WebVisit 6.01.02
User course

WebVisit

User course

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AUTOMATIONWORX Competence Center

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Notes:

Project creation and the user interface

Section 1

Notes:

Contents

This section describes the user interface of WebVisit 6.01.02 and the basic functions of the toolbar. In addition, a project will be created and the basic settings explained.

⚠	Note
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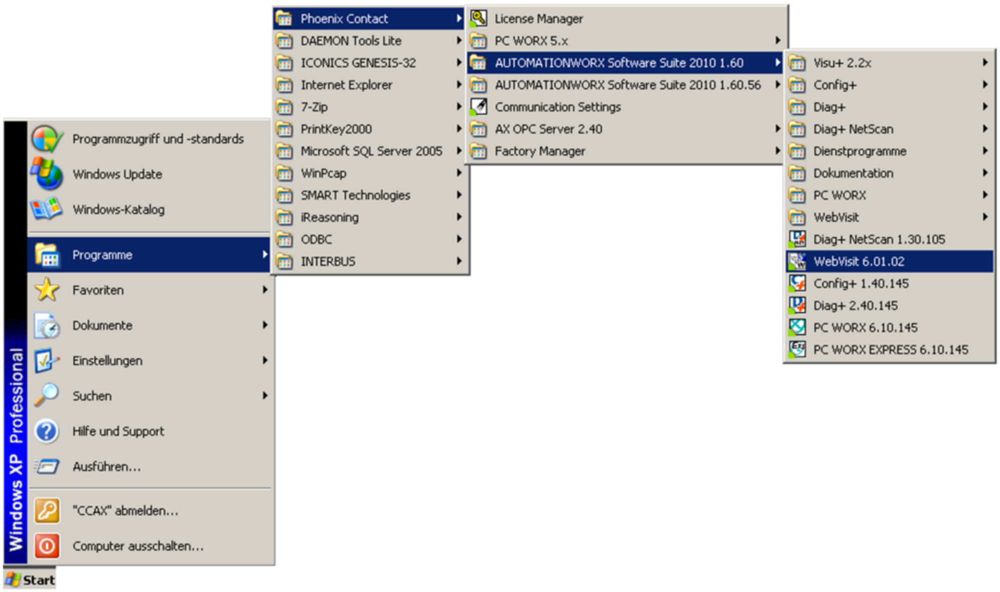
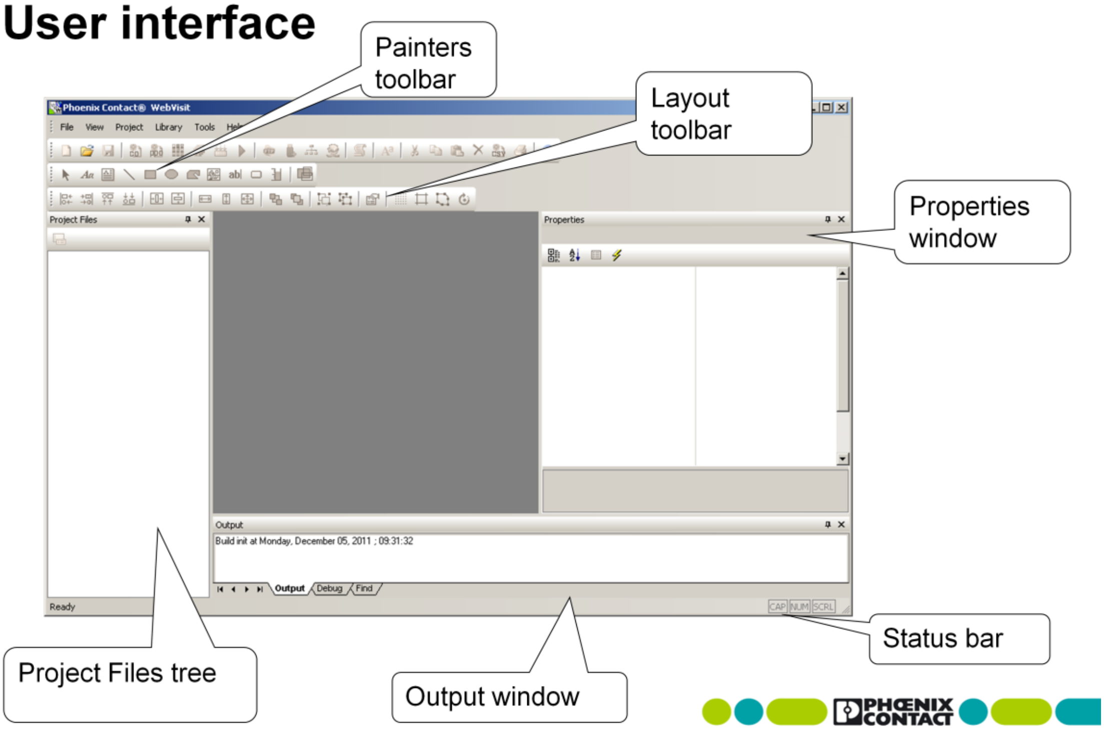
Notes:

Starting WebVisit



The easiest way to start WebVisit is via the Start menu. The path is shown above.

User interface



Build init at Monday, December 05, 2011 ; 09:31:32

The screen depicts the user interface of WebVisit when it is started for the first time. If projects have already been processed with WebVisit then the project that was opened last is loaded when the program is started.

As of Version 6.01.05, German, English, and French can be selected as the program language.

The window contains a toolbar, a tool box (the Painters Library toolbar), a status bar, a layout toolbar, and the project tree window (the Project Files tree toolbar). Some of the elements are described below.

The design may vary depending on the operating system.

Toolbar:

Display the local variables

Display the external variables (PDD for PC Worx)

Create HTML files (e.g., multi-language projects)

Compile the project

Download the project to the WebVisit server

Painters Library toolbar

Select the area to be edited

Insert static text (single-row)

Insert static text (multi-row)

Insert a line

Insert a rectangle

Insert a circle/oval

Insert a polygon

Insert an image (GIF format only)

Insert an editable field

Insert a switch

Insert a bar graph

Insert a macro from the macro library

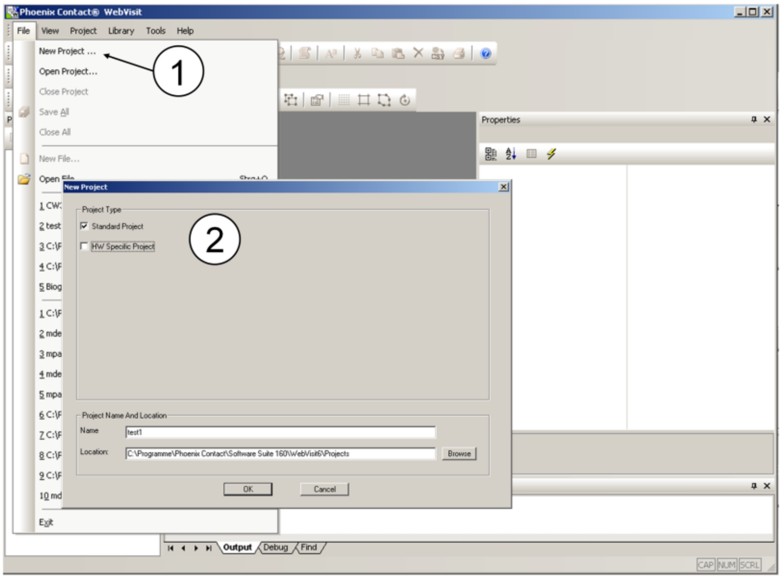
Layout toolbar

In addition to the “Move to front” and “Move to back” buttons and the grouping/ungrouping of objects, there are additional buttons that allow you to resize multiple objects uniformly and to align objects located in other objects, for example. The functions are not described further here.

Status bar

The status bar displays various information. E.g., when you hold the mouse over a button icon, additional information is displayed. On the right, you can see whether the “Scroll Lock”, “Num Lock” or “Caps Lock” keys are active.

Creating a new project



New Project

Project Type

☑ Standard Project

☐ HW Specific Project

Project Name And Location

Name: test1

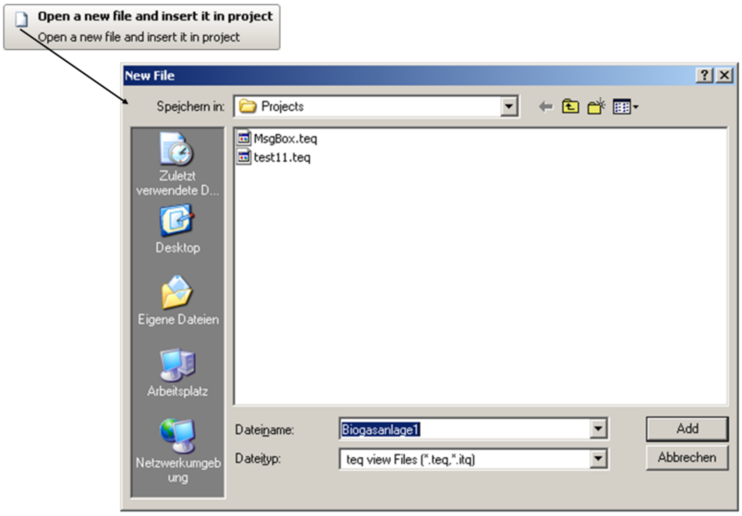
Location: C:\Programme\Phoenix Contact\Software Suite 160\WebVisit6\Projects

To create a new project, do not click on the blank page button in the toolbar. Instead, select the *File* menu followed by *New Project*. (1)

In the next window, you have the option of assigning a custom name and specifying the file path. The default path is specified in the example above. (2)

The checkbox for a hardware-specific project can be ignored as it does not offer any further functions in the WebVisit version described here (6.01.02).

Creating the first graphic view



Open a new file and insert it in project

Open a new file and insert it in project

New File

Speichern in: Projects

MsgBox.teq

test11.teq

Dateiname: Biogasanlage1

Dateityp: teq view Files (*.teq,*.itq)

Once the project has been created, four elements appear in the project tree window. The element with the extension “jar” is a Java archive for the distribution of class libraries that are used by the web server. Files with the extension “tcr” and “itq” are variable initialization files. These files and the graphic views (extension: teq) must be present in order to achieve a functioning visualization on a web server.

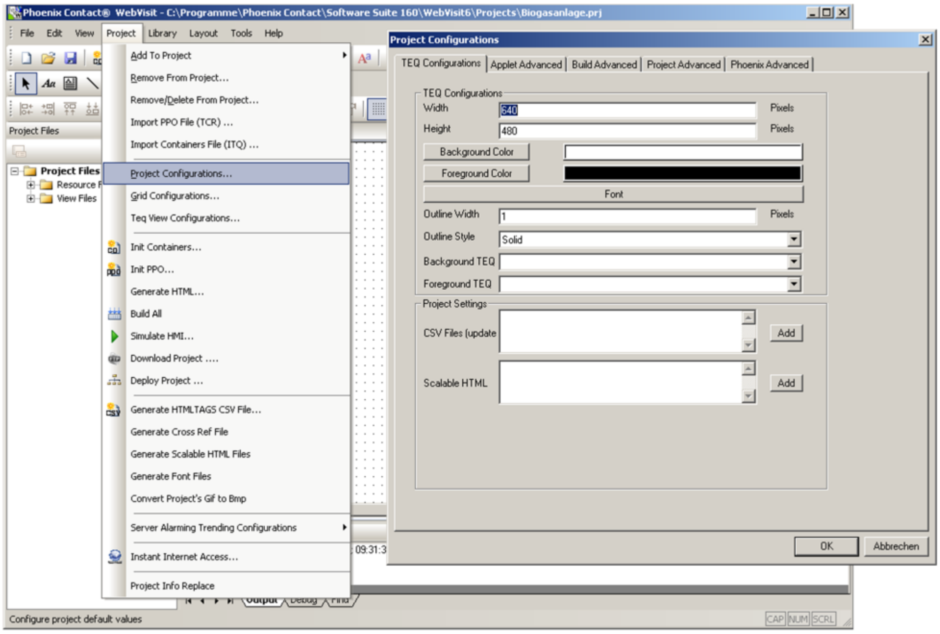
The MsgBox.teq graphic view, which is generated when the project is created, outputs various information and warning messages during operation and appears automatically in such instances.

In order to now generate a graphic view, which is to be displayed later, click on the button with the blank page. Or select *File* > *New Project…*

In the window that opens, the suggested file name is the name of the project followed by a one. It is recommended that you use a concise name which describes the function of the graphic view. First, you should specify the size of the graphic view in the project settings. The default size used is 640 x 480 pixels.

If Service Pack 1 (Version 6.01.05) is installed, there is a wizard to guide you through the initial settings.

Project settings


Phoenix Contact® WebVisit - C:\Programme\Phoenix Contact\Software Suite 160\WebVisit6\Projects\Biogasanlage.prj
File Edit View Project Library Layout Tools Help
Add To Project
Remove From Project...
Remove/Delete From Project...
Import PPO File (TCR) ...
Import Containers File (ITQ) ...
Project Configurations...
Grid Configurations...
Teq View Configurations...
Init Containers...
Init PPO...
Generate HTML...
Build All
Simulate HMI...
Download Project ....
Deploy Project ...
Generate HTMLTAGS CSV File...
Generate Cross Ref File
Generate Scalable HTML Files
Generate Font Files
Convert Project's Gif to Bmp
Server Alarming Trending Configurations
Instant Internet Access...
Project Info Replace
Project Files
Resource F
View Files
Output Debug Find
Configure project default values
CAP NUM SCRL
Project Configurations
TEQ Configurations
Applet Advanced
Build Advanced
Project Advanced
Phoenix Advanced
Background Color
Foreground Color
Font
Project Settings
Add
Add
OK
Abbrechen

TEQ Configurations
Width 640 Pixels
Height 480 Pixels
Outline Width 1 Pixels
Outline Style Solid
Background TEQ
Foreground TEQ
CSV Files (update
Scalable HTML

The project settings are called via the *Project* > *Project Configurations*… menu item.

The first tab that is displayed (Project – TEQ Configurations) contains size information for the graphic views (referred to as *TEQ* here).

The other project settings are, in large part, only explained briefly here. Other settings will be explained in more detail in later sections.

TEQ Configurations: Default settings for new graphic views.
Width: Default width of a graphic view in pixels.
Height: Default height of a graphic view in pixels.
Background Color: Default background color.
Foreground Color : Default font/outline color.
Font: Default font type for graphic icons.
Background TEQ: Specify graphic view as the background view for new graphic views.
Foreground TEQ: E.g., for elements that are to be shown under specific conditions.
Applet params: Parameters for the Java applet.
Period: Update rate for the process data points in ms.
Main TEQ: Start screen when the HMI is loaded.
Debug: When debug mode is activated, advanced debug information can be used. A Java console is required for this.
Message Box: When activated, error messages are displayed.
HTML parameters in csv file: Not supported at present.
Order per view: Only updates process data points for the active view.
Encode Special Chars: When activated (recommended), special characters in the PPO name are also processed correctly.

Getting started with visualization creation

Section 2

Notes:

Contents

This section uses an example to explain how a PC Worx project that controls a system can be visualized. A background image is inserted, a logo is created in every view, and switches and indicators are used which are linked to variables.

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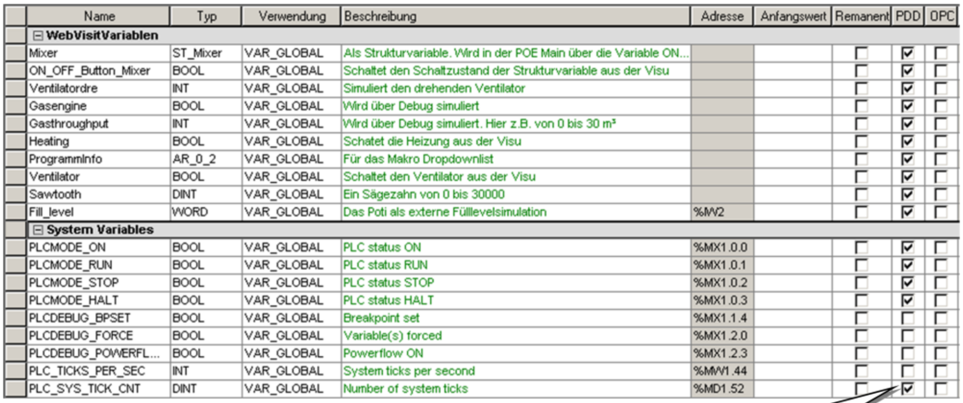
ℹ	Information
💡	Tip

Notes:

Visualization variables from PC Worx

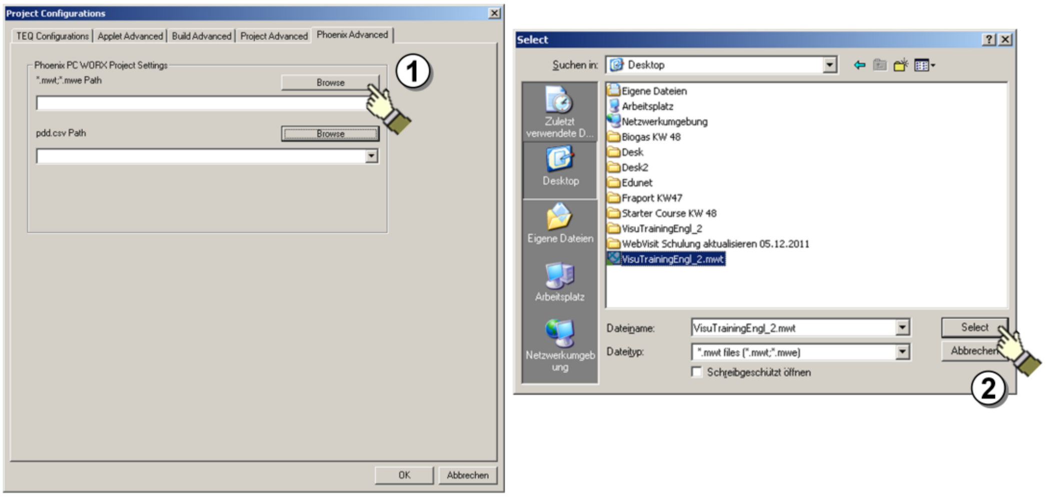


Name	Typ	Verwendung	Beschreibung	Adresse	Anfangswert	Remanent	PDD	OPC
⊟ **WebVisitVariablen**								
Mixer	ST_Mixer	VAR_GLOBAL	Als Strukturvariable. Wird in der POE Main über die Variable ON...			□	☑	□
ON_OFF_Button_Mixer	BOOL	VAR_GLOBAL	Schaltet den Schaltzustand der Strukturvariable aus der Visu			□	☑	□
Ventilatordre	INT	VAR_GLOBAL	Simuliert den drehenden Ventilator			□	☑	□
Gasengine	BOOL	VAR_GLOBAL	Wird über Debug simuliert			□	☑	□
Gasthroughput	INT	VAR_GLOBAL	Wird über Debug simuliert. Hier z.B. von 0 bis 30 m^3			□	☑	□
Heating	BOOL	VAR_GLOBAL	Schatet die Heizung aus der Visu			□	☑	□
ProgrammInfo	AR_0_2	VAR_GLOBAL	Für das Makro Dropdownlist			□	☑	□
Ventilator	BOOL	VAR_GLOBAL	Schaltet den Ventilator aus der Visu			□	☑	□
Sawtooth	DINT	VAR_GLOBAL	Ein Sägezahn von 0 bis 30000			□	☑	□
Fill_level	WORD	VAR_GLOBAL	Das Poti als externe Fülllevelsimulation	%MW2		□	☑	□
⊟ **System Variables**								
PLCMODE_ON	BOOL	VAR_GLOBAL	PLC status ON	%MX1.0.0		□	☑	□
PLCMODE_RUN	BOOL	VAR_GLOBAL	PLC status RUN	%MX1.0.1		□	☑	□
PLCMODE_STOP	BOOL	VAR_GLOBAL	PLC status STOP	%MX1.0.2		□	☑	□
PLCMODE_HALT	BOOL	VAR_GLOBAL	PLC status HALT	%MX1.0.3		□	☑	□
PLCDEBUG_BPSET	BOOL	VAR_GLOBAL	Breakpoint set	%MX1.1.4		□	□	□
PLCDEBUG_FORCE	BOOL	VAR_GLOBAL	Variable(s) forced	%MX1.2.0		□	□	□
PLCDEBUG_POWERFL...	BOOL	VAR_GLOBAL	Powerflow ON	%MX1.2.3		□	□	□
PLC_TICKS_PER_SEC	INT	VAR_GLOBAL	System ticks per second	%MW1.44		□	□	□
PLC_SYS_TICK_CNT	DINT	VAR_GLOBAL	Number of system ticks	%MD1.52		□	☑	□

Variables with the PDD flag are provided in WebVisit

In order that variables can be displayed and manipulated with WebVisit, they must be marked as PDD (Process Data Directory) in the variable table in the PC Worx project. The project is then compiled and written to the controller.

Integrating the PDD variables into WebVisit



Phoenix PC WORX Project Settings

.mwt;.mwe Path — Browse

pdd.csv Path — Browse

Suchen in: Desktop

- Eigene Dateien
- Arbeitsplatz
- Netzwerkumgebung
- Biogas KW 48
- Desk
- Desk2
- Edunet
- Fraport KW47
- Starter Course KW 48
- VisuTrainingEngl_2
- WebVisit Schulung aktualisieren 05.12.2011
- VisuTrainingEngl_2.mwt

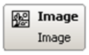
Dateiname: VisuTrainingEngl_2.mwt

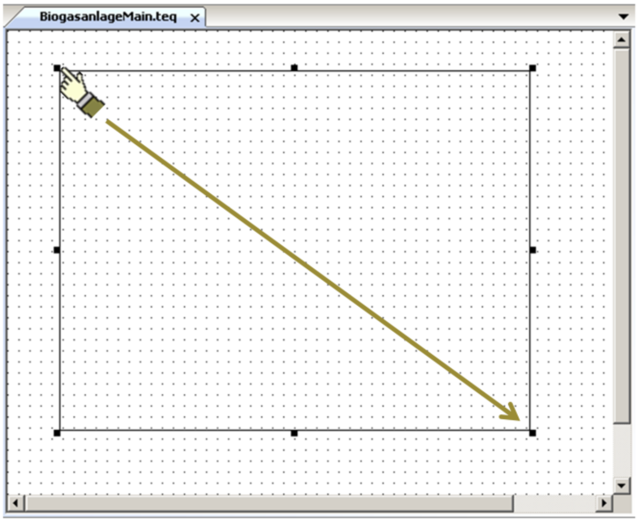
Dateityp: *.mwt files (*.mwt;*.mwe)

□ Schreibgeschützt öffnen

In order to now use the PDD variables that were created in the PC Worx project in WebVisit, you must specify the corresponding CSV file to WebVisit. This is done in the project settings under *Project – Phoenix Advanced*. You simply need to select the project file (.mwt) from PC Worx. The path to the corresponding PDD file is determined automatically.

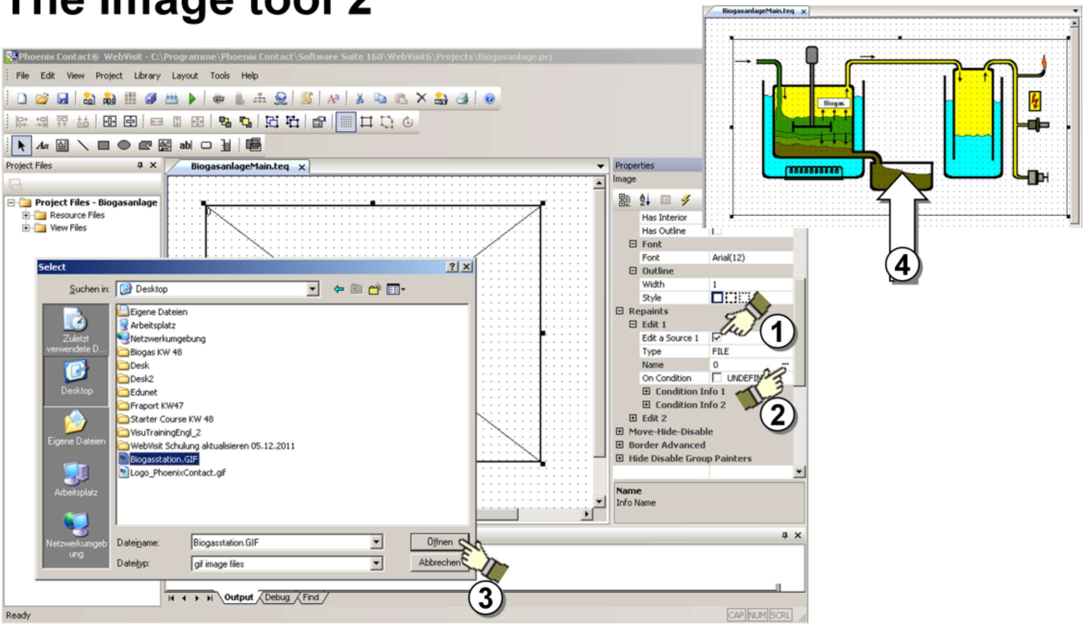
The Image tool 1





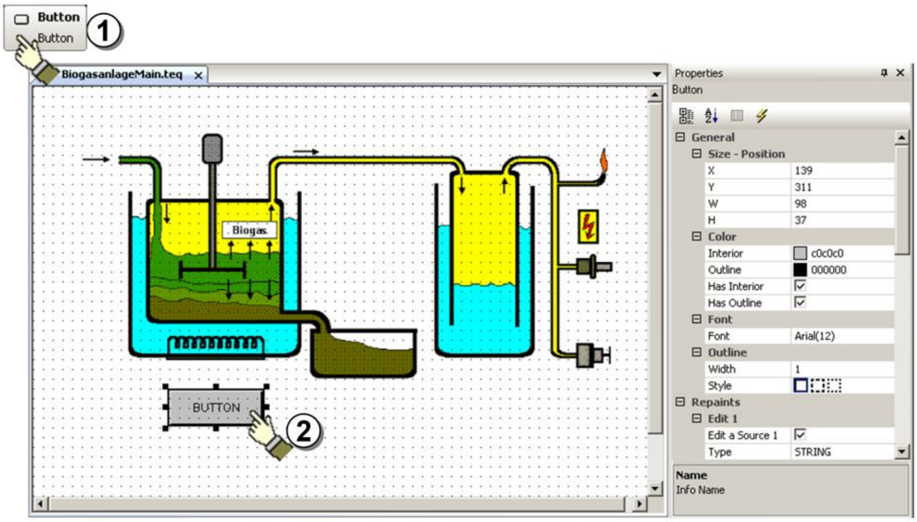
To set a graphic as the background for the graphic view, select the Image tool and draw a rectangle. The size of rectangle is unimportant as the size of the graphic will later correspond to the actual size in pixels. You must therefore first check whether the image (GIF format only) is of suitable size and adjust it if necessary.

The Image tool 2



To integrate an existing image file, select the rectangle to display the properties in the Properties window. Select the *Repaints* item (1). When the *Edit a Source* option is activated, you can click on the "..." button in the *Name* line (2). Now select the image file via the new window that opens (3). Once this is selected, you are taken back to the corresponding view with the image now inserted (4). The image is now also listed in the project tree window (Project Files).

The Button tool



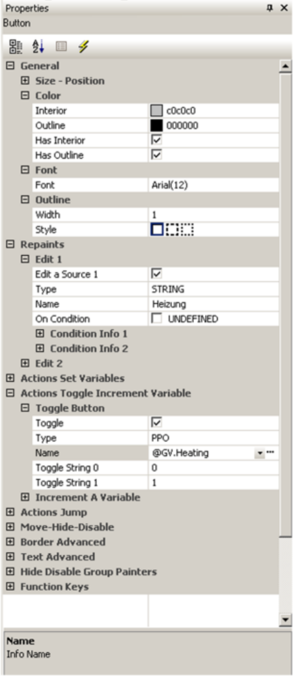
Properties
Button

⊟ General	
⊟ Size - Position	
X	139
Y	311
W	98
H	37
⊟ Color	
Interior	c0c0c0
Outline	000000
Has Interior	☑
Has Outline	☑
⊟ Font	
Font	Arial(12)
⊟ Outline	
Width	1
Style	
⊟ Repaints	
⊟ Edit 1	
Edit a Source 1	☑
Type	STRING

Name
Info Name

As with the Image tool, a button can also be created by clicking and dragging to the appropriate size. All settings for the button should be made in the object properties. They can always be displayed by selecting the relevant object in the *Properties* window.

Button tool properties



```
Properties
Button

⊟ General
  ⊞ Size - Position
  ⊟ Color
     Interior            c0c0c0
     Outline             000000
     Has Interior        ☑
     Has Outline         ☑
  ⊟ Font
     Font                Arial(12)
  ⊟ Outline
     Width               1
     Style
⊟ Repaints
  ⊟ Edit 1
     Edit a Source 1     ☑
     Type                STRING
     Name                Heizung
     On Condition        □ UNDEFINED
    ⊞ Condition Info 1
    ⊞ Condition Info 2
  ⊞ Edit 2
⊞ Actions Set Variables
⊟ Actions Toggle Increment Variable
  ⊟ Toggle Button
     Toggle              ☑
     Type                PPO
     Name                @GV.Heating
     Toggle String 0     0
     Toggle String 1     1
  ⊞ Increment A Variable
⊞ Actions Jump
⊞ Move-Hide-Disable
⊞ Border Advanced
⊞ Text Advanced
⊞ Hide Disable Group Painters
⊞ Function Keys

Name
Info Name
```

Change outline and fill colors

Change font type and size

Change button marking

Toggle between 0 and 1 for the specified variable

Using the button as an example, the object properties that apply to most of the other control elements are explained below.

Area: General

The exact pixel size of the object can be specified in the *General* area. The outline color, background color, and their font type can also be defined here. The Painter Position Offset Settings can also be used to modify the object position according to local or external variables.

In the *Repaints* area, you can set the source that is to be used for the object marking. In the case of the *String* type, the name can be entered directly. The default button name is *Button*. Instead of a *String*, the *HTML TAG* type can also be used. This is explained in more detail in the *Language selection* section. The *PPO* type allows you to select a variable marked as PDD in PC Worx. While the *Container* type allows you to select a local variable. The *File* type also enables an image to be selected as the background for the button. This is useful, for example, if you wish to use customized buttons.

The *On Condition* checkbox enables conditional naming, for example. Two sources can be set for a button.

Area: Actions Set Variables

Here you can set the function that is to be executed when the button is pressed (*Set Var on Mouse DOWN*) and released (*Set Var on Mouse UP*).

When this checkbox is activated, the fields for the variable type and name are also shown. Next to *Condition* you can also specify the value that the variable should allow for the assigned action.

Area: Actions Toggle Increment Variable

As the name suggests, a type of inching mode can be set up for a variable or a variable value can be incremented by a specified value every time the object is actuated.

Area: Actions Jump

View Jump jumps to a definable graphic view. When this checkbox is activated, a selection list of available graphic views is provided.

The *Back Button* checkbox is used to select the button function for jumping back to the previously active graphic view.

URL Jump can be used to select an html file that is then opened.

Area: Hide and Disable Painter

Here you can deactivate the function of the object under certain conditions. You can also define whether or not the object is visible. In this case, please note that a hidden button is not the same as a non-functioning button. I.e., it can be operated even when it is not displayed.

Area: Border Advanced

The fill and outline color can be set under *Border Advanced* and these settings can also depend on various adjustable conditions. Depending on which checkboxes are selected, the appearance of the window will change and the corresponding selection options will be displayed as per the *Color Conditions*.

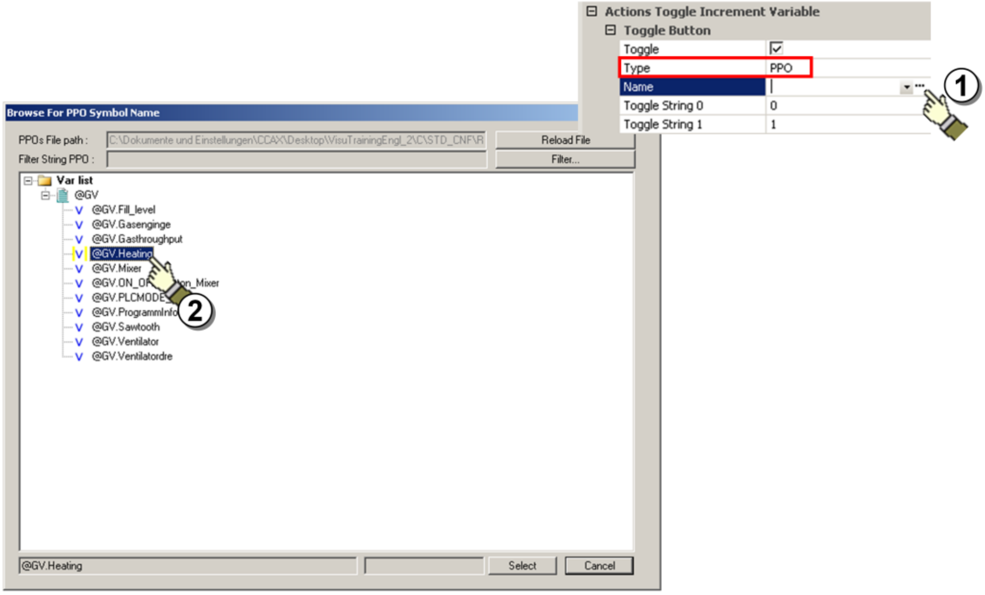
Area: Text Positions Advanced

Various setting options are available here for aligning the object text. Instead of just general text alignment, you can also set conditions here for when the text is to be aligned as specified.

Area: Function Keys

A shortcut for activating the button can be defined in this area. Please note that this function only works with the micro browser on the web panels.

Integrating a variable



Actions Toggle Increment Variable
Toggle Button

Toggle	☑
Type	PPO
Name	
Toggle String 0	0
Toggle String 1	1

Browse For PPO Symbol Name

PPOs File path : C:\Dokumente und Einstellungen\CCAX\Desktop\VisuTrainingEngl_2\C\STD_CNF\R

Filter String PPO :

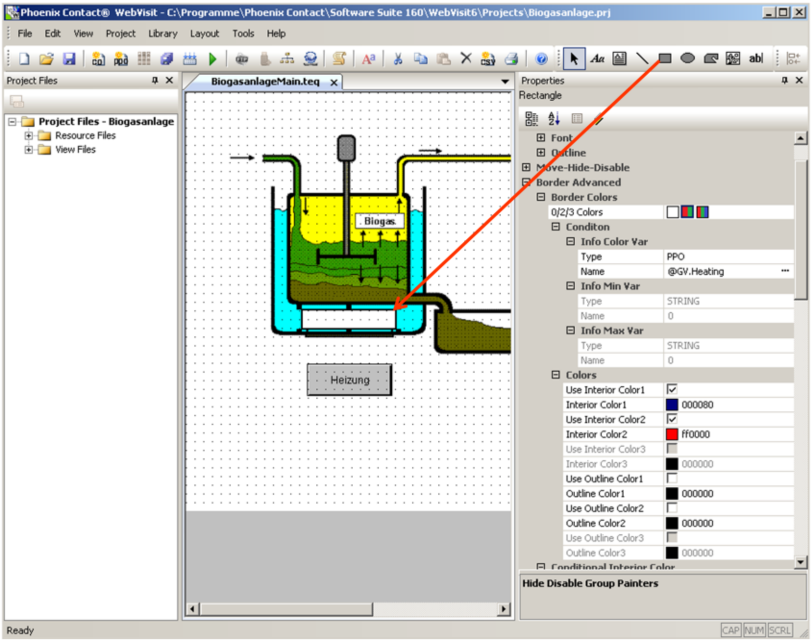
```
Var list
  @GV
    @GV.Fill_level
    @GV.Gasenginge
    @GV.Gasthroughput
    @GV.Heating
    @GV.Mixer
    @GV.ON_OF...on_Mixer
    @GV.PLCMODE...
    @GV.ProgrammInfo
    @GV.Sawtooth
    @GV.Ventilator
    @GV.Ventilatordre
```

@GV.Heating

If a PDD variable provided via PC Worx is to be used, the *Action Toggle Increment Variables* tab should be selected, e.g., for a normal on/off operation, and the *Toggle* checkbox activated. The type used is a PPO variable. The variable that is to be toggled is selected in the next window via *Select* (1) and the selection is confirmed with OK (2).

PPO for stands for *process point;* corresponds to PDD in PC Worx.

Color change depending on a variable



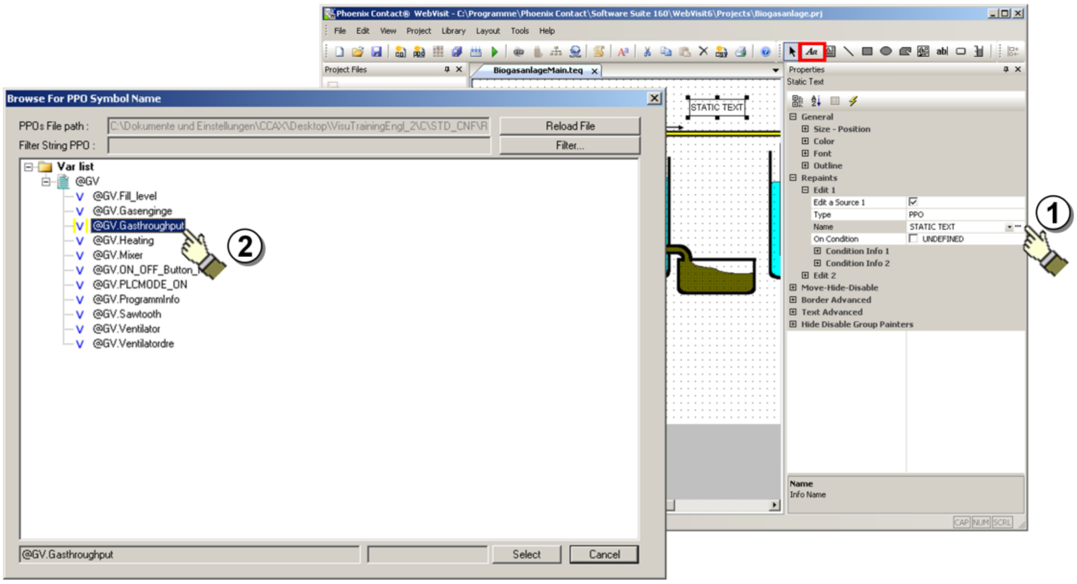
Phoenix Contact® WebVisit - C:\Programme\Phoenix Contact\Software Suite 160\WebVisit6\Projects\Biogasanlage.prj

0/2/3 Colors	
Info Color Var	
Type	PPO
Name	@GV.Heating
Info Min Var	
Type	STRING
Name	0
Info Max Var	
Type	STRING
Name	0
Colors	
Use Interior Color1	☑
Interior Color1	000080
Use Interior Color2	☑
Interior Color2	ff0000
Use Interior Color3	□
Interior Color3	000000
Use Outline Color1	□
Outline Color1	000000
Use Outline Color2	□
Outline Color2	000000
Use Outline Color3	□
Outline Color3	000000

The @GV.Heating variable is to be switched via the button. A rectangle that changes color between blue = off and red = active is to indicate whether or not the variable is switched. To do this, draw a rectangle over the heating using the rectangle tool.

In the rectangle properties, the corresponding color settings are made in the *Border Advanced* area and the reference variable is specified. Clicking on the *Color* button opens another window where various colors can be selected.

Displaying text



PPOs File path : C:\Dokumente und Einstellungen\CCAX\Desktop\VisuTrainingEngl_2\C\STD_CNF\R

Filter String PPO :

Edit a Source 1: ☑

Type: PPO

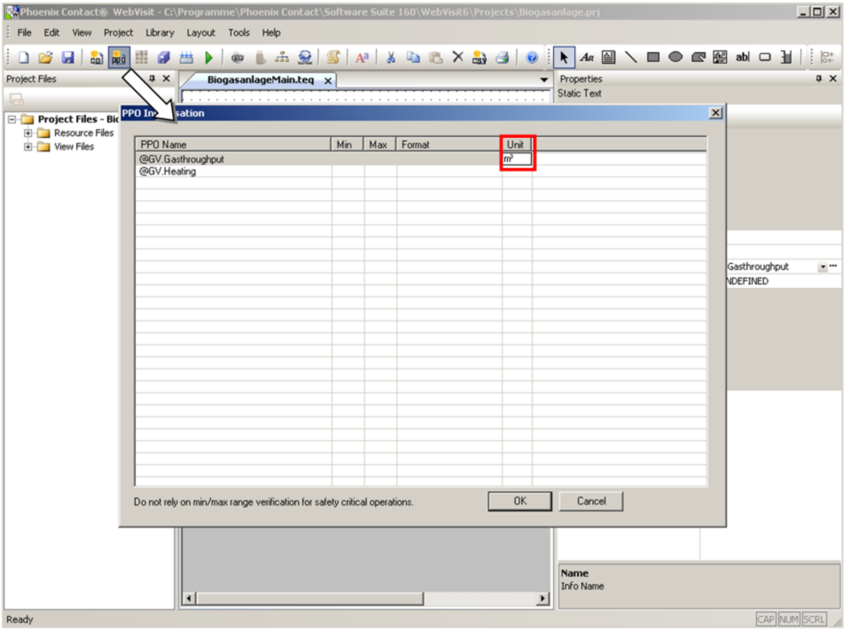
Name: STATIC TEXT

On Condition: □ UNDEFINED

@GV.Gasthroughput

There are two options for displaying text. Firstly by means of custom text input (string) and secondly by outputting the contents of a variable. In the above example, the value of a variable is to be output. The *Static Text* tool has been used for this and the corresponding settings as well as the selected variable can be seen above. Once everything is set, the value of the variable will be displayed in WebVisit after transferring the project.

Advanced settings for variables

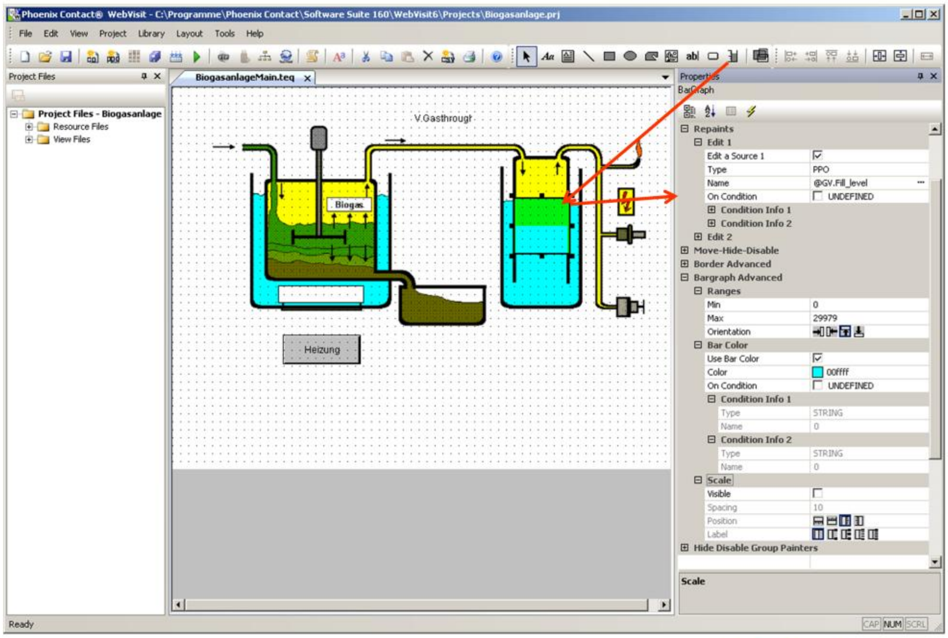


PPO Name	Min	Max	Format	Unit
@GV.Gasthroughput				m^3
@GV.Heating				

Do not rely on min/max range verification for safety critical operations.

The *PPO Initialisation* window is used to assign a unit for a variable value. All external variables that are used are listed here. Simply enter the desired unit in the *Unit* column. There are also columns for the minimum and maximum permissible value. Plus a column for the variable format. The format is required in order to enter a minimum or maximum value. The limit value settings only apply for the *Edit Box* tool. This checks the specified limits when a value is entered.

BarGraph tool properties



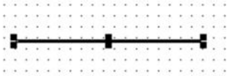
Phoenix Contact® WebVisit - C:\Programme\Phoenix Contact\Software Suite 160\WebVisit6\Projects\Biogasanlage.prj

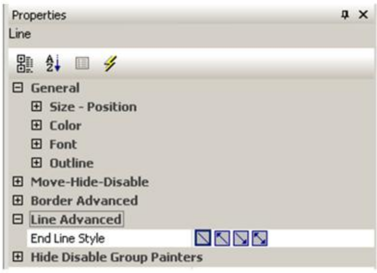
⊟ Repaints	
⊟ Edit 1	
Edit a Source 1	☑
Type	PPO
Name	@GV.Fill_level
On Condition	□ UNDEFINED
⊞ Condition Info 1	
⊞ Condition Info 2	
⊞ Edit 2	
⊞ Move-Hide-Disable	
⊞ Border Advanced	
⊟ Bargraph Advanced	
⊟ Ranges	
Min	0
Max	29979
Orientation	
⊟ Bar Color	
Use Bar Color	☑
Color	00ffff
On Condition	□ UNDEFINED
⊟ Condition Info 1	
Type	STRING
Name	0
⊟ Condition Info 2	
Type	STRING
Name	0
⊟ Scale	
Visible	□
Spacing	10
Position	
Label	
⊞ Hide Disable Group Painters	

Scale

In addition to the familiar setting options of the Button tool, the BarGraph tool also includes the *Bargraph Advanced* area. Under *Source Ranges* you can set the value at which the maximum and minimum value for filling is reached, and the direction in which filling is to take place can be set under *Orientation*. In the *Scale* area, you can display a scale and define its spacing.

Line tool properties





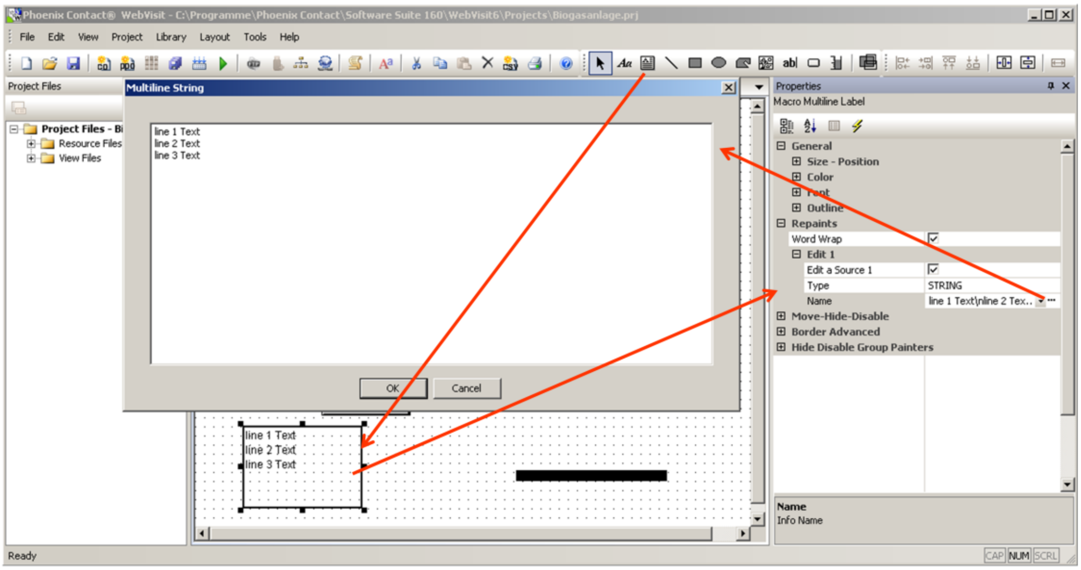
Properties

Line

⊟ General
⊞ Size - Position
⊞ Color
⊞ Font
⊞ Outline
⊞ Move-Hide-Disable
⊞ Border Advanced
⊟ Line Advanced
End Line Style
⊞ Hide Disable Group Painters

The Line tool also offers additional properties in the *Line Advanced* area where you can specify the line style as a line or arrow. The other properties are the same as those described for buttons.

Multi-Line Label tool properties



line 1 Text
line 2 Text
line 3 Text

- Word Wrap: ☑
- Edit 1
  - Edit a Source 1: ☑
  - Type: STRING
  - Name: line 1 Text\nline 2 Tex..

Name
Info Name

Instead of the usual repaint properties, the Multi-Line Label tool has a tab called *Multiline Repaints*. Here multiple lines of text can be generated one after the other. However, variable contents cannot be displayed using this tool.

Access to structures and fields

Section 3

Notes:

Contents

This section covers access to field and structure variables in PC Worx.

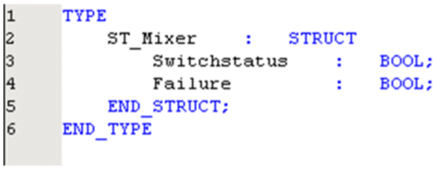
⚠ Note

ℹ Information

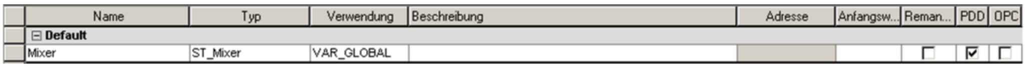
💡 Tip

Notes:

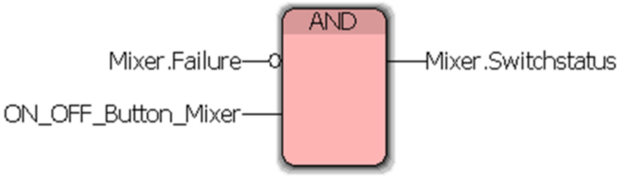
Accessing a structure in PC Worx



```
TYPE
    ST_Mixer    :   STRUCT
        Switchstatus    :   BOOL;
        Failure         :   BOOL;
    END_STRUCT;
END_TYPE
```

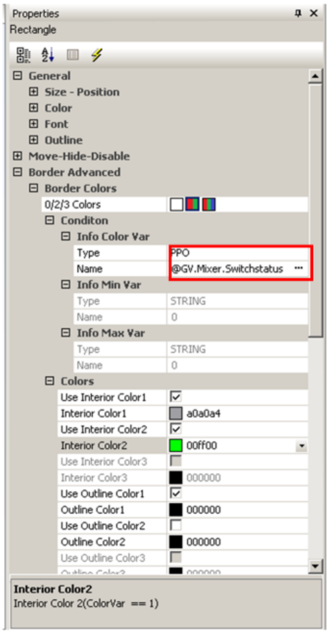


	Name	Typ	Verwendung	Beschreibung	Adresse	Anfangsw...	Reman...	PDD	OPC
	⊟ Default								
	Mixer	ST_Mixer	VAR_GLOBAL				□	☑	□



If a structure is defined in PC Worx, it is a custom data type that can be used for variables. A structure element can be accessed in PC Worx via the variable name and the relevant structure element which are separated by a dot.

Accessing a structure in WebVisit

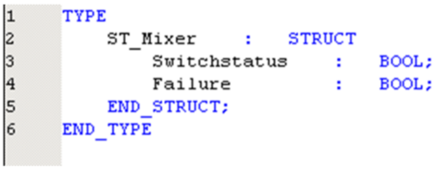


Properties

Rectangle

⊟ General	
⊞ Size - Position	
⊞ Color	
⊞ Font	
⊞ Outline	
⊞ Move-Hide-Disable	
⊟ Border Advanced	
⊟ Border Colors	
0/2/3 Colors	
⊟ Conditon	
⊟ Info Color Var	
Type	PPO
Name	@GV.Mixer.Switchstatus
⊟ Info Min Var	
Type	STRING
Name	0
⊟ Info Max Var	
Type	STRING
Name	0
⊟ Colors	
Use Interior Color1	☑
Interior Color1	a0a0a4
Use Interior Color2	☑
Interior Color2	00ff00
Use Interior Color3	□
Interior Color3	000000
Use Outline Color1	☑
Outline Color1	000000
Use Outline Color2	□
Outline Color2	000000
Use Outline Color3	□

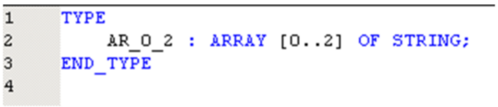
Interior Color2
Interior Color 2(ColorVar == 1)



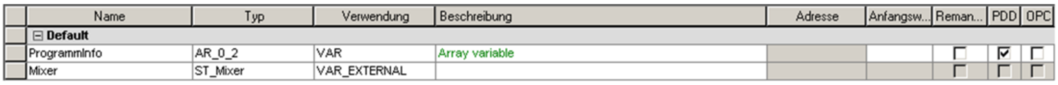
```
TYPE
    ST_Mixer    :   STRUCT
        Switchstatus    :   BOOL;
        Failure         :   BOOL;
    END_STRUCT;
END_TYPE
```

In this example, the PC Worx structure variable shown on the previous page is being accessed. When selecting variables (@GV.Mixer) in WebVisit, no other information is available. In order to access it, the structure element must now be manually specified according to the declaration in PC Worx.

Accessing a field in PC Worx



```
TYPE
    AR_0_2 : ARRAY [0..2] OF STRING;
END_TYPE
```



	Name	Typ	Verwendung	Beschreibung	Adresse	Anfangsw...	Reman...	PDD	OPC
	⊟ **Default**								
	ProgrammInfo	AR_0_2	VAR	Array variable			☐	☑	☐
	Mixer	ST_Mixer	VAR_EXTERNAL				☐	☐	☐

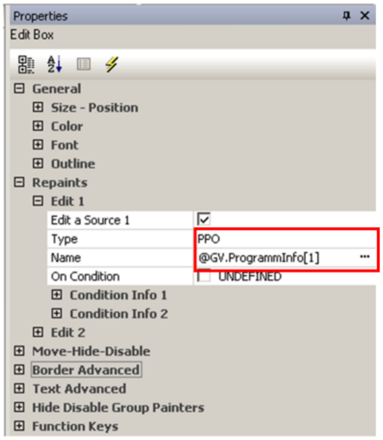
'Programm0'——ProgrammInfo[0]

'Programm1'——ProgrammInfo[1]

'Programm2'——ProgrammInfo[2]

If a field is defined in PC Worx, it is a custom data type that can be used for variables. An individual field element can be accessed in PC Worx via the variable name and an index.

Accessing a field in WebVisit



Properties
Edit Box

- ⊟ General
  - ⊞ Size - Position
  - ⊞ Color
  - ⊞ Font
  - ⊞ Outline
- ⊟ Repaints
  - ⊟ Edit 1

Edit a Source 1	☑
Type	PPO
Name	@GV.ProgrammInfo[1]
On Condition	□ UNDEFINED

  - ⊞ Condition Info 1
  - ⊞ Condition Info 2
  - ⊞ Edit 2
- ⊞ Move-Hide-Disable
- ⊞ Border Advanced
- ⊞ Text Advanced
- ⊞ Hide Disable Group Painters
- ⊞ Function Keys

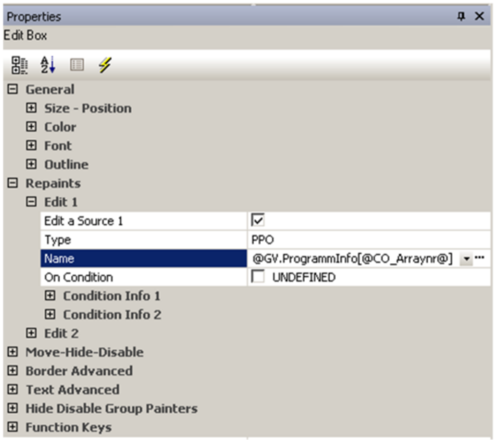
'Programm0'——ProgrammInfo[0]

'Programm1'——ProgrammInfo[1]

'Programm2'——ProgrammInfo[2]

In this example, the PC Worx variable shown on the previous page is being accessed. When selecting variables (Main.ProgrammInfo) in WebVisit, no additional information is available. The field level must now be specified manually according to PC Worx and the corresponding field value can then be accessed at this position.

Using an index variable for field access



Edit a Source 1	☑
Type	PPO
Name	@GV.ProgrammInfo[@CO_Arraynr@]
On Condition	□ UNDEFINED

If various field levels are to be accessed via an index variable, this must be accomplished as follows:

If the value of another variable is to act as the field element placeholder, this index variable should be integrated as shown above. In the screen, the *Arraynr* container variable has been used as the index variable. The formula for integrating an index variable is: @*Variablename*[@CO_*Indexvariable*@].

The method described above for accessing an index variable applies to Version 6.01.02 or later. The variable is integrated differently in earlier versions. See program help for more detailed information.

Notes:

Macros in WebVisit Pro

Section 4

Notes:

Contents

This section covers Macros in WebVisit Pro.

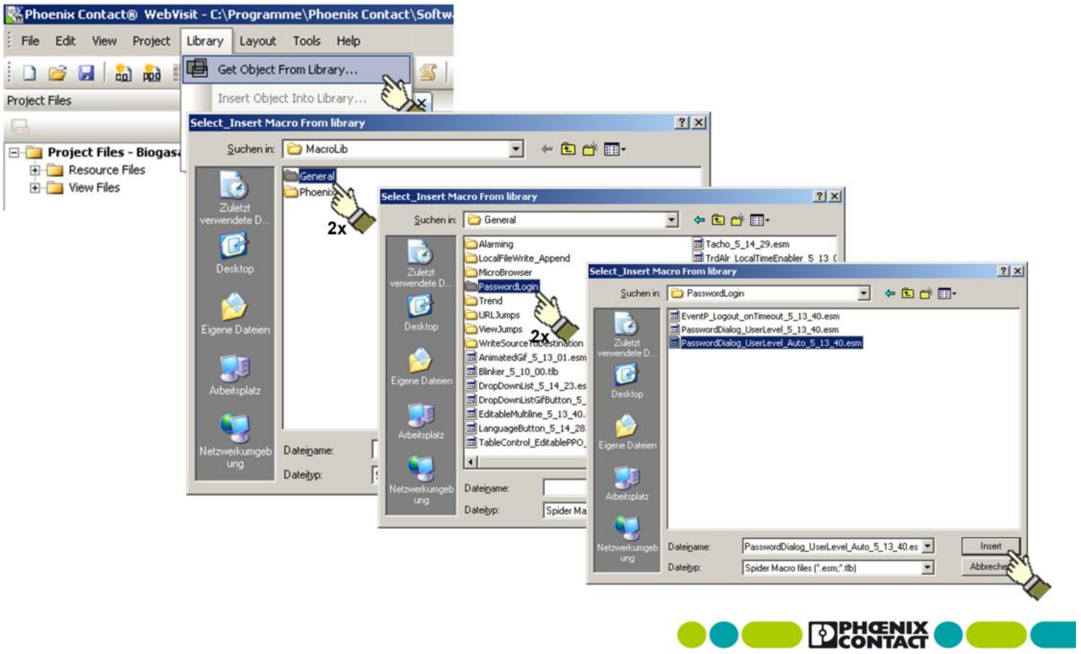
⚠ Note

ℹ Information

💡 Tip

Notes:

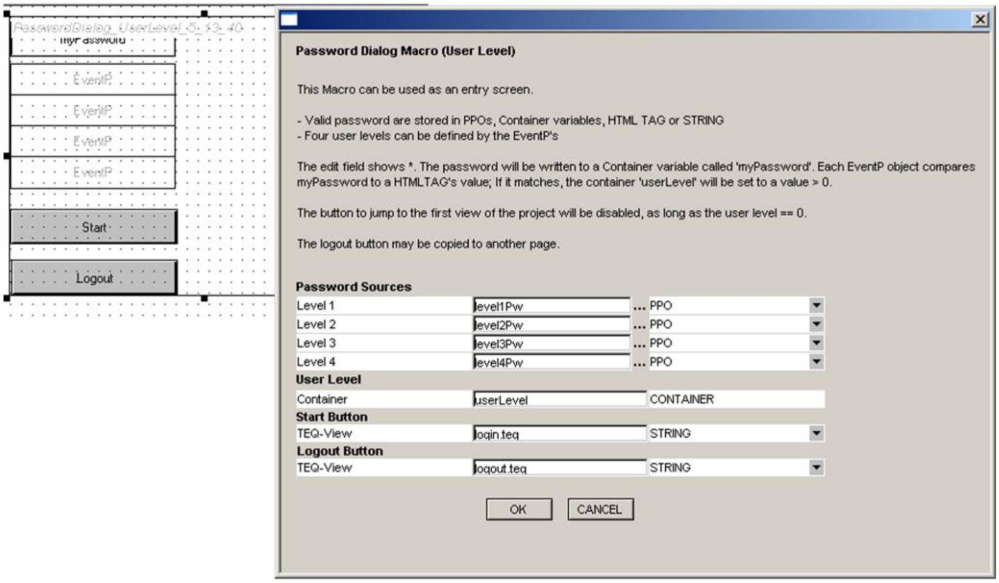
Inserting a macro


Phoenix Contact® WebVisit - C:\Programme\Phoenix Contact\Softw
File Edit View Project Library Layout Tools Help
Get Object From Library...
Insert Object Into Library...
Project Files
Project Files - Biogas
Resource Files
View Files
Select_Insert Macro From library
Suchen in: MacroLib
General
Phoenix
2x
Zuletzt verwendete D...
Desktop
Eigene Dateien
Arbeitsplatz
Netzwerkumgebung
Dateiname:
Dateityp:
Select_Insert Macro From library
Suchen in: General
Alarming
LocalFileWrite_Append
MicroBrowser
PasswordLogin
Trend
URLJumps
ViewJumps
WriteSourceToDestination
AnimatedGif_5_13_01.esm
Blinker_5_10_00.tlb
DropDownList_5_14_23.es
DropDownListGifButton_5_
EditableMultiline_5_13_40.
LanguageButton_5_14_28
TableControl_EditablePPO_
Tacho_5_14_29.esm
TrdAlr_LocalTimeEnabler_5_13_(
2x
Spider Ma
Select_Insert Macro From library
Suchen in: PasswordLogin
EventP_Logout_onTimeout_5_13_40.esm
PasswordDialog_UserLevel_5_13_40.esm
PasswordDialog_UserLevel_Auto_5_13_40.esm
Dateiname: PasswordDialog_UserLevel_Auto_5_13_40.es
Dateityp: Spider Macro files (*.esm;*.tlb)
Insert
Abbrechen

There are primarily two ways in which a macro can be inserted. Firstly via the button icon in the tool box and secondly via the *Library > Get Object From Library…* menu item. In the selection screen that then opens, the desired macro is selected in the menu structure and inserted via *Insert*.

Version 6.01.05 also provides a separate window for macro selection.

Password login



Password Dialog Macro (User Level)

This Macro can be used as an entry screen.

- Valid password are stored in PPOs, Container variables, HTML TAG or STRING
- Four user levels can be defined by the EventP's

The edit field shows *. The password will be written to a Container variable called 'myPassword'. Each EventP object compares myPassword to a HTMLTAG's value; If it matches, the container 'userLevel' will be set to a value > 0.

The button to jump to the first view of the project will be disabled, as long as the user level == 0.

The logout button may be copied to another page.

Password Sources		
Level 1	level1Pw	PPO
Level 2	level2Pw	PPO
Level 3	level3Pw	PPO
Level 4	level4Pw	PPO
User Level		
Container	userLevel	CONTAINER
Start Button		
TEQ-View	login.teq	STRING
Logout Button		
TEQ-View	logout.teq	STRING

As seen on the previous slides, there are various macro variants in the *Password Login* folder. The way in which they differ is described in the WebVisit help. The macro overview can be accessed via the *Help* > *Help Topics…* menu, *Contents* tab, and then via *Advanced Functions* > *Macro Library Index*.

By way of illustration, one of these macros is described below.

In the macro properties dialog box, which can be accessed by double-clicking, a separate password can be assigned for each user level as shown in the example above. You need to choose whether the variable that is to be assigned the password is a local or external variable and what name should be assigned. In this case they are PPO variables with the names *level1Pw*, *level2Pw*, etc.

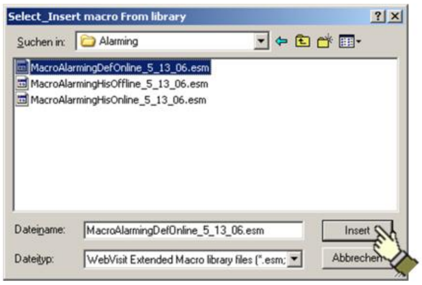
Depending on which password is used for login, the userLevel variable (a local variable here) is assigned the corresponding value 1 ... 4. A wide range of conditions can be linked with it.

ID= All variables selected as containers are created automatically and can be edited under *Project* > *Init Containers…* or via the button in the toolbar shown on the left (password assignment).

On successful login, you have the option of jumping to a graphic view (called login.teq in this case). The same principle applies for the logout button.

If an event macro, such as the Autologout macro, is used, it makes sense to run it on a Background-teq, as this won't then have to be inserted in every graphic view in order to ensure consistent monitoring.

Alarming macro

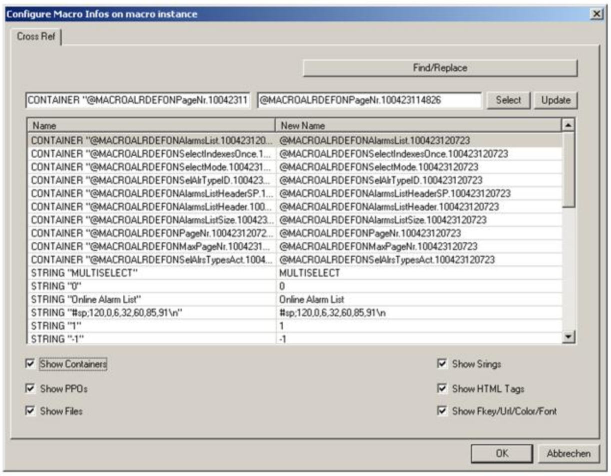


Suchen in: Alarming

MacroAlarmingDefOnline_5_13_06.esm
MacroAlarmingHisOffline_5_13_06.esm
MacroAlarmingHisOnline_5_13_06.esm

Dateiname: MacroAlarmingDefOnline_5_13_06.esm

Dateityp: WebVisit Extended Macro library files (*.esm;



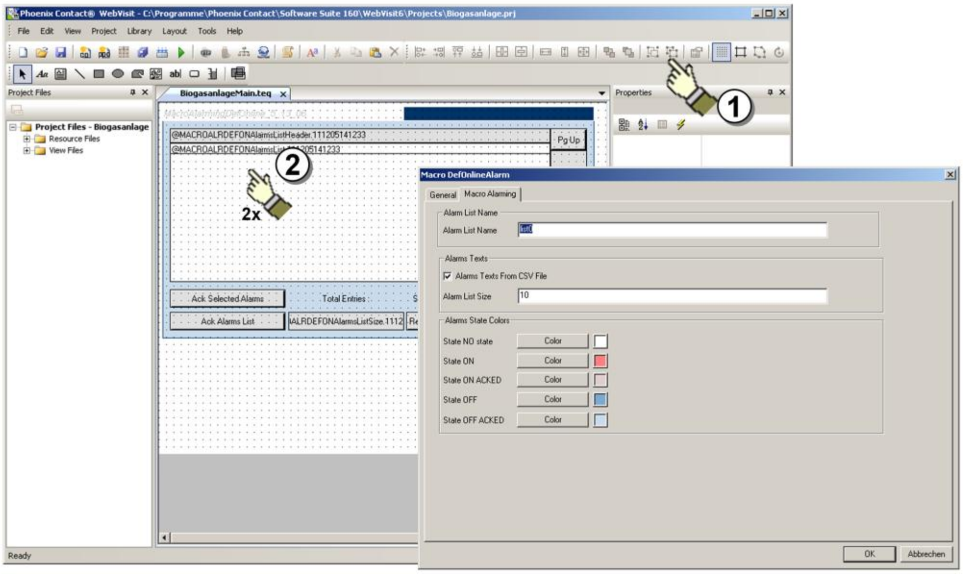
CONTAINER "@MACROALRDEFONPageNr.10042311 | @MACROALRDEFONPageNr.100423114826

Name	New Name
CONTAINER "@MACROALRDEFONAlarmsList.100423120...	@MACROALRDEFONAlarmsList.100423120723
CONTAINER "@MACROALRDEFONSelectIndexesOnce.1...	@MACROALRDEFONSelectIndexesOnce.100423120723
CONTAINER "@MACROALRDEFONSelectMode.1004231...	@MACROALRDEFONSelectMode.100423120723
CONTAINER "@MACROALRDEFONSelAlrTypeID.100423...	@MACROALRDEFONSelAlrTypeID.100423120723
CONTAINER "@MACROALRDEFONAlarmsListHeaderSP.1...	@MACROALRDEFONAlarmsListHeaderSP.100423120723
CONTAINER "@MACROALRDEFONAlarmsListHeader.100...	@MACROALRDEFONAlarmsListHeader.100423120723
CONTAINER "@MACROALRDEFONAlarmsListSize.100423...	@MACROALRDEFONAlarmsListSize.100423120723
CONTAINER "@MACROALRDEFONPageNr.10042312072...	@MACROALRDEFONPageNr.100423120723
CONTAINER "@MACROALRDEFONMaxPageNr.1004231...	@MACROALRDEFONMaxPageNr.100423120723
CONTAINER "@MACROALRDEFONSelAlrsTypesAct.1004...	@MACROALRDEFONSelAlrsTypesAct.100423120723
STRING "MULTISELECT"	MULTISELECT
STRING "0"	0
STRING "Online Alarm List"	Online Alarm List
STRING "#sp;120,0,6,32,60,85,91\n"	#sp;120,0,6,32,60,85,91\n
STRING "1"	1
STRING "-1"	-1

☑ Show Containers ☑ Show Srings
☑ Show PPOs ☑ Show HTML Tags
☑ Show Files ☑ Show Fkey/Url/Color/Font

If an Alarming macro is inserted, the window shown above on the right containing cross-references for the individual macro variables appears first. These should not usually be changed by the user. Just click OK.

Alarming macro


Phoenix Contact® WebVisit - C:\Programme\Phoenix Contact\Software Suite 160\WebVisit6\Projects\Biogasanlage.prj
File Edit View Project Library Layout Tools Help
Project Files
Project Files - Biogasanlage
Resource Files
View Files
BiogasanlageMain.teq
@MACROALRDEFONAlarmsListHeader.111205141233
Pg Up
Ack Selected Alarms
Total Entries
Ack Alarms List
Properties
1
2
2x
Ready

Macro DefOnlineAlarm

General | Macro Alarming

Alarm List Name
Alarm List Name: list0

Alarms Texts
☑ Alarms Texts From CSV File
Alarm List Size: 10

Alarms State Colors
State NO state: Color □
State ON: Color 🟥
State ON ACKED: Color □
State OFF: Color 🟦
State OFF ACKED: Color □

OK | Abbrechen

To access the macro properties, in the case of the Alarming macro the elements need to be grouped first. The *Macro Alarming* tab can then be viewed by double-clicking on the display field. Another option is to *right-click and select Cross Ref…* and then double-click on the top entry

0_MacroDefOnlineAlarm__Repaint:__@MACROALRDEFONAlarmList.100426123458

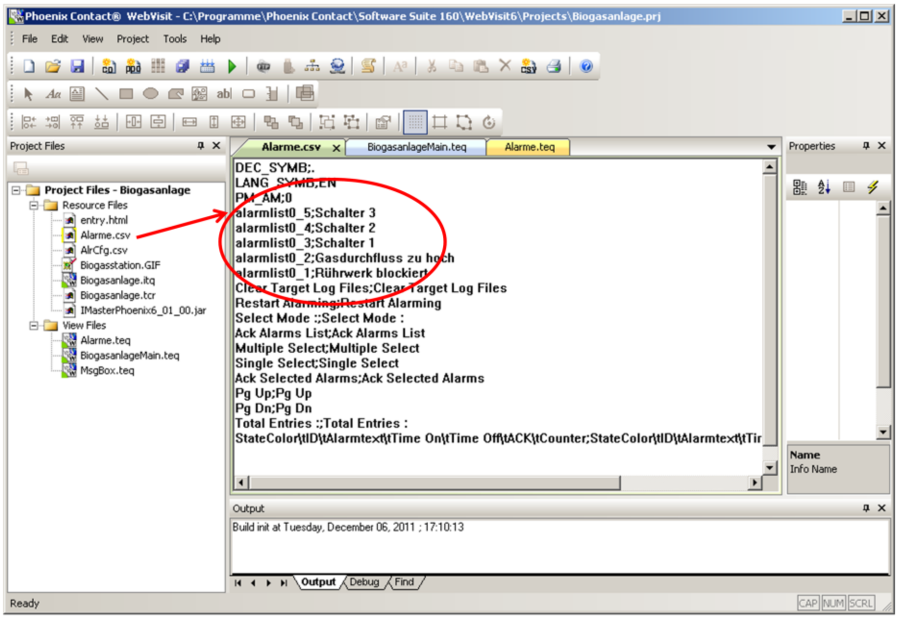
on the *Advanced Select* tab.

Properties:

The name of an alarm list must be entered first. Then the number of alarms is entered next to *Alarm List Size*.

A color can be selected for every status in the *Alarms State Colors* area.

Alarming macro

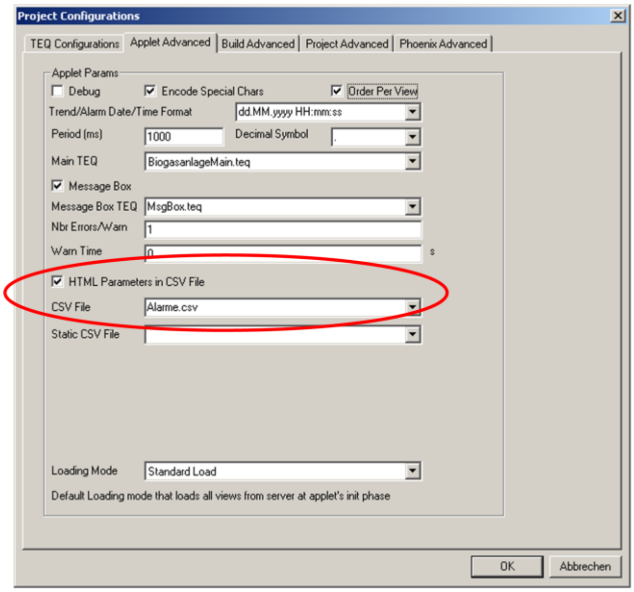


```
DEC_SYMB;.
LANG_SYMB;EN
PM_AM;0
alarmlist0_5;Schalter 3
alarmlist0_4;Schalter 2
alarmlist0_3;Schalter 1
alarmlist0_2;Gasdurchfluss zu hoch
alarmlist0_1;Rührwerk blockiert
Clear Target Log Files;Clear Target Log Files
Restart Alarming;Restart Alarming
Select Mode :;Select Mode :
Ack Alarms List;Ack Alarms List
Multiple Select;Multiple Select
Single Select;Single Select
Ack Selected Alarms;Ack Selected Alarms
Pg Up;Pg Up
Pg Dn;Pg Dn
Total Entries :;Total Entries :
StateColor\tID\tAlarmtext\tTime On\tTime Off\tACK\tCounter;StateColor\tID\tAlarmtext\tTir
```

```
Build init at Tuesday, December 06, 2011 ; 17:10:13
```

Generate a new CSV file via *Project > Generate HTML TAGS CSV File…* This is called *Alarme.csv.* The entries for the alarm text can be adapted in this CSV file.

Alarming macro



Applet Params

☐ Debug ☑ Encode Special Chars ☑ Order Per View

Trend/Alarm Date/Time Format: dd.MM.yyyy HH:mm:ss

Period (ms): 1000 Decimal Symbol: .

Main TEQ: BiogasanlageMain.teq

☑ Message Box

Message Box TEQ: MsgBox.teq

Nbr Errors/Warn: 1

Warn Time: 0 s

☑ HTML Parameters in CSV File

CSV File: Alarme.csv

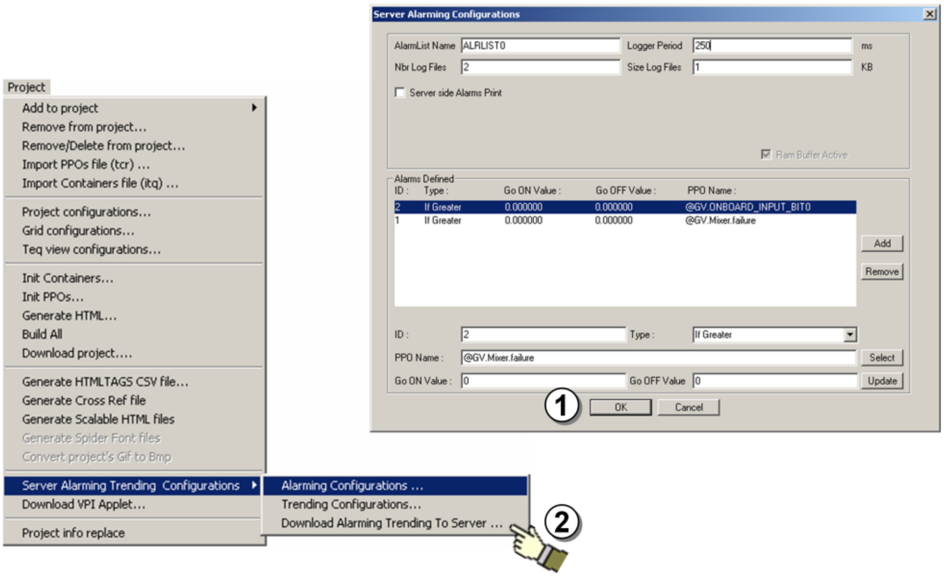
Static CSV File:

Loading Mode: Standard Load

Default Loading mode that loads all views from server at applet's init phase

For the CSV file to be integrated as well, it must be selected in the project settings under *Project – Applet Advanced*. The selection box appears when the *HTML Parameters in CSV File* checkbox is activated.

Alarming macro


Project
Add to project
Remove from project...
Remove/Delete from project...
Import PPOs file (tcr) ...
Import Containers file (itq) ...
Project configurations...
Grid configurations...
Teq view configurations...
Init Containers...
Init PPOs...
Generate HTML...
Build All
Download project....
Generate HTMLTAGS CSV file...
Generate Cross Ref file
Generate Scalable HTML files
Generate Spider Font files
Convert project's Gif to Bmp
Server Alarming Trending Configurations
Download VPI Applet...
Project info replace
Alarming Configurations ...
Trending Configurations...
Download Alarming Trending To Server ...
2
Server Alarming Configurations
Add
Remove
Select
Update
1
OK
Cancel

AlarmList Name: ALRLIST0
Logger Period: 250 ms
Nbr Log Files: 2
Size Log Files: 1 KB
☐ Server side Alarms Print
☑ Ram Buffer Active

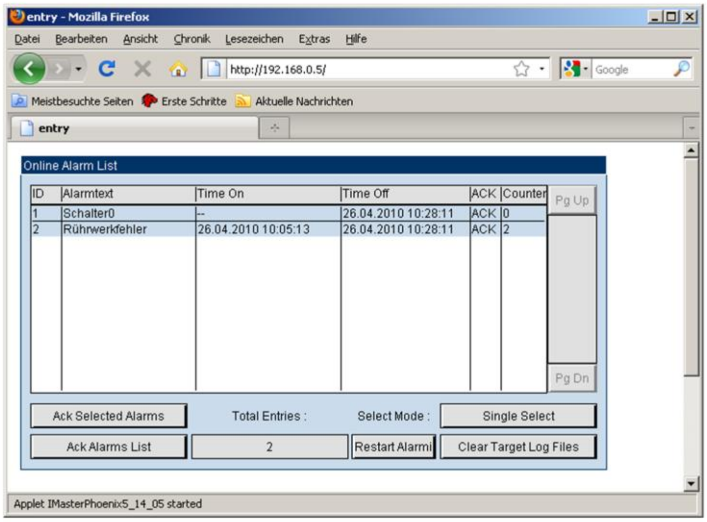
Alarms Defined

ID :	Type :	Go ON Value :	Go OFF Value :	PPO Name :
2	If Greater	0.000000	0.000000	@GV.ONBOARD_INPUT_BIT0
1	If Greater	0.000000	0.000000	@GV.Mixer.failure

ID : 2
Type : If Greater
PPO Name : @GV.Mixer.failure
Go ON Value : 0
Go OFF Value 0

The alarms are set in this window. Each alarm is assigned an ID and a conditional variable. An alarm is completed by clicking on *Add*. If changes need to be made, click on *Update*. Once alarms have been created they need to be downloaded via *Download Alarming Trending To Server*… and the web server must be restarted. Information on downloading project files to the web server is provided in the *Startup* section.

Alarming macro



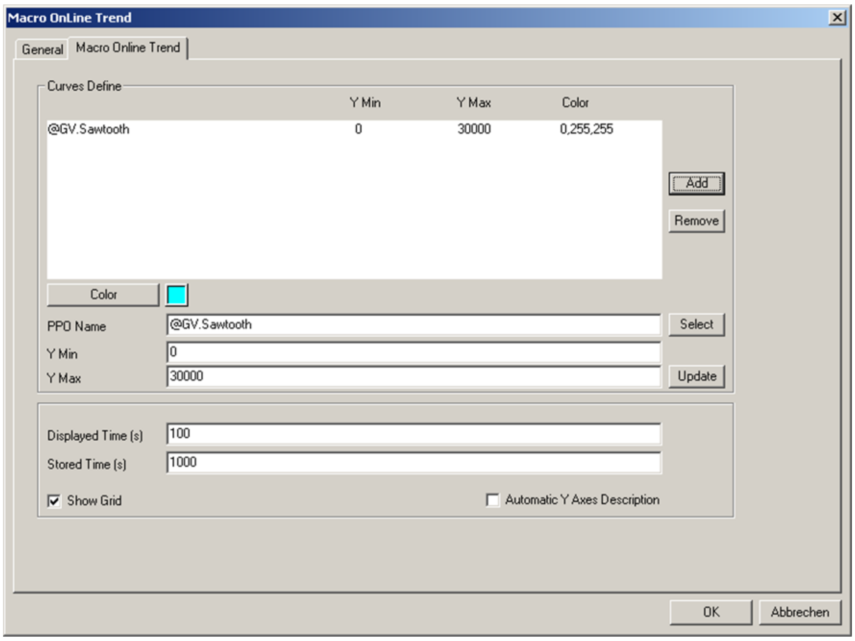
ID	Alarmtext	Time On	Time Off	ACK	Counter
1	Schalter0	--	26.04.2010 10:28:11	ACK	0
2	Rührwerkfehler	26.04.2010 10:05:13	26.04.2010 10:28:11	ACK	2

When the project is started up, all alarms are listed for the *MacroAlarmingDefOnline* macro. If an alarm is active, the relevant row is colored according to the settings and the *ACK* column contains the text *NAK* (not acknowledged). The *Counter* column shows how many times the alarm has occurred. At present the *Clear Target Log Files* button and the *Restart Alarm* button do not work and the counter can only be reset to zero by means of a hardware reset and resubmitting the project.

When an alarm occurs, the *MacroAlarmingHisOnline* macro writes this to a new row. This list cannot be reset either.

In the case of the *MacroAlarmingHisOffline* macro, the alarms are recorded but only displayed once the list is loaded in the memory.

Online Trend macro



Macro OnLine Trend

General | Macro Online Trend

Curves Define

	Y Min	Y Max	Color
@GV.Sawtooth	0	30000	0,255,255

PPO Name: @GV.Sawtooth

Y Min: 0

Y Max: 30000

Displayed Time (s): 100

Stored Time (s): 1000

☑ Show Grid

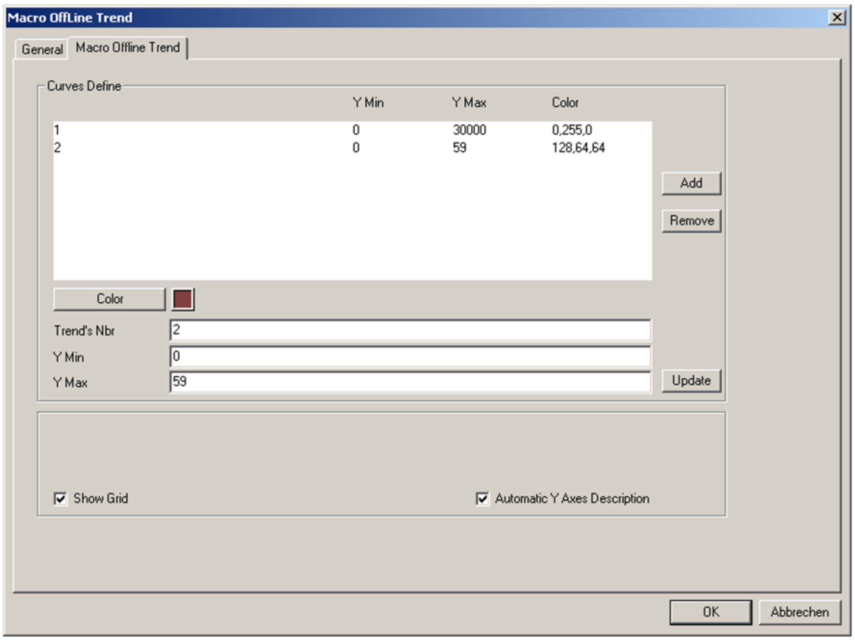
□ Automatic Y Axes Description

To access the properties of the trend macro, proceed as described for the Alarming macro.

At the very least, PPO Name, Y Min, and Y Max must be specified in the properties.

Once all the desired trends have been entered, exit the window with OK. The *Init PPOs…* item must then be selected in the *Project* menu in order to initialize the variables if these have not yet been integrated.

Offline Trend macro



Curves Define

	Y Min	Y Max	Color
1	0	30000	0,255,0
2	0	59	128,64,64

Trend's Nbr: 2

Y Min: 0

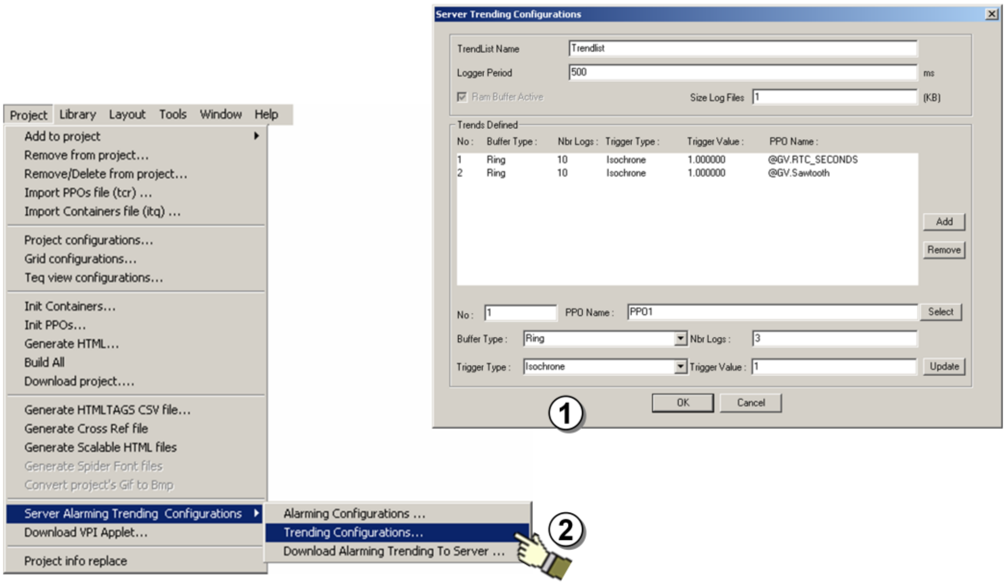
Y Max: 59

☑ Show Grid

☑ Automatic Y Axes Description

If the Offline Trend macro has been added, the properties can be called by *double-clicking* in the trend window on the *Advanced Select* tab and then on *Macro Offline Trend*. This is shown above. Here you can specify the number of curves, their colors, and their minimum and maximum values.

Offline Trend macro



Project
Library
Layout
Tools
Window
Help
Add to project
Remove from project...
Remove/Delete from project...
Import PPOs file (tcr) ...
Import Containers file (itq) ...
Project configurations...
Grid configurations...
Teq view configurations...
Init Containers...
Init PPOs...
Generate HTML...
Build All
Download project....
Generate HTMLTAGS CSV file...
Generate Cross Ref file
Generate Scalable HTML files
Generate Spider Font files
Convert project's Gif to Bmp
Server Alarming Trending Configurations
Download VPI Applet...
Project info replace
Alarming Configurations ...
Trending Configurations...
Download Alarming Trending To Server ...
Server Trending Configurations
Add
Remove
Select
Update
OK
Cancel
1
2

TrendList Name: Trendlist
Logger Period: 500 ms
☑ Ram Buffer Active
Size Log Files: 1 (KB)

Trends Defined

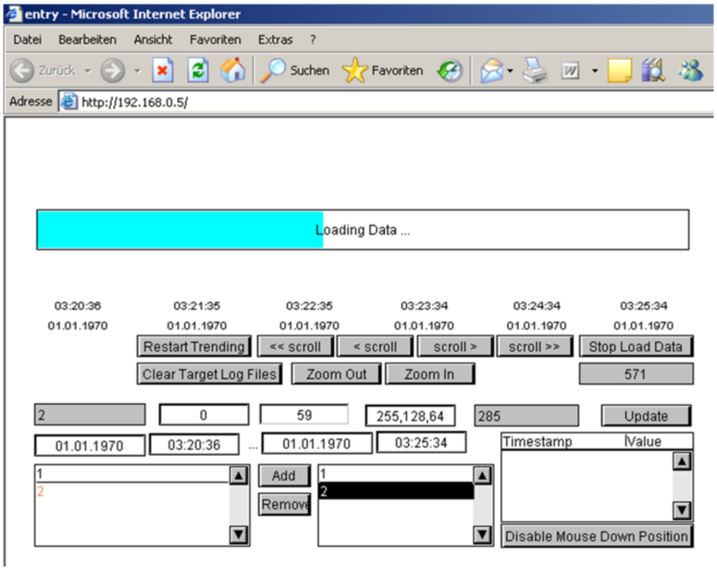
No :	Buffer Type :	Nbr Logs :	Trigger Type :	Trigger Value :	PPO Name :
1	Ring	10	Isochrone	1.000000	@GV.RTC_SECONDS
2	Ring	10	Isochrone	1.000000	@GV.Sawtooth

No : 1
PPO Name : PPO1
Buffer Type : Ring
Nbr Logs : 3
Trigger Type : Isochrone
Trigger Value : 1

If the curves are entered in the macro properties, the window shown above can be called via *Project > Server Alarming Trending Configurations > Trending Configurations…* The variables for the curves are defined here and the size of the log files is specified. Just like the Alarming window, once these settings have been made they need to be downloaded separately to the web server (2).

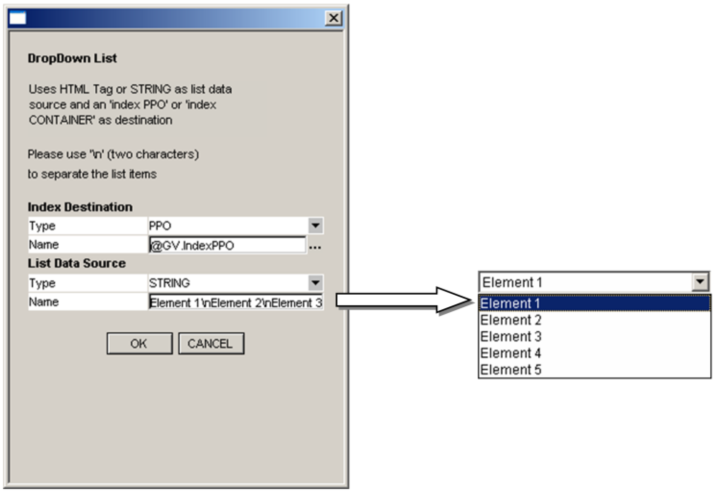
Important: the trend settings must be activated following download by restarting the web server.

Offline Trend macro



When the macro is called, the most recently recorded data is not immediately displayed. This must be loaded first via the *Start Load Data* button. Once the data has been loaded, it can be stored in the directory of your choice via *Save Logs to File*.

DropDown List macro



DropDown List

Uses HTML Tag or STRING as list data source and an 'index PPO' or 'index CONTAINER' as destination

Please use '\n' (two characters) to separate the list items

Index Destination

Type	PPO
Name	@GV.IndexPPO

List Data Source

Type	STRING
Name	Element 1\nElement 2\nElement 3

The DropDown List macro is practically self-explanatory. A predefined variable list is requested and an index variable is described as per the selection. This may be a container variable or a PPO variable. In PC Worx, the index variable must be of DINT type. When the element is selected, the index variable therefore has the value 0. This means, for example, that when the 5th selection field is selected, the variable has the value 4.

Note: If a container value is to be used as the placeholder for a level of a PC Worx field variable, see the description in Section 3.

Notes:

Language selection

Section 5

Notes:

Contents

Due to increasing globalization, there is a growing tendency for people of different nationalities to work together or for solutions to be marketed globally. Here, the possibility of switching between several languages can really make the difference. WebVisit also supports the creation of multi-language projects. This section explains the necessary steps.

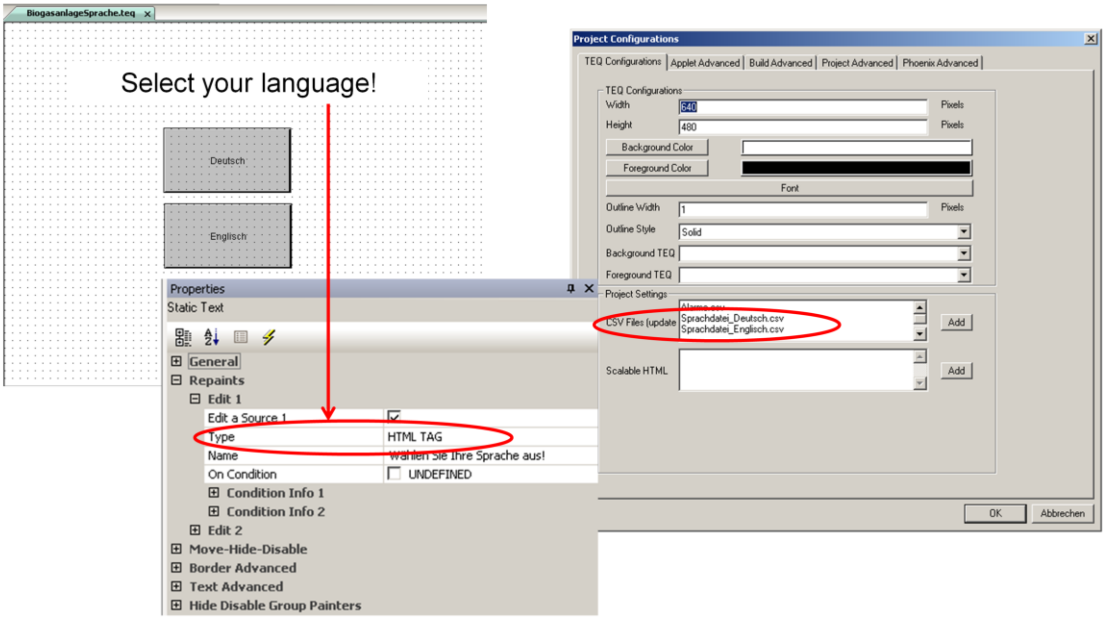
⚠ Note

ℹ Information

💡 Tip

Notes:

Language selection



BiogasanlageSprache.teq

Select your language!

Properties

Static Text

- ⊞ General
- ⊟ Repaints
  - ⊟ Edit 1
    - Edit a Source 1: ☑
    - Type: HTML TAG
    - Name: Wählen Sie Ihre Sprache aus!
    - On Condition: □ UNDEFINED
    - ⊞ Condition Info 1
    - ⊞ Condition Info 2
  - ⊞ Edit 2
- ⊞ Move-Hide-Disable
- ⊞ Border Advanced
- ⊞ Text Advanced
- ⊞ Hide Disable Group Painters

Project Configurations

TEQ Configurations | Applet Advanced | Build Advanced | Project Advanced | Phoenix Advanced

TEQ Configurations

Width: 640 Pixels

Height: 480 Pixels

Outline Width: 1 Pixels

Outline Style: Solid

Background TEQ:

Foreground TEQ:

Project Settings

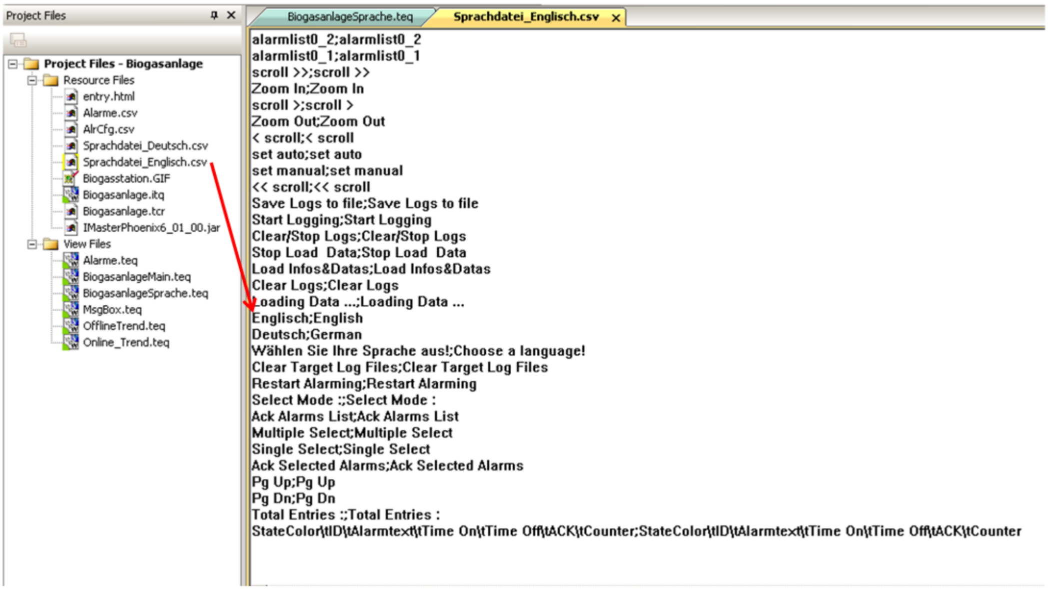
CSV Files (update: Alarme.csv
Sprachdatei_Deutsch.csv
Sprachdatei_Englisch.csv

Scalable HTML:

In order to select languages in WebVisit, all multilingual elements must be set to *HTML TAG* type. It saves on typing when the name of the elements already corresponds to the first language.

In the project settings under *Project > Project Configurations…*, enter as many CSV files (*Add* button) as there are languages to be used. The corresponding files are then created and filled via *Project > Generate HTML TAGS CSV File…* The menu item must be selected again every time a change is made.

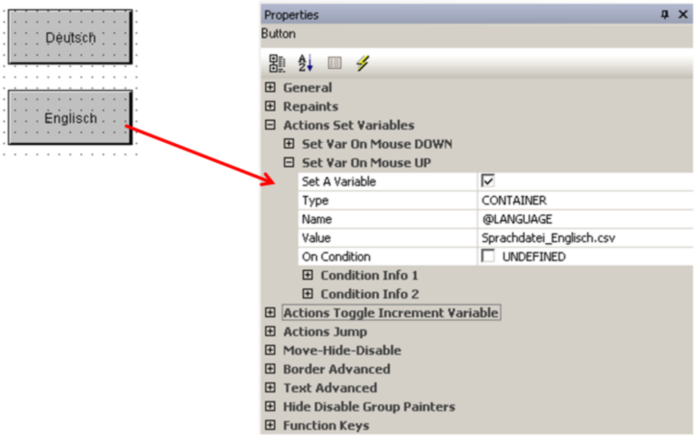
Language selection



```
alarmlist0_2;alarmlist0_2
alarmlist0_1;alarmlist0_1
scroll >>;scroll >>
Zoom In;Zoom In
scroll >;scroll >
Zoom Out;Zoom Out
< scroll;< scroll
set auto;set auto
set manual;set manual
<< scroll;<< scroll
Save Logs to file;Save Logs to file
Start Logging;Start Logging
Clear/Stop Logs;Clear/Stop Logs
Stop Load  Data;Stop Load  Data
Load Infos&Datas;Load Infos&Datas
Clear Logs;Clear Logs
Loading Data ...;Loading Data ...
Englisch;English
Deutsch;German
Wählen Sie Ihre Sprache aus!;Choose a language!
Clear Target Log Files;Clear Target Log Files
Restart Alarming;Restart Alarming
Select Mode :;Select Mode :
Ack Alarms List;Ack Alarms List
Multiple Select;Multiple Select
Single Select;Single Select
Ack Selected Alarms;Ack Selected Alarms
Pg Up;Pg Up
Pg Dn;Pg Dn
Total Entries :;Total Entries :
StateColor\tID\tAlarmtext\tTime On\tTime Off\tACK\tCounter;StateColor\tID\tAlarmtext\tTime On\tTime Off\tACK\tCounter
```

In the CSV files that are created, the part after the semicolon is now replaced by the translation of the part before the semicolon.

Language selection



Properties
Button

⊞ General
⊞ Repaints
⊟ Actions Set Variables
  ⊞ Set Var On Mouse DOWN
  ⊟ Set Var On Mouse UP

Set A Variable	☑
Type	CONTAINER
Name	@LANGUAGE
Value	Sprachdatei_Englisch.csv
On Condition	□ UNDEFINED

    ⊞ Condition Info 1
    ⊞ Condition Info 2
⊞ Actions Toggle Increment Variable
⊞ Actions Jump
⊞ Move-Hide-Disable
⊞ Border Advanced
⊞ Text Advanced
⊞ Hide Disable Group Painters
⊞ Function Keys

The final step is to select the relevant language file in operation. An internal language selection function is used for this. The name *@LANGUAGE* (note the capitalization) is entered via a button on the *Actions Set Variables* tab. The relevant CSV file is entered as the value. The project can then be compiled and written to the web server.

Notes:

Startup and scaling

Section 6

Notes:

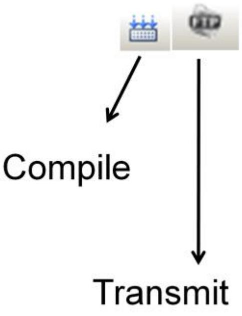
Contents

This section shows how to write a project to the web server and call it on the PC or web panel.

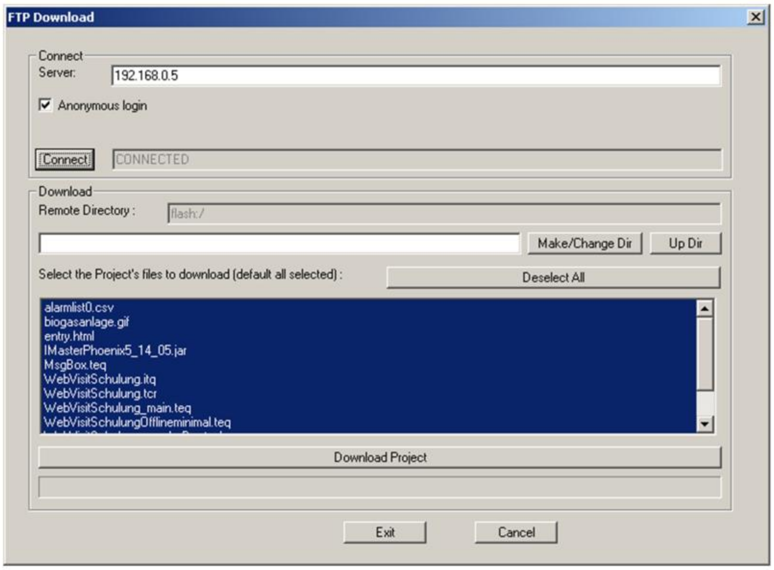
⚠	Note
ℹ	Information
💡	Tip

Notes:

Compiling and transmitting a project


Compile

Transmit


FTP Download

Connect

Server: 192.168.0.5

☑ Anonymous login

Connect: CONNECTED

Download

Remote Directory : flash:/

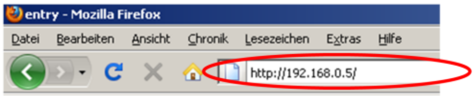
Select the Project's files to download (default all selected) :

alarmlist0.csv
biogasanlage.gif
entry.html
IMasterPhoenix5_14_05.jar
MsgBox.teq
WebVisitSchulung.itq
WebVisitSchulung.tcr
WebVisitSchulung_main.teq
WebVisitSchulungOfflineminimal.teq

Before the project is transmitted to the web server, it must be compiled.

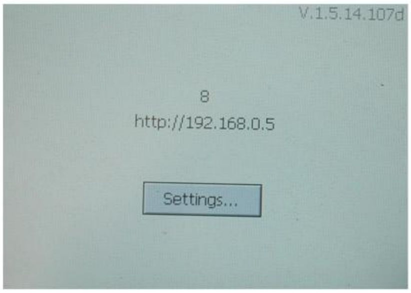
On completion of compiling, click on the transmit button. In the window that opens, enter the IP address of the controller where the desired web server is located and click on *Connect*. If the connection data has been entered correctly, a list will appear containing the files to be transmitted. If not modified in the settings, the file *entry.html* is listed here. The project will be called later using this file. Clicking on *Download Project* starts the transmission process. If everything proceeds successfully, the confirmation message can be closed with OK and the download window exited.

Calling a project in the browser



The created project can be called using any standard web browser by simply entering the IP address. Java Runtime must be installed in order for it to be displayed correctly. If the individual graphic views are not refreshed, the temporary storage of contents must be deactivated in the Java settings.

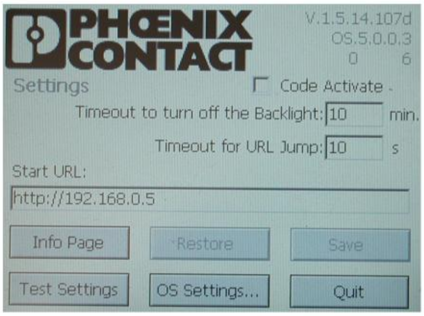
Calling a project with a web panel



V.1.5.14.107d

8

http://192.168.0.5



V.1.5.14.107d
OS.5.0.0.3
0 6

Settings

□ Code Activate

Timeout to turn off the Backlight: 10 min.

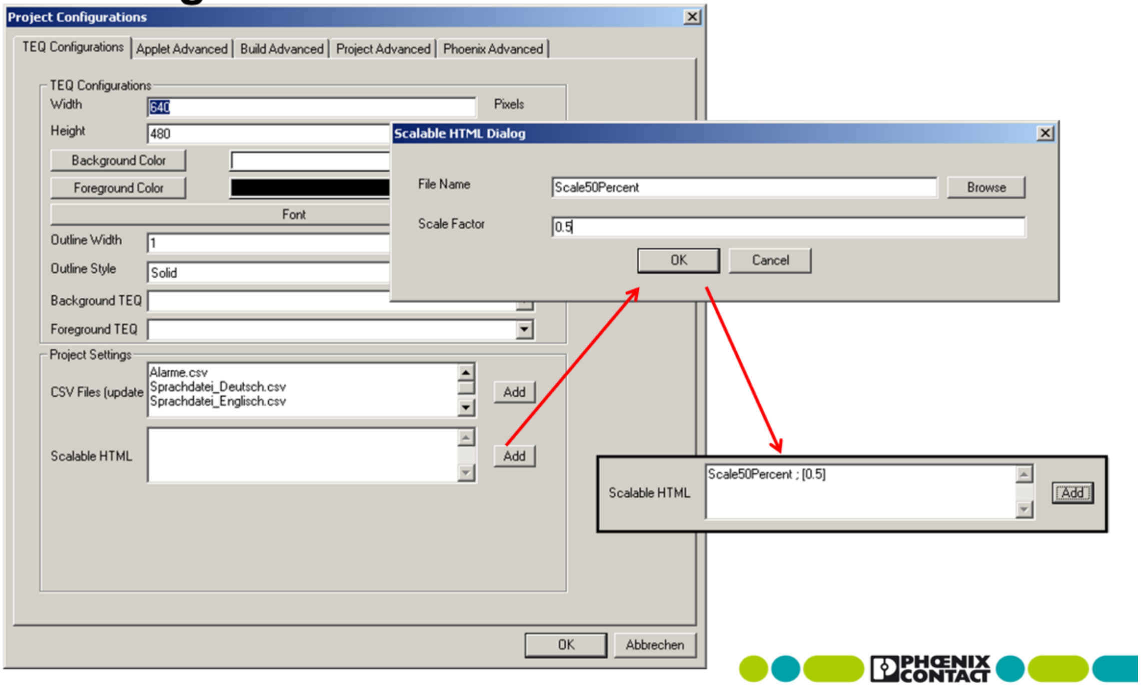
Timeout for URL Jump: 10 s

Start URL: http://192.168.0.5

To display the project on a web panel, press the *Settings…* button when the panel is starting up. In the screen that follows, enter the address http://xxx.xxx.xxx.xxx under Start URL. The IP parameters of the web panel must be set correctly in order for the project to be called successfully. This is achieved when the controller with the web server is located in the same subnetwork as the panel, and the last digit of the IP address differs (Class C network). Then press Save followed by Quit.

Note: Special internal container variables can be used to implement various other functions. E.g., shutting down the micro browser. For additional information, simply type “special containers” into the WebVisit help. This also applies to @LANGUAGE for language selection (see above).

Scaling the visualization



Project Configurations

TEQ Configurations

Width: 640 Pixels

Height: 480

Outline Width: 1

Outline Style: Solid

Project Settings

CSV Files (update: Alarme.csv, Sprachdatei_Deutsch.csv, Sprachdatei_Englisch.csv

Scalable HTML Dialog

File Name: Scale50Percent

Scale Factor: 0.5

Scalable HTML: Scale50Percent ; [0.5]

With WebVisit, a project can be displayed on HMIs of various size. This is made possible by scaling the visualization.

To reduce the visualization to half its size, the steps specified above must be followed.

To now call the scaled version, first compile and transmit the project in the browser or web panel and call the corresponding file.

Here: http://<IP address>/Scale50Percent.html.

Scaling is carried out by the relevant HMI and requires computing capacity. It is recommended that you avoid scaling on less powerful web panels.