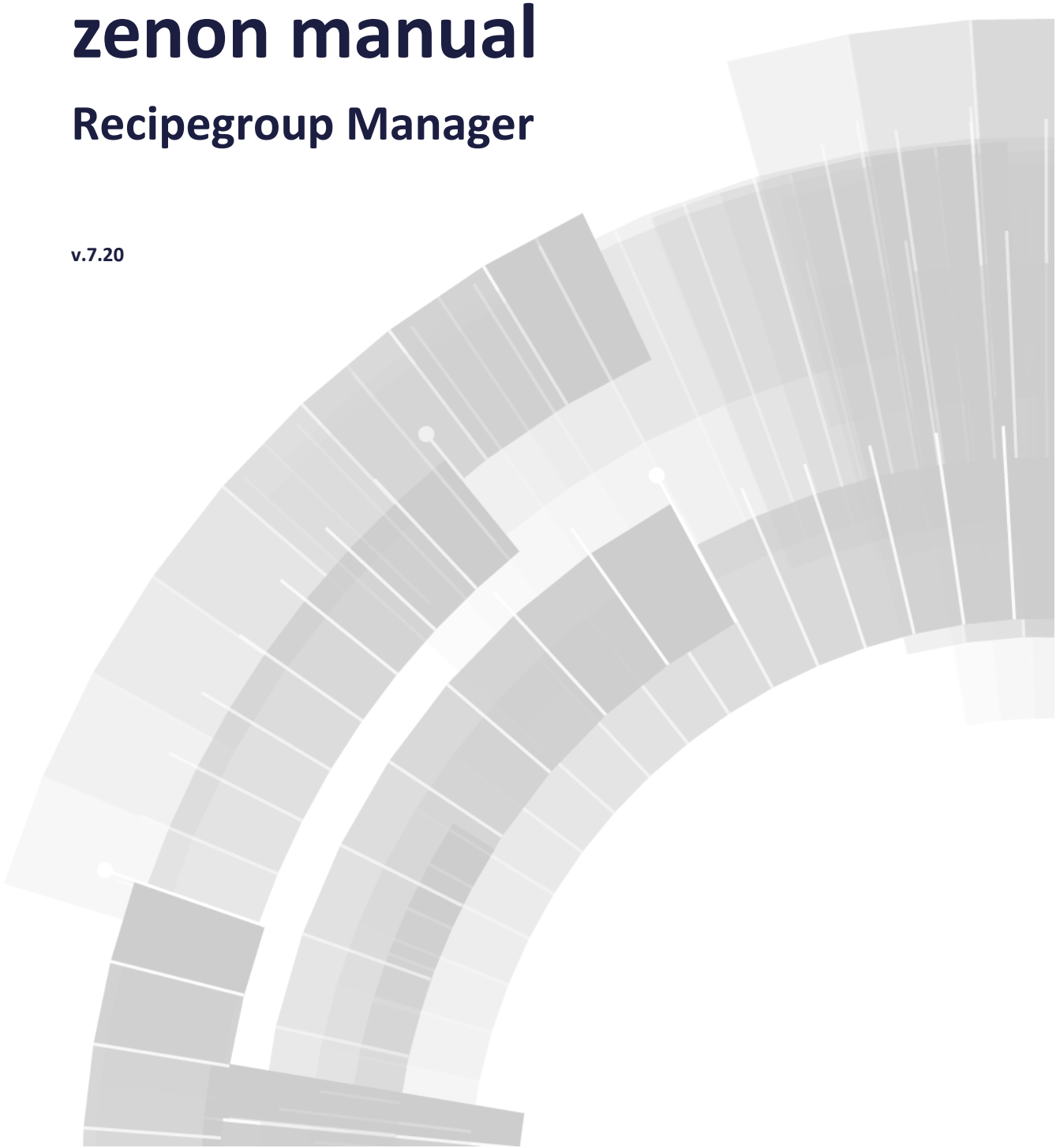
COPA-DATA
do it your way

zenon manual

Recipegroup Manager

v.7.20



Contents

1. Welcome to COPA-DATA help

GENERAL HELP

If you cannot find any information you require in this help chapter or can think of anything that you would like added, please send an email to documentation@copadata.com (mailto:documentation@copadata.com).

PROJECT SUPPORT

You can receive support for any real project you may have from our Support Team, who you can contact via email at support@copadata.com (mailto:support@copadata.com).

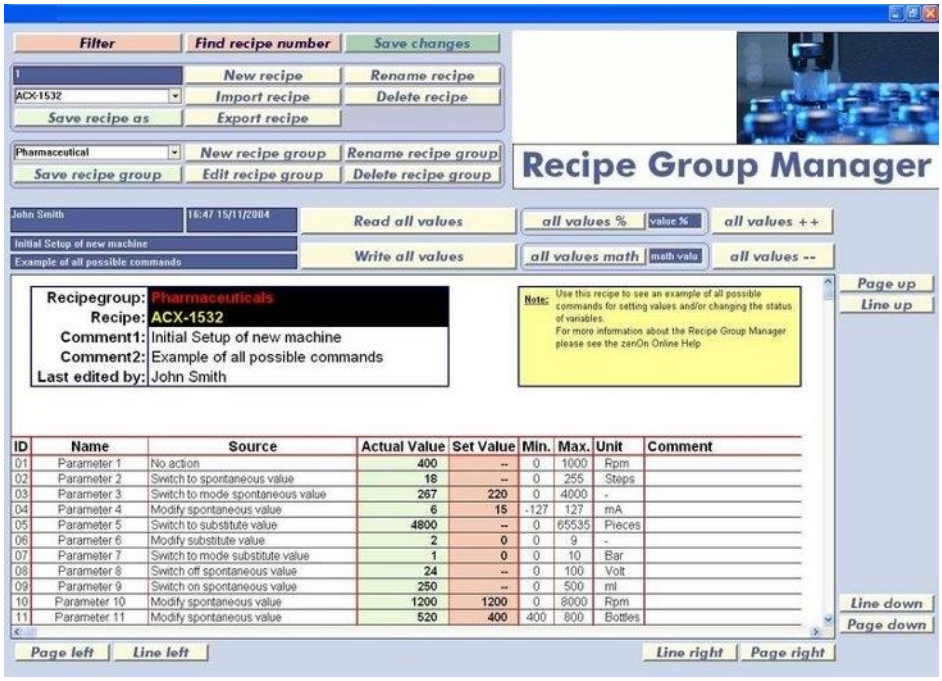
LICENSES AND MODULES

If you find that you need other modules or licenses, our staff will be happy to help you. Email sales@copadata.com (mailto:sales@copadata.com).

2. Recipegroup Manager

Additionally to the Recipes the Recipegroup Manager offers further functionality:

Tabular layout design (standard format or freely definable format with the Report Generator), free layout design with dynamic elements, recipes accessible via OLE, indirect recipe execution (e.g. depending on a process variable on opening a screen), free grouping.



License information

Must be licensed for Editor and Runtime (single-user, Server, Standby and Client).

FILE STORAGE

Up to and including version 7.0, `MS Access` or `binary data` could be selected for the RGM as a file storage location. From version 7.10 the MS Access database is no longer supported in the Recipegroup Manager. When opening an existing project the filing is automatically converted to `Binary data`. You can find details on this in the project conversion handbook in the **`Converting recipegroup manager database`** chapter.

For versions before 7.10 with data storage in MS Access active, please note:

- The maximum text length for response variables (on page 27) is 300 characters
- In the network, the use of MS Access when using CE devices as a client or server can lead to errors in the Runtime; the `binary data` format must be used
- The use of Unicode characters in recipe names, the recipe group or a comment are not supported.

3. Engineering in the Editor

To engineer the RGM, you generally need:

- a screen (on page 11) of type Recipegroup Manager
- Recipe groups (on page 20) and Recipes (on page 28)
- Functions (on page 40) for the operation of the recipegroup manager in the Runtime (on page 135)

Note for the name convention: For recipes alphanumeric characters are allowed. Invalid characters are `(\"'./*?<>!|)`.

3.1 Context menu Project manager

Menu item	Action
New recipe group	Creates a new recipegroup in the list and opens the name for editing.
Export XML all...	Exports all entries as an XML file.
Import XML	Imports from an XML file.
Profile	Opens the drop-down list in which you can allocate an Editor profile.
Help	Opens online help.

3.2 Context menu detail view

TOOLBAR

Parameters	Description
New recipe group	Creates a new recipegroup in the list and opens the name for editing.
Recipe new	Creates a new recipe in the list and opens the cell with the name for editing.
Edit recipe	Opens the dialog with the recipes.
Change variable parameters	Opens the dialog with the recipes.
Create standard function	Opens the dialog for selecting a recipe and defining an action.
Add variable	Opens the dialog for selecting variables.
Remove variable	Deletes selected variables from the list.
Move upwards	Moves the selected variable up.
Move downwards	Moves the selected variable down.
Duplicate	Creates a new recipegroup with the content of the selected recipegroup and assigns a name following this pattern automatically: **original name+0**, **Default10** becomes **Default100**.
Delete	Deletes selected entry.
Export selected recipegroup XML	Exports selected recipegroup as an XML file.
Import XML	Imports from an XML file.
Import ASCII	Imports from an ASCII file.
Rename	Makes it possible to rename the selected objects.
Help	Opens online help.

CONTEXT MENU RECIPEGROUP

Menu item	Action
New recipe group	Creates a new recipegroup in the list and opens the name for editing.
Export XML all...	Exports all entries as an XML file.
Import XML	Imports recipes and recipe groups from an XML file.
Help	Opens online help.

CONTEXT MENU SELECTED RECIPEGROUP

Menu item	Action

Duplicate	Creates a new recipe group with the content of the selected recipe group and assigns a name following the pattern **original name+[consecutive number]**: **Default10** becomes **Default100**, and **Default101 if it is duplicated again ...** Note: with the group of linked recipe variables, replacement can take place in a rule-based manner during duplication.
Delete	Deletes the selected recipegroup after a confirmation message.
Equipment groups...	Opens the dialog for selecting an Equipment group.
Export selected recipegroup XML	Exports selected recipegroup as an XML file.
Import XML	Imports from an XML file.
Rename	Opens the cell with the name of the recipegroup for editing.
Help	Opens online help.

CONTEXT MENU VARIABLE

Menu item	Action
Add variable	Opens the dialog for selecting variables.
Change variable parameters	Opens the dialog with the recipes.
Help	Opens online help.

CONTEXT MENU SELECTED VARIABLE

Menu item	Action
Remove variable	Deletes variable from the list.
Move upwards	Moves variable in a list up one place.
Move downwards	Moves variable in a list down one place.
Help	Opens online help.

CONTEXT MENU RECIPES

Menu item	Action
Recipe new	Creates a new recipe in the list and opens the cell with the name for

	editing.
Import ASCII	Imports from an ASCII file.
Help	Opens online help.

CONTEXT MENU SELECTED RECIPE

Menu item	Action
Edit recipe	Opens the dialog with the recipes.
Create new recipe version	Creates a new version of the recipe.
Create standard function	Opens the dialog for selecting a recipe and defining an action.
Duplicate as recipe version	Creates a new version of the selected recipe.
Duplicate	Creates a new recipe group with the content of the selected recipe group and assigns a name following the pattern **original name+[consecutive number]**: **Default10** becomes **Default100**, and **Default101 if it is duplicated again ...** Note: Source variables for the `Link to variable` action can be replaced when the recipe is duplicated.
Delete	Deletes selected recipe after a confirmation message.
Export selected recipe XML	Exports the selected recipe as an XML file.
Rename	Opens the cell with the name of the recipe for editing.
Help	Opens online help.

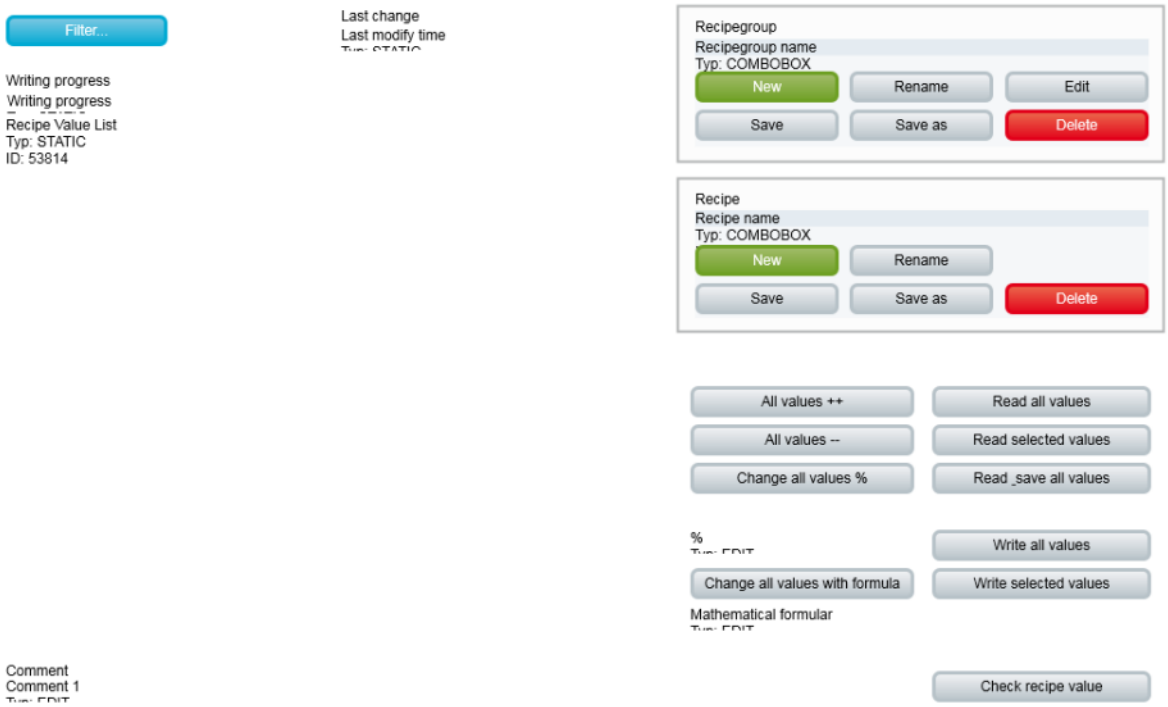
3.3 Create screen of type Recipegroup manager

Individual recipes and grouped recipes in Runtime are administered by using a screen for the Recipe Group Manager.

You create a screen of type Recipegroup Manager in the Editor by creating a new screen and choosing the type **Recipegroup Manager.**(For more information about pre-defined screen types see chapter Screens->Kinds of screen types.) In order to create screen Recipegroup Manager:

- create a new screen
- select as screen type `Recipegroup Manager` from the drop-down list.
- open the screen

- select menu item **`Add template`** from menu **`Control elements`** or select individual control element.
- configure the screen



With the help of the control elements you can carry out actions in the Runtime.

Information

During reading, exporting, importing and saving of recipes in the Runtime, a progress bar informs you about the progress of the action. For details see chapter Creation of system driver variables for standard recipes and Recipegroup Manager (sysdrv.chm::/25964.htm)

CONTROL ELEMENTS

Control element	Description
Insert template	Opens the dialog for selecting a template for the screen type. Templates are shipped together with zenon and can also be created by the user. Templates add pre-defined control elements to pre-defined locations in the screen. Elements that are not necessary can also be removed individually once they have been created. Additional elements are selected from the drop-down list and palced in the screen. Elements can be moved in the screen and placed individually.
Information	Information on recipes, users and changes
Recipegroup name	Name or selection of the current recipe group.
Recipe list	Displays all recipe/recipe versions as a list. The selection only contains recipes which are included in the recipe filter (on page 49) of function screen switch (on page 41) at the call up of the screen. One respective entry can be selected in Runtime. The selected recipe is displayed on the screen and can be edited. If the **Recipe name** and/or **Recipe version** control elements are used, the selection is always synchronized. If the selection in the control element is changed, the selection in the recipe list changes and vice versa. If a filter criterion excludes the selected entry in the list, nothing is selected in the list. Note: ▸ New recipes are added to the bottom of the list, regardless of the filter criteria. ▸ Changes to recipe data are only displayed once the recipe is saved. ▸ The language can be switched with the following list contents: - Headings in the header - Comment text - Recipe status texts

Recipe name	Drop-down list with recipe names to select the the recipe to be displayed.
Recipe number	Recipe number that is searched for after pressing the **Find recipe number** button
Recipe version	Creates a drop-down list that contains all version numbers of the selected recipe in Runtime.
Recipe state	Creates a drop-down list that contains all configures statuses in Runtime. The current status of the selected recipe version is displayed. The status can be changed here in Runtime. It is only accepted after the recipe is saved. Hint: The change of status in Runtime can be monitored and/or cancelled in Runtime with the **StatusChange** VBA event.
Recipe Value List	Display of the current recipe in a table The table can be configured directly in Runtime. Note: Not available under Windows CE. Is replaced by the **Recipe value table (outdated)** there.
Column selection (recipe value table)	Opens the dialog for selecting (on page 139) the columns which should be displayed. Is not available for **CE recipe value table**.
Column selection (recipe value table)	Opens the dialog to format (on page 140) the columns.. Is not available for **CE recipe value table**.
Recipe Value List CE	Display of the selected recipe in fixed table form. Replaces the **recipe value table** under Windows CE.
Column selection	Opens the dialog for selecting the columns of the recipe value table to be displayed. Note: Not available for **CE recipe value table**.
Column Format	Opens the dialog to format the columns of the recipe value table. Note: Not available for **CE recipe value table**.
Recipe Filter	Drop-down list with recipe filter (on page 26).
User name	Name of user who last changed the current recipe
Last modified time	Date and time the current recipe was last changed
Writing progress	Graphic display of the duration for which a recipe is sent.
Edit	Control elements to edit the information.
Filter	Define filter options for the recipe window. In the Runtime you can use the drop-down list to filter the displayed variables according to the Filter texts (on page 26) defined beforehand.

Read selected values	The values of the variables selected in the table are read from the process and entered into the table. Changes have to be saved!
Write selected values	The values of the variables selected in the table are written to the process as displayed in the table.
Read all values	The values of the variables of the selected recipe are read from the process and entered into the table. Changes have to be saved!
Read & save all values	Write the values of the process directly to the current recipe and save it immediately
Write all values	The values of the variables of the selected recipe are written to the process as displayed in the table.
All values ++	All values of the selected recipe are increased by 1
All value - -	All values of the selected recipe are decreased by 1
Change all values %	When the button is pressed in Runtime, all values of the selected recipe are changed by the percentage value given in the **Value % change** editing window, depending on the prefix: ▸ Plus prefix (+): Value is increased accordingly Example: +20% -> 100 becomes 120 ▸ Minus prefix (-): Value is reduced accordingly Example: -20% -> 100 becomes 80 ▸ No prefix: Percentage value of the current value becomes new value Example: 20% -> 100 becomes 20
% (input field)	All values of the selected recipe are increased (+) or decreased (-) by the percentage entered here after the button ”all values %” is pressed
Change all values with formula	All values of the selected recipe are changed by the mathematical operation entered in the element **value math**. Exactly one operation can be carried out. This affects all

	numerical variables. Addition (+), subtraction (-), multiplication (*) and division (/) are possible. The value in the recipe corresponds to the left operand, the user defines the operation in the **Formula field** and the right operands. This means: $NewValue = $CurrentValue $**Formula field**. $**Formula field** must contain an operator. Example: ▸ Entry in field **Formula** +100 ▸ Result: All values are increased by 100. Attention: Only one operator can be entered. Several operations lead to unforeseen results. For example, the entry /250+5 would increase all values by 2505.
Formula (input field)	All values of the selected recipe are changed by the mathematical operation entered here after the button **Change all values math formula** is pressed
Print list	Prints out the table on the defined printer. Only available for **CE recipe value table**. The **recipe value table** can be printed using the Report Viewer (on page 143).
Export/Import	Control elements for export and import.
Export recipe group (XML)	Exports recipe group to an XML file.
Export recipe (TXT)	Exports current recipe to a TXT file.
Import recipe (TXT)	Imports current recipe from a TXT file.
Export recipe (XML)	Exports current recipe to an XML file.
Importing an XML file	Imports recipe or recipe group from an XML file. If the file has individual recipes, a recipe group must be selected for import.
Administering recipes	Control elements for recipe management.
New Recipe	Create a new recipe
Rename recipe	Rename current recipe
Save recipe	Save current recipe under the same name
Recipe save as	Save current recipe under a different name The new recipe only contains the properties saved in the original recipe.
Delete recipe	Delete current recipe
New recipe version	Creates a new version of the recipe. The values of the newly

	created recipe version are filled with the values of the replacement values. Hint: This action can be checked with the **VersionCreate** VBA event.
Duplicate recipe version	Duplicates selected recipe version. A new version is created and the recipe values are filled with the values of the previously selected version. Hint: This action can be checked with the **VersionDuplicate** VBA event.
Duplicate and read recipe version	Duplicates selected recipe version and then reads it in. Firstly, a new version of the selected recipe is set up. The recipe values are filled with the values of the selected version. The values for the new version are then read in by the PLC. Hint: This action can be checked with the **VersionDuplicateRead** VBA event.
Delete recipe version	Deletes selected recipe version. If the selected recipe version is the last remaining version of this recipe, the whole recipe is thus deleted. Hint: This action can be checked with the **VersionDelete** VBA event.
Set status 1 - 10	Sets one of ten possible statuses. The function sets the status value (1 - 10) to the recipe currently selected in the screen. To accept the status in the recipe, the recipe must then be saved. Only statuses that were also configured (on page 36) in the Recipe Group Manager are set. If a status value that is not available is set, the system driver variable for **RGM recipe function in processing** (**sysdrv.chm::/25964.htm**) is set to an error and a CEL entry is generated. Note: The status selected with this button is displayed in the **Recipe status** drop-down list. The **list of recipes**, in contrast, always displays the status of the recipe as in the data storage. The change of status is only actually accepted after the change of status and is then displayed in the **list of recipes**.
Check recipe values	To test the recipe values, all variables that are linked to the recipe are read and the current recipe values are compared. The results are displayed in the **Actual value** column in color. ▸ Green: Results correspond. ▸ Red: There are deviations. ▸ Violet: No connection to the PLC. Attention: The function of the control element uses decimal points for synchronization with the PLC. If, for variables with the

	REAL data type, the **Decimals** property is not configured along the lines of the PLC settings and the values in the decimal point area are different, the function displays different values.
Recipe group	Control elements for the recipe group.
`New recipe group`	Create a new recipe group
`Recipe group edit`	Edit current recipe group
`Rename recipe group`	Rename current recipe group
`Recipe group save`	Save current recipe group under the same name
`Recipe group save as`	Save current recipe group under a different name
`Recipe group delete`	Delete current recipe group
Comment	Control elements for comments.
`Comment 1 - 8`	Comment lines for the current recipe. Up to 8 comments are possible. The comment fields have a **Representation/Translate displayed text** property. Comment fields are also written during XML export and import. In VBA, the comment fields can be read and written to using the DynProperties (name "`Commentn`", `n=1` to `8`) in the "`Recipes`" object
Navigation recipe list	
`Recipe group <`	Move to the previous recipe group
`Recipe group >`	Move to the next recipe group
`First recipe groups`	Move to the first recipe group
`Last recipe groups`	Move to the last recipe group
`Recipe <`	Move to the previous recipe in the current recipe group
`Recipe >`	Move to the next recipe in the current recipe group
`Recipe <<`	Move to the first recipe in the current recipe group
`Last recipe`	Move to the last recipe in the current recipe group
`Recipe number`	Move to the recipe with the number entered.
`Find recipe number`	Display the first recipe with the number entered in the element ”source recipe number”
`Previous version`	On the previous version.

Next version	On the next version.
Version <<	On the first version.
Version >>	On the last version.
Navigation recipe value list CE	
Line up	Move one line up in the table
Line down	Move one line down in the table
Column right	Move one column right in the table
Column left	Move one column left in the table
Page up	Move one page up in the table
Page down	Move one page down in the table
Page right	Move one page right in the table
Page left	Move one page left in the table

Information

A decimal value can be entered with either a ***comma*** *or a* ***point*** *as a decimal separator, it will automatically be changed to a* ***point****.*

3.3.1 Appearance of the recipe list

The table view of the **recipe list** can be adapted to individual requirements:

COLUMN SETTINGS

The column settings for display in Runtime are set during configuration of screen switching. For details, see the Recipe list column settings (on page 51) section.

SCROLL BARS

To define the size and appearance of scroll bars for the table:

1. Activate, in the **Representation** group, the **Extended graphical settings** property

2. Define the desired properties in the groups **Scroll bars** and **Header and grid**

> **Information**
>
> *If the `Graphics file` property is selected for the **Display style** property, then all elements for which no graphics file has been selected are shown with a color gradient. Transparent graphics cannot be used for control elements for lists.*

ROW HEIGHT

The row height can be adjusted, regardless of the font size, using the **Representation/Line height [pixel]** property.

The default value is `0 pixels`. The row height is thus set regardless of the font size. Each value above `0` defines a fixed value in pixels for the row height. If a line height is defined, then graphical illustrations are not scaled according to the line height but adapted to the font size.

Attention: If the row height

- is selected is too large, nothing is displayed in Runtime in certain circumstances.
- is selected as smaller than the font size, then graphical illustrations are cut off.

PREVIEW

By activating the **Representation/Extended graphical settings** property in the Editor, the header and scroll bars can be previewed. This way, details such as color fill effects, light effects or grids can be configured more easily.

Attention: As the size of the scroll bars equals their size in the Runtime, the total size of the list in the Editor can vary from the size in the Runtime. This is also true for the size of the header and the font of the header.

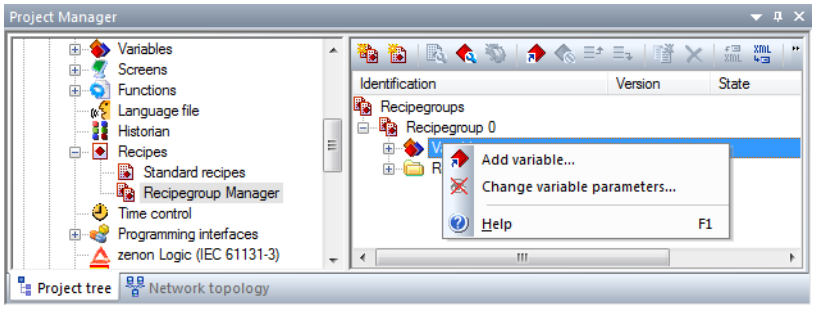
3.4 Creating a Recipegroup

To create a new recipe group:

1. If you select the **`Recipes/Recipegroup manager`** node or the **`New recipe group`** command in the detail view.
2. A new recipe group with a standard name is created. The name is already highlighted for further editing.
   Attention: If the recipe group is to be used as binary data, the name may only contain alphanumerical characters.
3. Variables (on page 21) and recipes (on page 28) must be added to each recipe group.
   Note: A maximum of 32,000 variables can be added to a recipe group.

3.5 Variables for recipe groups

A recipe group consists of the assigned process variables and the recipes. All process variables required in the recipes must first be inserted in the **Variable** submenu using the context menu.



To set up variables:

1. Right-click on **Variable**
2. Select the **Insert variable** entry in the context menu
3. The dialog for selecting several variables is opened
4. Select the desired variables
   Note: Variables from other projects that have been loaded can also be selected. Ensure that these projects are also available in Runtime. A maximum total of 32,000 variables per recipe group can be configured.
5. Confirm the configuration by clicking on the button OK.

It is possible to configure separate corresponding limits for minimum and maximum values (on page 22) for the individual variables.

Information

***Archivfüllwert** is used as a standard value:*

- For variables of new recipes
- When adding variables to a recipe group in new recipes

Information

Either a comma or a decimal point can be used as a decimal separator. The decimal separator is automatically changed to a decimal point.

SORTING VARIABLES

You can sort variables in the **Recipegroup Manager** as you wish.

Select the variable that you want to change the sequence of and choose one of the following actions:

- choose **up** or **down** in the context menu
- move variables via drag&drop

Alternatively, you can move variables in the variable selection dialog with the arrow buttons in the lower right corner.

DELETING VARIABLES

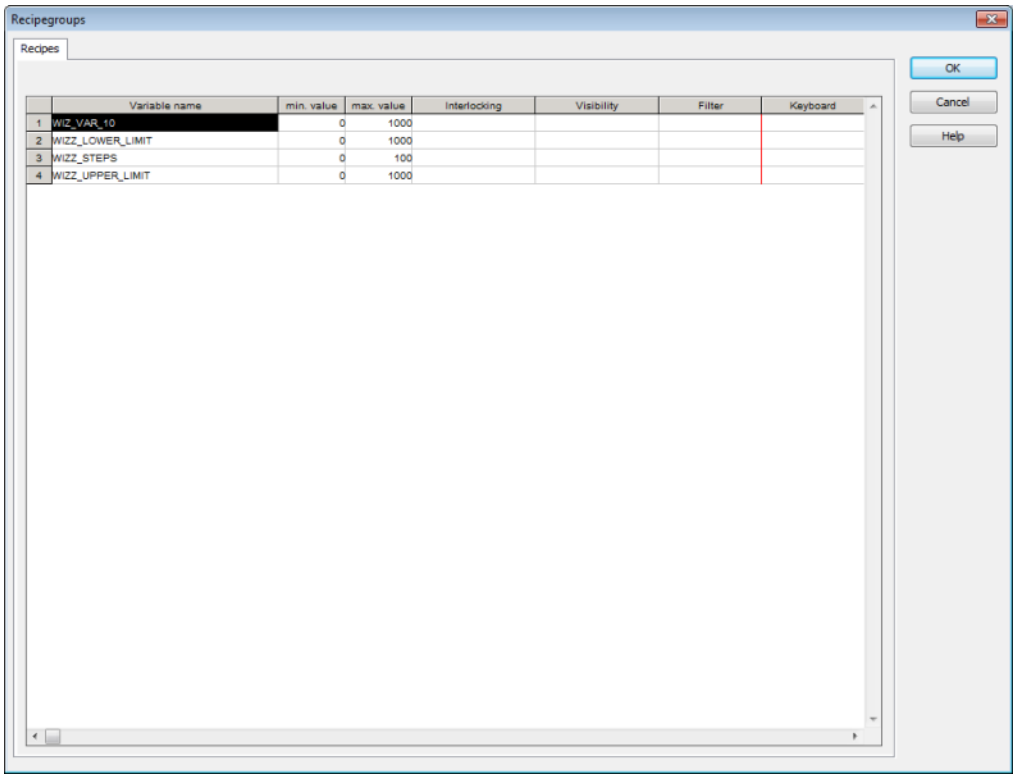
To remove variables:

1. Highlight the desired variables
   (multiple selection is possible)
2. Right-click on the highlighted variables
3. Select the **Remove variable** command in the context menu
4. The variables are removed after a request to confirm this
   Note: The variables are only removed from the recipe group, but remain in the project.

3.5.1 Change variable parameters

Select menu item **Change variable parameter** in the context menu of **Variables**.

In the dialog you can make the following settings.



Parameters	Description
Variable name	In this column all variables are displayed which are used in this recipe group.
min. value	Define the minimal value of the variable. Note: Binary variables have 0 as a **minimum value**. This value cannot be changed.
max. value	Define the maximal value of the variable. Note: Binary variables have 1 as a **maximum value**. This value cannot be changed.
Set value limit of the variables	Taking into account the set value limit of variables.
Interlocking	Select the desired interlocking from the drop-down list. (See also Interlocking and visibility (on page 25))
Visibility	Choose a fitting variable by right clicking and selecting menu item Variable selection. As an alternative you can enter the name of the variable directly. (See also Interlocking and visibility (on page 25))
Filter	Enter a filter text. (See also Filter (on page 26).)
Keyboard	You can link a screen of type Keyboard for each variable in this column. Choose a fitting screen by right clicking and selecting menu item **Screen selection**. As an alternative you can enter the name of the screen directly. In the Runtime the linked screen keyboard is called up when you click on the value of the variable. It is no longer possible to enter values directly. After you leave the screen keyboard with **OK**, the new value is entered in the recipe value list. In addition, the 'Setpoint input' screen function is available. With one click you can transfer a setpoint which you defined beforehand.
Graphic recipe variable	Linking of a graphic recipe variable (on page 160).

Information

Controlling the visibility of variables

You have the following available to control the visibility and operation of variables:

- Filter (on page 26): Defines terms according to which variables can be filtered. Variables that do not fit in the filter are not displayed. Filters are controlled by the user.
- Visibility (on page 25): Controls the display of variables in the list using the limit value of a variable. Variables that were set to "not visible" are not displayed. Visibility is controlled by the process.
- Authorization (on page 29): Defines the permissions with which a variable can be changed. Variables for which the user does not have permission are displayed but cannot be operated. Permissions are controlled by the person that configures the project and the administrator.

Interlocking and visibility

You can forbid users the access to certain areas of the recipe table by using either interlocking or visibility. The difference is that with interlocking the corresponding area is grayed out and with visibility it is not displayed at all.

INTERLOCKING

You allocate an interlocking to each variable in the column or by means of the **Interlocking** property. Select the desired interlocking from the drop-down list. Additional interlockings can be configured in the `Interlockings` module.

In Runtime, the line is displayed as normal or grayed out depending on the status of the interlocking. The colors for text and background can be defined individually using the properties of the RGM (**Colors/Interlocking** group).

You can find more information in chapter Interlocking.

Information

Display with report functions of the Report Generator:

The name of the interlocking is not available in Runtime. This means that interlocking IDs are displayed in the recipe list only when the interlocking is displayed with the help of functions ***recipew*** *or* ***recipef****.*

VBA AND XML IMPORT

The following is applicable for XML import of interlockings:

- Name of the interlocking exists in the project: Interlocking for the recipe variable from the import file replaces the existing one for the interlocking configured for the recipe variable.
- Name of the interlocking does not exist in the project: The interlocking is removed.
  An empty string in the import file can be used so that interlockings that are configured for the recipe variable can be removed as a parameter for the recipe variable.

This applies along the same lines as for the editing of recipe variables using VBA.

VISIBILITY

You allocate a visibility to each variable in the column visibility. To do this:

1. Right-click in the cell and select the variable that is to control the visibility or enter the name directly into the cell
2. Define a limit value for the variable

As soon as the controlling variable exceeds the defined limit value, the assigned variable in the recipe table is hidden.

Information

The ***recipe value list CE*** *is refreshed after every change of an allocated state. When configuring, keep in mind that changing the allocated states too frequently can lead to performance problems during operation.*

This does not affect the ***Recipe value list****. This only edits the entries that have changed.*

Filter

Filters make it possible to hide recipes at user level.

Filters are defined using the **Filter text** property for the variables in the detail view of the RGM. The variables are assigned a freely selectable filter term. This filter text is used in the screen Recipegroup Manager in order to reduce the display of variables. This filter can be set:

- This is carried out in Runtime in the Recipe Group Manager (on page 11) screen using the **Recipe filter** drop-down list
- When screen switching (on page 41) to the Recipe Group Manager screen

If no filter has been explicitly selected, all variables that have been set to invisible are displayed.

Information

The filtering is only related to the display of the recipe value list. If a recipe is sent to the control, for example, all values of the recipe are written.

3.5.2 Acknowledgement variables

Variables can be linked to each recipe group, which are provided with recipe data for the actions of writing, reading, checking and XML import. These RGM-specific acknowledgement variables act like the global **system driver variables** (**sysdrv.chm::/25964.htm**), but are assigned to individual recipe groups. Therefore several recipe groups can be evaluated in parallel.

It is possible to link as many variables as you want.
Note for versions before zenon 7.10 SP0: If the **DataSource** property is set to `MS Access`, the text length is a maximum of 300 characters. The binary file storage is used automatically from version 7.10.

The following recipe data can be set to variables:

- Recipe name
- Recipe number
- Recipe version
- Recipe status as text
  (in the form "**1 - Text**", whereby the text is not translated, which can however be released via the display element)
- Recipe status as number
- Recipe authorization level
- Time of the last change
- User that made the last change
- Comments 1 - 8

CREATING AN ACKNOWLEDGEMENT VARIABLE

To create an acknowledgement variable:

1. Highlight the recipe group
2. Navigate to the desired node
   - **Write feedback recipe**
   - **Read feedback recipe**
   - **Check feedback recipe value**
   - **Feedback XML import**
3. Click on the ... button next to the desired property
4. The dialog for linking variables is opened

You can find notes on the individual properties in the help for the respective property. The result is provided locally and to the network for all actions by means of **system driver variables** (**sysdrv.chm::/25964.htm**).

> **Information**
>
> *Changes made via VBA are only visible after the after the RGM has been opened again.*

3.6 Adding recipes to a recipegroup

To add a recipe to a recipe group:

1. Right-click on the **Recipe** node in the desired recipe group
2. Select **New recipe** in the context menu.
3. A new recipe with a standard name is created; the name is already highlighted for further processing
4. assign the desired properties to name, number, version, authorization and comment

> **Information**
>
> *If the recipe is to be used as binary file, the name may only contain alphanumerical characters.*

ISSUING A NAME DURING CREATION

*New recipes are created with a default name, e.g. **recipe_0**. In addition a recipe number is assigned to each new recipe. For each new recipe the recipe number is increased incrementally.*

The recipe name must be unique. The recipe number is not checked for uniqueness. It is only used in order to call a recipe via a variable with the help of function ***Recipegroup Manager****. If several recipes with the same number exist, zenon uses the recipe it finds first.*

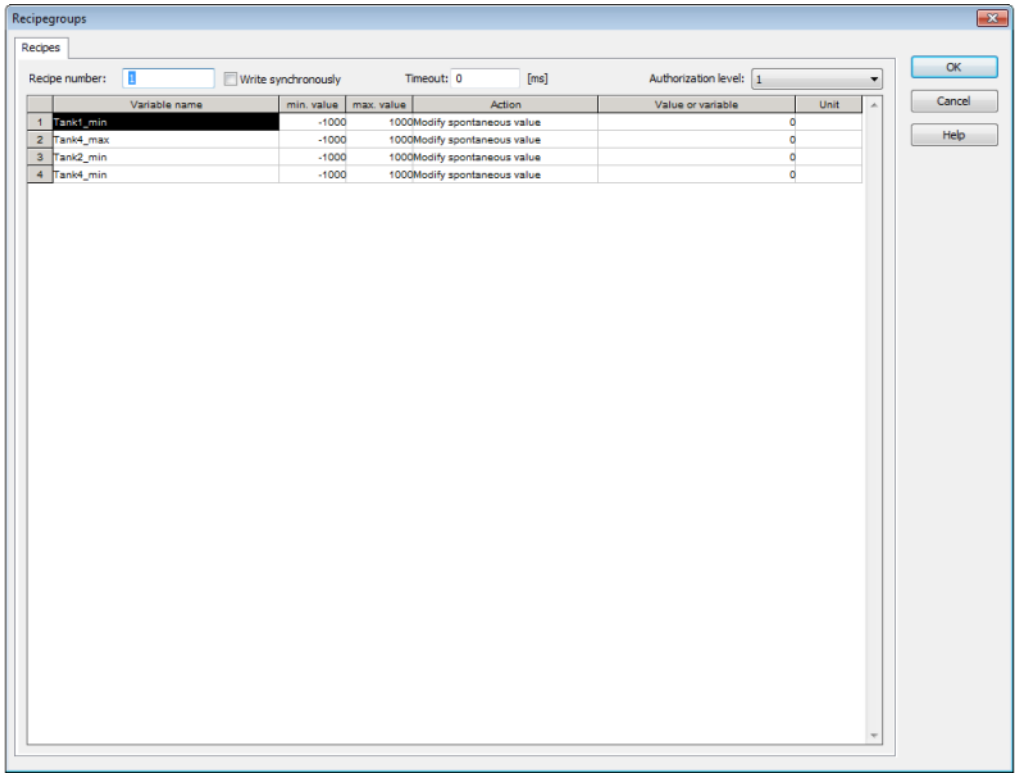
Example

There is already a ***Recipe_0*** *with the* ***recipe number*** *0 and a* ***Recipe_2*** *with the* ***recipe number*** *2. When being newly created, a recipe with the* ***name*** ***Recipe_1*** *and the* ***recipe number*** *3 is created.*

3.6.1 Editing a recipe from a recipegroup

In order to edit a recipe from a recipe group:

- right-click on a recipe
- select the command edit recipe
- The dialog **Recipe groups** is opened



Entry	Description
General	
Recipe number	Number of the recipe
Write synchronously	`Active`: When writing a recipe, all control elements are locked in the Recipe Group Manager screen until the driver confirms that all values have been written successfully or the defined **`time-out`** has expired. `Inactive`: The values of the recipe are written without waiting for a confirmation. The control elements can be used again immediately. The confirmation of the driver is done with the status bit **`WR-SUC`**, which is set to 1, when values have been written successfully. Note: ▸ This setting can be changed in the Runtime in the screen of the recipegroup manager with the button **`Rename recipe`**. ▸ The progress bar only works if this property is active.
Timeout [ms]	If **`Write synchronously`** is activated in a recipe, here the timeout can be defined. The control elements of the **`Recipe Group Manager`** screen can be operated once again after this time at the latest. If, in **`Timeout`**, the value `0` is entered, zenon calculates the timeout in the following way: 30000+(100*number of datapoints) Hint: This setting can be changed in the Runtime in the screen of the recipegroup manager with the button **`Rename recipe`**.
Authorization level	Only users with the authorization level entered here are allowed to change the recipe in the Runtime. This not only means manually editing the recipe in the screen of the recipe group manager but also renaming and deleting the recipe as well as reading its values from the hardware. Note: Recipe groups can only be changed by users, which have the authorization for all recipes of the according recipe group.
Lists entries	
`Variable name`	Name of a variable. Display only, cannot be changed.
`min. value`	Minimum value of variable Display only, cannot be changed.
`max. value`	Maximum value of variable Display only, cannot be changed.
`Action`	Function which is carried out on variables. Entry can be edited in the list. For details, see the Actions (on page 32) chapter.

Value or variable	Value which is transferred to the control when the recipe is written. Value dependent on **action**, can be edited in the list.
Measuring unit	Unit of a variable. Display only, cannot be changed.

Editing in Runtime: For details see **Operation in Runtime** (on page 135) chapter.

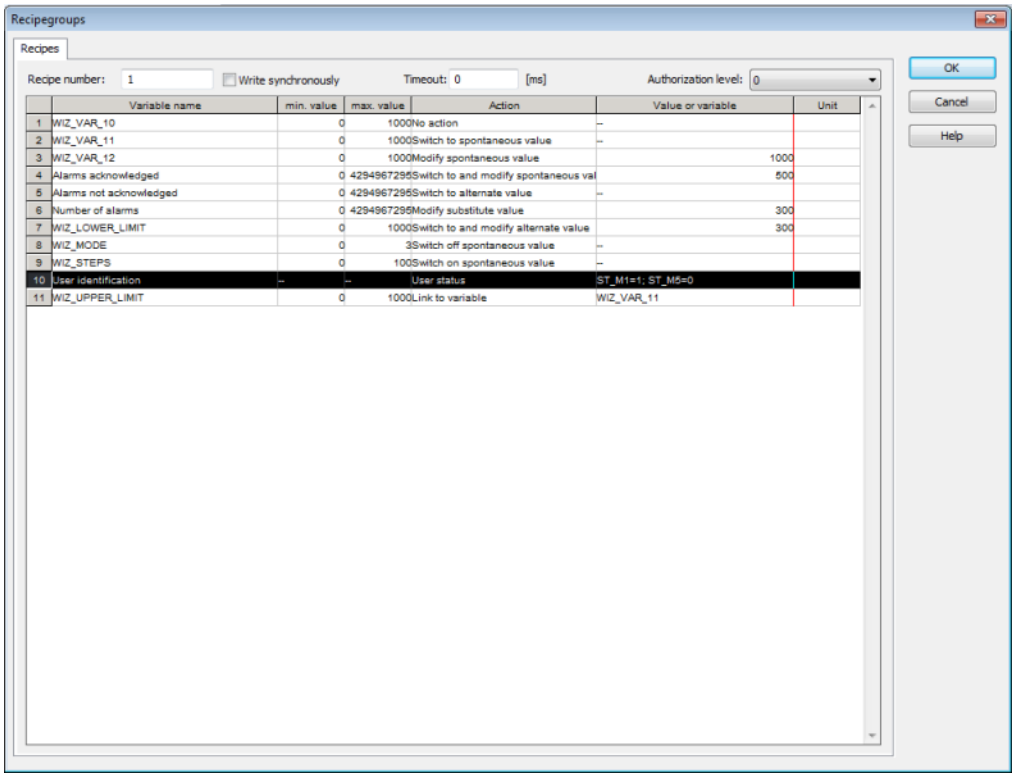
Information

The following is applicable for recipes in the RGM:

- The recipe name must be unique.
- The recipe number is not checked for uniqueness. It is only used in order to call a recipe via a variable with the help of function **Recipegroup Manager** (on page 59). If several recipes with the same number exist, zenon uses the recipe it finds first.
- The length of a string for an RGM recipe is limited to 249 characters.

Actions

To define an action, click on the respective variable in line **`Action`**. Click on the symbol with the arrow and select the desired action from the drop-down list. If you need entries in cell **`Value or variable`**, click in the cell and enter a value. For a variable selection right click in the cell in order to open the selection dialog.



Action	Description	Entry in Value or variable
No action	Deactivates a variable in this recipe	No input.
User status	Status information. Sets the according status bit of the variable. Note: You can only set status bits which were tagged as set by the user. Status bits which were automatically set by the system cannot be changed. Attention: In order to be able to call up a keyboard in Runtime, a keyboard must be linked in the **Keyboards** properties group for the **String tags** property.	Enter status short label: =1 to set =0 to reset You can enter more states separating them by semicolon (;). For example: M1=1; M5=0
Modify alternate value	Sets the Alternate value to the value stated under **Value or variable**.	Enter Alternate value.
Modify spontaneous value	Sets the Spontaneous value to the value stated under **Value or variable**.	Enter set value.
Switch off spontaneous value	Switches off the spontaneous value by setting status bit OFF (Bit 20).	No input.
Switch on spontaneous value	Switches on spontaneous value by resetting OFF bit.	No input.
Switch to alternate value	Switches from Spontaneous value to Alternate value	No input.
Switch to spontaneous value	Switches from Alternate value to Spontaneous value	No input.
Switch to and modify Alternate value	Switches from Spontaneous value to Alternate value and sets the alternate value to the value stated under **Value or variable**.	Enter Alternate value.
Switch and modified spontaneous value	Switches from Alternate value to Spontaneous value and sets the spontaneous value to the value stated under **Value or variable**.	Enter set value.
Link with variable	Links a variable with another variable.	Name of a variable. Right-click the field in order to open the context menu in which you can open the dialog for selecting variables. The value of the variable is transferred to the selected recipe variable. It is also possible to use

		variables of other loaded projects.

> **Attention**
>
> *If the `Read all values` function is used with the `Link with variable` action for a recipe, neither user authorization is checked nor is the action logged. If you want a logging, you must create it manually, e.g. using a VBA macro.*
>
> *Note for FDA regulations: As a consequence, this functionality is not allowed to be used for projects with a strict FDA standard!*

Check write set value

When writing values, the value receives a status bit that is has been written. If the writting process is successful, the corresponding status bit is set:

- WR-ACK

  The driver received a value for writing.

- WR-SUC

  Value `1`: Writing successful.

  Value `0`: Writing not successful. The value could not be written.

> **Information**
>
> *In case of reload or Server-Standby switch, the currently active responses or writing affirmations are discarded.*

This status combination are active until the next value change is triggered. Then both states are set to `0` until the writing action is finished. For evaluation the following bit combination must be requested in the reaction matrix:

`WR-ACK, WR-SUC`

Result:

- WR-ACK `1`, WR-SUC `1`: Writing action successful.
- WR-ACK `1`, WR-SUC `0`: Writing action not successful.

> **Attention**
>
> *The mechanism only shows, that the writing action was successful (or not successful) to the PLC. This does not mean, that the value has indeed been changed in the PLC, since the PLC can reset/overwrite the value immediately. (For example for writing the outputs or the transient bits which are only set for a short time.)*

MODULES

This mechanism can be used in the following modules:

- function **`Write set value`**: Activate option **Wait for writing confirmation** in the configuration dialog of the function.
- **`Standard recipes`**: Activate property **Write synchronously**.
- **`Recipegroup Manager:`** (on page 32) Activate property **Write synchronously**.
- Command Processing

ENTRY IN CEL

- Function Write set value

  For the entry in the CEL you must activate property **Function Set SV** in node **Chronological Event List** in the project settings. After this the positive or negative response the execution of the function is written to the CEL.

- Standard recipes and Recipegroup Manager

  For the entry in the CEL a system driver variable is used which is set to `1` when a recipe is written successfully. A global variable is evaluated on the Server, a local variable on every Client in order to determine when the recipe executed last was written completely.
  With this variables a CEL entry can be created via limit or reaction matrix. The query is carried out via a multi analog or a multi binary reaction matrix.

3.7 Recipe version

Recipes can be versioned. The versions can be administered in Runtime using the settings in the Editor and functions and control elements in Runtime.

To create a new recipe version in the Editor, you have two possibilities:

1. New recipe version: Creates a new version of the selected recipe.
   To do this:

a) Highlight the recipe in the detail view of the Recipe Group Manager

b) Select the **Create new recipe version** command in the context menu

or

2. Duplicating a recipe version: Creates a copy of the selected recipe version as new version. To do this:

a) highlight the recipe version in the detail view of the RGM

b) select the **Duplicate as recipe version** command in the context menu

A new version of the recipe is created and inserted below the recipe. The version number is automatically issued in the **Recipe version** property. The number of available versions is displayed to the right of the original recipe.

To create a new recipe version in Runtime, use the Create new recipe version (on page 97) function.

Information

A maximum of 89999 recipe versions can be created.

3.8 Recipe state

The recipe status is used for identifying and filtering a recipe with:

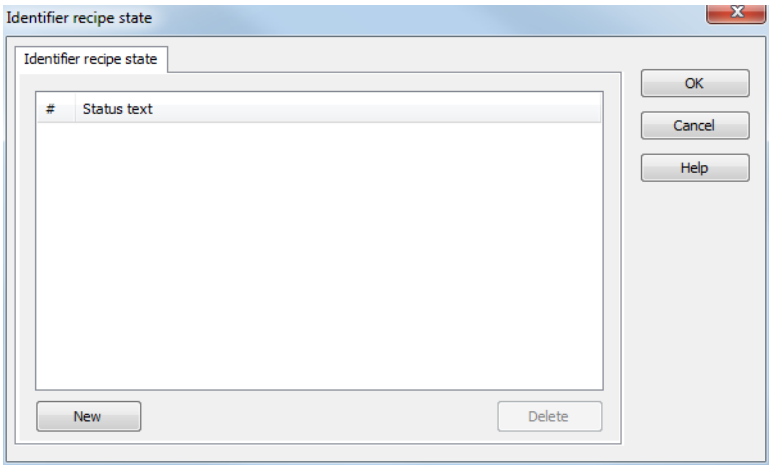
- **State** property for recipe
- RGM (on page 11) screen
- Screen switching to RGM (on page 41) function
- Recipegroup Manager (on page 59) function

It consists of an index given by zenon and an individual status text. The recipe status can be set differently for each recipe version (on page 35). This property can be changed using functions and control elements in the screen in Runtime.

To create a recipe status:

1. Highlight the name 'Recipe Groups' in the detail view of the Recipe Group Manager
2. click on property **Identifier recipe state**

3. The dialog for configuring the recipe status is opened



Parameters	Description
Identifier recipe state	Creating and administering the name for the recipe status.
#	Status index. This is issued automatically.
Status text	Status text is defined as in this dialog: ▸ Creation: Click on New button. ▸ Edit: A mouse click in the text allows editing. This text can also contain keywords (with a prefix of @) for language switching.
New	Creates new status at the end of the list.
Delete	Deletes highlighted status text. If the status to be deleted is at the end of the list, the status text and index number are deleted. If the status to be deleted is not at the end of the list, the text is deleted but the index is left. This way the gaps can be refilled again later.
OK	*Accepts input and closes dialog.*
Cancel	*Discards all changes and closes the dialog.*
Help	Opens online help.

3.9 List of status bits

Bit number	Short term	Long name	zenon Logic label
0	M1	User status 1	_VSB_ST_M1
1	M2	User status 2	_VSB_ST_M2
2	M3	User status 3	_VSB_ST_M3
3	M4	User status 4	_VSB_ST_M4
4	M5	User status 5	_VSB_ST_M5
5	M6	User status 6	_VSB_ST_M6
6	M7	User status 7	_VSB_ST_M7
7	M8	User status 8	_VSB_ST_M8
8	NET_SEL	Select in the network	_VSB_SELEC
9	REVISION	Revision	_VSB_REV
10	PROGRESS	In operation	_VSB_DIREC
11	TIMEOUT	Runtime exceedance	_VSB_RTE
12	MAN_VAL	Manual value	_VSB_MVALUE
13	M14	User status 14	_VSB_ST_14
14	M15	User status 15	_VSB_ST_15
15	M16	User status 16	_VSB_ST_16
16	GI	General interrogation	_VSB_GR
17	SPONT	Spontaneous	_VSB_SPONT
18	INVALID	Invalid	_VSB_I_BIT
19	T_CHG_A	Daylight saving time/winter time announcement	_VSB_SUWI
20	OFF	Switched off	_VSB_N_UPD
21	T_EXTERN	Real time external	_VSB_RT_E
22	T_INTERN	Realtime internal	_VSB_RT_I
23	N_SORTAB	Not sortable	_VSB_NSORT
24	FM_TR	Error message transformer value	_VSB_DM_TR
25	RM_TR	Working message transformer value	_VSB_RM_TR
26	INFO	Information for the variable	_VSB_INFO
27	ALT_VAL	Alternate value If no value was transferred, the	_VSB_AVALUE

		defined alternate value is used otherwise the last valid value is used.	
28	RES28	Reserved for internal use (alarm flashing)	_VSB_RES28
29	N_UPDATE	Not updated	_VSB_ACTUAL
30	T_STD	Standard time	_VSB_WINTER
31	RES31	Reserved for internal use (alarm flashing)	_VSB_RES31
32	COT0	Cause of transmission bit 1	_VSB_TCB0
33	COT1	Cause of transmission bit 2	_VSB_TCB1
34	COT2	Cause of transmission bit 3	_VSB_TCB2
35	COT3	Cause of transmission bit 4	_VSB_TCB3
36	COT4	Cause of transmission bit 5	_VSB_TCB4
37	COT5	Cause of transmission bit 6	_VSB_TCB5
38	N_CONF	Negative acceptance of Select by device (IEC 60870)	_VSB_PN_BIT
39	TEST	Test bit (IEC870 [T])	_VSB_T_BIT
40	WR_ACK	Writing acknowledged	_VSB_WR_ACK
41	WR_SUC	Writing successful	_VSB_WR_SUC
42	NORM	Normal status	_VSB_NORM
43	N_NORM	Deviation normal status	_VSB_ABNORM
44	BL_870	IEC 60870 Status: blocked	_VSB_BL_BIT
45	SB_870	IEC 60870 Status: substituted	_VSB_SP_BIT
46	NT_870	IEC 60870 Status: not topical	_VSB_NT_BIT
47	OV_870	IEC 60870 Status: overflow	_VSB_OV_BIT
48	SE_870	IEC 60870 Status: select	_VSB_SE_BIT
49	T_INVAL	Time invalid	not defined
50	CB_TRIP	Breaker tripping detected	not defined
51	CB_TR_I	Breaker tripping detection inactive	not defined
52	RES52	reserved	not defined
53	RES53	reserved	not defined
54	RES54	reserved	not defined
55	RES55	reserved	not defined
56	RES56	reserved	not defined

57	RES57	reserved	not defined
58	RES58	reserved	not defined
59	RES59	reserved	not defined
60	RES60	reserved	not defined
61	RES61	reserved	not defined
62	RES62	reserved	not defined
63	RES63	reserved	not defined

Information

In formulas all status bits are available. For other use the availability can be reduced.

You can read details on status processing in the Status processing chapter.

3.10 Windows CE

FILTER DIALOG IN THE RUNTIME

If you activate property **Show dialog in the Runtime** at the options of the Recipe value list (on page 41) in the screen switch, there are only restricted options available in Windows CE:

- Recipe Filter
- Column settings (for recipe table)

`Recipe selection`, **`Equipment modeling`** and column settings for the **`recipe list`** are not available.

4. Functions

When the standard function is created from the context menu in the detail view, zenon automatically creates a function **Recipegroup manager** for the selected recipe.

4.1 Function screen switch Recipegroup Manager

With screen switching to a Recipe Group Manager screen, you define a recipe that is to be sent when switching. These settings can also be made in Runtime, if the **Offer dialog in Runtime** option is active.

To configure screen switching:

1. create a new function
2. select **Screen switch**
3. Select the Recipe Group Manager screen
4. Select your settings in the individual tabs
   - Recipe value table (on page 41): Settings for the recipe.
   - Recipe value table column setting (on page 46): Settings for display in Runtime.
   - Recipe filter (on page 49): Definition of recipes of a recipe group that should be displayed in a Recipe Group Manager screen.
   - Recipe list column settings (on page 51): Settings for the display of the recipe lists.
   - Equipment modeling (on page 53): Selection of equipment models.

> **Information**
>
> *You can find the settings for visibility of variables in Runtime in:*
>
> - Changing variable parameters (on page 22): Filter (on page 26), Visibility (on page 25)
> - Editing recipe from a recipe group (on page 29): Authorization levels
>
> *These settings only relate to the display in the recipe table. If a recipe is sent to the control, for example, all values of the recipe are written.*

4.1.1 Recipe Value List

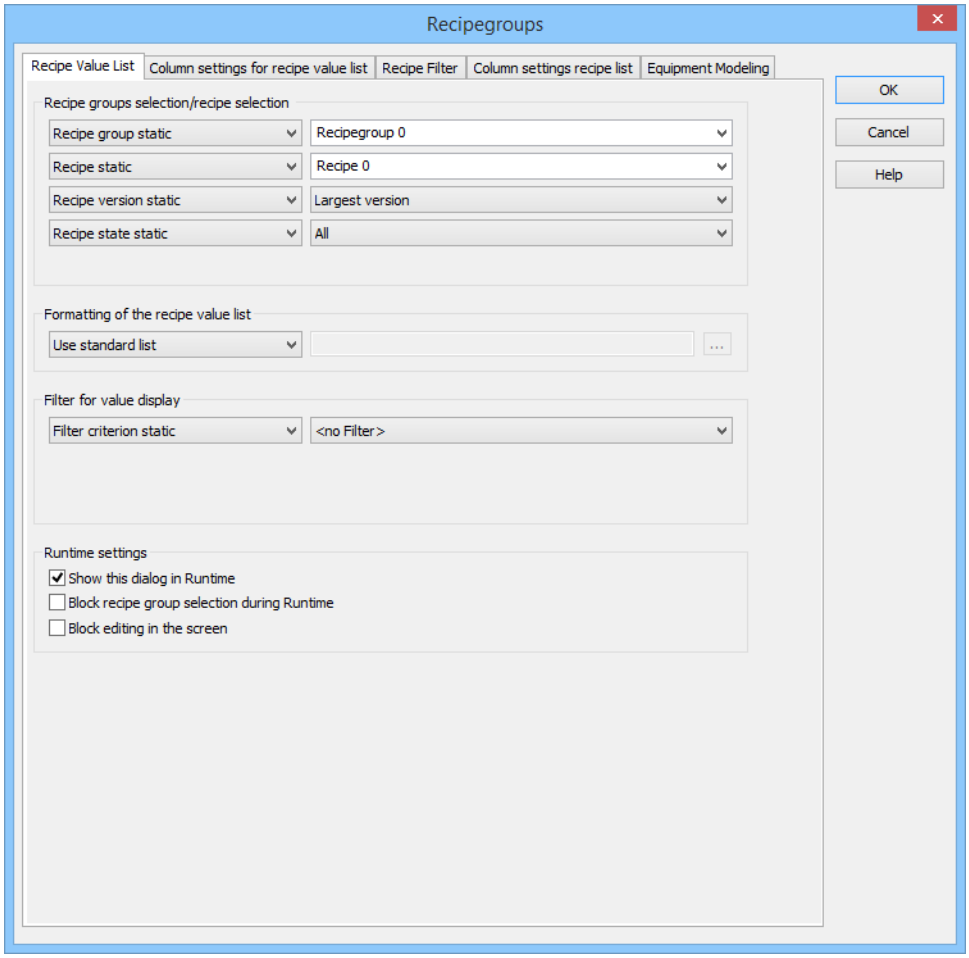
In this tab, the recipe that is displayed in the recipe value table is selected. The recipe value table is available in two versions:

- **`Recipe value table`**: Table that can be configured in Runtime directly. Not available for Windows CE.
- **`Recipe Value List CE`**: Display of the selected recipe in fixed table form. Replaces the **`recipe value table`** under Windows CE.

Both tables can be configured in the Editor. However only one of the two tables can be inserted into a screen. The **`recipe value table`** is recommended for all tables with the exception of Windows CE. The

configuration of the screen switching can be different for both tables. If a **recipe value table** is automatically replaced by a **recipe value table (CE)** under Windows CE, the settings of the original screen switching are applied.

CONFIGURATION



RECIPE GROUPS SELECTION/RECIPE SELECTION

Selection of the recipe group and the recipe. The selection can take place:

- Statically from pre-defined entries
- Dynamically using variables
- From a file

Clicking on Property opens a drop-down list to select the method.

Parameters	Description
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no. Note: If the recipe selection leads to an error in Runtime (recipe not present in Runtime, no selection made, recipe not contained in the filter), then no recipe is selected and the display of the drop-down list **Recipe** remains empty.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ Smallest version; additional selection of a recipe status possible ▸ Largest version; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button . . . opens

	the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 corresponds to static **lowest recipe version** ▸ Value 90001 corresponds to static **highest recipe version**
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value largest version or smallest version or is taken from a variable. Example: Largest version **with status** released. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ **All**
Recipe status from variable:	Recipe status is taken from a variable. Click on button ... opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value 0 is valued as all ▸ The action is cancelled if the status cannot be found in the recipe

FORMATTING OF THE RECIPE VALUE TABLE

Settings for the formatting of the recipe value table.

Parameters	Description
Table	Selection of report file. Click the button to open a drop-down list for selection: ▸ Use standard table ▸ Using the format file for table
Use standard table:	The recipe value are displayed in a **recipe value table** or **CE recipe value table** in Runtime.
Using the format file for table:	The recipe values can be displayed in a report file (***.xrs**). This file must have been created in the Report Generator beforehand. Click on button ... in order to open the dialog for selecting a XRS file. Note: When a format file is used, the **CE recipe value** is shown in Runtime.

FILTER FOR VALUE DISPLAY

Selection of the filter (on page 26) that is to be active when switching in order to limit the list of displayed recipe values.

Parameters	Description
Filter criterion	Selection of the filter. Clicking on text opens a drop-down list to select a filter: ▸ Filter criterion static ▸ Filter criterion as variable
Static filter criterion:	Selection of a filter from the drop-down list that was defined at the **Filter text** variable property.
Filter criterion as variable:	Filter criterion is is taken from a STRING variable in Runtime.

RUNTIME SETTINGS

Settings for operation in Runtime.

Parameters	Description
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made. Note: Only limited functions are available under Windows CE and when called up using the **`Filter`**button in the Recipe Group Manager screen: ▸ Recipe Filter ▸ Column settings (for recipe table)
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
Block editing in the screen	Blocks all control elements in the `RGM screen`. The user cannot make any changes to the RGM.

CLOSE DIALOG

Parameters	Description
`OK`	Applies all changes in all tabs and closes the dialog.
`Cancel`	Discards all changes in all tabs and closes the dialog.
`Help`	Opens online help.

Information

> *The recipe name must be unique. The recipe number is not checked for uniqueness. It is only used in order to call a recipe via a variable with the help of function* ***Recipegroup Manager****. If several recipes with the same number exist, zenon uses the recipe it finds first.*

4.1.2 Recipe value table column setting

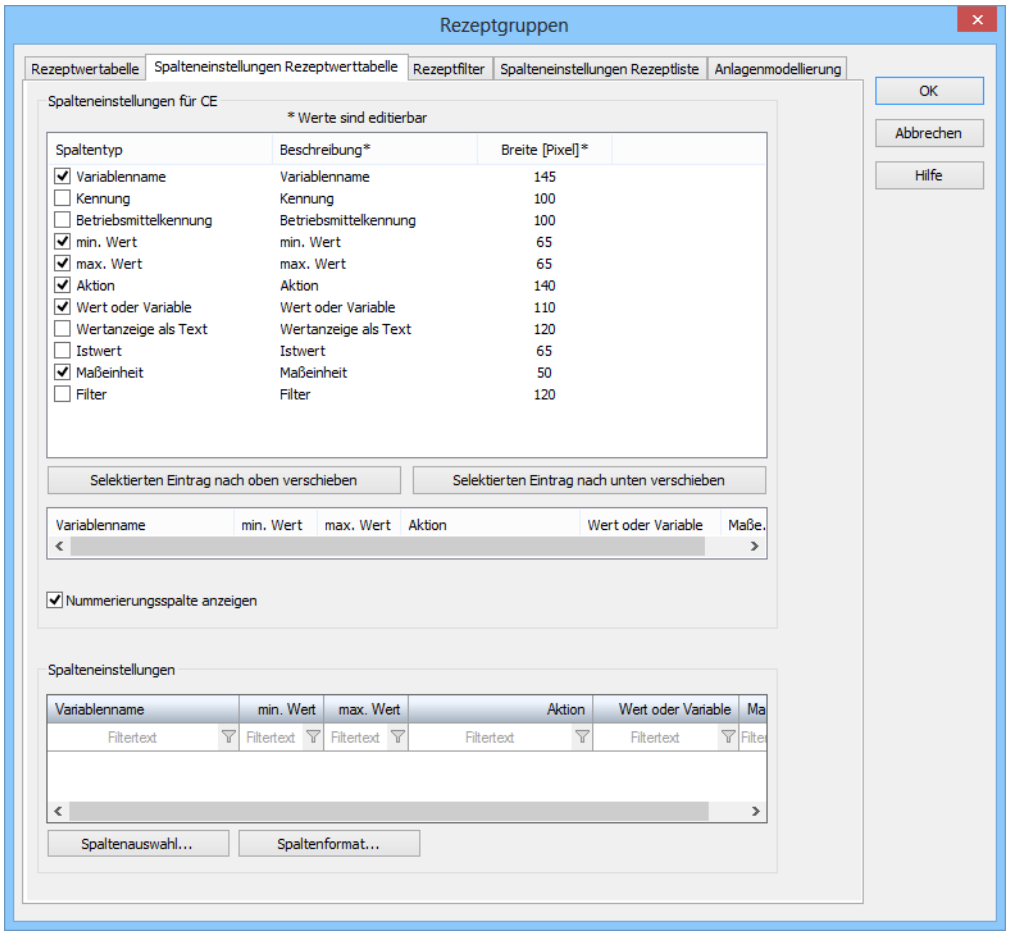
Note: Is not available if, for screen switching in the **recipe value table** (on page 41), the recipe value table **Format file for table:** has been selected.

All columns of the recipe value list are freely configurable. The columns can be made visible, sorted and labeled as you wish. In addition you can blank out the line numbering.

In this tab, the columns for the **CE recipe value table** and the **recipe value table** can be configured. There are two tools available for this:

- **Column Settings for CE**: Configures the settings for the **CE recipe value table**.

- **`Column settings`**: Configures the settings for the **`recipe value table`**.



COLUMN SETTINGS FOR CE

These settings related to the **CE recipe value table**. They are used for the display of the fixed recipe value tables under Windows CE. The **recipe value table** is always configured in the lower area of the dialog.

Parameters	Description
Column type	Type of the column. Cannot be edited. The display in the Runtime is activated or deactivated with the help of a checkbox.
Description	Defines the header of the respective column. You can configure it as language switchable. The value can be edited.
Width	Defines the width of the column in characters. You can also define the width of the column by clicking and dragging the column with the mouse in the list with the horizontal display of the column names. The value can be edited.
Move selected entry up	Moves selected row up. You can also move the columns with drag&drop.
Move selected entry down	Moves selected row down. You can also move the columns with drag&drop.
Field with horizontal display of the column names	Shows the columns which are active in the list. You can define the size of the columns by clicking and dragging the column borders with the mouse.
Display numbering column	`Active`: The first column of the report is displayed with line numbers.

COLUMN SETTINGS

Configuration of the **recipe value table**.

Parameters	Description
Table	Columns of the table are selected by clicking on the column selection button. They are arranged by clicking on the column title and using drag&drop with the mouse. When arranging them, two red arrows show where the column to be moved is placed.
Column selection	Clicking on the button opens the dialog to select (on page 55) the columns to be displayed.
Column Format	Clicking on the button opens the dialog to format (on page 56) the columns.

CLOSE DIALOG

Parameters	Description
OK	Applies all changes in all tabs and closes the dialog.
Cancel	Discards all changes in all tabs and closes the dialog.

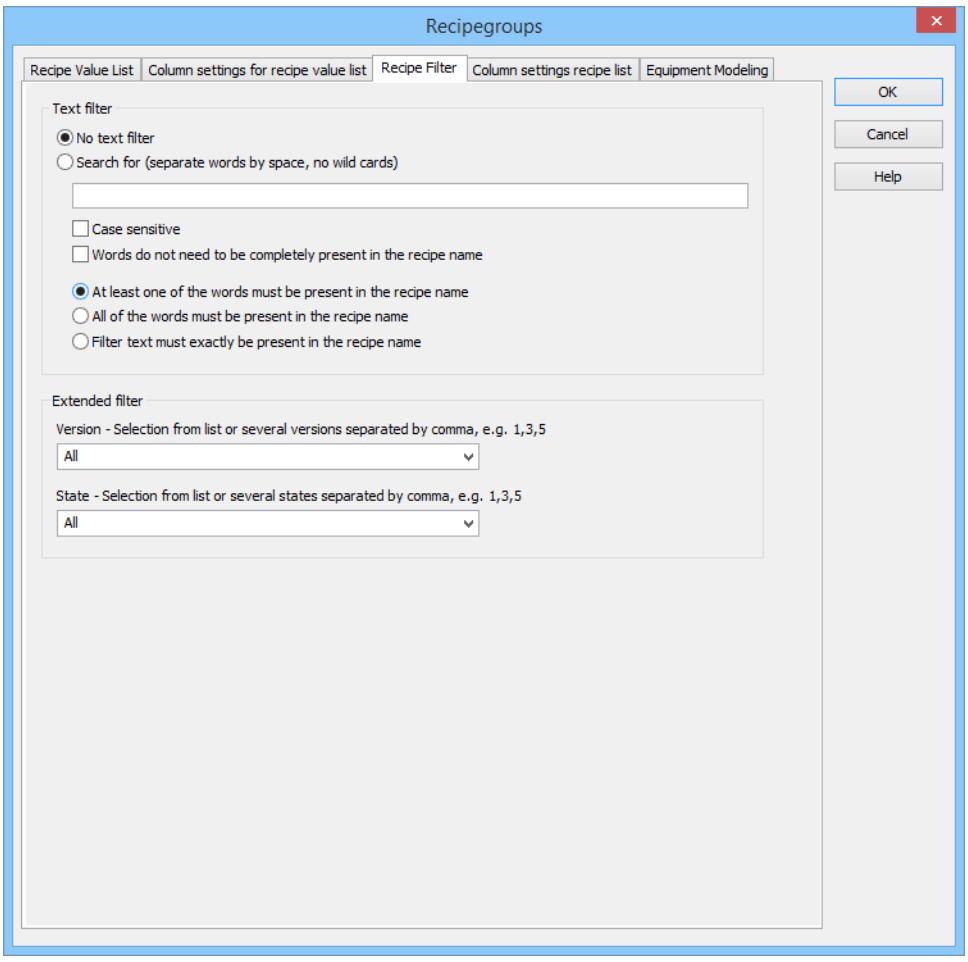
	The function is nevertheless created the first time screen switching is configured, however without a target.
Help	Opens online help.

4.1.3 Recipe Filter

On this tab you define which recipes of a recipe group should be displayed in a Recipegroup Manager screen. Only recipes are displayed which are allowed by the recipe filter of the screen switch function. The filtering is based on the recipe names.

Information

If the recipe selection leads to an error in Runtime (recipe not present in Runtime, no selection made, recipe not contained in the filter), then no recipe is selected and the display of the drop-down list ***Recipe*** *remains empty.*



Parameters	Description
`Text filter`	Defines filter criteria.
No text filter	`Active`: The text filter is not used.
Search for (words separated by spaces)	`Active`: The recipe filter is used. The additional settings are activated.
`Input field`	Enter the corresponding words or character strings.
Case sensitive	`Active`: Capitalization is taken into account when filtering.
Words do not have to appear in the recipe name in full	`Active`: The expressions entered in the **`input field`** are also taken into account if they only appear in the recipe name as part of a word.
At least one word must be present in the recipe name	`Active`: At least one word of the search string must appear in the recipe name.
All words must be present in the recipe name	`Active`: All words of the search string must be present in the recipe name but the order does not matter.
Filter text must appear in the recipe name exactly	`Active`: All words of the search string must be present in the recipe name in the same order.
`Extended filter`	Filter settings for version and status.
Version	Version filter: Selection from drop-down list or direct input. Drop-down list: ▸ Smallest version ▸ Largest version ▸ All These settings are always combined with the status. Direct input: ▸ Numerical input, separated by a comma. For example: **`1.2.6`** Entries may consist of numbers, commas or spaces and are checked to see if they are valid. Erroneous inputs are noticed when the dialog is confirmed with OK or the tab is changed. The dialog remains open and the focus is placed on the erroneous input.
Status	Filter criterion for status. Selection: Drop-down list: ▸ All ▸ Already configured status (on page 36)

	Direct input: ▸ Numerical input, separated by a comma. For example: **1.2.6** The language of status texts can be switched. Entries may consist of numbers, commas or spaces and are checked to see if they are valid. Erroneous inputs (such as letters) are noticed when the dialog is confirmed with OK. The dialog remains open and the focus is placed on the erroneous input.
OK	Accepts settings in all tabs and closes dialog.
Cancel	Discards changes for all tabs and closes dialog. The function is created the first time screen switching is configured, however without a target.
Help	Opens online help.

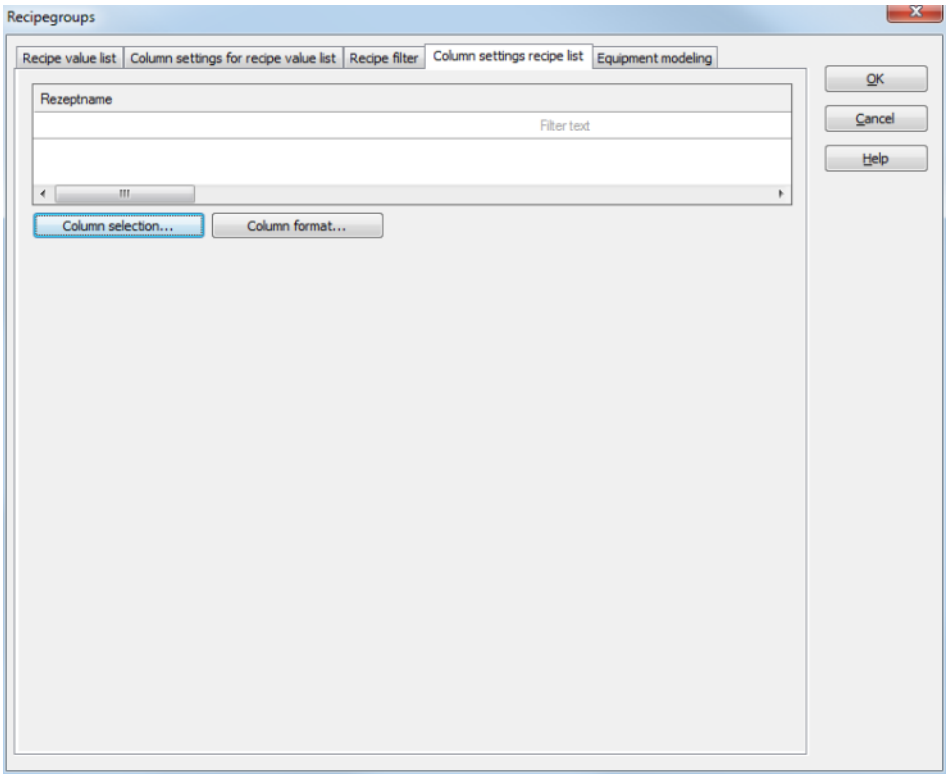
POSSIBLE COMBINATIONS OF THE VERSION FILTER WITH THE STATUS FILTER

Version filter	Status filter	Result
Smallest version	All	Only the smallest respective versions of all recipes are shown.
Smallest version	1.2	Only the smallest respective versions of all recipe versions with status 1 or 2 are displayed.
Largest version	All	Only the largest respective versions of all recipes are shown.
Largest version	1.2	Only the largest respective versions of all recipe versions with status 1 or 2 are displayed.
All	All	All recipe versions are displayed.
All	1.2	All recipe versions with the status 1 or 2 are displayed.
2.3	All	All recipe versions 2 and 3 are displayed regardless of status.
2.3	1.2	The respective recipe version 2 and 3 is displayed if these have either the status 1 or 2.

4.1.4 Column settings recipe list

In this tab, the column settings for the display of the **recipe list** (on page 11) in Runtime is configured.

Attention: The column settings for the recipe list are not available for CE projects.

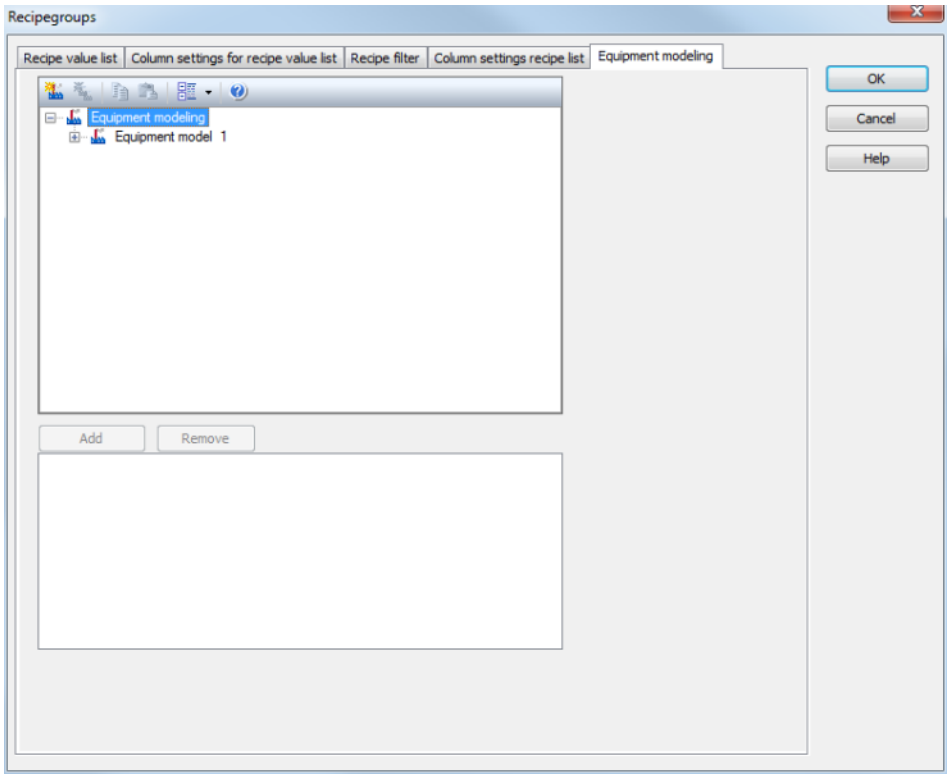


Parameters	Description
List field	Display of the configured columns.
Column selection	Opens dialog (on page 55) to select the columns.
Column Format	Opens dialog (on page 56) to format the columns.
OK	Applies all changes and closes dialog.
Cancel	Discards all changes and closes the dialog.
Help	Opens online help.

Other settings, such as scroll bars, are configured in the list field properties. For details, see **Appearance of recipe list** (on page 19) section.

4.1.5 Equipment Modeling

Here you allocate equipment models and levels:



Property	Description
Toolbar	Symbols to: ▸ Edit local equipment models ▸ Expand or collapse the display ▸ Display of information
List of equipment models	provides models and groups for selection The list separates the display into equipment models from the global project and from local projects. Local equipment models can be created, edited or deleted.
Add	Adds the selected group to the filter list.
Remove	Removes all selected groups from the filter list.
Filter list	Shows all equipment groups that are to be filtered.
OK	Applies settings and closes the dialog.
Cancel	Discards the selection and closes the dialog. Attention: Any changes that have been made to the structure of local equipment models are retained.
Help	Opens online help.

ADD GROUPS

- select the desired equipment model
  Attention: If there are naming conflicts between global and local equipment models, the local equipment models are displayed and the global ones are ignored. You can get information on possible conflicts by clicking on the corresponding symbol (triangle with exclamation mark) in the tool bar.
- Select an equipment group or level.
- Add the new group to the list with the **Add** button in the lower area of the dialog
- Subgroups are not automatically added.
- it is possible to link as many groups as you want.

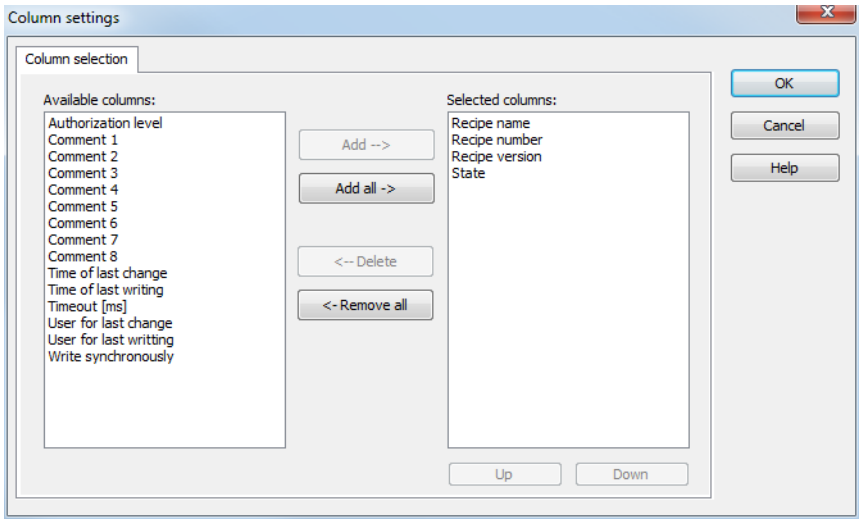
DELETE GROUPS

- Select the desired elements in the list in the lower area of the dialog (multiple selection is possible)
- Click the **Delete** button

Note: Changes in a tree element remain preserved independent of clicking button **Cancel**. **Cancel** only means that no element was selected.

4.1.6 Recipe list and recipe value table column selection

You configure the columns for the recipe list and recipe value table to be displayed in Runtime here. The following illustration shows an example of a recipe list. The columns for the recipe value table are configured along the same lines.



Button	Function
Available columns	List of columns that can be displayed in the table.
Selected columns	Columns that are displayed in the table.
Add	Moves the selected column from the available ones to the selected items. After you confirm the dialog with OK, they are shown in the detail view.
Add all	Moves all available columns to the selected columns.
Remove	Removes the marked columns from the selected items and shows them in the list of available columns. After you confirm the dialog with OK, they are removed from the detail view.
Remove all	All columns are removed from the list of the selected columns.
Up	Moves the selected entry upward. This function is only available for unique entries, multiple selection is not possible.
Down	Moves the selected entry downward. This function is only available for unique entries, multiple selection is not possible.

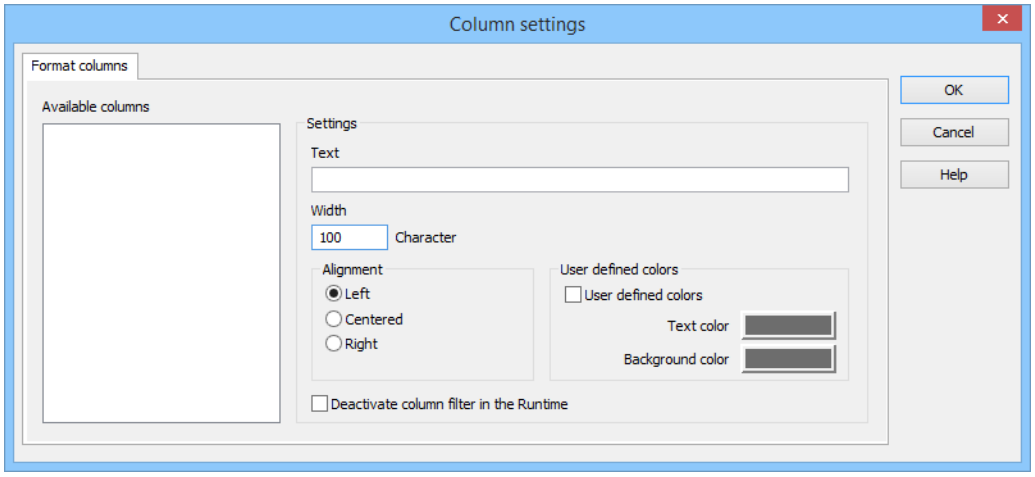
CLOSE DIALOG

Parameters	Description
OK	Applies settings and closes the dialog.
Cancel	Discards all changes and closes the dialog.
Help	Opens online help.

4.1.7 Recipe list and recipe value table column format

You format the columns for the recipe list and recipe value table here.

Configuration of the properties of the columns for configurable lists. The settings have an effect on the respective list in the Editor or - when configuring screen switching - in Runtime.



AVAILABLE COLUMNS

Parameters	Description
Available columns	List of the available columns via **Column selection**. The highlighted column is configured via the options in the **Settings** area.

SETTINGS

Parameters	Description
Settings	Settings for selected column.
Labeling	Name for column title. The column title is online language switchable. To do this, the @ character must be entered in front of the name.
Width	Width of the column in characters. Calculation: Number time average character width of the selected font.
Alignment	Alignment. Selection by means of radio buttons. Possible settings: ▸ **Left-justified**: Text is justified on the left edge of the column. ▸ **Centered**: Text is displayed centered in the column. ▸ **Right**: Text is justified on the right edge of the column.
Deactivate column filter in the Runtime	Active: The filter for this column cannot be changed in Runtime. Note: Only available for: ▸ Batch Control ▸ Extended Trend ▸ Filter screens ▸ Message Control ▸ Recipegroup Manager
User defined colors	Properties in order to define user-defined colors for text and background. The settings have an effect on the Editor and Runtime. Note: ▸ These settings are only available for configurable lists. ▸ In addition, the respective focus in the list can be signalized in Runtime by means of different text and background colors. These are configured using the project properties.
User defined colors	Active: User-defined colors are used.
Text color	Color for text display. Clicking on the color opens the palette to select a color.
Background color	Color for the display of the cell background. Clicking on the color opens the

	palette to select a color.

CLOSE DIALOG

Parameters	Description
OK	Applies all changes in all tabs and closes the dialog.
Cancel	Discards all changes in all tabs and closes the dialog.
Help	Opens online help.

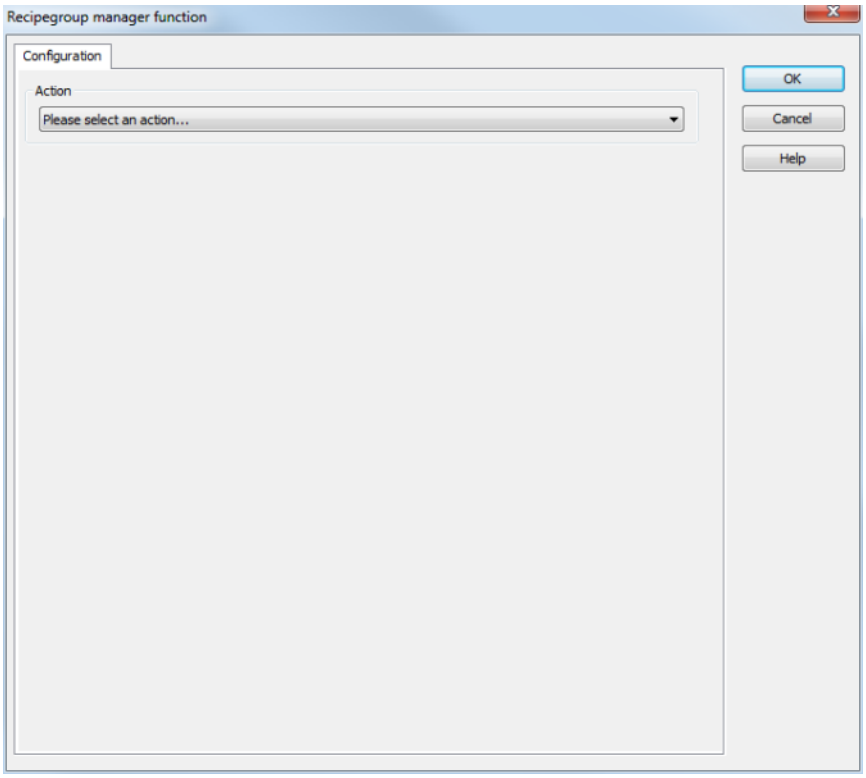
4.2 Recipegroup Manager function

This function carries out defined actions for a selected recipe of the Recipegroup Manager in the Runtime.

To configure the function:

1. create a new function
2. go to group **Recipes**
3. Select the **Recipegroup Manager** function.

The dialog for configuring the function is opened:



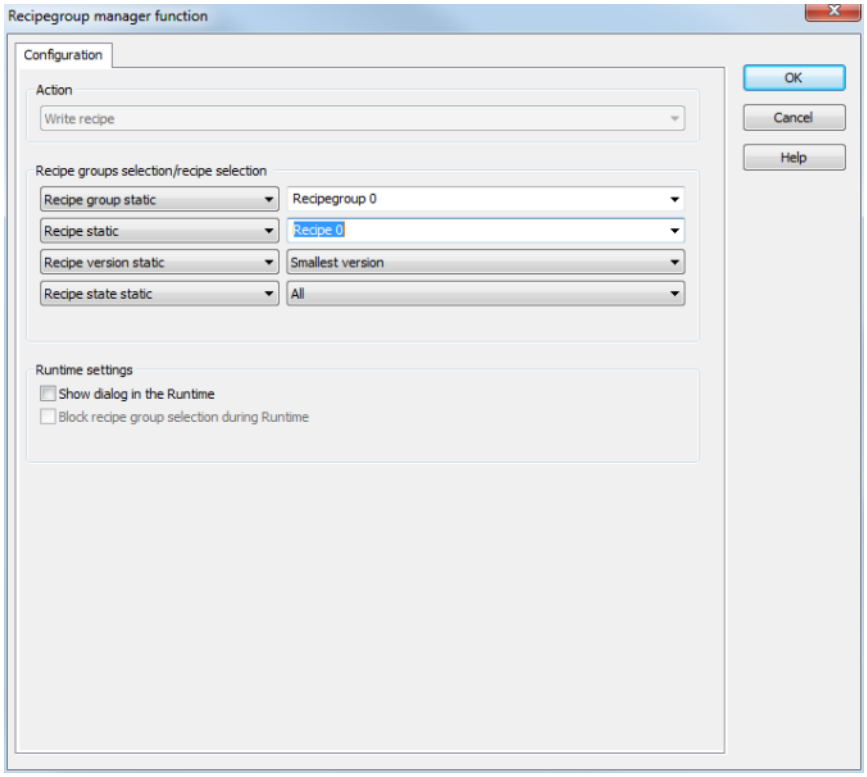
Parameters	Description
Action	Selection of desired function from drop-down list. Selection can be subsequently changed. Possible functions: ▸ Write recipe (on page 62) ▸ Read recipe (on page 65) ▸ Check recipe value (on page 68) ▸ Rename recipe (on page 74) ▸ Change recipe status (on page 76) ▸ Create new recipe (on page 81) ▸ Delete recipe (on page 83) ▸ Duplicate (on page 85) ▸ Duplicate and teach (on page 90) ▸ Create new recipe version (on page 97) ▸ Delete recipe version (on page 99) ▸ Duplicate as new recipe version (on page 102) ▸ Duplicating and reading as a new recipe version (on page 105) ▸ Write recipe value to shadow variable (on page 108) ▸ Write shadow variable to recipe value (on page 111) ▸ Export XML all (on page 114) ▸ Export recipe group XML (on page 117) ▸ Export recipe XML (on page 120) ▸ Import XML (on page 124) ▸ Detailed recipe data on saving documentation in XML (on page 126) ▸ Export recipe to text file (on page 130) ▸ Import recipe of text file (on page 133)
OK	Applies settings and closes the dialog.
Cancel	Discards all changes and closes the dialog. The function is created, however without an **action**.
Help	Opens online help.

Information

The recipe name of all functions must be unambiguous. The recipe number is not checked for uniqueness. It is only used in order to call a recipe via a variable with the help of function ***Recipegroup Manager****. If several recipes with the same number exist, zenon uses the recipe it finds first.*

4.2.1 Write recipe

This function sends the selected recipe in Runtime.



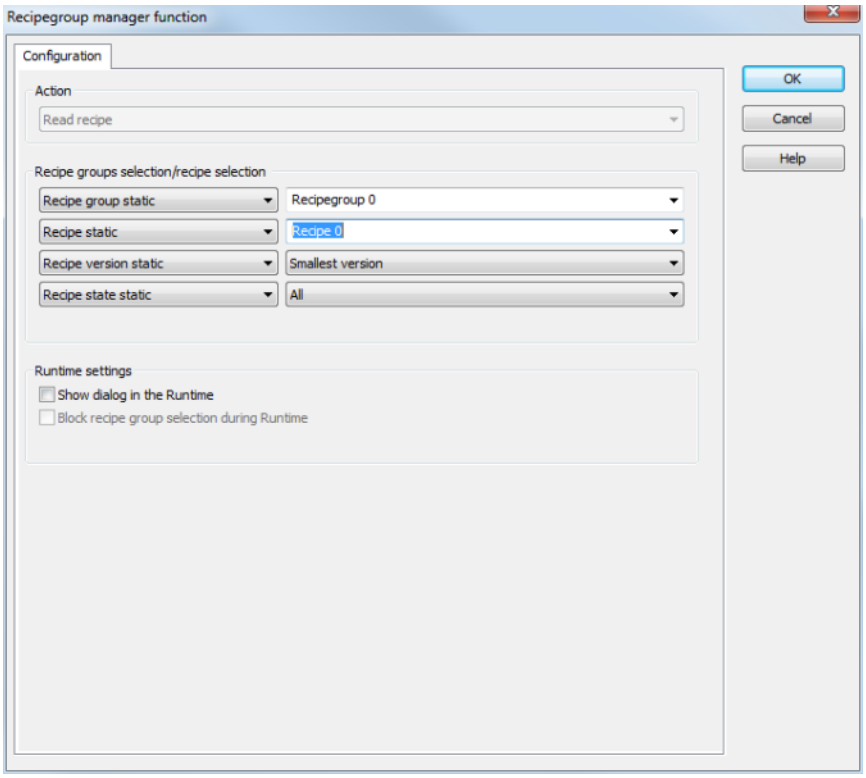
Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.2 Read recipe

The values of the corresponding variables are read off and written to the selected recipe (teaching).

When reading, a check is carried out to see if the values of the properties (on page 29) **minimum value** and max. **value** have been adhered to. If the values are gone below or exceeded, or the variable has the status INVALID, the values are not written to the recipe. Errors can be evaluated using the system variables (sysdrv.chm::/25964.htm).



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

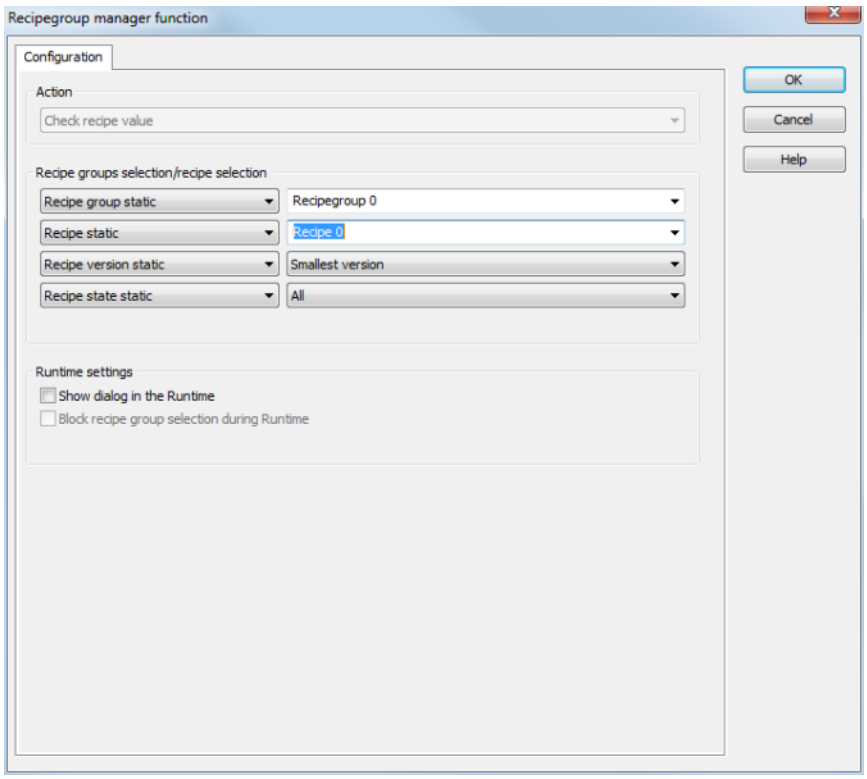
	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.3 Check recipe value

This function carries out a recipe check. At this recipe value and actual value are compared and the result is transferred to the corresponding system variable (sysdrv.chm::/25964.htm).

Recipe values can be checked using the **Recipegroup Manager** function or by means of the VBA.

RECIPEGROUP MANAGER



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ Smallest version;

	additional selection of a recipe status possible ▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

> **Attention**
>
> *The function uses decimal points for synchronization with the PLC. If, for variables with the REAL data type, the* ***Decimals*** *property is not configured along the lines of the PLC settings and the values in the decimal point area are different, the function displays different values.*

SCREEN

Recipe values can also be checked with a control element in the RGM screen. For details see the Create recipegroup manager screen (on page 11) chapter.

VBA

Recipe values can be carried out automatically via VBA: For this function **(Check())** is used. It takes over the following parameters or delivers the following return values:

```
Check(ByRef vList As Variant)as Long
```

- Return value: matches the values of the system variable **RGM recipe value check - result.**
- **vList**: matches the values of the system variable **RGM recipe value check - deviations.** At this a new entry is used for every array index (no line feed).

SYSTEM VARIABLES

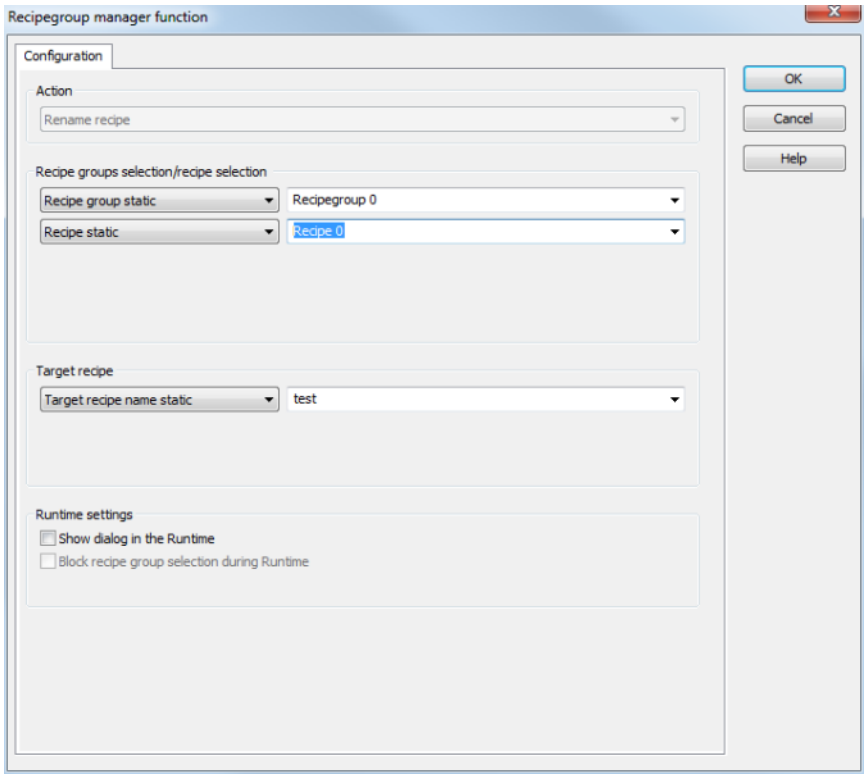
The function carries out a recipe check. At this recipe value and actual value are compared and the result is transferred to the corresponding system variable (sysdrv.chm::/25964.htm). The variable can be selected and checked locally or globally. Variables that cannot be checked due to erroneous communication with the PLC (INVALID status) are marked by a colored background (red).

Variable	Data type	Description
RGM recipe values check - deviations (global/local)	STRING	List all variable differences in the following order: [**Variable name; recipe value; variable value; unit**] each entry is written in a new line. Requirement: Variable **RGM recipe value check - result** has a value = 1. Attention: Variable can either be created and evaluated globally or locally.
Check RGM recipe values - authorization (global/local)	DINT	Authorization level of the last recipe checked.
Check RGM recipe values - last user change (global/local)	STRING	Name of the user who was logged in when the last change was made to the last recipe checked.
RGM recipe values check - result (global/local)	DINT	Result of the check: ▸ 0: All value match. ▸ 1: At least one variable value deviates from the recipe value. ▸ 2: At least one variable is faulty (INVALID). ▸ 3: Checking is not possible, because the column for the current value is not displayed. System driver variable is reset. Error messages: ▸ -1: En error while reading the variable value occurred. ▸ -2: The recipe group could not be opened. ▸ -3: The recipe could not be changed. Attention: Variable can either be created and evaluated globally or locally.
Check RGM recipe values - comment 1 to 8 (global/local)	STRING	Eight comments can be added to a recipe. The variable contains the comment of the respective number for the last recipe checked.
Check RGM recipe values - recipe group name (global/local)	STRING	Name of the recipe group of the recipe checked last. Requirement: Variable **RGM recipe value check - result** has a value >= -1. Attention: Variable can either be created and evaluated globally or locally.
RGM recipe values check - recipe name (global/local)	STRING	Name of the recipe checked last. Requirement: Variable **RGM recipe value check - result** has a value >= -1.

		Attention: Variable can either be created and evaluated globally or locally.
RGM recipe values check - recipe number (global/local)	UDINT	Number of the recipe checked last. Requirement: Variable **RGM recipe value check - result** has a value >= -1. Attention: Variable can either be created and evaluated globally or locally.
Check RGM recipe values - recipe status (global/local)	DINT	Status of the last recipe checked as a number.
Check RGM recipe values - recipe status text (global/local)	STRING	Status of the last recipe checked as text in the format: **1 - @Text**
Check RGM recipe values - recipe version (global/local)	DINT	Version of the last recipe checked.
Check RGM recipe values - time of last user change (global/local)	STRING	Time of the last recipe change of the last recipe checked.

4.2.4 Rename recipe

This function renames the selected recipe and all its versions.



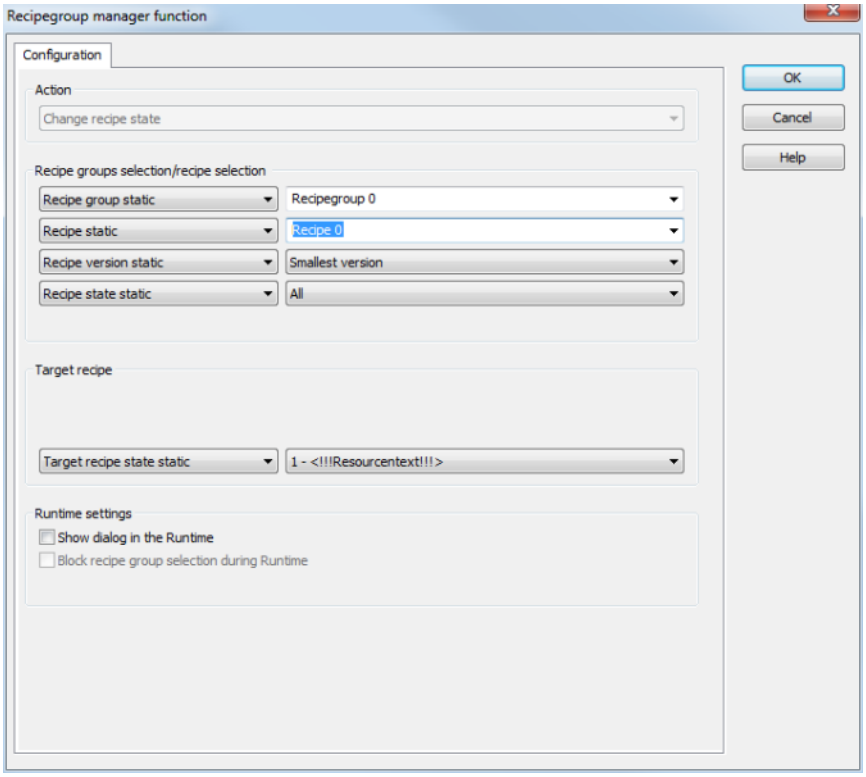
Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Target recipe	Select how the target recipe of the renaming is created: ▸ Target recipe name static ▸ Create new target recipe ▸ Target recipe name from variable
Static target recipe name:	Selection of an existing recipe from drop-down list.
Create new target recipe name	A new recipe with an automatically-generated name is created.

Target recipe name from variable:	Name of the target recipe is taken from a variable. Click on button `...` opens the dialog for selecting variables. The recipe is not renamed if the values of the variables are invalid.
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.5 Change recipe status

This function changes the status of a recipe.

An attempt is made to set the status value to the selected recipe and the recipe is then saved. If the given status value is not valid, (0 or a non-configured status value (on page 36)) the recipe remains unchanged and a CEL entry is generated. The **RGM recipe function being processed** (**sysdrv.chm::/25964.htm**) variable displays an error in this case (4).



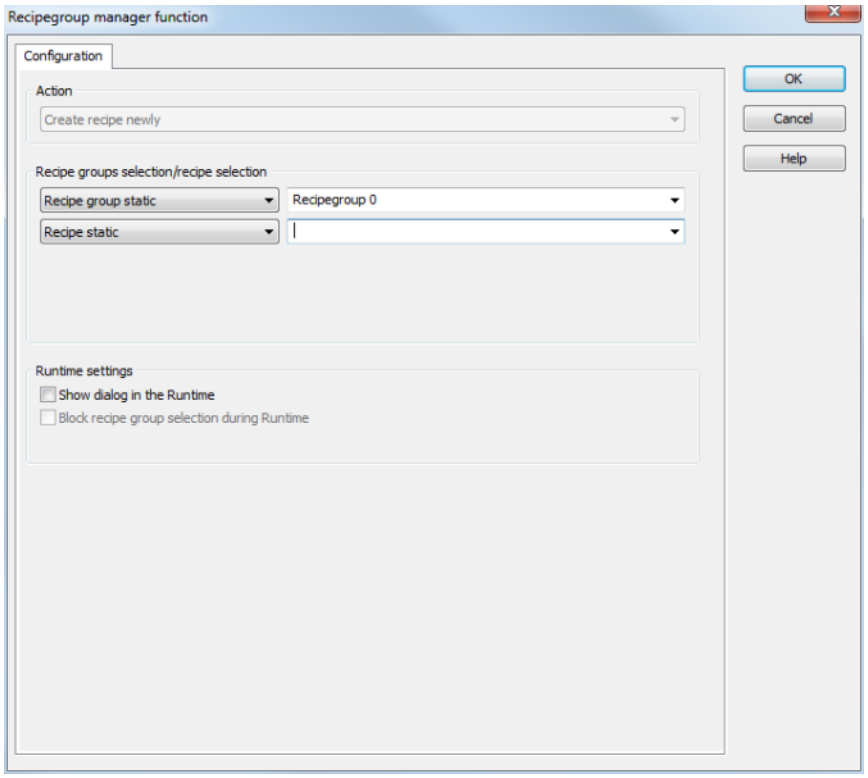
Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version;` additional selection of a recipe status possible

Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Target recipe`	Status definition for target recipe.
Target recipe status	Selection of new recipe status (on page 36) from existing status or using a variable.
Static target recipe list:	Selection of an existing status (on page 36) from drop-down list.
Target recipe status from variable:	Recipe status is taken from a variable as a numerical value. Click on button `...` opens the dialog for selecting variables. The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.6 Create new recipe

This function creates a new recipe in the selected recipe group.

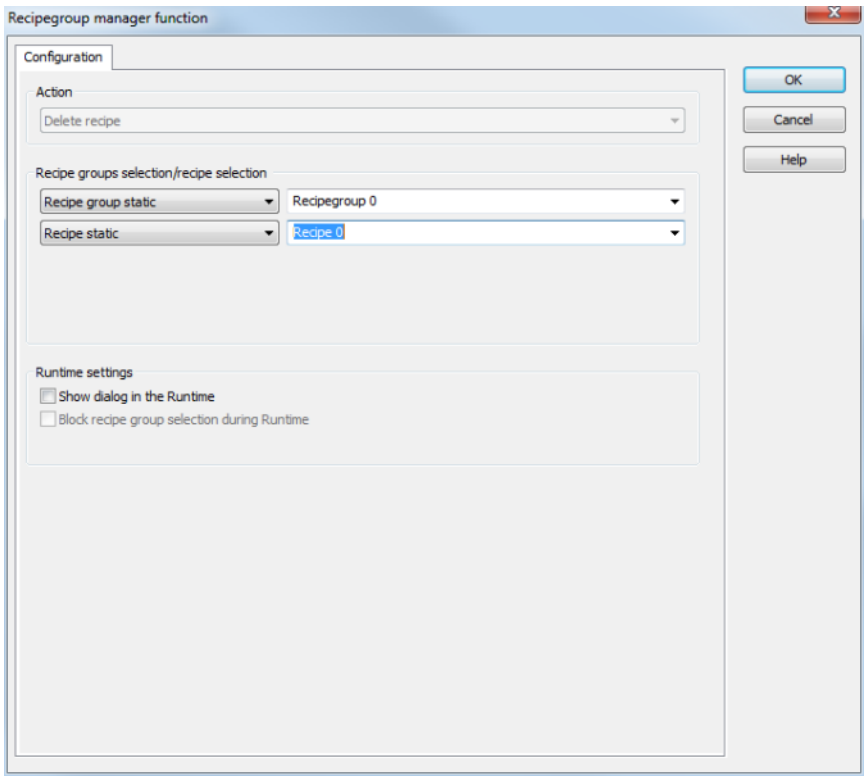


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button ... opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button ... opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button ... opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	Active: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	Active: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.
Cancel	Discards settings and closes the dialog. The function is created,

	however without a target.
Help	Opens online help.

4.2.7 Delete recipe

This function deletes the selected recipe with all its versions.



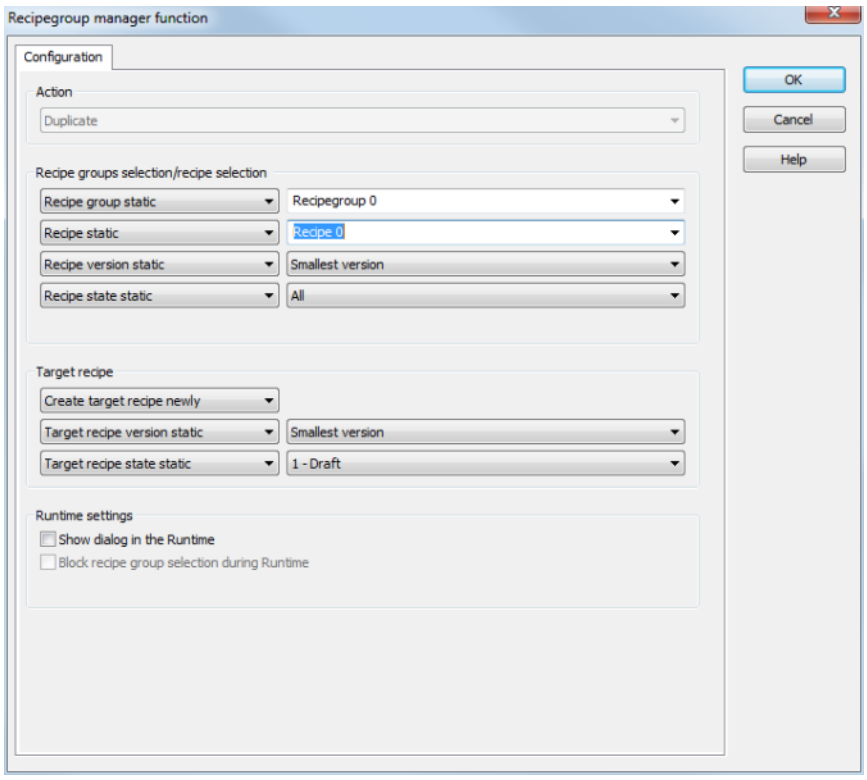
Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button ... opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button ... opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button ... opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	Active: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	Active: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.
Cancel	Discards settings and closes the dialog. The function is created,

	however without a target.
Help	Opens online help.

4.2.8 Duplicate

This function duplicates the selected recipe. The values of the corresponding variables are written to the new recipe.

Note: Duplication can lead to Runtime only being executed if the user who is logged in has the corresponding rights to edit the recipe further. If the user rights are not available, the dialog for temporary login is called up.



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Recipe group static	Selection of a recipe group (on page 20) that already exists.
Recipe group name from variable	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened. Attention: Must not be configured for versions before zenon 7.00.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Recipe static	Selection of a recipe (on page 28) that already exists.
Recipe name from variable	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened. Attention: Must not be configured for versions before zenon 7.00.
Recipe number from variable	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Recipe version static	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ Smallest version;

	additional selection of a recipe status possible ▸ `Largest version;` additional selection of a recipe status possible

Recipe version from variable	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe state static	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Target recipe`	Status definition for target recipe.
Create target recipe	Settings for recipe naming. Click on the text to open a drop-down list for selection: ▸ Target recipe name static ▸ Create new target recipe ▸ Target recipe name from variable
Target recipe name static	Assumption of an existing name from drop-down list.
Create new target recipe	The name is created and issued by the system.
Target recipe name from variable	Recipe name is is taken from a variable. Click on button `...` opens the dialog for selecting variables.
Target recipe version	Selection of target recipe version from existing versions or using a variable.
Target recipe version static	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Target recipe version from variable	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Target recipe status	Selection of new recipe status (on page 36) from existing status or using a variable.
Static target recipe list:	Selection of an existing status (on page 36) from drop-down list.
Target recipe state from variable	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards all changes and closes the dialog.
`Help`	Opens online help.

PROCEDURE WHEN DUPLICATING

When duplicating, an existing source recipe with its properties is:

- Transferred to an existing recipe and this is overwritten with all settings of the source recipe or
- A new recipe with all settings of the source recipe is created in the same recipe group

The recipe status is always taken from the source recipe (and its recipe version).

The recipe version is not transferred, because this is not a property of the recipe, but the name is further specified.

The following is applicable when stating the recipe version and recipe status:

- The specified recipe version for the specified recipe name and/or for the specified recipe names with the specified recipe status must exist

- If there is still no recipe with the specified name, a new version 1 is created with the specified name and the status is set as in the source recipe.

SPECIFICATION USING VARIABLES

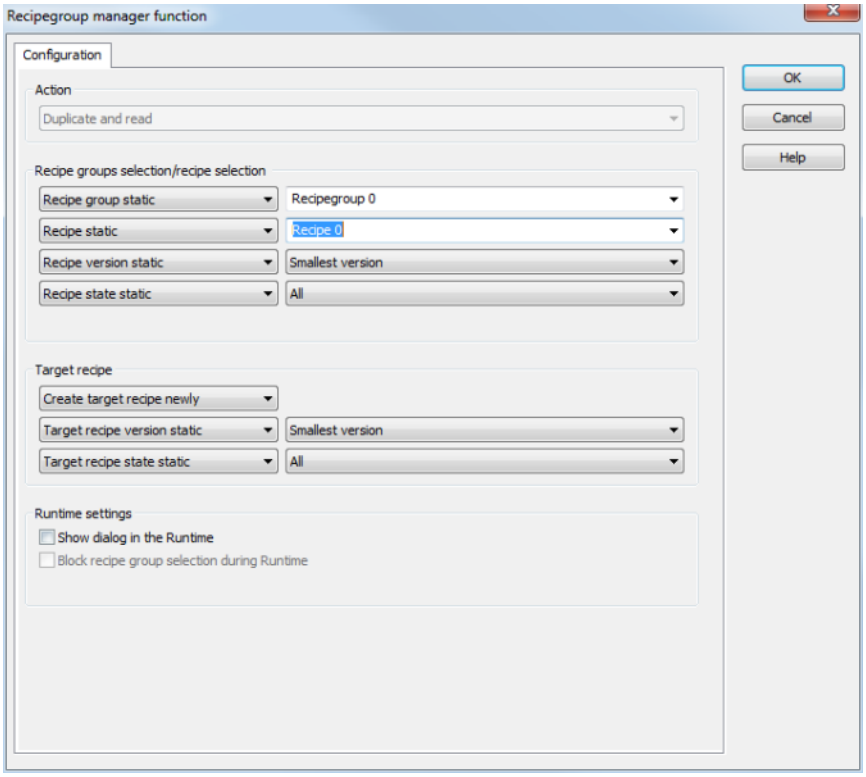
If, during configuration, the target recipe version or the target recipe status are specified using variables, the target recipe is only created or overwritten under the following conditions:

- The target version defined by the variable value with the status defined by the variable value already exists:
  - The defined target recipe is overwritten with the source recipe.
  - The number of the recipe version remains the same.
  - The recipe status is taken from the source recipe.
- There is not yet a recipe version with this name:
  - A recipe version 1 is created, regardless of what value the variable has for the target version.
  - The recipe status is taken from the source recipe.
- There is a recipe with the target name but no recipe version that corresponds to the variable value for the target version:
  - No new version is created.
    This also applies if no recipe version 1 exists any more.

4.2.9 Duplicate and teach

This function duplicates the selected recipe. The values of the corresponding variables are written to the new recipe. The values from the PLC are then read in. If the values cannot be read in, then the values of the duplicate no no longer come from the PLC, but are only copied from the original recipe.

Note: Duplication can lead to Runtime only being executed if the user who is logged in has the corresponding rights to edit the recipe further. If the user rights are not available, the dialog for temporary login is called up.



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Recipe group static	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened. Attention: Must not be configured for versions before zenon 7.00.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Recipe static	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened. Attention: Must not be configured for versions before zenon 7.00.
Recipe number from variable	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Recipe version static	Selection of an existing recipe version from drop-down list. Possible selection: ▸ pre-existing version

	▸ `Smallest version;` additional selection of a recipe status possible ▸ `Largest version;` additional selection of a recipe status possible

Recipe version from variable	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe state static	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Target recipe`	Status definition for target recipe.
Create target recipe	Settings for recipe naming. Click on the text to open a drop-down list for selection: ▸ Target recipe name static ▸ Create new target recipe ▸ Target recipe name from variable
Target recipe name static	Assumption of an existing name from drop-down list.
Create new target recipe	The name is created and issued by the system.
Target recipe name from variable	Recipe name is is taken from a variable. Click on button `...` opens the dialog for selecting variables.
Target recipe version	Selection of target recipe version from existing versions or using a variable.
Static target recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Target recipe version from variable	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Target recipe status	Selection of new recipe status (on page 36) from existing status or using a variable.
Target recipe state static	Selection of an existing status (on page 36) from drop-down list.
Target recipe state from variable	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards all changes and closes the dialog.
`Help`	Opens online help.

PROCEDURE WHEN DUPLICATING

When duplicating, an existing source recipe with its properties is:

- Transferred to an existing recipe and this is overwritten with all settings of the source recipe or
- A new recipe with all settings of the source recipe is created in the same recipe group

The recipe status is always taken from the source recipe (and its recipe version).

The recipe version is not transferred, because this is not a property of the recipe, but the name is further specified.

The following is applicable when stating the recipe version and recipe status:

- The specified recipe version for the specified recipe name and/or for the specified recipe names with the specified recipe status must exist

- If there is still no recipe with the specified name, a new version 1 is created with the specified name and the status is set as in the source recipe.

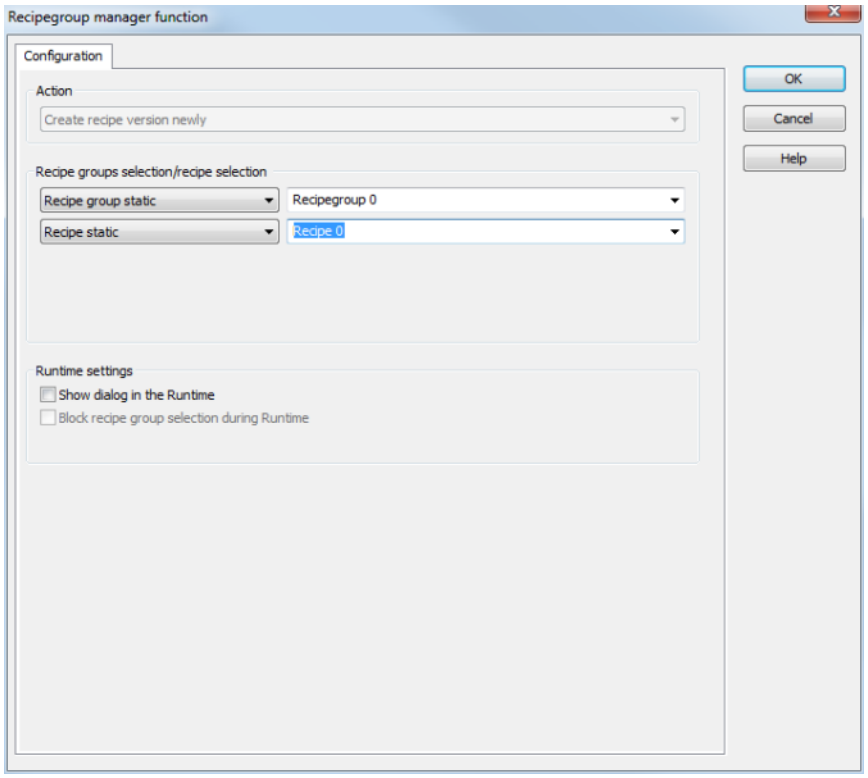
SPECIFICATION USING VARIABLES

If, during configuration, the target recipe version or the target recipe status are specified using variables, the target recipe is only created or overwritten under the following conditions:

- The target version defined by the variable value with the status defined by the variable value already exists:
  - The defined target recipe is overwritten with the source recipe.
  - The number of the recipe version remains the same.
  - The recipe status is taken from the source recipe.
- There is not yet a recipe version with this name:
  - A recipe version 1 is created, regardless of what value the variable has for the target version.
  - The recipe status is taken from the source recipe.
- There is a recipe with the target name but no recipe version that corresponds to the variable value for the target version:
- No new version is created.
  This also applies if no recipe version 1 exists any more.

4.2.10 Create new recipe version

This function creates a new recipe version for the selected recipe. The recipe values are filled with the replacement values of the selected variables. A maximum of 89999 recipe versions can be created.

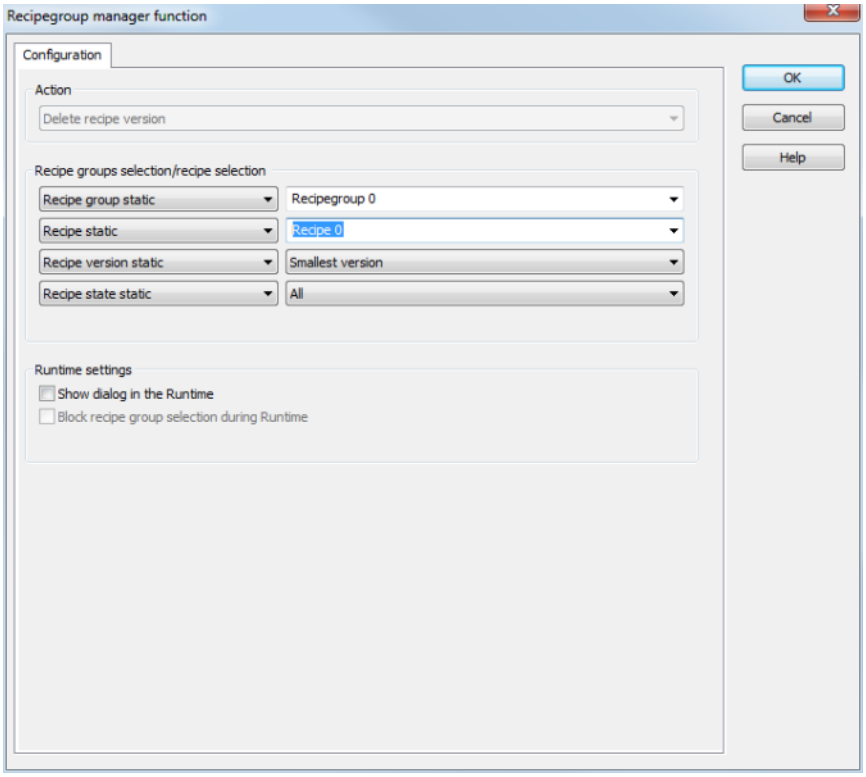


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button ... opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button ... opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button ... opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	Active: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	Active: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.
Cancel	Discards settings and closes the dialog. The function is created,

	however without a target.
Help	Opens online help.

4.2.11 Delete recipe version

This function deletes the selected recipe version. The whole recipe is deleted if there is only one recipe version.

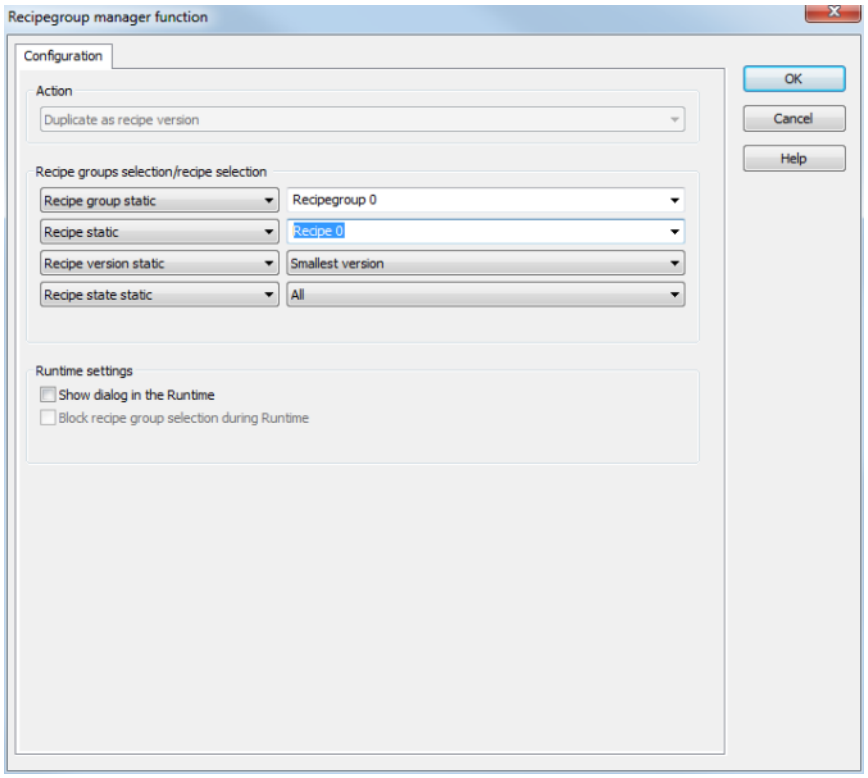


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.12 Duplicate as new recipe version

This function creates a new recipe version for the selected recipe. The recipe values are filled with the values of the selected recipe.

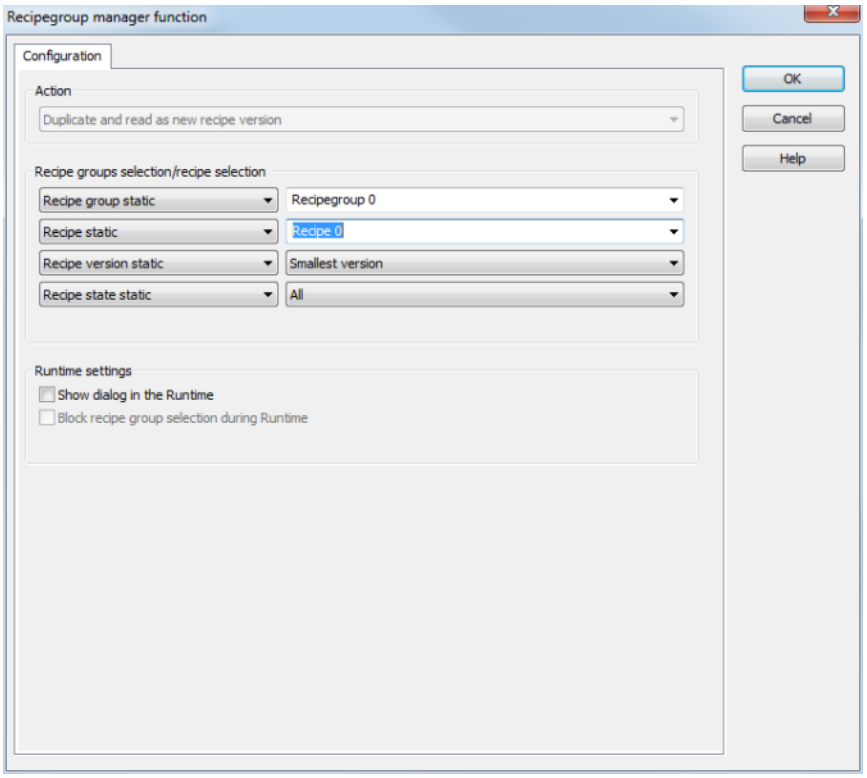


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.13 Duplicating and reading as a new recipe version

This function creates a new recipe version for the selected recipe. The recipe values are filled with the values of the selected recipe. The values from the PLC are then read in. If the values cannot be read in, then the values of the duplicate no no longer come from the PLC, but are only copied from the original recipe.

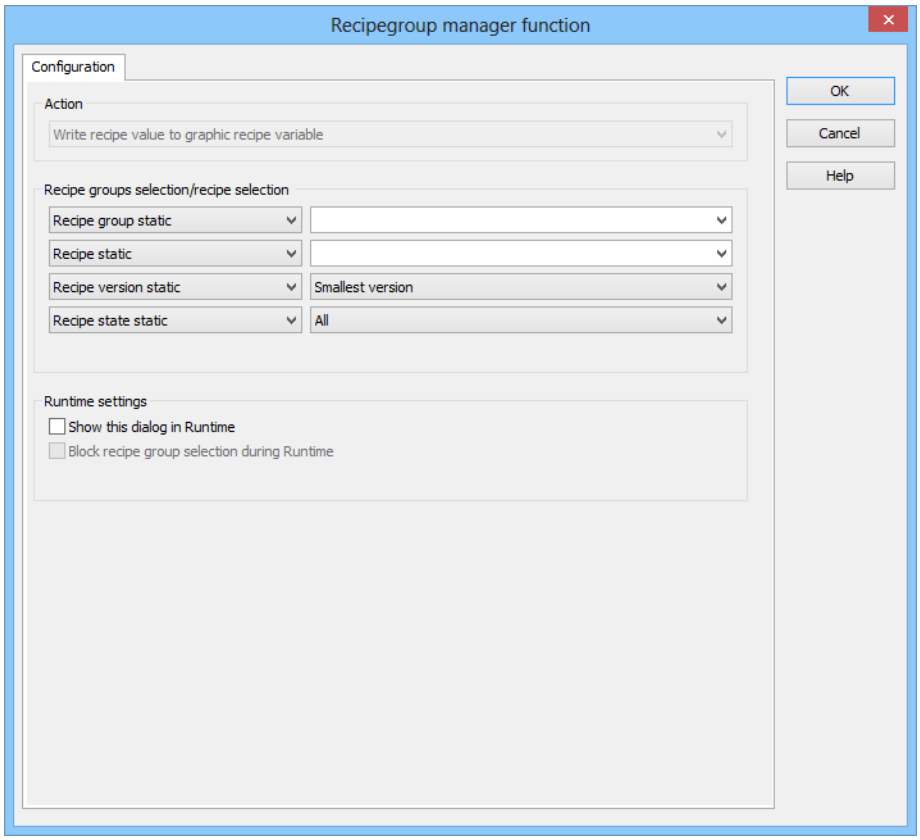


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.14 Write recipe value to shadow variable

This function writes recipe values to a graphic recipe variable (on page 160).

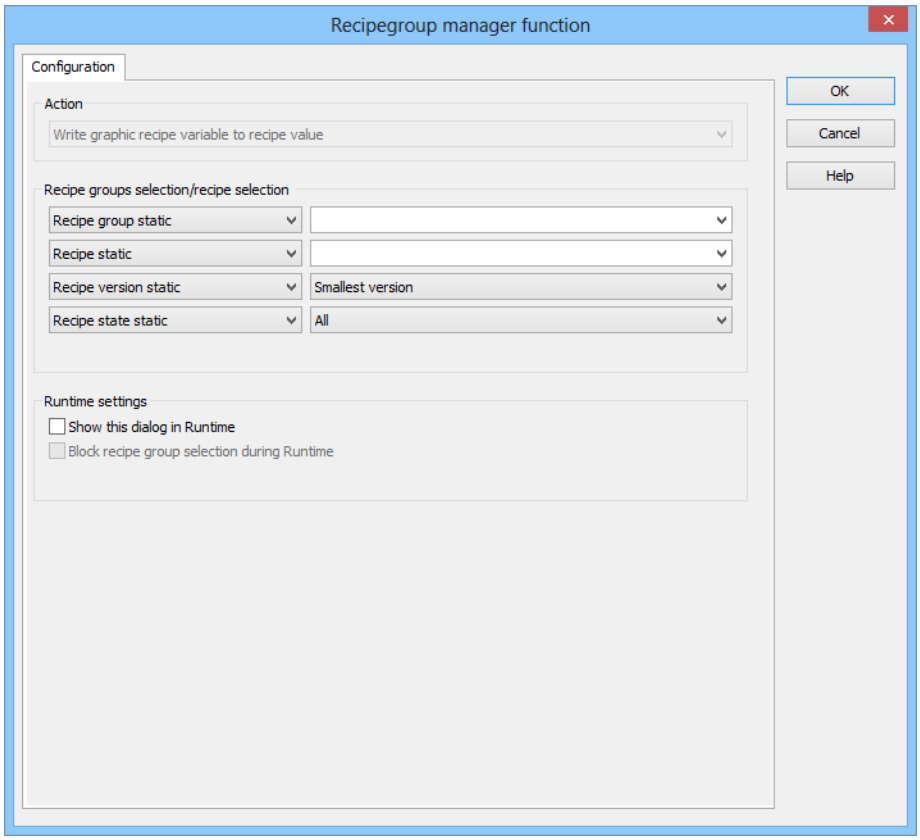


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.15 Write shadow variable to recipe value

This function writes graphic recipe variable (on page 160) values to recipe values.

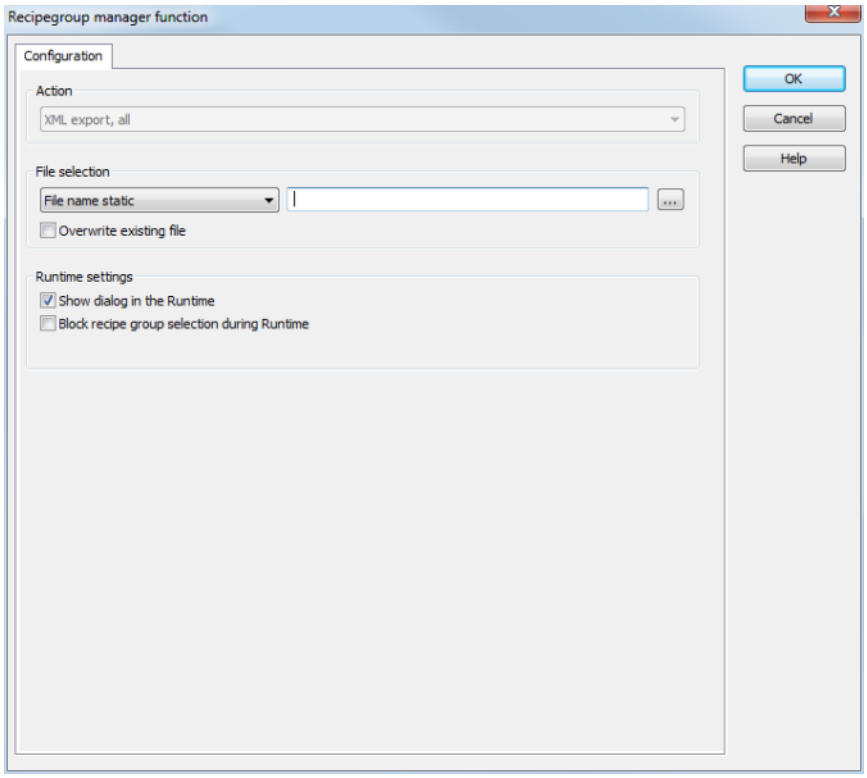


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If the variable values are invalid, no recipes are opened.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button . . . opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first. If the variable values are invalid, no recipes are opened.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible

	▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

4.2.16 Export XML all

The function exports the complete content of an RGM to an XML file.



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
File selection	Settings for issuing the filename of the export file. Click on the text to open a drop-down list for selection: ▸ File name static ▸ File name from variable ▸ Generate file name automatically If no other folder is stipulated, the export file is stored in the project's export folder: `%CD_USERDATA%\[Project]\Export`
File name static:	The name of the export file is directly defined by the user. The file name can be given with the path stated or the export path that has been set can be used. In addition, there is the possibility to generate file names dynamically by means of placeholders (on page 116). Click on the `...` button to open the dialog to select a folder and give it a name. If name is given without a path, the export file in the Runtime folder is written to.
File name from variable:	The name of the export file is defined by the contents of a string variable. A click on the `...` button opens the selection dialog for variable. The variables can also issue the file names with absolute path, relative path and with placeholders (on page 116).
Generate file name automatically:	The name of the export file is created automatically. It comprises the prefix **`RGM`** plus theplaceholder (on page 116) **`<DateTime>`**. For example: **`RGM 10_11_2011 10_42_29.xml`**
Overwrite existing file	`Active`: An file with the same name that already exists in the folder is overwritten. `Inactive` The export is canceled if a file with the same name is present. Default: `Inactive`
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.

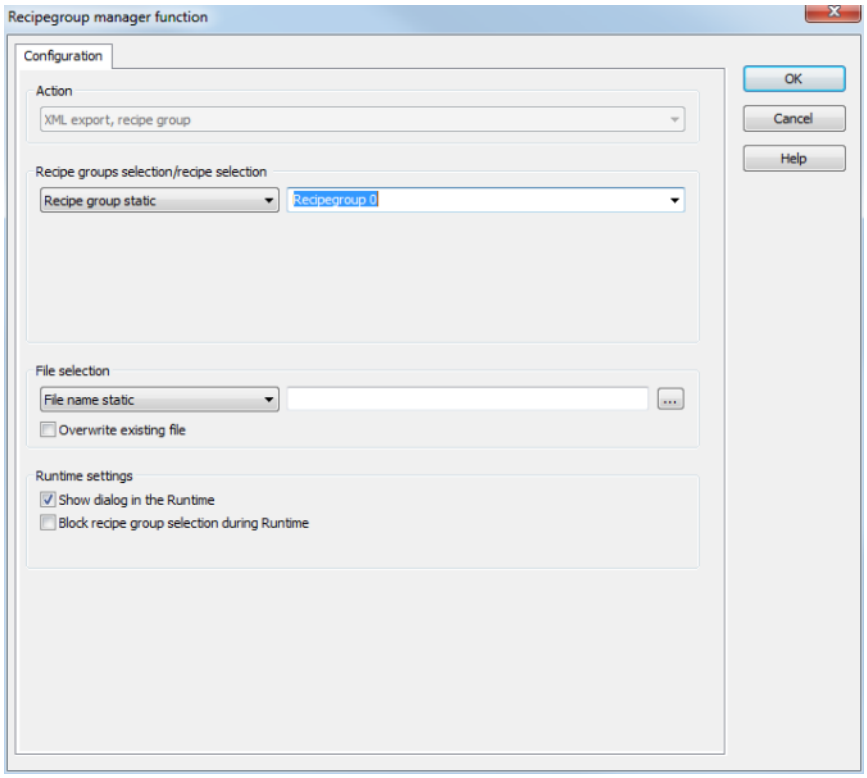
Cancel	Discards settings and closes the dialog. The function is created, however without a target.
Help	Opens online help.

Placeholders for dynamic paths

Placeholder	Condition	Result
<ProjectName>	▸ Always	Project name
<DateTime>	▸ Always	Date and time in the format according to the system settings. All characters that are invalid and unwanted for file names are replaced with an underscore (_). For German (Germany) for example, the date 24/12/2001, at 16:04 and 59 seconds, becomes: `24_12_2011 16_04_59`
<RGMGroupName>	▸ Export of a group ▸ Export of a recipe ▸ Import with group selection	Name of the selected recipe group.
<RGMRecipeName>	▸ Export of a recipe	Name of the selected recipe.
<RGMRecipeVersion>	▸ Export of a recipe	Version number of the selected recipe.

4.2.17 Export recipe group XML

This function exports the selected recipe group including its contents to an XML file.



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables.
File selection	Settings for issuing the filename of the export file. Click on the text to open a drop-down list for selection: ▸ File name static ▸ File name from variable ▸ Generate file name automatically If no other folder is stipulated, the export file is stored in the project's export folder: `%CD_USERDATA%\[Project]\Export`
File name static:	The name of the export file is directly defined by the user. The file name can be given with the path stated or the export path that has been set can be used. In addition, there is the possibility to generate file names dynamically by means of placeholders (on page 116). Click on the . . . button to open the dialog to select a folder and give it a name. If name is given without a path, the export file in the Runtime folder is written to.
File name from variable:	The name of the export file is defined by the contents of a string variable. A click on the . . . button opens the selection dialog for variable. The variables can also issue the file names with absolute path, relative path and with placeholders (on page 116).
Generate file name automatically:	The name of the export file is created automatically. It comprises the prefix **RGM** plus the placeholder (on page 116) **<RGMGroupName>**.

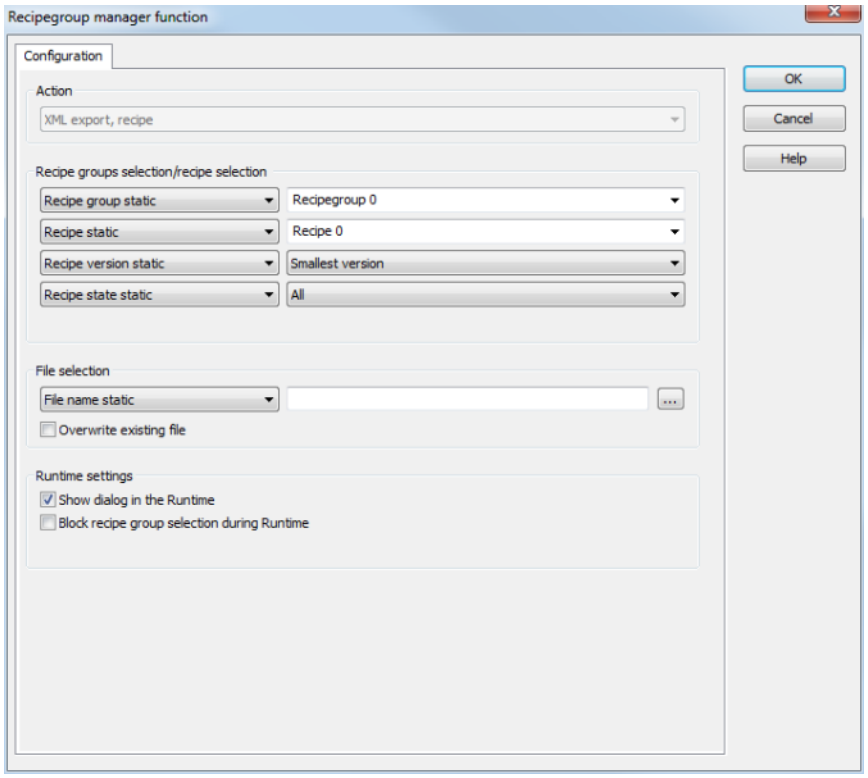
	For example: **<RGM GroupName>.xml** results in, for **Group** 1: **Group 1.xml.**
Overwrite existing file	Active: An file with the same name that already exists in the folder is overwritten. Inactive The export is cancelled if a file with the same name is present. Default: inactive
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	Active: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	Active: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.
Cancel	Discards settings and closes the dialog. The function is created, however without a target.
Help	Opens online help.

PLACEHOLDERS FOR DYNAMIC PATHS

Placeholder	Condition	Result
<ProjectName>	▸ Always	Project name
<DateTime>	▸ Always	Date and time in the format according to the system settings. All characters that are invalid and unwanted for file names are replaced with an underscore (_). For German (Germany) for example, the date 24/12/2001, at 16:04 and 59 seconds, becomes: 24_12_2011 16_04_59
<RGMGroupName>	▸ Export of a group ▸ Export of a recipe ▸ Import with group selection	Name of the selected recipe group.
<RGMRecipeName>	▸ Export of a recipe	Name of the selected recipe.
<RGMRecipeVersion>	▸ Export of a recipe	Version number of the selected recipe.

4.2.18 Export recipe XML

This function exports the selected recipe to an XML file. The name of the recipe group is also exported with it. If recipe groups are renamed after export, this assignment is lost during import.



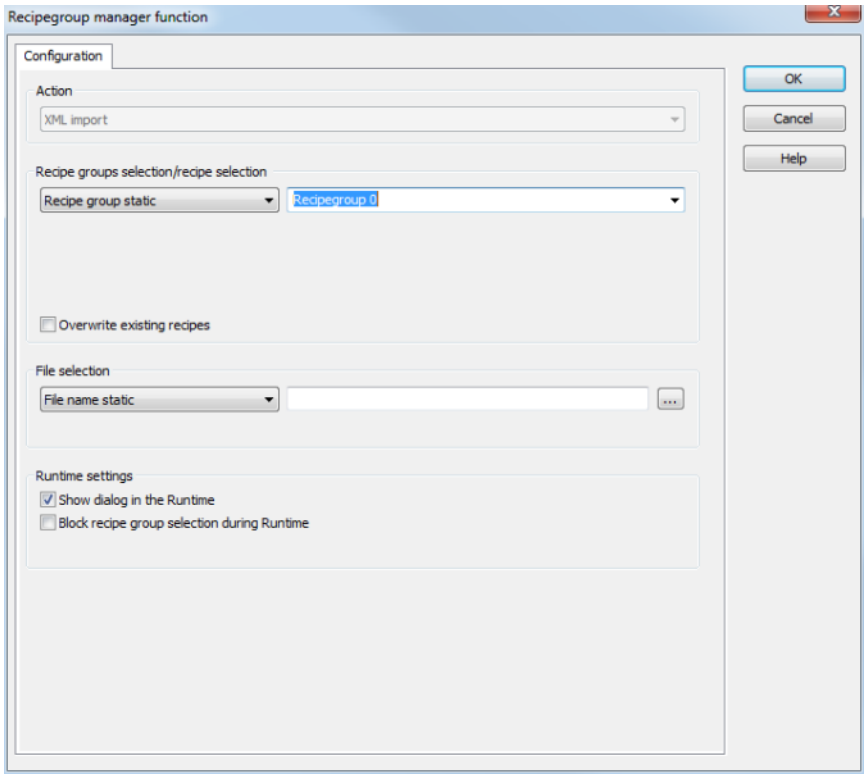
Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button ... opens the dialog for selecting variables.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button ... opens the dialog for selecting variables.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button ... opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible ▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button ... opens

	the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
File selection	Settings for issuing the filename of the export file. Click on the text to open a drop-down list for selection: ▸ File name static ▸ File name from variable ▸ Generate file name automatically If no other folder is stipulated, the export file is stored in the project's export folder: `%CD_USERDATA%\[Project]\Export`
File name static:	The name of the export file is directly defined by the user. The file name can be given with the path stated or the export path that has been set can be used. In addition, there is the possibility to generate file names dynamically by means of placeholders (on page 116). Click on the `...` button to open the dialog to select a folder and give it a name. If name is given without a path, the export file in the Runtime folder is written to.
File name from variable:	The name of the export file is defined by the contents of a string variable. A click on the `...` button opens the selection dialog for

	variable. The variables can also issue the file names with absolute path, relative path and with placeholders (on page 116).
Generate file name automatically:	The name of the export file is created automatically. It comprises the prefix **RGM** plus the placeholder (on page 116) **<RGMRecipeName>.<RGMRecipeVersion>**. For example: **<RGMRecipeName>.<RGMRecipeVersion>** results in, for the recipe Recipe 1 with **version** 3: **Recipe 1.3.xml**.
Overwrite existing file	Active: An file with the same name that already exists in the folder is overwritten. Inactive The export is cancelled if a file with the same name is present. Default: inactive
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	Active: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	Active: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.
Cancel	Discards settings and closes the dialog. The function is created, however without a target.
Help	Opens online help.

4.2.19 Import XML

This function imports the content of the stated XML file. If there are individual groups therein that do not belong to a group, these recipes are imported into the selected group, otherwise the group selection is ignored:



Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group into which unassigned recipes are to be imported. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables ▸ Using an import file Clicking on Property opens a drop-down list to select the method. This setting is ignored if there are already recipe groups in the XML file.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables.
Recipe group name from file.	The name of the recipe group is taken from the file to be imported.
File selection	Settings for the selection of the file from which importing is to take place. Click on the text to open a drop-down list for selection: ▸ File name static ▸ File name from variable The standard folder for exported data is the project's export folder: `%CD_USERDATA%\[Project]\Export`
File name static:	The name of the import file is defined by the user. The file name can be given with the path stated or the export path that has been set can be used. In addition, there is the possibility to generate file names dynamically by means of placeholders (on page 116). Click on the . . . button to open the dialog to select a folder and a file.
File name from variable:	The name of the import file is defined by the contents of a string variable. A click on the . . . button opens the selection dialog for variable. The variables can also issue the file names with absolute path, relative path and with placeholders (on page 116).
Overwrite existing recipes	`Active`: Existing recipes with the same name are overwritten during import.

	`Inactive`: Existing recipes are not overwritten. Only new recipes are created. Default: `inactive`
`Runtime settings`	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
`OK`	Applies settings and closes the dialog.
`Cancel`	Discards settings and closes the dialog. The function is created, however without a target.
`Help`	Opens online help.

NOTES ON EXPORTING WITH DIFFERENT VARIABLES

If a recipe is imported from an XML file and its variables are different to the variables of the original recipe, then:

1. The recipe is imported
2. Variables that exist in the XML file and in Runtime are overwritten in the original recipe
3. All other variables are ignored
4. The system driver variable (sysdrv.chm::/25964.htm) returns the value `2` (`import was completed without errors`)

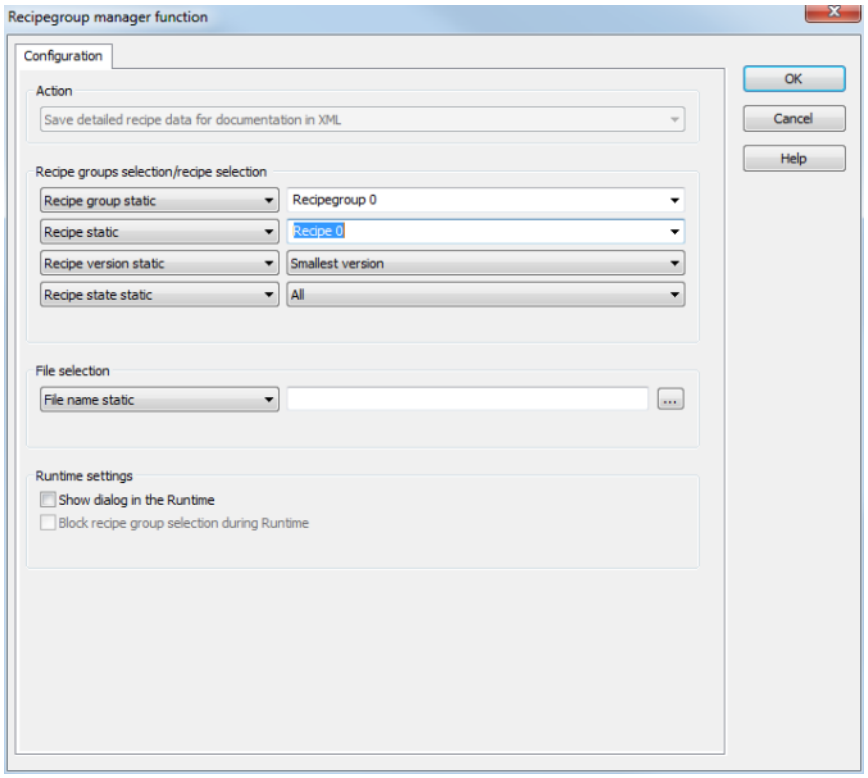
Note on block arrays: If the size of a block array is changed between import and re-Import of a recipe group, then the following is applicable for:

- Enlarging the array size (group already exists): the new variables are not added to recipe groups
- Enlarging the array group (group not present): the new variables are added to the recipe group; there is a message in the output window
- Reducing the array size: the missing variables are removed from the recipe group

4.2.20 Detailed recipe data on saving documentation in XML

This function exports detailed recipe data to documentation in an XML file.

Note: This data can no longer be imported. It is intended as the basis for the exact documentation.

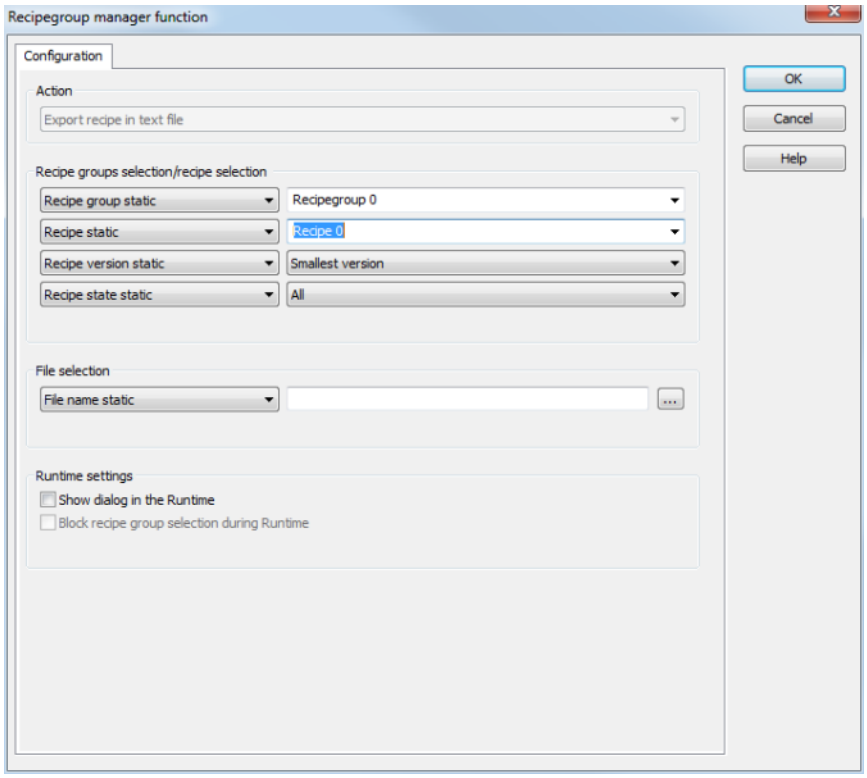


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button ... opens the dialog for selecting variables.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button ... opens the dialog for selecting variables.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button ... opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible ▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button ... opens

	the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe

4.2.21 Export recipe to text file

This function exports the selected recipe to a text file.



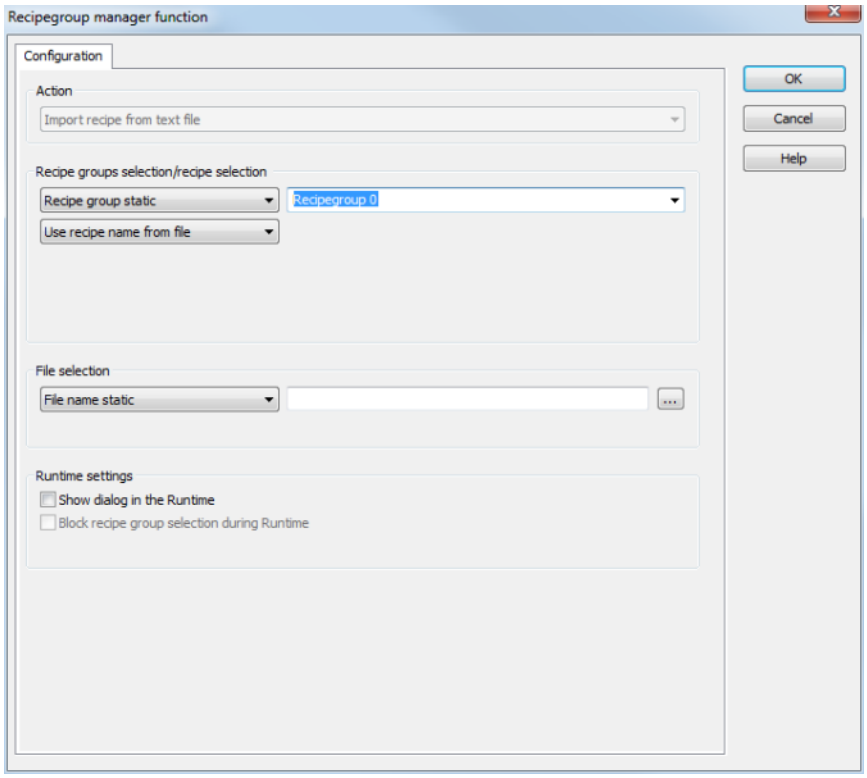
Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group and the recipe. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button ... opens the dialog for selecting variables.
Recipe	Settings for recipe selection. Click on the text to open a drop-down list for selection: ▸ Recipe static ▸ Recipe name from variable name ▸ Recipe name from variable no.
Static recipe:	Selection of a recipe (on page 28) that has already been created.
Recipe name from variable name:	Recipe name is is taken from a variable. Click on button ... opens the dialog for selecting variables.
Recipe number from variable no.:	Recipe number is is taken from a variable. Click on button ... opens the dialog for selecting variables. If several recipes with the same number exist, zenon uses the recipe it finds first.
Recipe version	Selection of recipe version (on page 35) from existing versions or using a variable.
Static recipe version:	Selection of an existing recipe version from drop-down list. Possible selection: ▸ Pre-existing recipe version (on page 35) ▸ `Smallest version`; additional selection of a recipe status possible ▸ `Largest version`; additional selection of a recipe status possible
Recipe version from variable:	Recipe version is is taken from a variable. Click on button ... opens

	the dialog for selecting variables. Note: If the recipe version is obtained from a numerical variable, the following applies: ▸ Value 90000 matches the statistical `smallest version` ▸ Value 90001 matches the statistical `largest version`
Recipe state	Selection of recipe status (on page 36) from existing status or using a variable.
Recipe status:	The recipe status is evaluated in combination with the version. Only available if the **recipe version** has the value `smallest version` or `largest version` or is taken from a variable. Example: `Largest version` **`with status`** `start`. Selection of a recipe status from drop-down list: ▸ Existing status (on page 36) ▸ `All`
Recipe status from variable:	Recipe status is taken from a variable. Click on button `...` opens the dialog for selecting variables. Note: If the recipe status is obtained from a numerical variable, the following applies: ▸ Value `0` is valued as `all` ▸ The action is cancelled if the status cannot be found in the recipe
File selection	Settings for issuing the filename of the export file. Click on the text to open a drop-down list for selection: ▸ File name static ▸ File name from variable ▸ Generate file name automatically If no other folder is stipulated, the export file is stored in the project's export folder: `%CD_USERDATA%\[Project]\Export`
File name static:	The name of the export file is directly defined by the user. Click on the `...` button to open the dialog to select a folder and give it a name. If name is given without a path, the export file in the Runtime folder is written to.
File name from variable:	The name of the export file is defined by the contents of a string variable. A click on the `...` button opens the selection dialog for variable.
Generate file name automatically:	The name of the export file is created automatically. It comprises the prefix **`RGM`** plus the **`date`** and **`time`**. For example: **`RGM 10_11_2011 10_42_29.txt`**
Overwrite existing file	`Active`: An file with the same name that already exists in the folder

	is overwritten.
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	Active: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	Active: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.
Cancel	Discards settings and closes the dialog. The function is created, however without a target.
Help	Opens online help.

4.2.22 Import recipe of text file

This function imports data from a text file.

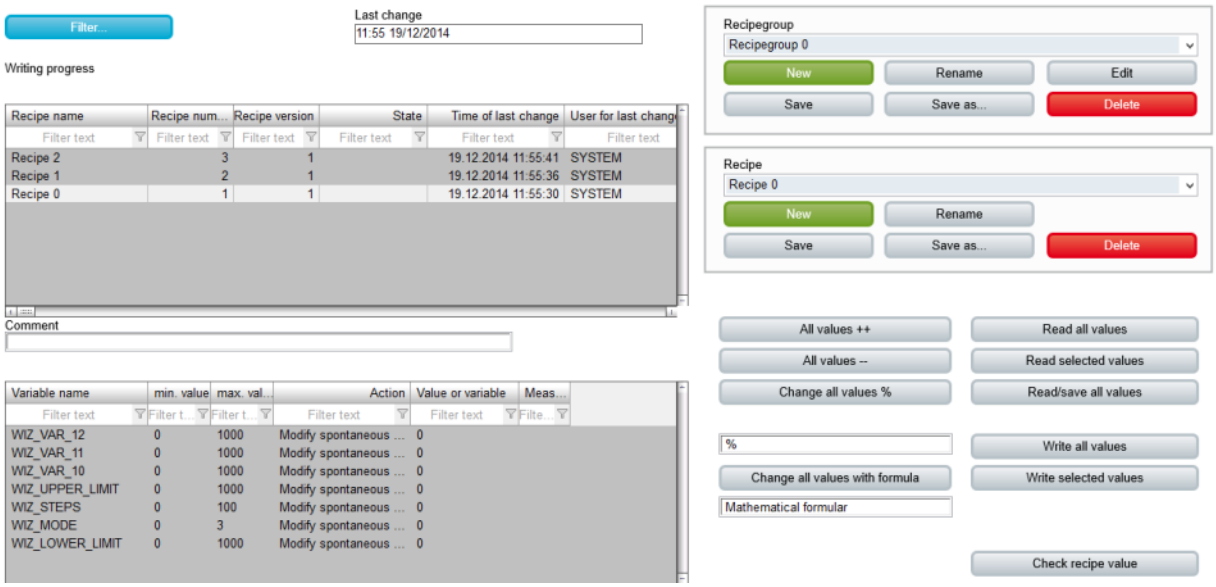


Parameters	Description
Action	Displays the action selected in the Recipe Group Manager function (on page 59) dialog. Display only, cannot be selected.
Recipe groups-/ Recipe selection	Selection of the recipe group that is to be imported. The selection can take place: ▸ Statically from pre-defined entries ▸ Dynamically using variables ▸ Using an import file Clicking on Property opens a drop-down list to select the method.
Recipe group	Settings for recipe group selection. Click on the text to open a drop-down list for selection: ▸ Recipe group static ▸ Recipe group name from variable
Static recipe group:	Selection of a recipe group (on page 20) that has already been created.
Recipe group name from variable:	Recipe group name is is taken from a variable. Click on button . . . opens the dialog for selecting variables.
Recipe group name from file.	The name of the recipe group is taken from the file to be imported.
File selection	Settings for the selection of the file from which importing is to take place. Click on the text to open a drop-down list for selection: ▸ File name static ▸ File name from variable The standard folder for exported data is the project's export folder: `%CD_USERDATA%\[Project]\Export`
File name static:	The name of the import file is defined by the user. Click on the . . . button to open the dialog to select a folder and a file.
File name from variable:	The name of the import file is defined by the contents of a string variable. A click on the . . . button opens the selection dialog for variable.
Overwrite existing recipes	`Active`: Existing recipes with the same name are overwritten during import.
Runtime settings	Settings for operation in Runtime.
Show dialog in the Runtime	`Active`: The dialog is shown in Runtime so that changes can be made.
Block recipe group selection in Runtime	`Active`: Selection of recipe group is blocked in Runtime. Only available if **Offer dialog in Runtime** is active.
OK	Applies settings and closes the dialog.

Cancel	Discards settings and closes the dialog. The function is created, however without a target.
Help	Opens online help.

5. Operating during Runtime

The screen configured in the Editor (on page 11) is available in Runtime via screen switching.



Engineering: See Creating a Recipe Group Manager screen (on page 11) section.

Note: Buttons are only active if the corresponding list/table is present.

EDIT RECIPE AND SAVE UNDER

A recipe that is edited is only saved if one of the following buttons is clicked on:

- **Save recipe**
- **Write all values**
- **Write selected values**

Clicking on the **Save recipe as** button saves the recipe that is currently being edited under a new name. Changes to the original recipe that have not yet been saved there are also not present in the new recipe.

CHANGE RECIPE NAME OR RECIPE NUMBER

The recipe name must be unique. The recipe number is not checked for uniqueness. It is only used in order to call a recipe via a variable with the help of function **Recipegroup Manager** (on page 41). If several recipes with the same number exist, zenon uses the recipe it finds first.

RENAME OR DELETE RECIPES

In order for a user to rename or delete a recipe, they must have the operating authorization for all existing versions of the recipe.

CURRENTNESS OF THE DISPLAYED INFORMATION

The Recipe Group manager screen works with a copy of the Recipe Group Manager database in Runtime. The current information from the database is displayed in Runtime when the RGM screen is displayed. This display is not updated automatically.

Changes are updated as follows:

- If the content is changed due to execution of a function or due editing the screen in a client, the change is not shown in the screen that is currently displayed. To display changes, the screen must be closed and reopened. The database is therefore read in again and the updated status is shown.
- New recipe groups are displayed immediately once the screen has been opened again; variables are only displayed after Runtime is reloaded.
- Recipes or recipe groups that are amended in the Editor are only displayed after Runtime is reloaded.

> **Attention**
>
> *If the variable for visibility (**Visibility/Variable** property) changes its value whilst a Recipe Group Manager screen that contains this variable is opened, the Recipe Group Manager screen is reopened. Changes to the screen that are not saved are lost in the process.*

QUEUING IN THE NETWORK

From version 7.10, the RGM supports queuing for communication in the network. RGM queries receive a unique ID and are processed in sequence. Versions before zenon 7.10 do not support queuing. This means that queries that reach the server whilst it is processing another query are discarded.

5.1 Recipe list

An individual entry in the recipe list can be selected. The selected recipe is displayed in the recipe value table and can then be edited with the buttons (rename, delete, etc.). The columns can be allocated arranged by means of drag&drop (with the exception of Windows CE).

If the list is used together with the **Recipe name** and/or **Recipe version** drop-down lists, the selection is synchronized. If the selection in the drop-down list is changed, the selection in the recipe list changes and vice versa. If the selected entry is not visible due to a filter criteria, nothing in the list is selected.

New recipes and recipe versions are added at the end of the list regardless of the filter criteria. Amended recipe data, for example the text of a comment or the status, are displayed after the recipe is saved. Texts (the language) of the comments and column headings are translated.

Design of the recipe list: See **Editing the recipe list** (on page 19) section.

5.2 Recipe Value List

In the recipe value table, the values and actions are displayed for the selected recipe. The recipe value table is available in two versions:

- Recipe Value List
- Recipe Value List CE

DIFFERENCES BETWEEN THE RECIPE VALUE TABLES

RECIPE VALUE LIST

Variable name	min. value	max. val...	Action	Value or variable	Meas...
Filter text	Filter t...	Filter t...	Filter text	Filter text	Filte...
WIZ_VAR_12	0	1000	Modify spontaneous ...	0	
WIZ_VAR_11	0	1000	Modify spontaneous ...	0	
WIZ_VAR_10	0	1000	Modify spontaneous ...	0	
WIZ_UPPER_LIMIT	0	1000	Modify spontaneous ...	0	
WIZ_STEPS	0	100	Modify spontaneous ...	0	
WIZ_MODE	0	3	Modify spontaneous ...	0	
WIZ_LOWER_LIMIT	0	1000	Modify spontaneous ...	0	

The table columns can be arranged by means of drag&drop and sorted by clicking on the column header. The columns can be selected and formatted using the **Recipe value table column selection** (on page 139) and **Recipe value table column format** (on page 140) buttons.

Available are:

- **Writing order**: Display only

- **`Action`**: Display only
- **`Resources label`**: Display only
- **`Filter text`**: Display only
- **`Actual value`**: Display only
- **`Identification`**: Display only
- Measuring unit: Display only
- Maximum value: Display only
- **`Minimum value`**: Display only
- **`Variable name`**: Display only
- **`Value or variable`**: can be edited depending on the entry in the **`Action`** column
- **`Value display as a text`**: can be edited depending on the entry in the **`Action`** column (only via `Keyboard` screen)

RECIPE VALUE LIST CE

	Variable name	min. value	max. value	Action	Value or variable	Measur
1	WIZ_VAR_12	0	1000	Modify spontaneous value	0	
2	WIZ_VAR_11	0	1000	Modify spontaneous value	0	
3	WIZ_VAR_10	0	1000	Modify spontaneous value	0	
4	WIZ_UPPER_LIMIT	0	1000	Modify spontaneous value	0	
5	WIZ_STEPS	0	100	Modify spontaneous value	0	
6	WIZ_MODE	0	3	Modify spontaneous value	0	
7	WIZ_LOWER_LIMIT	0	1000	Modify spontaneous value	0	

The table is configured in screen switching (on page 41).

USE IN RUNTIME

`Recipe value table` is used if this condition is applicable:

- The **`recipe value table`** has been configured in the screen and `Use standard table` has been selected for the **Formatting of the recipe value table** option.

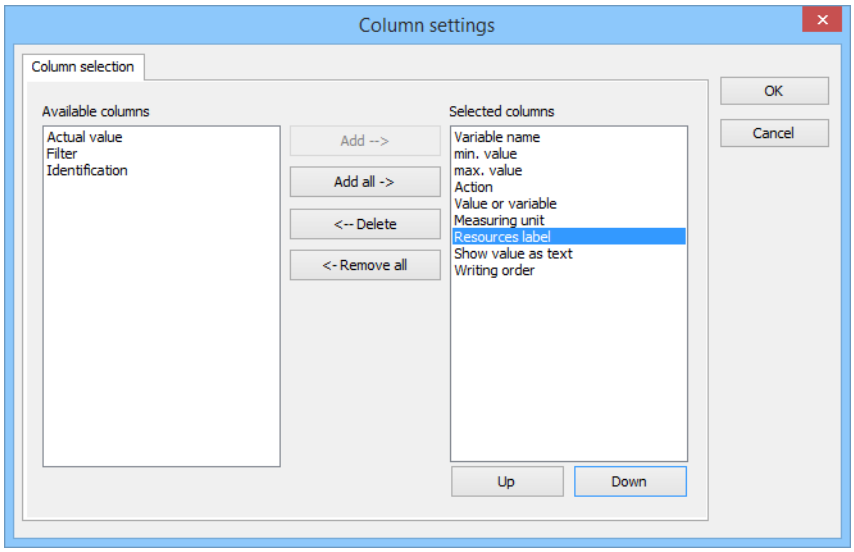
`CE recipe value table` is used if one of the following conditions is applicable:

- The **`CE recipe value table`** has been configured in the screen.
- The **`recipe value table`** has been configured in the screen and `Use format file for table` has been selected for the **Formatting of the recipe value table** option.
- The **Windows CE project** property must be activated in the project properties.

5.2.1 Recipe value table column selection

Clicking on the **Column selection** button opens the dialog to configure the columns to be displayed in the list. This button must be configured in the Editor.

Note: Is not available if, for screen switching in the **recipe value table** (on page 41), the recipe value table **Format file for table:** has been selected.



Button	Function
Available columns	List of columns that can be displayed in the table.
Selected columns	Columns that are displayed in the table.
Add	Moves the selected column from the available ones to the selected items. After you confirm the dialog with OK, they are shown in the detail view.
Add all	Moves all available columns to the selected columns.
Remove	Removes the marked columns from the selected items and shows them in the list of available columns. After you confirm the dialog with OK, they are removed from the detail view.
Remove all	All columns are removed from the list of the selected columns.
Up	Moves the selected entry upward. This function is only available for unique entries, multiple selection is not possible.
Down	Moves the selected entry downward. This function is only available for unique entries, multiple selection is not possible.

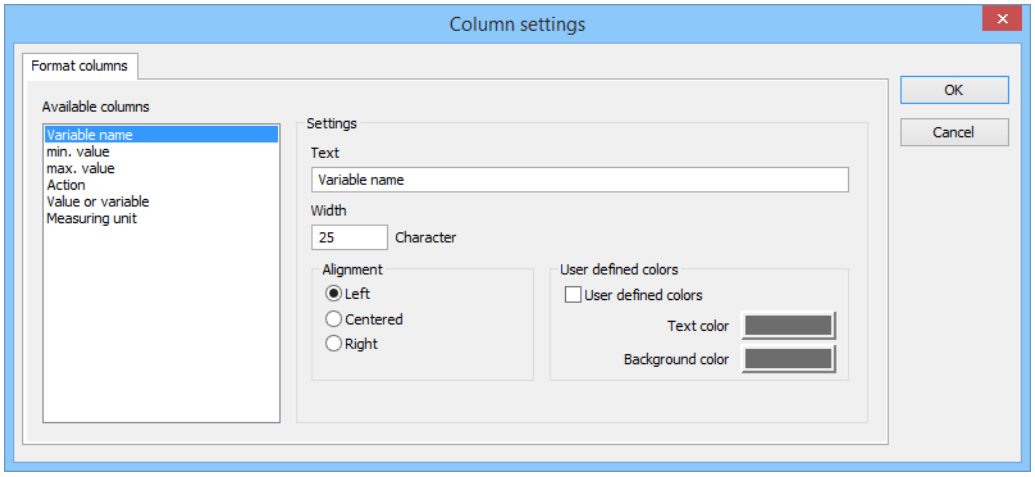
CLOSE DIALOG

Parameters	Description
OK	Applies settings and closes the dialog.
Cancel	Discards all changes and closes the dialog.

5.2.2 Column format recipe value table

Clicking on the **Column format** button opens the dialog to configure the columns. This button must be configured in the Editor.

Note: Is not available if, for screen switching in the **recipe value table** (on page 41), the recipe value table **Format file for table:** has been selected.



AVAILABLE COLUMNS

Parameters	Description
Available columns	List of the available columns via **Column selection**. The highlighted column is configured via the options in the **Settings** area.

SETTINGS

Parameters	Description
Settings	Settings for selected column.
Labeling	Name for column title. The column title is online language switchable. To do this, the @ character must be entered in front of the name.
Width	Width of the column in characters. Calculation: Number time average character width of the selected font.
Alignment	Alignment. Selection by means of radio buttons. Possible settings: ▸ **Left-justified**: Text is justified on the left edge of the column. ▸ **Centered**: Text is displayed centered in the column. ▸ **Right**: Text is justified on the right edge of the column.
Deactivate column filter in the Runtime	Active: The filter for this column cannot be changed in Runtime. Note: Only available for: ▸ Batch Control ▸ Extended Trend ▸ Filter screens ▸ Message Control ▸ Recipegroup Manager
User defined colors	Properties in order to define user-defined colors for text and background. The settings have an effect on the Editor and Runtime. Note: ▸ These settings are only available for configurable lists. ▸ In addition, the respective focus in the list can be signalized in Runtime by means of different text and background colors. These are configured using the project properties.
User defined colors	Active: User-defined colors are used.
Text color	Color for text display. Clicking on the color opens the palette to select a color.
Background color	Color for the display of the cell background. Clicking on the color opens the

	palette to select a color.

CLOSE DIALOG

Parameters	Description
OK	Applies settings and closes the dialog.
Cancel	Discards all changes and closes the dialog.
Help	Opens online help.

5.2.3 Display, export or print recipe value table with Report Viewer

To display a recipe value table as a report and print it:

1. Create the corresponding system driver variables.
2. Create the corresponding report:
3. Display the report in Runtime, or print or export the report.

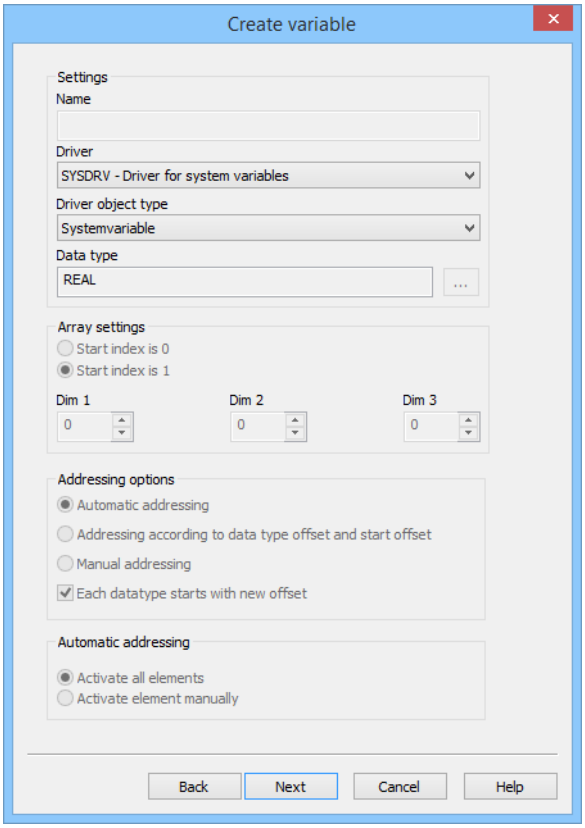
CREATE SYSTEM DRIVER VARIABLES

Create the system driver variables from the **Recipegroup Manager** group. To do this:

Create a new variable.

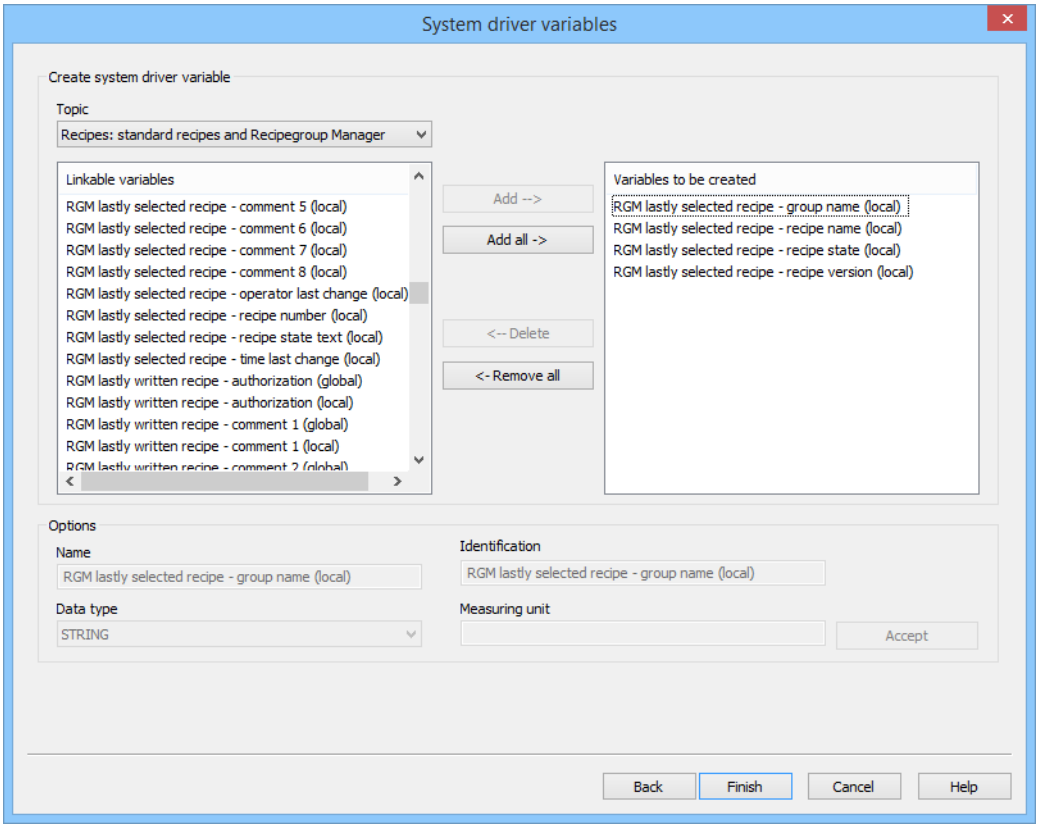
1. Select SYSDRV as the driver.

2. Select `system variable` as the object type.



3. Click on **`Next`**.
4. Add the following system driver variables:
   - **`RGM lastly selected recipe - group name (local)`**
   - **`RGM lastly selected recipe - recipe name (local)`**
   - **`RGM lastly selected recipe - recipe version (local)`**

- **RGM lastly selected recipe - recipe state (local)**



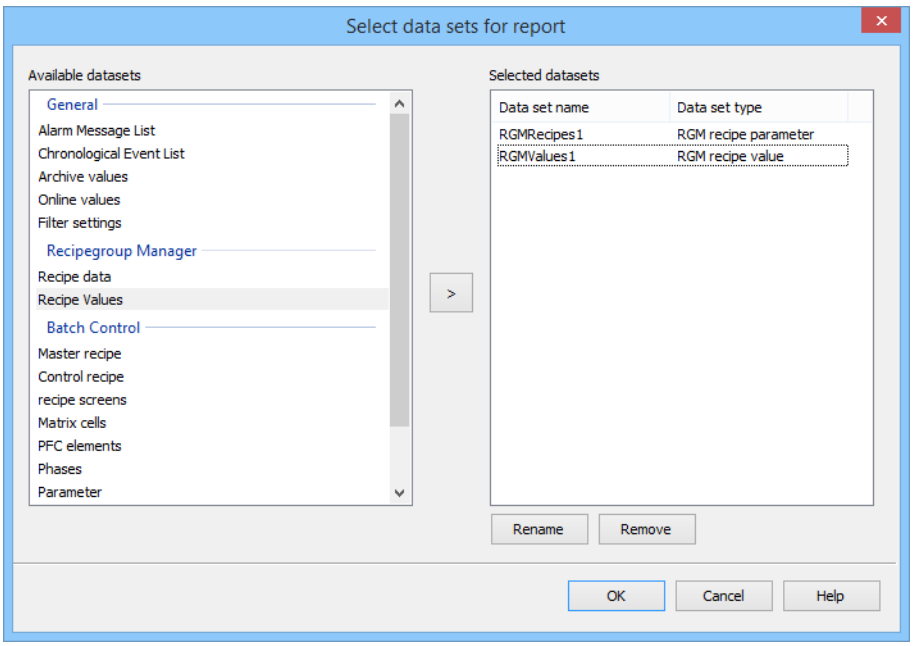
5. Click on **Finish**.

CONFIGURE REPORT VIEWER

Create a new **RGMReport.rdl** report with the **recipe data** and **recipe values**.
To do this:

1. Create a new report.

2. Select the **Recipe data** and **Recipe values** data sets.



3. Confirm your selection by clicking **OK**.
4. Save the file in the Report Builder under the name **RGMReport.rdl** or rename it in zenon.

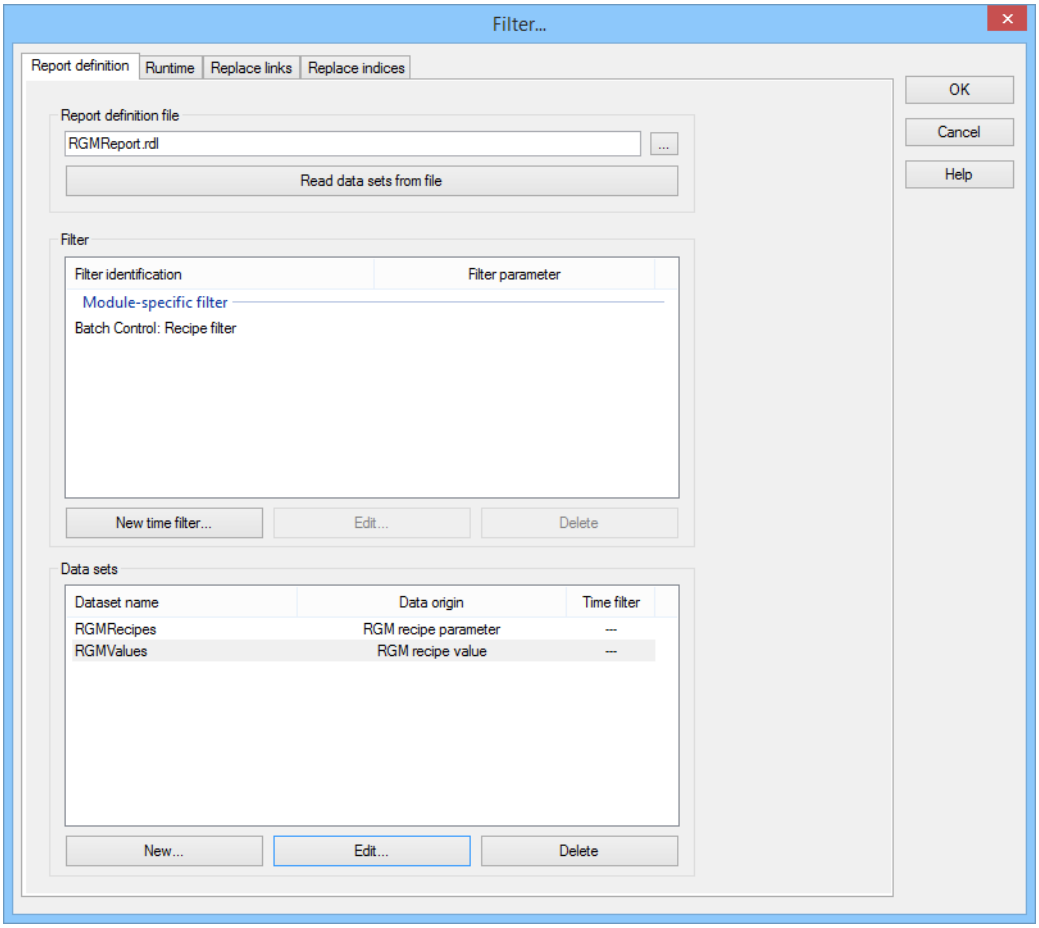
DISPLAY REPORT, EXPORT IT DIRECTLY OR PRINT IT

DISPLAYING THE REPORT IN RUNTIME

To display the report in Runtime:

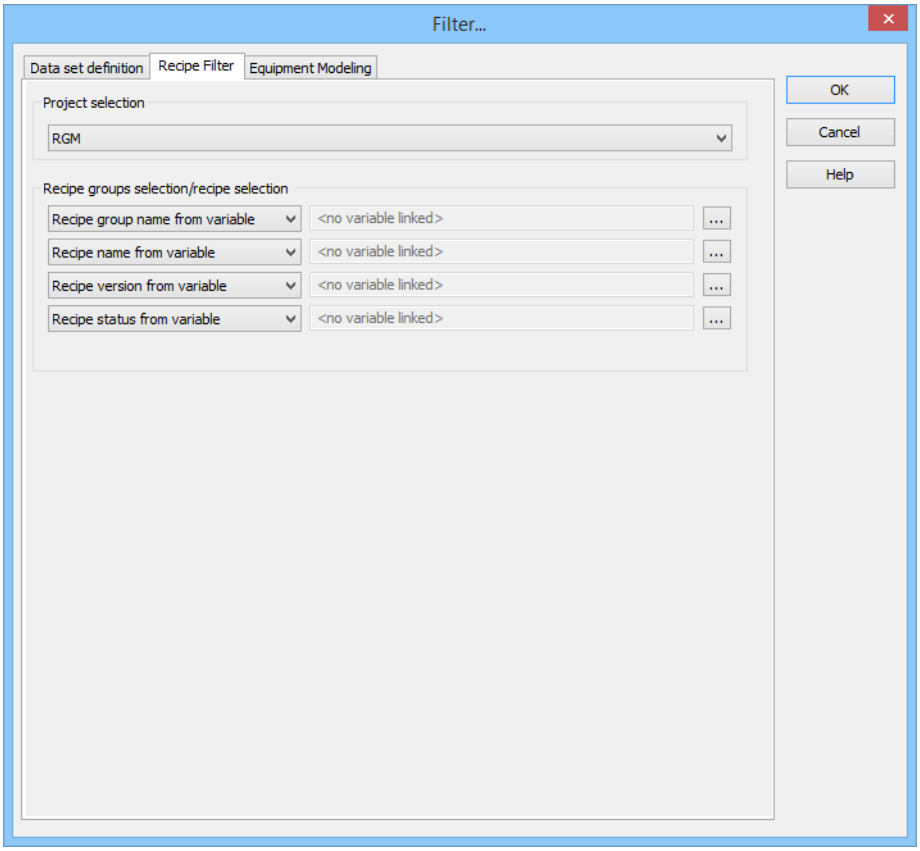
1. Create a `Report Viewer` screen if there is not one in the project.
2. Create a screen switching function on the `Report Viewer` screen.
3. Select, as a **report definition file**, the previously-created **RGMReport.rdl** file.
4. Click on the **Read data sets from file** button.

5. The data sets are displayed.



6. Select the first data set, for example **`recipe data`**.
7. Click on **`Edit`**.
8. The dialog for configuration is opened.
   Switch to the **`Recipe filter`** tab.
9. Switch the four drop-down lists for **`Recipe group/recipe selection`**
   from **`[...] Static`**
   to **`[...] from variable`**.

10. Assign one of the previously-created system driver variables to each entry.



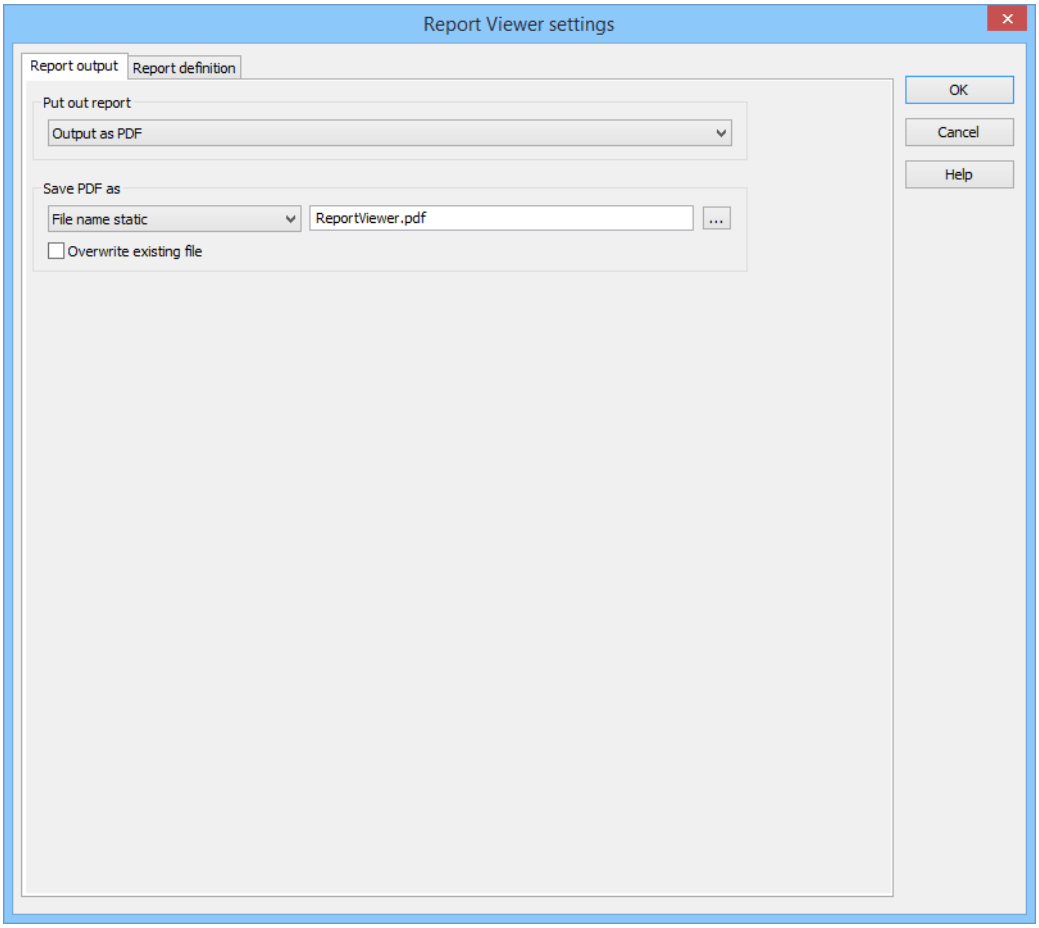
11. Repeat this step for the second data set (**`recipe values`**).
12. Close the dialog and and functions and give the function a name.
13. Assign this function to a button in the `RGM` screen to use it in Runtime.

PRINT OR EXPORT REPORT

To print the report directly or to export it:

1. Create a new function.
2. Go to the **Report Generator** / **Report Viewer** / **Analyzer** function group.

3. Select the **Report Viewer: export / print** function.



4. Select the desired action for the **Issue report** option:
   - `Output as PDF`: Creates a PDF document.
     Configure the **file name** and save location as well as the **Overwrite existing data** option.
   - `Output on printer`: Prints the table on the configured printer.
5. Switch to the **`report definition`** tab.
6. Configure this in the same way as the documentation for **`Show report in Runtime`**.
7. Close the dialog and and functions and give the function a name.
8. Assign this function to a button in the `RGM` screen to use it in Runtime.

5.2.4 Values and actions

Values and actions can be edited in Runtime in the recipe value table directly.

Note: In the Editor, actions and values are defined when editing a recipe. See **Editing a recipe from the recipe group** (on page 29)/**Actions** (on page 32).

Information

*If there are invalid values/actions in a recipe, these are not saved. If, for example the action type is changed, but the value for the action is not amended, the **Save recipe** command can be executed but the amended, invalid values are not applied.*

ENTER VALUES

Values in the **Value or variable** column and in the **Value display as text** column can be amended in Runtime directly or by means of a `keyboard` screen.

To enter values in cells:

1. Double click in the cell.
2. Enter the value.

Note:

- Only values that are within the **Value limit** for **min. value** and **max. value** defined for the recipe values can be entered.
- The editing of a value or a variable is only possible if the attendant action is one of the following types:
  - `Modify spontaneous value`
  - `Switch to and modify spontaneous value:`
  - `Modify alternate value`
  - `Switch to and modify alternate value:`
  - `User status`
  - `Link with variable`
- If a keyboard is to be called up for input, this must be linked to the variable or configured (on page 156) for the data type.

Note: Recipe values can be switched using invisible (on page 25) variables.

FILTERING OF VALUES

Values can be filtered or displayed using filter control elements. If a filter is selected in the combo box, the corresponding values are switched to invisible or displayed. If no filter is selected, all values are shown with the exception of variables that have been switched to invisible.

DEFINE ACTIONS

Values in the **Action** column can be amended in Runtime directly by means of selection from a drop-down list.

To define an action:

Double click in the **Action** cell of the corresponding variables.

1. Click on the symbol with the arrow.
2. Select the desired action from the drop-down list.
3. The action is applied to the recipe value table with the selection.

Available actions:

Action	Description	Entry in Value or variable
No action	Deactivates a variable in this recipe	No input.
User status	Status information. Sets the according status bit of the variable. Note: You can only set status bits which were tagged as set by the user. Status bits which were automatically set by the system cannot be changed. Attention: In order to be able to call up a keyboard in Runtime, a keyboard must be linked in the **Keyboards** properties group for the **String tags** property.	Enter status short label: =1 to set =0 to reset You can enter more states separating them by semicolon (;). For example: M1=1; M5=0
Modify alternate value	Sets the Alternate value to the value stated under **Value or variable**.	Enter Alternate value.
Modify spontaneous value	Sets the Spontaneous value to the value stated under **Value or variable**.	Enter set value.
Switch off spontaneous value	Switches off the spontaneous value by setting status bit OFF (Bit 20).	No input.
Switch on spontaneous value	Switches on spontaneous value by resetting OFF bit.	No input.
Switch to alternate value	Switches from Spontaneous value to Alternate value	No input.
Switch to spontaneous value	Switches from Alternate value to Spontaneous value	No input.
Switch to and modify Alternate value	Switches from Spontaneous value to Alternate value and sets the alternate value to the value stated under **Value or variable**.	Enter Alternate value.
Switch and modified spontaneous value	Switches from Alternate value to Spontaneous value and sets the spontaneous value to the value stated under **Value or variable**.	Enter set value.
Link with variable	Links a variable with another variable.	Name of a variable. Right-click the field in order to open the context menu in which you can open the dialog for selecting variables. The value of the variable is transferred to the selected recipe variable. It is also possible to use

		variables of other loaded projects.

Note: The **Value display as text** (on page 155) column can also be edited. To do this, a Keyboard must be linked. Your settings correspond to those of the **Value or variable**column.
The following actions are exceptions:

- `User status`: can only be edited with an `RGM` keyboard.
- `Link to variable`: cannot be edited

> **Attention**
>
> *If the `Read all values` function is used with the `Link with variable` action for a recipe, neither user authorization is checked nor is the action logged. If you want a logging, you must create it manually, e.g. using a VBA macro.*
>
> *Note for FDA regulations: As a consequence, this functionality is not allowed to be used for projects with a strict FDA standard!*

IDENTIFICATION OF ERRORS AND INTERLOCKINGS

The values displayed in the recipe value tables are checked automatically and highlighted in the event of errors. The following cells are marked.

- Error:
  - Values that are outside the defined minimum/maximum value
  - Values that relate to a variable that is not present or not contactable

  Default: red background color.
  This error labeling is not available for the **CE recipe value table**.
- Cells that show interlocked parameters (on page 25).
  Default: gray background color.

The matching of values from the PLC and recipe and be checked and displayed using the function or the Check recipe value (on page 154).

*Colors for texts and background can each be amended individually using the properties of the **Colors** group (not available for **CE recipe value table**).*

PRIORITY OF THE COLOR MARKINGS

If several colors are applied on a list, the following priorities apply:

1. General: **Selection colors for the object lists**
2. RGM: **Recipe value validation**
3. RGM: Online validation
4. RGM: **Interlocking**

5. List: Column color

5.2.5 Recipe value validation

When checking the recipe, the recipe value and actual value are compared. The result of the check can be displayed in the recipe value table or transferred to system variables.

Recipe values can be checked:

- Automatically on loading, saving and reading values from the PLC.
- With the **Check recipe value**.
- Using the **Recipegroup Manager** function.
- By means of VBA.

A value is invalid if:

- An action refers to a variable but no variable is linked.
- A certain action refers to values outside of the permitted range (min./max.). This applies for:
  - Modify alternate value
  - Modify spontaneous value
  - Switch to and modify spontaneous value:
  - Switch to and modify alternate value:

COLORING

The results are displayed in the **Current Value** column in color. The colors can be amended using the properties of the group **Colors/Recipe value validation**. The amendment is not available for the **CE recipe value table**. Individual colors can also be configured for interlockings (on page 25). In the event of errors, the table for the first place of finding (red or violet) is scrolled through.
Coloring of default values:

- `Green`: Results correspond.
- `Red`: PLC value different from the recipe value.
- `Blue`: No connection to the PLC.

"CHECK RECIPE VALUE" BUTTON

To check recipe values in Runtime immediately in the recipe value table:

1. Configure the **Check recipe values** button in the screen.
2. Click on the button in Runtime.

3. All variables linked to the recipe are read and the current actual values are compared to the recipe values.

Attention: The function of the control element uses decimal points for synchronization with the PLC. If, for variables with the REAL data type, the **Decimals** property is not configured along the lines of the PLC settings and the values in the decimal point area are different, the function displays different values.

FUNCTION RECIPEGROUP MANAGER

To check recipe values in Runtime and to output the result with system driver variables:

1. Configure a function (on page 68) **Recipegroup Manager**.
2. If the function is triggered in Runtime, then:
   a) The recipe values are checked
   b) The results are transferred to the corresponding system variables (sysdrv.chm::/25964.htm)

5.2.6 Show value as text

The **value display as text** column can only be defined if a Keyboard is linked. No entry is possible for the Link to variable action.

If, for a value, you also want to display the meaning of the value within a recipe in Runtime:

1. Create a reaction matrix of the type numeric or String for the variable you use in the recipe.

   The type of reaction matrix must correspond to the type of variable used.
2. In the reaction matrix, you defined the "equals" states and enter the desired meaning - the text to be displayed.

Alternatively: To have text displayed, you can also use limit values or binary reaction matrices with states other than "equals". However in this case, you cannot use the functions from keyboard screens.

DISPLAY IN THE RUNTIME

The Recipe value list (on page 137) in screen of type Recipegroup Manager shows in the **Show value as text** columng the linked limit texts either from the reaction matrix or from the limit which was violated by the recipe value. If no limit value texts are linked, the recipe value is displayed.

In selft-engineered **Report Generator** lists you can achieve the same functionality with the help of functions recipew and recipef with parameter **symbolic**.

If a recipe value is changed and a state of limit is violated, the displayed limit text is updated immediately. Values can be be amended in Runtime in the recipe value table using a Keyboard screen.

ENTRIES INTO THE CHRONOLOGICAL EVENT LIST

With changes of recipe values and with writing a recipe (recipe value) not only the values but also the respective limit texts are written in the CEL entry. If no state or limit is violated, only the value is entered.

5.3 Keyboards

Keyboards serve with zenon as virtual keyboards that allow inputs on devices without a hardware keyboard in the Runtime. Keyboards are projected with a screen type `keyboard`. zenon provides automatically generated keyboards that can be engineered by the user. Keyboards can be defined for entries in the recipe value table. When clicking on a cell in the **`Value or variable`** column, the corresponding keyboard is called up.
Requirement: The keyboard was, in the Editor,

- either configured for the corresponding data type
- or linked to the variable

The following keyboards are available in the **Keyboards** group:

- **Binary tags**
- **Numeric tags**
- **String tags**

> **Attention**
>
> *A string keyboard is required for the `User status` action type. This must be configured as a global string keyboard.*
>
> *Reason: To edit a variable, the keyboard that is linked to the variable and that belongs to its data type is always called up. A string keyboard is required for the `User status` action type. This is not linked with a numerical variable and must therefore be additionally configured.*
>
> *Engineering: Configure the keyboard using the **String tags** property in the RGM **Keyboards** property group.*

KEYS FOR RGM KEYBOARD

For the RGM, there are the following special control elements available under Control elements -> Recipegroup Manager specific when configuring the keyboard screen:

Control element	Description
Send value	The set value is written to the variable, updated in the recipe and the keyboard is closed.
Save recipe	The recipe is saved
Send value and save recipe	The set value is written to the variable, updated in the recipe, the recipe is saved and the keyboard is closed.
Value displays as Text 1 to **Value displays as Text 32**	Keys can be linked with limits from a reaction matrix. To do this, the variable of the recipe parameter ▸ must be linked with **Numeric reaction matrix** or **String reaction matrix** and ▸ "equals" states must be included Assigned keys are shown in runtime and labeled with the text from the reaction matrix. Clicking the button writes the linked value in the reaction matrix as a proposal for the recipe value in the Set value input control element.

5.4 Status information for recipes and recipegroup manager

In the Runtime status information is provided at

- Read/write
- Export/Import
- Saving

If a recipe written, this variable contains the result of the writing operation.

VALUES

WRITE RECIPE

System driver variable **Standard recipe/RGM recipe completely written**

Value	Result
0	Send initialization value before the recipe
1	Write completed successfully
2	Write not executed because of a parameter error
3	Write not completed successfully
5	Write terminated because RT is being ended
6	Timeout occurred

Note: If the network functionality is active in the project, the system driver variable **Standar recipe/RGM recipe completely written (local)** is relevant for the function executed on the local computer.

Information

Writing means writing to the driver. The driver then transfers the recipe to the control. That means:

- Property **Write synchronously** inactive: Value 1 for **Standard recipe/RGM recipe written completely** does not mean that the values are available in the control. They are written on the driver.
- **Write synchronously** property active: The value change take place when all values on the control are topical.

  *Note: The progress display at writing is only display if property **Write synchronously** is active.*

RECIPE IN PROGRESS

System driver variable **Standard recipe/RGM recipe function in progress**

Value	Result
-1	is being executed
0	Initialization value read successfully
1	User has no authorization
2	no authorization in the network
3	chancel by user
4	Error - could not read everything successfully, e.g. ▸ Communication with the hardware is interrupted before read was started ▸ a data block is not available on the PLC ▸ Error during transmission
5	Error during save of the recipe file
6	Function cancelled via VBA

SCREEN TYPE SPECIFIC FUNCTIONS

During

- reading (system driver variable: **Standard recipe/RGM recipe reading all values finished**
- Exporting/Importing and
- Saving

of a recipe via screen specific function - the following values are available:

Value	Result
0	Initialization value waits for response from driver
1	read successfully
2	Error during Read, Export/Import or Save: ▸ Communication with the hardware is interrupted before read was started ▸ a data block is not available on the PLC ▸ Error during transmission

5.5 Writing values to a recipe using a screen (graphic recipe variables)

Values in recipes can be changed directly in Runtime using screens. To do this, **graphic recipe variables** are used, which can be read and written in the RGM using the **Recipegroup Manager** function.

DEFINING A GRAPHIC RECIPE VARIABLE

A **graphic recipe variable** can be defined for each variable in a recipe group. Each **graphic recipe variable** can be only used once per recipe group. Not every variable of the recipe group must have a **graphic recipe variable**. to define a **graphic recipe variable**:

1. Highlight the variable of the recipe group.
2. Navigate to the properties in the **General** group.
3. Click on the **Graphic recipe variable** property
4. The dialog for selecting a variable is opened
5. Select the desired graphic recipe variable.
6. Confirm the dialog with **OK**.

CONFIGURATION PROCEDURE

1. Define, during configuration, a **graphic recipe variable** for each variable that has values that can be changed in Runtime using a screen.
   You define these using the **General/Graphic recipe variable** property.
2. Configure a screen that displays changeable recipe values, such as a tank.
3. Link the screen to the function (on page 59) **Recipegroup Manager** and select the **Write recipe value to graphic recipe variables** (on page 108) action**.**
4. Configure a button in the screen.
5. Link the button to the **Recipegroup Manager** function and select the **Write graphic recipe variables to recipe values** (on page 111) action**.**

PROCEDURE IN RUNTIME

1. The screen for setting the values for the RGM is called up.
2. In doing so, the variables are substituted by the **graphic recipe variables**.
3. When the screen is opened, the **Recipegroup Manager** function is called up with the **Write recipe values to graphic recipe variables** (on page 108) action.
4. The recipe values are displayed in the screen and can be changed.

5. Amended values are written to the recipe in the RGM by means of the button with the **Recipegroup Manager/Write graphic recipe variables to recipe values** (on page 111) function.
6. If an error should occur, this can be evaluated using the system driver variables (sysdrv.chm::/25964.htm) and the entries in the LOG files (on page 161).

6. Error treatment

Errors can be evaluated using system driver variables and error messages. You can find messages from system driver variables in the System driver variables manual, Recipe Group Manager section (sysdrv.chm::/25964.htm) chapter.

LOG FILES

Entry	Level	Meaning
COM events		
COM Event "RecipeCreate" returned with "bCancel == TRUE"	logLe_DEBUG	Message for COM events if the respective action is cancelled using the **bCancel** function parameter: ▸ RecipeCreate ▸ VersionCreate ▸ RecipeDuplicate ▸ VersionDuplicate ▸ VersionDuplicateRead ▸ RecipeRename ▸ RecipeDelete ▸ VersionDelete No special logging entry appears if the action is not cancelled in the event function.
Graphic recipe variable		
RGM: Teached value out of Minimum max range. Variable: "x1", Value: x2, FromShadow: x3	FAILED	A value that was read in breaches the **minimum value** or the **max. value** of the target value limit of the recipe. ▸ x1: Name of the variable ▸ x2: Standardized value of the variable ▸ x3: Note on process value or value of a graphic recipe variable
Error while reading current value for CEL logging.	INTERNAL	An error occurred when the current value for CEL logging (set recipe) was read in. Possible reasons: ▸ A value is outside the limits for **minimum value** and **max. value** -> additional entry **RGM: Teached value out of Minimum max range. Variable: "x1", Value: x2, FromShadow: x3** ▸ A value has the status INVALID ▸ Time-out was reached

POP-UP MESSAGES

Message	Meaning
The name "Recipe\Test" contains invalid characters (\"'./*?<>!|).	The recipe group name or recipe name that was entered does not correspond to the guidelines for issuing names. Expression in

	brackets contains characters that are not approved.
Delete version "7" of recipe "Recipe1"?	Confirmation request before a recipe version in deleted in the RGM screen in Runtime.

7. Examples

Here you can find examples of configuration:

7.1 Writing the highest recipe version with the status released to the PLC

To write the highest recipe version with `released` status to the PLC in Runtime:

1. Creation of status texts for the recipe status:
   a) Open the **Identifier recipe state** property in the **Recipegroup Manager**
   b) Create, in the dialog, the status:
      - 1 draft
      - 2 checked
      - 3 unlocked
      - 4 blocked
      - 5 deleted

   Hint: Here, you can also define the status texts by a prefixed `@`, as well as the key words for language switching (for example: **`@Released`**
2. Creating several recipe versions:
   a) Create a new recipe group using the context menu
   b) Link variables to the recipe group
   c) Creating a new recipe
   d) Create a new version for the recipe
   e) Change the status in the second version of the recipe to **`3 unlocked`**
3. Creating the function:
   a) Highlight the recipe and select **`Create standard function`** in the context menu or in the toolbar

b) The dialog for configuration is opened

c) Select **Write recipe**

d) Set **Recipe version** to >

e) Select, at **Static recipe**, the entry 3 unlocked

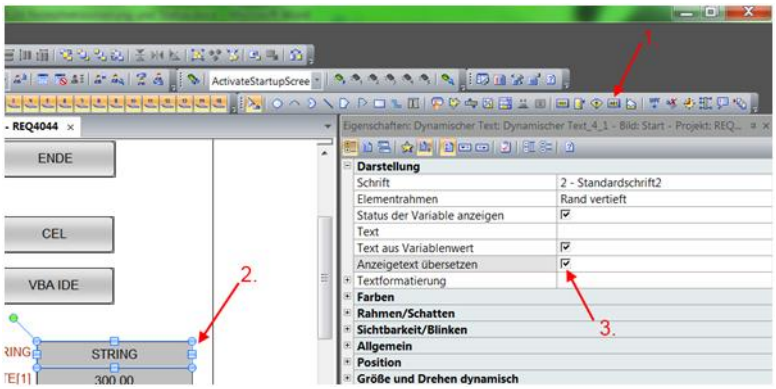
If the function is executed in Runtime, then the highest existing version of the recipe with the status **3 - unlocked** is written to the PLC. If now, for example, a new recipe version is created and this contains the status **3 - unlocked**, then this new version is written to the PLC the next time the function is called up.

7.2 Switching the language of the display text in the dynamic text element

To use language switching for a dynamic text element, create this in the Editor and switch it in Runtime.

IN THE EDITOR

To create a dynamic element of dynamic text text type and configure it:



1. Click on the symbol for dynamic text in the toolbar for the element and drag the element onto the screen.
2. Select a string variable.
3. Activate the **Translate displayed text** property.

IN RUNTIME

The set point default displays the text as a raw value. The text can be edited:

The text is modified by the language switching when displayed: