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MANUAL

HMI Template Suite (WinCC Unified)

SIMATIC WinCC Unified V21

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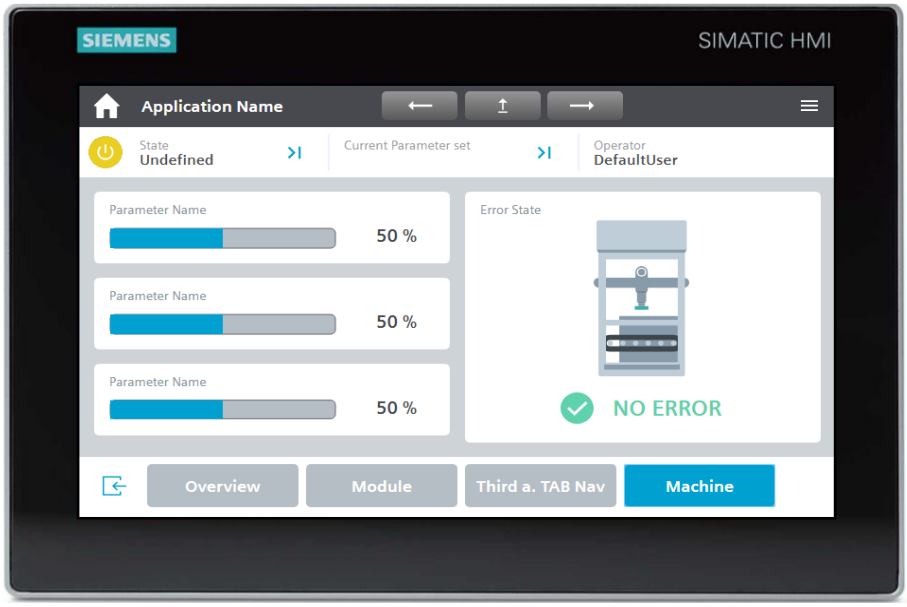
1. Introduction

1.1. Overview

Machines are becoming more and more complex and, therefore, more difficult to operate. To make it easier for automation engineers to get started with a modern user interface, SIEMENS has developed the HMI Template Suite.

For a machine to be operated optimally, everything on the Operator Panels must be clear and easy to understand. The HMI Template Suite provides you with templates and ideas to make the configuration of your Operator Panel straightforward and modern. As a result, it serves as the only interface between man and machine for controlling and monitoring the machines.

Figure 1-1



Layout and design are designed for smooth operation, transparency, and scalability. In this way, you can simplify the operation of your machine and reduce operator errors. In addition, a good user interface sets you apart from the competition and ensures that users are satisfied by increasing productivity.

1.2. Principle of Operation

The foundation of the HMI Template Suite is a fully configured Operator Panel or web application stored on the SIMATIC S7-1500 (SIMATIC WinCC Unified "View of Things", or "VoT" for short). Detailed information on the subject of "VoT" can be found via the following link \5\.

The fully configured Operator Panel contains basic navigation and operating functions. On this basis, you can easily build and extend your project in a modular manner using additional HMI objects from the library.

The "HMI Template Suite Wizard" helps you to expand your project with additional HMI objects or to create your new Operator Panel by selecting the content and then having the wizard generate it in your project via Openness. The basis for the configuration of the Wizard is, in turn, the HMI Template Suite library (WinCC Unified).

This gives you a uniform look and feel with a consistent operating principle and saves time during configuration.

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1.3. Components Used

This application example has been created with the following hardware and software components:

Component	Number	Article number	Note
SIMATIC HMI MTP700 Unified Comfort	1	6AV2128-3GB06-0AX0	Alternatively, you can use Operator Panels in sizes from 7 to 22 inches.
SIMATIC STEP 7 inkl. Safety, S7-PLCSIM und WinCC V21	1		Download trial software under entry ID: 109989774
SIMATIC WinCC Unified PC Runtime V21	1		Download trial software under entry ID: 109991137
WinCC Unified PC (10k) ES V21	1	6AV2153-2FB02-5LA5 (DL) 6AV2153-2FB02-5AA5 (Package)	
WinCC Unified PC (150) RT V21	1	6AV2154-3DB02-5LA0 (DL) 6AV2154-3DB02-5AA0 (Package)	

To purchase these components you can use SiePortal.

This application example consists of the following components:

Component	File name	Note
Documentation	LHmiTemplateSuite_V21_0_0_Manual_en.pdf	
Library	LHmiTemplateSuite_V21_0_0_LightTheme_TiaLib_V21.zip LHmiTemplateSuite_V21_0_0_DarkTheme_TiaLib_V21.zip	
Wizard	LHmiTemplateSuite_V21_0_0_Wizard_V21.zip	Executable file

2. Structure of the Library

With the HMI Template Suite library, you can easily create a custom project using preconfigured graphics and control elements. In the following section you will find information about the structure of the library. It basically consists of 4 folders. In the first 2 folders "Types" (1) and "Master copies" (2) you will find the templates for configuring a visualization. The last 2 folders "Common data" (3) and "Languages & resources" (4) contain the technical data that is not relevant for configuring your visualization and is therefore not described further in this documentation.

Figure 2-1

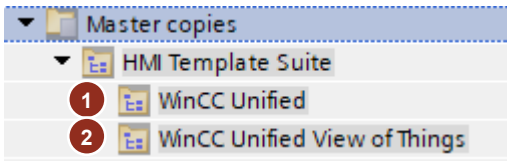


NOTE Information on integrating the library into your project can be found in Section 5.1.

2.1. Master Copies

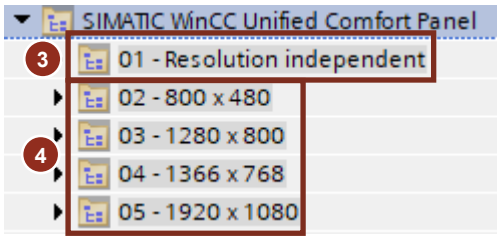
The "Master copies" folder contains the heart of the HMI Template Suite. Here you will find 2 folders, "WinCC Unified" (1) and "WinCC Unified View of Things" (2). The "WinCC Unified" folder is divided into 2 further folders "SIMATIC WinCC Unified Basic Panel" and "SIMATIC WinCC Unified Comfort Panel". In each folder you will find templates for WinCC Unified Operator Panels corresponding to the chosen device and its resolution.

Figure 2-2



In principle, the structure of all device folders in the library is the same. The tags and scripts can be found under "01 – Resolution independent" (3). This is followed by various folders for each resolution (4) of the chosen device. However, the structure of these folders is the same.

Figure 2-3



2.1.1. Selection of WinCC Unified Operator Panels

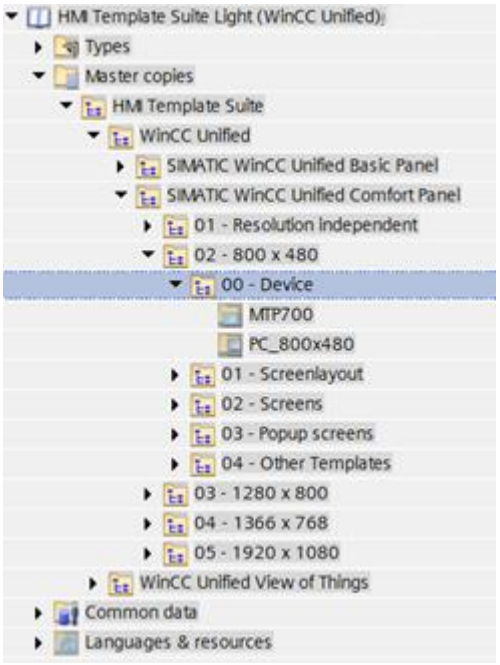
For WinCC Unified Operator Panels, templates are available with the following resolutions:

- 800x480 pixels (MTP700, MTP400 Basic, MTP700 Basic, PC Station, VoT)
- 1280x800 pixels (MTP1000, MTP1200, MTP1000 Basic, Vertical_MTP1200, MTP1200 Basic, PC Station, VoT)
- 1366x768 pixels (MTP1500, PC Station, VoT)
- 1920x1080 pixels (MTP1900, MTP2200, PC Station, VoT)

NOTE The description of library integration into a TIA Portal project can be found in Section 5.1.

Use the preconfigured Operator Panels that are stored in the library under the different resolutions in the folder "00 - Device".

Figure 2-4



2.1.2. Templates for Operator Panels (00 – Device)

The pre-configured Operator Panels provide the perfect foundation for your project. The Operator Panel already contains all of the necessary elements for operation:

- Navigation, Title, and Status bar (Section 4.1)
- Displaying Messages/Alarms (Section 0)
- Settings and Diagnostics Pages (Section 0)
- Templates (Image Templates) for Different Levels of Navigation (Section 0)

NOTE

The preconfigured Operator Panels are located in the library in the subfolders "00 – Device". They are stored according to resolution.

You have the option of creating your visualization on this basis and expanding it using the other objects (e.g., faceplates) from the library.

2.1.3. Templates for Screens by Resolution

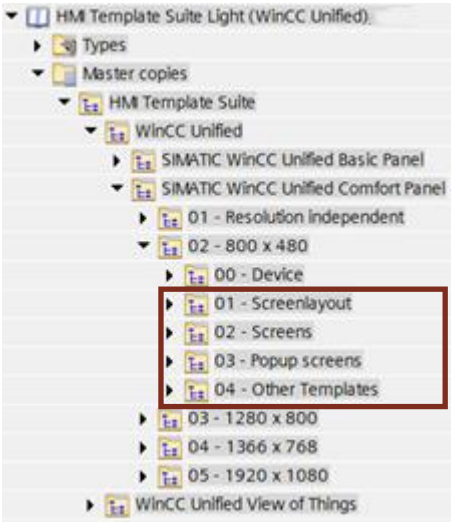
If you do not want to transfer the entire device from the "00 – Device" subfolder, but only parts from the HMI Template Suite library such as screens or objects to your already configured Operator Panel, you can copy them manually one by one into the configuration of your Operator Panel in the TIA Portal from the library using drag-and-drop.

NOTE

Information on the names of the screens and their definitions can be found in Section 0.

All master copies for screens are structured in the same way for each resolution and consist of 4 different subfolders (highlighted in Figure 2-5), which are explained in the following sub-sections 0 – 2.1.3.3.

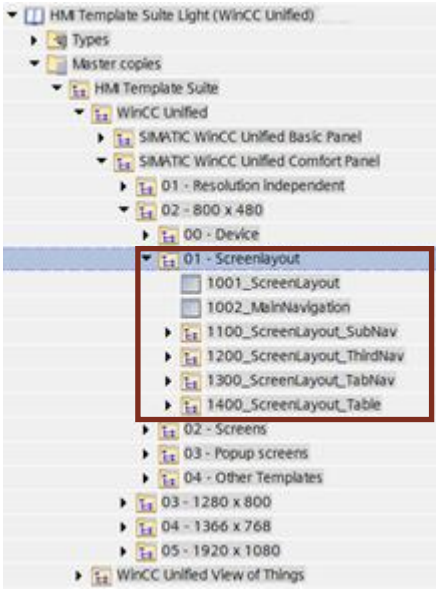
Figure 2-5



01 – Screen Layout

The folder "01 – Screen layout" contains various elements, such as the Start Screen with a specific layout, as well as various navigation modules that are used for image navigation.

Figure 2-6

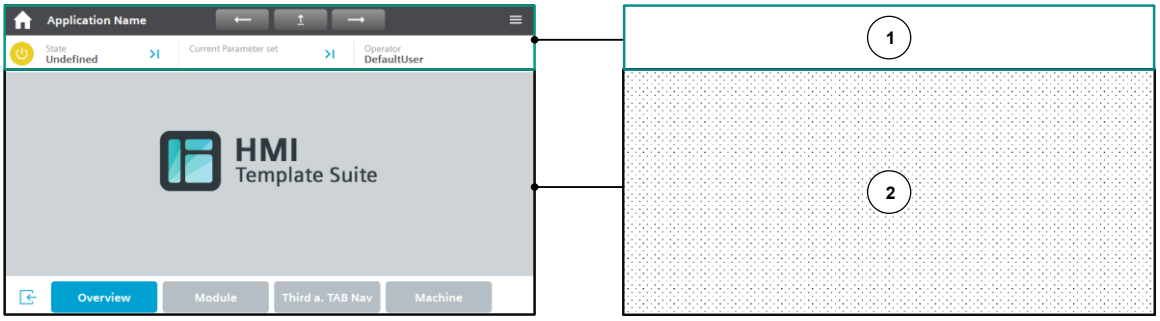


The "1001_ScreenLayout" screen is defined as the Start Screen or main screen window in the Screen management of the HMI Template Suite. It is divided into two areas (see Figure 2-7).

The upper, static area (1) represents a "header" area with title and Status bar. Static means that the image content is not switched by a screen change.

The lower area (2) contains a screen window with the sub-navigation ("SubNavigation") (1101_ScreenLayout_SubNav), in which the user-specific screens are later displayed.

Figure 2-7

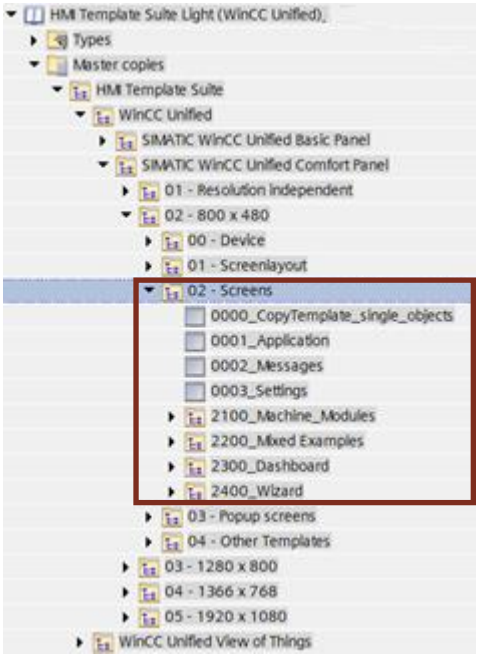


NOTE A detailed description of the layout and the navigation concept can be found in Section 4.1.

2.1.3.1. 02 – Screens

In the folder "02 – Screens" you will find the preconfigured HMI screens, such as dashboards, Overview screens, or Wizards (see Section 0). In addition, the individual screen objects such as buttons, text fields, etc. are available as templates in the "0000_CopyTemplate_single_objects" screen (see Section 4.4).

Figure 2-8



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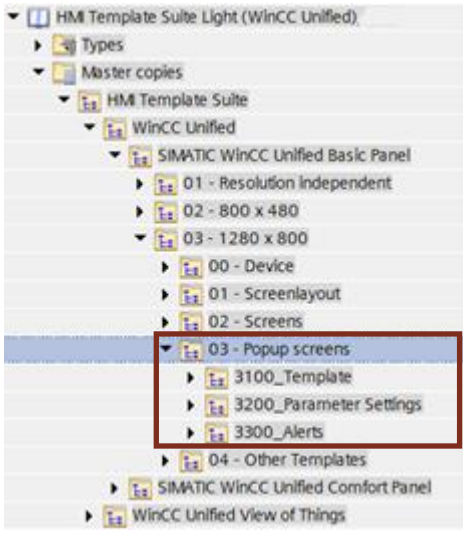
2.1.3.2. 03 – Popup Screens

The pop-up windows are used to display alarms or change parameters in the machine and are generally used to enter values. The normal screens, not pop-up windows – e.g., from the "02-Screens" library folder – should only display output values and pop-ups should be used to edit values. Therefore, the pop-up windows are primarily used to show the user a clear visual separation between an output and an input field. However, there are some example screens in the library and in the preconfigured devices that are an exception.

In rare cases, the input can also be made via the usual screen, for example when using preconfigured faceplates.

You can find the pop-up windows in the library under the various resolutions in the subfolder "03 – Popup screens".

Figure 2-9



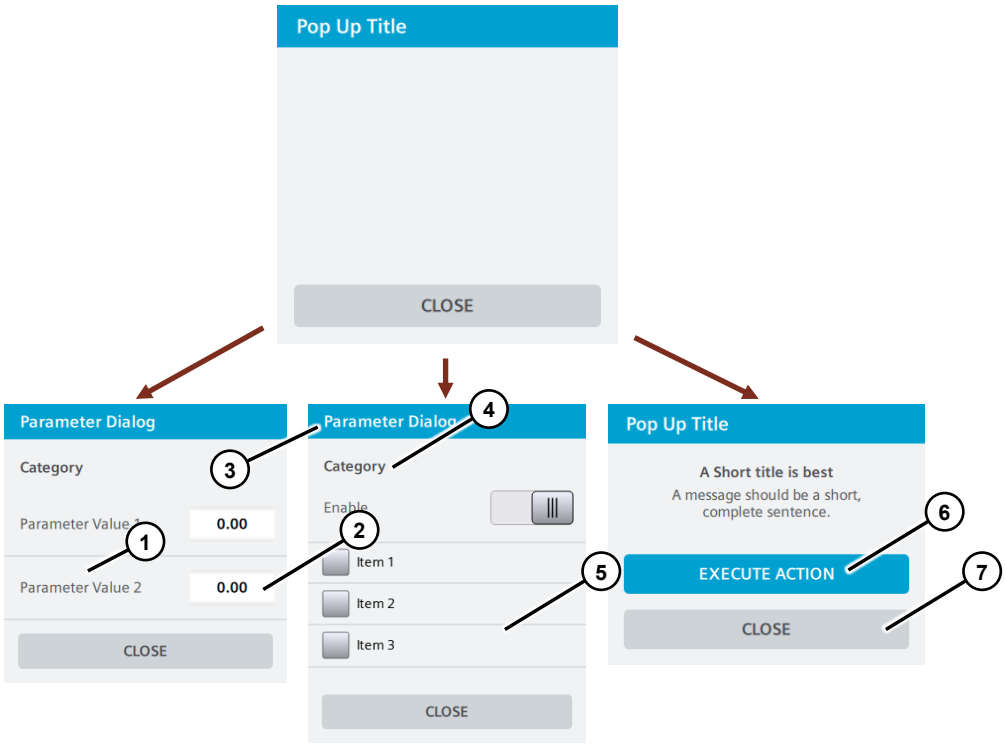
NOTE The preconfigured pop-ups are screens that are called up as pop-ups in WinCC Unified. You can find information on accessing the pop-up windows in the screens in Section 5.4.

General structure of a pop-up window

All pop-up windows contain colors based on the theme and the color selected palette. There can be headers for subcategories, if necessary, as well as separators between the output values.

The rest depends on the individual content of the pop-up and can be filled with text, input fields, checkboxes etc., for example.

Figure 2-10



(1) Value: Text field

(2) Value: I/O field

(3) Title bar:

(4) Subcategory: no dividing line between the heading and the first value

(5) Dividing lines between each input value

(6) Button: Performs machine actions

(7) Button: For closing pop-ups/canceling actions

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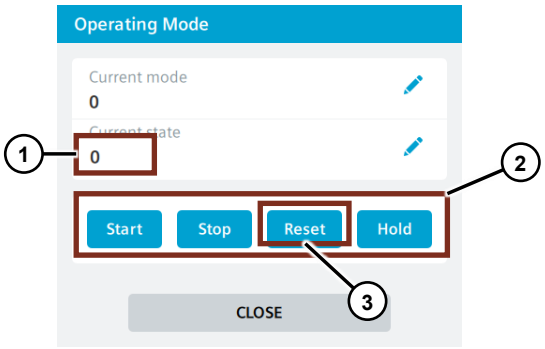
Special case of pop-up windows

Although pop-up windows are used for input values in most cases, there are some exceptions. For example, the pre-configured pop-up window "Template_Machine_State".

Here, only the output values are placed and displayed, as is the case with standard screens.

That's why this pop-up window looks different.

Figure 2-11



(1) Output field: not editable

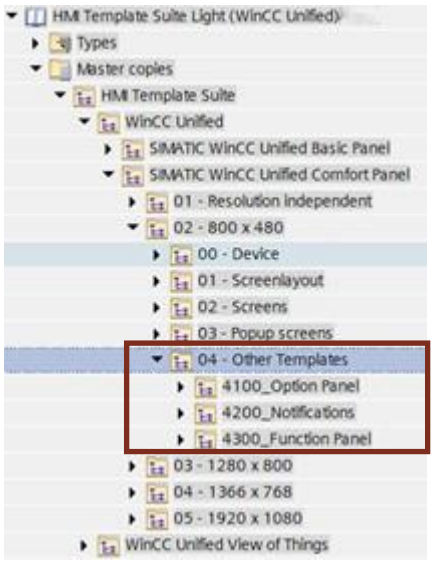
(2) ContentBoard: For grouping elements

(3) Button: To adjust the operating mode

2.1.3.3. 04 – Other Templates

Use the function buttons for the jobs and functions of the machine. You can use these elements to create different additional levels of navigation. You can find the various function buttons in the "04 – Other Templates" folder.

Figure 2-12



The folder "04 – Other Templates" is composed of 3 subfolders: "4100_Option Panel" (Section 0), "4200_Notifications" (Section 0) und "4300_Function Panel" (Section 4.3.7).

2.1.4. WinCC Unified View Of Things

The template has been designed for SIMATIC WinCC Unified "View of Things", or "VoT" for short.

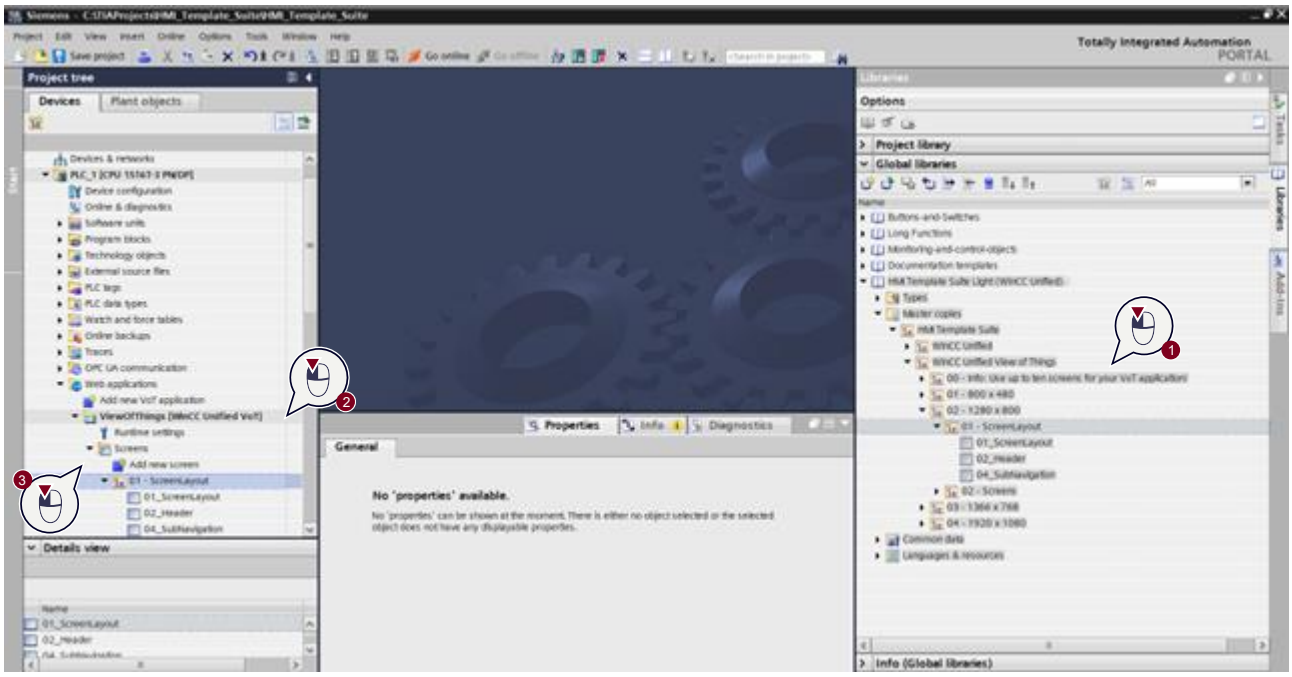
SIMATIC WinCC Unified "View of Things" is a web application stored on the SIMATIC S7-1500. Detailed information on the subject of "VoT" can be found via the following link \5\.

The templates are available in the following resolutions:

- 800x480 pixels
- 1280x800 pixels
- 1366x768 pixels
- 1920x1080 pixels

Drag and drop the individual objects from the "WinCC Unified View Of Things" folder (1) into the "Web Application" folder (2) > "Screens" (3) of the controller used.

Figure 2-13



NOTE Ensure that the components of the automation system you are using are VoT-capable. You can find help in the compatibility tool.

You can find the tool via https://www.siemens.com/compatool.

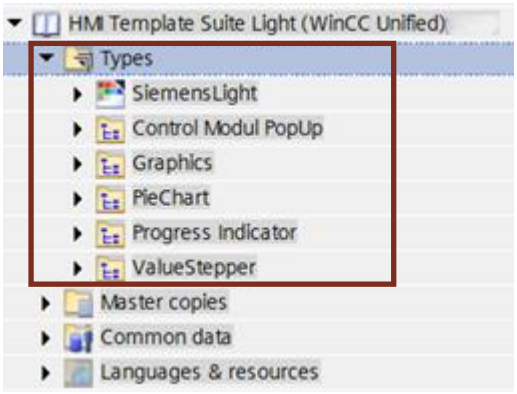
NOTE To stay within the VoT limits, do not configure more than 10 screens.

The folder "00 - Info: Use up to ten screens for your VoT application!" does not contain any screens and is for information purposes only.

2.2. Types

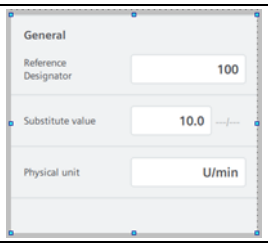
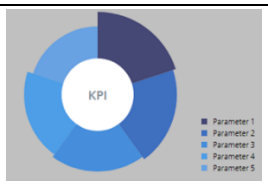
The "Types" folder contains various ready-made faceplates.

Figure 2-14



Basically, there are the following faceplates:

Table 2-1

Name	Appearance	Uses/Location of use
"Control Module PopUp"		Faceplates that can be used as pop-up windows to control and display certain process values
Graphics		Versioned graphics for use in the screens
"PieChart"		Pie chart to display KPI values
"Progress Indicator"		Progress indicator to visualize the progress of a process
"ValueStepper"		Value stepper to increase or decrease a process value

A more detailed description of the individual faceplates and their configuration can be found in Section 5.5.

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3. Fundamentals

Before starting the configuration with the HMI Template Suite library in the TIA Portal, some default settings for the engineering must be configured and the "user experience" rules (UX for short) must be followed in order to create a uniform user interface design. The following information will help you work effectively with the library in the TIA Portal.

3.1. General Design Rules

User interface design is a crucial aspect of developing a user interface. It refers to the design of the visual and interactive elements that operators use to interact with a machine.

In order to develop a well-designed user interface design that allows users to work effectively with a machine, certain design rules should be observed.

The following figure shows the most important rules:

Figure 3-1



3.2. Color Concept and Palette

This section explains the color concept and color palette of the HMI Template Suite in detail.

There is a light color scheme and a dark color scheme version of the library.

Each library contains at least one example color palette.

Previews of the main screen in both Light and Dark themes are presented below, showcasing the use of different color palettes. Each figure demonstrates how the respective palette is applied across various elements within the themes.

Figure 3-2: Light Theme Library using the SiemensLight color palette

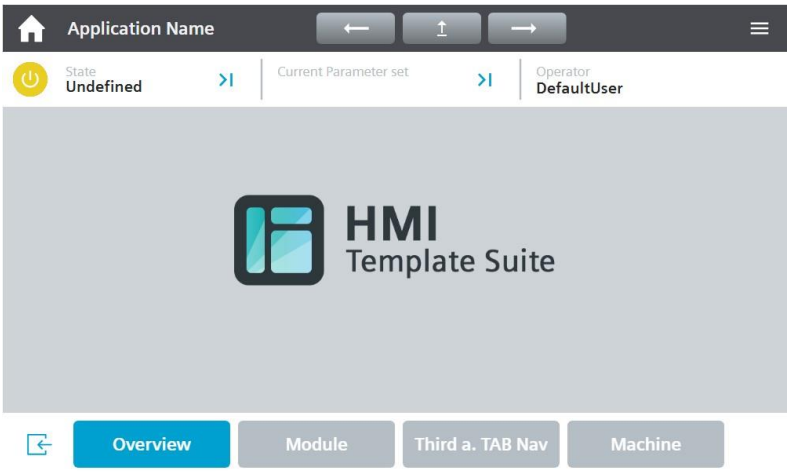


Figure 3-3: Dark Theme Library using the SiemensDark color palette

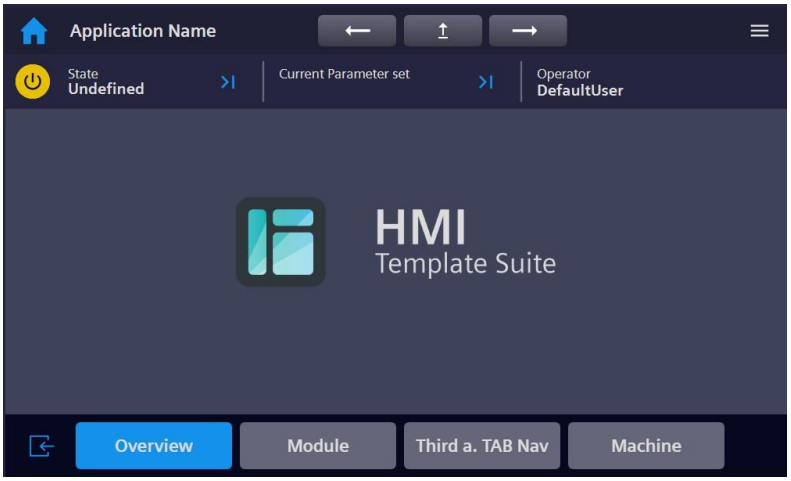
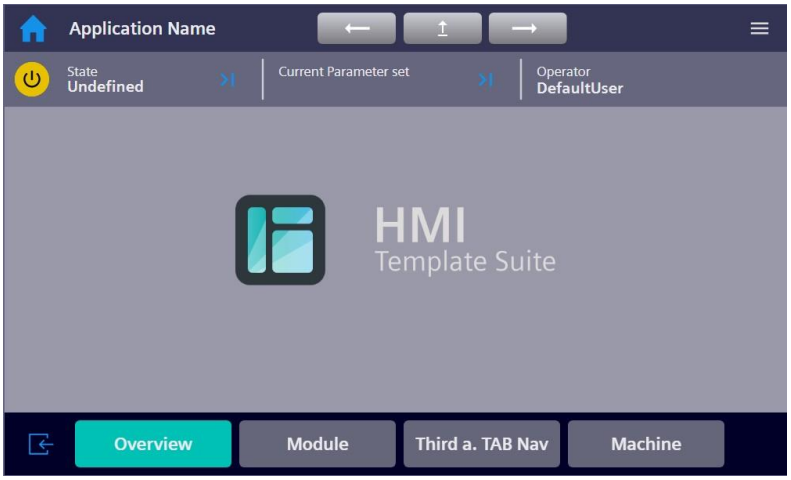


Figure 3-4 Dark Theme Library using the DeepBlue color palette



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3.2.1. Color Concept

The entire HMI Template Suite is created in a flat design. It is a minimalist design style that works without three-dimensional effects (shadows or textures etc.). This makes configuration easier and provides a clear display for the user, as the design style places the focus on the content.

For optimal usability and ergonomics, a simple color concept is used for this project.

The following colors are defined within a color palette:

- **Highlight**: The accent color that is used to highlight objects such as the title bar or active buttons and tabs
- **Basic 0**, **Basic 20**, **Basic 40**, **Basic 60**, **Basic 80**, **Basic 100**: Various graded tones for navigation and the application area (MainWindow)
- **Alarm**, **Caution**, **Warning**, **OK**, **Information**, **White**, **Grey**: Indication of different status

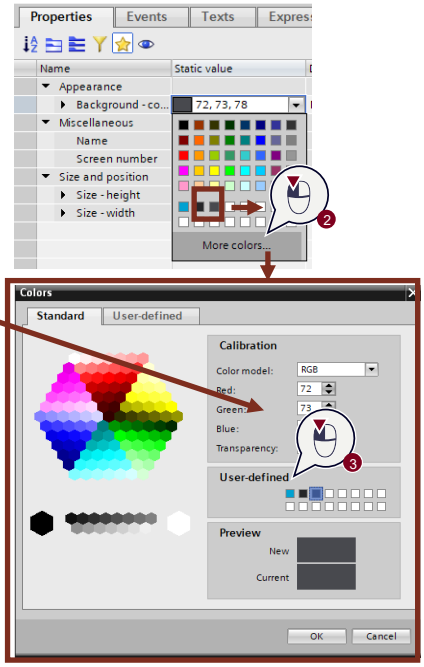
3.2.2. Color Palette

To achieve a consistent design during configuration, you can configure a palette of pre-assigned colors. This means that the same colors can always be used, thus ensuring a consistent user interface design. You can store these as "User-defined". When setting the colors in the property settings of the respective HMI object, you can use the quick access to select the colors accordingly:

1. Click any object on a screen.
2. If you are editing the color of the object, click one of the white placeholders and then click "More colors..." to configure the RGB code that you want to define for this placeholder.
3. You can find the selected white placeholder in the "User-defined" area.
4. Enter the RGB code of an HMI Template Suite color in "Calibration" and select the next color.
5. Repeat the previous steps for all the colors of the documentation.

Figure 3-3

Color	RGB color code	Function
	0,161,209	Blue, accent color, Button (active)
	38,39,41	Anthracite, Main Navigation (background)
	72,73,78	Dark gray Title bar (background) Option Panel (background)
	181,190,197	Gray, Button (inactive)
	205,211,215	Light gray, MainWindow (background)
	240,242,243	Light gray, ThirdLevel Navigation (background)
	255,255,255	White, Status bar (background), ContentBoard (background), SubNavigation (background)



3.2.3. Color Palette SiemensLight

For visualization, the following main colors are used for the HMI objects in the Light Theme (SiemensLight color palette).

Table 3-1

Name	Color	RGB color code	Function
Highlight		0,161,209	Accent color blue ("selective" color) For example, if a button is active
Basic 100		38,39,41	Anthracite Main Navigation (background) Text
Basic 80		72,73,78	Dark gray Title bar (background) "Option Panel" (background)
Basic 60		181,190,197	Gray Button (inactive)
Basic 40		205,211,215	Light gray Main Window background
Basic 20		240,242,243	Light gray Third-level navigation (background)
Basic 0		255,255,255	White Status bar (background), content board (background) SubNavigation (background)

The following colors are defined for status displays:

Table 3-2

Name	Color	RGB color code	Function
Warning		234,206,33	Warning color 1
Caution		231,121,16	Warning color 2
Alarm		222,56,88	Alarm
OK		94,209,173	Status "OK"
Information		0,80,104	Dark blue Complementary color for display elements

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The following color is used for ordinary text:

Table 3-3

Name	Color	RGB color code	Function
Grey		181,190,197	Gray Default color for Status indication icon

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3.2.4. Color Palette SiemensDark

For visualization, the following main colors are used for the HMI objects in the Dark Theme utilizing Dark color palette.

Table 3-4

Name	Color	RGB color code	Function
Highlight		20,145,235	Accent color blue ("selective" color) For example, if a button is active
Basic 100		6,8,31	Main Navigation (background) SubNavigation (background)
Basic 80		32,32,53	Title bar (background) "Option Panel" (background) Status bar (background) content board (background)
Basic 60		37,37,62	Button (inactive) Third-level navigation (background)
Basic 40		62,67,90	Main Window background
Basic 20		102,102,121	Navigation Button (inactive)
Basic 0		221,220,220	White Text

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The following colors are defined for status displays:

Table 3-5

Name	Color	RGB color code	Function
Warning		232,193,0	Warning color 1
Caution		247,139,37	Warning color 2
Alarm		255,31,87	Alarm
OK		33,186,132	Status "OK"
Information		20,145,235	Blue Complementary color for display elements

The following color is used for ordinary text:

Table 3-6

Name	Color	RGB color code	Function
Grey		102,102,102	Gray Default color for Status indication icon

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3.2.5. Color Palette DeepBlue

For visualization, the following main colors are used for the HMI objects in the Dark Theme utilizing the DeepBlue color palette.

Table 3-7

Name	Color	RGB color code	Function
Highlight		0,204,204	Accent color petrol ("selective" color) For example, if a button is active
Basic 100		38,37,72	Deep Blue Main Navigation (background) SubNavigation (background)
Basic 80		51,51,83	Deep Blue 80% Title bar (background) "Option Panel" (background) Status bar (background) content board (background)
Basic 60		76,76,104	Deep Blue 60% Button (inactive) Third-level navigation (background)
Basic 40		102,102,126	Deep Blue 40% Main Window background
Basic 20		115,115,137	Deep Blue 20% Navigation Button (inactive)
Basic 0		235,235,238	White Text

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The following colors are defined for status displays:

Table 3-8

Name	Color	RGB color code	Function
Warning		232,193,0	Warning color 1
Caution		247,139,37	Warning color 2
Alarm		255,31,87	Alarm
OK		0,175,142	Status "OK"
Information		0,135,190	Dark blue Complementary color for display elements

The following color is used for ordinary text:

Table 3-9

Name	Color	RGB color code	Function
Grey		102,102,102	Gray Default color for Status indication icon

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3.2.6. Using the color palette

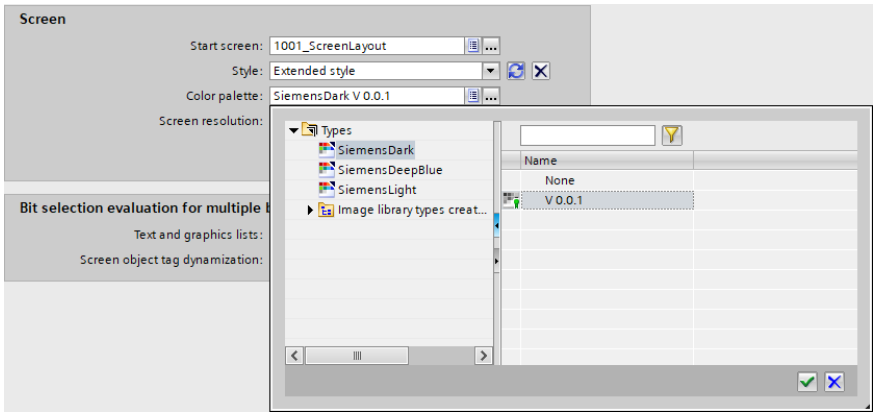
You can change a color palette for the standard colors in the Runtime settings of the device for each HMI device. You can use the colors in the color palette for color display and dynamization of screens and screen objects.

To select the color palette, follow these steps:

1. Double-click on the "Runtime settings" of the device in the project tree.
2. Open the selection dialog under "General > Screen > Color palette".
3. Select a color palette.

You can use the selected color palette for color display and dynamization of screens and screen objects.

Figure 3-5



3.3. 8-pixel Grid

The use of a spacing grid to create a uniform visualization is essential. It is an important part of a design system to ensure a consistent and appealing design and to increase efficiency in operation.

The main reasons for using a spacing grid are:

- **Consistency and harmony**: A spacing grid ensures that the spacing between different screen objects (such as text boxes, buttons, images, etc.) is consistent across all images and screens. This creates a uniform appearance.

- **Efficiency**: By using a spacing grid, developers can work faster because they can access predefined spacing values. This speeds up the development process and reduces errors.

- **Scalability**: For large projects with many screens and Operator Panels of different sizes, it is important that the distance between the elements remains consistent. A spacing grid allows for smooth scaling and adaptation to different Operator Panel sizes and resolutions.

- **Accessibility**: A well-designed spacing grid also takes accessibility into account. Proper spacing between text and other elements improves readability and usability for people with different visual abilities.

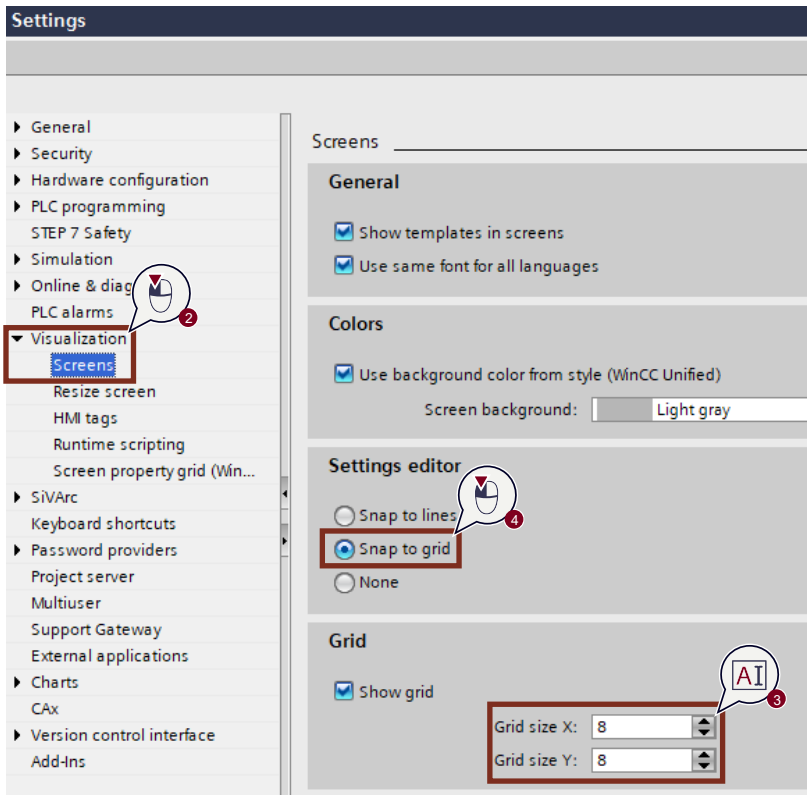
- **Aesthetics**: A spacing grid contributes to visual aesthetics by ensuring that elements are not too close or too far apart. This makes the design look balanced and appealing.

In the HMI Template Suite, all objects in the screen should be aligned to an 8-pixel grid if possible. The size of the objects should also be adapted to the 8-pixel grid. If space is limited, it is also possible to split the grid into groups of 4 pixels.

NOTE The grid is only partially supported until version WinCC Unified V17 Update 1.

The following figure shows the steps for setting the grid in the TIA Portal.

Figure 3-4



1. Go to the TIA Portal Settings at the top of the TIA Portal under "Options" > "Settings".
2. Choose "Visualization" > "Screens".
3. Set the grid values for X/Y to 8 pixels.
4. Enable the option "Snap to grid".

Once the grid has been set in the TIA Portal, you can use the keyboard shortcut "Shift + Cursor" to move selected objects in the 8-pixel grid. However, these objects should be aligned exactly to the grid beforehand. The guides also help align objects with each other.

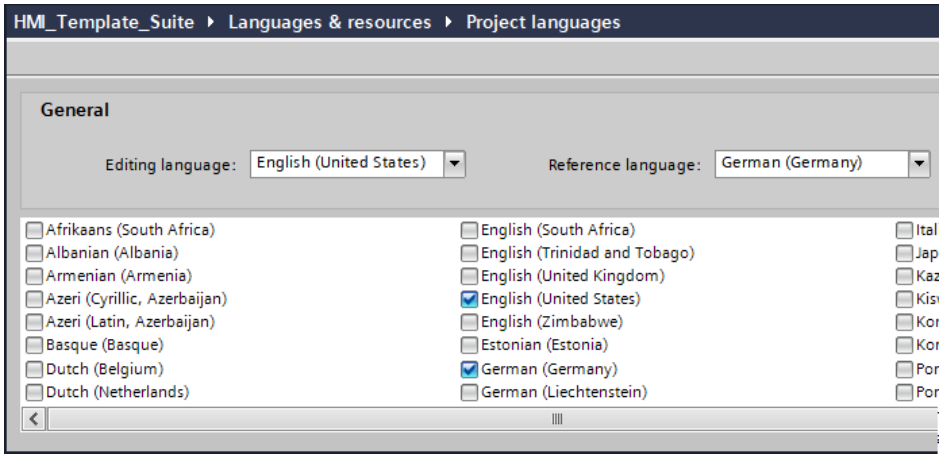
3.4. Language

The stored projects and screen objects have been created in the following languages.

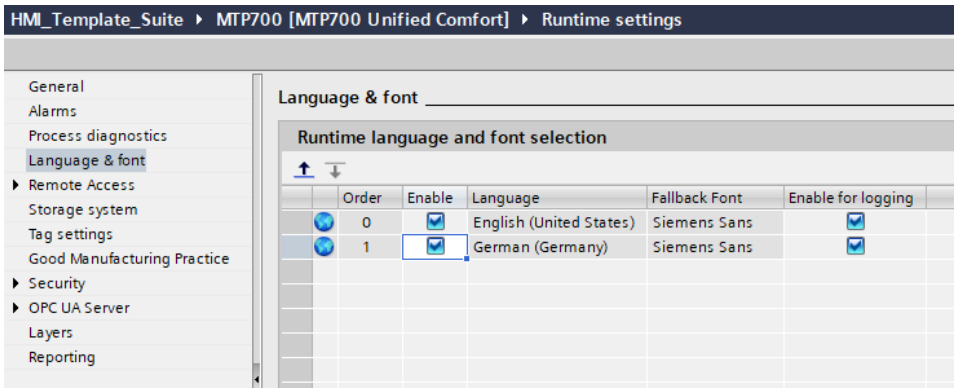
- German (Germany)
- English (United States)

For the project texts to be displayed correctly, the previously mentioned languages must be activated. To do this, check the language settings in your project and configure the following settings:

- "Project tree > Languages & resources > Project languages"
  Figure 3-5



- "Project tree" > "Operator Panel" > "Runtime settings" > "Language & font"
  Figure 3-6



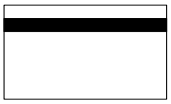
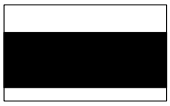
4. Layout and Structure of the Screens

This section explains the structure of the screens that are displayed in Runtime in detail. The focus of the description is not on the technical structure, but on a pure description of how the interface design is structured and how user-friendliness is achieved as a result.

4.1. Layout Areas ("Screen Layout")

Specific names have been defined for the individual areas in the HMI Template Suite. The following table lists the naming of the areas and their intended use. The technical implementation of the areas is described in the following sections.

Table 4-1

Element	Position	Benefits
Title Bar		Display title, open MainNavigation
Status Bar		Displaying important information, e.g., current parameter set, the logged-in user, or the status of the machine The display can be adjusted according to the machine It is a static area with various objects.
MainWindow (application area)		Display of plant modules, dashboards, machine operation
MainNavigation		First-level navigation (main navigation): Display of the menu, switching between machine applications or display of alarms or settings
SubNavigation (SubNav)		Second-level navigation: Navigation bar at the bottom of the screen, inside the machine
Thirdlevel-Navigation (ThirdNav)		Third-level navigation: Additional level for better structuring

NOTE

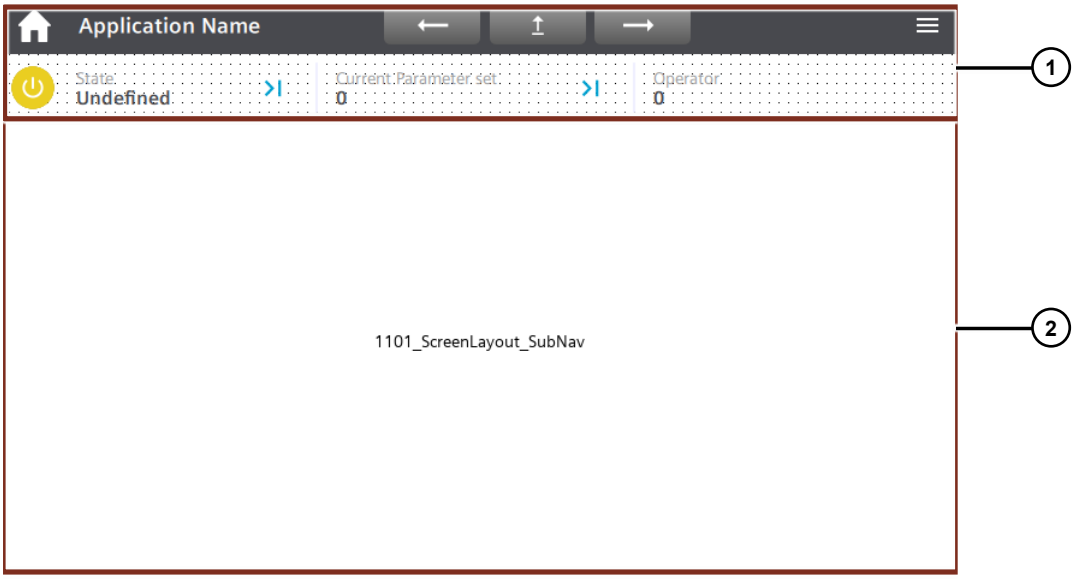
A fourth navigation level is possible by using a "Tab" view.
Configuration details for this navigation level can be found in Section 4.1.5.4.

4.1.1. "1001_ScreenLayout"

The Start Screen "1001_ScreenLayout" is also configured as the main screen window in the fully configured devices from the HMI Template Suite. If you have manually added the screens from the global library to your device, you can define the screen "1001_ScreenLayout" as the main screen window in the project directory under "Screen management". The main screen window allows you to focus on areas of the assigned screen in Runtime by zooming and scrolling. It is used as the Start Screen in Runtime instead of the screen that you have set as the Start Screen in the Runtime settings. Synchronization between the screens is not necessary.

The "1001_ScreenLayout" screen is generally defined as the Start Screen of the HMI Template Suite. It is divided into two areas. The upper, static area (1) represents a "header" area with title and Status bar. Static in this case means that the screen contents in this area are never switched by a screen change. The lower area (2) contains a screen window with the sub-navigation ("SubNavigation") (1101_ScreenLayout_SubNav).

Figure 4-1



4.1.2. Title Bar

The "Title bar" is visible on all screens and is located at the top of the "1001_ScreenLayout" Start Screen. It contains a short title that shows the operator of the plant which area of the visualization it deals with.

The title should be informative. First-level navigation (main menu) can be accessed via the menu icon on the right-hand side (see Section 0).

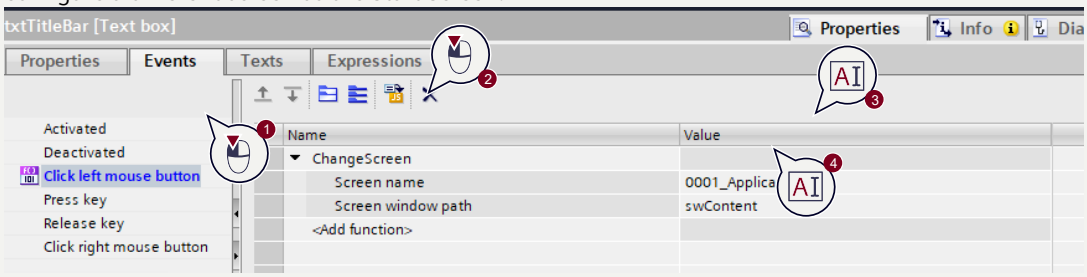
In the light theme Basic 80 and in the Dark Theme, Basic 80 are used as the background color for the "Title bar".

Figure 4-2



NOTE

Clicking the text in the "Title bar" takes you to the Start Page (Start Screen). However, you can also configure a different screen as the Start Screen.



The following table presents the use cases of the buttons and icons of the HMI Template Suite in relation to the "Title bar". The display of the objects is standardized.

Table 4-2

Name	Appearance	Use/place of use
"Home"		Button to the Start Page (Start Screen).
"Title"		Title as a text field to display the name of a current area of the visualization. → The title should be informative. → Font: Siemens Sans, 18pt, style=Bold
"Navigation"		Buttons to navigate through the navigation levels created by HMI Template Suite Wizard.  "Previous"  "LevelUp"  "Next"
"Menu"		Button for the main menu to navigate the page (first-level navigation) → script "Navigation.ShowMainNavigation" as the "Click left mouse button" event → "Menu" graphic

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4.1.3. Status Bar

There is a static area with various components directly below the "Title bar" at the top of the "1001_ScreenLayout" Start Screen, which represents the "Status bar" of the screen layout. It can be customized to the user's requirements and allows them to configure important settings for the machine or the application in general.

The "Status bar" contains information about the machine as standard and displays:

- Status of a plant component (as text and screen)
- Currently edited parameter set
- User currently logged in
- For screen sizes of more than 12 inches: Date/time

Figure 4-3



Any entry (machine status, recipe management, user management, date/time) can be deleted. If a new entry should be added, retain the structure of the preconfigured entries (description, IO fields and, if necessary, pop-up button).

NOTE The dividing lines between the entries of the status bar are recommended for a clear separation of the entries! It is only when there is no entry in the status bar that they are no longer necessary.

The color of the left icon visualizes the current operating state of the system.

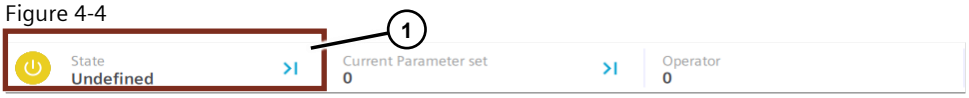
The background color of the "1001_ScreenLayout" screen (the color white) is used for the "Statusbar". This makes it stand out from the upper "Title bar" and the lower main window.

Operating states

The state of the machine or system is displayed in the left-hand area of the status bar. The current machine state is displayed in text form and also by the "MachineState_Light" in the light theme and the "MachineState_Dark" in the dark theme graphic.

If the user wants to manage the machine state in the status bar, they can use a pop-up (1), which can be opened using the button to the right of the text output (see Figure 4-4).

Figure 4-4



Depending on the machine state (tag: CurrentMachineState), the display of the plant states in the "Statusbar" changes as follows:

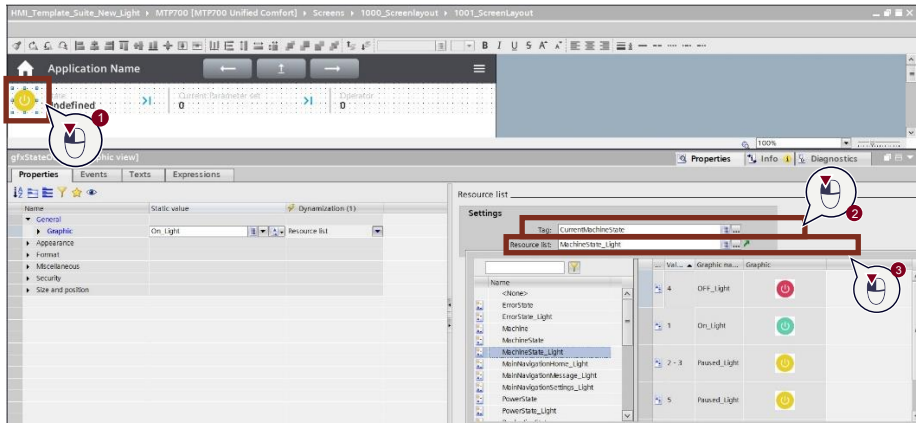
Table 4-3

Name	Appearance	Value of the tag "CurrentMachineState": Meaning
Normal operating state:		Machine is on 1: Production

Name	Appearance	Value of the tag "CurrentMachineState": Meaning
Normal operating state: Startup		Machine is paused 0 (standard entry): Undefined 2: Startup 3: Paused 5: Stopped
Error, System stop		Machine is off 4: Shutdown

The machine health indicator graph (1) is controlled by the CurrentMachineState (2) INT tag (see Figure 4-5). The given graphics are only suggestions and can be freely configured. The graphics can be changed in the "MachineState" graphics list (3).

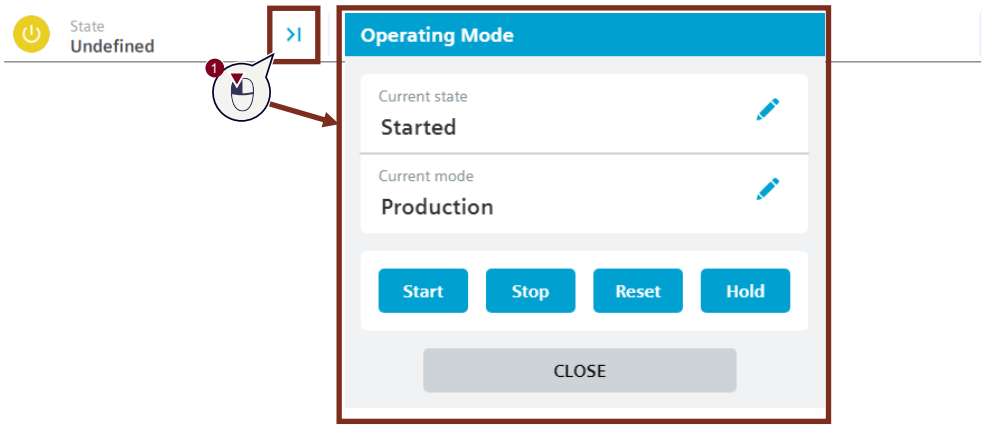
Figure 4-5



The additional output of the machine state in text form is controlled by the similar tag. The "MachineState text list, assigned to the symbolic IO field that displays the state.

The preconfigured pop-up window "3102_PopUp_Template_Machine_State" (Figure 4-6), which allows the user to control the machine state, looks as follows and can also be customized as required:

Figure 4-6



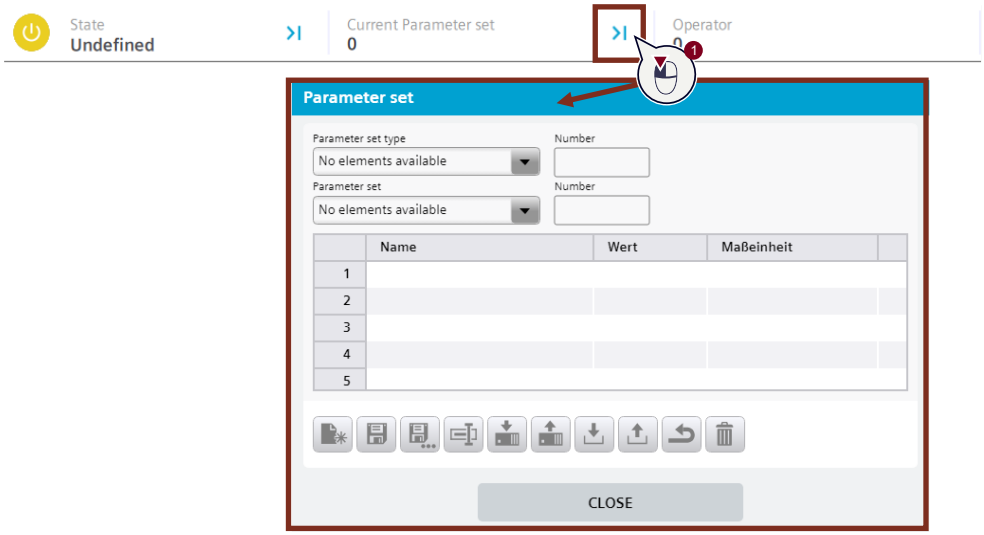
© Siemens 2026

Recipe management

The "Current parameter set" area provides an option to call up recipe management in a pop-up window directly in the status bar. The output field, which is located in the status bar, indicates the currently selected recipe in text form.

If the user would like to manage the recipes, they can use a pop-up window "3103_PopUp_Template_Parameter_Set", which can be opened using the button (1) to the right of the text output (Figure 4-7).

Figure 4-7



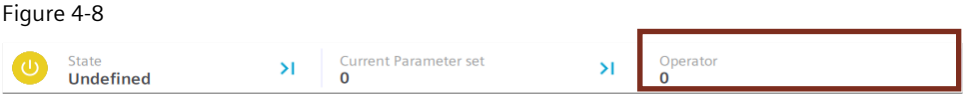
User Management

The right-hand area of the Status bar labeled "User" can be used to display the username of the user currently logged in.

There is not yet an option for User Management directly from the status bar of the HMI Template Suite. In WinCC Unified there is a system function "ShowLoginDialog" that would open the login screen of the system, but since this system function did not exist in older versions, this functionality has not yet been implemented in the HMI Template Suite.

The name of the user currently logged in, which is stored in the WSTRING system variable "@UserName", is displayed in text form in the IO field of this right-hand area of the status bar.

Figure 4-8



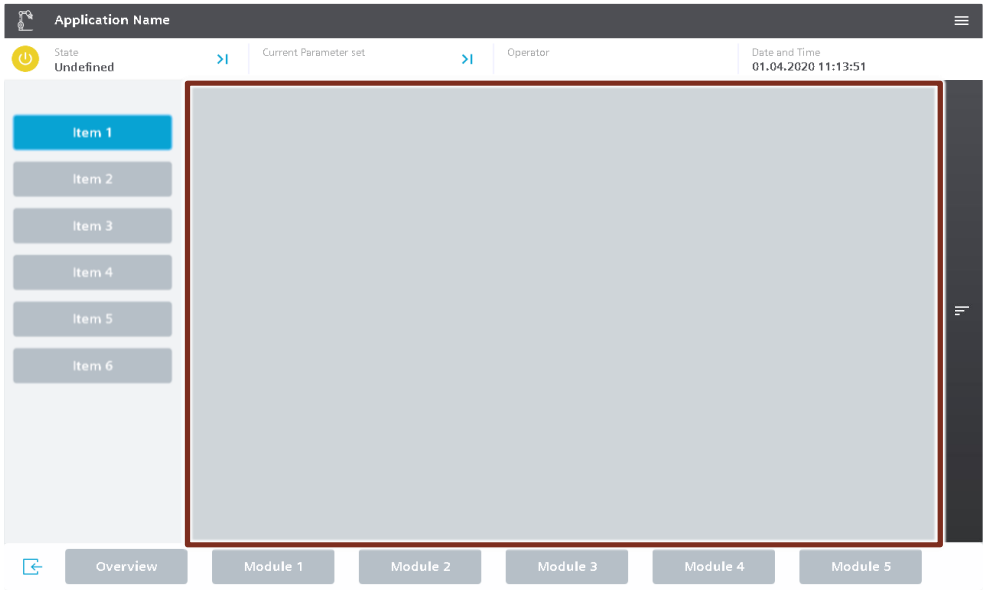
© Siemens 2026

4.1.4. MainWindow

The MainWindow (application area) is not an object in the HMI Template Suite, but merely a name for an area in the screen layout that is displayed at runtime. It is usually an area in which the user-configured components, such as plant modules, dashboards, machine operation, etc., are displayed.

The operating area of the plant or the main window is always located in the center of the Operator Panels. The edges of the Operator Panels screen are used for navigation or to display global functions.

Figure 4-9



This area is the main focus of the operator's attention, which is why the machine visualization is configured in this area of the Operator Panel. This central area takes up around 70% of the display area and is used to operate and monitor the selected plant component. Based on what the user has selected in the navigation (i.e. the content from other tabs or navigation control within the screen), the selected plant component is then displayed. The background color is Basic 40 in the light theme and Basic 40 in the Dark Theme.

4.1.5. Levels of Navigation in Detail

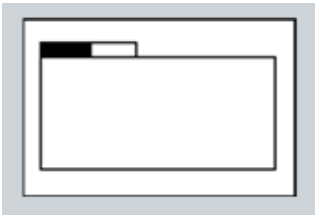
Basically, there is one main navigation level and three other navigation levels in the HMI Template Suite.

The "MainNavigation" is used as the general main navigation level. It should be viewed as general, as it can be selected between Application, Diagnostics and Settings. Then there are three more navigation levels that can be used to navigate through the machine/application.

The structure and components of the navigation levels presented are the recommendation when planning an operating concept. They were created on the basis of efficient engineering and proven practices.

The following overview shows the available navigation levels of the HMI Template Suite:

Table 4-4

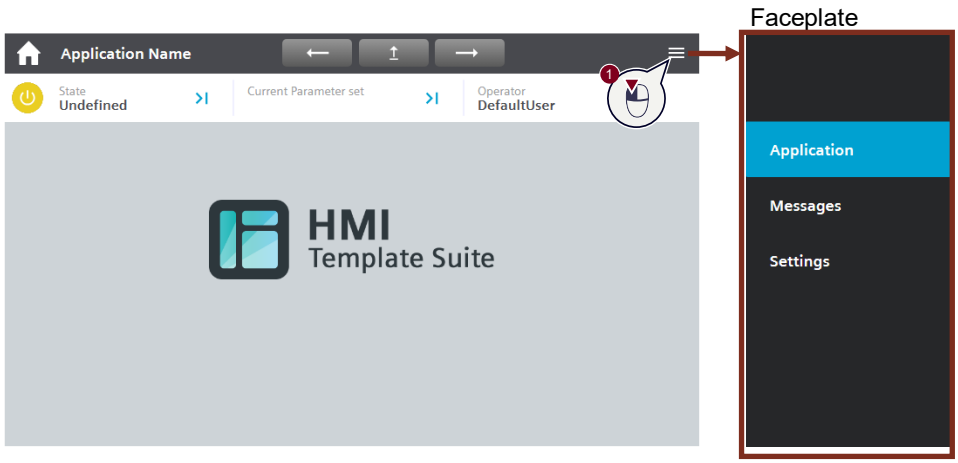
First-level navigation "MainNavigation"	**Second-level navigation "SubNavigation"**	**Third-level navigation "Thirdlevel-Navigation"**	**Fourth-level navigation "Tab-Navigation"**
			
If you copy the preconfigured device from the global library into your project, this navigation is already implemented in the screen window on the right. The corresponding preconfigured screen is "1002_MainNavigation".	This navigation level is implemented in the preconfigured screen "1101_ScreenLayout_SubNav" and can be assigned to any screen.	This navigation level can be embedded as the first-level navigation and/or the second-level navigation. The preconfigured screens are contained in the project directory of the library under "01 – Screen Layout" > "1100_ScreenLayout_SubNav".	If necessary, you also have the option of using additional navigation. This navigation is an additional screen from the project directory of the library under "01 - Screen Layout" > "1300_ScreenLayout_TabNav". This navigation level can be used as the first, second and/or third-level navigation.

These navigation levels are explained in detail in the following sub-section.

4.1.5.1. First-Level Navigation ("MainNavigation")

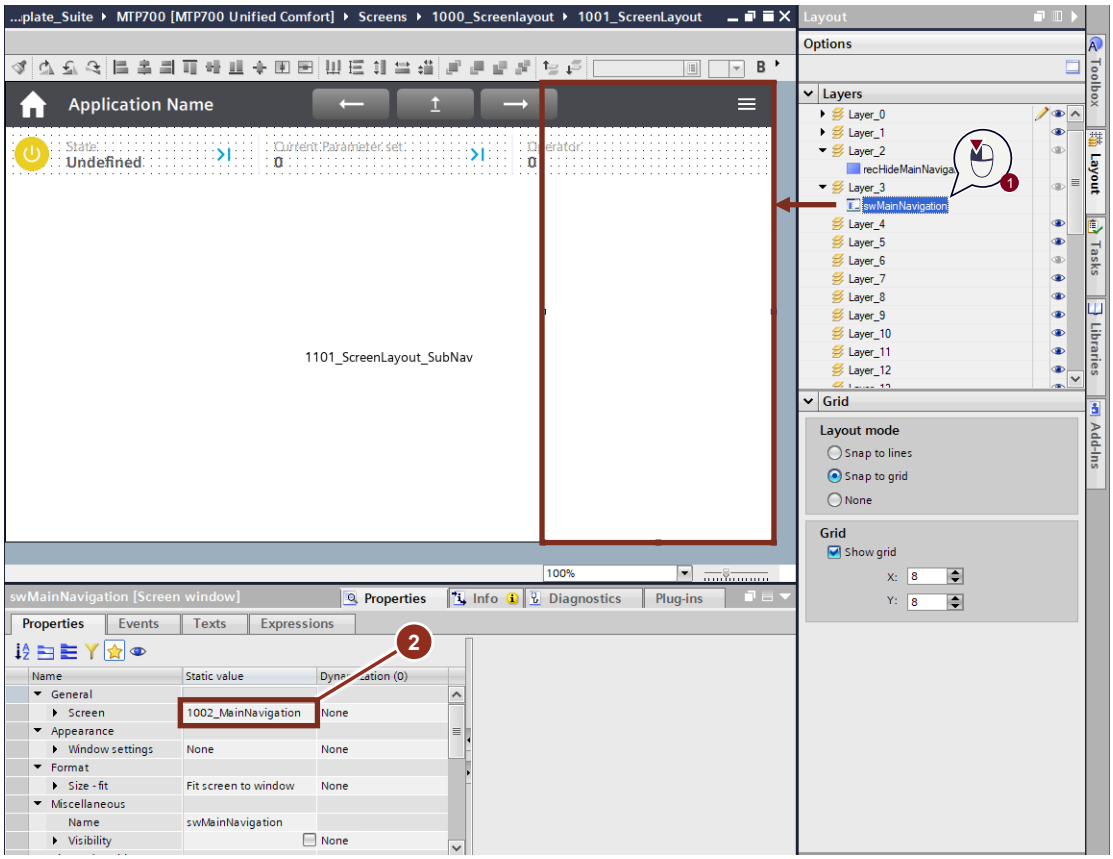
The main navigation can be displayed via the hamburger menu (1) in the "Title bar" of the "1001_ScreenLayout" screen (see Figure 4-10).

Figure 4-10



The first-level navigation (MainNavigation) is implemented via the "swMainNavigation" screen window (1) in the "1001_ScreenLayout" screen on the permission page. The "1002_MainNavigation" screen (2) is displayed in the screen window (see Figure 4-11).

Figure 4-11



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NOTE

Note that the following element for navigation is still in the "1001_ScreenLayout" screen:

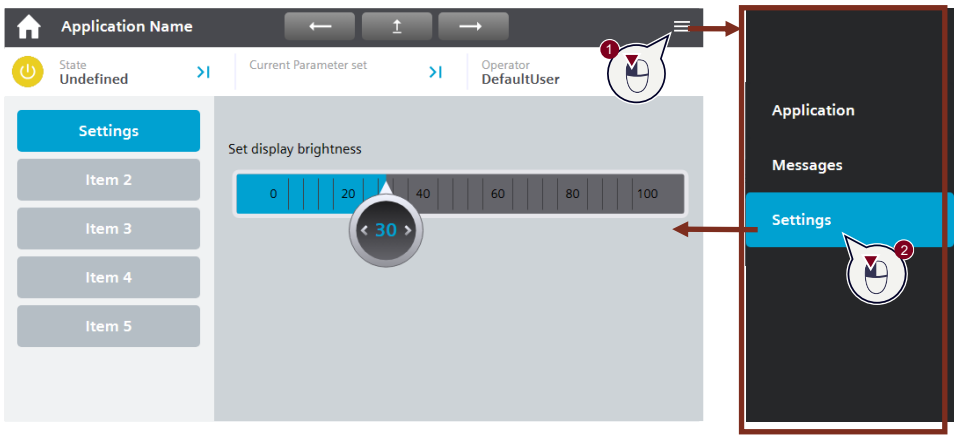
- "recHideMainNavigation":
  This element has a visibility animation. It is called up when the "swMainNavigation" screen window is called up and is used to make the background of the screen semi-transparent in order to highlight the navigation for the user. Another purpose of the element is that when the user clicks on the semi-transparent element, the MainNavigation closes.

To show or hide navigation levels, refer to Section 0.

You can switch between 3 different pages in the main navigation:

- Application: Configured application
- Messages: global message page
- Settings: Parameterization of the device settings, e.g. changing the brightness of the Operator Panels (see Figure 4-12)

Figure 4-12



NOTE

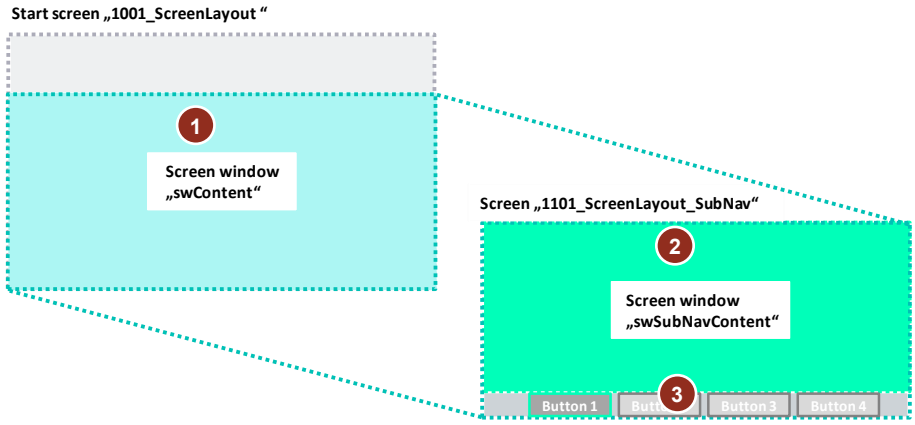
The first menu level for "Settings" is already included in the preconfigured Operator Panels (Figure 4-11) and can be expanded as required.

4.1.5.2. Second-Level Navigation ("SubNavigation")

The main navigation of your application forms the second-level navigation (SubNavigation). It is located at the bottom of the screen on the "1101_ScreenLayout_SubNav" screen, which is already configured in the "1001_ScreenLayout" Start Screen of the HMI Template Suite as the "swContent" screen window (1) (see Figure 4-13).

The screen "1101_ScreenLayout_SubNav" with the second-level navigation is divided into 2 areas. The upper area represents an application area as a screen window "swSubNavContent" (2) and can be filled with project-dependent screens. The lower area (3) is static and contains various second-level navigation buttons for switching between the project-dependent screens in the "swSubNavContent" screen window (2).

Figure 4-13



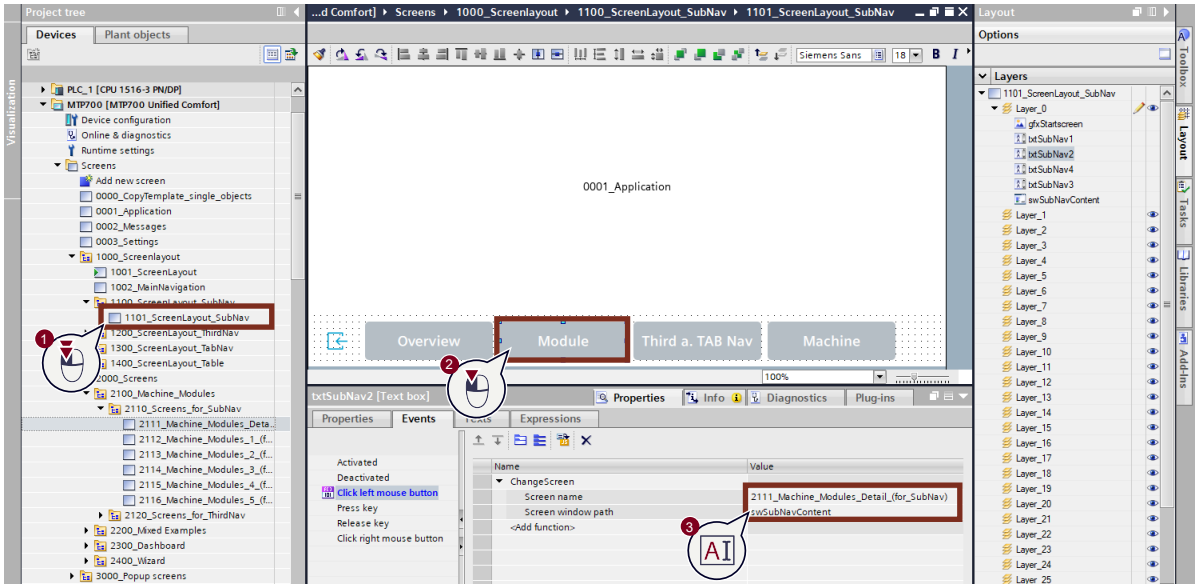
(1) "swContent" screen window with the SubNavigation (1101_ScreenLayout_SubNav in screen 1001_ScreenLayout)

(2) "swSubNavContent" screen window with the screen of the application (0001_Application in screen 1101_ScreenLayout)

(3) Navigation bar of the second-level navigation (1101_ScreenLayout)

You can use the navigation bar to switch between individual HMI screens of your application. In addition, you can configure page views in the navigation bar and customize the text of the buttons (see Figure 4-14).

Figure 4-14



NOTE To configure a screen change, see Section 5.2

4.1.5.3. Third-Level Navigation (optional)

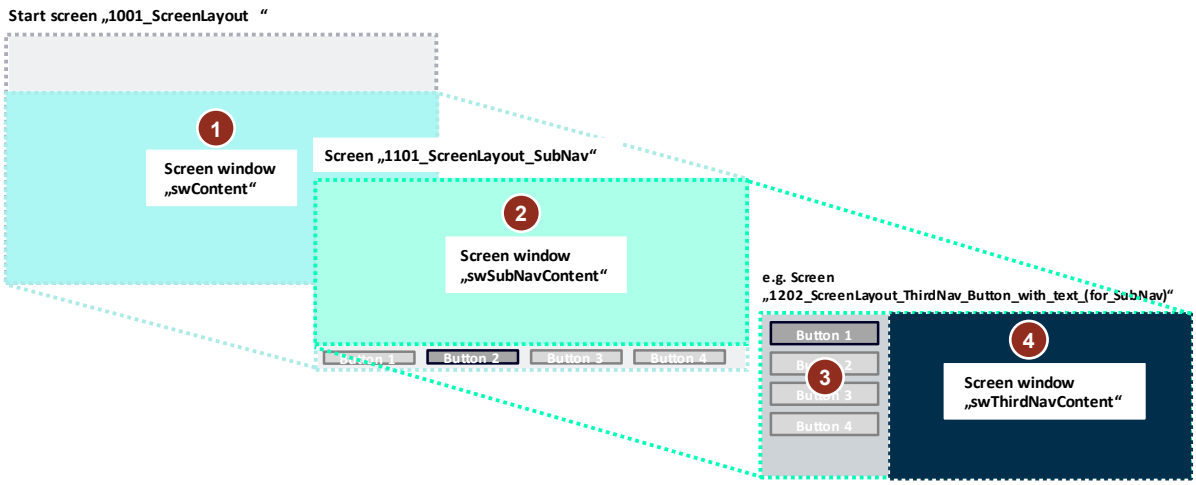
If a machine can be structurally divided into different large areas and further navigation levels are required to ensure or display a division of these areas, then an additional navigation level is required. The third-level navigation is available for this purpose.

The third-level navigation is always located on the left-hand side of the screen. There are two options for use here.

First display type of the third-level navigation

The first option is to display the third-level navigation on a screen combined with the second-level navigation.

Figure 4-15



(1) Screen window "swContent" (in the "1001_ScreenLayout" screen) with the "1101_ScreenLayout_SubNav" screen called up (contains the buttons for the SubNavigation)

(2) "swSubNavContent" screen window (in the "1101_ScreenLayout_SubNav" screen) with the "1202_ScreenLayout_ThirdNav_Button_with_text_(for_SubNav)" screen called up, which contains the third-level navigation.

(3) Navigation bar of the third-level navigation ("1202_ScreenLayout_ThirdNav_Button_with_text_(for_SubNav)")

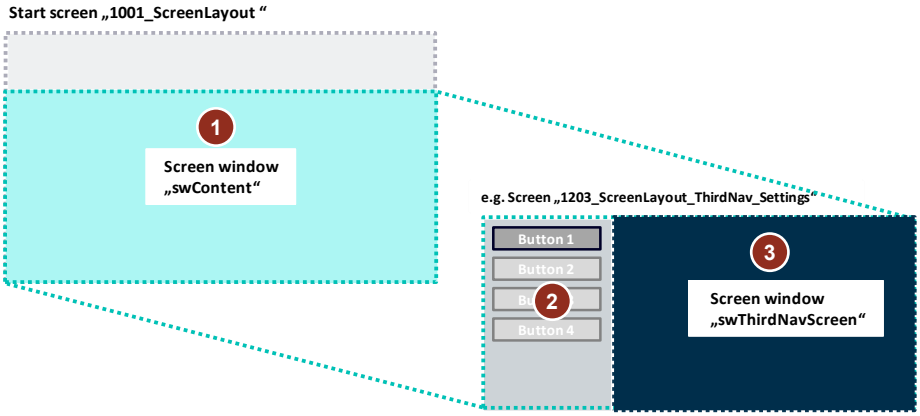
(4) "swThirdNavContent" screen window with the screen of the application ("2121_Machine_Modules_1_(for_SubNav_and_ThirdNav)" in the "1202_ScreenLayout_ThirdNav_Button_with_text_(for_SubNav)" screen)

The screen with the third-level navigation basically consists of 2 areas. The left-hand area is static and provides space for the navigation buttons (3). The area to the right of the screen represents an application area as the "swThirdNavContent" screen window. You can configure this screen window with project-dependent screens.

Second display type of the third-level navigation

The second option is to use the third-level navigation directly as the second-level navigation (see Figure 4-16). It is best suited for small Operator Panels and if you do not want the navigation to be displayed at the bottom of the screen.

Figure 4-16



(1) "swContent" screen window with the SubNavigation ("1203_ScreenLayout_ThirdNav_Settings" in the "1001_ScreenLayout" screen)

(2) Navigation bar of the third-level navigation ("1203_ScreenLayout_ThirdNav_Settings")

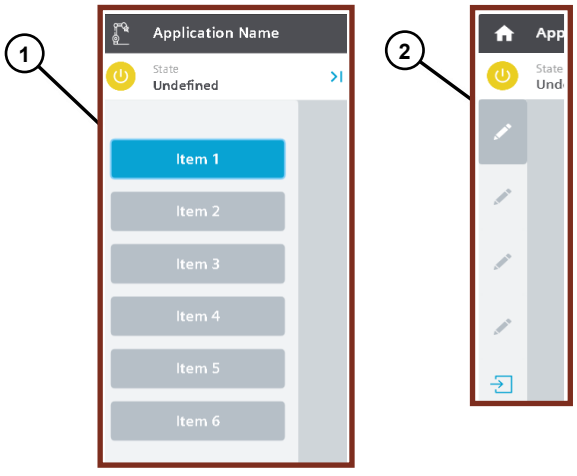
(3) "swThirdNavScreen" screen window with the screen of the application without the SubNavigation ("0003_Settings" in the "1203_ScreenLayout_ThirdNav_Settings" screen)

Structure of the third-level navigation

Regardless of which display type you choose for the third-level navigation, the display and structure of the screen is the same for both options.

By default, the navigation bar is implemented as text-based navigation. However, it is possible to switch to icon-based navigation by changing the screen. This saves space for the plant visualization on smaller Operator Panels.

Figure 4-17



(1) Text-based navigation

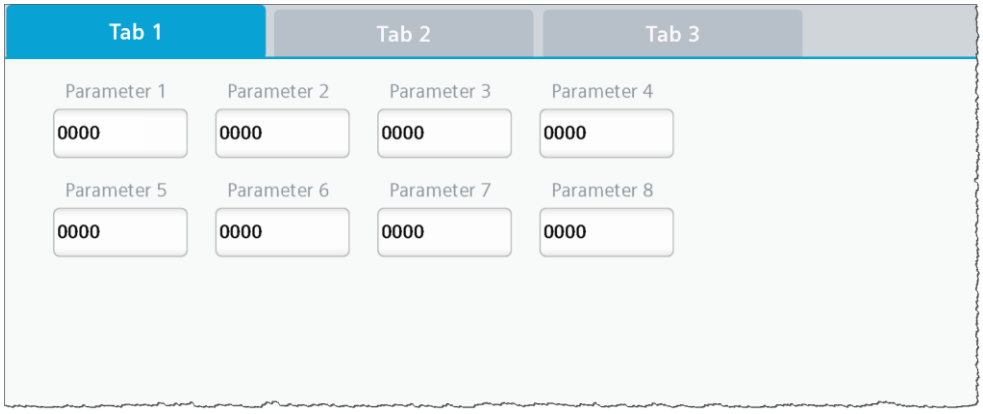
(2) Icon-based navigation

4.1.5.4. Fourth-Level Navigation ("Tab Navigation") (optional)

On an HMI screen, you also have the option of using the following "tab" navigation to display content in a clear and structured manner.

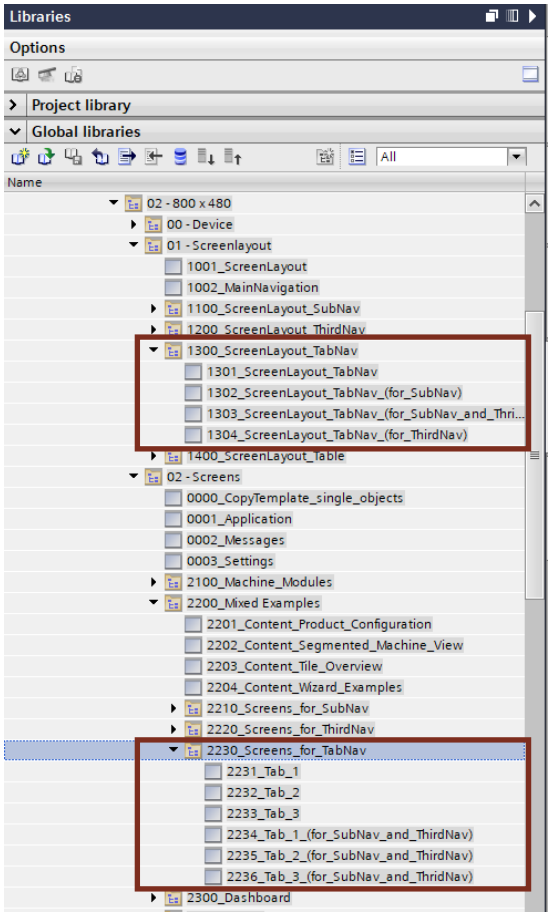
Tab navigation is familiar to the user from various areas of everyday life and is therefore intuitive to use.

Figure 4-18



The "Tab" navigation is stored in the library in the "1300_ScreenLayout_TabNav" folder.
The contents of the tabs are each implemented in a separate screen in the "2230_Screens_for_TabNav" folder. The different tabs allow you to set the respective screen in the screen window via a "click" event.

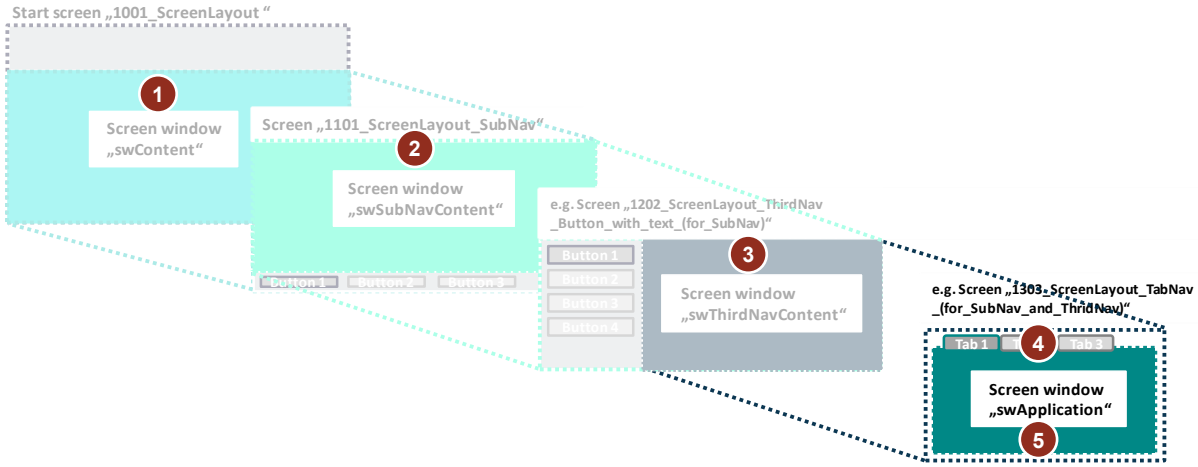
Figure 4-19



Depending on the display type, if you are already using the navigation levels explained so far, tab navigation can be integrated as a fourth-level navigation.

In the following figure, the screen with the tab navigation is embedded in a "swThirdNavContent" screen window. In addition to the tab navigation and the screen of the application, the navigation levels "SubNavigation" and "ThirdNavNavigation" can also be operated.

Figure 4-20



(1) Screen window "swContent" (in the "1001_ScreenLayout" screen) with the "1101_ScreenLayout_SubNav" screen called up (contains the buttons for the SubNavigation)

(2) Screen window "swSubNavContent" (in the "1101_ScreenLayout_SubNav" screen) with the "1202_ScreenLayout_ThirdNav_Button_with_text_(for_SubNav)" screen called up (contains the buttons for third-level navigation)

(3) Screen window "swThirdNavContent" with the "1303_ScreenLayout_TabNav_(for_SubNav_and_ThridNav)" screen called up in the "1202_ScreenLayout_ThirdNav_Button_with_text_(for_SubNav)" screen

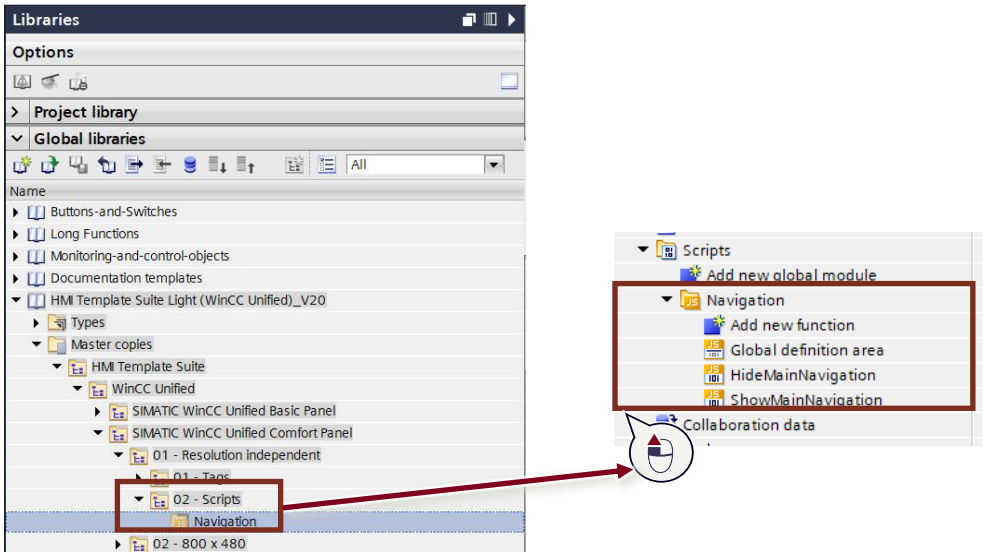
(4) Navigation bar of the fourth-level navigation ("1303_ScreenLayout_TabNav_(for_SubNav_and_ThridNav)")

(5) Screen window "swApplication" with the screen of an application

4.1.5.5. Script Functions of the Navigation Levels

Within the navigation levels, two scripts of the global module "Navigation" are used to display or hide the first-level navigation.

Figure 4-21



"HideMainNavigation" function

This script function hides the first-level navigation "MainNavigation".

"ShowMainNavigation" function

The script function displays the first-level navigation "MainNavigation".

NOTE In the script functions, absolute paths to the screen window of the first-level navigation and the rectangle object are used to hide the main menu. If you change the names of these objects or positions in the screen, you must also configure these changes in the script functions.

4.2. Naming of the Layout Screens and Screens

The naming of the screens in the HMI Template Suite follows the principle of simplification in order to be able to quickly draw conclusions from the name of the screen as to which screens contain which screen windows. In addition, the name is also meaningful with regard to navigation in order to be able to quickly decide which screens can be used in terms of size and in which position.

In general, screens in the HMI Template Suite can be divided into 3 categories according to their names, which are shown in the following overview (see Table 4-5). These are screens from the "1000_Screenlayout" and "2000_Screens" folders. "XXX" represents a generalized name in the overview, which is only listed here as an example for the sake of clarity.

NOTE ScreenLayout is the name of a screen and is also a suffix. This indicates that this screen can be used to build the navigation level or contains a specific screen window.

The size of the screen is a decisive factor in deciding which screen should be used in which screen window. To illustrate the contents of Table 4-5, first Figure 4-22 and Figure 4-23.

Figure 4-22

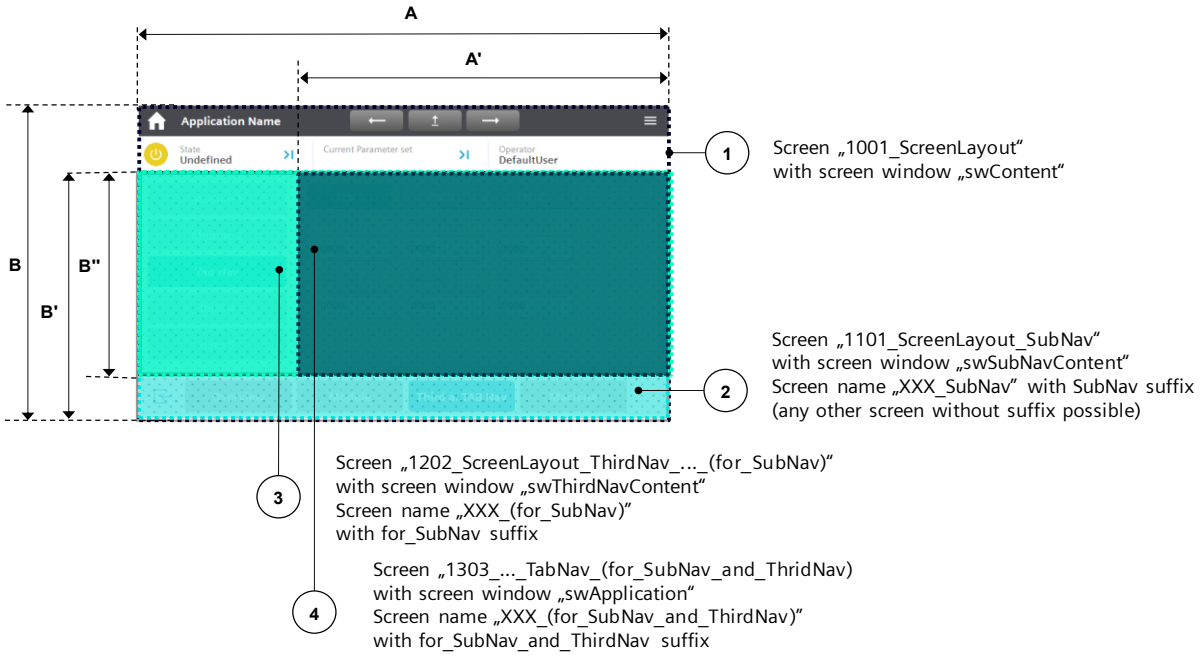
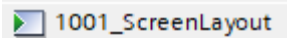
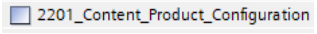
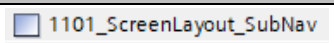
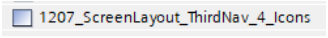
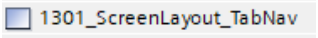
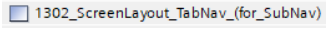
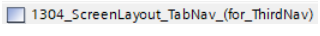
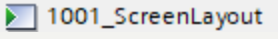
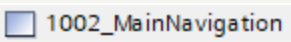


Table 4-5

Name	Appearance	Uses/Location of use
Main screen		
ScreenLayout		Screen size A x B (width x height) Depending on the selected resolution of the Operator Panels Includes a "swContent" screen window size A x B'
Without suffix >> One screen for the main screen		
XXX ("Without suffix")		Screen size A x B' (width x height) All screens "without suffix" fit exactly into the "swContent" screen window of the main screen "1001_ScreenLayout" of size A x B, so that the header area remains free for operation.
With a navigation suffix >> A navigation screen for the main screen		
XXX_**SubNav** ("With SubNav suffix")		Screen size A x B' (width x height) that has a SubNavigation at the bottom of the screen and fits into the "swContent" screen window of the main screen size A x B, leaving the header area free for operation. Includes a swSubNavContent screen window size A x B"
XXX_**ThirdNav** ("With ThirdNav suffix")		Screen size A x B' (width x height) that has a third-level navigation in the left area of the screen and fits into the "swContent" screen window of the main screen size A x B, leaving the header area free for operation. Includes a "swThirdNavContent" screen window size A' x B'
XXX_**TabNav** ("With TabNav suffix")		Screen size A x B' (width x height) that represents a tab navigation and fits into the "swContent" screen window of the main screen size A x B, leaving the header area free for operation. Includes a "swApplication" screen window size A" x B'"
With a "for" navigation suffix in brackets >> A screen for the main screen and a corresponding navigation bar		
XXX_**(for_SubNav)** ("With for-SubNav suffix")		Screen size A x B" (width x height) that fits exactly into the "swSubNavContent" screen window of the SubNavigation screen size A x B'.
XXX_**(for_ThirdNav)** ("With for-ThirdNav suffix")		Screen size A' x B' (width x height) that fits exactly into the "swThirdNavContent" screen window of the third-level navigation screen size A x B'.
XXX_**(for_SubNav_and_ThirdNav)** ("With for-SubNav-and-ThirdNav suffix")		Screen size A" x B'" (width x height) that fits into a SubNavigation screen with a third-level navigation.

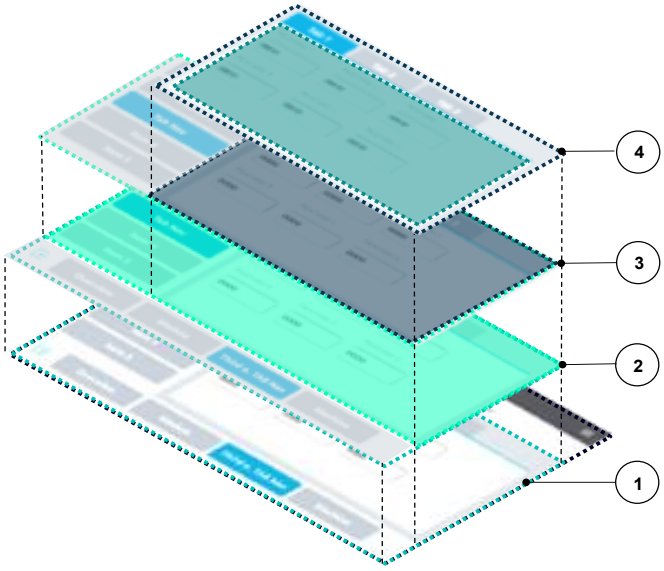
NOTE

Exceptions to the screen sizes and without a suffix in the screen name are as follows:

- The main window with a header 
- The main navigation 

These screens are located at the top of the screen project directory and not in special folders.

Figure 4-23



Screen „1303_..._TabNav_(for_SubNav_and_ThridNav)
with screen window „swApplication“
Screen name „XXX_(for_SubNav_and_ThirdNav)“
with for_SubNav_and_ThirdNav suffix

Screen „1202_ScreenLayout_ThirdNav_..._(for_SubNav)“
with screen window „swThirdNavContent“
Screen name „XXX_(for_SubNav)“
with for_SubNav suffix

Screen „1101_ScreenLayout_SubNav“
with screen window „swSubNavContent“
Screen name „XXX_SubNav“ with SubNav suffix
(any other screen without suffix possible)

Screen „1001_ScreenLayout“
with screen window „swContent“

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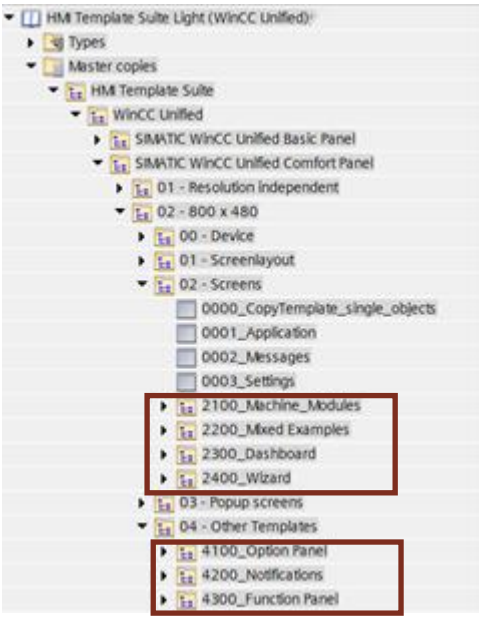
4.3. HMI Screens and Their Elements

In the library you will find pre-configured HMI screens for various use cases. These templates are designed to help you create your own Operator Panels.

The following types of templates are at your disposal:

- Dashboard (Section 0) and Tables (Section 0)
- Machine Modules Overview (Section 0)
- Wizard (Section 0)
- More example screens (Section 0)
- Options Panel (Section 0)
- Notifications (Section 0)
- Function Panel (Section 4.3.7)

Figure 4-24



NOTE The screens serve as a template for your visualization. You still need to connect the associated HMI objects accordingly so that these HMI objects can display process values. For this purpose, use system functions such as, e.g., "SetPropertyValue" and/or "ChangeScreen" etc.

4.3.1. Dashboard

With a Dashboard, you can display the most important information and analyses such as the "efficiency" or "produced quantity" of the machine. The most important HMI screens are also linked to it.

Thus, the dashboard clearly displays the most important information about a machine at a glance.

In the library, different versions are preconfigured for different application scenarios. From the multitude of display formats, you can always put together new Dashboards individually adapted to your machine. In addition to the two variants shown in Figure 4-, other variants, including a tabular form, are available in the library.

Figure 4-28

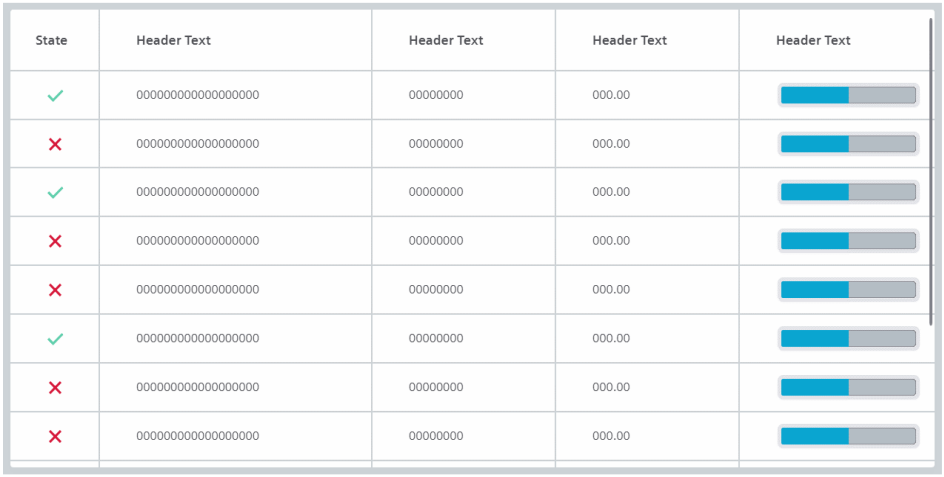


4.3.1.1. Tables

Tables are important for a listed view of information. They can also be scrollable, so they are a good solution if there is more information than fits on a screen.

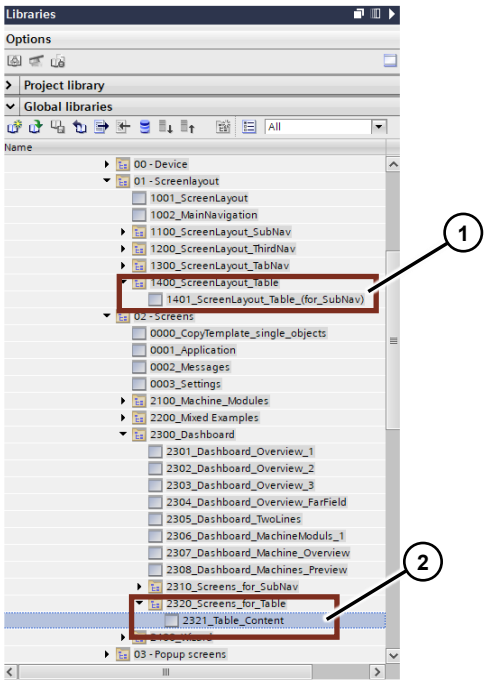
Tables can be created with texts, IO fields, bars and symbols, for example. The background color of the entire table should be white.

Figure 4-29



An example of a table can be found in the library under "02 – Screens" > "2300_Dashboard" > "2320_Screens_for_Table" (2) (see Figure 4-). To be able to display long tables, a screen window was used in the "1401_ScreenLayout_Table_(for_SubNav)" screen under "01 - Screen Layout" > "1400_ScreenLayout_Table" (1) to display the table content itself and activate a scroll bar on the right-hand side.

Figure 4-30



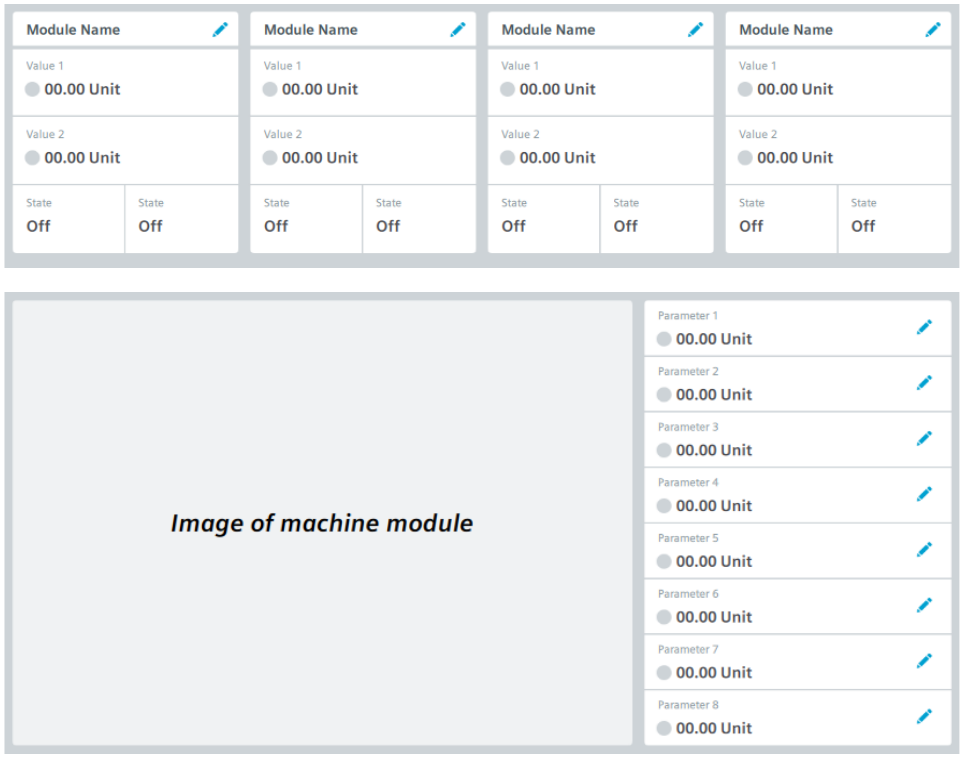
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4.3.2. Machine Modules

The Machine Modules Overview allows you to keep track of your area of responsibility at all times. The machine module overview pages show the machine states or possible errors for each sub-area or module, providing a good overview.

In addition to the three variants shown in Figure 4-, further variants are available in the library.

Figure 4-31

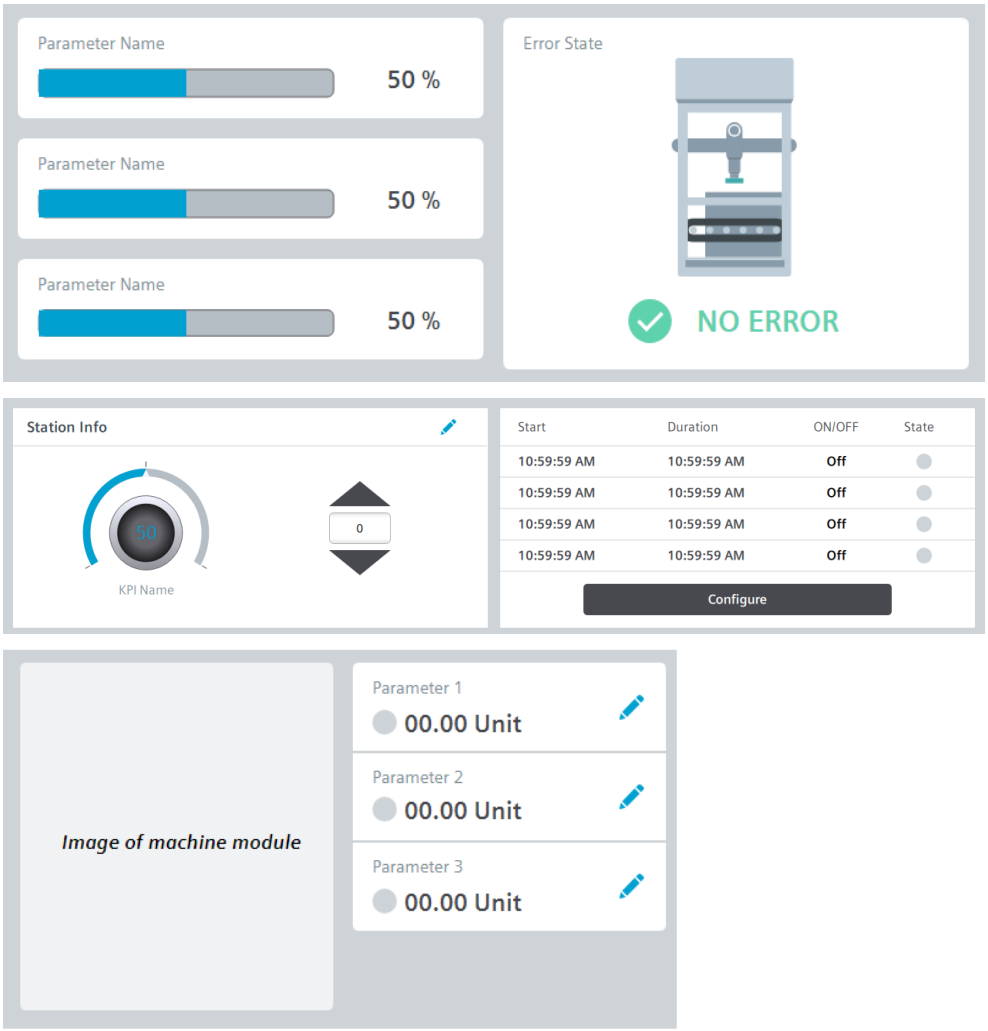


4.3.3. Mixed Examples

Further example screens ("Mixed Examples") are preconfigured in the library to illustrate the visualization concept and promote ideas for your own implementation.

In addition to the two variants shown, further variants are available in the library.

Figure 4-32



4.3.4. Wizard

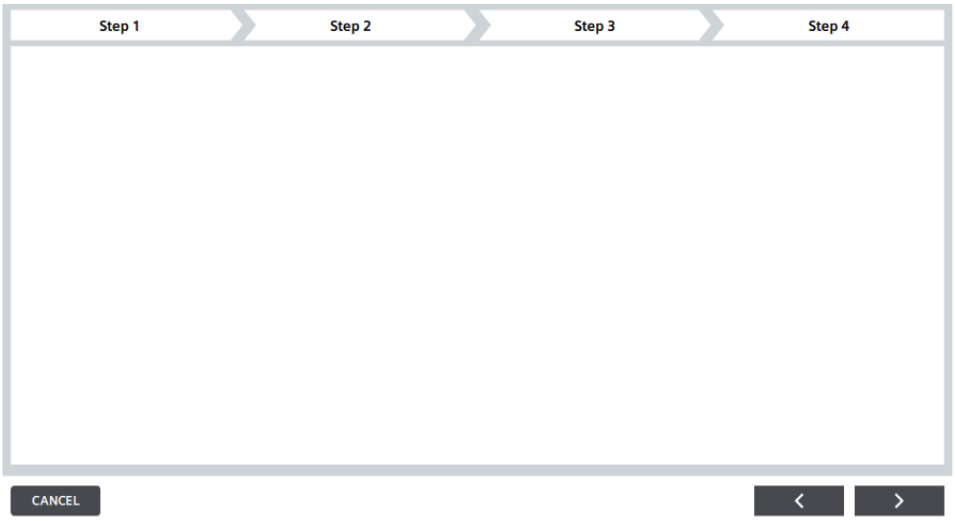
NOTE The wizard described in this Section refers to HMI templates for configuring a wizard screen and not to the "SIMATIC HMI Template Suite Wizard" application. The documentation for the application can be found here \2\.

Use the Wizard to guide the operator through a number of steps, the sequence of which is predefined.

The Wizard should always appear on the entire screen.
This allows the operator to concentrate fully on the current step. It only applies the new settings to the configuration once the operator has completed all the steps.

Versions with 3 to 5 steps are available in the Wizard. The following example shows a template with 4 steps.

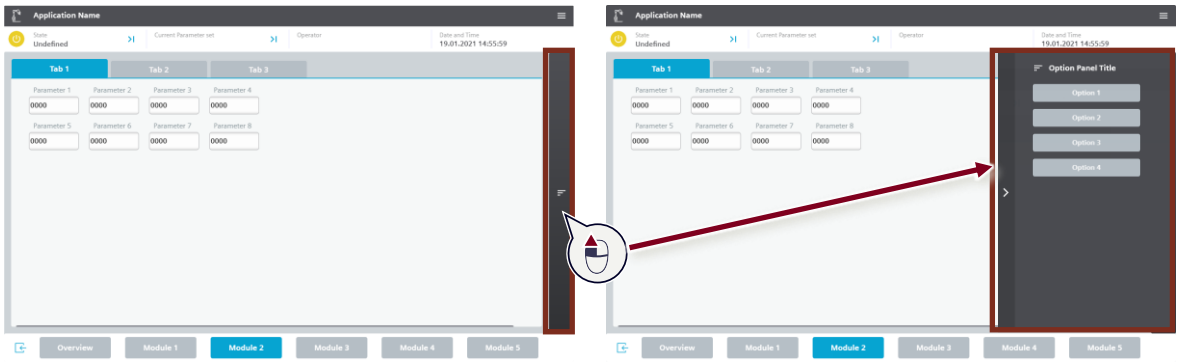
Figure 4-33



4.3.5. Option Panel

The "Option Panel" is a pop-up window and can be used for manual operations on a machine or for other special functions that may be available in several or all HMI screens.

Figure 4-25



The "Option Panel" can be displayed on the **right-hand side of the screen**. As the area for calling up is relatively narrow, you should use icons here.

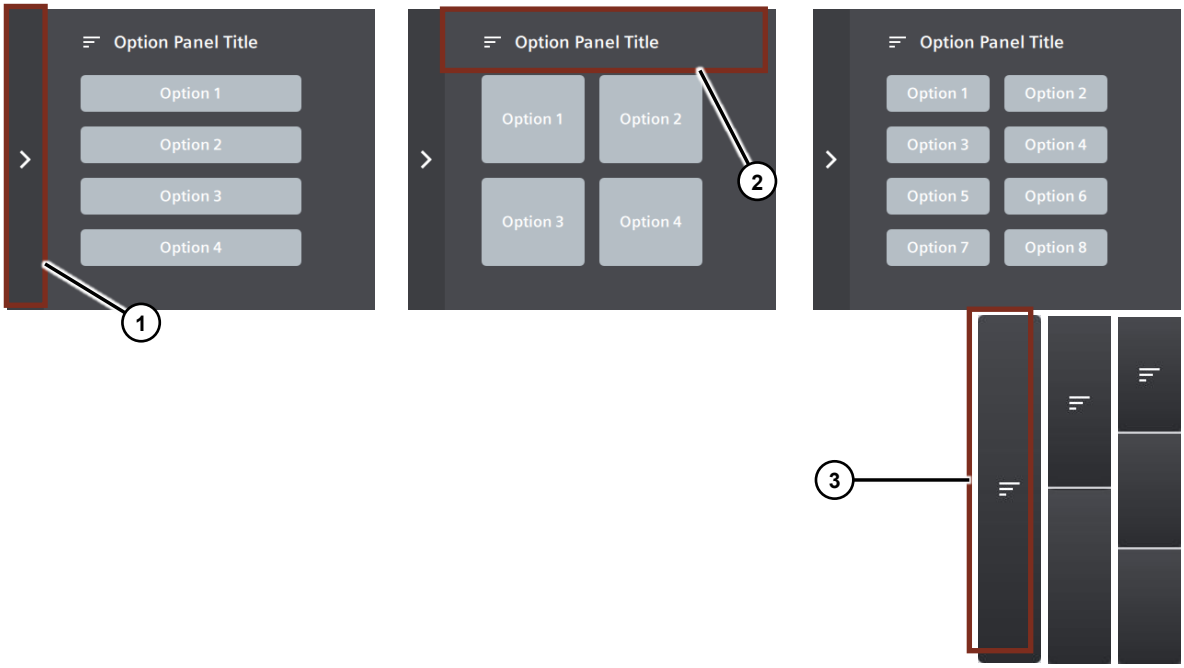
The following actions can be called up in the "Option Panel":

- Functions or actions that have a temporary effect on the machine
- Global functions that should be accessible from several or all HMI screens

Structure and variants of the "Option Panel" and its buttons

Depending on the screen resolution, you will find several variants of the checkbox and its buttons in the preconfigured devices of the global library.

Figure 4-35



(1) Button to close the "Option Panel"

(2) Title of the "Option Panel"

(3) Variants of the buttons to open the "Option Panel" on the right edge of the screen

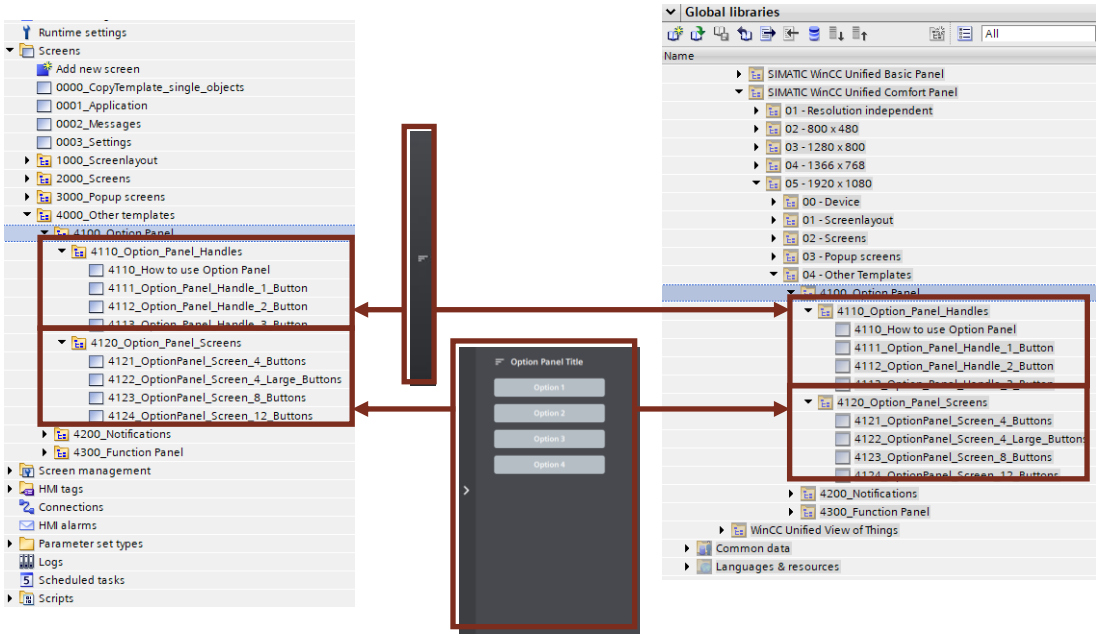
Storage of the "Option Panel" in the project directory and the library

Several pop-up windows for the "Option Panel" can be found in the screens of the preconfigured device in the project directory under "4000 - Other Templates" > "4100_Option Panel". Two subfolders can be found there. The different variants of the buttons for opening the "Option Panel" are available in the "4110_Option_Panel_Handles" folder. These buttons must be provided with a suitable symbol as they are very narrow.

The "4120_Option_Panel_Screens" folder contains several layout variants of the "Option Panel" with different numbers of buttons.

The same folder structure with the numerous variants of the "Option Panel" can be found in the global HMI Template Suite library and you can add a suitable screen to your Operator Panels using drag-and-drop if required.

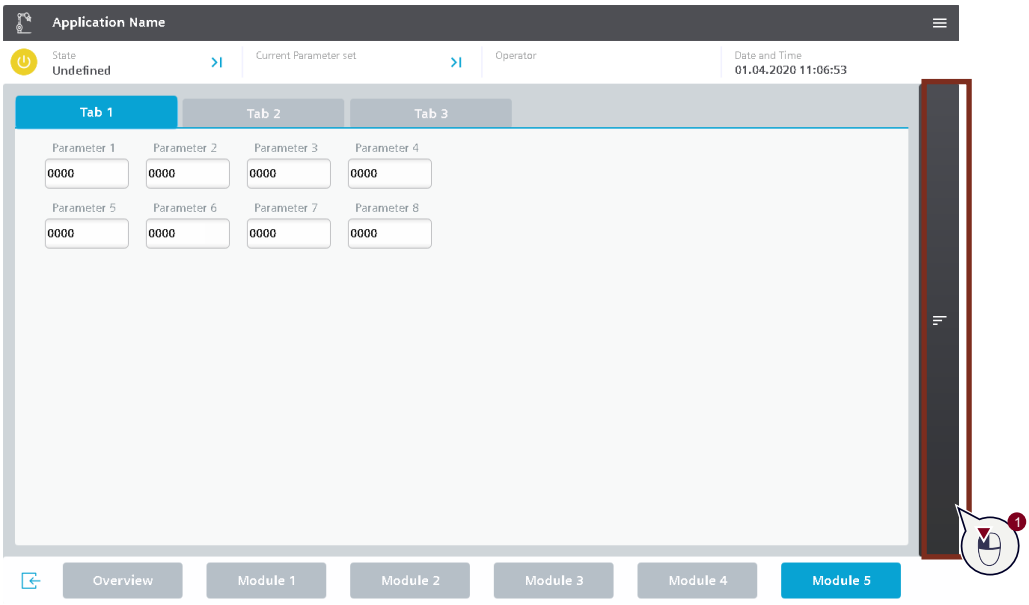
Figure 4-26



Access to the "Option Panel":

Use the button on the permission side of the screen to open the "Option Panel" (see Figure 4-27).

Figure 4-27

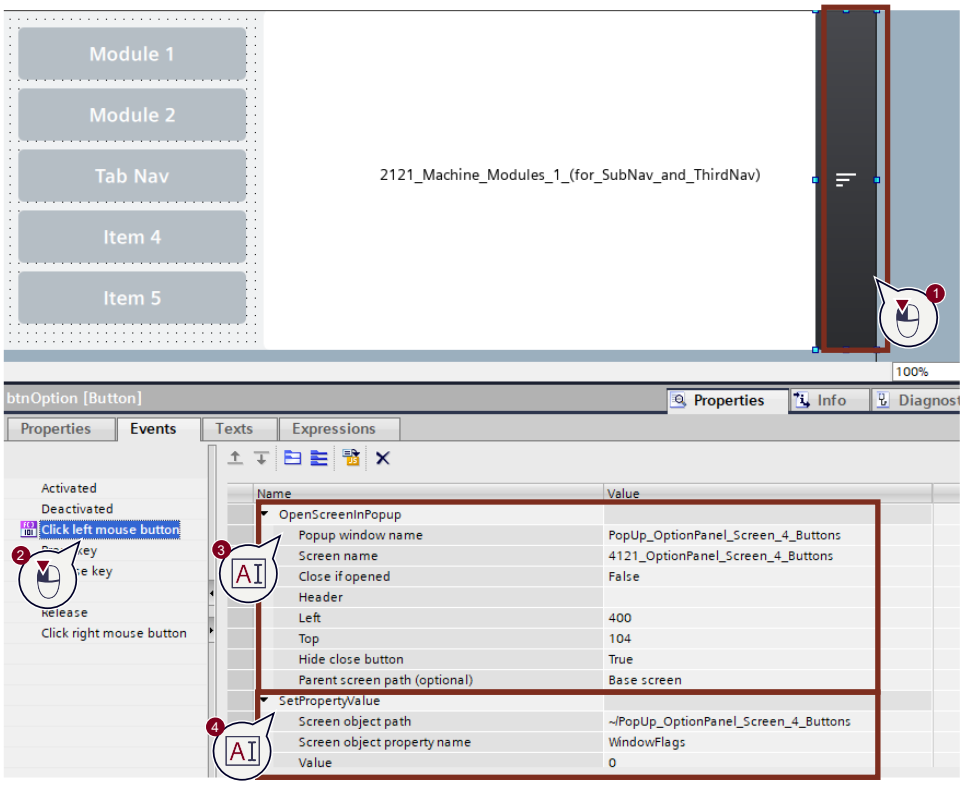


The "Option Panel" screen opens as a pop-up window. This is implemented by the "OpenScreenInPopup" system function. You must define a unique pop-up name and the screen to be displayed in the pop-up window generated during runtime as parameters for this function.

The button for opening the "Option Panel" can be hidden after opening the pop-up with the "SetPropertyValue" system function. Refer to the pop-up window as a screen object with the path "~/PopUp_Name" and set the "WindowFlags" property to "0".

The following figure shows a sample configuration of the screen with the "Option Panel".

Figure 4-28



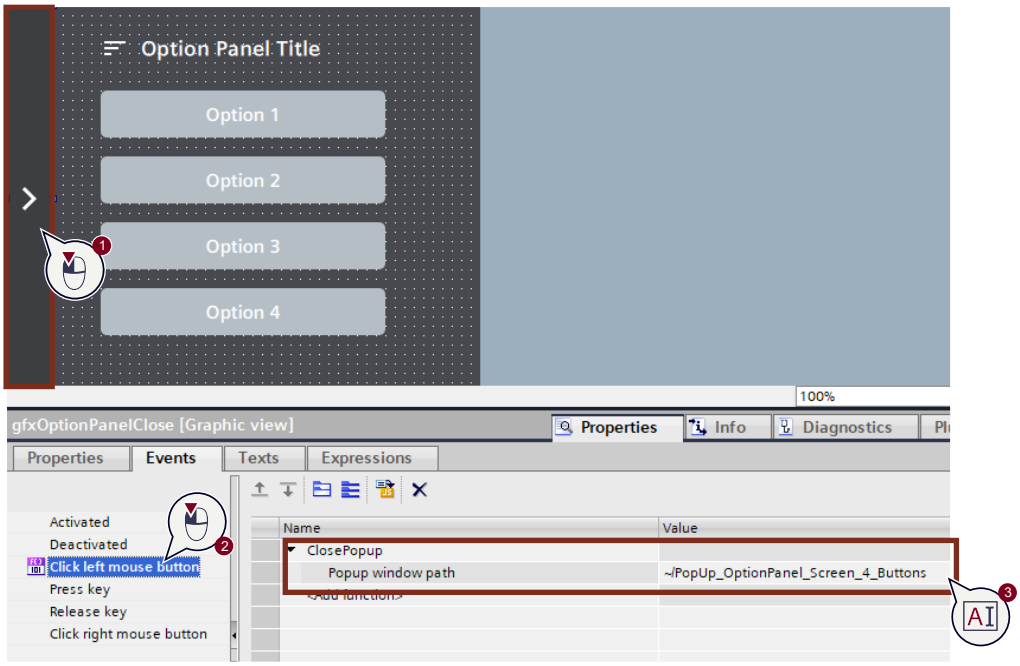
NOTE When configuring the "Option Panel", ensure that the navigation bars are not covered by the pop-up window.

To close the "Option Panel":

After pressing the button on the right edge of the screen, the "Option Panel", also aligned on the right edge of the screen, opens.

The "Option Panel" contains an arrow button on the left-hand side to close itself using the "ClosePopup" system function and a compatible pop-up path as a parameter.

Figure 4-29



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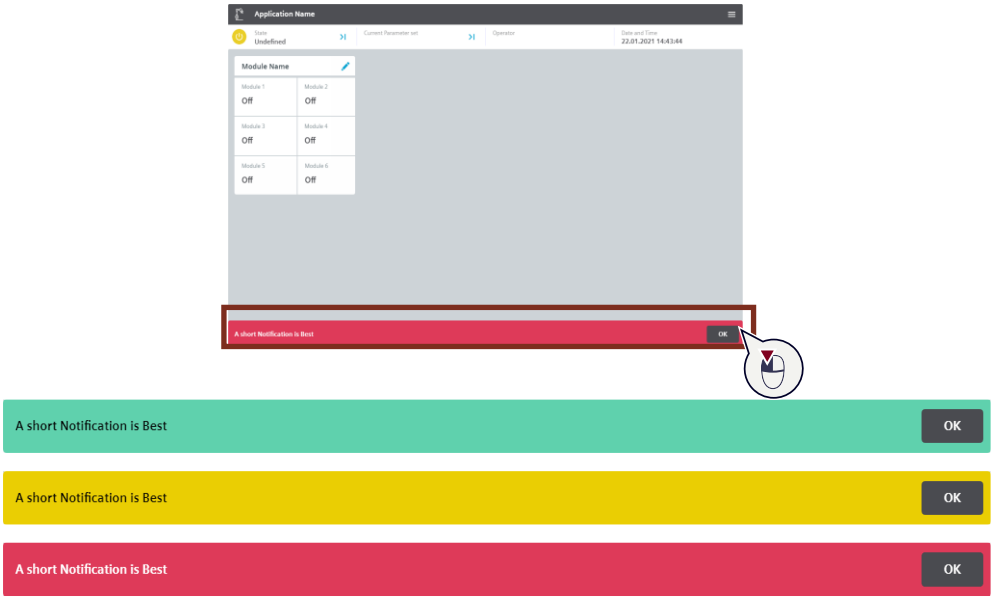
4.3.6. Notifications

A notification can provide important information about various events in the plant.

Notifications are displayed at the bottom of the screen. If you are in the second-level navigation, the notification overlays the navigation elements (see Figure 4-). If you do not use the second level navigation, the notification will also appear along the entire bottom edge of the screen.

NOTE Use the notification line to confirm user entries, provide operating instructions or similar. It is not compatible for use as a reporting system.

Figure 4-40



There are 3 types of notifications: "Info/Ok" (green), "Warning" (yellow) and "Error" (red).

The notification templates can be found in the screens of the preconfigured device in the project directory under "4000 - Other Templates" > "4200_Notifications".

With the integrated button, the user can confirm a message and, for example, hide it. Unlike a pop-up window, it does not block the content of the screen and does not make it unusable.

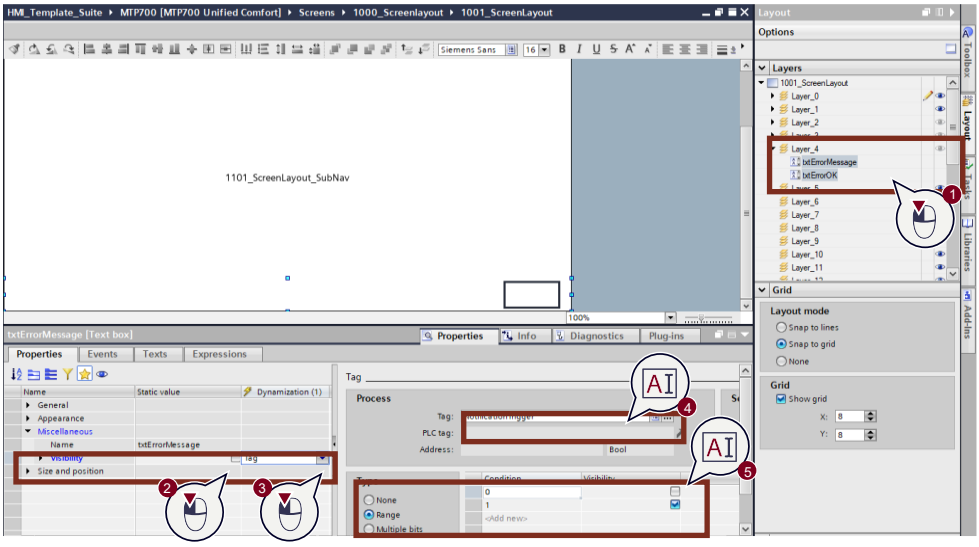
Notification configuration

The easiest way to implement a notification is to place the notification text and the integrated button for confirming the notification as objects in the top level of the "1001_ScreenLayout" screen (see Figure 4-). The notifications should even be visible when a pop-up window is opened.

If you want to display multiple messages, you have the option of using a separate screen window in the layout screen to display the notifications. The notification appears with a visibility animation.

Don't forget to give the integrated button the same animation as the notification text object, as it is a separate object.

Figure 4-41



4.3.7. Function Panel

You can use the "Function Panel" to dynamically activate or deactivate a specific functionality or module of your machine.

By pressing a button, the previous state is inverted (two states). Depending on the status, this should be displayed in a different color to indicate to the user that the button is pressed.

Different versions are available for different panel sizes and variants with 4, 8, and 16 buttons.

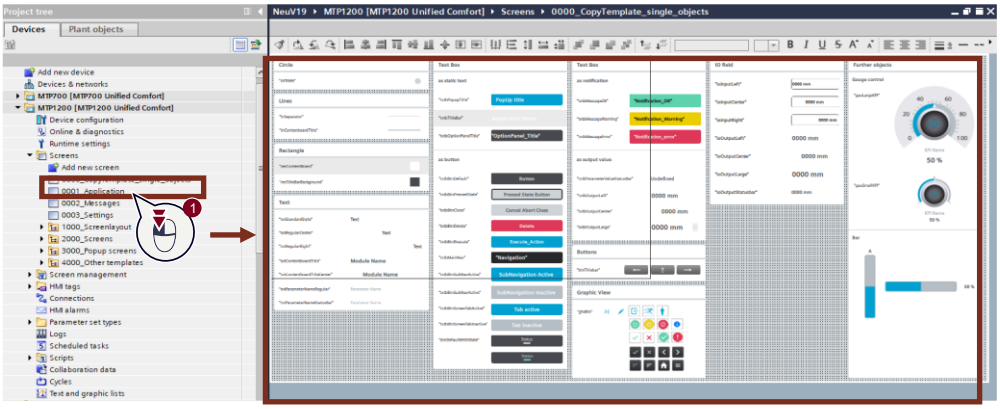
Figure 4-42



4.4. Screen Objects of the HMI Template

Various objects are configured as templates on different screens in the HMI Template Suite. This section explains various use cases for these screen objects. After dragging and dropping the chosen device into the project directory, you will find a screen "0000_CopyTemplate_single_objects" (1) in the "Screens" folder of the corresponding Operator Panels. This screen offers you all the elements of the HMI template for copying to your desired screen in a uniform and continuous display.

Figure 4-30



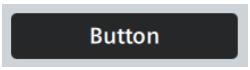
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4.4.1. "Buttons and Icons" Use Cases

Size

A minimum button size of 40x120px (height x width) has been defined for the HMI Template Suite. This ensures that all buttons are of sufficient size to be operated.

Figure 4-31

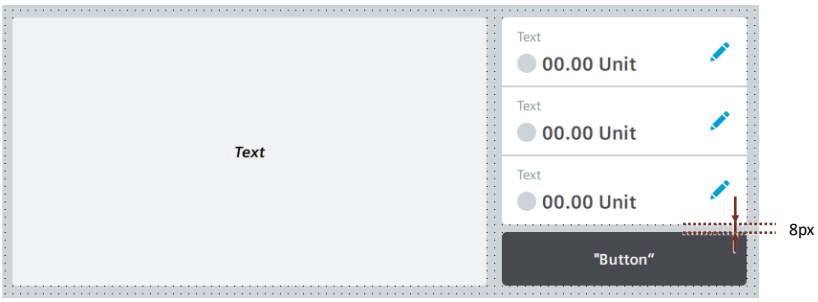


Appearance

A button can have an animation to signal to the user that this button is pressed or to display an inactive button.

If possible, the buttons should be placed outside a ContentBoard if they refer to the entire ContentBoard. They should be placed on the permission side or at the bottom of the ContentBoard with a distance of 8 pixels to the associated ContentBoard and other buttons. In rare cases, it makes sense to place buttons within the ContentBoard. Basically, this involves a visual separation of inputs and outputs.

Figure 4-32



The display of the objects is standardized. Text fields in the HMI Template Suite are used to configure buttons without a color gradient. In WinCC Unified there is also the option of using the "Click left mouse button" event on text fields.

The following table presents the use cases of the buttons and icons of the HMI Template Suite.

NOTE

Text fields in the HMI Template Suite were used to configure buttons without a color gradient. These are used because they are more resource-efficient. A button differs in the display of the background color. The background color always has a color gradient. With a button, system functions can be linked to the "Press" and "Release" events. This is not possible with a text field, as these events are not available.

"Events" in WinCC Unified can also be executed on a text box with the "Click left mouse button" event. This is done using both mouse and touch operation. An example of such a button can be found in the "1002_MainNavigation" screen.

Table 4-6

Object name	Appearance	Object type	Uses/Location of use
"txtbBtnDefault"	OPTION 1	Text field	Standard button, for normal operating action e.g., executing a function or opening a pop-up screen
"txtbBtnPressedState"	Pressed	Text field	Button for normal operating action, pressed state.
"txtbBtnClose"	CLOSE	Text field	Button to cancel actions or close pop-up windows. → no effect on the machine
"txtbBtnDelete"	DELETE	Text field	Button that triggers a delete action. → critical actions
"txtbBtnExecute"	EXECUTE	Text field	Button for actions that have an effect on the machine, such as executing script functions or setting machine parameters.
"txtbMainNav"	Text	Text field	Button for main navigation purposes
"gfxBtnStatusBar"		Graphic view	Button for opening the pop-up windows of the Status bar, e.g., logon dialog or Recipe view Button for opening a pop-up windows for controlling the plant module → Additional content via pop-ups
"gfxBtnFuncActive"		Button	Button to execute/activate user-defined functions State: The button is ready to be enabled, function is disabled
"gfxBtnFuncInactive"		Button	Button to execute/deactivate user-defined functions State: The button cannot be used/is deactivated
"txtbBtnSubNavInactive"	Module 1	Text field	Navigation button for the "SubNavigation" bar. Display of inactive state (unpressed).
"txtbBtnSubNavActive"	Module 1	Text field	Navigation button for the "SubNavigation" bar. Display of active state (pressed). If a screen has been opened, the button is colored blue to indicate that it has been selected.
"txtbBtnScreenTabInactive"	Tab 3	Text field	Button for the "Tab bar", Display of the unpressed state
"txtbBtnScreenTabActive"	Tab 3	Text field	Button for the "Tab bar", Display of the pressed state
"txtBtnWithState"	Status	Text field	Button with status display of the executed function  0: Inactive  1: Active

NOTE

Text fields in the HMI Template Suite were used to configure buttons without a color gradient.

With WinCC Unified, the event "Click left mouse button" can also be used to execute "Events" on a "text box". This is done using both mouse and touch operation. An example of such a button can be found in the "1002_MainNavigation" screen.

4.4.2. "Texts and IO Fields" Use Cases

To ensure a uniform and clean typeface on the Operator Panels, texts and IO fields are configured in a standardized way in the HMI Template Suite.

This ensures consistency and allows the HMI to be configured more intuitively and quickly.

Size

Present the text in such a way that the operators can recognize them quickly and reliably.

The font size used depends on the distance between the operator and the configured Operator Panel.

Font

"Siemens Sans" was used as the default font for all text and process values.

Appearance of texts

The following table presents the use cases of the text fields in the HMI Template Suite.

Table 4-7

Style name	Appearance	Object type	Uses/Location of use
Standard			
"txtStandardStyle"	Text	Text	Text aligned left
"txtRegularCenter"	Text	Text	Text centered
"txtRegularRight"	Text	Text	Text aligned right
Title bar, Status bar & Pop-ups			
"txtContentboardTitle"	**Text**	Text	Dark heading, only to be used for ContentBoard headings (grouping of information)
"txtContentboardTitleCenter"	**Text**	Text	ContentBoard title, centered text (grouping of information)
"txtbPopupTitle"	Text	Text field	Heading, only for pop-up windows
"txtbTitleBar"	Text	Text field	Font, only for the title bar
"txtParameterNameStatusBar"	Text	Text	Name of the process value displayed in the IO field
"txtbParameterValueStatusBar"	**Text**	Text field	Output of a process value
Notifications			
"txtbMessageOk"	**Text**	Text field	Notification at the bottom of the screen, for non-critical information
"txtbMessageWarning"	**Text**	Text field	Notification at the bottom of the screen, for important information
"txtbMessageError"	**Text**	Text field	Notification at the bottom of the screen, for critical information
Miscellaneous			
"txtbOptionPanelTitle"	**Text**	Text field	Heading for the "Option Panel"
"txtParameterNameRegular"	Text	Text	Naming of the process value

Design of IO Fields

Input fields are identified by a white background and a frame. If the IO Field does not have a white background or frame, no entry is possible in the field.
The operator can thus see at a glance whether the field can be edited.

The following table shows the use cases of the IO fields of the HMI Template Suite.

Table 4-8

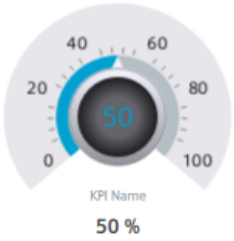
Name	Appearance	Use/place of use
"ioInputLeft"	0000 mm	Standard object, unrestricted
"ioInputCenter"	0000 mm	Standard object, unrestricted
"ioInputRight"	0000 mm	Standard object, unrestricted
"ioOutputLeft"	00.00 Unit	Use only to output values
"ioOutputCenter"	00.00 Unit	Use only to output values
"ioOutputRight"	00.00 Unit	Use only to output values
"ioOutputLarge"	Text	Output of a process value in capital letters
"ioOutputStatusbar"	00.00 Unit	Used for the Status bar
"txtbOutputLeft"	00.00 Unit	Output and entry field on a "ContentBoard"
"txtbOutputCenter"	00.00 Unit	Output and entry field on a "ContentBoard"
"txtbOutputLarge"	00.00 Unit	Output and entry field on a "ContentBoard"

4.4.3. "Further Objects" Use Cases

Further objects are available in the "0000_CopyTemplate_single_objects" template as "Further Objects" for configuring a visualization. The description of these objects can be found in the following table.

There are also white rectangles in the template. These serve as background objects to create a visual grouping of elements. The rectangles are defined without a border so that they fit into the defined flat design.

Table 4-9

Name	Appearance	Uses/Location of use
"recContentboard"		Background for a visual grouping of elements; ContentBoard frame as a white rectangle, no border, 6px corner radius
"Gauge control"		
"gauLargeKPI"		Display of numerical values in the form of an analog gauge control Used purely for display and cannot be operated
"gauSmallKPI"		Display of numerical values in the form of an analog gauge control without a value scale
"Bar"		
"barVertical"		Vertical bar display for graphical representation of a value scale with display of a process variable
"barHorizontal"		Horizontal bar display for graphical representation of a value scale with display of a process variable and the percentage symbol

"Gauge control"

In the HMI Template Suite library, there are several examples of displaying KPIs with a gauge control.

You are in the template "0000_CopyTemplate_single_objects".

You can also create user-defined KPIs with a gauge control. To do this, you can take the preconfigured gauge controls from the template and adjust their size.

Use a text field to describe the KPI value and an IO field to display the value of the KPI. Both should be placed below the gauge controls and centered horizontally.

"Bar"

A bar should always be displayed together with a description (name of the displayed value) and an IO field (current process value). The alignment of the bar can be vertical or horizontal.

There are several examples with bars in the library in the template "0000_CopyTemplate_single_objects".

5. Configuration Notes

This Section explains the additional information that is essential when configuring screens with the HMI Template Suite in the TIA Portal.

Requirements

Before you start configuring your Operator Panel, develop a complete design concept with specific visualization ideas.

NOTE

If you need more information and tips on creating a design concept, take a look at the free "HMI Design Masterclass".

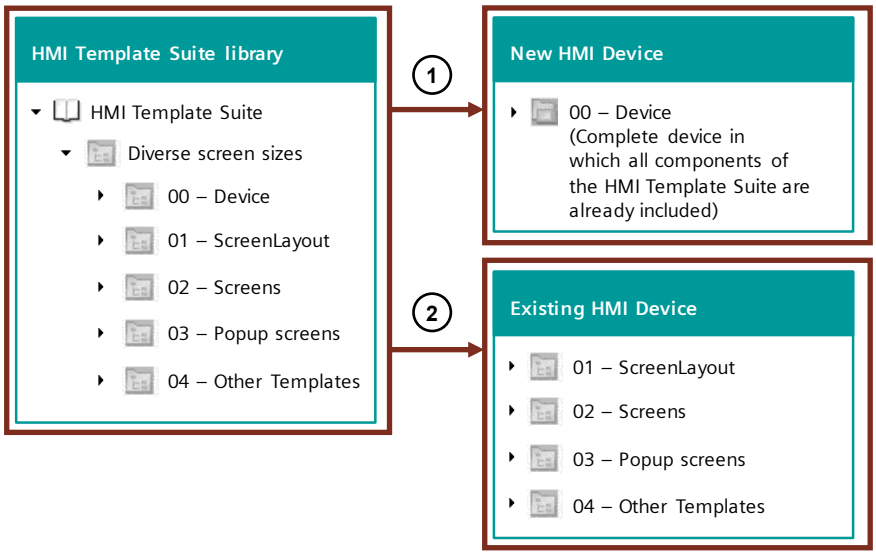
The "HMI Design Masterclass" gives you an introduction to the topic of HMI design in 7 x 10-minute video units.

Link to the Masterclass: https://www.siemens.com/hmi-design-masterclass

5.1. Integrating the Library

In general, there are 2 ways to work with the HMI Template Suite library. The 2 options are illustrated in Figure 5-1.
The first way is to use a new Operator Panels and then only parameterize it and then put it into operation (1) (see Section 5.1.1).
The second way is to manually integrate certain content from the library that is of interest into an existing Operator Panels step by step (2) (see Section 5.1.2).

Figure 5-1

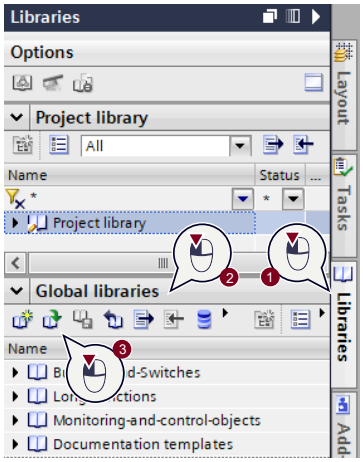


5.1.1. Copying a new Operator Panel from the HMI Template Suite Library into a TIA Portal Project

Follow the next steps to manually copy a new Operator Panel from the HMI Template Suite library into your TIA Portal project. Alternatively, you can use the "SIMATIC HMI Template Suite Wizard" application to integrate a new Operator Panel from the HMI Template Suite library into an existing project. The documentation for the application can be viewed here \2\.

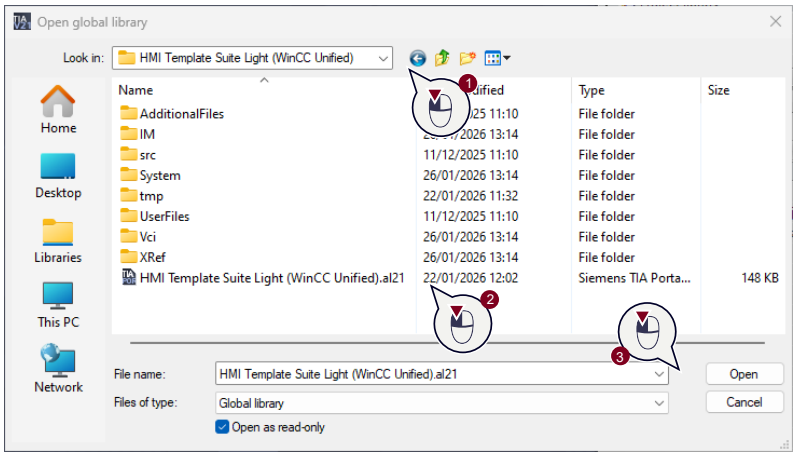
1. Download the library from the article page and unzip it.
   https://support.industry.siemens.com/cs/ww/en/view/91174767
2. Open the library with the TIA Portal. Create a new project or open an existing configuration.
3. Open the "Libraries" task card (1).
4. Then open the "Global libraries" palette (2).
5. Click the icon to open a library (3).
   The "Open Global Library" window opens.

Figure 5-2



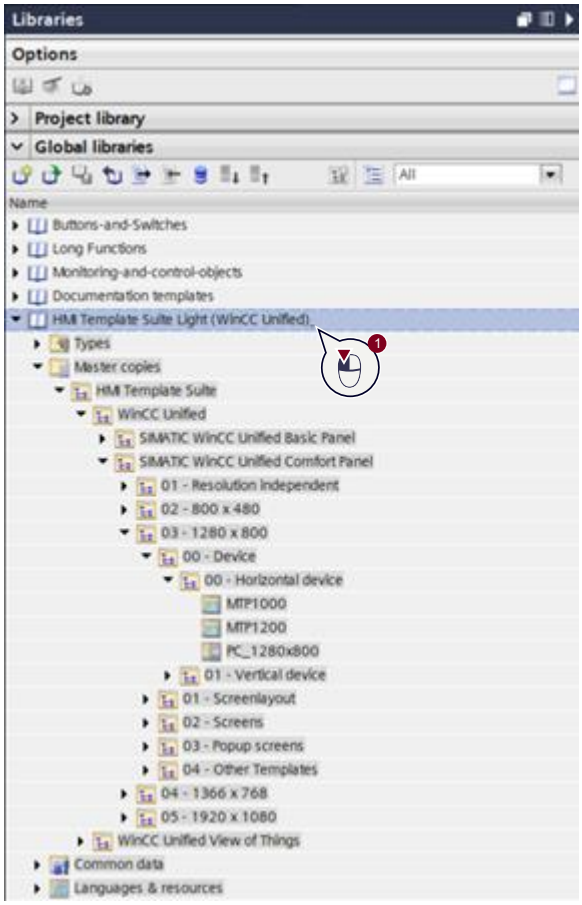
6. Select the library
   - In the window, navigate to the file folder where the library file is located (1).
   - Select the file "HMI Template Suite Light (WinCC Unified)" (2) for the light theme (Select the file "HMI Template Suite Dark (WinCC Unified)" for the dark theme).
   - Then click "Open" (3). The "Open Global Library" window opens.

Figure 5-3



7. View of the open library file (1).
   From here, navigate to the screen objects or the fully configured Operator Panels.

Figure 5-4

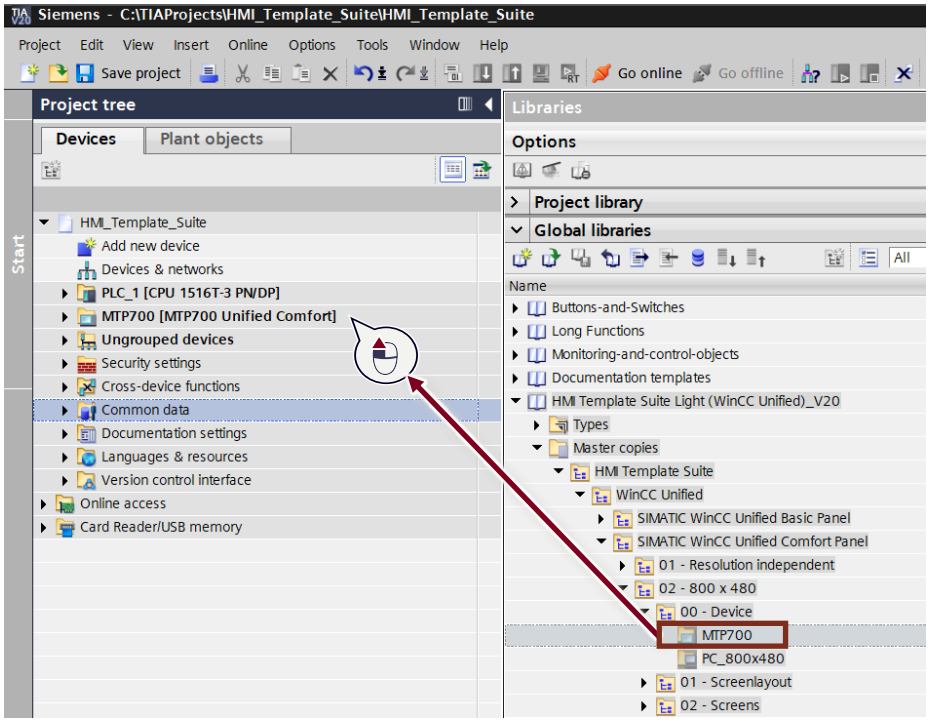


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8. Once you have selected the corresponding object, drag and drop the object into the project directory. In this case, the fully configured "MTP700" is added to the project directory under "Add new device".

NOTE The Operator Panels are sorted by resolution in the "00 – Device" subfolders. All elements (navigation bars, example screens, etc.) of the library are already included in these Operator Panels.

Figure 5-5



9. The Operator Panel is now fully configured. You can test it immediately with the runtime simulation or load it into a real Operator Panel. For this, adjust the IP address to match your configuration.

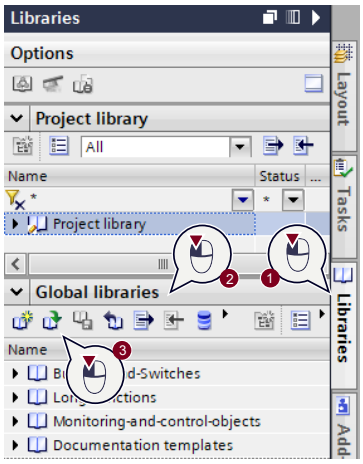
NOTE Use the other screen objects, as well as the preconfigured HMI screens and assemble your visualization step by step. You can remove unused elements from the Operator Panel.

5.1.2. Expanding Content from the HMI Template Suite Library to an Existing Operator Panel in a TIA Portal Project

Follow the next steps to manually expand an existing Operator Panel in the TIA Portal project with the content from the HMI Template Suite library.

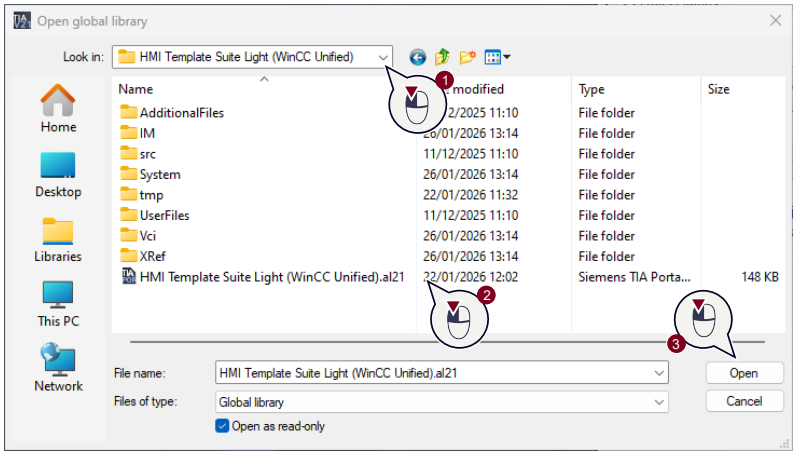
1. Download the library from the article page and unzip it.
   https://support.industry.siemens.com/cs/ww/en/view/91174767
2. Open the library with the TIA Portal. Open an existing configuration.
3. Open the "Libraries" task card (1).
4. Then open the "Global libraries" palette (2).
5. Click the icon to open a library (3).
   The "Open Global Library" window opens.

Figure 5-6



6. Select the library
   - In the window, navigate to the file folder where the library file is located (1).
   - Select the file "HMI Template Suite Light (WinCC Unified)" (2) for the light theme (Select the file "HMI Template Suite Dark (WinCC Unified)" for the dark theme).
   - Then click "Open" (3).

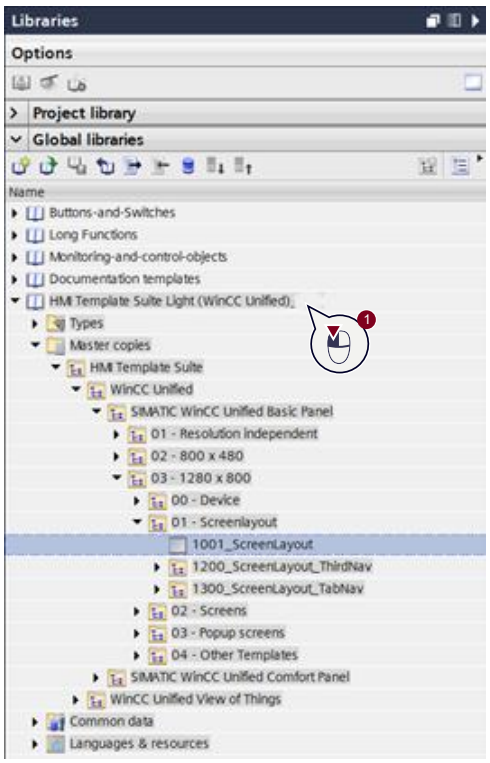
Figure 5-7



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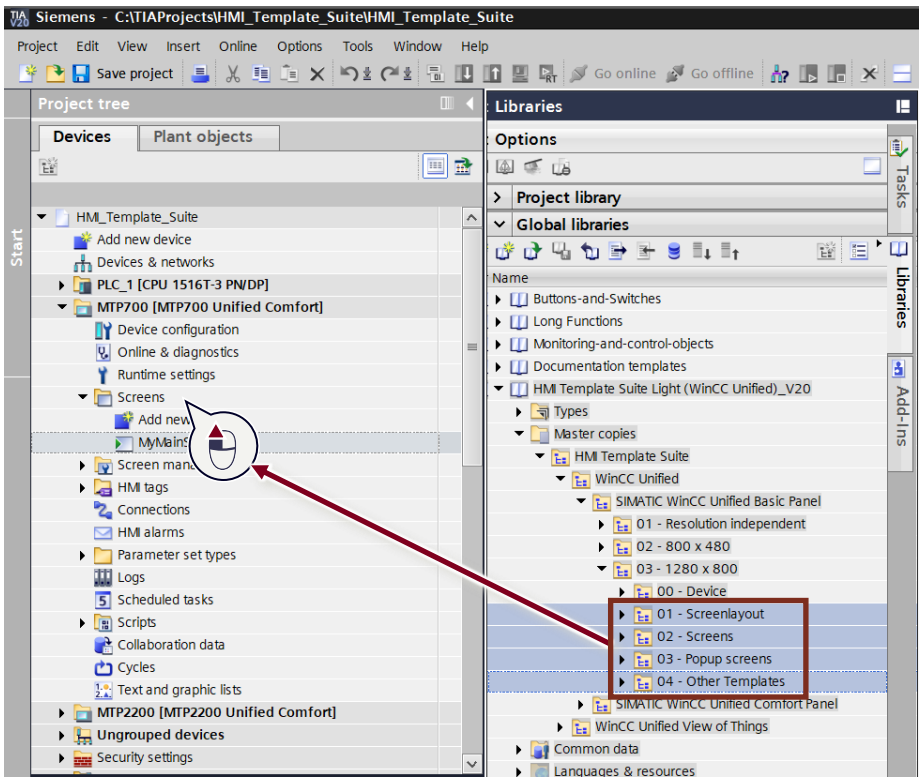
7. View of the open library file (1).
   Navigate from here to the screen objects that are of interest to you.

Figure 5-8



8. Once you have selected the desired object, drag and drop the object to the corresponding position in the project directory.

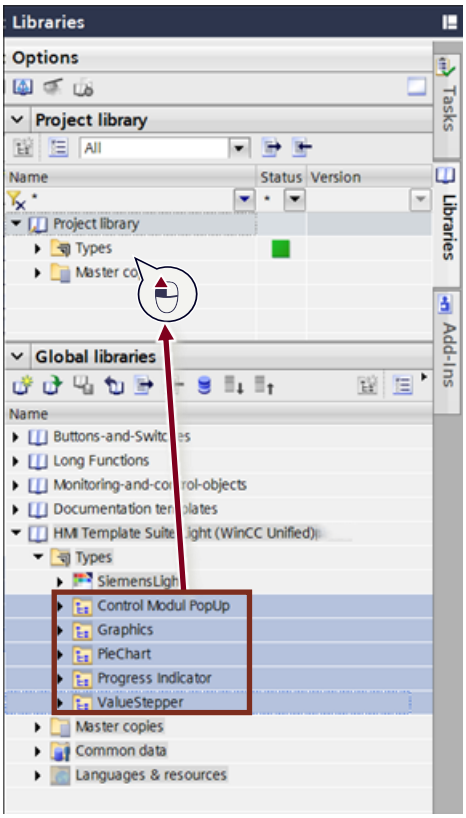
Figure 5-9



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9. In the next step, copy the faceplates, HMI tags and script functions from the library into your project (see Figure 5-10 and Section 5.5).

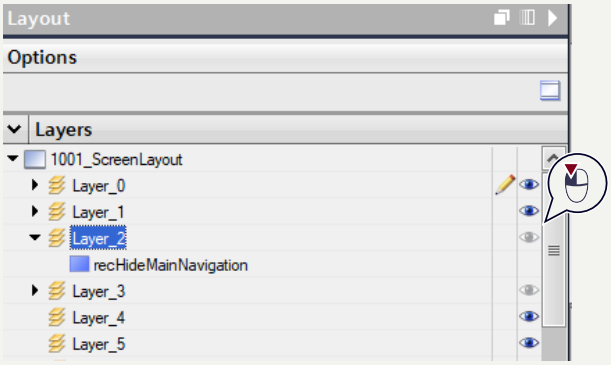
Figure 5-10



10. Compile your project and check whether there are any components missing in your Operator Panel from the HMI Template Suite.
11. Set the "1001_ScreenLayout" screen as the Start Screen.
12. Configure a screen change for your screens and implement your navigation concept. See Sections 4 und 5.2.

NOTE

When copying individual screens via drag-and-drop from a global library into the project directory in an existing TIA Portal project, individual layers that were previously hidden become visible. You can hide these objects or layers again in the layout area under "Layers".



13. Compile your project again and test it.

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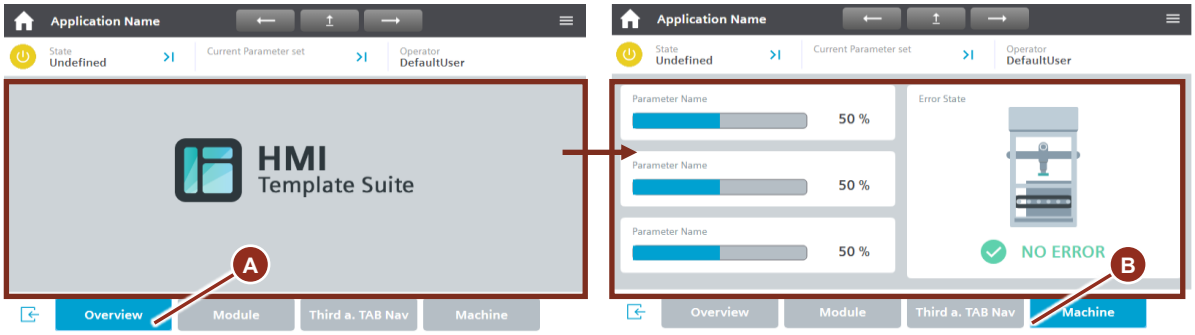
5.2. Configuring a Screen Change

There are two points to note when configuring a screen change. The first essential point is how a screen change is initiated. The second point is the change in the display of the button in the navigation bar (animation of the button) to signal to the user that a screen change has taken place. These 2 points are described in this Section.

5.2.1.1. Calling up the Screen Change via a System Function

To configure a screen change, a "ChangeScreen" system function is required on a button in an addressed screen window. The following figure shows a screen change from an "Overview" page to a "Machine" page.

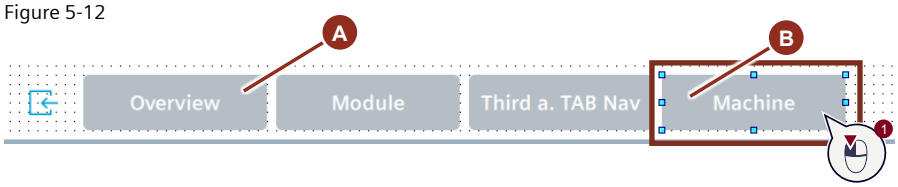
Figure 5-11



In principle, it is a screen in which several screen windows are nested. The main screen is the screen "1001_ScreenLayout" with a header area. This contains a screen window "swContent", in which a screen "1101_ScreenLayout_SubNav" with the second-level navigation and another screen window "swSubNavContent" is called up.
To configure the screen change shown above, the following steps must be carried out in the TIA Portal:

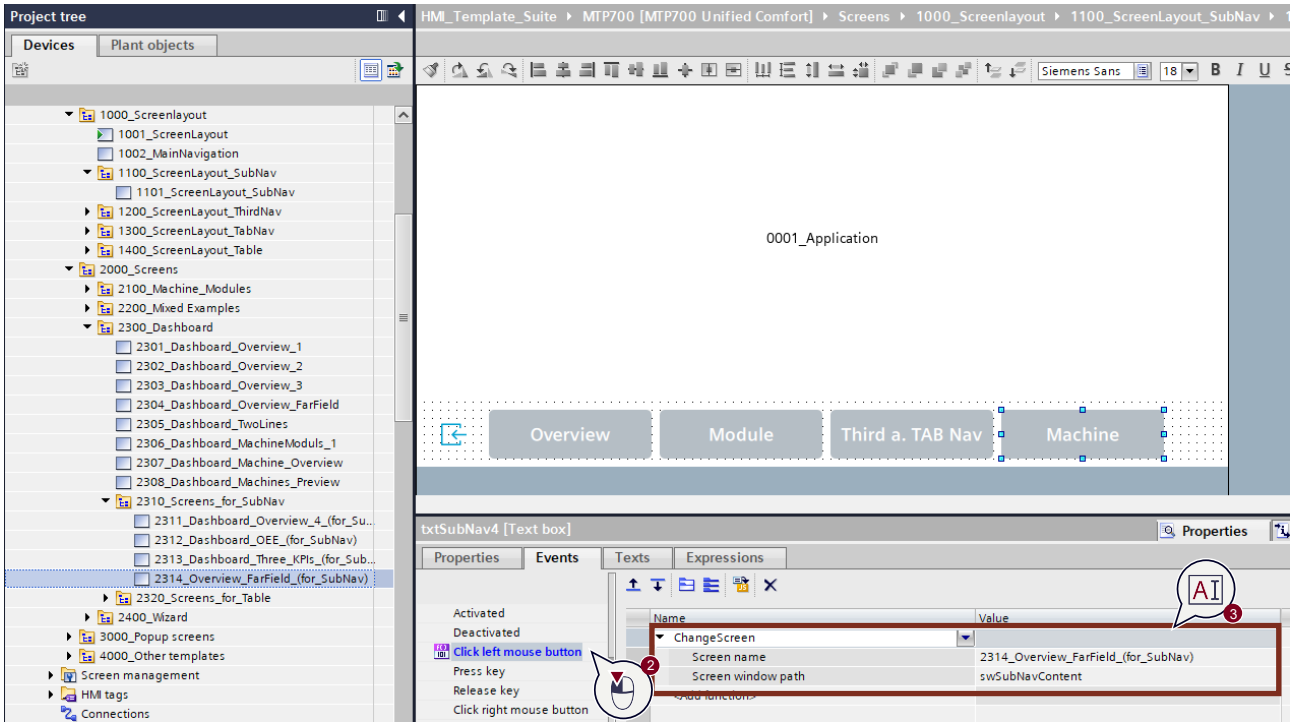
1. On the desired (navigation) screen, e.g. "1101_ScreenLayout_SubNav", select any button (B) with the left mouse button that should display a different screen when pressed than when the desired (navigation) screen and the first button (A) in the main window (MainWindow) are set up (see Section 0).

Figure 5-12



2. For the selected button (B) under "Events" > "Click left mouse button".

Figure 5-13



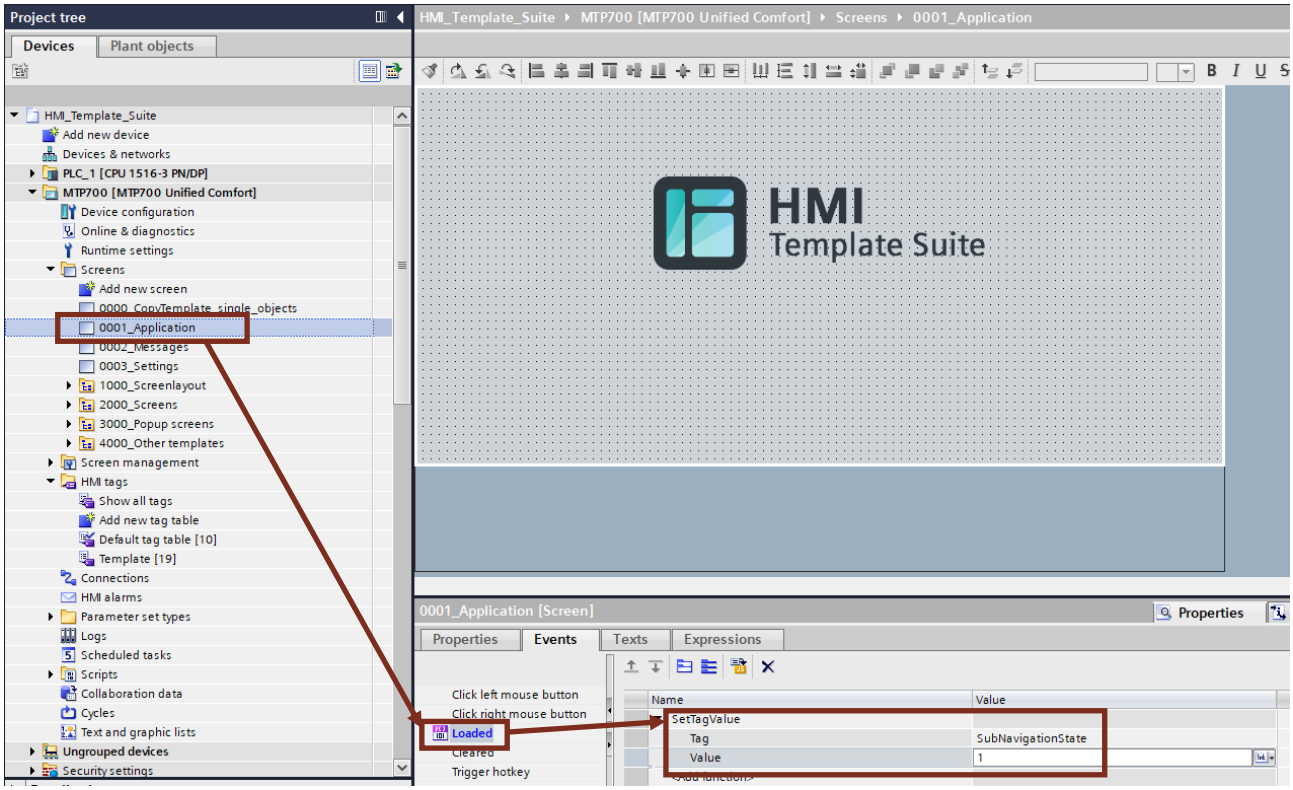
3. With "Left mouse button click" you can call up the system function "ChangeScreen" in the specific screen window of the navigation level (in this case "swSubNavContent") the screen with the desired content, e.g. "2314_Overview_FarField_(for_SubNav)".

5.2.1.2. Button Animation when Changing Screens

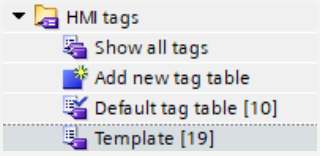
The following example shows you how to configure an animation of the "Overview" button in several steps.

1. When setting up each screen, a unique value is assigned to a specific HMI tag in the HMI Template Suite.
   As an example in the following figure, when the "0001_Application" screen is created ("Loaded" event), the value "1" is assigned to the "SubNavigationState" tag. In addition, in this example, in step 3, the other buttons "Module" at a value of "2", "Third a. TAB Nav" at "3" and "Machine" at "4" will be colored blue, as in steps 1 to 2.

Figure 5-14

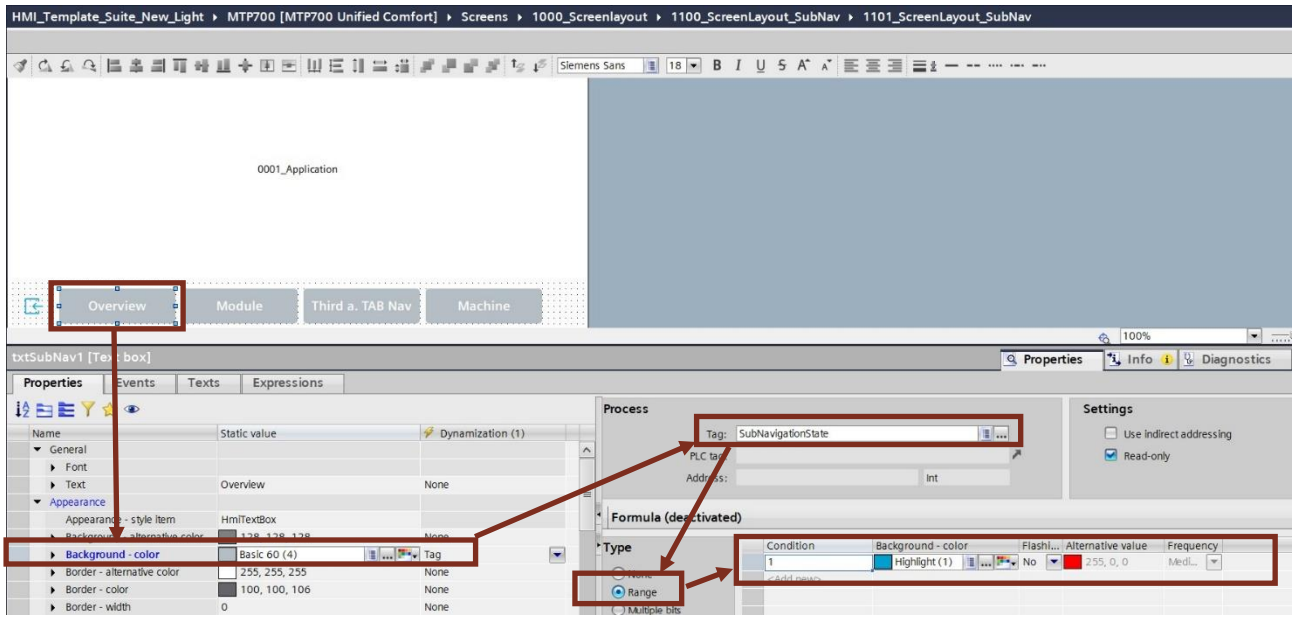


NOTE All HMI tags required for the HMI Template Suite are located in an HMI tag table "Template".



2. Figure 5-15**Fehler! Verweisquelle konnte nicht gefunden werden.** shows the example of step 1 continued.
   For the button that should display a specific screen in a screen window when activated, the "Background - color" property in "Appearance" is animated.
   In this example, the button is displayed in Highlight (RGB 0,161,209) in the Light Theme and Highlight (RGB 20,145,235) in the Dark Theme if the HMI tag "SubNavigationState" is set to "1". In all other cases, as soon as the HMI tag "SubNavigationState" is assigned a value other than "1", the "Overview" button retains its default color in Basic 60 (RGB 181,190,197) in the Light Theme and Basic 20 (RGB 102,102,121) in the Dark Theme.

Figure 5-15



NOTE In principle, the procedure for configuring the animation of a button applies to all screens in the project. However, it also depends directly on your configuration. The current color of the button depends on an HMI tag that is set to a specific value when a screen is created.

3. To animate further buttons, steps 1 and 2 are carried out analogously for further buttons.

   As an example here:
   The "Modules" button calls up the "2111_Machine_Modules_Detail_(for_SubNav)" screen in the "swSubNavContent" screen window (see Figure 5-17). To display the "Modules" button in blue when it is selected, the HMI tag "SubNavigationState" is set to the value "2" when the "2111_Machine_Modules_Detail_(for_SubNav)" screen is created (see Figure 5-18). In this example, the "Module" button is displayed in Highlight (Light Theme) and Highlight (Dark Theme) with a value of "2" for the "SubNavigationState" HMI tag (see Figure 5-19). In all other cases, as soon as the HMI tag "SubNavigationState" is assigned a value other than 2, the "Module" button retains its default color in Basic 60 (Light Theme) and Basic 20 (Dark Theme).

Figure 5-16

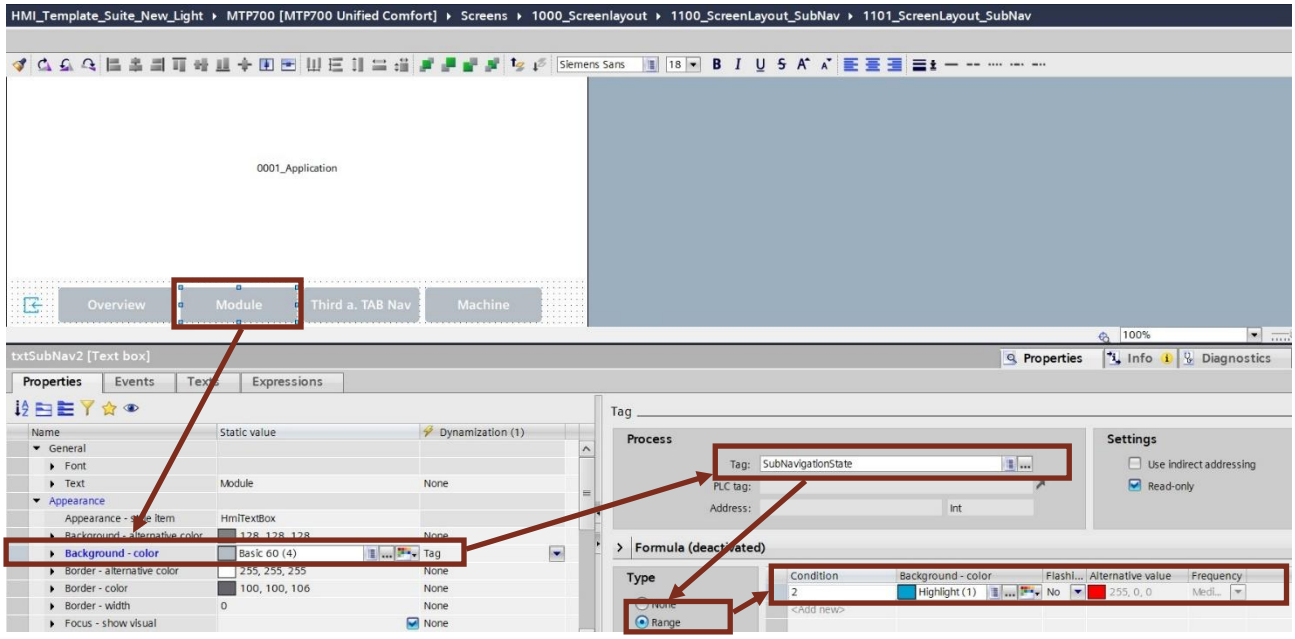


Figure 5-17

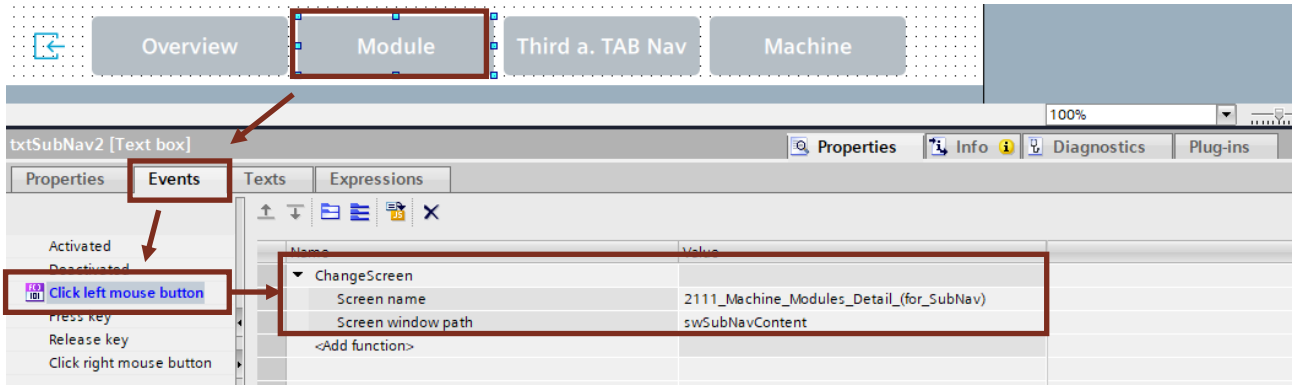
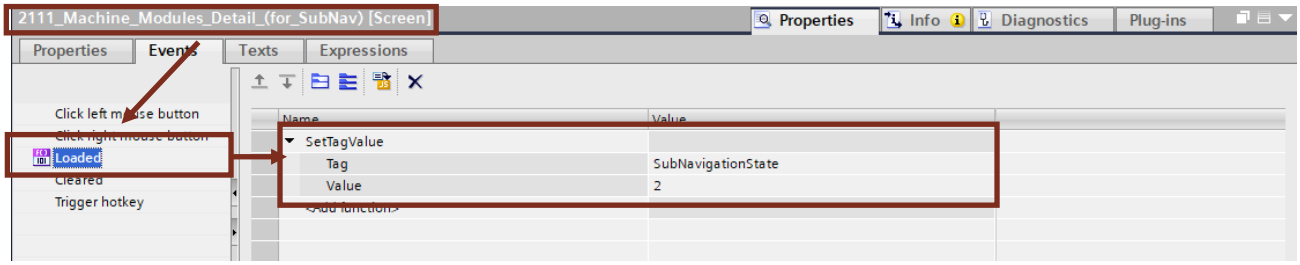


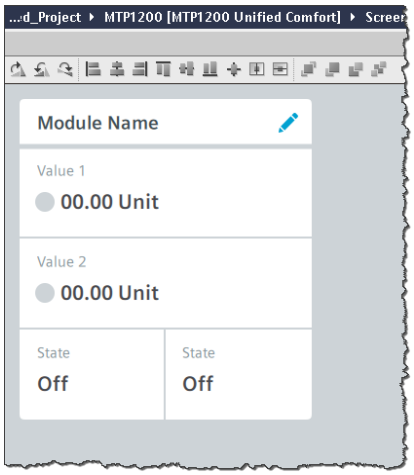
Figure 5-18


2111_Machine_Modules_Detail_(for_SubNav) [Screen]
Properties
Info
Diagnostics
Plug-ins
Properties
Events
Texts
Expressions
Click left mouse button
Loaded
Cleared
Trigger hotkey
Name
Value
SetTagValue
Tag
SubNavigationState
Value
2

5.3. ContentBoard Quick Start Guide

The "ContentBoard" is a purely visual aid for grouping and structuring HMI elements on a screen. It consists of a white rectangle. This rectangle is placed behind the HMI objects to represent a functional context. This makes it easier for the user to find their way through the application. See the following figure for an example of a ContentBoard.

Figure 5-19



Fundamentals

The ContentBoards always have a distance of 16 pixels to each object. The white rectangles have a corner radius of 5 pixels.

If there is not enough content to fill the entire screen, arrange the ContentBoards in the upper left area, but keep a distance of 16 pixels to the status bar and the left edge of the screen.

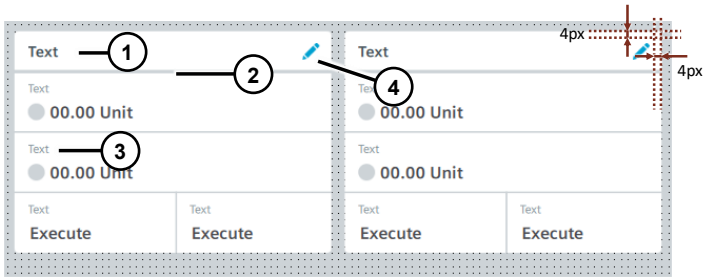
Title dividing line

A ContentBoard that contains more than one piece of information should have a title and a dividing line.

The dividing line is a simple line with a width of 2 pixels.

If a pop-up window needs to be used to enter values in relation to the ContentBoard, the button for this is placed at a distance of 4 pixels from the right edge, the top edge and the dividing line.

Figure 5-20



(1) ContentBoard title (8px below the top edge of the ContentBoard)

(2) Separation line (4px below the top edge of the ContentBoard)

(3) Description of the process variable set in the color Basic 60

(4) Button to open a pop-up: must be placed in the upper right corner of the ContentBoard

These screenshots are examples for a device with a resolution of 800x400px. For smaller/larger devices, select a suitable font size.

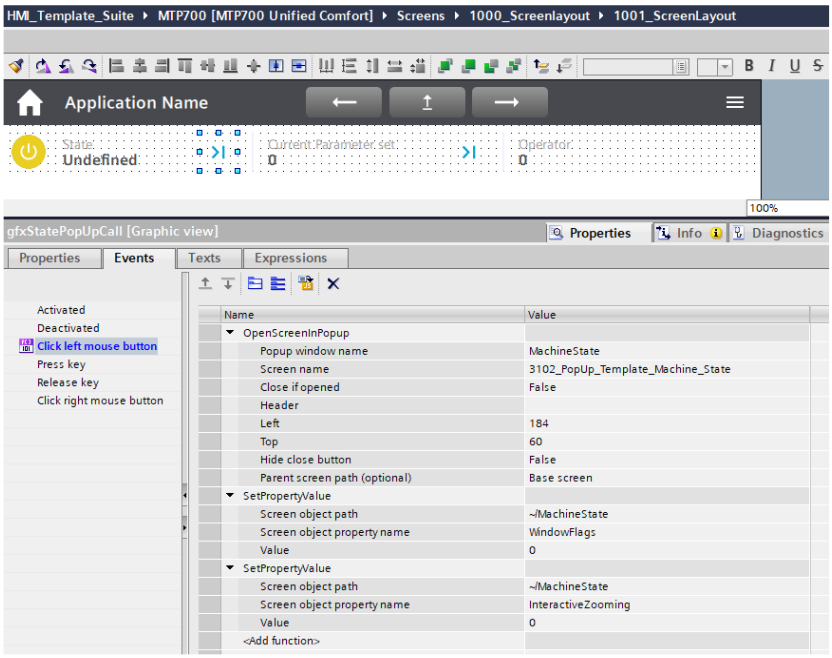
Configuring
Insert a new rectangle into your screen and assign the color white to the rectangle (use cases "Rectangles", see Section 4.4.3).

NOTE	You can use horizontal and vertical lines as additional structuring features within the ContentBoard.

5.4. Accessing Screens as Pop-Ups

In WinCC Unified, you can access screens as pop-ups. The system function "OpenScreenInPopup" is used for this purpose.

Figure 5-21



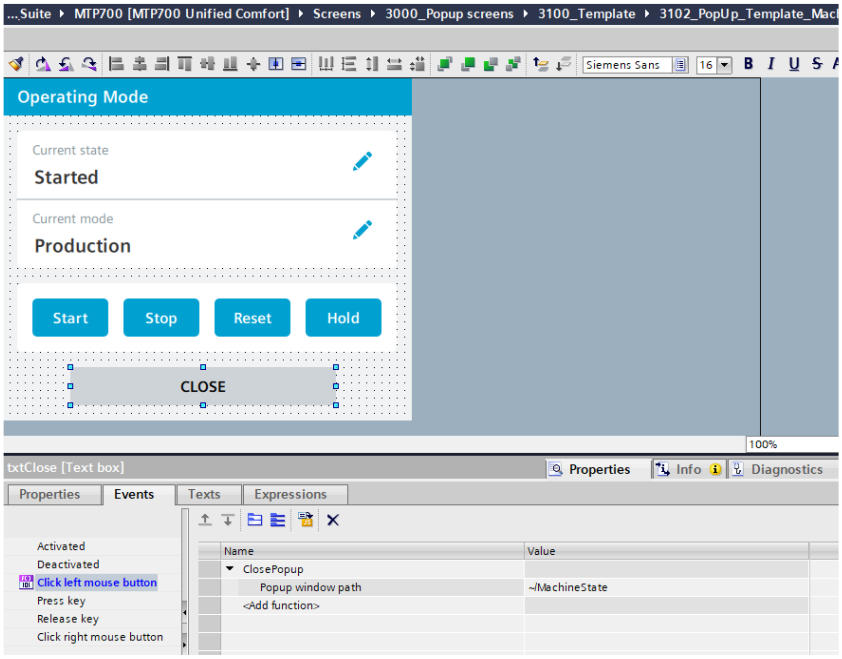
NOTE By setting the value "0" for the "WindowFlags" property, you can hide all properties (frame, movable, etc.) of the screen window.

It is important to define a unique pop-up window name and select the screen you want to display in the pop-up window. Also, don't forget to set the correct coordinates for displaying the pop-up windows in the center of the screen.

With the "SetPropertyValue" function, you must also deactivate the "WindowFlags" property (hides the pop-up window). As the screen object path, it is important to enter the unique pop-up window name preceded by the "/" character.

To close the pop-up window, the system function "ClosePopup" can be used. Pay attention again to the correct pop-up window image path with the "/" sign in front of it (see Figure 5-22).

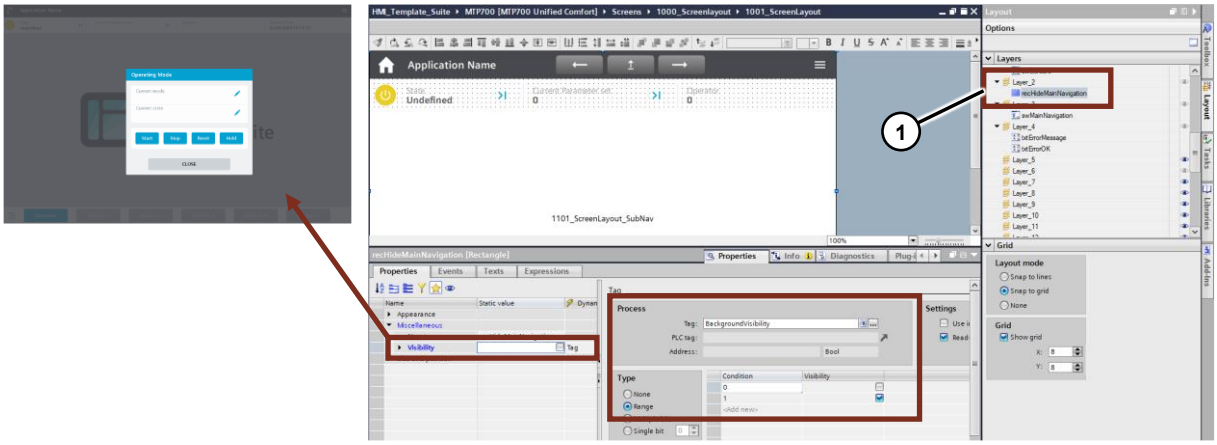
Figure 5-22



Block background

A pop-up window is always displayed centered on the entire screen. To focus on the content of the screen (opened as a pop-up window), the background is blocked (darkened). For this purpose, a semi-transparent rectangle "recHideMainNavigation" (1) was configured in screen "1001_ScreenLayout" in level 2, which is made visible when the screen is displayed.

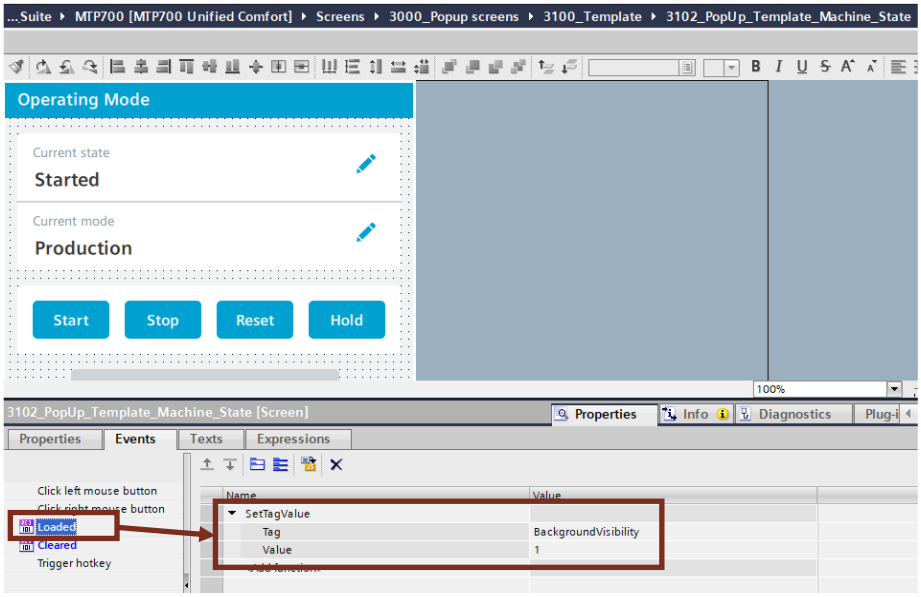
Figure 5-23



The visibility of the rectangle is controlled by the BOOL variable "BackgroundVisibility". It becomes visible when the tag is set to "1" with the system function "SetTagValue" at the "Loaded" event of the pop-up window to be opened (see Figure 5-24).

However, this rectangle must be at one of the top layers of the layout screen to cover the rest of the screen content. Only the pop-up window as well as the main navigation and error messages will appear in front of the rectangle.

Figure 5-24



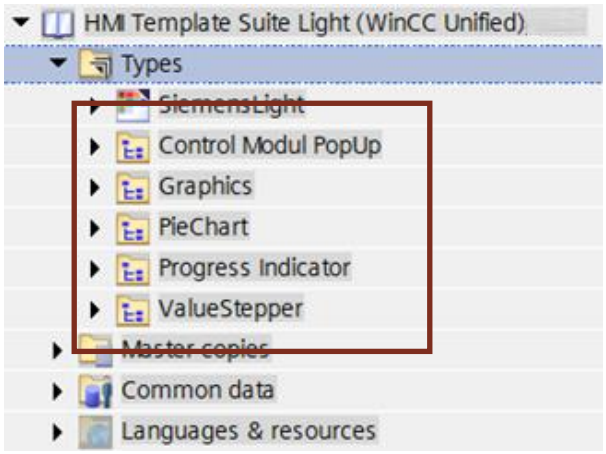
To make the rectangle invisible again, the "BackgroundVisibility" tag must be set to "0" when the pop-up window is closed using the "SetTagValue" system function for the "Cleared" event of the pop-up window to be closed.

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5.5. Faceplates

Faceplates are objects that already have a specific function and appearance. The HMI Template Suite library offers several preconfigured faceplates as versionable objects in the "Types" folder, which can simply be dragged and dropped onto a screen.

Figure 5-25



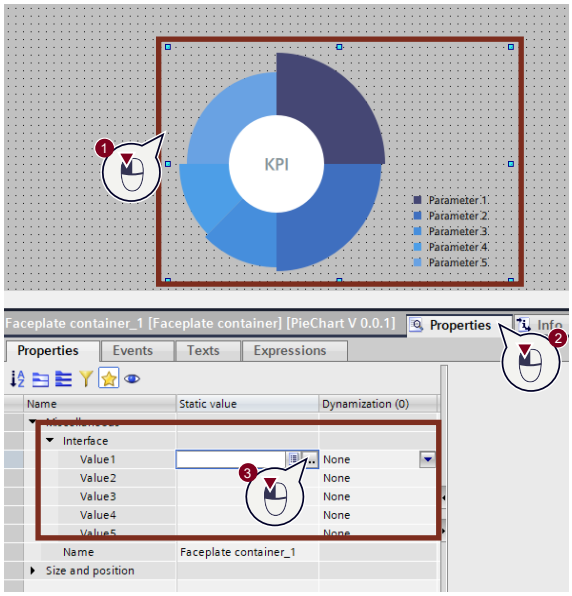
NOTE If you drag a device available in the global library into your project, all faceplates linked to the device are automatically created in the project library. You can find the faceplates you have created under "Project library" > "Types".
Additional steps are not required.

NOTE If you drag a faceplate available in the global library directly into the project library or into the screen where it is needed, the faceplate is automatically added to the project library.

You can interconnect the "Faceplates" using the type interface.

1. In Engineering, select a faceplate in the screen.
2. Go to the "Properties" tab in the Inspector window
3. Open the "Interface" group in the "Properties" under "Miscellaneous". The corresponding sub-section explains how to connect the individual elements.

Figure 5-26



Below you will find an overview of the faceplates in the HMI Template Suite.

"Progress Indicator"

The "progress indicator" can be used to visualize the progress of a process. Each point indicates a process step (see Figure 5-27). As soon as the step has been completed, it is displayed in blue with a white checkmark. There are templates with 3, 4, and 5 steps.

Figure 5-27



At the interface, you can select an INT tag for each step (2 = step completed, 1 = step active, 0 = step still pending).

Table 5-1

Interface	Function
"Step1" "Step2" "Step3" ...	Connect one HMI tag for each step. Depending on the tag value, the display changes as follows:
	HMI tag = "0"
	HMI tag = "1"
	HMI tag = "2"

"Value Stepper"

The "value stepper" is an element with two buttons that can be used to increase or decrease a value. The current value is displayed between the two steppers.

Figure 5-28



The library contains different "Value Stepper" templates for REAL and INT variable values.

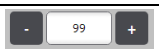
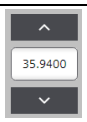
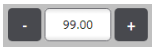
One tag for the incrementation (delta) and another for the process value must be connected to the control panel interface.

Table 5-2

Interface	Function
"Value"	Connect an HMI tag (INT/LReal). If you click the "-" button, the tag value is reduced by the delta value. If you click the "+" button, the tag value is increased by the delta value.
"Delta"	Connect an HMI tag (INT/LReal). The "Value" tag is incremented or decremented by this value.

The following "value steppers" can be found in the HMI Template Suite.

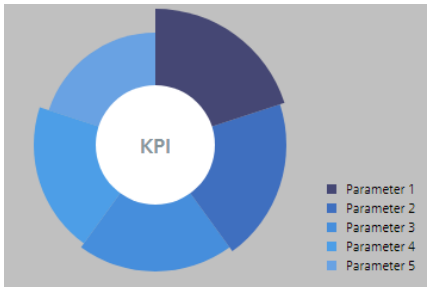
Table 5-3

Faceplate name	Appearance	Benefits
"ValueStepperInt"		Horizontal "value stepper" with rounded square buttons for switching between the values for the process values and delta values as INT tags with the output as an INT value
"ValueStepperInt_Vertical"		Vertical "value stepper" with square buttons for switching between the values for the process values and delta values as REAL tags with output as INT values
"ValueStepperInt_Vertical2"		Vertical "value stepper" with triangular buttons for switching between the values for the process values and delta values as INT tags with the output as an INT value
"ValueStepperReal"		Horizontal "value stepper" with rounded square buttons for switching between the values for the process values and delta values as INT tags with the output as a REAL value
"ValueStepperReal_Vertical"		Vertical "value stepper" with square buttons for switching between the values for the process values and delta values as REAL tags with the output as a REAL value
"ValueStepperReal_Vertical2"		Vertical "value stepper" with triangular buttons for switching between the values for the process values and delta values as REAL tags with the output as a REAL value

"PieChart"

The "PieChart" is used to display KPI values. You can connect up to 5 parameters as INT tags to the interface and display them in the diagram.

Figure 5-29

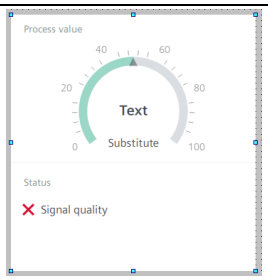
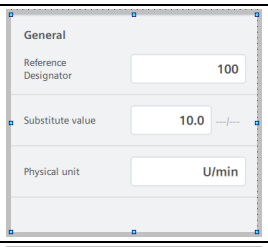
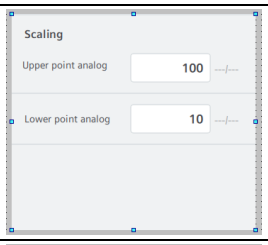
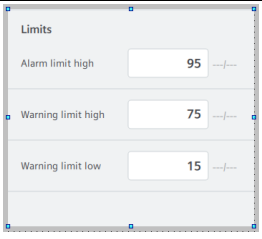


"Control Module PopUp"

There are 4 different faceplates in the "Control Module PopUp" folder that can be used as pop-up windows to control and display certain process values. These only serve as a template for displaying certain content and cannot be parameterized via the faceplates interface, as this is not fully configured. If required, you can configure the interface yourself.

You will find the following "Control Module PopUp" in the HMI Template Suite.

Table 5-4

Faceplate name	Appearance	Benefits
"BasicControlModulPopUp_Layer1"		Faceplates for displaying a process variable on an alternative gauge control
"BasicControlModulPopUP_Layer2_1"		Faceplates for parameterization in the Runtime of a process variable
"BasicControlModulPopUP_Layer2_2"		Faceplates for parameterization in the Runtime of a scale
"BasicControlModulPopUP_Layer2_3"		Faceplates for parameterizing certain limits in Runtime

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6. Appendix

6.1. Service and Support

SiePortal

The integrated platform for product selection, purchasing and support - and connection of Industry Mall and Online support. The SiePortal home page replaces the previous home pages of the Industry Mall and the Online Support Portal (SIOS) and combines them.

- Products & Services
  In Products & Services, you can find all our offerings as previously available in Mall Catalog.
- Support
  In Support, you can find all information helpful for resolving technical issues with our products.
- mySiePortal
  mySiePortal collects all your personal data and processes, from your account to current orders, service requests and more. You can only see the full range of functions here after you have logged in.

You can access SiePortal via this address: sieportal.siemens.com

Technical Support

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers – ranging from basic support to individual support contracts.
Please send queries to Technical Support via Web form: support.industry.siemens.com/cs/my/src

SITRAIN – Digital Industry Academy

We support you with our globally available training courses for industry with practical experience, innovative learning methods and a concept that's tailored to the customer's specific needs.
For more information on our offered trainings and courses, as well as their locations and dates, refer to our web page: siemens.com/sitrain

Industry Online Support app

You will receive optimum support wherever you are with the „Industry Online Support" app. The app is available for iOS and Android:

6.2. Links and literature

No.	Topic
\1\	SiePortal https://sieportal.siemens.com
\2\	Link to this entry page of this application example https://support.industry.siemens.com/cs/ww/en/view/91174767
\3\	Link to the HMI Design Masterclass Video series https://www.siemens.com/hmi-design-masterclass
\4\	Link to the HMI Template Suite page https://www.siemens.com/en-us/products/simatic-hmi/hmi-template-suite
\5\	SIMATIC WinCC Unified "View of Things ("VoT") https://support.industry.siemens.com/cs/ww/en/view/109803395

6.3. Change documentation

Version	Date	Modification
V1.0	04/2020	First version
V2.0	11/2021	Adaptation to V17, Tile navigation
V3.0	12/2021	Added "Unified View of Things"
V4.0	03/2023	Upgrade to V18
V4.1	06/2023	Availability and procedure of the WinCC Unified V18 Wizard
V5.0	07/2024	Complete overhaul and upgrade to V19. Separation of the document into two. The existing document deals with the contents and configuration of the library in the TIA Portal. The separate document is about the HMI Template Wizard.
V6.0	08/2025	Updated to V20 and introduced two libraries for light and dark display, incorporating three new color palettes: Siemens Dark, Siemens Light, and Siemens DeepBlue.
V7.0	03/2026	Upgrade to V21.