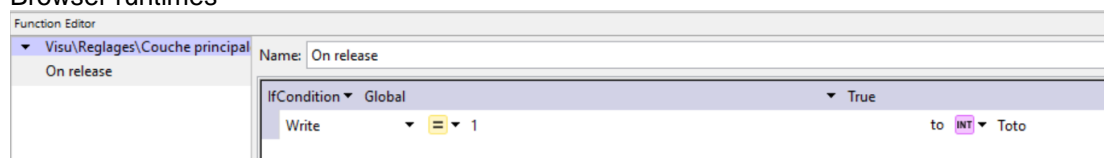
To install this new version, user needs first uninstall the version 2.3.192 using Apps&features in Configuration Pannel, then install the version 2.3.193.

### **7.2 General Considerations**

In this new version, the focus has been given to the correction made in Web-Editor8.

### **7.3 Corrections**

- Web-Editor8, conditions used on functions  
The ifCondition statement “true” or “false” used on the function editor is now working in Micro-Browser runtimes



## **8 Release PG5 V2.3.195 Service Pack 5**

### **8.1 PG5 2.3 installation and compatibility**

#### **8.1.1 General consideration**

For the installation, licensing, and compatibility with previous versions – PG5 2.2, 2.1, 2.0 and 1.4, please refer to the chapter 2.1 'PG5 2.3 installation and compatibility'.

The PG5 now additionally supports Window 11

#### **8.1.2 Compatibility with PG5 version 2.3.193**

PG5 version 2.3.195 is fully compatible with the precedent version 2.3.193.

The license for the version 2.3 is valid and the user registration are still valid.

The projects done with version 2.3.193 are fully compatible with this new version.

#### **8.1.3 Installation**

To install this new version, user needs first uninstall the version 2.3.193 using Apps & Features in Configuration Panel, then install the version 2.3.195.

## **8.2 Corrections**

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Corrections Since Last Released Version, PG5 V2.3.193 Service Pack 4

#### **Fupla:**

- Copy/paste of a DDC Suite Fbox creates the symbols in selected Language
- In Fupla the "Add FBox" is now working correctly
- Editor doesn't crash anymore, if clipboard contains: Auto/Hand digital string [0;2;0;2;;x]
- In Fupla when a FBox is inserted you can now place it several times
- Find function in Symbol Editor finds all the symbols with the searched expression

#### **BACnet:**

- BACnet Command Object Rev. 14 Compiler Error fixed
- BACnet Command Object Rev. 14 No more missing Properties in BACnet Configurator
- BACnet Configurator Upload/Merge of scheduler objects adds the ( ) on the Effective Period value
- BACnet Event Enrollment Rev. 14 Compiler Errors fixed
- PG5 BACnet compiler now accepts a numeric value as BACnet object units

#### **Easy Update:**

- Easy Update Wizard allows to select firmware files for PCD2.M4560 and PCD1.M2110R10
- Easy Update tool now updates the firmware on a PCD1.M0160E0
- Easy Update tool, factory feature is loading the service key in to the PCD

#### **Web Editor:**

- SVG pictures are displayed in Firefox
- CSV text is replaced if 'translation key' contains special characters like \n (HTML5 runtime)
- Web editor allows to call a condition in a condition
- On HTML5 runtime, edited value of Edit Box is displayed if text color is white
- Update of PCD medias on the HTML5 web-page works now
- Possible to use HTML5 Web-Pages on iPad and iPhone if web page is zoomed
- Change of content type is taken in account on conditions (HTML5 runtime)
- Displaying of DB RAM trending works on HTML5
- CSV translation key containing - or / duplicated the text is fixed
- Project compile failure with clitool.exe is fixed
- It is possible to compile a Web Project using Command-line

- Web Editor 8 standard-condition doesn't conflict with access mask in HTML5 runtime
- PCD symbols of type DB; min and max values are displayed correctly
- Grid is displayed in HTML5 runtime for old trending templates
- Minimum and maximum Limits set for a PCD Float format is now working in HTML
- On the HTML5 browser, it's possible to display HDLog BACnet trend curbs.
- Alarm texts are now displayed on HTML5
- Elements of drop down list don't show anymore a ; in front of text
- Variable editor is not crashing if \$variables.\$dat contains invalid PCD variable @CO\_@

**Fbox Libraries:**

PG5 FBox for PCD1.G2200 now allows to define a PWM time < 10 seconds