

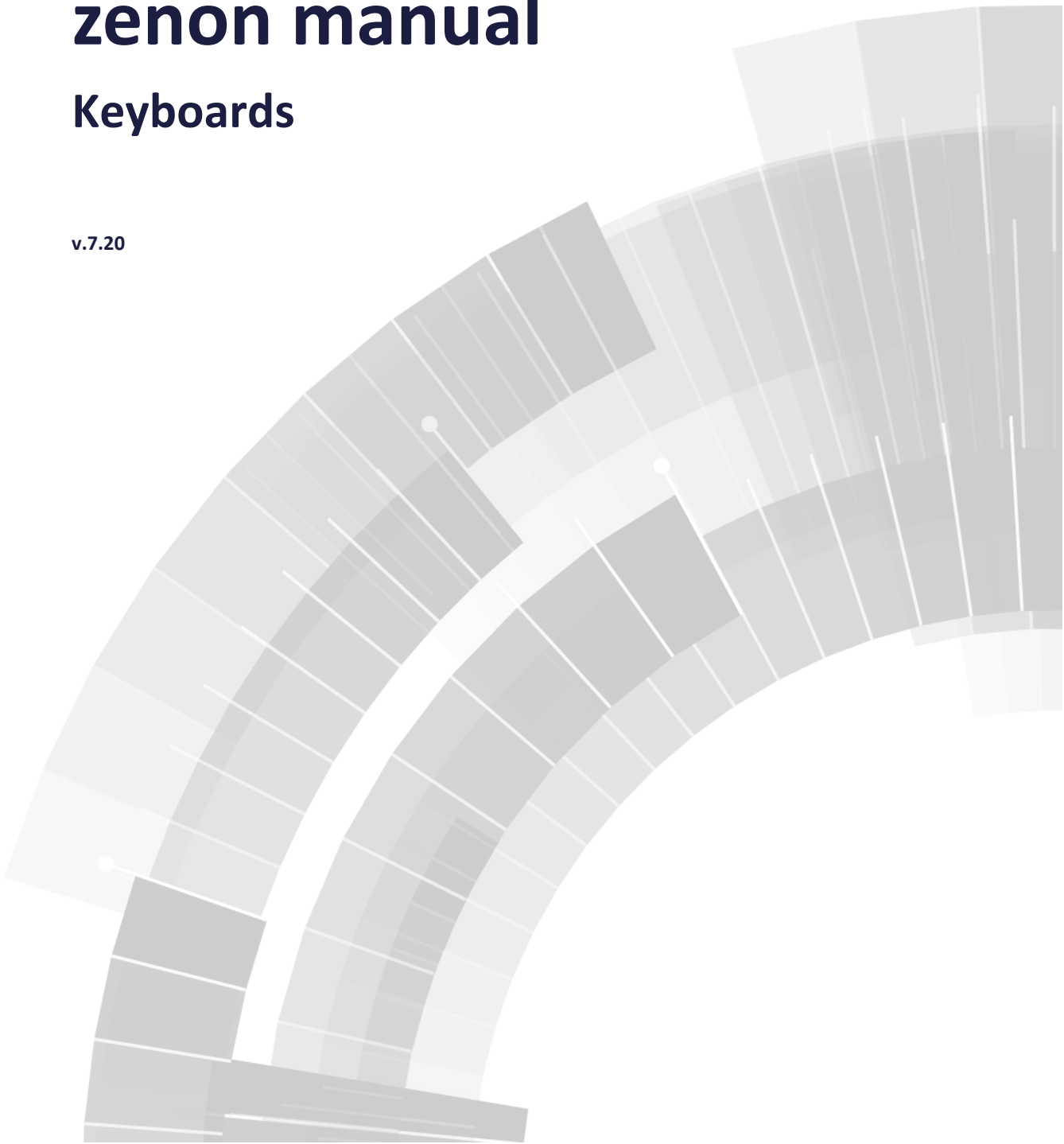


COPADATA
do it your way

zenon manual

Keyboards

v.7.20





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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. Keyboards

Keyboards serve as virtual keyboards in zenon. Entries are possible in Runtime using a touchscreen with a virtual keyboard.



License information

Part of the standard license of the Editor and Runtime.

Note: Use of the virtual keyboard and the hardware keyboard in combined operation is not recommended.

Two different types of keyboards can be configured in zenon Editor:

- ▶ Automatic keyboard (on page 5).
- ▶ Configurable keyboard (on page 7).

Use of keyboards in zenon:

- ▶ Keyboards are used in in zenon to write set values.
- ▶ Individual keyboards can be used in Batch Control.
 - You can find further information in the `Batch Control` manual, in the `Keyboards` chapter.
- ▶ You can do the following in recipe groups:
 - Link a keyboard screen for each recipe parameter
 - Define keyboards for each parameter data type

You can find further information in the `RGM` manual in the `Keyboard` chapter.

Special case: A string keyboard is called up for the `action type` user status in the Recipegroup Manager.

If, in the Recipegroup Manager, a `bool` or `numeric` recipe parameter has the action type changed to `user status`, the general string keyboard configured in the RGM is called up. If no keyboard screen is linked there, direct editing mode is activated in the recipe value table.

3. Automatic keyboard

To use the automatic keyboard, proceed as follows:

1. Open the zenon Editor
2. Click on the project with which you would like to work.
3. Click on **Interaction** in the properties.
4. Activate the **Automatic keyboard** setting there under the **Keyboard** heading.

Keyboard			
<input checked="" type="checkbox"/> Automatic keyboard	Keyboard size [%]: 100		
Favored position			
Vertical:	Top	Horizontal:	Left
Vertical offset [pixel]:	2	Horizontal offset [pixel]:	2
Alternative position			
Vertical:	Top	Horizontal:	Left
Vertical offset [pixel]:	2	Horizontal offset [pixel]:	2

This setting is not activated by default. When activating, the automatic keyboard is created by the system and is automatically called up in Runtime relatively close to the element. It appears where a set value is to be entered. You can configure your own properties such as size or position by means of the properties in the Editor.

Note: There are no automatic keyboards available for the profile control elements. In this case, it is recommended that you create your own keyboard and call it up using a button. It is therefore also possible to enter a profile name using your own, manually-activated keyboard.

3.1 Size of the keyboard

The size of the keyboard can be freely defined by the user.

To do this:

1. Open the zenon Editor
2. Click on the project with which you would like to work.
3. Click on **Interaction** in the properties.
4. Activate the **Automatic keyboard** setting under the **Keyboard** heading.
5. Enter the desired size in percent in the **Keyboard size [%]** field.



Information

The height of the title bar is obtained from the display settings. The following can be changed using the setting via Control Panel -> Appearance -> Display -> Advanced -> Element: Palette title.

3.2 Position of the keyboard

You can define a preferred position and also an alternative position in the properties of the keyboard. If there is not enough space for the keyboard at the preferred position, it will be displayed at the alternative position. If there is also not enough space there, the position will be defined by the system. You define the position with the help of four values.

Property	Description
Horizontal	<code>Left</code> (default) positions the left corner of the keyboard in relation to the top or bottom left corner of the element. <code>Right</code> positions the right corner of the keyboard in relation to the top or bottom right corner of the element.
Horizontal offset [pixel]	Horizontal space (in pixels) to the selected element for the preferred position of the automatic keyboard. Positive values move the keyboard to the right, negative values move it to the left. Default: 2.
Vertical	With <code>top</code> (default) or <code>bottom</code> you position the keyboard above or below the element.
Vertical offset [pixel]	Vertical space (in pixels) to the selected element for the preferred position of the automatic keyboard. Positive values move the keyboard upwards, negative values move it downwards. Default: 2.

4. Configurable keyboard

The keyboard can be configured or defined by the user. To do this, proceed as follows:

1. Open the zenon Editor
2. Click on the project with which you would like to work.
3. Create a new frame under Screen ->Templates.
Note: Keyboards always need their own frame that should only be used for keyboards.
4. Define the desired properties in relation the position and size of the keyboard.
5. Under `Screens`, create a new `keyboard` screen (on page 7).
6. Select a template for the keyboard under `Control` elements.

In the properties, you can change the color, the form or the naming of the keyboard keys as you wish.

Note: Use of the `Standard` template is recommended.

4.1 Creating a screen of the type keyboard

You have several possibilities for creating a new `keyboard` screen:

Context menu in the project manager:

1. Click on **screens** in the Project Manager.
2. A right click opens the context menu.
3. Click on **New screen** in the context menu.

Toolbar

1. Click on **screens** in the Project Manager.
2. In the detail view of the Project Manager, click on **New screen** in the tool bar.

You have several possibilities for determining the screen type of the new screen:

Detail view of the Project Manager:

1. In the detail view of the Project Manager, click on the **screen type** of the newly created screen.
2. Select the **keyboard** screen type in the drop-down list.

Properties:

1. Click on **General** in the properties.
2. Click on the arrow on the right under **screen type** and select the **keyboard** screen type in the drop-down list.
3. In the properties of the **General** group, select a pre-defined keyboard as a name or give it a freely-definable name.

Attention: Keyboard screens with reserved names have priority at Runtime over other keyboard screens, including the screen **Automatic keyboard** for touch operation.

If a **keyboard** screen is called up over the whole screen, instead of just a dialog, it can be the case that menus are hidden.

Hint: In that case, engineer a **close frame** function which allows you to close the open keyboard-frame.

In the screen properties, under **General**, there are several key words under **Name**. You can read what these are for in the following:

RESERVED NAMES

For screen type **keyboard**, the following names have been reserved:

Name	Description
DIALOGKBD	<p>if a picture with this name exists, it will be opened in the Runtime every time a dialog is loaded, e.g. for entering a new recipe name in the RGM.</p> <p>Attention: The DIALOGKBD is not designated to be used with control element <code>Set value input</code> and not suitable for it. The use of this combination can cause errors in the Runtime.</p>
SETBOOLKBD	if a picture with this name exists, it will be opened in the Runtime every time an input for binary variables is required.
SETSTRINGKBD	If a picture with this name exists, it will be used in Runtime instead of the standard dialog box for string variables.
SETVALUEKBD	<p>If a picture with this name exists, it will be used in Runtime instead of the standard dialog box for numeric variables. The control element <code>set value input</code> must be inserted in the keyboard.</p> <p>Attention: When <code>Caps lock</code> is activated, you cannot enter anything in a keyboard of type SETVALUEKBD as instead of numbers the respective special characters would be entered.</p> <p>Exception: French keyboards need the <code>Shift</code> key or <code>Caps lock</code> for entering numbers.</p>

*Note: Use the control element `Set value input` only for keyboards which are created for the input of input set value (**SETVALUEKBD**, **SETSTRINGKBD**). It is automatically connected to the variable of the dynamic element that is to receive the set value. When using a normal Keyboard, unwanted results may occur.*

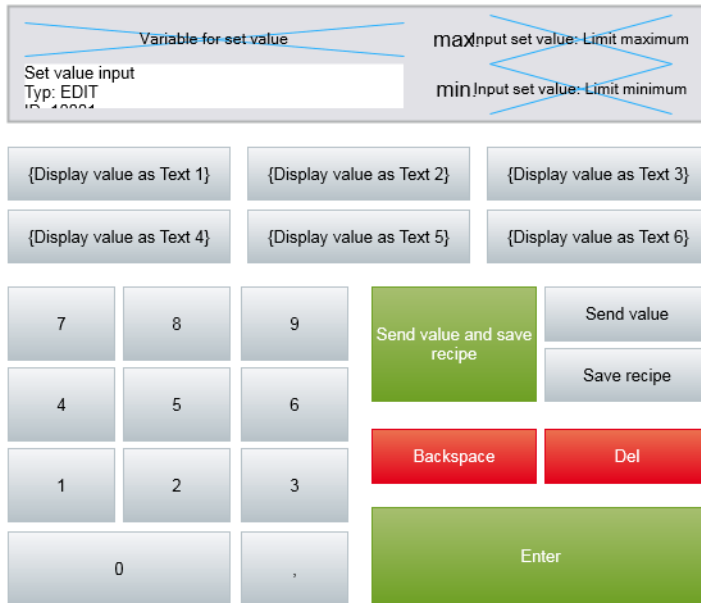
It is imperative for Keyboards that are used for setpoint input to have the control element `Setpoint input` projected in the screen. If not, it is impossible to enter values or to send set values.

Note: Is in the project

- ▶ a screen of type Keyboard with the reserved name **DIALOGKBD** available
 - ▶ and at the same time a screen of type Login
 - ▶ and the `automatic keyboard` property in the **keyboard** group is activated,
- the screens must not be based on the same frame. In this case, the **DIALOGKBD** would be used automatically.*

A keyboard button has more properties than a normal button in `zenon Editor`. This can be seen and defined under `Display`. Special characters can be defined this way.

4.2 Control elements



The image shows a control panel interface with the following elements:

- Variable for set value:** A text input field labeled "Set value input" with "Typ: EDIT" and "R: 1000" below it. It is connected to a "max" label (Limit maximum) and a "min" label (Limit minimum) via blue lines.
- Display Text Buttons:** A grid of six buttons labeled "{Display value as Text 1}" through "{Display value as Text 6}".
- Numeric Keypad:** A grid of buttons for digits 0-9, a comma, and a period.
- Function Buttons:**
 - "Send value and save recipe" (green)
 - "Send value" (grey)
 - "Save recipe" (grey)
 - "Backspace" (red)
 - "Del" (red)
 - "Enter" (green)

Control element	Description
Insert template	<p>Opens the dialog for selecting a template for the screen type.</p> <p>Templates are shipped together with zenon and can also be created by the user.</p> <p>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 placed in the screen. Elements can be moved in the screen and placed individually.</p>
Alphanumerical left	Definition of the keys for self-created keyboard; left side of a normal standard keyboard.
Alphanumerical right	Definition of the keys for self-created keyboard; right side of a normal standard keyboard.
Number lock	Definition of the keys for self-created keyboard; number keys of a normal standard keyboard.
Function keys	Definition of the keys for self-created keyboard; function keys and Escape key of a normal standard keyboard.

Recommendation: Use a template.

Control element	Description
Write set value	Control element for write set value.
Set value input	Allows the input a set value. Must be configured in the screen for SETBOOLKBD, SETSTRINGKBD and SETVALUEKBD.
Value ++	Carries out addition calculations. Adds 1 to the value.
Decrement	Carries out subtraction calculations. Subtracts 1 from the value.
Value on	The value is 1, i.e. <i>true</i> . Example: Machine is on.
Value off	The value is 0, i.e. <i>false</i> . Example: Machine is off.
Toggle value	True/false switch.
OK	Sets the value and closes the window.
Cancel	Closes the window.

4.3 Keys for Recipegroup Manager

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
<code>Send value</code>	The set value is written to the variable, updated in the recipe and the keyboard is closed.
<code>Save recipe</code>	The recipe is saved
<code>Send value and save recipe</code>	The set value is written to the variable, updated in the recipe, the recipe is saved and the keyboard is closed.
<code>Value displays as Text 1</code> to <code>Value displays as Text 32</code>	<p>Keys can be linked with limits from a reaction matrix. To do this, the variable of the recipe parameter</p> <ul style="list-style-type: none"> ▶ must be linked with Numeric reaction matrix or String reaction matrix and ▶ "equals" states must be included <p>Assigned keys are shown in runtime and labeled with the text from the reaction matrix.</p> <p>Clicking the button writes the linked value in the reaction matrix as a proposal for the recipe value in the <code>Set value</code> input control element.</p>

4.4 Automatic key labeling

The labeling of the Keyboard can be either freely defined or defined by the operating system. To do this, activate or deactivate, in the screen properties under **Representation**, the **Automatic labeling** option. The language is automatically taken from the operating system and the keys are automatically labeled after that. This option is well suited to other countries that want to work with the keyboard. All keyboard layouts that are supported by Windows are available. The functionality of the virtual keyboard keys corresponds to the hardware keyboard. The configured labeling is ignored in the process.

For this, the following applies:

1. Active:

- For letters, numbers and F keys of the screen of the type `Keyboard` the original labeling of the keyboard layout of the operating system is used.
- No alternative labeling can be defined.
- If keys have been labeled differently, the original labeling will still be used in the Runtime. Function keys such as `Tab` or `Shift` can still be labeled differently.

The keypad of the keyboard is not automatically labeled and the label can be adapted in the Runtime at any time independent of the setting of property **Automatic labeling**.

1. Inactive:

- All keys can be labeled individually and are displayed in the Runtime correspondingly.
- The labeling of the keys can be amended in the Editor in the properties, under **Representation**.
- In the Runtime the alternative label is displayed.

4.5 Keyboards in the Web Client

If a keyboard is loaded in the Runtime, it stays open even if the Runtime is minimized. In the OS task bar, a drop down list for the keyboard is shown.



Attention

*Individually adapted screens of type **Keyboard** may under certain circumstances not work properly with the Mozilla Firefox browser.*

Reason: Mozilla Firefox loads new windows in the background without putting the focus on them. Depending on the project configuration, individually-adapted keyboard screens are closed as soon as they are no longer in focus.

Solution: Use a different browser such as Microsoft Internet Explorer or Google Chrome, or use the "Close on loss of focus" frame option".

Automatic keyboards are not affected!

5. Hardware keyboards and virtual keyboards used together

Virtual keyboards act like hardware keyboards in the operating system. If virtual keyboards are used together with hardware keyboards, they affect each other. Settings on the hardware keyboards - e.g. determine whether Shift is used - affect the virtual keyboard and vice versa.

EXAMPLES:

- ▶ If **CAPS lock** is pressed on the hardware keyboard, it is also true for the virtual keyboard. In this case you cannot enter numbers via the automatic keyboard.

- ▶ If you press key `Num` on the hardware keyboard in order to switch of the number pad, the number pad on the virtual keyboard is also turned off.

Note: Use of the virtual keyboard and the hardware keyboard in combined operation is not recommended.