



► PASvisu V1.14.1

PILZ
THE SPIRIT OF SAFETY

Readme-1003811-EN-19



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SD means Secure Digital

General

This document contains important information, which must be noted. This document also contains details of the changes made in the software tool from one version to the next.

System requirements



INFORMATION

Please note:

To install the PASvisu Builder, PASvisu Server and PASvisu Viewer you need administrator rights on the target device.

PASvisu Builder

Operating system:	64-Bit version of Windows 10 and Windows 11
Processor:	Dual Core (2.4 GHz) or desktop equivalent
RAM:	Min. 4 GB
Available hard drive space:	Approx. 4 GB
Screen resolution:	Min. 1024 x 768 pixels
Colour quality:	32 Bit
Text size:	Display setting in Windows "Smaller – 100% (default)"
Required software tools:	"CodeMeter" software from WIBU SYSTEMS (is installed automatically with PASvisu Builder)

PASvisu Server for PC

Operating system:	64-Bit version of Windows 10 and Windows 11
Processor:	Dual Core (2.4 GHz) or desktop equivalent
RAM:	Min. 4 GB
Available hard drive space:	Approx. 4 GB
Required software tools:	► "CodeMeter" software from WIBU SYSTEMS (is installed automatically with PASvisu Server) ► Microsoft .NET Framework Version 4.5.2

PASvisu Server for PMI

The following PMIs support the PASvisu Server:

- PMI v704e
- PMI v707e
- PMI v807
- PMI v812
- PMI v815

Tool languages

The software tool PASvisu is published in the tool languages German and English.

As soon as translations for the software tool are available, they will be provided within a service pack. You'll find the service pack in the software tool PASupdate or on the Internet under <http://www.pilz.com/support/downloads/>.

The following languages can be provided:

- ▶ French
- ▶ Italian

Important information

Security

By default, the PASvisu Builder saves the project data in the personal user directory, for example: C:\User\<Username>. Please note that saving to a different path may lead to security restrictions.

Display of visualisation

Pilz supports the display of the PASvisu project on PCs, PMI v704e, PMI v707e, PMI v807, PMI v812 and PMI v815. Other end devices are possible, but have not been tested.

PMI: The PASvisu Viewer for PMI can be used as the Visu Client.

PC: The PASvisu Viewer for PC or Google Chrome can be used as the Visu Client. Other HTML 5-compatible web browsers are possible, but have not been tested.

Operation of the PASvisu Server

Pilz supports the operation of the PASvisu Server on PCs, the PMI v704e, PMI v707e, PMI v807, PMI v812 and PMI v815. The possible system layouts are described in the on-line help for the PASvisu Builder.

The PASvisu Server can communicate exclusively with OPC UA Servers and Modbus/TCP Servers.

PMI: If the PASvisu Server is on a PMI, this PMI may also have a local Visu Client. At least one remote Visu Client is supported.

PC: Simultaneous display of the PASvisu project on 5 Visu Clients is supported. Up to 8 Visu Clients are possible, but simultaneous operation of 8 Visu Clients has not been tested.

Compatibility for data source "PNOZmulti project"

Pilz offers a solution for visualisation of an individual PNOZmulti project.

The PNOZmulti project is created using the PNOZmulti Configurator. A PVIS OPC Server UA is required for visualisation.

Required versions:

- ▶ PNOZmulti Configurator from Version 10.12.0
- ▶ PVIS OPC Server UA from Version 2.5.0;
 - At least Version 2.5.1 is required when using the "MSO flex visu" tile;
 - At least Version 2.7.0 is required when using the "Key-in-Pocket sign in list" tile

Compatibility for data source "PVIS OPC project"

Pilz offers a solution for visualisation of several PNOZmulti projects that are combined in a PVIS OPC project.

The PNOZmulti projects are created using the PNOZmulti Configurator. For the PNOZmulti project, the diagnostic configuration must be linked. The diagnostic configuration is then added to a PVIS OPC project in the PVIS OPC Configurator. The PVIS OPC project must be executed on a PVIS OPC Server UA.

Required versions:

- ▶ PNOZmulti Configurator from Version 10.12.0
- ▶ PVIS OPC Configurator from Version 2.1.0
- ▶ PVIS OPC Server UA from Version 2.5.0;
 - At least Version 2.5.1 is required when using the "MSO flex visu" tile;
 - At least Version 2.7.0 is required when using the "Key-in-Pocket sign in list" tile

Compatibility for data source "PSS 4000 project"

Pilz offers a solution for visualisation of PSS 4000 projects. PSS 4000 projects must be built using PAS4000 from Version 1.15.0.

An OPC UA Server must be configured in the project so that the namespace elements file, which is used by the PASvisu Builder, is created during the build process.

Compatibility for "PITreader" data source

Pilz offers a solution for the visualisation of data from a PITreader. The PITreader can also be used for user authentication on the online PASvisu project.

For both these applications, the PITreader must contain an OPC UA Server.

Required firmware version: From Version 1.5.01

Compatibility between PASvisu Builder and PASvisu Server

PASvisu projects can only be run on PASvisu Servers if the version of the PASvisu Server matches the version of the PASvisu Builder that was used when the project was created. In other words, if a PASvisu project was created using Version V1.14.1 of the PASvisu Builder, the PASvisu Server must also be Version V1.14.1.

Migration of PASvisu projects

A project that was created using an older PASvisu Builder version will automatically be migrated when opened using a newer PASvisu Builder version.

Once a project has been opened with a newer PASvisu Builder version it may no longer be opened using older PASvisu Builder versions.

Renaming projects after download

If a PSS 4000 project or a PVIS OPC project is used as the data source for the PASvisu project, the following names may no longer be changed once the PASvisu project has been downloaded to the PASvisu Server:

- ▶ Name of the PSS 4000 project
- ▶ Name of the PVIS OPC project and name of the PNOZmulti projects

Otherwise the PASvisu Server cannot access the data on the OPC Server. If project names are changed, the PASvisu project must be synchronised with the data source and the download must be performed again.

Visualisation with a PMI v7

► Data source


For visualisation on a PMI v7, the "PNOZmulti project" data source must be used in PASvisu Builder. If the OPC UA server integrated on the PMI v7 is not used, and the PMI v7 is only used as a Visu Client, you can use any other data source.

► Data logging

If data logging is to be used, then a USB stick has to be connected. The USB stick must not be removed during operation.

Licensing

Licences are managed in licence containers. They are managed using "CodeMeter" software from WIBU SYSTEMS. This software has been installed together with the PASvisu Builder/PASvisu Server.

PC: If the "CodeMeter" software is installed on a PC, the  icon will be found in the Windows status bar.

Note: When starting the PASvisu Server, if you receive a message that WIBUCM32.dll is missing, then the "CodeMeter" software has been uninstalled and the PASvisu Server can no longer be started. In this case, re-install the PASvisu Server. (2823)

Licence information

Source code from third-party manufacturers or open source software has been used for some components. The relevant licence information is available on the Internet on the Pilz homepage.

Known problems

PASvisu Builder

- ▶ External links on "HTML display" tiles

From version 1.14.0 of the PASvisu Builder, the option **Allow external links** in the project-wide properties is ineffective. Even if the option is not activated, access to external links is not prevented.

(3709)

- ▶ PASvisu Builder does not start

If the message "Terminating the PASvisu Builder because an internal error occurred (error code: 10)." is displayed when the PASvisu Builder is started, the WebSocket port 40857 may be occupied. If the message is displayed with error code 11, the HTTP port 40856 may be occupied.

Remedy: Make sure that no other service is occupying the ports or change the ports used by the PASvisu Builder. To do this, open the file "PASvisuBuilder.ini" in the directory "C:\ProgramData\Pilz\PASvisu Builder" and change the values for "websocket_port" and/or "http_port".

(2838)

- ▶ Problem after installing PASvisu Builder

When PASvisu Builder is newly installed and started for the first time, in rare cases it may not be possible to position tiles on pages.

Remedy: Close PASvisu Builder and restart it.

(3207)

- ▶ "Slider" tile

The labelling of the start and end value is not displayed correctly if the following formula does not produce an integer:

$$(\text{"End value"} - \text{"Start value"}) / (\text{"Steps per division"} \times \text{"Step size"})$$

Remedy: Change the tile's configuration.

(1879)

- ▶ "Slider" tile

If the "Slider" tile is positioned on a page, the start and end value modified and the tile then reduced in size, the scale may disappear.

Remedy: Change the size of the tile immediately after it is positioned and only then change the start and end value.

(3030)

- ▶ Display format

In the Page Editor, the display format of the time and date plus the decimal values (decimal point or comma) depends on the tool language, although it should depend on the selected project language.

Note: In the PASvisu Viewer, the display format depends on the selected project language.

(2994)

- ▶ Project languages: Edit exported CSV file in Excel

If the exported CSV file is edited using an older version than Excel 2016, only the key combination "Ctrl + S" may be used for saving. Otherwise the file can no longer be imported into the PASvisu Builder.

(3046)

► ARRAYS in the namespace of PVIS OPC projects

The namespace/address space of the configured data source is displayed in the variable editor on the **Data source** tab. If a PVIS OPC project is configured as the data source and an element in this data source has the ARRAY data type, BOOLEAN is displayed incorrectly as the data type in the namespace. Even when selecting a variable in the tile properties, the BOOLEAN data type is displayed for the element.

(3089)

► Display problems

If the display settings in Windows do not match PASvisu Builder's system requirements, there may be problems displaying graphic elements.

Remedy: In the Windows display settings, set a text size of "Smaller – 100% (default)".

► PNOZmulti: Namespace of analogue elements

If a PNOZmulti project is used as the data source and the PNOZmulti project contains analogue elements, the values of these elements cannot be displayed. The namespace elements for the analogue elements are not even available in the namespace in the variable editor.

Remedy: Add an "OPC UA Server" data source type to the PASvisu project and select the OPC UA Server of the PNOZmulti project. You will then have access to the values of the analogue modules in the namespace of the OPC UA Server.

(3260)

PASvisu Server

► Websocket port

If the websocket port that is configured for the PASvisu Server is already in use by another service, the PASvisu Server does not work, but no error message is issued.

(683)

Visu Clients

► General

– Entering values

If a Visu variable is configured for a tile's data item and this Visu variable is not assigned a namespace element, then no values can be entered in the tile.

Example: A decimal value tile is configured for data entry and uses a Visu variable without an assigned namespace element as the data item. Another decimal value tile is configured for the data output and uses the same Visu variable. If a value is now entered in the first tile in the Visu Client, it will not be displayed on the second tile.

(571)

– Data logging: Export of data records

When exporting the data records, a CSV file is created. When this file is opened using Microsoft Excel, it can happen that the decimal places in decimal numbers are not recognisable.

Remedy: Open the Excel options (Menu **File -> Options**), on the tab **Advanced**, deactivate the option **Use system separators** and select the required separators. You may have to restart Excel.

– Red borders after connection has been interrupted to OPC UA Server

In some cases, the PASvisu Server cannot automatically restore the connection to the OPC UA Server after the connection has been interrupted. The tiles that display

the data from the OPC UA Server are then marked with red borders.

Remedy: Switch to another page and then back again.

(3325)

- Displaying the Security ID of the PITreader

The Security ID of the PITreader has the data type UInt64. Variables of this data type cannot be displayed.

Remedy: The Security ID is displayed on the "PITreader Status" tile.

(3522)

► PASvisu Viewer for PMI

- Japanese keyboard on PMI

The PASvisu Viewer for PMI does not provide a Japanese keyboard.

(3059)

- Red borders after download

In rare cases, it is not possible to display the variable values after downloading the PSS 4000 project. The tiles are then marked with red borders.

Remedy: Start PMI again.

(3198)

► PASvisu Viewer for PC

- "Button" tile, "pushbutton" type

The pushbutton does not work on all touchscreens.

Remedy: Make sure that the current driver for the touchscreen is installed.

If this does not help, you can use a set button and reset button instead of the pushbutton.

(1563)

- Display problems

There may be problems displaying graphic elements.

Remedy: In the Windows display settings, set a text size of "Smaller – 100% (default)".

► HTML 5-compatible web browser

- Google Chrome: Behaviour of touchscreens

The behaviour of the PASvisu project on touchscreens is improved if the following setting is made in Google Chrome:

Enter "Chrome://flags" in the field for the URL address and deactivate the property "Disable touch adjustment".

(2614)

Changes in Version 1.14.1

Optimisations

The following security vulnerabilities have been rectified:

- CVE-2022-44729
- CVE-2022-44730
- CVE-2023-3935
- CVE-2023-4863
- CVE-2023-5217
- CVE-2023-5218
- CVE-2023-6345
- CVE-2023-6346
- CVE-2023-6347
- CVE-2023-6350
- CVE-2023-6351
- CVE-2023-34188
- CVE-2023-45795
- CVE-2023-45796

You'll find the security advisories under www.pilz.com/security.

Please note: The PMI v7 is not affected by the security vulnerabilities, therefore there is no new version of the PASvisu server and the PASvisu viewer for PMI v7. Version 1.14.0 of PASvisu server for PMI v7 is compatible with version 1.14.1 of PASvisu Builder.

Changes in Version 1.14.0

New features

► New "Key-in-Pocket sign in list" tile

Tile for displaying the sign in list for an access point of a Key-in-Pocket system. The tile shows how many users are currently signed into the sign in list. In addition, a graphic can be used to highlight whether the sign in list is empty or whether users are signed in. The content of the sign in list is displayed by clicking on the tile.

By assigning access rights it is possible to determine which operators of the online project can open the sign in list, view all the content in the sign in list and manage the transponder details (first names, surnames and telephone numbers of the transponder owners).

Optimisations

► Security

– Authentication on the online project

When a new project is created, the **Authentication on the project is required** option is enabled automatically.

– Authentication via password

You can configure whether the user themselves must enter the user name during authentication (default setting) or whether they can select the user name from a list. If the user name can be selected from a list, this reduces security because all user names are exposed.

– Data source PSS 4000 project

The following security policies are now also supported:

Basic256-Sha256

Aes128-Sha256-RsaOaep

Aes256-Sha256-RsaPss

– Security vulnerabilities

Several non-critical security vulnerabilities have been rectified.

► "HTML display" tile

The tile can now also be used to open the web application on a PITreader. To display the web application, forms, modals, scripts and downloads must be allowed in the tile properties.

► Windows 8

Windows 8 is no longer supported. PASvisu can also be installed on Version 8 of Windows, but this version has not been tested and Pilz does not offer any support for it.

Changes in Version 1.13.0

New features

► Tile groups

Multiple tiles and shapes that are repeatedly used together can be saved as a tile group. The tile group will then be available in the tile library under the "Tile groups" category.

► Data logging

– New "data log display" tile

Tile for displaying the records from a data log in a table. The logging rule for which the data log is to be displayed can be selected in the online project. In the online project you can also select which variables are to be displayed (maximum 5 variables) and the time period for which the records are to be displayed.

– Variables of the STRING data type

Variables of the STRING data type with maximum 255 characters can be recorded. The number of characters is configurable.

– Display names for Visu variables

A display name for each Visu variable can be entered in the variable editor. When data logging, the display name can be used to identify the variable in the data log.

– Variable identification in the data log

The identification that is to be used for the variables in the data log can be configured for each logging rule. The following options are available: name of the Visu variable, namespace element/address or display name.

► Life bit on the PASvisu Server

When data from the visualisation is to be processed in a data source, e.g. when an operation in the data source is ended via a button in the visualisation, then the data source should know whether the connection to the PASvisu Server is working correctly or has been broken. The life bit on the PASvisu Server serves this purpose.

The life bit is a variable of the BOOLEAN data type, whose value is toggled every 500 ms. This variable can be monitored in the data source. If the value of the variable no longer changes, then the connection to the PASvisu Server is broken.

Use of the life bit is optional. No life bit can be configured for the data source "PASmotion project".

Optimisations

► PASvisu Viewer for PMI: User management

When the PMI was restarted, changed passwords were reset to the default passwords and newly created users were deleted. This problem has now been rectified. (3496)

► PASvisu Viewer: Shapes

In some cases, the positions of shapes were changed when switching pages. This problem has now been rectified. (3533)

► Security vulnerabilities

Several non-critical security vulnerabilities have been rectified.

Changes in Version 1.12.0

New features

- ▶ New data source: PITreader
A PITreader that contains an OPC UA Server can be configured as a data source. Data from the OPC UA Server can be visualised and the PITreader can be used for user authentication on the online PASvisu project.
- ▶ New "PITreader status" tile
Tile for displaying the status information of a PITreader and/or the transponder.
- ▶ Authentication with PITreader
If the security measures "Authentication on the online project" and/or "Access protection for tiles" are used, a user must log in to the project. When logging in, the user can now use a PITreader for authentication.
- ▶ Windows 11
Installation and operation of the PASvisu Builder, PASvisu Server and PASvisu Viewer on Windows 11 is supported.

Optimisations

- ▶ PASvisu Viewer for PMI: "PSS 4000 diagnostic list" tile
In rare cases, "Information" status was displayed for a message, although the actual status was "Error". This problem has now been rectified.
(3227)
- ▶ Security vulnerability
The following security vulnerabilities have been fixed:
 - "zip-slip" attacks on the PASvisu Server were possible. This vulnerability has now been fixed.Please refer to the guidelines in the security advisory "2022-002" (document number 1006472). You'll find the security advisory under www.pilz.com/security.

Changes in Version 1.11.0

New features

- ▶ New tile "HTML display"
This tile is used to display websites whose URLs begin with "http" or "https".
The tile is available for PC and PMI v8 display units.
- ▶ "Linear/radial gauge" tile
It is possible to change the width of the bar and the colour of the bar/pointer.
- ▶ "MSO flex visu" tile
The "MSO flex visu" tile has a version. The version can be displayed in the online project.
- ▶ Data source "OPC UA Server"
SHA-2 is supported with the data source OPC UA Server.

Optimisations

- ▶ Login
When logging in to the online project and the PASvisu Server, after 5 failed login attempts the login is blocked for 1 minute before you can try again.
- ▶ Default directory
The default directory for application data (e.g. certificates) on a PC or PMI v8 is now "C:\Users\<User name>\AppData\Local\Pilz\PASvisu". Some application data (e.g. installation logs) is still stored under "C:\programdata\Pilz\PASvisu".
- ▶ Windows 8 and 10, 64 Bit
Installation and operation of the PASvisu Builder, PASvisu Server and PASvisu Viewer are only supported on the 64 Bit version of Windows 8 or 10.
PASvisu Server and PASvisu Viewer can be installed and operated on the 32 Bit version, but this version has not been tested and Pilz does not offer any support for it. The PASvisu Builder can no longer be installed on the 32 Bit version.
- ▶ CodeMeter Runtime
Version 7.21a of the CodeMeter Runtime from WIBU-SYSTEMS AG is now installed with the software tool PASvisu. The CodeMeter Runtime is used to manage the licences. The CodeMeter Runtime security has been optimised.
- ▶ Session timeout
When a session timeout was configured in Version 1.10.0, it was only monitored when user management was also configured. This problem has now been rectified.
(3377)
- ▶ PMI v7: USB sticks
All types of USB sticks are now recognised on a PMI v7.
(3359)

Changes in Version 1.10.0

New features

- ▶ New "PASscope" tile
Tile to display the PASscope tool. The PASscope tool is a PC-based oscilloscope. This oscilloscope function can be operated for different PASMotion devices (controllers and servo amplifiers).
- ▶ New data sources
 - Modbus/TCP
Data from Modbus/TCP connections to any devices can be visualised. The PASvisu Server must always be the connection Client.
 - PASMotion project
A PASMotion project can be used as a data source for the "PASscope tile". Individual variables from the PASMotion project cannot be visualised.
- ▶ Enhanced security support
 - https connections
Communication between PASvisu Server and PASvisu Builder, PASvisu Client and the configuration tool of the PASvisu Server is via https connections. The connections are encrypted asymmetrically. X.509 certificates are used.
 - Authentication on the online project
Configuration can be such that a user needs to log in to the online project in order to obtain access to the online project. If authentication on the online project is activated, data on the PASvisu Server is also protected against unauthorised access.
 - Authentication on the PASvisu Server
Configuration can be such that a user needs to log in to the PASvisu Server in order to obtain access to the PASvisu Server. Login is required when downloading a project in the PASvisu Builder and when configuring the PASvisu Server in the configuration tool of the PASvisu Server.
- ▶ User management: Target page after login
For each user it is possible in user management to configure the target page that is to be opened after the user has logged in to the online project.
- ▶ New PMIs
PASvisu projects can now be displayed on the PMI v807 and PMI v815, plus it is possible to install the PASvisu Server.

Optimisations

- ▶ Windows 7
Windows 7 is no longer supported. PASvisu can also be installed on Version 7 of Windows, but this version has not been tested and Pilz does not offer any support for it.
- ▶ CodeMeter Runtime
Version 7.10a of the CodeMeter Runtime from WIBU-SYSTEMS AG is installed now with the software tool PASvisu. The CodeMeter Runtime is used to manage the licences. In older versions of the CodeMeter Runtime there were several security vulnerabilities, see security advisory "WIBU CodeMeter Runtime" (document number 1005485).

► "PSS 4000 device status" tile

In projects created using PASvisu Builder Version 1.9.0, the "PSS 4000 device status" tile was not displayed correctly. This problem has now been rectified.

► Start page on the PC and PMI v8

In rare cases, the start page was not displayed when opening the online project on a PC or PMI v8. This problem has now been rectified.

Changes in Version 1.9.0

New features

► New "MSO flex visu" tile

Tile for selecting modes of safe operation. The tile is part of the system MSO flex visu. The system comprises:

- Authentication system PITreader
- Safety controller to evaluate and activate the selected operating mode e.g. PNOZmulti or the safety controller from the automation system PSS 4000
- Operator terminal (HMI) with the MSO flex visu tile for selecting and displaying the operating mode

Details of the system can be found in the System Description MSO flex visu.

► Undo and redo

In the page editor it is possible to undo and redo actions.

► Add variables

Visu variables can be highlighted in the variable editor and added directly to a recipe or logging group.

► PMI v812 is supported

PASvisu projects can now be displayed on the PMI v812, plus it is possible to install the PASvisu Server.

Optimisations

► PMI v507 and PMI v512 are no longer supported.

► Graphics

Graphics in ICO format are no longer supported.
(3261)

► Filters in tables

When a table is filtered by text and then you press "Ctrl + A", only the filtered rows are now highlighted, as expected.
(3266)

Changes in Version 1.8.0

New features

- ▶ Multiple data sources
Data from multiple data sources can be visualised with a PASvisu project. For example, two PNOZmulti projects and a PSS 4000 project can be visualised together.
- ▶ Alarms
A graphic can be configured for each alarm; this is displayed in the details in the alarm list.
- ▶ Creating multiple Visu variables
In the variable editor it is now possible to create multiple Visu variables at once. In the tree, highlight one or more namespace elements/addresses, right-click on the highlight and select **New Visu variables**.
- ▶ Recipes
It is possible to configure the number of decimal places that are to be displayed for the setpoint and actual value in the online project. The actual value read back from the controller will be rounded to this number of decimal places. When the setpoint is compared with the actual value, the rounded value is used in the comparison.
- ▶ "Data logging" tile
When exporting, it is now possible to state the time period for which the data is to be exported.
- ▶ Align and distribute tiles and shapes
Tiles and shapes can now be aligned or distributed together. Previously these operations could be applied only to tiles or only to shapes.
- ▶ Value range of identifiers
The value range for the page identifier and the identifier for recipe data sets has been changed from 1 ... 9999 to 1 ... 1000000.
- ▶ "PSS 4000 diagnostic list" and "PSS 4000 diagnostic log" tiles
The name of the corresponding PSS 4000 project can now be displayed on the tile.

Changes in Version 1.7.0

New features

► Recipes

Recipes can be created.

A recipe combines data, which can be used to set parameters for a machine, for example.

The data sets are configured in the offline project. In the online project, the "Recipe" tile can be used to write the individual data sets to the controller. It is also possible to change the values, create new data sets and read the controller's current values into a data set. The system variable "WriteRecipeDataSet" can also be used to trigger the writing of a data set to the controller. In this way, for example, the PSS 4000 project can determine which of a recipe's data sets is to be used.

► Variable values for the position and size of tiles

Visu variables can also now be entered for the tile properties x-position, y-position, width and height.

► Variable values for the position and size of shapes

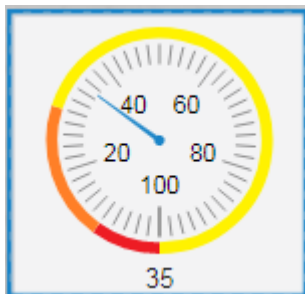
Visu variables can also now be entered for the properties X1, Y1, X2 and Y2.

► Icons for the status tiles

With the "Emergency stop status" tile, you can replace the default icon for the element/block with one of your own graphics. The same applies for the following tiles: "Light curtain status", "Safety gate status", "Two-hand pushbutton status", "Foot switch status", "Enabling switch status" and "Output with feedback loop status".

► "Linear/radial gauge" tile

With the radial gauge it is now possible to configure the angle for the start value and end value. As a result it is also possible to implement scales up to 360 degrees.



► "Static text" tile

This tile can also now be used to enter text. A prerequisite is that the data source must support write access to namespace elements/addresses of the STRING data type. This is not the case with PNOZmulti projects and PSS 4000 projects.

► "PVIS event list" and "PVIS event log" tile

If several languages are available in the PVIS OPC project, the operator can now select the display language for the event list and event log in the online project. Previously only one language was displayed.

Optimisations

► Licensing of PASvisu projects

PASvisu projects no longer need to be licensed. PASunits are no longer needed.
(It is still necessary to license the runtime environment.)

Changes in Version 1.6.0

New features

► New data source: PNOZmulti project

If you wish to create the visualisation for an individual PNOZmulti project, the PNOZmulti project can be used directly as a data source, without the circuitous route via the PVIS OPC project. When downloading the PASvisu project the required data is not only downloaded to the PASvisu Server but also to the OPC UA Server. The PVIS OPC Configurator does not have to be used.

► Trend line graph

The tile has been completely revised.

Up to 10 lines can be displayed in a graph now. Each line represents a variable. Only variables which are logged using the Data logging can be displayed.

The tile is configured in the offline project, however, in the online project it can be adapted very dynamically to the current requirements. The following changes are possible at runtime:

- Selection of the displayed variables
- Colour and label of the lines
- Time period to be displayed
- Value range of the Y axis

In the online project, the representation of the lines can be paused and it can be scrolled forward and backward on the time axis.

In the online project, click on the tile so that the menu for performing actions is displayed.

► Lock/unlock of tiles and shapes

Tiles and shapes may be locked, so that they can no longer be moved. Their properties can still be edited.

► Font size

The font size can now be configured for the following tiles:

- Alarm log
- Alarm list
- PVIS event list
- PVIS event log
- PSS 4000 Diagnostic list
- PSS 4000 Diagnostic log

► Visualisation on PMIs

PASvisu projects can now be displayed on the following PMIs, plus it is possible to operate the PASvisu Server:

- PMI v704e
- PMI v707e

The possible system layouts are described in the online help for the PASvisu Builder.

Changes in Version 1.5.0

New features

► Data logging

The PASvisu Server can log the values of variables.

There are three different methods of data logging:

- Periodic data logging

The values of the variables are stored at configurable intervals (polling interval).

If required, a variable can be used to activate and deactivate data logging.

- Data logging on data change

At configurable intervals (polling interval), a check is carried out to see whether the value of a certain variable has changed. If this is the case, the values of the variables are stored.

If required, a variable can be used to activate and deactivate data logging.

- Triggered data logging

Recording of the variable values is triggered by a boolean variable. The values are recorded and stored when the value of the variable switches from FALSE to TRUE.

The "Data logging" tile is used to access the stored data.

► User management

- In the online project you can now also create new users or delete users.

- In user management, the language in which the project will be displayed as soon as the user logs on can be assigned to each user. Should users wish to use a different language, they can switch the language. The language setting is stored separately for each Visu Client.

► New tile "PDF button"

Tile used to open a PDF file. The PDF file is displayed in the program that is defined as the default program for PDF files on the Visu Client device.

The PDF file can be imported into the project or the PDF file is linked to the project via a URL address.

This tile is suitable for the PASvisu Viewer PC. The tile is displayed in the PASvisu Viewer PMI, but the PDF file cannot be opened.

► Draw shapes

Lines, rectangles and ellipses can be drawn on pages and page templates.

► Align and distribute tiles

Several tiles can be selected and then aligned or distributed.

► Change properties of several elements

If several tiles are selected, tile properties will only display the properties which are available for all tiles. These properties can be changed simultaneously for all selected tiles.

The same applies for the properties of several shapes, pages, page templates and logging groups. All selected elements must be of the same type, i.e. tiles and shapes may not be selected simultaneously.

► "Button" tile: Display feedback

The state of a variable can be displayed on the "Button" tile. For example, if the button is used to open a valve, the variable can provide information as to whether the valve has actually opened.

- ▶ "PVIS event log"
The log can be exported.

Optimisations

- ▶ Opacity of tiles
The property "Opacity" can now also be controlled via a variable.
- ▶ Download manager
The dialogue box with all the download settings is now in the **Modules** menu and no longer in the **Target** menu. The corresponding button can now be found on the far right of the toolbar.

Changes in Version 1.4.0

New features

► Alarms

Alarms can be created and displayed.

Alarms are used to monitor values of variables. For example, if the value of a variable is greater than a fixed value or the value of another variable, an alarm message is displayed. It is possible to configure whether an alarm message must be acknowledged by the operator. A log shows when an alarm message arrives, when it is acknowledged and when it is cleared. The alarm log can be exported.

The following tiles are used to display the alarms:

- "Alarm log"
- "Alarm list"
- "Alarm status"

► Visualisation of PNOZmulti projects

Visualisation of PNOZmulti projects is supported. The following tiles are available for PNOZmulti:

- "PVIS event log"
Tile for displaying and exporting the event log
- "PVIS event list"
Tile for displaying the event list
- Status tiles
The tiles "E-STOP status", "Light curtain status", "Safety gate status", "Two-hand pushbutton status", "Foot switch status", "Enabling switch status" and "Output with feedback loop status" can be used to visualise the corresponding elements of the PNOZmulti project.

There is read access to the inputs and outputs in the PASvisu project, as well as to the virtual inputs and outputs of a PNOZmulti. There is also write access to the virtual inputs.

A PVIS OPC project is required in order to visualise PNOZmulti projects. A PVIS OPC project may contain one or more PNOZmulti projects.

► Place tiles over each other

Tiles may overlap or fully cover each other.

► Page template

The entire page can be configured as a page template. There are no longer any page template areas, which are reserved for the page template.

► New tile "SafetyEYE Live Video"

The new tile "SafetyEYE Live Video" is used to display the image from a SafetyEYE Live Video Server.

► Tile "PSS 4000 diagnostic log"

The diagnostic log can be exported.

Optimisations

► OPC UA Server

PASvisu exclusively supports the OPC UA Server. It is no longer possible for the PASvisu Server to communicate with a PSS 4000 OPC Server classic.

Changes in Version 1.3.1

Optimisations

► PASvisu Viewer for PC

- User management on tiles

Even if a tile was protected by the user management, all users were able to enter values in the tile. This problem occurred only in version 1.3.0 and it has now been rectified.

(3064)

► PASvisu Viewer for PMI

- Tile "PSS 4000 diagnostic log"

In version 1.3.0 the time stamp in the diagnostic log was not displayed. This problem has now been rectified.

(3065)

Changes in Version 1.3.0

New features

- ▶ OPC UA Server
Data from OPC UA Servers can now be visualised. This may be an OPC UA Server from Pilz or from another manufacturer.
- ▶ Project languages
It is now easier to create project languages. All texts are now visible in the project language editor and can be edited and translated there. However, the texts can also be exported to a TXT or CSV file for translating.
- ▶ Grid size can be set
The required grid size can now be set on each page.
Positioning of the tiles can be more flexible as a result and the tile size can also be set at will.
- ▶ "Decimal value" tile
Values can now also be displayed in "Scientific format", e.g. "1.234E+1".
- ▶ Windows 10
Operation of the PASvisu Builder and of the PASvisu Server under Windows 10 is supported.

Optimisations

- ▶ On-screen keyboard
Whether an on-screen keyboard is to be displayed for data entry in the online project can now be configured centrally in the project-wide properties. The setting is no longer made in the tile properties.
- ▶ "Slider" tile
Operation of the slider is now identical in the PASvisu Viewer for PC and PASvisu Viewer for PMI. To adjust it you can either drag the slider or click on the scale.
(2996)
- ▶ Alphanumeric keyboard in the PASvisu Viewer
The PASvisu Viewer for PMI now also has an alphanumeric keyboard.
(2998)

Changes in Version 1.2.0

New features

- ▶ Visualisation on PMIs

PASvisu projects can now be displayed on the following PMIs, plus it is possible to install the PASvisu Server:

- PMI v507
- PMI v512

The possible system layouts are described in the online help for the PASvisu Builder.

- ▶ Licensing of the runtime environment

If the PC on which the PASvisu Builder is installed has an Internet connection and the PC is also connected to the device on which the PASvisu Server is installed, then the runtime environment can now be licensed using the PASvisu Builder.

Optimisations

- ▶ "Increment/decrement" tile

If the endless loop option is selected, then incrementing will continue with the start value once the end value is reached.

Example: 0 -> 5 -> 10 -> 15 -> **20 -> 0** -> 5 -> 10...

Changes in Version 1.1.0

New features

- ▶ Project languages
Project languages can be used to create a project in several languages.
- ▶ New tiles
 - Administration
The administration tile can be used in the online project to open a dialogue box, in which the users' passwords can be changed. The system time of the Visu Host device can also be changed.
 - NUMBER button
Tile for entering a value of the NUMBER data type
 - Switch language
Tile for switching between project languages
- ▶ System variables
System variables provide system information and/or enable intervention into the system behaviour. The following system variables have been introduced:
 - ActivePage
The system variable contains the page identifier of the last page requested by the PASvisu Server.
 - SetPage
When a page identifier is written in the system variable, the corresponding page is opened on all Visu Clients.
- ▶ User may change his own password online
Depending on the configuration, the user is permitted to change his own password in the online project. This happens on the login/logout tile.
- ▶ Pop-up windows in the PASvisu Viewer
Pop-up windows containing messages can now be moved.
- ▶ Tile: Decimal value
A variable can also now be used at runtime to determine whether the tile is to be used only to output values or also to enter values.

Optimisations

- ▶ Default ports on the PASvisu Server
The default HTTP port on the PASvisu Server has been changed from "8081" to "40856".
The default WebSocket port on the PASvisu Server has been changed from "45454" to "40857".
- ▶ "Date and time" tile
The warning "The "Data item" tile property must be configured" was issued even if the time of the Visu Client was to be displayed on the tile. This fault has now been rectified.
(2392)

► Grey window

With certain actions (e.g. when saving the project under a different name, when opening a project or when creating a new project), a grey window could be displayed. This fault has now been rectified.

(2285)

► "PSS 4000 device project" tile

The check sum "FS project" is now also displayed on the tile. This is the check sum "FS project" for the online project.

(2913)

Support

Technical support is available from Pilz round the clock.

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