CENTUM VP
Graphic Conversion Guide

IM 33J01C40-01EN

IM 33J01C40-01EN
6th Edition

Introduction

To upgrade the graphic functions of CENTUM CS 1000/CS 3000 to CENTUM VP in consideration of compatibility, you need to use the special procedure when you convert the project database to CENTUM VP.

This document describes the method to convert graphic files from CENTUM CS 1000/CS 3000 to CENTUM VP considering the compatibility as well as how to use the Graphic Compatibility Check Tool, which is necessary for detecting compatibility issues.

This manual consists of the following chapters:

- Chapter 1. Graphic Conversion

  This chapter defines the graphic conversion.

- Chapter 2. Requirements for Graphic Conversion

  This chapter explains the software and the operating environment required for graphic conversion.

- Chapter 3. Converting the Graphic Files

  This chapter explains the procedure for graphic conversion.

- Chapter 4. Details of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP

  This chapter explains the details about the differences that will result when graphic files of CENTUM CS 1000/CS 3000 are converted to graphic files of CENTUM VP.

6th Edition : Aug. 2019 (YK)

Safety Precautions for Use

Safety, Protection, and Modification of the Product

- To protect the system controlled by the Product and the Product itself and to ensure safe operation, please observe the safety precautions described in this Manual. Yokogawa Electric Corporation ("YOKOGAWA") assumes no liability for safety if users fail to observe the safety precautions and instructions when operating the Product.
- If the Product is used in a manner not specified in the User's Manuals, the protection provided by the Product may be impaired.
- If any protection or safety circuit is required for the system controlled by the Product or for the Product itself, please install it externally.
- Be sure to confirm the specifications and required settings of the devices that are used in combination with the Product by referring to the instruction manual or other documents of the devices.
- Use only spare parts that are approved by YOKOGAWA when replacing parts or consumables of the Product.
- Do not use the Product and its accessories such as power cords on devices that are not approved by YOKOGAWA. Do not use the Product and its accessories for any purpose other than those intended by YOKOGAWA.
- Modification of the Product is strictly prohibited.
- The following symbols are used in the Product and User's Manuals to indicate the accompanying safety precautions:

Indicates that caution is required. This symbol for the Product indicates the possibility of dangers such as electric shock on personnel and equipment, and also indicates that the user must refer to the User’s Manuals for necessary actions. In the User’s Manuals, this symbol is used together with a word “CAUTION” or “WARNING” at the locations where precautions for avoiding dangers are described.

<French> Signale qu’il faut faire preuve de prudence. Ce symbole pour le produit signale la possibilité d’un danger pour le personnel et l’équipement comme un choc électrique, et signale également que l’utilisateur doit se référer au Manuel de l’utilisateur afin de prendre les mesures nécessaires. Dans le Manuel de l’utilisateur, ce symbole est utilisé conjointement avec la mention «CAUTION» ou «WARNING» aux endroits où sont décrites les précautions pour éviter les dangers.

Indicates that caution is required for hot surface. Note that the devices with this symbol become hot. The risk of burn injury or some damages exists if the devices are touched or contacted.

<French> Signale qu'il faut faire preuve de prudence avec la surface brûlante. Les appareils sur lesquels est apposé ce symbole risquent de devenir brûlants. Tout contact physique ou matériel avec ces appareils risque de provoquer des brûlures ou des dommages.

Identifies a protective conductor terminal. Before using the Product, you must ground the protective conductor terminal to avoid electric shock.

Identifies a functional grounding terminal. A terminal marked "FG" also has the same function. This terminal is used for grounding other than protective grounding. Before using the Product, you must ground this terminal.

Indicates an AC supply.

Indicates a DC supply.

| Indicates that a component such as a power supply switch is turned ON.

◯ Indicates that a component such as a power supply switch is turned OFF.

Notes on Handling User's Manuals

- Hand over the User's Manuals to your end users so that they can keep the User's Manuals on hand for convenient reference.
- Thoroughly read and understand the information in the User's Manuals before using the Product.
- For the avoidance of doubt, the purpose of the User's Manuals is not to warrant that the Product is suitable for any particular purpose but to describe the functional details of the Product.
- Contents of the User's Manuals are subject to change without notice.
- Every effort has been made to ensure the accuracy of contents in the User's Manuals. However, should you have any questions or find any errors, contact us or your local distributor. The User's Manuals with unordered or missing pages will be replaced.

Warning and Disclaimer

- Except as specified in the warranty terms, YOKOGAWA shall not provide any warranty for the Product.
- YOKOGAWA shall not be liable for any indirect or consequential loss incurred by either using or not being able to use the Product.

Notes on Software

- YOKOGAWA makes no warranties, either expressed or implied, with respect to the Software Product's merchantability or suitability for any particular purpose, except as specified in the warranty terms.
- Purchase the appropriate number of licenses of the Software Product according to the number of computers to be used.
- No copy of the Software Product may be made for any purpose other than backup; otherwise, it is deemed as an infringement of YOKOGAWA's Intellectual Property rights.
- Keep the software medium of the Software Product in a safe place.
- No reverse engineering, reverse compiling, reverse assembling, or converting the Software Product to human-readable format may be performed for the Software Product.
- No part of the Software Product may be transferred, converted, or sublet for use by any third-party, without prior written consent from YOKOGAWA.

Documentation Conventions

Symbols

The following symbols are used in the User's Manuals.

 WARNING	Indicates precautions to avoid a danger that may lead to death or severe injury.
 CAUTION	Indicates precautions to avoid a danger that may lead to minor or moderate injury or property damage.
IMPORTANT	Indicates important information required to understand operations or functions.
TIP	Indicates additional information.
SEE ALSO	Indicates referenced content. In online manuals, you can view the referenced content by clicking the links that are in green text. However, this action does not apply to the links that are in black text.

Typographical Conventions

The following typographical conventions are used throughout the User's Manuals.

Commonly Used Conventions throughout the User's Manuals

- Character string to be entered
  The characters that must be entered are shown in monospace font as follows:

  Example:

  ```
  FIC100.SV=50.0
  ```

- ▼ Mark
  This symbol indicates the description for an item for which you should make a setting in the product's engineering window.

  While operating an engineering window, the help information for the selected item can be accessed from "Builder Definition Items" in the Help menu. Listing more than one definition item after this symbol implies that the paragraph on the page describes more than one definition items.

  Example:

  ```
  ▼ Tag Name, Station Name
  ```

- Δ Mark
  Indicates that a space must be entered between character strings.
  Example:

  ```
  .ALΔPIC010Δ-SC
  ```

- Character string enclosed by braces { }
  Indicates character strings that may be omitted.

  Example:

  ```
  .PRΔTAG{Δ.sheet name}
  ```

Conventions Used to Show Key or Button Operations

- Characters enclosed by brackets [ ]
  When characters are enclosed by brackets in the description of a key or button operation, it indicates a key on the keyboard, a key on the operation keyboard, a button name in a window, or an item in a list box displayed in a window.

  Example:

  To alter the function, press the [ESC] key.

Conventions Used in Command Syntax or Program Statements

The following conventions are used within a command syntax or program statement format:

- Characters enclosed by angle brackets < >
  Indicate character strings that user can specify freely according to certain guidelines.

  Example:

  #define <Identifier> <Character string>

- "..."
  Indicates previous command or argument that may be repeated.

  Example:

  Imax (arg1, arg2, ...)

- Characters enclosed by brackets [ ]
  Indicate character strings that may be omitted.

  Example:

  sysalarm <format character string> [, <output value>…]

- Characters enclosed by separators | |
  Indicates character strings that can be selected from more than one option.

  Example:

  opeguide | <format character string> [, <output value>...]
  OG, <element number> |

Drawing Conventions

Drawings used in the User's Manuals may be partially emphasized, simplified, or omitted for the convenience of description.

Drawings of windows may be slightly different from the actual screenshots with different settings or fonts. The difference does not hamper the understanding of basic functionalities and operation and monitoring tasks.

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CENTUM VP Graphic Conversion Guide

IM 33J01C40-01EN 6th Edition

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1. Graphic Conversion

“Graphic Conversion” in this manual means the conversion from CENTUM CS 1000/CS 3000 graphics to CENTUM VP graphics.

The procedure for upgrading from CENTUM CS 1000/CS 3000 to CENTUM VP is explained in CENTUM VP Installation (IM 33J01C10-01EN).

This procedure includes the steps to convert graphic files of CENTUM CS 1000/CS 3000 to graphic files conforming to the specifications of CENTUM VP graphics. With this conversion, the display and behavior of some graphic objects on CENTUM VP may differ from those on CENTUM CS 1000/CS 3000.

To upgrade the graphic functions of CENTUM CS 1000/CS 3000 to CENTUM VP in consideration of compatibility, you need to use the special procedure when you convert the project database to CENTUM VP.

This document describes the method to convert graphic files from CENTUM CS 1000/CS 3000 to CENTUM VP considering the compatibility as well as how to use the Graphic Compatibility Check Tool, which is necessary for detecting the differences.

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2. Requirements for Graphic Conversion

This chapter explains the software and the operating environment required for graphic conversion.

Operating environment

The following hardware and software are required for graphic conversion:

Hardware

- CENTUM CS 1000/CS 3000 HIS
- CENTUM VP HIS

Software

- CENTUM CS 1000/CS 3000 project database containing the graphic files to be converted
- CENTUM VP Standard Engineering Function
- CENTUM VP Graphic Builder
- Graphic Compatibility Check Tool

SEE ALSO For more information about the requirements for normal upgrading, refer to:

CENTUM VP Installation (IM 33J01C10-01EN)

CENTUM CS 1000/CS 3000 HIS

Used to print out images of the original graphic windows before graphic conversion.

CENTUM VP HIS

Used to print out images of the graphic views after graphic conversion.

CENTUM CS 1000/CS 3000 project database containing the graphic files to be converted

The project database of CENTUM CS 1000/CS 3000 that contains the graphic files you want to convert.

CENTUM VP Standard Engineering Function

CENTUM VP Standard Engineering Function is required to upgrade a CENTUM CS 1000/CS 3000 project database to a database for use in CENTUM VP.

CENTUM VP Graphic Builder

In addition to Standard Engineering Function, Graphic Builder is also required. It is used to modify the CENTUM CS 1000/CS 3000 graphic files before conversion or the CENTUM VP graphic files after conversion.

Graphic Compatibility Check Tool

This tool detects the graphic objects that will or may produce differences which affect compatibility when CENTUM CS 1000/CS 3000 graphic files are converted to CENTUM VP graphic files during upgrading. This tool is applied to the original CENTUM CS 1000/CS 3000 graphic files before conversion, allowing you to detect the graphic objects that will or may produce compatibility-affecting differences in advance.

Based on the differences detected by this tool, the graphic files before or after the conversion should be checked and modified as necessary. The information of the detected differences is displayed in the message area of the tool's window and is also output to a log file (XML format).

This tool runs in the same environment as that of the computer installed with CENTUM VP Standard Engineering Function.

TIP

The Graphic Compatibility Check Tool is included in the CENTUM VP Graphic Builder package.

SEE ALSO

For more information about the operating environment of the computer installed with CENTUM VP Standard Engineering Function, refer to:

General Specifications of the Standard Engineering Function (GS 33J10D10-01EN)

3. Procedure for Graphic Conversion

This chapter explains the procedure for graphic conversion.

3.1 Basic work flow for graphic conversion

The following figure shows the system upgrading work flows that include graphic conversion from CENTUM CS 1000/CS 3000 to CENTUM VP.

This is based on the work flows described in the CENTUM VP Installation manual. The works in double-line boxes are the activities of graphic conversion which is performed with consideration given to graphic compatibility.

For more information about the other works, you need to refer to CENTUM VP Installation; for details about the works in double-line boxes, read section 3.2, “Converting a project database to CENTUM VP project” in this manual.

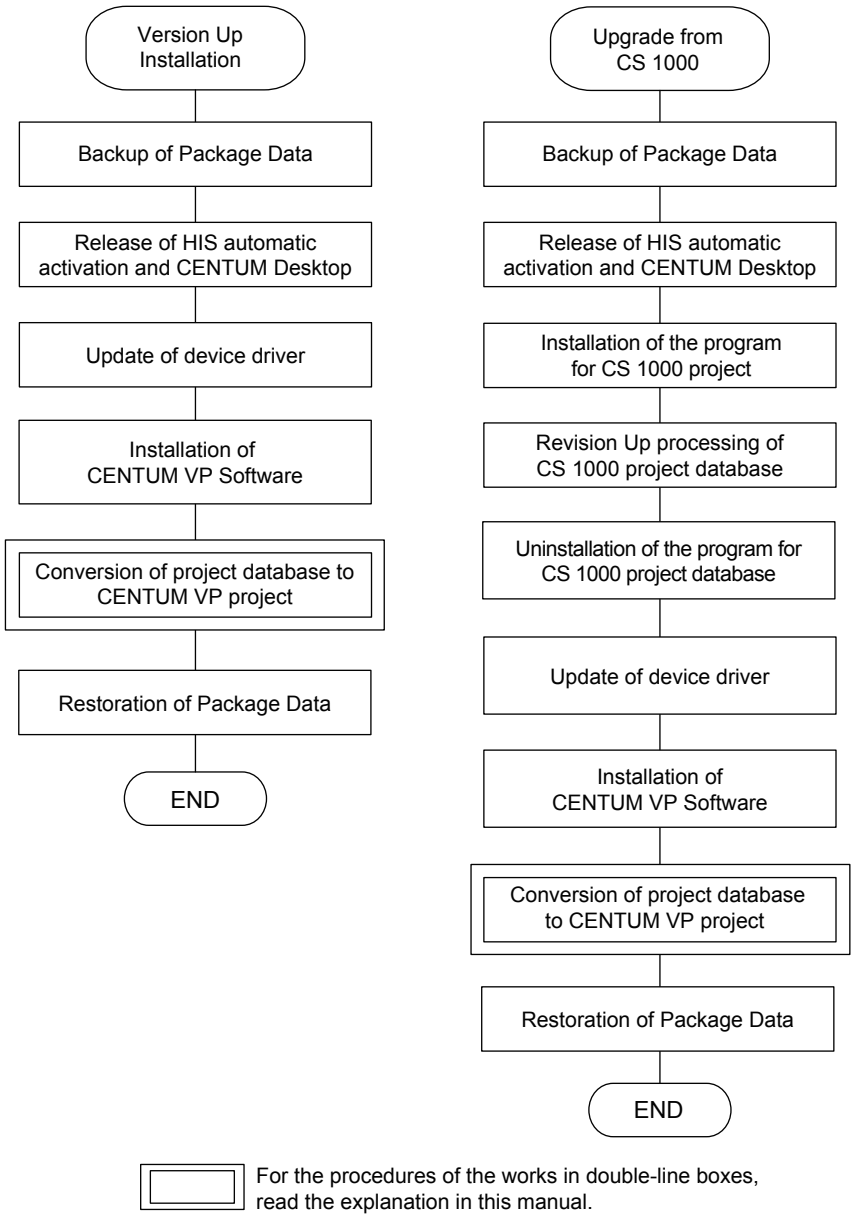

Figure 3.1-1 Flow of Upgrading Works including Graphic Conversion

SEE ALSO For more information about upgrading from CENTUM CS 1000 to CENTUM VP, refer to:

C6.2, “Upgrading from CENTUM CS 1000 to CENTUM VP R6” in the CENTUM VP Installation (IM 33J01C10-01EN)

For more information about upgrading from CENTUM CS 3000 to CENTUM VP, refer to:

C6.1, “Upgrading from CENTUM CS 3000 to CENTUM VP R6” in the CENTUM VP Installation (IM 33J01C10-01EN)

3.2 Converting a project database to CENTUM VP project

Work flow

The work flow of converting an existing project database to a CENTUM VP project is shown below. It shows the detailed steps of “Conversion of project database to CENTUM VP project” in the flowcharts presented in 3.1, “Basic work flow for graphic conversion.” In the following subsections, how to convert a project database to a CENTUM VP project is explained along this work flow.

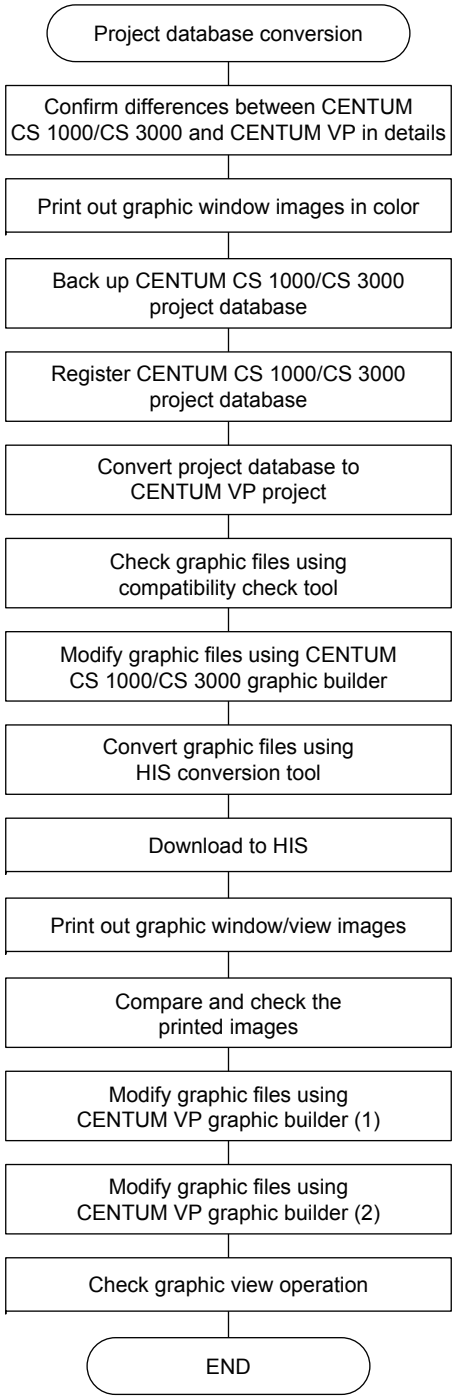

Figure 3.2-1 Converting Project Database to CENTUM VP Project

Confirm differences between CENTUM CS 1000/CS 3000 and CENTUM VP in details

Before you start working with the database, confirm and understand the differences between CENTUM CS 1000/CS 3000 and CENTUM VP in details.

The above chapter explains not only the differences detected by the graphic compatibility check tool in the later stage but also explains the differences not detectable by the tool but you need to know when you perform graphic conversion. Such differences are marked with “None (Not detected)” in the place of rule number.

SEE ALSO For more information about the differences between CENTUM CS 1000/CS 3000 and CENTUM VP, refer to:

4., “Details of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP” on page 4-1

Print out graphic window images in color

Before upgrading the system, print out on CENTUM CS 1000/CS 3000 HIS the images of the graphic windows you are going to convert.

Be careful not to invert the image.

These printouts will be compared with the printouts of the graphic view images after conversion in order to check the differences in appearance.

Back up CENTUM CS 1000/CS 3000 project database

To be prepared for unexpected situation, back up the original project database as you do in normal upgrading.

Register CENTUM CS 1000/CS 3000 project database

Follow these steps to register the CENTUM CS 1000/CS 3000 project database:

1. Place the CENTUM CS 1000/CS 3000 project database in the following folder:
   `<CENTUM VP installation folder>\eng\BKProject` (*1)

   *1: You can also register a project database placed in other location such as the network folder.
2. Start the Project's Attribution Utility.
3. On the Project's Attribution Utility, register the project database, specifying “user-defined project” as the project attribute. Setting this attribute prevents the database from being downloaded to HIS by mistake in later stages.

Convert project database to CENTUM VP project

Follow these steps to convert a project database to a CENTUM VP project.

1. Start System View.
   When System View starts up, project database upgrading processing starts automatically, and the [Revise Project] dialog box appears.

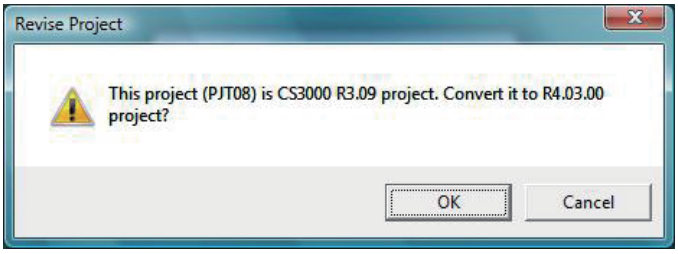

Figure 3.2-2 Revise Project dialog box

2. Click [OK].
   A dialog box appears, asking you whether to back up the database.

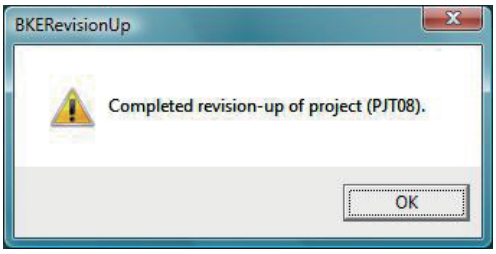

Figure 3.2-3 Revise Project dialog box - Confirming the back up

3. Do either of the following operations:
   - If you don't want to back up the database,
     click [No].
   - If you want to back up the database,
     click [Yes] and specify the location where the database is backed up.

   A dialog box appears, telling that the project has been upgraded.

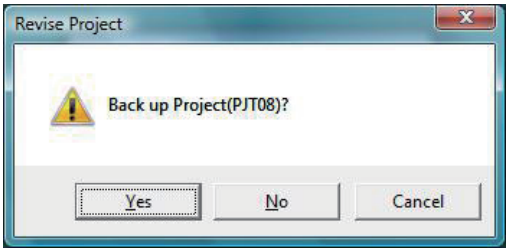

Figure 3.2-4 Dialog Box Indicating that Upgrading of the Project is Completed

4. Click [OK].
   A dialog box related to HIS database appears.

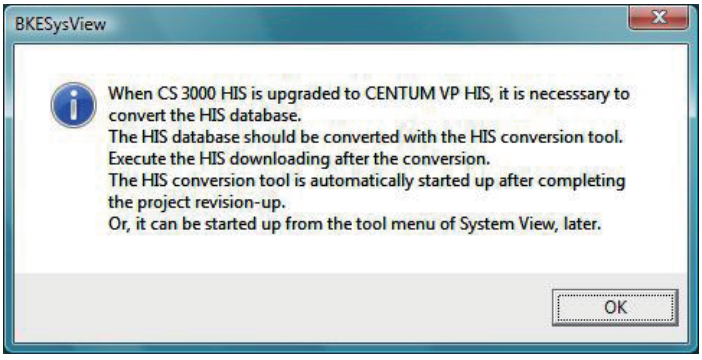

Figure 3.2-5 Dialog Box Related to HIS Database

5. Confirm the messages in the dialog box and click [OK].

HIS Database Conversion Tool window appears.

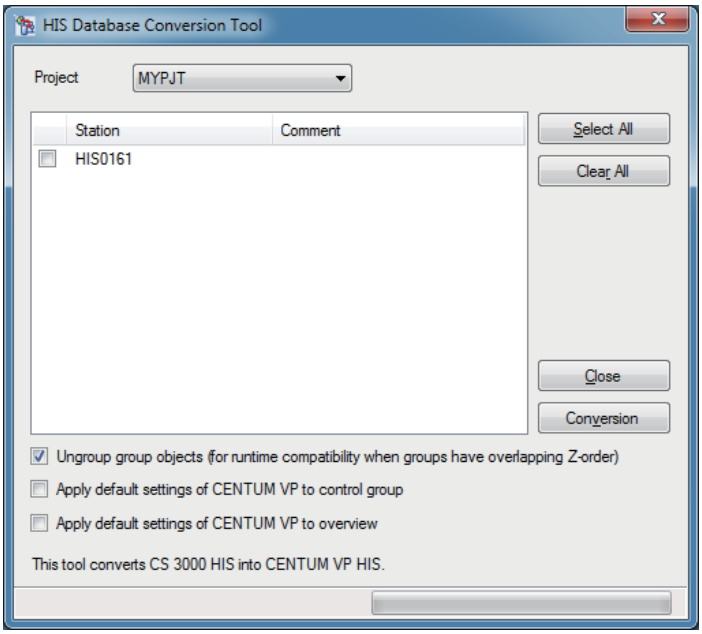

Figure 3.2-6 HIS Database Conversion Tool

6. Do not select any HIS because HIS conversion should be performed later.
   For the conversion of graphic linked parts that automatically runs after you close this dialog box, clear the [Ungroup group objects (for runtime compatibility when groups have overlapping Z-order)] check box and click the [Close] button.

   A dialog box related to graphic linked parts appears.

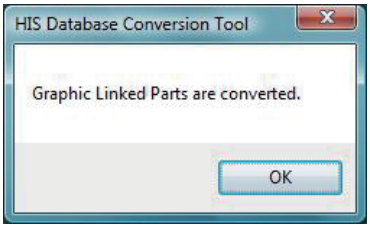

Figure 3.2-7 Dialog Box Related to Graphic Linked Parts

7. Click [OK] to start conversion of linked parts.
   The project is registered with System View when the conversion is finished.

Check graphic files using Graphic Compatibility Check Tool

Use the Graphic Compatibility Check Tool to detect graphic objects that can cause compatibility-affecting differences.

If such objects are detected, the graphic file should be modified as necessary using the graphic builder.

Follow these steps to check for compatibility:

1. Start the Graphic Compatibility Check Tool.

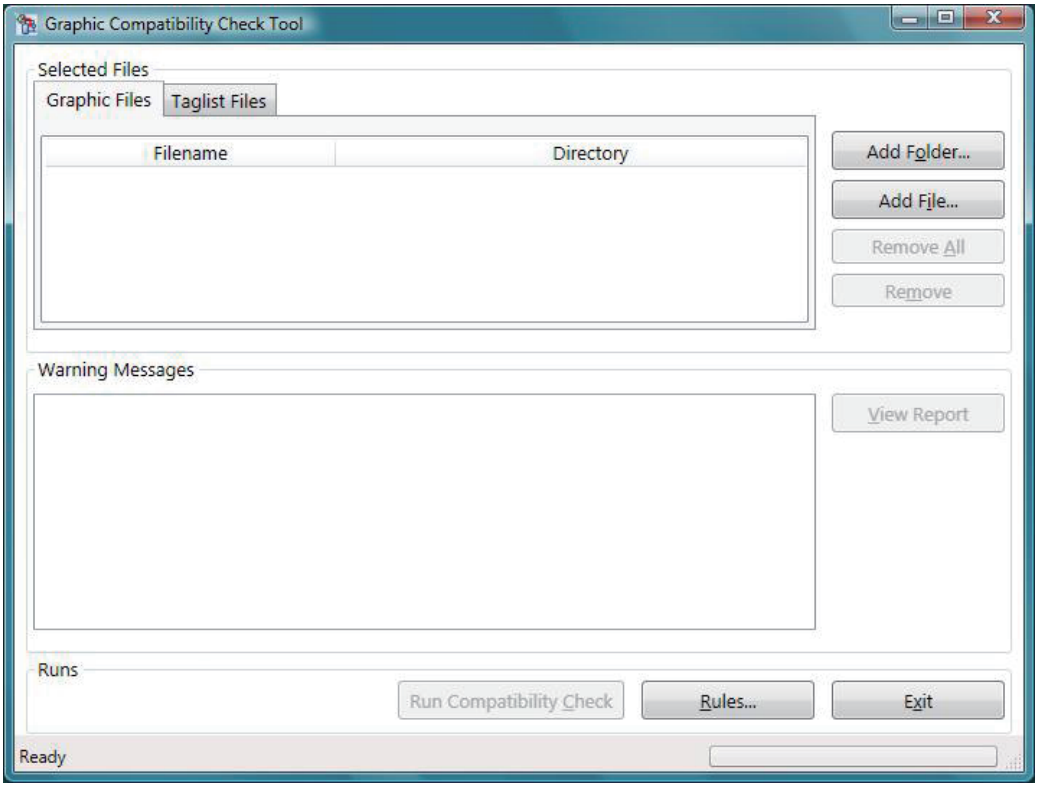

Figure 3.2-8 Graphic Compatibility Check Tool

2. Click the [Add Folder] or [Add File] button and select the graphic file to be subjected to the compatibility check from the database you have converted to a CENTUM VP project.
   You can select files with extensions EDF, SVA, or LPT.(*1)

   If you have clicked [Add Folder], all the files with these extensions in the selected folder are listed in the Selected Files list.

   *1: For both CENTUM CS 1000/CS 3000 graphic files and CENTUM VP graphic files, the extension of builder files and standalone files are .EDF and .SVA, respectively.
   However, only the graphic files of CENTUM CS 1000/CS 3000 are added to the Selected Files list.
   Graphic files with extension .LPT are the linked parts files of CENTUM CS 1000/CS 3000. (Linked parts files of CENTUM VP has the extension .LPX.)

3. Click the [Rules] button.
   The Rule Selector dialog box appears.

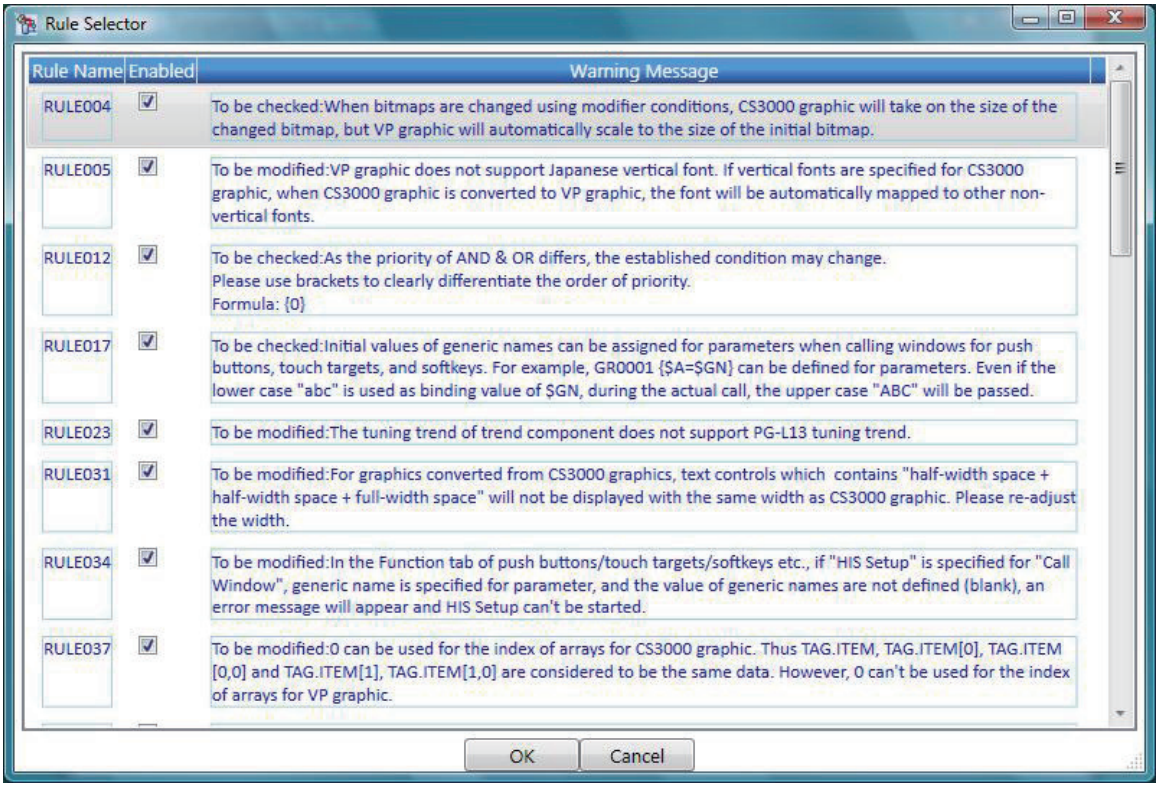

Figure 3.2-9 Rule Selector Dialog Box

4. Select the rule numbers of the issues to be detected in the compatibility check and click [OK]. (Basically, you do not need to change the default selections.)

5. Click the [Run Compatibility Check] button to start the compatibility check.
   If any objects that cause compatibility-affecting differences are detected, the results are shown in the [Warning Messages] list of the dialog box and also output to a log file (XML format).

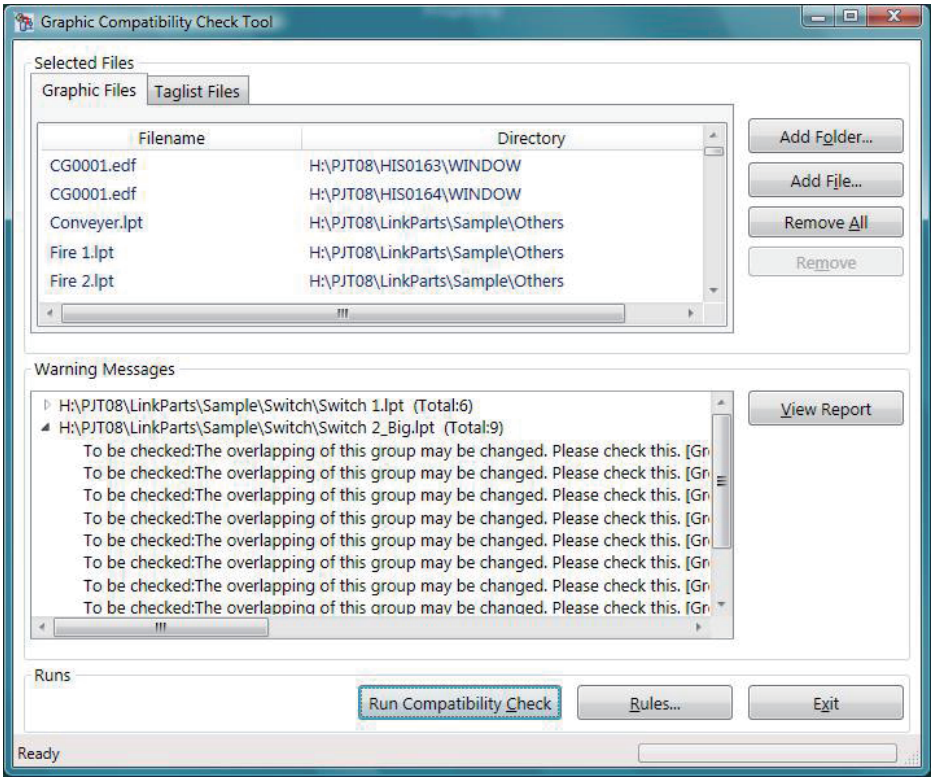

Figure 3.2-10 Detected Results Displayed in the Warning Messages Area

TIP

The files initially shown in the list are in the order they are detected during a search. The compatibility check is performed on them in the order shown in the list, and the results of checking are output to the log file in the same order.

If you want to sort the files alphabetically to view the results of checking in that order, click an item in the [Filename] column of the [Selected Files] list.

6. To view the contents of the log file, click the [View Report] button.
   The following window is displayed.

   The files containing any compatibility-affecting difference are indicated with a red mark at the head of the line.

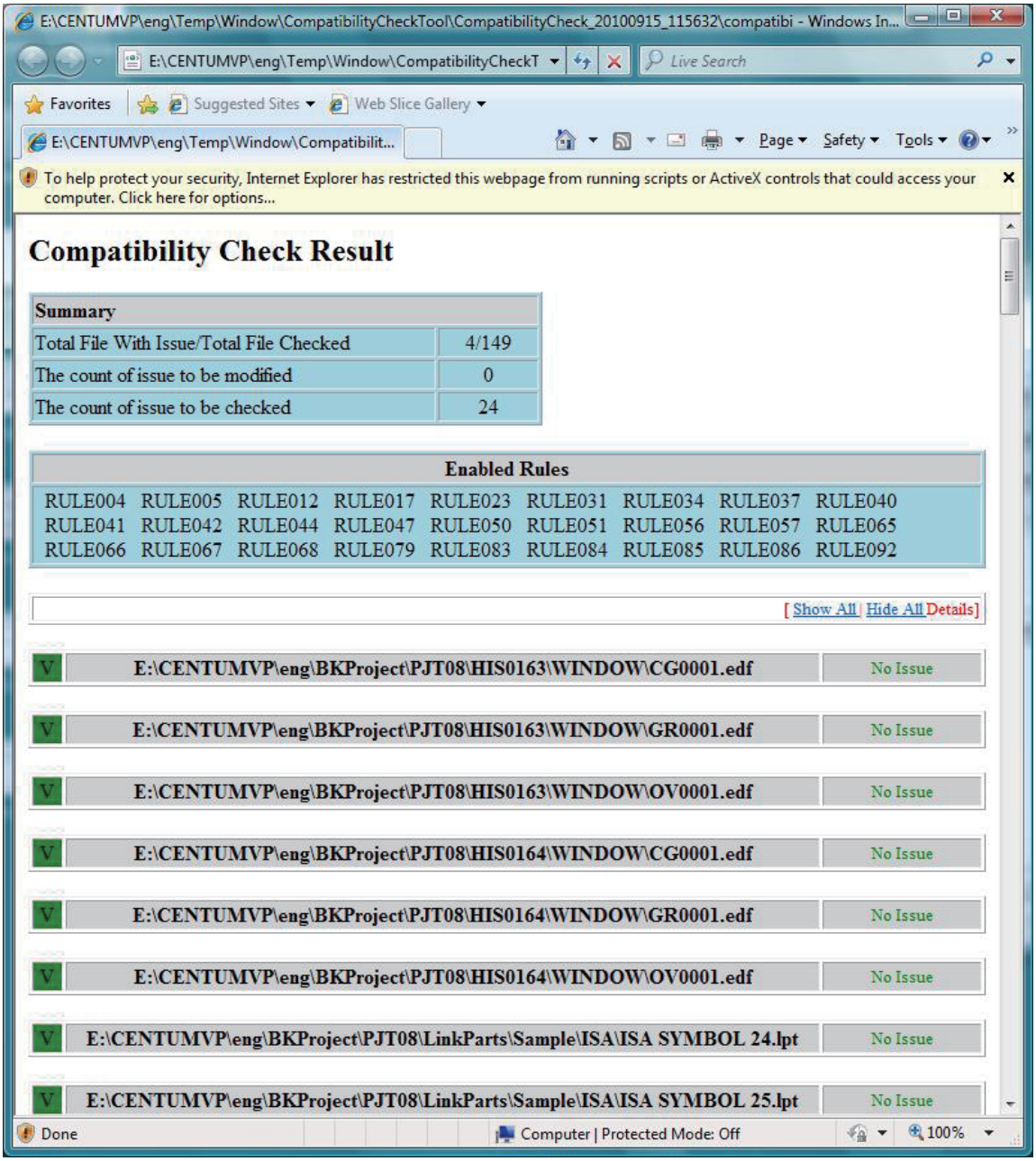

Figure 3.2-11 Results of Compatibility Check (Log File in XML Format)

TIP

The log files created by Graphic Compatibility Check Tool cannot be properly displayed on Internet Explorer 9.0. Do any of the followings:

- Use Microsoft Excel to view the files.
- Use Internet Explorer 8.0 to view the files.
- Set Compatibility View to Internet Explorer 9.0

From menu bar, choose [Tools] > [Compatibility View settings], on the displayed dialog box, check the option of [Display all websites in Compatibility View].

7. To view the contents of the log file on Microsoft Excel, right-click on the file compatibility_result.xml in the following folder and select [Open with] > [Microsoft Office Excel] from the menu.

   `<CENTUM VP installed folder>\eng\Temp\Window\ComptibilityCheckTool\Compatibility-Check_yyyyMMdd_HHmmss` (*1)

*1: yyyy = year, MM = month, dd = date, HH = hour, mm = minute, ss = second

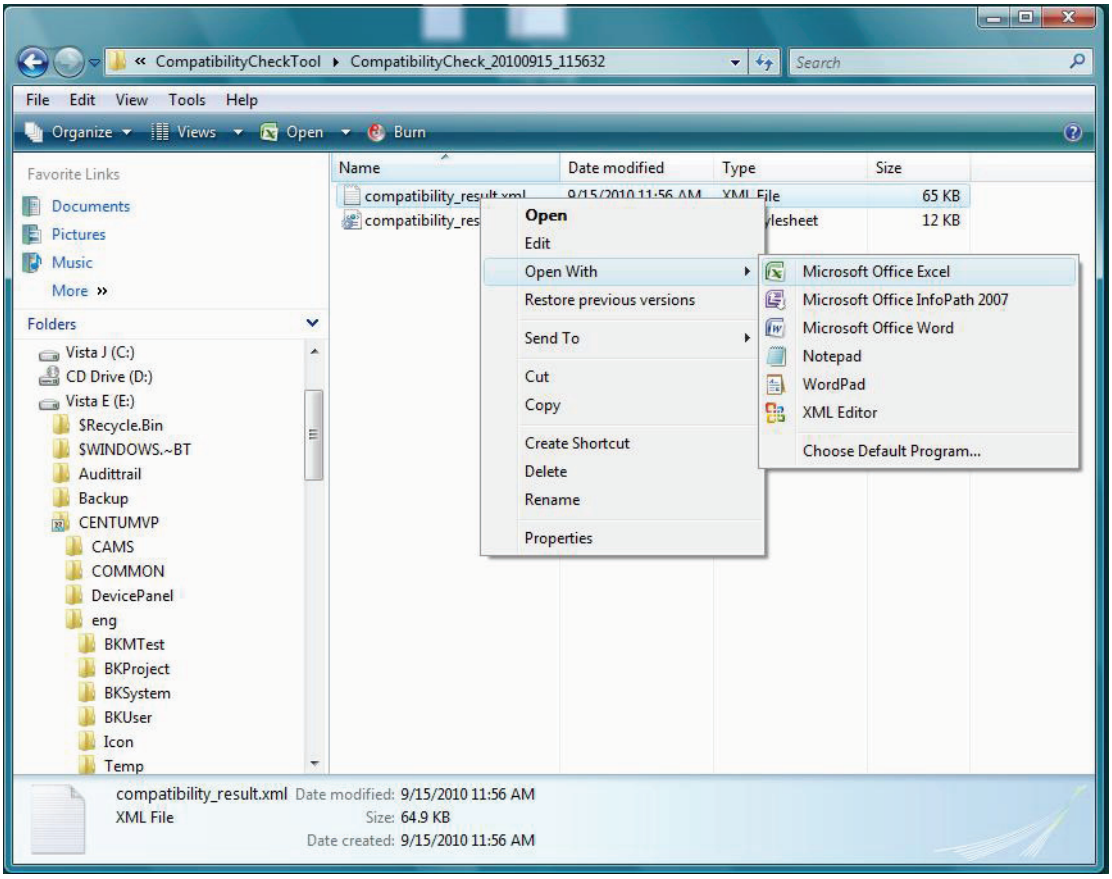

Figure 3.2-12 Opening Log File on Microsoft Excel

The [Import XML...] dialog box appears.

Figure 3.2-13 Import XML… Dialog Box

8. Select the [Open the file without applying a stylesheet] option and click [OK].
   The [Open XML] dialog box appears.

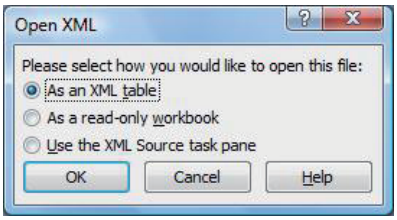

Figure 3.2-14 Open XML Dialog Box

9. Select the [As an XML table] option and click [OK].
   The XML file is opened on Microsoft Excel.

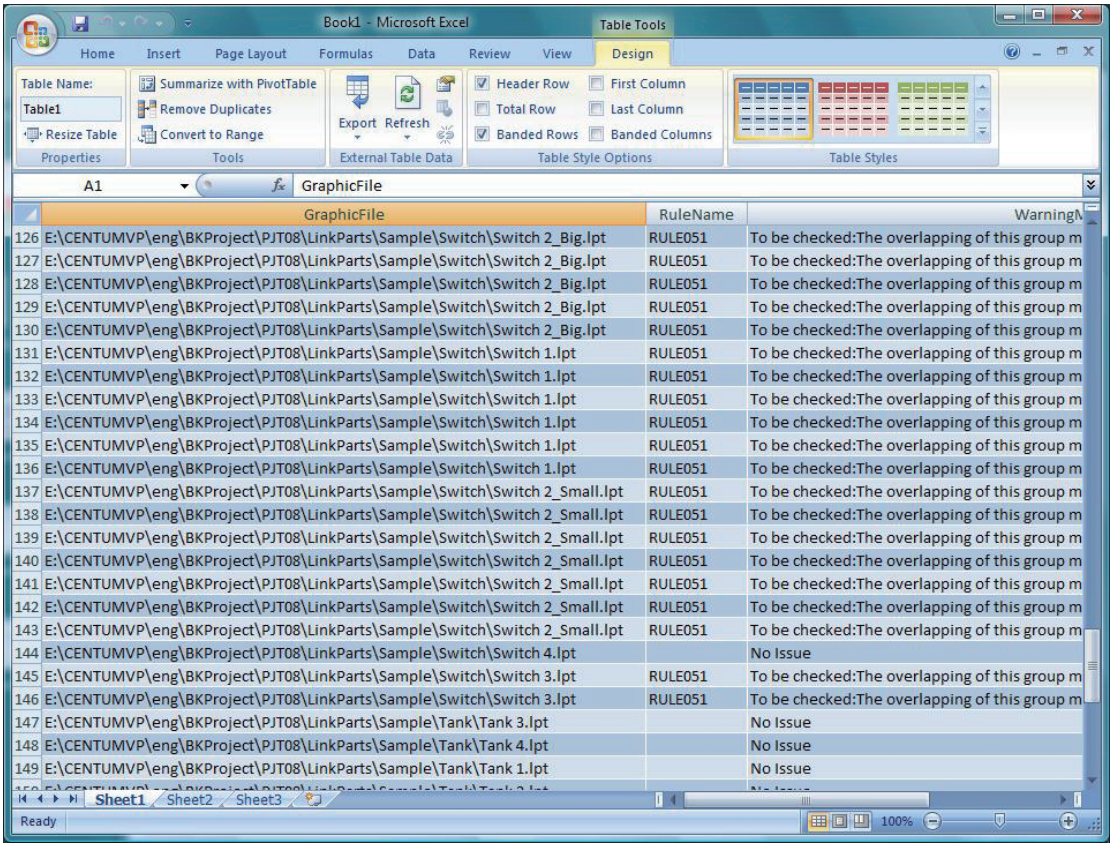

Figure 3.2-15 Example of XML File Opened on Microsoft Excel

The information items shown in each column of the file are shown below:

Table 3.2-1 Information Shown in Log File Columns

Column	Header title	Description
1	GraphicFile	Full file path name to the file for which compatibility check was performed
2	RuleName	When a compatibility-affecting difference is detected, the rule name used for detection is displayed.
3	WarningMessage	Description of the detected compatibility-affecting difference
4	ObjectName	Name of the object containing the compatibility-affecting difference
5	ObjectType	Type of the object containing the compatibility-affecting difference
6	ObjectID	Object number of the object containing the compatibility-affecting difference
7	GroupPath	When the object containing the compatibility-affecting difference is a member of a group, the path to that group is displayed.
8	ObjectPosition	Display position of the object containing the compatibility-affecting difference
9	Reference	Number used in internal processing. You can ignore this.

Modify graphic files using CENTUM CS 1000/CS 3000 graphic builder

Modify the graphic objects detected to contain compatibility-affecting difference by the Graphic Compatibility Check Tool. In this stage, you need to modify to correct the differences for which “Modify the difference using CENTUM CS 1000/CS 3000 graphic builder” is indicated in the Warning Message.

You can find out the objects to be modified based on the graphic file name and the object numbers output by the Graphic Compatibility Check Tool.

IMPORTANT

After the graphic file is converted to CENTUM VP, you can no longer modify the graphic objects to correct the differences for which “Modify the difference using CENTUM CS 1000/CS 3000 graphic builder” is indicated.

SEE ALSO For more information about the differences that need modification, refer to:

4., “Details of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP” on page 4-1

Convert graphic files using HIS Database Conversion Tool

After you modified the graphic files using the CENTUM CS 1000/CS 3000 graphic builder to correct the differences, you need to do the following task.

1. On System View, select a project and click [Tools] > [HIS Database Conversion Tool].
2. On the HIS Database Conversion Tool window, select the project name and HIS stations for conversion.

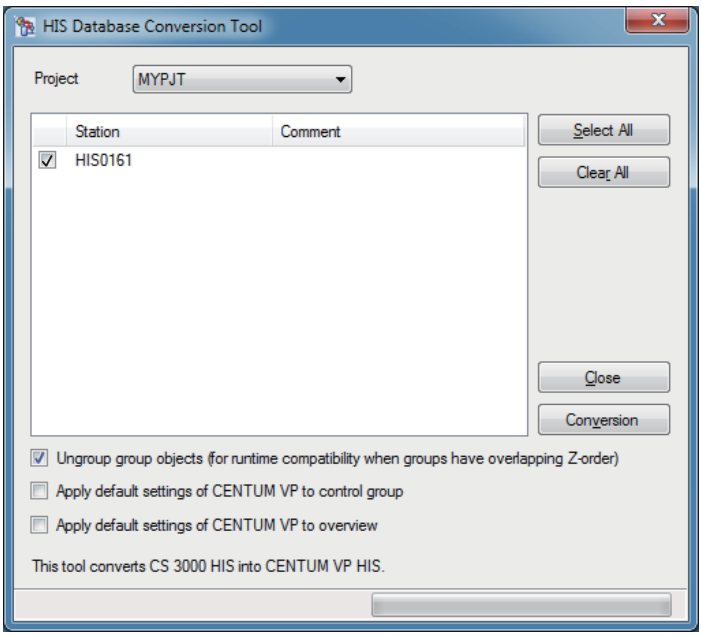

Figure 3.2-16 HIS Database Conversion Tool

3. If necessary, select the [Ungroup group objects (for runtime compatibility when groups have overlapping Z-order)] check box. To find out whether to select it or not, refer to the explanation of RULE051 in the compatibility-affecting differences.
4. Select the [Apply default settings of CENTUM VP to control group] check box as necessary.
   This check box should be selected if you want to apply the default size (1198 x 804) and background color (dark gray) of CENTUM VP control windows to CENTUM CS 1000/CS 3000 control windows.

TIP

Only the CENTUM CS 1000/CS 3000 graphic windows that satisfy all of the following conditions are converted to the default size and background color of CENTUM VP:

- The graphic window has the control attribute.
- The size of the graphic window is 1024 x 686.
- The graphic window contains only faceplate objects.
- The faceplates contained in the graphic window are in the default positions and size of CENTUM CS 1000/CS 3000.

5. Select the [Apply default settings of CENTUM VP to overview] check box as necessary. This check box should be selected if you want to apply the default size (1226 x 821) and background color (dark gray) of CENTUM VP overview windows to CENTUM CS 1000/CS 3000 overview windows.

TIP

Only the CENTUM CS 1000/CS 3000 graphic windows that satisfy all of the following conditions are converted to the default size and background color of CENTUM VP:

- The graphic window has the overview attribute.
- The size of the graphic window is 1024 x 686.
- The graphic window contains only overview objects.
- The overview objects contained in the graphic window are in the default positions and size of CENTUM CS 1000/CS 3000.

6. Click the [Conversion] button.
7. In the dialog box for confirming whether to start conversion that appears, click [OK].

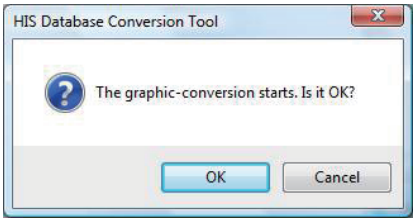

Figure 3.2-17 Dialog Box for Confirming Whether to Start Conversion

8. A dialog box appears when the conversion of HIS database is completed. Then, click [OK].

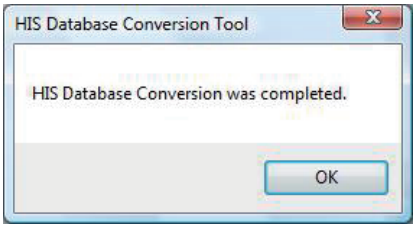

Figure 3.2-18 Dialog Box Displayed on Completion of HIS Database Conversion

SEE ALSO

For more information about the compatibility-affecting differences, refer to:

4., “Details of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP” on page 4-1

Note on HIS Database Conversion Tool

It describes the notes on HIS Database Conversion Tool.

- Note on using HIS of CS 3000

In case of using HIS of CS 3000, exclude from conversion target on HIS Database Conversion Tool when it is started for project revision up.

- After project revision up, convert from HIS of CS 3000 to HIS of VP
  After convert to HIS of VP on HIS Database Conversion Tool, execute Download to HIS.

  The HIS Database Conversion Tool is started that it selects the target to HIS folder on System View and selects HIS Database Conversion Tool on context menu. This menu is displayed when it selected HIS of CS 3000 only.
- Note on existing the shortcut between HISs
  When it exist the shortcut between HISs, it convert both HIS at the same time.

Download to HIS

Use the Project Attribute Change Utility to change the project attribute to “Current project” and then download the graphic files to CENTUM VP HIS.

Print out graphic window/view images

On the CENTUM VP HIS, print out the images of the graphic views of the converted graphic files.

Be careful not to invert the image.

Compare and check the printed images

Compare the printouts of the graphic windows printed out on CENTUM CS 1000/CS 3000 HIS with the printouts of the graphic views printed out on CENTUM VP HIS.

If you find any differences in their appearance, decide whether to correct them.

Modify graphic files using CENTUM VP graphic builder (1)

To the graphic files you have decided to modify as a result of the above checking, make necessary modification using the CENTUM VP graphic builder.

Modify graphic files using CENTUM VP graphic builder (2)

Modify the graphic objects which were detected to contain compatibility-affecting differences by the Graphic Compatibility Check Tool. In this stage, you need to modify the graphic file to solve the differences which should be modified using CENTUM VP graphic builder.

You can find out the objects to be modified based on the graphic file name and the object numbers output by the Graphic Compatibility Check Tool.

TIP

When you modify graphics to correct the differences detected with the Graphic Compatibility Check Tool, some objects may be grouped and cannot be modified directly.

In such a case, ungroup them before you modify.

When ungrouped, the definitions, like modifier definitions, that had been set for the grouped objects are set to the individual objects. After you modify the objects, regroup them and set the definitions such as modifier definitions again so that the objects behave as you intend.

Note the following points when you set definitions again after regrouping:

- Generic name definitions are retained after ungrouping. So, after regrouping the objects, modify the generic name definitions if necessary.
- Do not set the following items again in the [General] tab: [Visible], [Activate Tag Object], [Enabled], and [Set Data During Debugging]. If you set them, the definitions of the individual objects will be overwritten.
- You can set modifier conditions efficiently by saving a copy of the original grouped objects in advance and copying the modifier definitions to the regrouped objects. To copy the modifier conditions, right-click on the copy of the grouped objects and select[Modifier] > [Copy Modifier]. Then, right-click on the regrouped objects and select [Modifier] > [Paste Modifier].

If any compatibility issues are detected in the objects in a linked part, modify the objects in the source linked part, not in the linked parts in graphic views.

SEE ALSO

For more information about the differences that need modification, refer to:

4., “Details of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP” on page 4-1

Check graphic view behaviors

Check the behaviors of the graphic views. Now, you have finished all the tasks of project database conversion.

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4. Details of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP

This chapter explains the details about the differences that will result when graphic files of CENTUM CS 1000/CS 3000 are converted to graphic files of CENTUM VP.

To find the detailed information on the differences detected by the Graphic Compatibility Check Tool as well as how to modify the graphic file to correct the differences, use the rule number output by the Graphic Compatibility Check Tool as the keyword and search this chapter.

In this chapter, the topics for which “None (Not detected)” is shown in the place of rule number are not detected by the Graphic Compatibility Check Tool but have impact on the graphic file when checked compatibility.

The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP

The following table shows the list of differences between CENTUM CS 1000/CS 3000 and CENTUM VP with the abstracts.

Table 4-1 The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP

Issue	Rule Number	Abstract	Page
Use of ActiveX controls	RULE050	• ActiveX controls are not included in the scope of the conversion. • Correct behavior of ActiveX controls is not guaranteed on CENTUM VP.	4-6
Display size of graphic window/ view	None (Not detected)	The size of the display area on the screen on CENTUM VP is smaller than on CENTUM CS 1000/CS 3000.	4-7
Display of objects	None (Not detected)	There are slight differences in the line color of objects and the size of symbols at the start/end points of a line between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-7
Appearance of lines	None (Not detected)	Lines appear slightly less clear on CENTUM VP than on CENTUM CS 1000/CS 3000.	4-8
Appearance of patterned fills	None (Not detected)	The lines of patterned fills appear less clear on CENTUM VP than on CENTUM CS 1000/CS 3000.	4-8
Appearance of fonts	None (Not detected)	On CENTUM VP, font size and feed line width are displayed slightly greater than on CENTUM CS 1000/CS 3000. Therefore, the texts and push buttons in the boxes may run off the boxes on CENTUM VP.	4-8
Garbled characters	None (Not detected)	Depending on the types of font and characters specified on CENTUM CS 1000/CS 3000, texts may be garbled and not be displayed properly after conversion to CENTUM VP.	4-9
Space between text characters	RULE068	• The space width between the text characters on overview controls slightly differs between CENTUM CS 1000/CS 3000 and CENTUM VP. • This issue is detected only for the Wingdings font, in which the difference is significant.	4-9
Width of text controls	RULE031	The width of the text controls containing “single-byte space character + single-byte space character + double-byte space character” becomes smaller on CENTUM VP compared to CENTUM CS1000/CS 3000.	4-10

Continues on the next page

Table 4-1 The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP (Table continued)

Issue	Rule Number	Abstract	Page
Fill areas	None (Not detected)	If fill areas are placed side-by-side with each other on CENTUM CS 1000/CS 3000, a gap may appear between the fill areas on CENTUM VP.	4-10
Objects placed outside the drawing area	None (Not detected)	• If the object does not need to be displayed on CENTUM VP, place it below the soft key positions or place it to the left, right or above of the drawing area. • On CENTUM VP, the objects that are placed in the area of the soft keys are displayed on HIS even if they are placed outside the drawing area.	4-10
Modifier actions of bitmaps	RULE004	If the Bitmap Change is specified as a modifier condition and the size of the bitmap image changes before and after the satisfaction of the modifier condition, and when the modifier condition is satisfied, the size of the bitmap image may differ between CENTUM VP and CENTUM CS 1000/CS 3000.	4-11
Background color of text on push buttons, soft keys, and text controls	None (Not detected)	• On CENTUM CS 1000/CS 3000, only the background of character strings is filled with the specified color. • On CENTUM VP, the rectangular area surrounding the whole text is filled with the specified color.	4-12
Width of soft keys	None (Not detected)	On CENTUM VP, the width of soft keys is narrower than on CENTUM CS 1000/CS 3000.	4-12
Trend display	None (Not detected)	The visual quality, such as color and fonts on trend controls appears differently between on CENTUM CS 1000/CS 3000 and on CENTUM VP.	4-13
Display when rounded corners are specified	None (Not detected)	When rounded corner is specified for a shape such as a rectangle, polyline, and fill area, the shapes of the rounded corners are smoother on CENTUM VP than on CENTUM CS 1000/CS 3000.	4-13
Area that can be clicked to select an object	None (Not detected)	When Activate Tag Object option is selected, the area that can be clicked to select an object is different between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-14
Grouped primitives	RULE051	When some of the primitives are overlapped, grouping processing differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-15
Behavior of a bitmap component in a grouped object	RULE084	If blinking is specified for a grouped object containing any bitmap component, the behavior of blinking is as follows: • On CENTUM CS 1000/CS3000, bitmap components do not blink. • On CENTUM VP, bitmap components blink.	4-15
Behavior of a push button in a grouped object	RULE083	If blinking is specified for a grouped object containing any push button component, the behavior of blinking is as follows: • On CENTUM CS 1000/CS 3000, push buttons blink. • On CENTUM VP, push buttons do not blink.	4-16
Display sequence of components	None (Not detected)	Overlap sequence of the components to be displayed differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-16
Faceplate components	RULE092	• The width of instrument faceplate component may differ between CENTUM CS 1000/CS 3000 and CENTUM VP. • This issue can be detected only when a taglist file is specified.	4-17
Operation of faceplate controls	RULE066	When Activate Tag Object option is not selected, operations of faceplate controls are different between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-18

Continues on the next page

Table 4-1 The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP (Table continued)

Issue	Rule Number	Abstract	Page
Tag object activation on transparent components	RULE047	If color change to “transparent” is specified as a modifier action of an object for which the [Activate Tag Object] option is specified, whether or not the tag object can be activated after the modifier condition is satisfied is different between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-19
Local generic names and global generic names	None (Not detected)	The order of priority of the values selected as the initial value of a generic name, and the value that is selected when the initial value of a generic name is left blank are different between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-19
System-defined generic name	RULE065	The unit of $_ZoomScale, a system-defined generic name, differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-21
Generic names and Faceplate Assignment dialog box	None (Not detected)	On CENTUM VP, generic name cannot be specified on the Faceplate Assignment dialog box.	4-21
Color changing actions when the initial value of generic name is not defined	None (Not detected)	The behavior of an action differs between CENTUM CS 1000/CS 3000 and CENTUM VP when the initial value of the generic name specified as the modifier condition for overview color change/overview blinking is not defined.	4-21
Window call using a generic name (1)	RULE017	An initial value of a generic name can be specified as the parameter for window call by some particular function tab. The result of the recognition for the specified initial value of a generic name is different between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-23
Window call using a generic name (2)	RULE034	This issue applies when Call Window is selected on the Function tab and a particular window is specified by using an interactive control. (For example HIS Setting.) On CENTUM VP, if the parameter specification is wrong, the specified window does not start.	4-23
Evaluation of modifier conditions	None (Not detected)	If data values of different data types are compared in a modifier condition written with a special format of OR, CENTUM CS 1000/CS 3000 and CENTUM VP produce different evaluation results.	4-24
Logical expressions in a special format	RULE012	For logical AND or OR between relational expressions whose left sides are the same (for example, TAG.PV==100 OR TAG.PV==10), you can use a special format of logical expression (TAG.PV==100 OR 10). • In CENTUM CS 3000, this special-format logical expression is given higher priority than AND or OR used in an ordinary format. • In CENTUM VP, this special-format logical expression is given the same priority as AND or OR used in an ordinary format.	4-25
Evaluation of modifier conditions	None (Not detected)	If different types of data in a modifier condition are compared, the result If different types of data in a modifier condition are compared, the result recognized as an error and FALSE is returned on CENTUM VP.	4-26
Ack button operation for overview blinking	None (Not detected)	On CENTUM VP, if a graphic view contains an overview component used for monitoring the alarm status of windows, you cannot stop the blinking by just clicking the Ack button on the graphic view.	4-27
Data display positions on overview components	None (Not detected)	The display position of the monitored data value and engineering unit on overview components slightly differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-27

Continues on the next page

Table 4-1 The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP (Table continued)

Issue	Rule Number	Abstract	Page
Behavior when annunciator is assigned to an overview component	None (Not detected)	If an annunciator is monitored through an overview component and an internal switch (%SW or %GS) is assigned to the 2nd line, the color of the overview control differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-28
Definition of overview controls	None (Not detected)	If an incorrect window or tag name is specified in the definition of an overview control, the behavior of the overview control differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-29
Blinking specified to be executed first time only	None (Not detected)	If screen blinking or alarm-specific blinking is set for a modify condition that is specified to be executed first time only, the behavior when acknowledgement operation is performed is different between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-29
Behavior when division by 0 has occurred	RULE085	If division by 0 has detected in modifier conditional formula, the condition is recognized as “not satisfied” on CENTUM CS 1000/CS 3000, and evaluation of the condition expression is continued on CENTUM VP.	4-30
Division by 0 in data characters	None (Not detected)	If display format of data character control is percentage, and if division is defined for the data to be displayed, and if division by 0 has occurred, data characters are differently displayed between on CENTUM CS 1000/CS 3000 and on CENTUM VP.	4-31
Behavior of @CurrentData	RULE029	“@RecipeUnit/@RecipeBatchID” in CENTUM CS 1000/CS 3000 graphics are converted to “@CurrentData” during conversion to CENTUM VP. However, this causes no difference in their behavior.	4-31
Last character of data character controls	RULE040	If “Wingdings” was selected as the type of font, the last character of character strings on CENTUM CS 1000/CS 3000 may not be displayed correctly after converted to CENTUM VP.	4-32
Array element specifications	RULE037	• On CENTUM CS 1000/CS 3000, if an array index is specified to be 0, it is recognized that the index of that dimension is not specified. • On CENTUM VP, an index of 0 results in an error, so the data is not displayed after conversion to CENTUM VP.	4-32
Display time span of trend components	RULE041	• On CENTUM CS 1000/CS 3000, the display time span of trend components is automatically determined from the display size and time axis setting. • On CENTUM VP, the display time span of trend components is specified in a properties dialog box regardless of the display size of the trend graph.	4-33
Omission of upper/lower limit values when a calculation formula is set in a coordinate modifier	RULE042	• On CENTUM CS 1000/CS 3000, if specification of upper/lower limits is omitted and if a calculation formula is set, the object is not displayed. • On CENTUM VP, the objects with such modifier settings are displayed taking that the value of the expression is the X- and Y-axis data from the upper left.	4-34
Clicking position to select an object with a coordinate modifier	None (Not detected)	• On CENTUM CS 1000/CS 3000, when you specify a coordinate modifier, you can only click the initial display position that is defined on the graphic builder to select the object. • On CENTUM VP, you can click on the moving object to select it.	4-34
Scaling mode	RULE079	If a graphic window on CENTUM CS 1000/CS 3000, for which [Disable Scaling] is set is converted to CENTUM VP, the scaling mode is changed to [Fixed Ratio] on CENTUM VP.	4-36

Continues on the next page

Table 4-1 The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP (Table continued)

Issue	Rule Number	Abstract	Page
ITV window	RULE056	Since CENTUM VP does not support ITV, definitions to call up an ITV window that are contained in CENTUM CS 1000/CS 3000 graphics are converted to definitions to call up process alarm window during conversion to CENTUM VP.	4-36
Function execution	RULE057	If a graphic file containing a push button or touch target to which either of the system function key commands [Window Set Store (WSSV)] and [Window Set Delete (WSCL)] as function execution is assigned in CENTUM CS 1000/CS 3000, and if converted to CENTUM VP, an error will occur during performing the function execution on CENTUM VP.	4-37
Color change of gradient objects	RULE067	If the color of an object for which gradient fill is specified is changed by a modifier of Alarm-specific color change or Overview color change, the behavior of the object when the modifier condition is satisfied differs between CENTUM CS 1000/CS 3000 and CENTUM VP.	4-37
Color change of linked parts or group objects	RULE097	If CENTUM CS1000/CS 3000 graphics with smart-parts or group objects defined to them are converted to CENTUM VP and then saved, the color change at the satisfaction of modifier conditions is changed from color gradient to a solid color.	4-38
Number of lines displayed in message controls	None (Not detected)	• On CENTUM CS 1000/CS 3000, an entire message is displayed even if the message is not accommodated in the specified number of display lines. • On CENTUM VP, the font size is automatically calculated so that the entire message is displayed.	4-38
Dialog	RULE086	If a dialog name object is used to define a dialog name on CENTUM CS 1000/CS 3000, the dialog name object is replaced with a data character control during conversion to CENTUM VP.	4-38
Limit value display in line-segment graph	None (Not detected)	On CENTUM VP, the line width of line-segment graph when the value is clamped at 0% or 100% is about half of the line width on CENTUM CS 1000/CS 3000. Because of this, the graph line at 0% or 100% may be slightly hard to see if the line is overlapped with another graphic shape.	4-39
Border line of bar graph bars	None (Not detected)	• On CENTUM CS 1000/CS 3000, bars of a bar graph control do not have border lines. • On CENTUM VP, border lines of bars of a bar graph control are displayed.	4-39
Graphic interface (ReplaceDataBindValue/DataBindValue)	None (Not detected)	The syntaxes of two graphic interface methods (ReplaceDataBindValue and DataBindValue) differ between CENTUM CS 1000/CS 3000 and CENTUM VP with regard to handling text-type generic names.	4-40
Text for initial value of a generic name and text for replacement in modifier definition	None (Not detected)	To handle special characters with the same way between on CENTUM CS 1000/CS 3000 and on CENTUM VP, the Treat As Character check boxes that are provided for handling the initial value of a generic name and Modify Strings are automatically selected when graphics are converted from CENTUM CS 1000/CS 3000 to CENTUM VP.	4-40
Graphic Interface (MoveCursor)	None (Not detected)	• In CENTUM CS 1000/CS 3000, when calling MoveCursr, the cursor can be moved regardless if the graphic view is focused or not. • In CENTUM VP, when calling MoveCurosr, the cursor can be moved only while the graphic view is focused.	4-41

Continues on the next page

Table 4-1 The List of Differences between CENTUM CS 1000/CS 3000 and CENTUM VP (Table continued)

Issue	Rule Number	Abstract	Page
Linked Parts that Contain Instrument Faceplate Control or Message Control	RULE094	If the linked parts that contain instrument faceplate control or message control have been defined in a CENTUM CS 1000/CS 3000 graphic file, the size of the linked parts will be intact right after the file is converted to the CENTUM VP graphic file. However, once the graphic file is edited on the graphic builder or the linked parts are updated, the size will be changed to 1:1 size of the linked parts.	4-41
Cursor Navigation Index	None (Not detected)	• On CENTUM CS 1000/CS 3000, the cursor moves to the objects with defined cursor navigation index numbers first and then move to the objects without the defined cursor navigation index numbers. • On CENTUM VP, the cursor moves to the objects without defined cursor navigation index numbers first and then move to the objects with the defined cursor navigation index numbers.	4-41
Width of fonts	None (Not detected)	If Windows OS is changed from Windows XP to a later version of Windows, the width of fonts may be different upon the following cases: • When the font that is not supported on CENTUM CS 1000/CS 3000 Graphic is assigned. • When Japanese is displayed in an English font on CENTUM CS 1000/CS 3000 Graphic. • When the alphabet in some Proportional font is displayed on CENTUM CS 1000/CS 3000 Graphic.	4-42
CENTUM VP Graphic Convert Error (1)	RULE095	When the window control in which ITV Window is set for window name is defined on CENTUM CS 1000/CS 3000, the conversion into CENTUM VP is failed.	4-42
CENTUM VP Graphic Convert Error (2)	RULE096	When the particular controls of which the width or height is less than 1 are defined on CENTUM CS 1000/CS 3000, the conversion into CENTUM VP is failed.	4-42
Font conversion error	RULE098	If the Arial Narrow font is used in CENTUM CS 1000/CS 3000 graphics, the font style will not be applied correctly in CENTUM VP graphics.	4-43
Cursor display settings	None (Not detected)	The right-click menu in touch target, push buttons, faceplate block button, and overview components in which cursor display settings are not configured is different for CENTUM CS 1000/CS 3000 and CENTUM VP.	4-43
Linked parts containing text components with bold font style	None (Not detected)	If any linked parts containing text components with bold font style are defined in CENTUM CS 1000/CS 3000 graphics, the size of the linked parts with bold font style may change after converting the graphics to CENTUM VP and updating the linked parts.	4-43

Use of ActiveX controls

Rule number

RULE050

Description

Correct operation of ActiveX controls is not guaranteed on CENTUM VP graphic views. You must test their operations after conversion to CENTUM VP. If they do not operate as you intend, you need to create them again.

Remarks

ActiveX controls are not included in the scope of conversion.

If any ActiveX controls are used, consult the one who produced the graphic window containing ActiveX controls.

Display size of graphic window/view

Rule number

None (Not detected)

Description

The size of the display area on the screen is different between CENTUM CS 1000/CS 3000 and CENTUM VP.

Because of this, a graphic window that was created to just fit in the CENTUM CS 1000/CS 3000 screen in full-screen mode will have space in the top/bottom and left/right after conversion.

Remarks

Specification changed in CENTUM VP.

The display size relative to the screen size is smaller on CENTUM VP because the browser bar, tabs, and other new components are displayed.

Display of objects

Rule number

None (Not detected)

Description

The following differences are seen between CENTUM CS 1000/CS 3000 and CENTUM VP.

- Single-dot-width lines appear in slightly different colors on both HIS and graphic builder.

  (For example, a white line appears in very light gray.) If magnified, they appear in the original color.
- On HIS, the symbols at the start/end points of a line (arrow, ●, and ■) appear thicker and larger in CENTUM VP graphics.

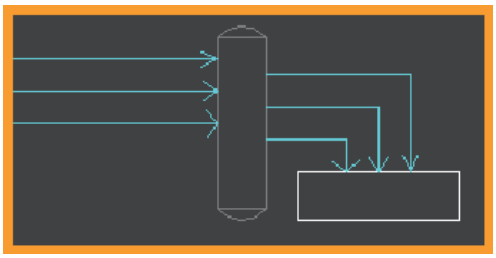


Figure 4-1 CENTUM CS 1000/CS 3000

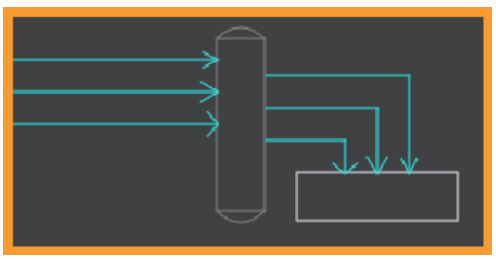


Figure 4-2 CENTUM VP

Appearance of lines

Rule number

None (Not detected)

Description

Lines appear slightly less clear on CENTUM VP than on CENTUM CS 1000/CS 3000.

Appearance of patterned fills

Rule number

None (Not detected)

Description

If patterned fill is specified for basic shapes or interactive controls such as a push button, the clarity of the pattern lines differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

The pattern lines appear clearer on CENTUM CS 1000/CS 3000.

Appearance of fonts

Rule number

None (Not detected)

Description

The following differences are seen in characters even if the same type of fonts is used.

- Texts appear in different size, width, and linefeed width (characters appear thicker on CENTUM VP).
- Texts in boxes (including push buttons) may run off the boxes on CENTUM VP.

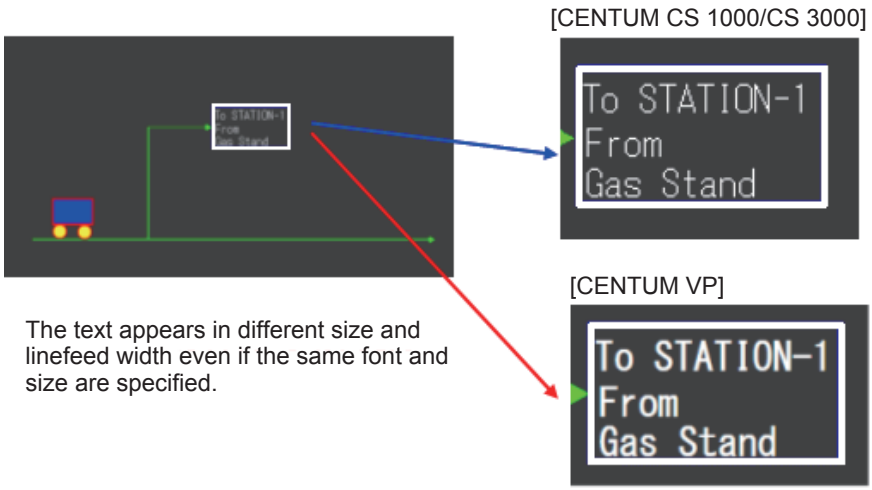


Figure 4-3 Example Display of Text Object

[CENTUM CS 1000/CS 3000] [CENTUM VP]

Figure 4-4 Example Display of Push Button

These differences are seen in all objects where text is displayed. The differences vary depending on the font used.

How to correct

Change the font or adjust the font size as necessary.

For texts enclosed in a box such as the text on a push button, adjust the display position of the text by reducing the font size and changing the linefeed positions. Alternatively, change the size of the push button, maintaining a good balance in the entire view.

Garbled characters

Rule number

None (Not detected)

Description

Depending on the types of font and characters specified on CENTUM CS 1000/CS 3000, texts may not be displayed properly (garbled) after conversion to CENTUM VP.

Check the appearance of texts in the following cases:

- Non-standard characters are used on CENTUM CS 1000/CS 3000.
- After changing the Windows OS from Windows XP to a later version of Windows, fonts not supported in the new Windows are used in the previous Windows.
- The language of Windows OS is changed (for example, from English OS to Japanese OS).

Space between text characters

Rule number

RULE068

Description

The space width between the text characters on overview controls slightly differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

Remarks

The tool detects this issue only for the Wingdings font, in which the difference is significant.

Width of text controls

Rule number

RULE031

Description

The width of the text controls containing “single-byte space character + single-byte space character + double-byte space character” becomes smaller on CENTUM VP compared to CENTUM CS 1000/CS 3000.

Adjust the space width after conversion to CENTUM VP, referring to the following instructions:

- If monospaced font is used, replace the above space characters with four single-byte space characters.
- If non-monospaced font is used, change the order of the space characters so as to avoid the pattern “single-byte + single-byte + double-byte.”

Fill areas

Rule number

None (Not detected)

Description

If fill areas are placed side-by-side with each other on CENTUM CS 1000/CS 3000, a gap may appear between the fill areas on CENTUM VP.

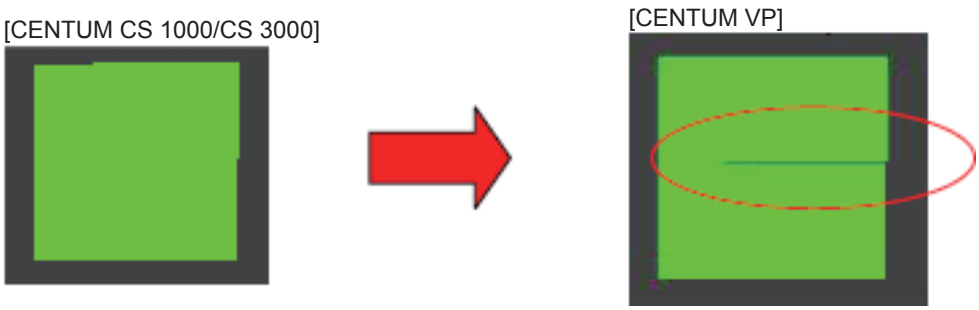


Figure 4-5 Gap between Fill Areas

How to correct

If a gap appears, change the size of the fill area.

Objects placed outside the drawing area

Rule number

None (Not detected)

Description

If the object does not need to be displayed on CENTUM VP, place it below the soft key positions or place it to the left, right or above of the drawing area.

On CENTUM VP, objects that are placed in the area of the soft keys are displayed on HIS even if they are placed outside the drawing area.

Modifier actions of bitmaps

Rule number

RULE004

Description

If the Bitmap Change is specified as a modifier action for a control having a bitmap image and the size of the bitmap image changes before and after the satisfaction of the modifier condition, the bitmap image appears in different size on CENTUM CS 1000/CS 3000 and CENTUM VP when the condition is satisfied.

On CENTUM CS 1000/CS 3000, the size of the bitmap image before condition satisfaction is ignored and the bitmap image after replacement is displayed according to the size of the bitmapfile that was specified for replacement.

On CENTUM VP, the bitmap image after replacement is displayed in the same size as the image before condition satisfaction.

[CENTUM CS 1000/CS 3000]

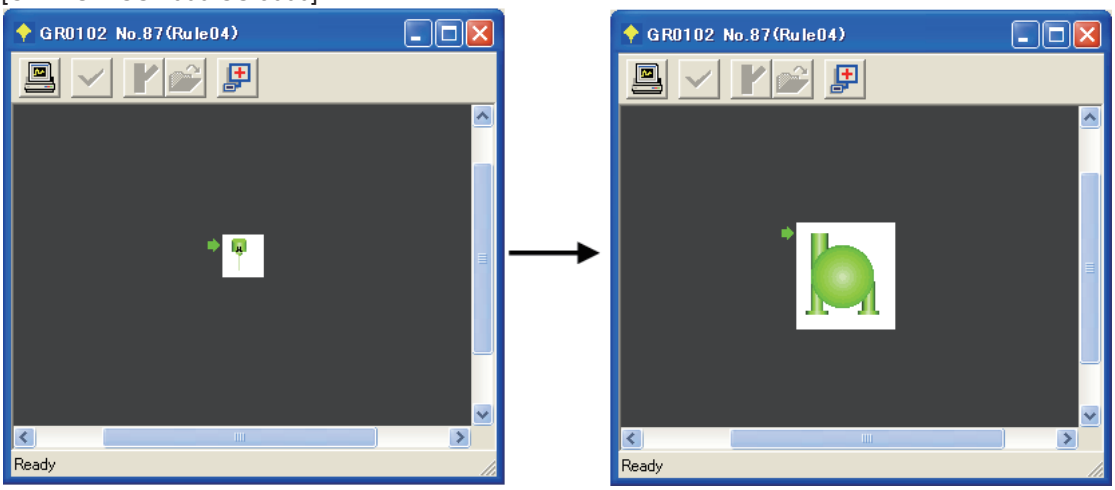


Figure 4-6 Bitmap Replacement on CENTUM CS 1000/CS 3000

[CENTUM VP]

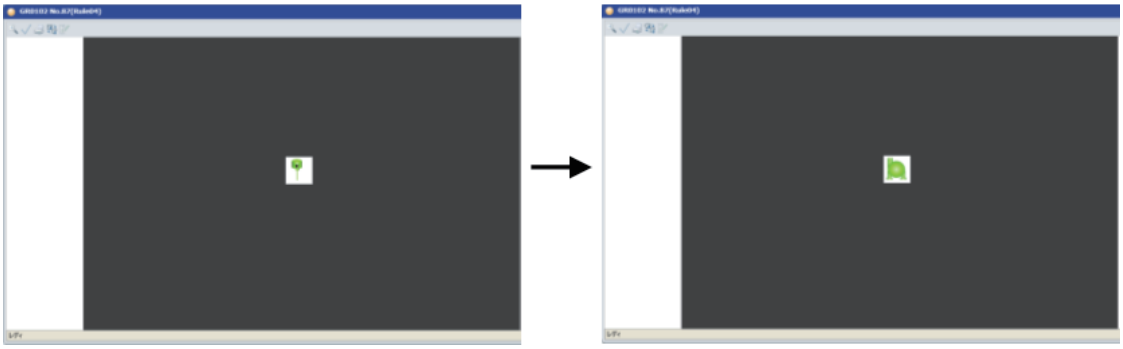


Figure 4-7 Bitmap Replacement on CENTUM VP

Remarks

On CENTUM VP, you cannot find out if the bitmap size was actually changed on CENTUM CS 1000/CS 3000.

Confirm it on CENTUM CS 1000/CS 3000 HIS if necessary.

Background color of text on push buttons, soft keys, and text controls

Rule number

None (Not detected)

Description

The appearance of background colors of text on push buttons, soft keys, and text controls differ between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, only the background of the text string is filled with the specified color.

On CENTUM VP, the rectangular area surrounding the whole text is filled with the specified color.

This doesn't make difference for single-line text, but the difference is distinctive when the text is in multiple lines.

Therefore, the text background may hide other object after converted to CENTUM VP.

	CENTUM CS 1000/CS 3000	CENTUM VP
Text		
Push button / Soft key		

Figure 4-8 Background Color of Text

Remarks

Specification changed in CENTUM VP.

Width of soft keys

Rule number

None (Not detected)

Description

On CENTUM VP, the width of soft keys is narrower than on CENTUM CS 1000/CS 3000.

As a result, some soft key label text may not be displayed in one line and folded, or the label text that was displayed in multiple lines may be displayed with inappropriate linefeed positions.

[On CENTUM CS 1000/CS 3000]

[On CENTUM VP]

The label text is folded because of the narrow soft key button width.

Figure 4-9 Width of Soft Keys

- **Remarks**

  You can specify the linefeed position of the label if necessary.

Trend display

- **Rule number**

  None (Not detected)

- **Description**

  The color, fonts, etc. on trend controls appear differently between CENTUM CS 1000/CS 3000 and CENTUM VP.

- **Remarks**

  Specification changed in CENTUM VP.

Display when rounded corners are specified

- **Rule number**

  None (Not detected)

- **Description**

  When rounded corner is specified for a shape such as a rectangle, polyline, and fill area, the shapes of the rounded corners differ between CENTUM CS 1000/CS 3000 and CENTUM VP.

  Rounded corners are smoother on CENTUM VP.

[CENTUM CS 1000/CS 3000]

Figure 4-10 Rounded Corner of CENTUM CS 1000/ CS 3000 Shape

[CENTUM VP]

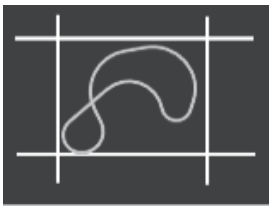


Figure 4-11 Rounded Corner of CENTUM VP Shape

Remarks

Specification changed in CENTUM VP.

Area that can be clicked to select an object

Rule number

None (Not detected)

Description

For some types of objects, the area that can be clicked to select an object is different between CENTUM CS 1000/CS 3000 and CENTUM VP.

For example, the areas you can click to select the following fill area on CENTUM CS 1000/CS 3000 and CENTUM VP are as shown below:

[CENTUM CS 1000/CS 3000]
You can click anywhere within the rectangle to select the shape.

[CENTUM VP]
You can click only on the filled area to select the shape

Figure 4-12 Selected Area on the Fill Area

This only applies to the components for which the Activate Tag Object option is selected.

Remarks

Specification changed in CENTUM VP.

Grouped primitives

Rule number

RULE051

Description

Grouping processing differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, when some of the overlapping primitives are grouped, the display sequence is maintained. On CENTUM VP, the grouped primitives always come on top.

The following figure shows the difference in the result of grouping processing.

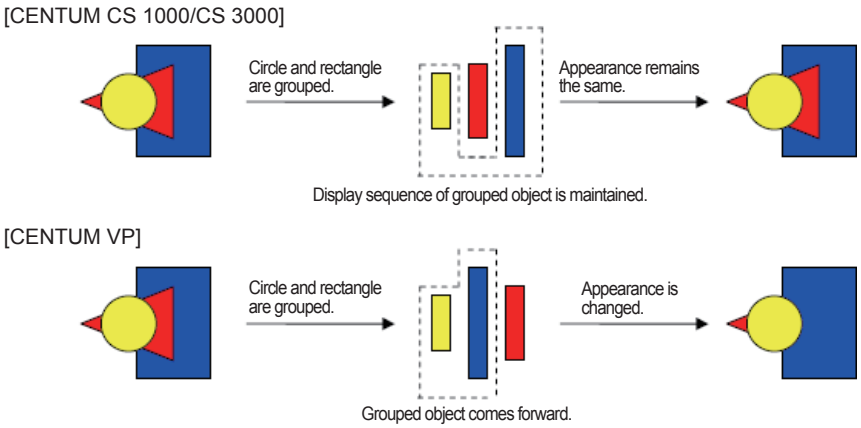


Figure 4-13 Difference in Display Sequence of Grouped Objects

Select either of the following operations when you convert CENTUM CS 1000/CS 3000 graphic files containing grouped objects to CENTUM VP.

1. Ungroup objects
   This makes no change in the appearance after conversion. Parts, as well as grouped objects, are also ungrouped while the grouping of linked parts are maintained.
2. Does not ungroup objects
   Grouping of objects are maintained but the display sequence may be changed.

Remarks

If you select the above mentioned “Ungroup objects” option, the appearance does not change but the modifier definitions that are set for a grouped object are reassigned to each object.

If you select the above mentioned “does not ungroup objects” option, the appearance is changed but modifier definitions are maintained.

Behavior of a bitmap component in a grouped object

Rule number

RULE084

Description

If blinking is specified for a grouped object containing any bitmap component, the blinking behavior differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

Such bitmap components do not blink on CENTUM CS 1000/CS 3000 but blink on CENTUM VP.

Remarks

Specification changed in CENTUM VP.

Behavior of a push button in a grouped object

Rule number

RULE083

Description

If blinking is specified for a grouped object containing any push button, the blinking behavior differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

This issue only applies to push buttons for which the [With Illumination] option is not selected.

Such push buttons blink on CENTUM CS 1000/CS 3000 but do not blink on CENTUM VP. To make the push button blink on CENTUM VP, change the push button setting to select [With Illumination].

Display sequence of components

Rule number

None (Not detected)

Description

The display sequence of overlapping components differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, components placed in the same position are displayed in the following sequence. (The components listed upper in the list are displayed closer to the foreground.

- Touch target
- Faceplate corresponding to the inc/dec keys
- Faceplate not corresponding to the inc/dec keys
- Soft key
- Push button
- Trend
- Message
- Batch-related window
- ActiveX control
- Overview
- Background image

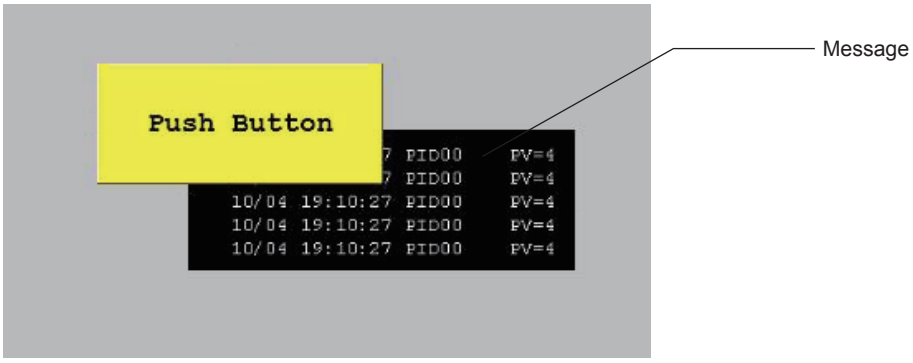
The display sequence on CENTUM VP is as follows:

- ActiveX control
- Touch target (moves to the foreground when selected)
- Message

- Trend
- Faceplate
- Push button
- Soft key
- Overview and foreground image
- Background image

Make adjustment as necessary to achieve the same appearance on CENTUM CS 1000/CS 3000 and CENTUM VP.

[CENTUM CS 1000/CS 3000]



[CENTUM VP]

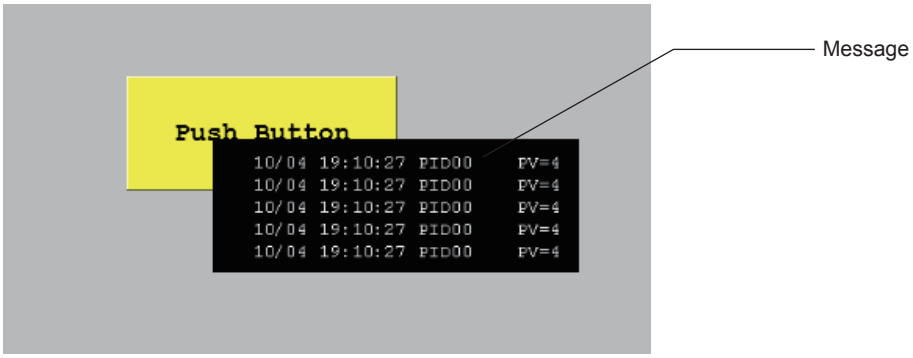


Figure 4-14 Display sequence of components

Faceplate components

Rule number

RULE092

TIP

This issue can be detected only when a taglist file is specified.

The taglist file of the project is automatically specified when you use the Add Folder button of the Graphic Compatibility Check Tool.

If you use the Add File button and specify individual files for compatibility check, specify the taglist file in the following folder on the Taglist Files tab of the Graphic Compatibility Check Tool.

Folder name: <project folder>\FCSxxxx\ETC

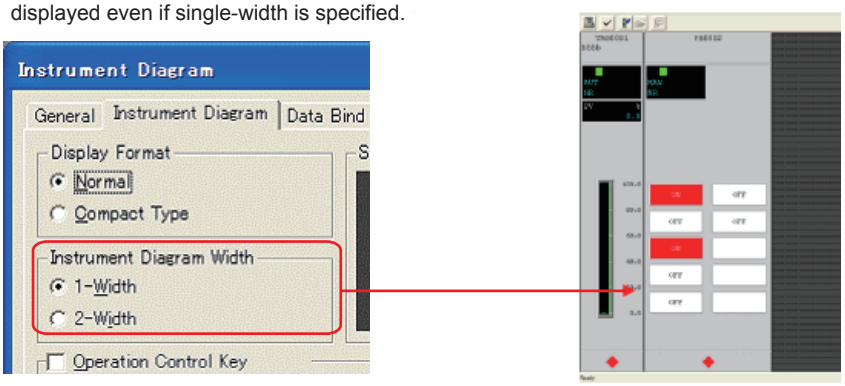
File name: TFxxxx.I

Description

The width of instrument faceplate component may differ between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, faceplates of function blocks that need double-width faceplate are always displayed with double-width on HIS even if [1-Width] is specified on the graphic builder. On CENTUM VP, faceplates of such function blocks are displayed according to the width specified on the graphic builder.

[CENTUM CS 1000/CS 3000]
Depending on the type of function block, a double-width faceplate is displayed even if single-width is specified.



[CENTUM VP]
Display width is determined according to the specified width.
For a function block that needs double-width faceplate, only half of the faceplate is displayed if [1-Width] is specified.

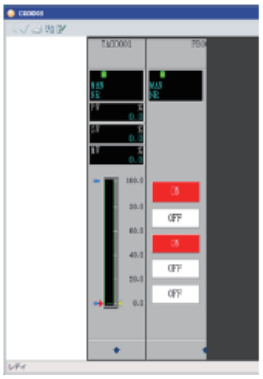


Figure 4-15 Display Width of Faceplate Component

How to correct

For function blocks that need double-width faceplate display, specify [2-Width] on the graphic builder.

Operation of faceplate controls

Rule number

RULE066

Description

Operation of faceplate controls for which the [Activate Tag Object] between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, double (or single) click operation to call the faceplate view is not possible on faceplate controls while it is possible on CENTUM VP.

Remarks

Specification changed in CENTUM VP.

Tag object activation on transparent components

Rule number

RULE047

Description

If color change to “transparent” is specified as a modifier action of an object for which the [Activate Tag Object] option is specified, whether the tag object can be activated after the modifier condition is satisfied is different between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, after the component turns transparent upon condition satisfaction, you can still select the component to activate the tag object.

On CENTUM VP, you cannot select the component while it is transparent and therefore the tag object cannot be activated.

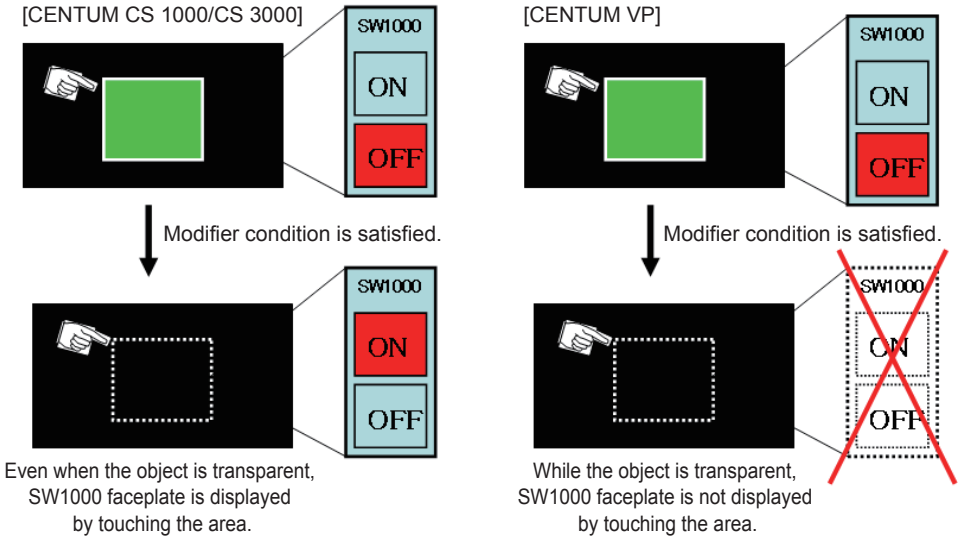


Figure 4-16 Behavior of a Transparent Component

Local generic names and global generic names

Rule number

None (Not detected)

Description

The order of priority of the values selected as the initial value of a generic name is different between CENTUM CS 1000/CS 3000 and CENTUM VP.

The order of priority of the values selected as the initial value of a generic name is as shown below:

Table 4-2 Order of Priority for the Initial Values of Generic Names

Priority	CENTUM CS 1000/CS 3000	CENTUM VP
High ↑ ↓ Low	Value that is passed as an argument when the graphic view is called up ↓ Initial value of local generic name that is defined for the object ↓ Initial value of global generic name	Initial value of local generic name that is defined for the object ↓ Value that is passed as an argument when the graphic view is called up ↓ Initial value of global generic name

In addition, the value that is selected when the initial value of a generic name is left blank also differs.

If the initial value of a generic name is left blank, the behaviors are as follows:

On CENTUM CS 1000/CS 3000, the initial value will be blank even if a value has been specified as the global generic name.

On CENTUM VP, “blank” is regarded as “not defined” and the value at the next level of priority is used as the initial value.

For example, assume that graphic window/view GR0001 contains the following three data character components.

Table 4-3 Three Data Character Components

No.	Data to be displayed (generic name)	Local data binding	Data value of generic name
01	$GN	Not selected	(Invalid)
02	$GN	Selected	<Specified value>
03	$GN	Selected	<Blank>

Table 4-4 Results when GR0001 is Called Up without Argument

No.	CENTUM CS 1000/CS 3000	CENTUM VP
01	Value of global generic name	Value of global generic name
02	Value of local generic name	Value of local generic name
03(*1)	<Blank>	Value of global generic name

*1: Because “blank” is specified as the local generic name value, blank is shown on CENTUM CS 1000/CS 3000 while the value of global generic name is used on CENTUM VP.

Table 4-5 Results when GR0001 is Called Up with Argument (GR0001{$GN=CALL})

No.	CENTUM CS 1000/CS 3000	CENTUM VP
01	CALL	CALL
02(*1)	CALL	Value of local generic name
03	CALL	CALL

*1: The value “CALL” that is passed as an argument is used on CENTUM CS 1000/CS 3000 while the value of local generic name is used on CENTUM VP.

Table 4-6 Results when GR0001 is Called Up with Argument (Example: GR0001{$GN=})

No.	CENTUM CS 1000/CS 3000	CENTUM VP(*1)
01	<Blank>	Value of global generic name
02	<Blank>	Value of local generic name
03	<Blank>	Value of global generic name

*1: The “blank” that is passed as an argument is used on CENTUM CS 1000/CS 3000 while the values at the next level of priority are used on CENTUM VP.

System-defined generic name

Rule number

RULE065

Description

The unit of $_ZoomScale, a system-defined generic name, differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, the Zoom In/Out ratio is shown in percentage (integer).

On CENTUM VP, the Zoom In/Out ratio is shown as a value from 0 to 1 (fraction). So, if the number of decimal places for display is set to 0, only “0” or “1” is displayed.

How to correct

After conversion to CENTUM VP, multiply $_ZoomScale with 100 to obtain the same value as percentage.

Remarks

Specification changed in CENTUM VP.

Generic names and Faceplate Assignment dialog box

Rule number

None (Not detected)

Description

On CENTUM VP, generic name cannot be specified on the Faceplate Assignment dialog box.

How to correct

You need to delete the assignments using generic names after conversion to CENTUM VP.

Remarks

Specification changed in CENTUM VP.

Also on CENTUM CS 1000/CS 3000, if assignment is made using a generic name, the faceplate displayed on the graphic window could not be changed even if the value of the generic name is changed. Therefore, use of generic names was meaningless.

Color changing actions when the initial value of generic name is not defined

Rule number

None (Not detected)

Description

The behavior of an action differs between CENTUM CS 1000/CS 3000 and CENTUM VP when the initial value of the generic name specified as the modifier condition for overview color change/overview blinking is not defined.

On CENTUM CS 1000/CS 3000, if the initial value is not defined for the generic name specified as the modifier condition, this condition is always regarded as “satisfied.”

On CENTUM VP, the condition is always regarded as “not satisfied.”

The following figure shows the settings on the graphic builder for the case where overview blinking is defined.

[CENTUM CS 1000/CS 3000]

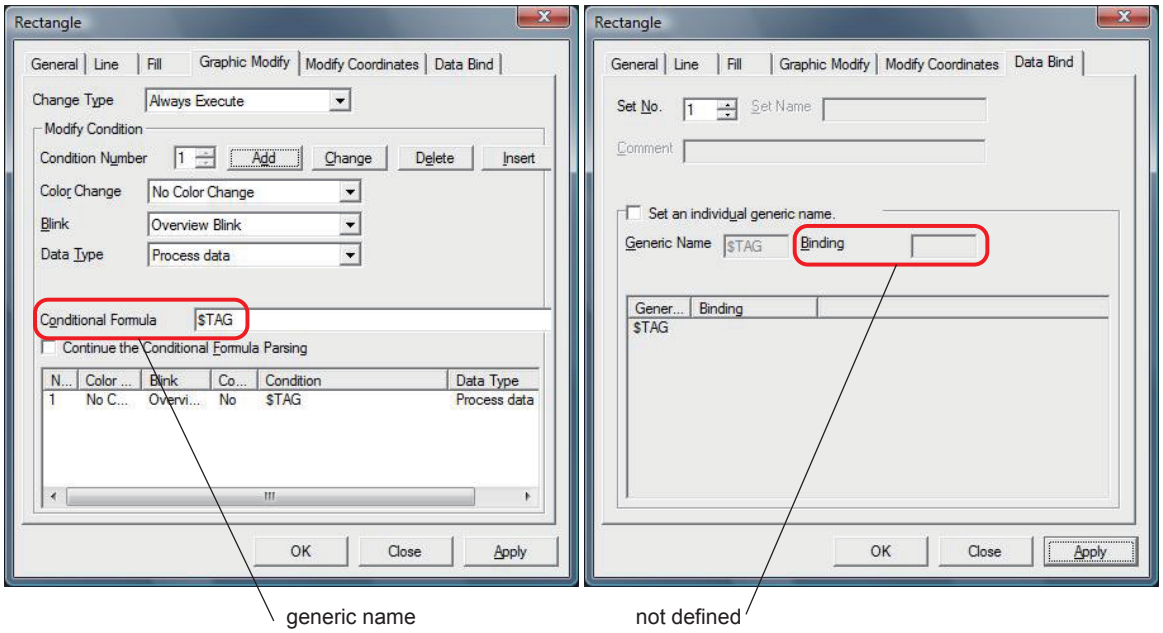


Figure 4-17

[CENTUM VP]

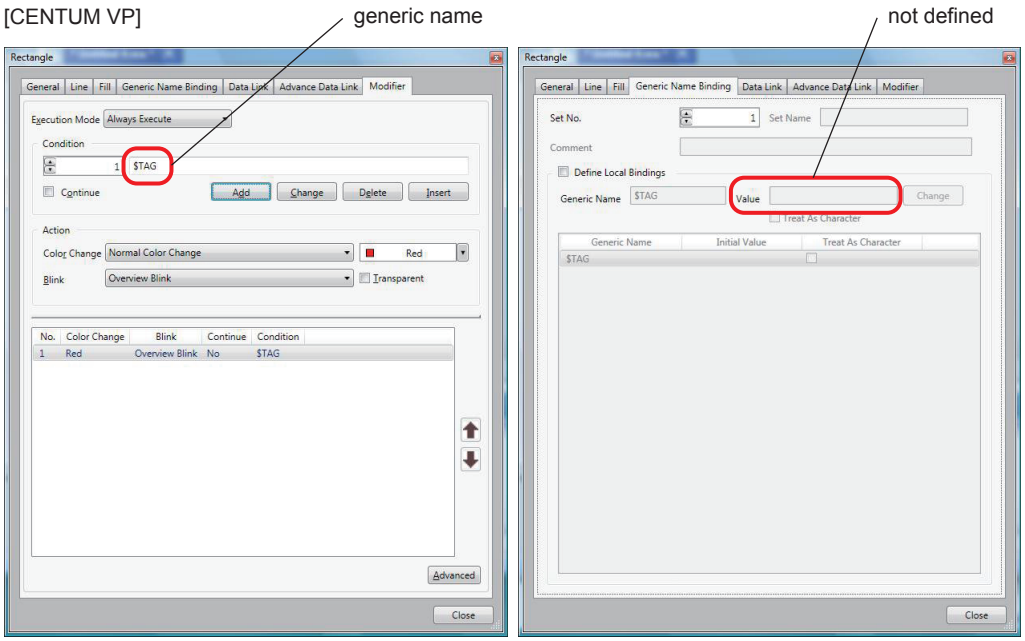
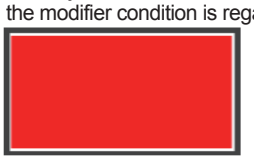


Figure 4-18 Settings on Graphic Builder

If set as shown in the above figure, the object behaves as follows:

[CENTUM CS 1000/CS 3000]

The object is shown in the specified color because the modifier condition is regarded as “satisfied.”



[CENTUM VP]

The object remains in the original color because the modifier condition is regarded as “not satisfied.”

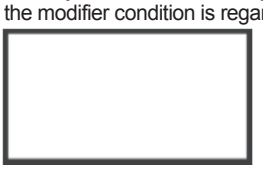


Figure 4-19 Display in the Graphic Window/View

How to correct

Define the initial value so that the value is given to the generic name before the condition is tested.

Window call using a generic name (1)

Rule number

RULE017

Description

An initial value of a generic name can be specified as the parameter for window call by push button, touch target, soft key, and overview controls.

If the initial value of the generic name is specified using a generic name, different results will be obtained on CENTUM CS 1000/CS 3000 and CENTUM VP.

For example, assume that GR0001 {$A=$GN} is written for the parameter and abc is specified as the initial value of generic name $GN. On CENTUM CS 1000/CS 3000, the parameter value will be regarded as “abc” in lower-case characters as specified while it is regarded as “ABC” in upper-case characters on CENTUM VP.

Remarks

Specification changed in CENTUM VP.

Since the processing is not case-sensitive, this poses no problem.

Window call using a generic name (2)

Rule number

RULE034

Description

This issue applies when a window call function is programmed for an interactive control by selecting [Call Window] on the [Function] tab and specifying [HIS Setting]. If the parameter specification is wrong, different behaviors will result on CENTUM CS 1000/CS 3000 and CENTUM VP.

Examples of wrong parameter specification:

- Parameter is specified using a generic name and the initial value of the generic name is not defined (blank).
- Parameter specification is invalid (example: -SP) regardless of whether a generic name is used.

On CENTUM CS 1000/CS 3000, the HIS Setting window is started.

On CENTUM VP, an error message appears and the HIS Setting window is not started.

How to correct

Specify the parameter directly and correctly without using a generic name after conversion to CENTUM VP.

Remarks

Specification changed in CENTUM VP.

This problem also occurs when process alarm window is specified instead of HIS Setting window (resultant behavior will be different from above mentioned behavior).

In both cases, modify the specification so as to obtain the desired behavior.

Evaluation of modifier conditions

Rule number

None (Not detected)

Description

The modifier condition evaluation processing is partially different between CENTUM CS 1000/CS 3000 and CENTUM VP.

If data values of different data types are compared in the relational expression written with a special format of OR, different results are produced.

This issue occurs only when generic names are used to specify data values in the relational expression.

On CENTUM CS 1000/CS 3000, the result of the relational expression is regarded as TRUE if the relation is satisfied for either of the values on the right side that are combined with an “or” operator.

On CENTUM VP, the result of the expression is regarded as FALSE at the point when different types of data are compared.

For example, assume that the following relational expression is set as a modifier condition.

Condition: TAG.PV = $A or $B

Values for generic names: $A = 10 (numeric value), $B = A (character)

In the above expression, comparison of two types of data values, a numeric value and a character, is performed in the expression.

If TAG.PV is 10, the result of the expression is as follows:

[CENTUM CS 1000/CS 3000]

TAG.PV = 10 (TRUE)

TAG.PV = A (FALSE)

↑

As comparison of different types of data is acceptable, the result of TAG.PV = $A or $B becomes TRUE.

[CENTUM VP]

TAG.PV = 10 (TRUE)

TAG.PV = A (FALSE)

↑

At the point different types of data are compared, the result of TAG.PV = $A or $B becomes FALSE.

SEE ALSO For more information about the special format of OR, refer to:

"■ Logical expressions in a special format" on page 4-25

■ Logical expressions in a special format

● Rule number

RULE012

● Description

For logical AND or OR between relational expressions whose left sides are the same (for example, TAG.PV==100 OR TAG.PV==10), you can use a special format of logical expression (TAG.PV==100 OR 10). In CENTUM CS 1000/CS 3000, this special-format logical expression is given higher priority than AND or OR used in an ordinary format while it is given the same priority in CENTUM VP.

For this reason, a logical expression like the one shown below delivers different results on CENTUM CS 1000/CS 3000 and CENTUM VP.

TAG1.PV == 10 OR 0 AND (TAG2.PV == 1 OR 2)

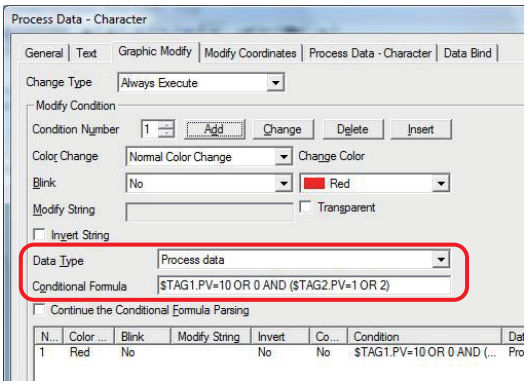
In CENTUM CS 1000/CS 3000, the result of this expression is True when TAG1.PV = 10 or 0 and TAG2.PV = 1 or 2.

In CENTUM VP, the result of this expression is only True when TAG1.PV = 10. (Because the "0" is on the left side of AND, the value of "0 AND (TAG2.PV == 1 OR 2)" is always False.)

Assume that the expression "$TAG1.PV==10 OR 0 AND ($TAG2.PV==1 OR 2)" is set for the modifier condition.

The following figure shows the settings on the graphic builder.

[CENTUM CS 1000/CS 3000]



[CENTUM VP]

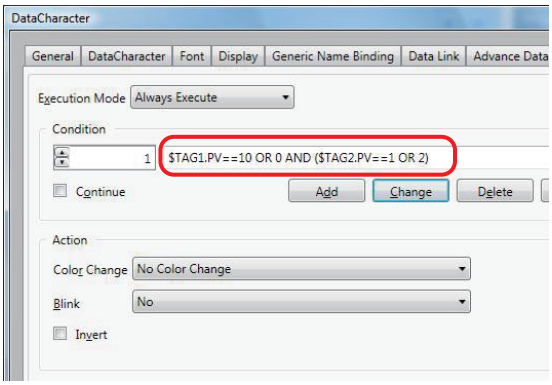


Figure 4-20 Settings on Graphic Builder

On CENTUM CS 1000/CS 3000, this expression is regarded as

($TAG1.PV=10 or 0) and ($TAG2.PV = 1 or 2)

On CENTUM VP, it is regarded as

($TAG1.PV==10) or (0 and ($TAG2.PV == 1 or 2))

Since "0" is means FALSE, the result of (0 and ($TAG2.PV == 1 or 2)) is always FALSE. Therefore, the result of the entire expression is practically the result of ($TAG1.PV==10).

Table 4-7 Results of Modifier Condition Evaluation

	CENTUM CS 1000/CS 3000				CENTUM VP			
TAG1.PV	10	10	0	0	10	10	0	0
TAG2.PV	1	2	1	2	1	2	1	2
Result	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE

How to correct

Modify the modifier condition expressions using parentheses to clarify the order of priority.

Evaluation of modifier conditions

Rule number

None (Not detected)

Description

If different types of data are compared in the relational expression specified as a modifier condition, different results are produced on CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, the result of comparison is returned even if the data types do not match. On CENTUM VP, such conditions are always evaluated as “not satisfied.” (It is regarded as an error and FALSE is returned.)

Algorithm of condition evaluation

The condition is evaluated as shown in the following figure.

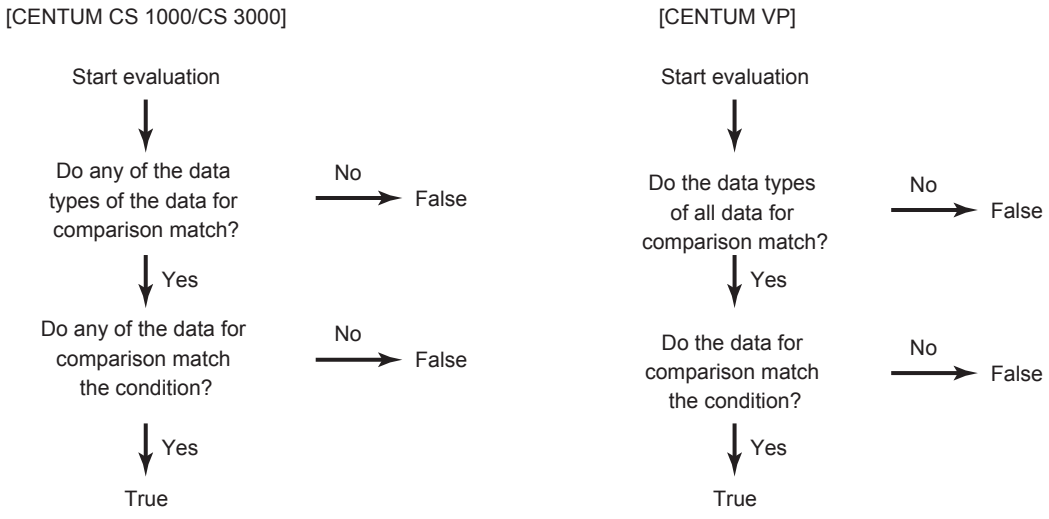


Figure 4-21 Algorithm of Condition Evaluation

Examples of evaluation

- Example1:
  If SFC001.CHR16[1,1]=“” (blank) .$A=“abc”, $D6=2 are defined, the results of evaluation will be as follows:

  Condition: SFC001.CHR16[1,1]<>$A and $D6

  → TRUE on CENTUM CS 1000/CS 3000 and FALSE on CENTUM VP.

  Condition: SFC001.CHR16[1,1]<>$A

  → TRUE on both CENTUM CS 1000/CS 3000 and CENTUM VP.

Condition: SFC001.CHR16[1,1]<>$D6

→TRUE on CENTUM CS 1000/CS 3000 and FALSE on CENTUM VP.

- Example2:
  If SFC001.CHR16[1,1]=2, $D6=2 are defined, the results of evaluation will be as follows:

  Condition: SFC001.CHR16[1,1]=$D6

  → FALSE on both CENTUM CS 1000/CS 3000 and CENTUM VP.

Ack button operation for overview blinking

Rule number

None (Not detected)

Description

On CENTUM VP, if a graphic view contains an overview component used for monitoring the alarm status of windows, you cannot stop the blinking by just clicking the Ack button on the graphic view. To stop the blinking, you need to click the Ack button on the view that is being monitored. You can also stop the blinking by acknowledging the alarm on the source of blinking.

Remarks

Specification changed in CENTUM VP.

Data display positions on overview components

Rule number

None (Not detected)

Description

The display position of the monitored data (data value and engineering unit) on overview components slightly differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

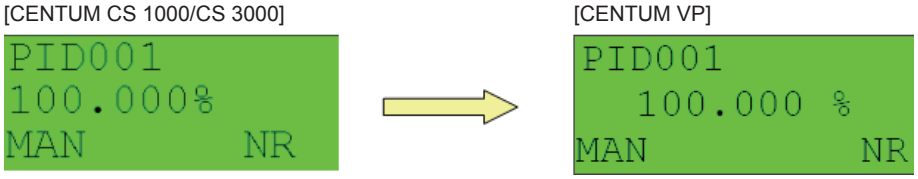


Figure 4-22 Difference in Data Display Position

Remarks

Details of the data display positions on overview components are shown below for CENTUM CS 1000/CS 3000 and CENTUM VP:

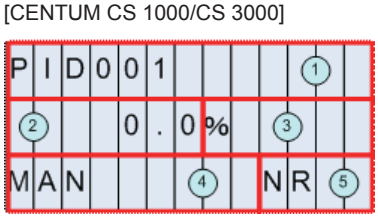


Figure 4-23 Details of Data Display Positions (CENTUM CS 1000/CS 3000)

Table 4-8 Details of Displayed Contents (CENTUM CS 1000/CS 3000)

No.	Item	Character length	Alignment	Position	Remarks
1	Tag name or comment	Any length	Left	From the 1st character in the 1st line	If the character length is too long for the width, the font width is narrowed.
2	Data value	Always 7	Right	From the 1st character in the 2nd line	If the character length (7 + length of engineering unit) is too long for the width, the font width is narrowed.
3	Engineering unit	Any length	Left	From the 8th character in the 2nd line	
4	Mode	Always 9	Left	From the 1st character in the 3rd line	If the character length (9 + length of status string) is too long for the width, the font width is narrowed.
5	Status	Any length	Left	From the 10th character in the 3rd line	

[CENTUM VP]

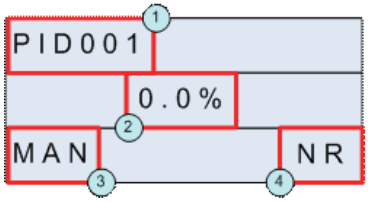


Figure 4-24 Details of Data Display Positions (CENTUM VP)

Table 4-9 Details of Displayed Contents (CENTUM VP)

No.	Item	Character length	Alignment	Position	Remarks
1	Tag name or comment	Any length	Left	Left-justified in the 1st line	If the character length is too long for the width, the font width is narrowed.
2	Data value + engineering unit	Any length	Center	Centered in the 2nd line	If the character length is too long for the width, the font width is narrowed.
3	Mode	Any length	Left	Left-justified in the 3rd line	If the character length of the mode or status string, whichever is longer, is too long for half the width, the font width is narrowed.
4	Status	Any length	Right	Right-justified in the 3rd line	

Behavior when annunciator is assigned to an overview component

Rule number

None (Not detected)

Description

If an annunciator is monitored through an overview component and a common switch (%SW****.PV) or global switch (%GS****.PV) is assigned to the 2nd line, the appearance of the overview control slightly differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, the overview control does not change its color according to the alarm status of the annunciator but is displayed in white, which is the color of internal switches.

On CENTUM VP, the overview control changes its color according to the alarm status of the annunciator.

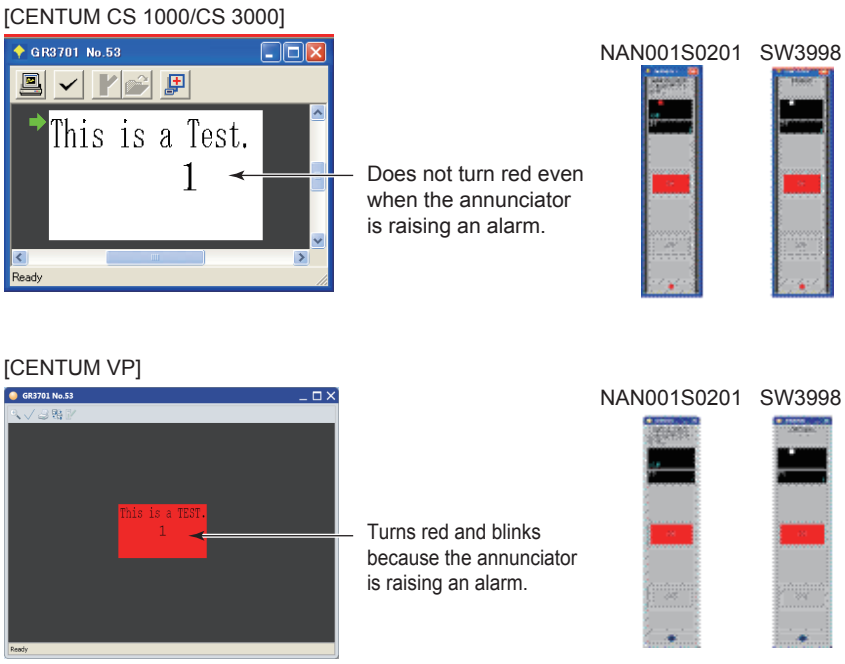


Figure 4-25 Difference in the Color of Overview Control

Definition of overview controls

Rule number

None (Not detected)

Description

If an incorrect window or tag name is specified in the definition of an overview control, the behavior of the overview control differs between CENTUM CS 1000/CS 3000 and CENTUM VP. Modify the definition so that the overview control behaves as desired.

Remarks

Specification changed in CENTUM VP.

Blinking specified to be executed first time only

Rule number

None (Not detected)

Description

If screen blinking or alarm-specific blinking is set for a modifier that is specified to be executed first time only, the behavior when acknowledgement operation is performed is different between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, the blinking of the function block being monitored stops but the blinking on the graphic view does not stop.

On CENTUM VP, the blinking of both the function block and graphic view stops.

Remarks

Specification changed in CENTUM VP.

Behavior when division by 0 has occurred

Rule number

RULE085

Description

The behavior when division by 0 is detected in a relational expression specified for a modifier condition differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, evaluation of the expression is discontinued upon detection of division by 0 and the condition is regarded as “not satisfied.”

On CENTUM VP, evaluation of the expression continues even after a division by 0 is detected.

For example, the following condition is regarded as “not satisfied” on CENTUM CS 1000/CS 3000 but regarded as “satisfied” on CENTUM VP.

1=1 OR PID001.PV / $A = 0 (when the initial value of $A is 0)(*1)

The behavior when division by 0 is detected in the expression for a modifier is as follows:

On CENTUM CS 1000/CS 3000, evaluation of expressions is discontinued at the moment division by 0 is detected. (Further evaluation is not performed for that expression.)

On CENTUM VP, evaluation of the expression continues even after a division by 0 is detected. (If the result of any expression is True, the object changes into a specified color.)

On CENTUM VP, result of division by 0 is taken as ∞ or -∞.

So, the result of the following expression is True.

10 / $A > 0

*1: “=” in CENTUM CS 1000/CS 3000 is converted to “==” in CENTUM VP.

Example of setting

An example of setting and the difference in behavior are described below.

Original color of the object: White

Color when modifier condition is satisfied: Red

Modifier condition: SW1000.PV = 1 or 10/BD0001.DT01 = 10

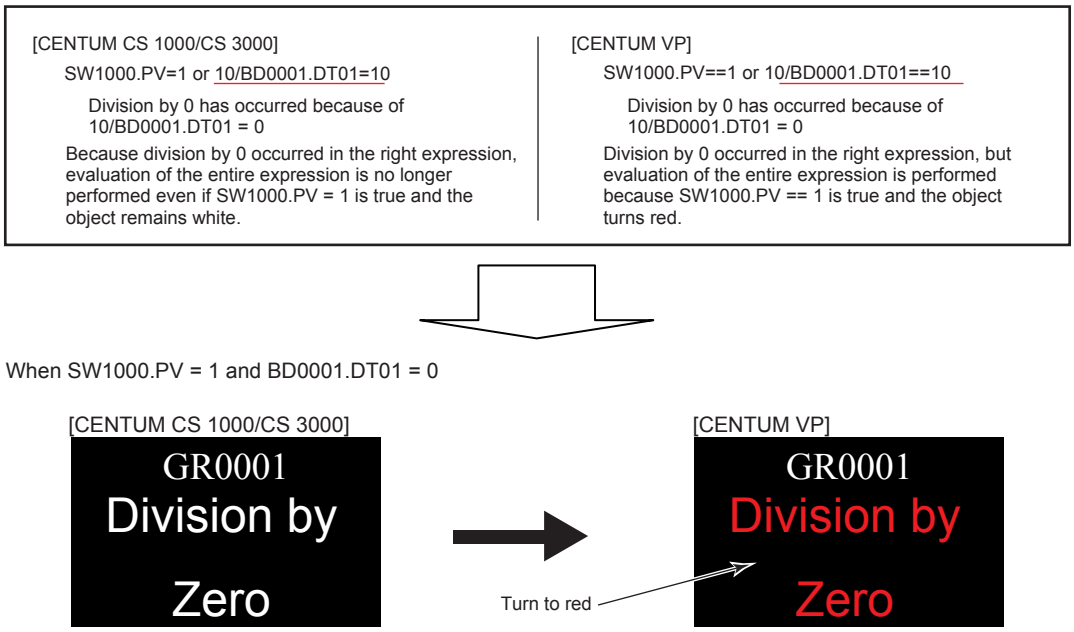


Figure 4-26 Behavior when Division by 0 has Occurred

Division by 0 in data characters

Rule number

None (Not detected)

Description

If display format of data character control is percentage and division is defined for the data to be displayed, the behavior is different between CENTUM CS 1000/CS 3000 and CENTUM VP when division by 0 has occurred.

On CENTUM CS 1000/CS 3000, the data character control itself is not displayed.

On CENTUM VP, **** (asterisks) is displayed.

Remarks

If display format of data character control is percentage and division is defined for the data to be displayed, the behavior is not different between CENTUM CS 1000/CS 3000 and CENTUM VP. **** (asterisks) is displayed on both of CENTUM CS 1000/CS 3000 and CENTUM VP.

This difference also applies to the cases where division by 0 occurs as a result of division by a value given via a generic name or by process data as well as the division by 0 that is directly specified.

Behavior of @CurrentData

Rule number

RULE029

Description

@ProcessData/@RecipeUnit/@RecipeBatchID in CENTUM CS 1000/CS 3000 graphics are converted to @CurrentData during conversion to CENTUM VP. However, this causes no difference in their behavior.

Last character of data character controls

Rule number

RULE040

Description

Depending on the type of font, the last character of data character control may not be displayed correctly after converted to CENTUM VP.

This problem is significant when the font Wingdings is selected in the properties dialog box of data character control.

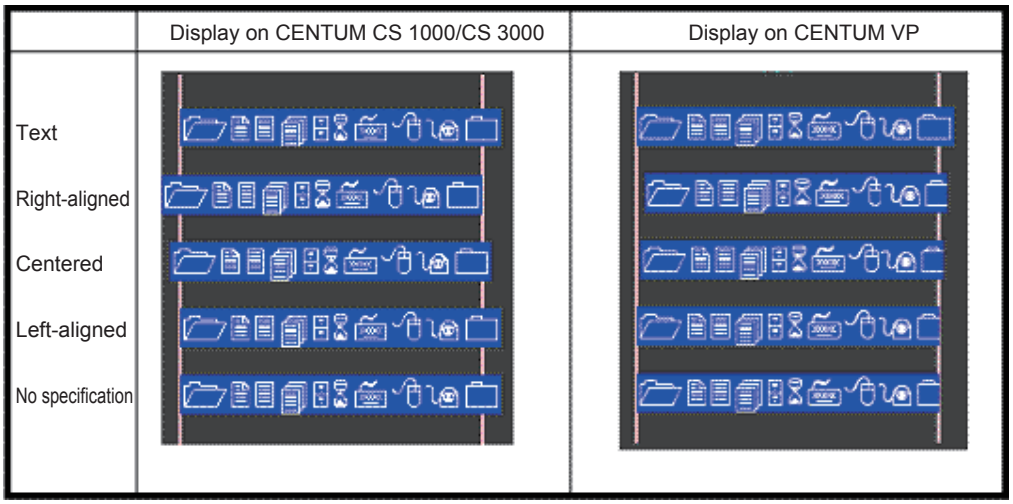


Figure 4-27 Example of Display when Wingdings is Used

How to correct

Adjust the position as necessary so that the entire string is displayed.

Remarks

This problem does not apply to text controls.

Array element specifications

Rule number

RULE037

Description

On CENTUM CS 1000/CS 3000, if an array index is specified to be 0, it is regarded that the index of that dimension is not specified. For example, description for a non-array data item PID001.PV may be PID001.PV[0] or PID001.PV[0,0], both of which deliver the same behavior.

On CENTUM VP, however, an index of 0 results in an error, so the data is no longer displayed after conversion to CENTUM VP.

You need to modify such array index descriptions.

Shown below is an example where an index is specified for the PV of PID instrument FIC0001. Assume that settings (properties) are made on the builder as shown in the following figure.

[CENTUM CS 1000/CS 3000] [CENTUM VP]

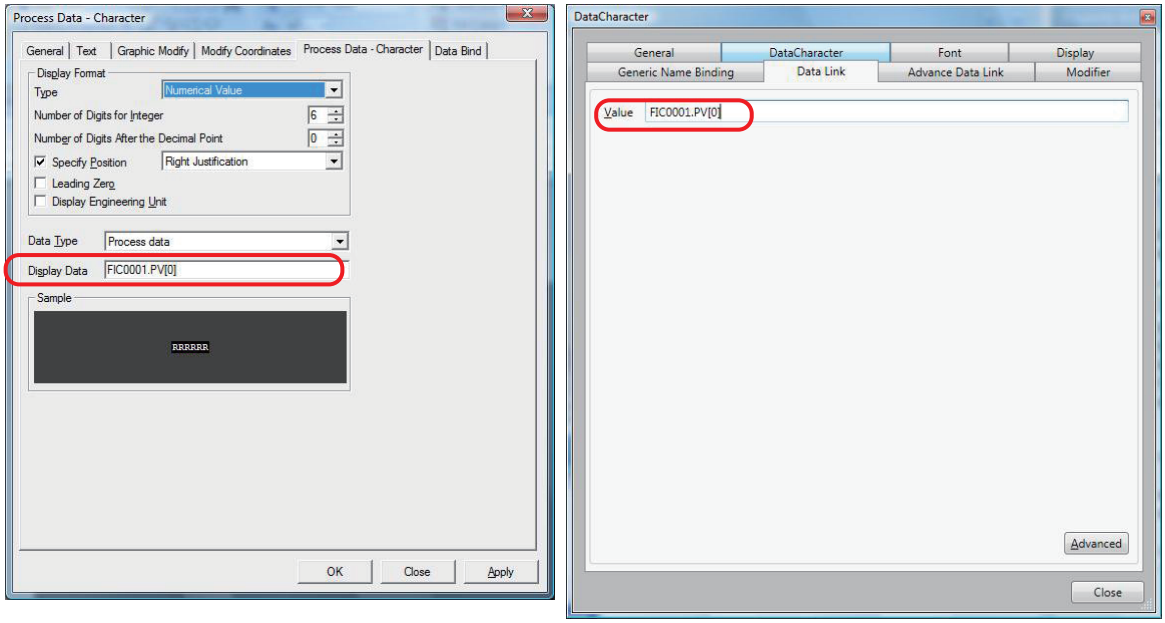


Figure 4-28 Setting on the Builder

Display on the graphic window/view will be as follows:

[CENTUM CS 1000/CS 3000] [CENTUM VP]

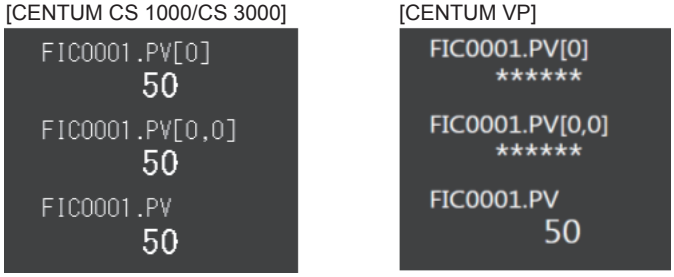


Figure 4-29 Display on the Graphic Window/View

● How to correct

Modify the index specification so that the data is displayed properly.

● Remarks

RULE037 only detects array indexes directly specified as “0”. Those specified, for example, using a generic name are not detected.

■ Display time span of trend components

● Rule number

RULE041

● Description

The method of determining the display time span of a trend component differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM VP, the display time span is specified from a properties dialog box regardless of the display size of the trend graph. On CENTUM CS 1000/CS 3000, the display time span is automatically determined from the display size and time axis setting.

After converted to CENTUM VP, the display time span is the default span for the time axis that was specified on CENTUM CS 1000/CS 3000 (6 minutes for 1-second trend with magnification = 1).

Omission of upper/lower limit values when a calculation formula is set in a coordinate modifier

Rule number

RULE042

Description

In a coordinate modifier, if a calculation formula is set as the X- or Y-axis data and its upper/lower limit values are not specified, the behavior of the object differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, specification of upper/lower limits can be omitted even if a calculation formula is set. In this case, however, the object is not displayed.

After conversion to CENTUM VP, the objects with such modifier settings are displayed taking that the value of the expression is the X- and Y-axis data from the upper left, which is 0 coordinate.

If you do not want the object to be displayed, delete the object after conversion.

Remarks

“Coordinate modifier” is the function of CENTUM CS 1000/CS 3000 that is used to move a graphic object according to the value of process data. It is configured by the settings on the [Coordinate Modifier] tab of an object.

The same function is provided in CENTUM VP, but it is not called “coordinate modifier.” This function is treated as an advanced data link function and can be configured by the settings on the [Advance Data Link] tab of an object.

Clicking position to select an object with a coordinate modifier

Rule number

None (Not detected)

Description

The position in the graphic window you can click to select an object with a coordinate modifier differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, you can only click the initial display position that is defined on the graphic builder to select the object.

On CENTUM VP, you can click on the moving object to select it.

The settings on the builder are shown below.

[CENTUM CS 1000/CS 3000]

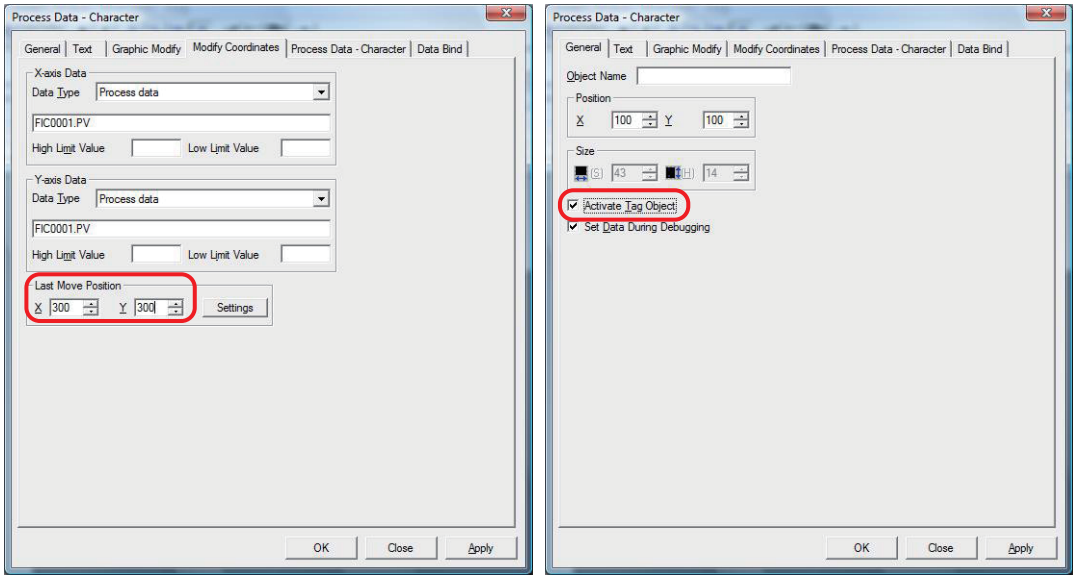


Figure 4-30 Settings on the Builder (CENTUM CS 1000/CS 3000)

[CENTUM VP]

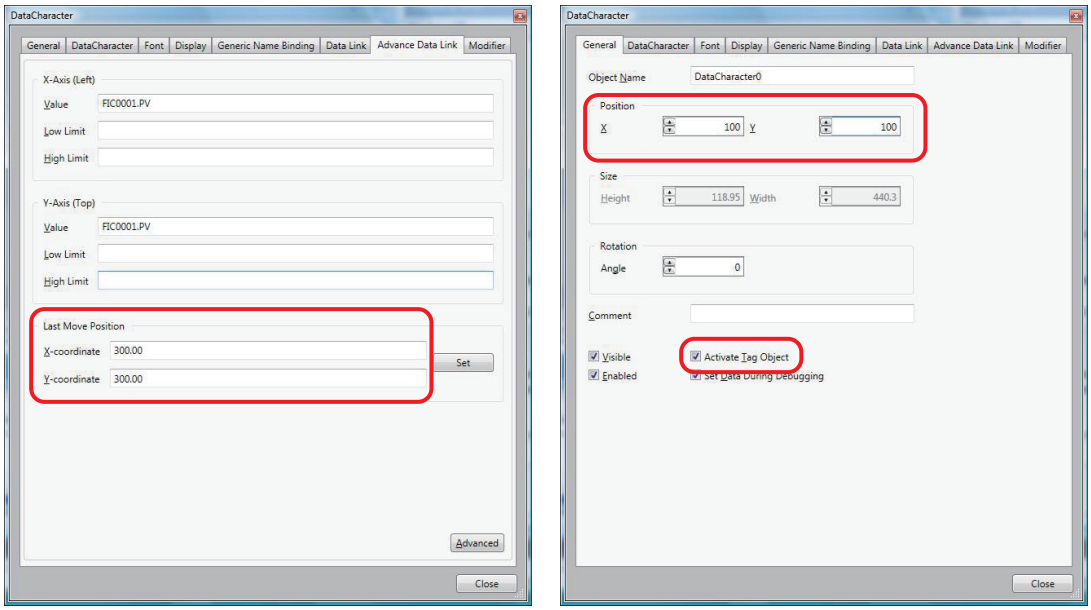
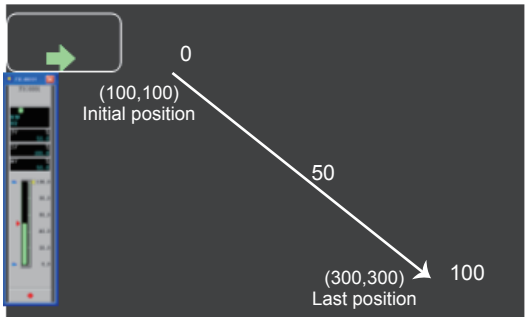


Figure 4-31 Settings on the Builder (CENTUM VP)

The object behaves as follows on the graphic window/view.

[CENTUM CS 1000/CS 3000]
To call up the function block, always click the initial position.



[CENTUM VP]
To call up the function block, click the object that moves.

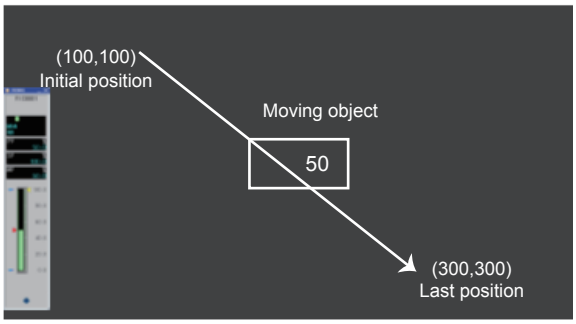


Figure 4-32 Behavior on the Graphic Window/View

Remarks

Specification changed in CENTUM VP.

Scaling mode

Rule number

RULE079

Description

The scaling mode setting of CENTUM CS 1000/CS 3000 graphic windows are changed when they are converted to CENTUM VP.

If a graphic window for which [Disable Scaling] is set is converted to CENTUM VP, the scaling mode is changed to [Fixed Ratio].

How to correct

For graphic windows for which [Disable scaling] is set, set the scaling mode to [No scaling] again after conversion.

For graphic windows for which [Disable Scaling] is not set, you don't need to set the scaling mode again because it is set to [Fixed Ratio], which is the default setting on CENTUM VP.

ITV window

Rule number

RULE056

Description

Definitions to call up an ITV window that are contained in CENTUM CS 1000/CS 3000 graphics are converted to definitions to call up process alarm window during conversion to CENTUM VP.

Wherever [ITV window] is specified, it is converted to [Process alarm].

[CENTUM CS 1000/CS 3000] [CENTUM VP]

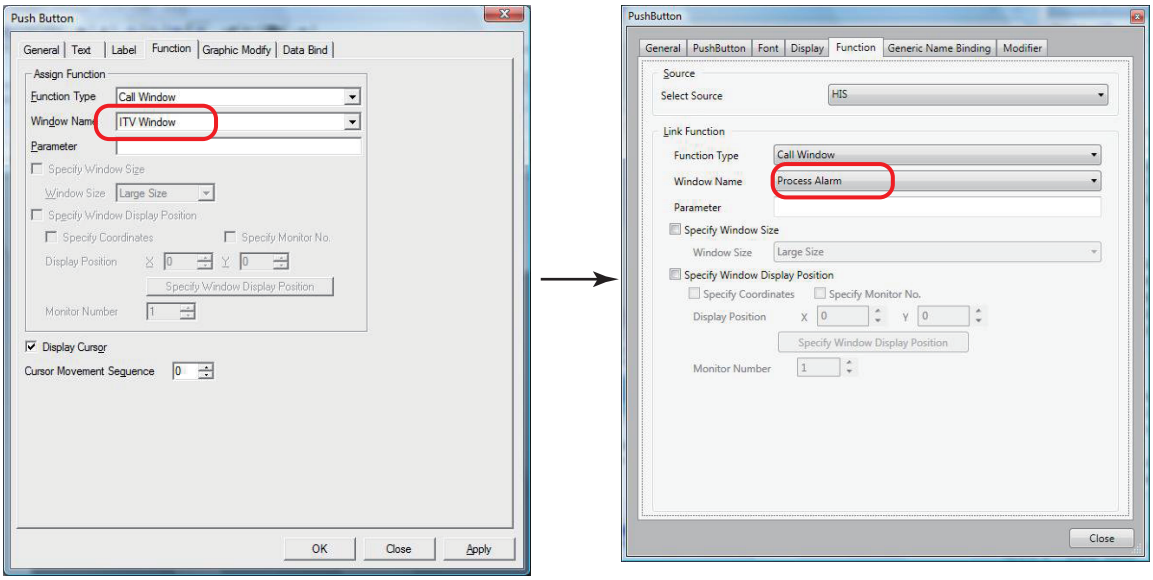


Figure 4-33 Conversion of Calling ITV Window

- **Remarks**

The ITV package is not available with CENTUM VP.

Function execution

- **Rule number**

RULE057

- **Description**

CENTUM VP HIS does not support the system function key commands [Window Set Store (WSSV)] and [Window Set Delete (WSCL)].

Therefore, if a graphic file containing a push button or touch target to which either of these commands is assigned is run after conversion to CENTUM VP, an error will result.

Color change of gradient objects

- **Rule number**

RULE067

- **Description**

If the color of an object for which gradient fill is specified is changed by a modifier of Alarm-specific color change or Overview color change, the behavior of the object when the modifier condition is satisfied differs between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, the object is filled with the specified color without gradation.

On CENTUM VP, the object is displayed with gradation where only the starting color (color 1) is changed to the specified color.

- **How to correct**

After conversion to CENTUM VP, set the second color (color 2) so that the object is displayed in the right color. (Setting color 2 to white allows the object to be modified more clearly.)

Color change of Linked Parts or Group objects

Rule number

RULE097

Description

If CENTUM CS1000/CS 3000 graphics that the following linked parts or group object is defined are converted to CENTUM VP and graphics are saved after the conversion, the color change at the satisfaction of modifier conditions is changed from color gradient to a solid color. If graphics are not saved, behaviors on CS 1000/CS 3000 are maintained.

- Linked parts
  Define a control in linked parts, apply a pattern or gradient effect as the Fill Type and specify Normal Color Change as the modifier condition. Quote this linked parts to graphics and specify Normal Color Change as the modifier condition of this linked parts.
- Group object
  Define a control, apply a pattern or gradient effect as the Fill Type and specify Normal Color Change as the modifier condition. Grouping this control. Specify Normal Color Change as the modifier condition of the group.

How to correct

Delete the modifier condition that is specified to linked parts or group objects and adjust the modifier condition to make respective internal controls the same as those in CS 3000.

Number of lines displayed in message controls

Rule number

None (Not detected)

Description

The number of lines displayed in a message control may differ between CENTUM CS 1000/CS 3000 and CENTUM VP.

On CENTUM CS 1000/CS 3000, the entire message is displayed even if the message is not accommodated in the specified number of display lines. On CENTUM VP, the font size is automatically calculated so that the entire message is displayed.

As a result of this, the number of display lines may be changed after conversion to CENTUM VP.

If the width of the message control is too short and the latter part of the message is not displayed, use the graphic builder to make the message control wider.

Remarks

Specification changed in CENTUM VP.

Dialog

Rule number

RULE086

Description

If a dialog name object is used to define a dialog name on CENTUM CS 1000/CS 3000, the dialog name object is replaced with a data character control during conversion to CENTUM VP.

When converted, the height of the area where the dialog name is displayed may be changed. As a result, the dialog name may be hard to read on CENTUM VP.

How to correct

Adjust the size of the data character control as necessary.

Limit value display in line-segment graph

Rule number

None (Not detected)

Description

On CENTUM VP, the line width of the line-segment graph when the value is clamped at 0% or 100% is about half the line width on CENTUM CS 1000/CS 3000.

Because of this, the graph line at 0% or 100% may be slightly hard to see if the line is overlapped with another graphic shape.

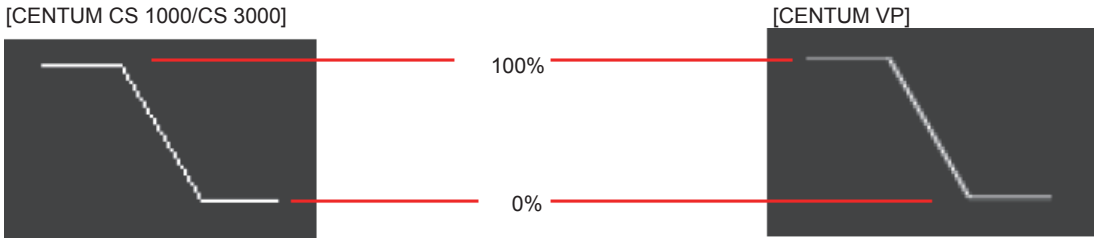


Figure 4-34 Line Width of Line-segment Graph

Border line of bar graph bars

Rule number

None (Not detected)

Description

On CENTUM CS 1000/CS 3000, bars of a bar graph control do not have border lines but border lines are displayed on CENTUM VP.

How to correct

After conversion to CENTUM VP, set the border line width to 0 so as to get the same appearance as CENTUM CS 1000/CS 3000.

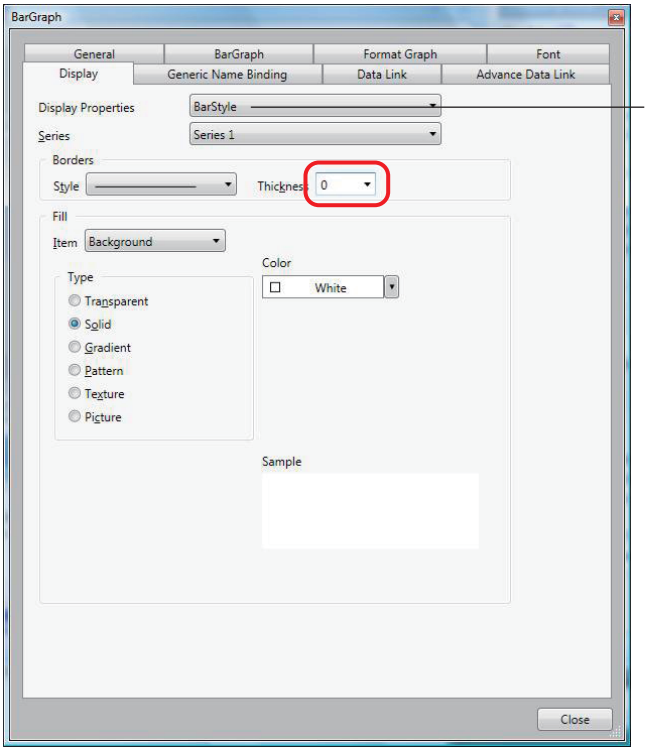


Figure 4-35 Corrective Setting on Properties Dialog

Graphic interface (ReplaceDataBindValue/DataBindValue)

Rule number

None (Not detected)

Description

The syntaxes of two graphic interface methods (ReplaceDataBindValue and DataBindValue) differ between CENTUM CS 1000/CS 3000 and CENTUM VP for handling text-type generic names.

- For ReplaceDataBindValue method, the text must be enclosed with double quotations (“).
- The texts returned by DataBindValue method are enclosed with double quotations (“).

Text for initial value of a generic name and text for replacement in modifier definition

Rule number

None (Not detected)

Description

On CENTUM VP, a [Treat As Character] check box is provided in the dialog box to set the initial value of a generic name and the dialog box to set the text for replacement in modifier definition.

On CENTUM CS 1000/CS 3000, the characters $, “ (double quotations), +, . (dot), and \ (back slash) contained in the text are handled as text but not on CENTUM VP. The [Treat As Character] check box was introduce to CENTUM VP to avoid this difference.

When converted from CENTUM CS 1000/CS 3000 to CENTUM VP, these check boxes are automatically selected. However, when you create a new graphic view on CENTUM VP, this check box is clear by default.

Graphic Interface (MoveCursor)

Rule number

None (Not detected)

Description

Actions regarding MoveCursor graphic interface differs between CENTUM CS 1000/CS 3000 and CENTUM VP. In CENTUM CS 1000/CS 3000, when calling MoveCurosr, the cursor can be moved regardless if the graphic is focus or not. However, in CENTUM VP, when calling MoveCursor in a graphic view while the graphic view is not focused, calling MoveCursor cannot move the cursor in the graphic view.

Remarks

Specification changed in CENTUM VP.

Linked Parts that Contain Instrument Faceplate Control or Message Control

Rule number

RULE094

Description

If the linked parts that contain instrument faceplate control or message control have been defined in a CENTUM CS 1000/CS 3000 graphic file, the size of the linked parts will be intact right after file is converted to the CENTUM VP graphic file. However, once the graphic file is edited on the graphic builder or the linked parts are updated, the size will be changed to 1:1 size of the linked parts.

How to correct

Release the linked parts before converting the graphic file to CENTUM VP graphic file.

Cursor Navigation Index

Rule number

None (Not detected)

Description

After converting a CENTUM CS 1000/CS 3000 graphic file to CENTUM VP graphic file, the cursor navigation order may become different. In CENTUM CS 1000/CS 3000 environment, the cursor moves to the objects with defined cursor navigation index numbers first and then move to the objects without the defined cursor navigation index numbers. However, in CENTUM VP, the cursor moves to the objects without defined cursor navigation index numbers first.

How to correct

After conversion, you need to redefine the cursor navigation index number for the objects on CENTUM VP graphic builder according to you desired order.

Width of fonts

Rule number

None (Not detected)

Description

If Windows OS is changed from Windows XP to a later version of Windows, the width of fonts may be different upon the following cases:

- When the font that is not supported on CENTUM CS 1000/CS 3000 Graphic is assigned
  Example: Meiryo
- When Japanese is displayed in an English font on CENTUM CS 1000/CS 3000 Graphic
  Example: Courier New (default)
- When the alphabet in some Proportional font is displayed on CENTUM CS 1000/CS 3000 Graphic
  Example: Arial, Times New Roman

How to correct

Make adjustment the width to change the fonts or characters.

CENTUM VP Graphic Convert Error (1)

Rule number

RULE095

Description

When the window control set to ITV Window for window name is defined on CENTUM CS 1000/CS 3000, it can not convert into CENTUM VP.

How to correct

Change or delete the definition of the window control on CENTUM CS 1000/CS 3000.

CENTUM VP Graphic Convert Error (2)

Rule number

RULE096

Description

When the width or height of the below control is less than 1 and is defined on CENTUM CS 1000/CS 3000, it can not convert into CENTUM VP.

- Rectangular Bar
- Line-segment Graph
- User-defined Line-segment Graph
- Bar Graph
- Step Graph
- Radar Chart

- Two-dimensional Graph
- Touch Target
- Window
- Overview

How to correct

Delete the above control on CENTUM CS 1000/CS 3000.

Font Conversion Error

Rule number

RULE098

Description

If CENTUM CS 1000/CS 3000 graphics containing Arial Narrow font characters are converted to CENTUM VP graphics, the Arial Narrow font style may not be applied correctly in CENTUM VP. For example, if Arial Narrow font characters that are displayed in BOLD or ITALIC style in CENTUM CS 1000/CS 3000 are converted, the Arial Narrow font characters may be displayed in the normal style.

This problem stems from the specifications of Microsoft WPF (Windows Presentation Foundation).

How to correct

If the incorrectly displayed font style is inconvenient, change the Arial Narrow font in CENTUM CS 1000/CS 3000 graphics to another font before conversion, or change the Arial Narrow font in the CENTUM VP graphics to another font after conversion.

Cursor display settings

Rule number

None (Not detected)

Description

Operations on touch target, push buttons, faceplate block button, and overview components in which cursor display settings are not configured differs for CENTUM CS 1000/CS 3000 and CENTUM VP.

When you right-click touch target, push-button, faceplate block button, and overview components in which cursor display settings are not configured, right-click menu is displayed in CENTUM CS 1000/CS 3000. But, the menu is not displayed in CENTUM VP.

Remarks

Specification changed in CENTUM VP.

Linked parts containing text components with bold font style are defined in CENTUM CS 1000/CS 3000

Rule number

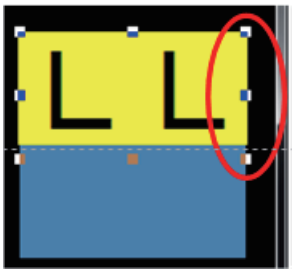
None (Not detected)

Description

If any linked parts containing text components with bold font style are defined in CENTUM CS 1000/CS 3000 graphics, the size of the linked parts may change after converting the graphics to CENTUM VP and updating the linked parts. In addition, because the linked parts will be updated when you open the graphics on the graphic builder after conversion, the size of the linked parts may also change if you save them on the builder.

The following figure shows an example. In this example, the width of the text component with bold font style became larger compared to the one with normal font style.

Normal font style



When bold font style is specified.

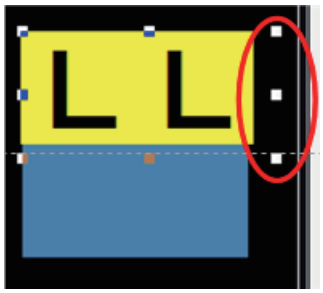


Figure 4-36 Text component with bold font style

How to correct

When there is any bold font style text in the text components of linked parts in CENTUM CS 1000/CS 3000, adjust the border of such text components so that they are aligned with the border of other text components. Alternatively, cancel the bold font style specification.

After that, convert them to CENTUM VP graphics.

Revision Information

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Aug. 2019/6th Edition/R6.07 or later

Preface Updated descriptions in “■ Trademark Acknowledgements.”

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4 Added “■ Linked parts containing text components with bold font style are defined in CENTUM CS 1000/CS 3000.”

Nov. 2017/4th Edition/R6.05

4 Added “■ Cursor Display Settings.”

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4 Deleted descriptions of Windows Vista.

Added RULE097.

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3.2 Updated the figure in "■ Convert project database to CENTUM VP project.”

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■ For Questions and More Information
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