

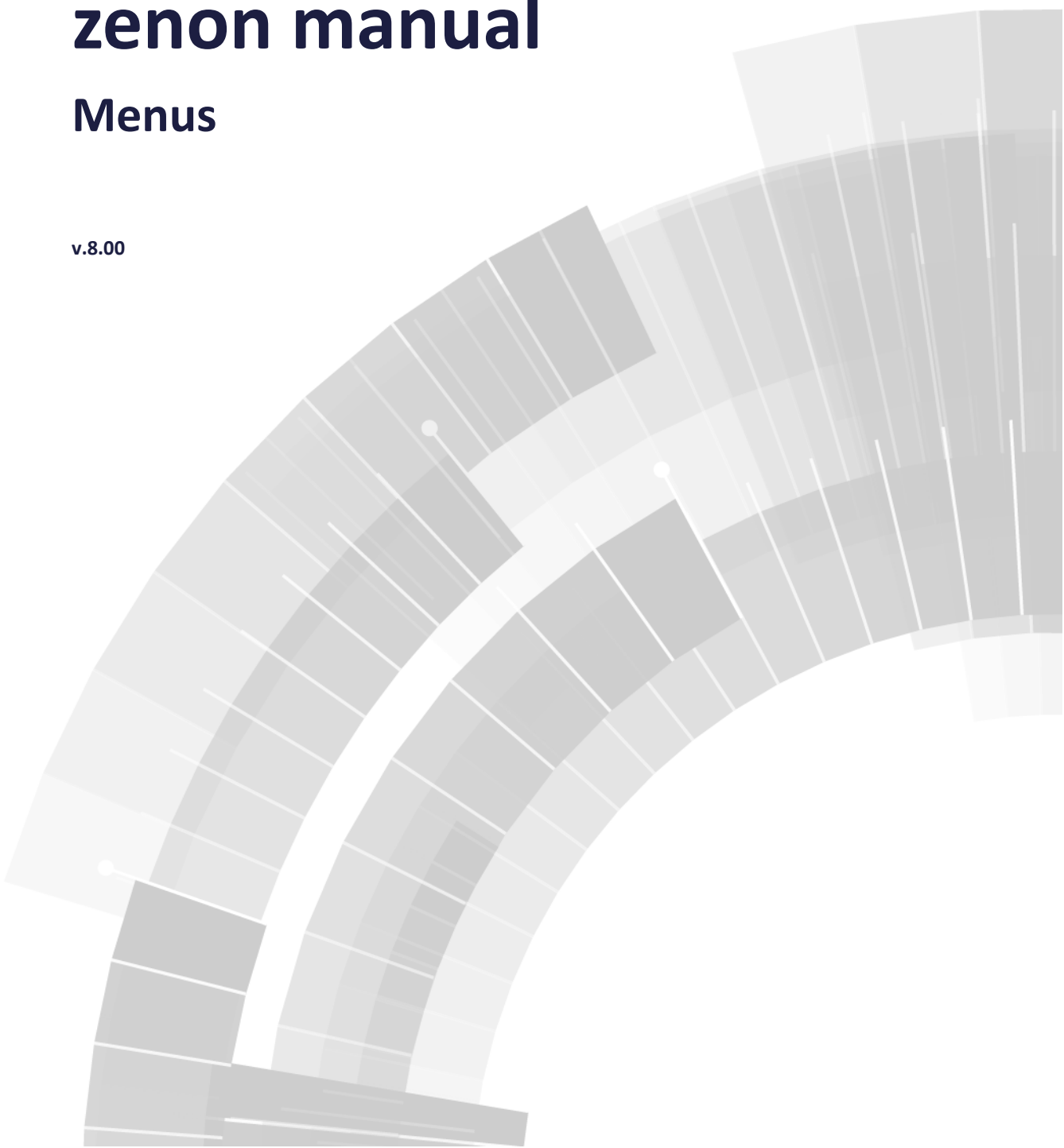


**COPADATA**  
do it your way

# zenon manual

## Menus

v.8.00





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# 1. Welcome to COPA-DATA help

## ZENON VIDEO-TUTORIALS

You can find practical examples for project configuration with zenon in our YouTube channel. The tutorials are grouped according to topics and give an initial insight into working with different zenon modules. All tutorials are available in English.

## 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. Menus

Windows-compliant menus are created in the menu editor. Two different types of menus are available:

- ▶ Main menus
- ▶ Context Menus

**Note:** The operating system does not allow separate menus for single screens or frames.

## PROJECT MANAGER CONTEXT MENU

Menu item	Action
<b>New main menu</b>	Inserts a new main menu in the menu list of the detail view.
<b>New context menu</b>	Inserts a new context menu in the menu list of the detail view.
<b>Export all as XML</b>	Exports all entries as an XML file.
<b>Import XML</b>	Imports entries from an XML file.
<b>Editor profile</b>	Opens the context menu with pre-defined Editor profiles.
<b>Help</b>	Opens online help.

## 3. Engineering in the Editor

Select menu item Project Manager in order to open the menu editor in detailed view. You can choose from main and sub menus. With the context menu (entry **Main menu new** or **Context menu new**) you can create new menus. They then are displayed in the right part of the detail view. Menus can be imported and exported. You will find more information in chapter Import / Export / Menus.



### Attention

*Requirement if main menus should be displayed in Runtime: The **Main menus active** (**NodesGraphical design**) property must be activated in project properties.*

### CREATE NEW MENU ITEM

To create a new menu item:

1. Highlight the last entry.
2. Confirm with the `Enter` key.
3. A new empty input field is created.

### CREATE NEW SUB-MENU

To create a new sub-menu, activate the **Submenu** property in the superordinate menu item. A new entry field is thus opened for the sub-menu.

## MOVE MENU ITEM

1. Highlight the desired entry (multiple selection is possible).
2. Hold down the left mouse button and move it to the new position.
3. **Note:** If you move sub-menus to a menu item that is not defined as a sub-menu, the items are created as main menus.  
If you move the uppermost item, all sub-menus are moved with it.

## COPY MENU ITEM

1. Highlight the desired entry (multiple selection is possible).
2. Select Copy in the context menu or in the tool bar.
3. Select the save location for the copy.  
**Note:** If you copied sub-menus to a menu item that is not defined as a sub-menu, the items are created as main menus.  
If you copy the uppermost item, all sub-menus are copied with it.
4. Select Insert in the context menu or in the tool bar.
5. Hold down the left mouse button and move it to the new position.

## RENAME MENU ITEM

1. select the menu item and edit it via:
  - Double-click or delayed double-click on the entry  
or
  - Press the `F2` key or the `Enter` key when the entry is selected  
or
  - select command **Rename** in the context menu or from the toolbar
2. the current entry is highlighted
3. Enter the new name
4. confirm the change via:
  - Pressing the `Enter` key
  - switch to another menu item
5. or cancel the change by pressing the `Esc` key.

## MULTISELECT

To edit several entries at once

- ▶ press and hold the `Control` key and click on the entries  
or
- ▶ press and hold the `Shift` key and click on the entries  
or
- ▶ press and hold the `Shift` key and use the cursor keys on the keyboard

To deselect an entry again, click on the entry whilst holding down the `Ctrl` key or `Shift` key.

To deselect all entries and only select a single entry, click on the desired entry.

### 3.1 Toolbar and context menus for detail view and details

#### TOOLBAR



Menu item	Action
<b>New main menu</b>	Inserts a new main menu in the menu list of the detail view.
<b>New context menu</b>	Inserts a new context menu in the menu list of the detail view.
<b>Create standard function</b>	Opens the dialog for selecting an action and creates a suitable function. The action is documented in the output window.
<b>Jump back to starting element</b>	Jumps back to the initial position in the zenon Editor. <b>Note:</b> This context menu entry is only available if a jump to the current position has been made from another position with the <b>Linked elements</b> context menu entry.
<b>Copy</b>	Copies the selected entry to the clipboard.
<b>Paste</b>	Pastes the contents of the clipboard.
<b>Delete</b>	Deletes the selected entry without confirmation.
<b>Export selected as XML...</b>	Exports selected entries as an XML file.
<b>Import XML</b>	Imports entries from an XML file.
<b>Rename</b>	Opens menu item for renaming.
<b>Properties</b>	Opens the properties window for the selected entry.
<b>Help</b>	Opens online help.

## CONTEXT MENU RUNTIME MENUS

Menu item	Action
<b>New main menu</b>	Inserts a new main menu in the menu list of the detail view.
<b>New context menu</b>	Inserts a new context menu in the menu list of the detail view.
<b>Paste</b>	Pastes copied menu entry into the corresponding branch ( <b>Main menus</b> or <b>Context menus</b> ) as <b>Copy x of</b> , whereby <b>x</b> is a consecutive number.
<b>Help</b>	Opens online help.

## CONTEXT MENUS MAIN MENUS

Menu item	Action
<b>New main menu</b>	Inserts a new main menu in the menu list of the detail view.
<b>Paste</b>	Pastes copied menu entry of a main menu as <b>copy x of</b> , whereby <b>x</b> is a consecutive number.



<b>Help</b>	Opens online help.
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## CONTEXT MENUS CONTEXT MENUS

Menu item	Action
<b>New context menu</b>	Inserts a new context menu in the menu list of the detail view.
<b>Paste</b>	Pastes copied menu entry of a context menu as <b>copy x of</b> , whereby <b>x</b> is a consecutive number.
<b>Help</b>	Opens online help.

## CONTEXT MENUS MENUS

Menu item	Action
<b>Create standard function</b>	Opens the dialog for selecting an action and creates a suitable function. The action is documented in the output window.
<b>Linked elements</b>	Lists linked elements. Clicking on the entry opens the linked element in the Editor.
<b>Copy</b>	Copies the selected entry.
<b>Paste</b>	Pastes copied menu entry as <b>copy x of</b> , whereby <b>x</b> is a consecutive number.
<b>Delete</b>	Deletes the selected entry without confirmation.
<b>Export selected as XML...</b>	Exports selected entries as an XML file.
<b>Import XML</b>	Imports entries from an XML file.
<b>Properties</b>	Opens the properties window for the selected entry.
<b>Help</b>	Opens online help.

## CONTEXT MENU DETAILS

Menu item	Action
<b>Rename</b>	Opens menu item for renaming.
<b>Create new in front of selected</b>	Adds a new menu item in front of the highlighted menu item.
<b>Copy</b>	Copies the selected menu item to the clipboard.
<b>Paste</b>	Pastes the contents of the clipboard.

<b>Delete</b>	Deletes the selected menu item without confirmation.
<b>Properties</b>	Opens the properties window for the menu item.
<b>Help</b>	Opens online help.

## 3.2 Define entries

Generally there are three types of menu entries:

Parameter	Description
<b>Action type</b>	<p>Sets out which type of action is to be carried out via the corresponding menu item in Runtime. Not all action types are available in the main menu (on page 11), some are only available via the context menu (on page 11).</p> <ul style="list-style-type: none"> <li>▶ Acknowledge alarm (context menu only)</li> <li>▶ Command processing(context menu only)</li> <li>▶ Acknowledge flashing (context menu only)</li> <li>▶ Show Extended Trend</li> <li>▶ Function</li> <li>▶ Help</li> <li>▶ No action</li> <li>▶ Write set value</li> <li>▶ VBA macro (context menu only)</li> </ul>
<b>Submenu</b>	Opens a sub-menu in Runtime.
<b>Separator</b>	A horizontal line divides menu entries.

Underline text: Entering a & causes the following characters to be displayed as underlined.

Plan entries

To configure a menu item in the main menu or context menu:

1. Activate the corresponding menu cell
2. In properties, select:
  - **Action type:** depending on menu type  
see also: Main menu action types (on page 11) and Context menu action types (on page 11)
  - **Menu ID:** ID of the entry  
**Note:** For menu entries in the **Command Processing** (on page 14) module, fixed,

pre-defined types with prescribed IDs are used by this module for project configuration. You can find further information about this and a list of these IDs in the Energy Edition manual in the Command processing via context menu chapter.

- **Text:** clear labeling of the menu cells



### Attention

*The engineering of the **Text** property must be unique. If texts that are the same are given, further menu items with the same name are not displayed.*

## 3.2.1 Main menu action types

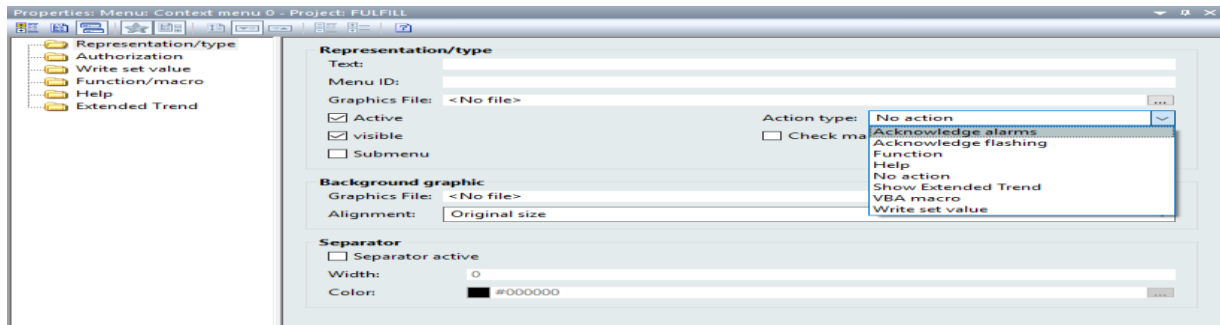
Parameters	Description
<b>Function</b>	A defined function of zenon is executed by selecting the menu entry in the Runtime.
<b>Help</b>	A help chapter from a CHM file is displayed.
<b>No action</b>	No action is executed.
<b>Setting values</b>	By selecting menu item <code>Setting values</code> a fixed value can be send or a variable value can be increase or decrease by a fixed amount during Runtime. The entry is made with the help of the zenon standard dialog box. If one of the 3 keyboard screens ( <code>SETVALUEKBD</code> , <code>SETBOOLKBD</code> or <code>SETSTRINGKBD</code> ) is available in the project, it is automatically used. For this action a variable can be selected directly, or if used in a context menu the variable can be selected from the clicked element.

## 3.2.2 Properties of the context menu and selection of the action types

The following nodes are available in the properties of the context menu, in which you can change settings for the context menu:

- ▶ **Representation/type**
- ▶ **Authorization**
- ▶ **Write set value**
- ▶ **Function/macro**
- ▶ **Help**
- ▶ **Extended Trend**

The following possibilities for selection are available under **Representation/type** and **Action type**:



Parameter	Description
<b>Acknowledge alarms</b>	The alarms of all variables linked to the dynamic element that the context menu relates to are acknowledged.
<b>Command Processing</b>	Opens the defined Command Processing screen (only with an energy license)
<b>Acknowledge flashing</b>	Switches off the blinking of all alarms for variables that are linked to the dynamic element, which the context menu relates to. The alarms are not acknowledged by this.
<b>Show Extended Trend</b>	<p>Opens a <b>Extended Trend</b> screen type. A new curve is created for the variable, which is linked to the respective element. The new curve has, by default, the style linked to the variable/data type. With archive variables, the best-suited archive is automatically selected. If it is not an archive variable, online data is used. If no <b>Extended Trend</b> screen has been configured in the context menu, the menu item is grayed out in Runtime. If a diagram style is linked, the styles of the groups are used in Runtime.</p> <p>The following settings can be changed in the <b>Extended Trend</b> node of the menu properties:</p> <ul style="list-style-type: none"> <li>▶ <b>Screen:</b> Allows the selection of a screen to be displayed in Extended Trend.</li> <li>▶ <b>Time filter relative:</b> Allows the display of a time filter.</li> <li>▶ <b>Style group chart:</b> Allows the selection of a style for display in Extended Trend.</li> </ul>
<b>Function</b>	A defined function of zenon is executed by selecting the menu entry in the Runtime.
<b>Help</b>	A help chapter from a CHM file is displayed.
<b>No action</b>	No action is executed.
<b>Write set value</b>	<p>By selecting menu item <code>Setting values</code> a fixed value can be send or a variable value can be increase or decrease by a fixed amount during Runtime. The entry is made with the help of the zenon standard dialog box. If one of the 3 keyboard screens (SETVALUEKBD, SETBOOLKBD or SETSTRINGKBD) is available in the project, it is automatically used.</p> <p>For this action a variable can be selected directly, or if used in a context menu the variable can be selected from the clicked element.</p>
<b>VBA macro</b>	A VBA macro is executed by selecting the menu entry in the Runtime. You can only select the VBA macros which are declared as Init event.

## Command Processing

When creating a new action in the Command Processing, a menu ID corresponding to the action type and the switching direction for the **Action type** property is created and offered in the drop-down list. If the content corresponds to an ID defined as standard text for the action type and switching direction, the content is adapted if the action type or switching direction change.

To create a context menu for the Command Processing:

1. Create the desired actions in the command processing
2. In the properties of the context menu item select the **Action type Command Processing**
3. Select the desired action and switching direction via the drop-down menu with the **Menu ID** property
4. Give it a clear label in the **Text** property  
Note: If no entry is defined for **Text**, the field is automatically filled with the "**command processing**" label.



### Attention

*The engineering of the **Text** property must be unique. If texts that are the same are given, further menu items with the same name are not displayed.*

*Because automatically created menu items with the same action result in the same text, there are macros (on page 16) available for these.*

*The character sequence `ID_CMD_AUTO` is reserved for automatically created menu items. These must always be used with macros, because otherwise only the menu item is inserted.*

When checking for duplicate entries the following rules apply:

- ▶ Manual menu points have priority over automatic ones.
- ▶ If it is the same type then the last entry has twice the priority.
- ▶ If a duplicate entry is found, a warning is set off in the log. This includes the menu ID and description. Automatically expandable entries have **<auto>** added to the ID.

## ACTIONS FOR ACTION TYPE COMMAND PROCESSING

Action	Switching direction	Menu ID
ID_CMD_AUTO		This menu entry automatically shows all possible actions for an element, if no direct menu entry from the list is used already.
<b>Pulse command</b>	On (1)	ID_CMD_EBEF_ON
<b>Pulse command</b>	OFF (1)	ID_CMD_EBEF_OFF
<b>Pulse command</b>	NONE	ID_CMD_EBEF_NONE
<b>Switching command</b>	On (1)	ID_CMD_DBEF_ON
<b>Switching command</b>	OFF (2)	ID_CMD_DBEF_OFF
<b>Switching command</b>	NONE	ID_CMD_DBEF_NONE
<b>Set value</b>	NONE	ID_CMD_SVALUE
<b>Set value</b>	DIRECT	ID_CMD_SVALUE_DIR
<b>Status input</b>	NONE	ID_CMD_STATE
<b>Status input</b>	On (1)	ID_CMD_STATE_ON
<b>Status input</b>	OFF (0)	ID_CMD_STATE_OFF
<b>Replace</b>	NONE	ID_CMD_REPL_NONE
<b>Replace</b>	On (1)	ID_CMD_REPL_ON
<b>Replace</b>	OFF (0)	ID_CMD_REPL_OFF
<b>Replace</b>	DIST	ID_CMD_REPL_DEF
<b>Replace</b>	DIFF	ID_CMD_REPL_DIFF
<b>Manual correction</b>	NONE	ID_CMD_UPD_NONE
<b>Manual correction</b>	On (1)	ID_CMD_UPD_ON
<b>Manual correction</b>	OFF (0)	ID_CMD_UPD_OFF
<b>Manual correction</b>	DIFF	ID_CMD_UPD_DIFF
<b>Manual correction</b>	DIST	ID_CMD_UPD_DEF
<b>Manual correction</b>	DIRECT	ID_CMD_UPD_DIR
<b>Block</b>	NONE	ID_CMD_BLOCK
<b>Release</b>	NONE	ID_CMD_UNLOCK
<b>Lock</b>	NONE	ID_CMD_LOCK
<b>Revision</b>	OFF (0)	ID_CMD_REV_OFF
<b>Revision</b>	On (1)	<b>ID_CMD_REV_ON</b>
<b>Mandatory command</b>	On (1)	ID_CMD_FORCE_ON
<b>Mandatory command</b>	Off (0)	ID_CMD_FORCE_OFF

Action	Switching direction	Menu ID
<b>Mandatory command</b>	NONE	ID_CMD_FORCE_NONE



### Information

*For more information about using the context menus in the Command see chapter Energy Edition in section Context menu Command.*

## Macros for the context menu

A macro is a defined character sequence that is replaced by a text when menu items are created in Runtime. Virtually all macros can occur more than once per menu item. They can also contain further macros as a result. In doing so, the expansion sequence must be considered. Macros are not case sensitive when configuring menus. If macros contain a macro as a result, the macro must be contained in capitals in the result. The entry is made with \$ as a prefix and suffix.

The sequence of the expansion is from left to right in the following priority.

1. **\$ALL\$**
2. **\$NOTES\$**
3. **\$TAG\$**
4. **\$REMA<Condition>\$**
5. **\$RDIR\$**
6. **\$DIR\$**
7. **\$ACT\$**
8. **\$NAME\$**



Macro	Description
<b>\$ALL\$</b>	<p>Results in <b>Action naming: Switching direction</b>.</p> <p>Corresponds to the combination of the <b>\$ACT\$</b>: macro <b>\$DIR\$</b></p> <p><b>Note:</b> If a context menu is created for the command processing, the default text is \$ALL\$, even if the menu already has text configured for it but the action type changes to command processing.</p>
<b>\$NOTES\$</b>	<p>The whole text including the macro is interpreted as a note. If the resulting text is empty, the <b>\$ALL\$</b> macro is used.</p> <p>For the last macro, the note macro is again checked and the text to the right of this including the macro is deleted.</p> <p>If the resulting text is empty or only consists of spaces, the menu item is not inserted.</p>
<b>\$TAG\$</b>	<p>Is replaced by the identification of the action variable.</p> <p>The identification can be translated by the online language translation function. If no translation character (@) is contained, the whole identification is highlighted for translation.</p>
<b>\$REMA&lt;Status&gt;\$</b>	<p><b>&lt;Condition&gt;</b> is a Rema or limit value state, the text of which is used as a replacement.</p> <p>If the status is not present, the menu item is not displayed.</p> <p>The limit value text is translated linguistically according to the placement of @ .</p> <p>The status can be a number between <math>-2^{31}</math> and <math>2^{31-1}</math>. Leading characters and a prefix are permitted. If characters are contained that cannot be converted to a number, or the number is outside the given area, the menu item is not displayed.</p>
<b>\$RDIR\$</b>	<p>Text for the switching direction from reaction matrix/limit value as in <b>\$DIR\$ macro, with the exception of:</b></p> <ul style="list-style-type: none"> <li>▶ <code>Action Write set value direct</code> The text is taken from the rema/limit value of the status, which corresponds to the value of the set point to be set.</li> <li>▶ <code>Action Status on and Status off</code> Text is taken from the rema/limit value for the <code>on</code> or <code>off</code> statuses.</li> <li>▶ <code>Action Correct direct</code> The text is taken from the rema/limit value of the status, which corresponds to the value of the set point to be set.</li> </ul>
<b>\$DIR\$</b>	Switching direction of the action.
<b>\$ACT\$</b>	Action naming of the action.
<b>\$NAME\$</b>	The \$NAME\$ macro can be used to create menus and provides the configured content of the <b>Action name</b> property, the language of which can also be switched in Runtime with a @ character.

## AUTOMATICALLY CREATED MENU ITEMS

Automatically created menu items are created as a menu ID with ID\_CMD\_AUTO. In this case, macros must always be used, because otherwise only a menu item would be inserted.

## COMPATIBILITY

Previous to version 6.51 text at automatic menu items was ignored. When converting projects that were created with versions earlier than 6.51, the macros \$ALL\$NOTE\$ are automatically inserted before the configured text. Therefore the menu items behave as before.

## ONLINE LANGUAGE SWITCH

The labeling for the menu item in the **Text** property is translated linguistically before macro expansion from the character @.

**Note:** If, for the **\$TAGSS** macro, no translation indicator (@) is contained, the complete text is translated.

### 3.2.3 Graphical designs

The graphics of the menus can be influenced by the following properties

Parameters	Description
<b>Graphics File</b>	Shows a graphics file in the far left area.
<b>Background graphic</b>	Places a graphics file behind the menu entry. The orientation can be either in <code>original size</code> or <code>stretched</code> .
<b>Check mark</b>	Shows a tick in the far left area. This tick has no influence on the availability of the linked function; it is only for display. The display and functionality in Runtime can only be controlled via VBA/VSTA.
<b>visible</b>	Activated: Menu entry is displayed in Runtime and linked function is available. The visibility in Runtime can only be controlled via VBA/VSTA.
<b>Separator active</b>	Shows, instead of the menu entry, a horizontal dividing line for a logical division of the menu.  The dividing line can be a width of 0 to 50 pixels and the color can be freely defined.

### 3.2.4 Submenu

To create sub-menus:

1. Go to a menu cell.
2. Activate the **Submenu** property.  
As a result, a new, empty menu item is created next to the selected menu cell.
3. Define the entries for the sub-menu or configure further sub-menus

Sub-menus are shown by an arrow to the right. Sub-menus can also be created as nested sub-menus.

## 4. Operating during Runtime

The Menu Editor menus correspond to the usual functionality that is common in Windows applications.

Menus are located on a predefined position in the upper left corner in Runtime.

**Note:** If there is alarm pending, the alarm line may cover the menus. In this case, the menus can only be operated once the alarms have been acknowledged. To avoid this, plan the alarm status line at a different location or activate frames for the template.

### 4.1 Displays menus in Runtime

To display main menus (on page 20) in Runtime, the corresponding **Show menu** function must be created and linked.

Context menu (on page 21) are defined in the properties for the respective dynamic elements.

#### USER ADMINISTRATION

If user administration is configured for the project, the display behavior of the menu in Runtime can be amended to the user operating authorizations.



#### Information

You can read more information about the configuration of user administration in the user administration chapter.

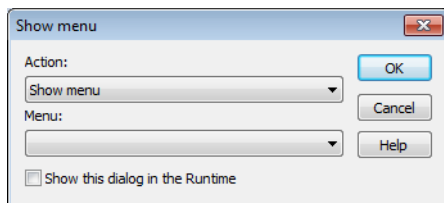
## ENGINEERING IN THE EDITOR.

1. Click on the main node of your project.
2. Go to the **User Administration** property group.
3. Select the desired behavior in the **Locked menu items** property.
4. Assign a **Authorization level**:  
For the assignment of the respective **Authorization level**:
  - a) Switch to the **Authorization** property group.
  - b) Set the corresponding password level in the **Authorization level** property.

### 4.1.1 Displaying main menus

This function controls the display of main menus (on page 4).

1. Create a new function with **New function**
2. In the **Screens** node, select the **Display menu** function
3. Define the action to be carried out and the main menu



Parameters	Description
<b>Action</b>	Selection of the action:
Show menu	The selected menu is displayed.
Hide menu	The selected menu is hidden.
Change menu	The current menu is hidden and the selected menu is displayed instead.
If no menu exists	The selected menu is displayed, if no menu is displayed at the moment.
<b>Menu</b>	Selection of menu.
<b>Show this dialog in the Runtime</b>	<b>Active:</b> This dialog is opened when the function is carried out in Runtime.



### Information

*In the zenon Web Client (zenon Web Server and Web Server Pro) the main menus are not displayed.*

*Under CE (zenon under Windows CE) menus can only be displayed in the standards supported by Windows CE. Colors and fonts different than the Windows colors/fonts cannot explicitly be selected in the menus under CE.*

When the standard function is created from the context menu in the detail view, zenon automatically creates the function 'Show menu' for the selected menu.

## 4.1.2 Displaying context menus

Context menus can be used in Runtime for dynamic elements. To display a context menu in Runtime, link the context menu with the desired dynamic element.

To do this:

1. navigate to the **Runtime** node in the dynamic element properties
2. select the **Context Menu** property
3. select the desired context menu from the drop-down list



### Attention

*Context menus are referenced via their name. This means: If a context menu is renamed, the linking to the dynamic element is lost and must be recreated.*