

# BLUE 3.4 Service Pack 1 Read Me

Document Revision: 02

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## 1 SOFTWARE DESCRIPTION

This software provides an integrated development environment that enables you to use a personal computer to create a Human Machine Interface (HMI) user application. The HMI user application, used by the runtime software, can run on multiple platforms.

## 2 SYSTEM REQUIREMENTS (SCREEN EDITING SOFTWARE)

	Minimum specifications	Comments
PC	Windows PC/AT compatible machine	-
CPU	8th Generation Intel(R) Core™ i3/i5 Processors or faster	-
Memory	8 GB or more	-
Available Disk Space	30 GB or more	-
Operating System	Windows 10 Pro (64-bit) with latest update	-
Other non-operating-system programs	.NET Framework 4.7.2 full *1	-

\*1 When installing the screen editing software, .NET Framework Ver.4.7.2 full is automatically installed. For disk space requirements, visit the Microsoft website.

Note:

- This product must be installed and configured by qualified software installation personnel with administrator rights.
- The software installation file is configured with a digital signature. If any issue regarding the digital signature arises during installation, cancel the installation and contact customer support.

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## 3 ACCESS RIGHTS

### 3.1 Screen Editing Software

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You can install or uninstall the screen editing software with administrator privileges.

### 3.2 Runtime (IPC Series / PC/AT)

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You can install or uninstall the run time with administrator privileges.

When transferring project files, launch the run time with administrator privileges before transferring.

## 4 FOR SECURE APPLICATIONS

This section explains some points to securely configure applications.

Note: Security related messages appear in the Feedback Zone's [Security Warnings] tab. Review messages and take required corrective action to reduce your cybersecurity risk.

### 4.1 Cybersecurity Best Practices

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To help keep your Pro-face products secure and protected, we recommend that you implement the cybersecurity best practices.

Following the recommendations may help significantly reduce your company's cybersecurity risk.

For the recommendations, refer to the following URL:

<https://www.pro-face.com/trans/en/manual/1087.html>

### 4.2 To build a secure network for unauthorized access prevention

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- Build a communication environment using encrypted communications (ex. VPN).
- Check that the network is secured before communication is established and data is transferred through the Ethernet.
- Select a transfer option that is not based on Ethernet communication (ex. USB Cable or FileSystem). If you need transfer option based on Ethernet communication, we recommend to use IPsec.
- Open the port for data communication only when you use the communication service.
- Protect your PC with a firewall and make sure it is used on a trusted secure network.
- Install the display unit on a trusted secure network and protect the display unit with a firewall.

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## 4.3 To prevent impersonation in Display Unit

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- Use the Security features.
  - Use the auto logout feature.
  - Give an appropriate security level for unlocking to limited users (allow only users with administrator rights to unlock, and so on).
- Password is not asked for the below operations:
  - External Device operation block - Upload (USB Storage/SD Card)
  - External Device operation block - Download (USB Storage/SD Card)
  - Display the Hardware Configuration

Set the security level for the Switches which are used for above operations.

- When using Web Viewer to connect to the display unit, do not touch the [\*\*\*] button to display the password. The displayed password will become visible to all connected display units and Web Viewer clients.

### 4.3.1 When Using SP5000 Series Open Box (Windows 10 IoT Enterprise Model), IPC Series, or PC/AT

- Use runtime only on a trusted PC.
- Do not log in to Windows with an account that has administrator rights, except when transferring project files or performing other operations that specifically require administrator rights.
- Use the security features in Windows (set a password, use the auto-logout feature, etc.).
- Set secure passwords and security for the administrator account for your project.

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## 4.4 To protect information from alteration

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- Harden your PC following the best cybersecurity practices (antivirus, updated operating systems, strong password policies, Application Allow Listing software, etc.) using the following guideline:  
<https://www.pro-face.com/trans/en/manual/1087.html>
- Carefully manage your own data.
- Protect your project by adding a project password.
- Preventing Unauthorized Changes to a Project
- When using transfer option based on USB Cable or Ethernet Cable, enable [Security Setting] in [Transfer Method].
- Do not execute screen editing software with Windows administrator rights.

- Use screen editing software only on a trusted PC.

## 5 LICENSE / REGISTRATION

Please refer to Help from the Schneider Electric License Manager.

## 6 TOOLS

You can distribute the following tools installed in the [Tools] folder.

- Export Validation Tool
- User Management Tool

## 7 WHAT'S NEW

### 7.1 Updated Drivers

New CPUs are supported by the following drivers

- OMRON Corporation - CS/CJ/CP/NX Series Ethernet
- OMRON Corporation - CS/CJ/CP Series HOST Link

New device addresses are supported by the following drivers.

- Mitsubishi Electric Corporation - Q/QnA Series Ethernet
- Mitsubishi Electric Corporation - Q/QnA Series Serial

External Device firmware version (STEP7 V11-V18) is now supported.

- Siemens AG - TIA Portal Ethernet

The following drivers have been updated to increase the range of unit IDs.

- Modbus Organization - Modbus TCP Master
- Schneider Electric - Modbus TCP Master
- Schneider Electric - Modbus TCP Master via USB

### 7.2 New Features

Alarm

- The [Alarm Behavior] property has been added to the [Alarm Group] property window. When the [Alarm Behavior] is [Optional ACK], the alarm status transitions between three states, and transitions between four states when the [Alarm Behavior] is [Mandatory ACK].

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As a result of adding the [Alarm Behavior] property, the file version for exported alarm data has been updated to 2.1.

#### Indirectly Define Array Index with Object Property Values

- Object property values now can be used to indirectly define array indexes.

#### Select to Keep or Clear Log Data at Transferring via Ethernet or USB Cable

- When transferring projects via Ethernet or USB cable, alarm, logging and operation log settings and log data can now be retained. Select to keep or clear each log data file in the Download Manager.

#### Improved Features

- The Maximum number of recipes in each recipe group has increased.
- When re-importing the symbol file, there is no need to remove the previously imported symbol file.

## 8 FIXED LIMITATIONS

### 8.1 Screen Editing

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#### 8.1.1 Screen Editing Software

- Fixed an issue where an error message continued to display in the screen editing software even after the error was corrected.
- Fixed an issue where the error message "Reached maximum number of \*\*\* equipment" displayed in the screen editing software even though the project did not reach the maximum number of equipment.
- Fixed an issue with CSV file import in the screen editing software.
- Fixed an issue that resulted in a corrupted file when saving a project.
- Fixed an issue where memory usage was too high when opening multiple screens in the screen editing software.
- Fixed an issue where float values did not display correctly at simulation and run time because float values were not handled correctly in certain language settings.
- Fixed an issue where drag selection of multiple objects did not operate correctly.
- Fixed an issue where the [Maximize] button did not appear when the screen editing software was used on a computer with a specific resolution.
- Fixed an issue where only one message was displayed in the error window even though multiple error messages were generated by the same source property association.
- Fixed an issue where the [Order] heading to change the stacking order could not be selected when multiple objects were selected.



- Fixed an issue where an incorrect error message "The [Save in] setting is invalid because the selected storage is also configured for [External Storage - Eject] operation" displayed in the screen editing software even though it was USB storage that was selected in the [Save in] property and SD card was selected for [External Storage]. The same also applied when SD card was selected in the [Save in] property and USB storage was selected for [External Storage].
- Fixed an issue where opening an older version of a project file did not retrieve the correct image if the path specified in the [Image File] fields were the same for multiple objects but with different displayed images.
- Fixed an issue where the screen editing software did not work properly when the Windows login user name was very long.
- Fixed an issue where either the project file was corrupted or the screen editing software exited unexpectedly on opening a project file created in an earlier version of the screen editing software.

### 8.1.2 Screen / Content

- Fixed an issue where the Grid did not display correctly when extending the size of a layout object such as Scroll Canvas or Zoom Canvas when [Show Grid] was enabled.
- When using the Navigation function, there are Navigation switches on the Master Screen. Fixed an issue in the screen editing software where the Navigation Switch properties were incorrectly allowed to bind.
- Fixed an issue so that you can copy screens or contents from screen editing software version 3.3 to screen editing software version 3.2, 3.2 service pack 1, or 3.2 service pack 2.
- Fixed an issue where scrolling did not function properly in the screen editing software when the Content width or height was set to a large value and the content was zoomed in or out.
- Fixed an issue where the values of properties such as [Fill] and [Border] for navigation switches were not preserved in the screen editing software.
- Fixed an issue in the screen editing software where changing the navigation switch's [Show Icon] property did not work properly.

### 8.1.3 Parts / Shapes

- Fixed an issue where using the [Ctrl] key and mouse to copy a part or shape duplicated the part or shape in the same position.
- Fixed an issue where an incorrect string was set to the destination if a large numeric value was set in the [Source] for a string type touch operation in an object ([Function] tab - [Touch] tab).
- Fixed an issue where an invalid error displayed when a binding source with indirect addressing was set for a property of a part or shape.

#### 8.1.3.1 Dropdown List

- Fixed an issue where only 100 [items] could be set in the Dropdown List. It now stores up to 256 items.

#### 8.1.3.2 Pipe

- Fixed an issue where using the [Add Points] command on the end of a Pipe caused the added end to draw in an unexpected area making it unselectable. Additionally, fixed an issue where the screen editing software exited unexpectedly when using the [Snap Objects] option to edit a Pipe.
- Fixed an issue where the drawing process did not start after selecting a Pipe from the Tool Chest and clicking on the screen editor.

#### 8.1.4 Script

- Fixed an issue where an invalid property "TriggerVariable" was shown in the "DataLogging" Block when editing scripts in the screen editing software.
- Fixed an issue where the variable block produced an incorrect validation error and indicated the variable was undefined if the variable was defined with a previously deleted variable name.
- Fixed an issue where the screen editing software exited unexpectedly when the setting field of an [Equipment] value was left blank in a script.
- Fixed an issue where the screen editing software showed a variable validation error even though the variable was not used in a block mode script.
- Fixed an issue where the screen editing software showed syntax errors when using strings that included the following characters as part of a literal.
  - /u
  - /x
- Fixed an issue where the Intellisense function did not work while entering the variable name in Text mode of the script editor if the variable name used characters from any of the following languages.
  - Japanese
  - Korean
  - Chinese
- Fixed an issue where the reference to an alarm property in the script did not update correctly after the alarm type was changed.
- When using a variable with the same name as one of the following keywords in the Text mode script, prefix with "\$Global".

Keyword				
break	const	continue	debugger	default
delete	do	export	extends	finally
for	function	goto	import	instanceof
return	super	switch	throw	try
var	while	with		

- Fixed an issue where IME inputs did not work properly in Text mode of the script editor.
- Fixed an issue where the replace function did not work properly after continually replacing text using Find and Replace.
- Fixed an issue so that you can use `$Math.E()` or `$Math.Random()` with an assignment operator (=) in scripts.
- Fixed an issue where the screen editing software did not catch an error even though the Target value block was set incorrectly, thereby allowing the transfer of the project. Now the screen editing software shows an error in the Feedback Zone for the incomplete settings.
- Fixed an issue where script stopped working at runtime when a paste, undo, or redo operation was performed in the screen editing software for a script element set up with an array.
- Fixed an issue where the [SystemErrorGroup] property could be selected even though it was not supported.
- Fixed an issue where scrolling with the mouse wheel did not work in the screen editing software's script editor.
- Fixed an issue in the screen editing software's script editor where unnecessary space appeared between sections when the [Script Mode] was [Text].
- Fixed an issue where the screen editing software exited unexpectedly when the Recipe value block contained an incomplete path for an ingredient value.
- Fixed an issue in the screen editing software where an invalid dialog box displayed when opening an earlier version of a project file that contained corrupted data in Text mode scripts.

### 8.1.5 Alarm

- Fixed an issue where you could not use real data type numbers with the same integral value in multiple alarm fields in a single variable.
- Fixed an issue where the screen editing software did not catch an error when invalid variables were configured in the Alarm and transferring the project was possible. Now the screen editing software shows an error for the invalid settings and the project cannot be transferred.

### 8.1.6 Logging

- Fixed an issue so that the data format in an exported logging file uses the setting in the Target's [Date Format] property.
- Fixed an issue where even if the [Interlock] property of a Logging Group was locked, the display unit continued to execute logging.

### 8.1.7 Converters

- Fixed an issue where the Range Converter output the text IDs instead of the text when [Language Text] was selected as the [Data Type (Result)].

## 8.1.8 Variables

- Improved the usability for the Device address window for entering device address for variables.
- Fixed an issue so that you can now set the Target.DateAndTime property to a DATE\_AND\_TIME type variable without an error.
- Fixed an issue so that the [Minimum] and [Maximum] values of external variables in an [Input Range] setting are retained correctly after project is reopened.
- Fixed an issue in the array editor where the search did not update correctly when changing array dimensions while narrowing the search criteria in the search function.
- Fixed an issue where the screen editing software exited unexpectedly when modifying a structure variable inside an array.
- Fixed an issue so that the screen editing software shows an error when the [Dimension] setting of an array variable imported from a symbol file was changed.
- Fixed an issue so that the screen editing software shows an error when the data types for the variable and device address do not match.
- Fixed an issue where the screen editing software falsely displayed an error and prevented you from importing a CSV file even though its content did not exceed the maximum number of variable folders. The limit for the number of variable Folders is 100. When importing a CSV file that includes Folders that already exist in the current project, the Folders are identified as different and therefore the screen editing software showed the error.
- Fixed an issue in the screen editing software where renaming a child element of a structure also renamed child elements with the same name in a different structure.
- Fixed an issue where the Data Sharing property of external variables was not updated when importing variables.
- Fixed an issue so that now you can now search for variables inside structures in the [Variable Selector] dialog box.
- Fixed an issue where values did not display correctly at runtime when a structure array or an array element was associated with a variable.
- Fixed an issue where a project with an array starting with a negative or non-zero element number (e.g. Array1[-1..1] or Array2[4..6]) that was created in an older version of the screen editing software did not work properly at runtime after opening and transferring the project file.
- Fixed an issue where the screen editing software could not correctly import CSV/TXT files that contained multiple, consecutive tabs between each item.
- Fixed an issue in the screen editing software where the decimal separator for a REAL or LREAL variable did not match between the Properties window and the Variable editor when using Portuguese, French, Spanish, Italian, or German.
- Fixed an issue where the initial values of REAL and LREAL variables changed when the language setting of the screen editing software was one of the following.

- Portuguese
  - French
  - Spanish
  - Italian
  - German
- Fixed an issue where a range was determined incorrectly when using indirect addressing of arrays.

#### 8.1.8.1 Symbol Link

- Fixed an issue where the display unit did not work properly when using more than one symbol link.
- Fixed an issue with displaying the retentive property of symbol variables in the screen editing software. Now you cannot modify the property for symbol variables.
- Fixed an issue where error path details did not display correctly.
- Fixed an issue in the screen editing software that prevented the required error from displaying when importing a symbol file that was edited after variables imported using the symbol link function were deleted in the project file.
- Fixed an issue that caused the address portion to become blank when importing EcoStruxure Control Expert symbol files with non-IEC formatted addresses.
- Fixed an issue in the screen editing software where device addresses were mapped to invalid addresses when importing a symbol file that contained complex structure tags.
- Fixed an issue in the screen editing software where variables were assigned to internal variables instead of external variables when importing a symbol file.
- Fixed an issue that corrupted the variable database when a variable created from an imported symbol file was deleted before importing an unrelated symbol file.
- Fixed an issue where deleting an imported symbol file and importing it again displayed an unnecessary error in the screen editing software when the [Script Mode] was [Text].

#### 8.1.9 **Simulation**

- Fixed an issue where simulation did not launch when using the comma ',' decimal point in the property settings.
- Fixed an issue where simulation unexpectedly exited when a decimal value was set in the Numeric Display's [Current Value] property in the screen editing software.

#### 8.1.10 **Driver**

- The error message that displays when changing the [Series] in the equipment property window for the following drivers has been improved.
  - Siemens AG - SIMATIC S7 MPI Direct

- Siemens AG - SIMATIC S7 Ethernet
- Fixed an issue in the following drivers, where the screen editing software allowed entering an invalid Unit ID causing the display unit to display a system error.
  - Modbus Organization
    - ✧ Modbus SIO Master
    - ✧ Modbus ASCII SIO Master
    - ✧ Modbus TCP Master
  - Schneider Electric
    - ✧ Modbus SIO Master
    - ✧ Modbus TCP Master
    - ✧ Modbus TCP Master via USB
  - Emerson Industrial Automation / Control Techniques
    - ✧ Modbus SIO Master
    - ✧ Modbus TCP Master
  - YOKOGAWA Electric Corporation
    - ✧ Modbus SIO Master
    - ✧ Modbus TCP Master\*\*\*

### 8.1.11 External Storage

- Fixed an issue where ejecting an external device was possible even if it was selected in the [Save in] property of [All Alarms], [All Loggings] or [Operation Log]. Now the screen editing software shows an error if the [Eject] operation is set for an external device that is selected in a [Save in] property.

## 8.2 Transfer

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- Fixed an issue where the screen editing software did not show the correct error when transferring a project file that exceeded the maximum size limit.
- Fixed an issue where the screen editing software showed a download error even if download was successful. This issue occurred when downloading for the first time a project file with the [Download Ethernet Settings] enabled to a display unit with GP-Pro EX installed.
- Fixed an issue where the display unit did not restart correctly after a large project file was transferred to it.
- Fixed an issue in the screen editing software where the save confirmation box did not appear when using the security feature to transfer a project file.

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## 8.2.1 ST6000 Series, STM6000 Series

- Fixed an issue where the [Cancel] button did not work when a dialog box appeared asking whether to keep or overwrite the data on Local Storage.

## 8.3 Display Unit Operation

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### 8.3.1 Screen / Content

- Fixed an issue where the screen configured in the [Initial Screen ID] property did not display at startup when the [Target] property's [Download Ethernet Setting] was disabled and the wrong IP Address was configured.
- Fixed an issue where scrolling did not work on the display unit or during simulation when using a Zoom Canvas to zoom in on a Screen or Content.

### 8.3.2 Parts / Shapes

- Fixed an issue where the Web Viewer client did not display the following parts correctly with the [Shadow] property.
  - Lamp
  - N-StateLamp
  - Toggle Switch
  - CheckBox
  - Radio Button
- Fixed an issue where the [Shadow] of an object did not show on the display unit at run time or simulation regardless of the width or height of the object.

#### 8.3.2.1 String Display

- Fixed an issue where the String Display displayed the ID instead of the string when the variable associated with the String Display was configured with a Range Converter that output text from the Language Table.

#### 8.3.2.2 Trend Graph

- Fixed an issue where the display unit displayed the latest data when attempting to show historical data.
- Fixed an issue where the display flickered when displaying historical data in a Trend Graph part.

#### 8.3.2.3 Picture Display

- Fixed an issue so it is now possible to touch areas outside a picture display object even when its width is thinner than the width of the control icons (arrows, zoom in, zoom out).

#### 8.3.2.4 Toggle Switch

- Fixed an issue where a white circle appeared when using the [Toggle Switch] with a Flat theme, even when specifying the [None] brush for the [Fill] and [Border] properties.

#### 8.3.2.5 Numeric Display

- Fixed an issue where the minimum and maximum values did not display correctly on the keypad when a variable was bound using a Converter to a Numeric Display.

#### 8.3.2.6 Dropdown List

- Fixed an issue where a Dropdown List did not operate as directed by the value of its Binding Source property, when there was binding of other properties to the Dropdown List's [Item] or [Selected Index] (or [Selected Value]) property.

#### 8.3.2.7 Block Trend

- Fixed an issue where a Block Trend object did not display correctly when data for many variables was displayed and the [Clear and Draw] [Block Trend] operation was executed.

### 8.3.3 **Script**

- Fixed an issue where using the [Quality] property of variables did not work.
- Fixed an issue where the Comparison Condition block did not work correctly in a script using 64-bit variables.

### 8.3.4 **Trigger / Operation**

- Fixed an issue where using the debug print operation with Indirect Addressing (for example, Var1[Var2.Value].Value.) did not work correctly.
- Improved the [Launch Application] operation with the ability to configure multiple parameters.

### 8.3.5 **Alarm**

- Fixed an issue where the filter function in an Alarm Summary did not work correctly when associating [Language Table Text] in an alarm message.
- Fixed an issue where the [CurrentLogCount] property did not update when executing the [Alarm Summary] [Delete] operation on selected alarms when the [Alarm Summary]'s [Alarm Mode] was set to [Historical].
- Fixed an issue where [Alarm Group] labels that were applied using Language Table IDs did not display correctly in an Alarm Summary when its [Alarm Mode] was set to [Historical].
- Fixed an issue where the display unit did not start properly when external storage was set in the [All Alarms]'s [Save in] property and the alarm data was deleted from external storage.
- Fixed an issue where turning off the display unit in the middle of exporting operation log data and turning the display unit back on caused the [Exporting OperationLog] and [Delay] operations to stop working properly.



### 8.3.6 Logging

- Fixed an issue where SQL-reserved words could not be used for the names of logging groups.
- Improved the performance of exporting logging data which sometimes took an excessive amount of time depending on the logging group settings below, the structure of the current screen when export was executed and the model of the display unit.
  - Maximum number of records
  - Number of registered variables
  - Available storage of export destination
- Fixed an issue that increased the startup time of the display unit when there was a lot of logged data.

### 8.3.7 Recipe

- Fixed an issue where unintended recipe data got updated when editing at runtime recipe data that was configured as part of multiple recipe families or recipe groups.
- Fixed an issue where the [Max Input] and [Min Input] did not display when changing ingredient values on the display unit even though the [Max Input] and [Min Input] of ingredients was configured in the screen editing software. Selecting the [Ingredient Viewer]'s [Show Min/Max Values] property displays the minimum and maximum values on the [Ingredient Viewer].

### 8.3.8 Security

- Fixed an issue that occurred when failing to enter the User Name or Password and an error message in the Alarm Summary but did not disappear even after logging in successfully.
- Fixed an issue where graphic objects did not display properly after changing screens as specified by the [Auto Logout] feature set up with a screen change.

### 8.3.9 Import

- Fixed an issue where importing a CSV file was interrupted when it included line breaks, causing only a part of the CSV data to be imported. A CSV file with line breaks is not supported. This line is imported as empty and any data that follows continues to be imported.

### 8.3.10 Web Viewer

- Fixed an issue where the [Touch Hold Timeout] setting did not work as expected when the Web Viewer client was running in the background after a second log-in from the Web Viewer client.
- Fixed an issue so the display is now the same between the display unit and Web Viewer even under the following conditions.

- 'Animation.RotationAngle' and 'Animation.Rotation Center(X)/(Y)' are set, and the object is part of a grouped object.
- 'Animation.RotationAngle' and 'Animation.Rotation Center(X)/(Y)' are set, and [Height] or [Width] property is associated with a source property such as a variable value.
- Fixed an issue where Pipe objects with [Shadow] enabled and either completely horizontal or completely vertical may not display correctly in the Web Viewer when run except on iOS and iPadOS. (They may not display correctly in the Web Viewer when run on iOS and iPadOS.)

### 8.3.11 OPC UA Server

- Fixed an issue with OPC UA Server generating a redundant node ID.

### 8.3.12 Driver

- Fixed an issue where unexpected behavior occurred when using an unlocated BOOL variable associated with the Schneider Electric Modbus TCP Master driver and a display unit read from an unexpected area.
- Fixed an issue where the display unit did not communicate correctly when using the Mitsubishi Electric Corporation FX Series CPU Direct driver with an FX3UC CPU.
- Fixed an issue where a PLC connection could not recover when using one of the following drivers.
  - Schneider Electric Modbus SIO Master
  - Schneider Electric Modbus TCP Master
- Improved the input range of unit IDs of the following drivers.
  - Modbus Organization
    - ✧ Modbus TCP Master
  - Schneider Electric
    - ✧ Modbus SIO Master
    - ✧ Modbus TCP Master via USB
- Fixed an issue with the Pro-face by Schneider Memory Link Ethernet driver where the write command did not work correctly depending on the word length.
- Fixed an issue where the display unit did not communicate with external devices properly when using Function Block variables with Schneider Electric's Machine Expert Network.

### 8.3.13 SP5000 Series

- Fixed an issue where runtime did not launch properly on the SP-5B412 Box Module after uninstalling and reinstalling the runtime application.

### 8.3.14 GP-4100 Series

- Fixed an issue where you could not change the year with the Up/Down buttons in the Hardware configuration screen of the GP4000 Series.
- Fixed an issue where the HMI did not communicate when using GP4000 Series and Mitsubishi Electric Corporation FX CPU direct via RS422/485 (4 wire).

### 8.3.15 ST6000 Series

- Fixed an issue so the system error SYS02002 does not display after replacing the battery and restarting the display unit.

### 8.3.16 IPC Series and PC/AT

- Fixed an issue where the runtime did not work correctly when the group name for general users was not "Users", such as "utilisateurs" on a French operating system.

## 8.4 Performance

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- Improved the performance of transferring the project file from the screen editing software to the display unit.
- Improved the performance of opening a project file in the screen editing software.
- Improved the performance of simulation in the screen editing software.
- Improved the screen editing software's display performance of contents and screens with many Graphic Objects and Content Displays.
- Improved the boot performance of the display unit when many Alarms are registered.
- Improved the drawing performance for Block Trend and Trend Graph when there are many points.

## 8.5 Cybersecurity

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- Enhanced security to prevent scripts in an exported file from running when you open the file.
- The following security vulnerabilities have been addressed in this release.
  - CVE-2023-1049

## 9 LIMITATIONS

This section lists the limitations that are applicable to both the Screen Editing Software and Runtime.

### 9.1 License

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- In the Schneider Electric License Manager, if a version 3.0 trial license is still active, please remove it.

- After the trial license has expired, on launching the runtime the Schneider Electric License Manager will launch and prompt you to input a license. Close the Schneider Electric License Manager so that you can continue operating the runtime.

## 9.2 Screen Editing

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### 9.2.1 Screen Editing Software

- You cannot search for a variable in an array variable element by its full variable name. Search for either the name of the array variable or the variable used in the array element. For example, if the search target is "Var1[Var2.Value].Value", search "Var1.Value" (name of array variable) or "Var2.Value" (name of variable used in element). Search will not work with "Var1[Var2.Value].Value".
- Do not install the screen editing software in a path with Unicode characters. Select a path without any Unicode characters.
- There are multiple issues in tab management when the project is closed and opened again:
  - If you have multiple tabs in a single docking section, the order of tabs is not retained.
  - If a layout item is closed (for example, Cross Reference Window), it will be opened again when the project is opened.
- Windows 8.1 and Windows Server 2012 R2 are not a supported operating system for the screen editing software. The screen editing software can be still installed, but it will not launch successfully.
- In a screen, when there is an error in a navigation switch property, the screen editing software shows an error. In this scenario, the error window cannot direct you to the location of the error. Please check the [Source], [Path] and [Property] in the error window and find it manually.
- The error message count in the error window may be different between the Block mode and Text mode for scripts.

### 9.2.2 Project File Conversion

- When using the screen editing software with a project converted from a previous version, an error is incorrectly shown for an N-State Lamp object's [Variable] property during validation. Double click the error and the error will disappear.
- Before opening a project file in this version, refer to the user documents. From the Manual top page, click the [Feature Guide] icon and in the table of contents select [Before Use] and then [Notes of Project File Conversion].

<https://www.pro-face.com/manual/blue/history/en/index.htm>

### 9.2.3 Screen / Content

- If you add a screen with [Screen Type] set to [View Box], the screen may not draw correctly if the following conditions occur.

- A script does one of the following:
  - ✧ Change language using the Target source property (<target name>.Preferences.LanguageID)
  - ✧ Perform a [Security] - [Login] operation
  - ✧ Change visibility using Content Display source property (<object name>.Visibility)
- After executing the above, screen change or content change operation occurs.

## 9.2.4 Parts / Shapes

- When editing nodes and angles of the following objects, even when [Snap Objects] is enabled, the nodes do not snap.
  - Arc
  - Arch
  - Bezier
  - Doughnut
  - Line
  - Path
  - Pie
  - Polyline
  - Polygon

### 9.2.4.1 Content Display

- The width and height of a content display and referenced content may not be correct when the values are referenced from other properties or script.

### 9.2.4.2 Uniform Grid

- When a graphical object with its [Visibility] property set to [Hidden] or [Collapsed] is placed in a Uniform Grid, the object may not display correctly. Close and reopen the screen or the content to display the object correctly.

### 9.2.4.3 Layout Object

- When using a layout object within another layout object, and in the parent layout object there is a Graphic Object with its [Visibility] property set to [Collapsed], resizing the child layout object may not work properly.

### 9.2.4.4 Block Trend

- The error message “Mismatched Data Type. Specify a valid data type” may incorrectly display for some Block Trend properties. Clear the [Use Global Range] check box to remove the error then reselect the check box.

#### 9.2.4.5 Picture Display

- In simulation, “Images not found. There are no files with .png in the specified folder.” may display for the Picture Display even though the correct path to the image file is specified. Set the image with a shorter path and file name to specify the image in the property.

### 9.2.5 Font

- Chinese\_Simplified\_GB2312\_Gothic will not be supported in the next version, nor in later versions. Project files that use this font from previous versions will be converted to Chinese\_Simplified\_GB18030\_Gothic.

### 9.2.6 Script

- When using Search and Replace in Text mode of the script editing screen, word searches containing some special characters ('\$','^','\*', etc.) may not work properly.
- When the script editing screen is in Text mode, the replace operation on text mode scripts from the [References] window does not work. Instead, use the find and replace operation in the script editing screen.

### 9.2.7 Trigger / Operation

- An error does not occur even if you set one of the following unsupported objects on a Touch trigger.
  - Alarm Summary
  - Hardware Configuration
  - Ingredient Viewer
  - Picture Display
  - Web Browser
  - All Layout Objects
  - Screen / Content
  - Group Object

### 9.2.8 Alarm

- Script cannot change the alarm message. On the screen editing software, an error occurs when you create a script that changes the alarm message.

### 9.2.9 Variables

- Do not import a variable file with a variable named "Structure".

#### 9.2.9.1 Symbol Link

- The following data types are either not supported or they are converted to another data type during Symbol Link import:

---

### Not Supported

- ENUM
- INTERFACE

### Converted to a primitive type of the source

- SUBRANGE
- POINTER TO
- REFERENCE

### Converted to Structure

- UNION
- FUNCTION\_BLOCK

- NamedBasicType in Rockwell L5K File is imported as String type in Symbol Link.
- Non-IEC formatted addresses in Unity-Pro File are imported in Symbol Link, however the addresses for these variables become blank. Please delete these variables.
- When importing a SoMachine Basic Modbus Symbol file (.SMBP), variables associated with registers %IWS and %QWS do not import correctly.
- When importing a symbol file that contains PLC variable names that use characters that are not supported by the screen editing software, the [Invalid unicode character] error may display. If possible, rename variables in the PLC software.
- The equipment name and variable folder name must be unique in the project. Check for uniqueness before using the symbol import functionality.
- The screen editing software cannot import a SoMachine Basic File only Modbus (.SMBP) file if it contains a Time or Counter tag. Remove the Time or Counter tag from the SoMachine Basic File only Modbus file and import again.

## 9.2.10 Web Viewer

- If you use Web Viewer in a project that has a folder without a screen in the [Project Explorer]'s [Screen Design] - [Screen] node, you may not be able to operate the screen from a Web Viewer client.

## 9.3 Transfer

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- In broken mode, you cannot use File System transfer to upgrade the run time before version 3.1.100.
- Do not press the [ALT] key during a transfer operation. Pressing [ALT] will sometimes cause the transfer operation to fail.
- Transferring a project with many image files to the display unit may take a considerable amount of time.

### 9.3.1 IPC Series and PC/AT

- When using run time version 3.1 or earlier, you cannot transfer project files from version 3.1 Service Pack 1 or later.  
If you transfer the project file in the above condition, the following error message appears in the screen editing software.  
[Unable to update using download operation. Use the installer to update run time to the latest version.]  
In order to transfer, the run time must be re-installed with the same version, or later, as the screen editing software.  
Install the run time from the following path on the installation DVD.  
"BLUE\_Setup\BLUERuntime\BLUERuntime.exe"  
Installing the run time erases any previously transferred project files. After installation, transfer the project files again.  
If .NET Framework is not already installed in the run time installation destination, or its version is older, .NET Framework is also installed. After .NET Framework is installed, the destination unit is restarted.  
When installing the run time, there is no need to uninstall the previously installed run time.

## 9.4 Display Unit Operation

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### 9.4.1 Display Unit

- When using the following features, in certain settings the display unit may not work correctly.
  - Configure many alarm records with a string variable set with a long string.
  - Configure many logging data records with a 64-bit variable set with a large value.

### 9.4.2 Screen / Content

- If the Scroll Grid Content is smaller than the Content Display object, the Scroll Grid Content is magnified to the Content Display object.
- Changes in values may not be reflected in screen drawings while there are frequent system errors, you are continually accessing back up memory, and there are many changes to variable values.
- If communication between the display unit and external device is unstable, the screen on the display unit may freeze for several seconds on a screen change.
- When the [Screen ID] is associated with a variable in the [Target01] property window, changing to the previous screen may not work properly.

### 9.4.3 Hardware Configuration Screen

- When restarting the run time by using an operation in the Hardware Configuration screen, the status of external storage may not be updated.  
When that happens, cycle the power on the display unit.
- When implementing a filter in the filter setup screen [Filter Simplified] with the Operation Log Screen in a Hardware Configuration, sometimes items do not display correctly.



- In the Hardware Configuration screen, when you configure Pro-face Connect parameters for the first time, [Save & Restart] will not restart the display unit. Use some other method to restart, such as powering OFF/ON.
- In the Hardware Configuration screen, the Scan Control menu for up to 32 devices is displayed for each driver. If you cannot change the scan control from the Hardware Configuration screen, use the equipment source property '.ScanOffControl' to change the scan control.

#### 9.4.4 Keypad

- While the keypad is displayed, reverse display may not show properly for rapid touches. This is only a display issue and values are written properly.

#### 9.4.5 Parts / Shapes

##### 9.4.5.1 Text Box

- When using the Bold attribute in a Text Box object, the thickness of text may differ between the screen editing software and the display unit.

##### 9.4.5.2 Alarm Summary

- You can display up to 146 items in the Alarm Summary filter setup screen [Filter Simplified]. When there are more than 146 items, narrow down the list by either using the [Search] field or the [Filter Detailed] settings.
- When implementing a filter in the filter setup screen [Filter Simplified] with the Alarm Summary, sometimes items do not display correctly.

##### 9.4.5.3 Numeric Display

- In a Numeric Display part, if you use a source property together with a converter for the [Current Value], the [Format] and [Decimal Places] properties of the Numeric Display part are not applied even though you can set these properties. Instead of these properties, the settings in the converter properties apply. The target converters are as follows.

- Unit
- Scale
- Expression

The above operation is correct. In future versions, in the above case the [Format] and [Decimal Places] properties of the Numeric Display part will be disabled.

- When setting the Prefix or Suffix in [Arabic\_Gothic] or [Hebrew\_Gothic] font, the Prefix or Suffix characters display in the wrong order in the display unit.

##### 9.4.5.4 String Display

- Do not enable [Display text as \*] on a String Display part with IME Japanese input. The currently stored string is displayed while typing characters. If you want to use the [Display text as \*] feature, design a mechanism to clear the string before starting input.

#### 9.4.5.5 Web Browser

- The Web browser part no longer supports TIFF and MNG image file formats.
- Web Browser parts may not display correctly when viewing dynamic content defined using paths.

#### 9.4.6 **Trigger / Operation**

- When animation or change in visibility hides a pressing object, Touch trigger (Release or Click) does not occur during that. The triggers operate as if the object is not hidden.
- The more [Array] Operations with the [All] check box selected, the longer it will take for the first screen change.
- When using the [File Management] Operation, if the file or folder name uses non-ASCII characters, the file or folder name will not display correctly in the [Confirmation Message] displayed by the [File Management] Operation.
- While external storage is not recognized by the display unit and an [External Storage] operation is run, there is no system error.
- When using the [Operation Result] operation, you may not get the correct result if the specified operation fails.

#### 9.4.7 **Logging**

- If a data logging operation occurs while a [File Management] Operation is in progress, sometimes data may not be logged depending on the logging frequency.
- The display of a Trend Graph part could be very slow depending on the number of Trend Graph part display points, the maximum number of records in the logging group, and the model of the display unit. The number of display points on the Trend Graph part increases or decreases depending on the following settings.
  - Number of channels
  - Unit
- When using the Logging function, you can configure the following.
  - Logging Group: The number of maximum records, external storage of exported data, and the number of assigned variables.
  - Trend Graph object: The number of channels and number of display pointsProcessing the following could take a lot of time depending on the combination of the above settings, the screen configuration when the process is executed, and the display unit.
  - Exporting logging data
  - Displaying trend graph

#### 9.4.8 **Network**

- If you set an IP address that duplicates another device on the local network in operation, or if you connect a device with an IP address that duplicates the display unit to the local

network, you cannot detect duplicating IP addresses.  
Only at runtime startup, the runtime check the IP address of the device on the local network and a system error occurs if there is duplication with the display unit.  
After changing the IP address of the display unit, the runtime will be rebooted, so please check whether system error has occurred after rebooting.

### 9.4.9 Web Viewer

- If a project transfer operation fails, the Web Viewer license is removed. Activate Web Viewer again on the display unit with the same license keycode.
- Pipe objects with [Shadow] enabled and either completely horizontal or completely vertical may not display correctly in the Web Viewer when run on iOS and iPadOS.

### 9.4.10 OPC UA Server

- When using the OPC UA server function, on first starting up the display unit generates a server certificate. On first connecting to the server, the OPC UA client verifies the server's certificate.  
As the server certificate is renewed in the following cases, the OPC UA client may have to check the server certificate again.
  - In the Hardware Configuration screen, from the [OPC UA Server] menu the command [Regenerate Certificate] is selected.
  - Transfer via File System (This issue does not arise with Ethernet and USB cable transfer.)

### 9.4.11 Driver

- When you use the Modbus driver from Schneider Electric and then create a Symbol link with TM devices, the screen editing software can successfully import that device. But, because TM devices are not supported, the associated variable will not work correctly.
- When using the Schneider Electric - Machine Expert Network driver, if an array structure has elements with variable names such as 'X' or 'Y', the runtime may not communicate properly when using these variables.

### 9.4.12 SP5000X Series and SP5000 Series Power Box / Open Box

- When using CANopen Slave and TIA Portal Ethernet drivers at the same time, do not add any more drivers. Additional drivers could interfere with CANopen Slave communication.

### 9.4.13 GP-4100 Series

#### 9.4.13.1 CoDeSys Automation Alliance - CoDeSys V2 Ethernet / Schneider Electric - PacDrive

- When using GP-4100 Series with the following driver, sometimes connection system errors will occur.
  - CoDeSys Automation Alliance - CoDeSys V2 Ethernet
  - Schneider Electric - PacDrive

#### 9.4.14 ST6000 Series

- Flow control XON/XOFF is not available.

#### 9.4.15 IPC Series and PC/AT

- When using multibyte characters for file or folder names for logging, operation log, and alarm export destinations, the system locale for the operating system must be set appropriately.
- When using multibyte characters for the file or folder name for an Image Display part's image save destination, the system locale for the operating system must be set appropriately.
- Use [Run as administrator] the first time you start the run time after installing it. From the Start menu, right-click the [BLUE Runtime] icon and from the shortcut menu select [Run as administrator]. If you do not run as administrator, the Welcome Screen may not appear.
- Do not install the runtime in a path with Unicode characters. Select a path without any Unicode characters.
- If a display device with touch capability is turned on after the Runtime application is launched, touch operations may not work correctly. Turn on the display device before launching the Runtime application.

#### 9.4.16 External Storage (SDCard / USBStorage)

- While USB storage is being continuously accessed, even though you eject the USB device, it may not work.  
Provide a function to either interrupt access to USB storage or change the storage destination.

### 9.5 Cybersecurity

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- Open only trusted project files in the screen editing software.
- BLUE Runtime uses an older Schneider Electric License Manager component that may have potential Cybersecurity vulnerabilities.  
CWE-74 : Improper Neutralization of Special Elements in Output Used by a Downstream Component ('Injection')  
For more details, refer to the following website.  
<https://cwe.mitre.org/data/definitions/74.html>

## 10 INSTALLER INTEGRITY VERIFICATION

When you download the installer from our web site or Schneider Electric Software Update, you can get the SHA256 of the installer. To validate, follow the steps below.

Step 1 : Go to Windows Start menu command box and type 'PowerShell', it opens the Windows PowerShell prompt.

Step 2 : Use 'Get-FileHash' command followed by the file path to calculate the Hash of a file.

```
Get-FileHash 'C:\Users\Public\Downloads\Schneider Electric\Software
Update\Downloads\<installer executable file name>' (e.g. Soft_BLUE64_V34.exe)
```

Step 3 : Press Enter

This results in output similar to the example below:

```
Get-FileHash 'C:\Users\Public\Downloads\Schneider Electric\Software
Update\Downloads\<installer executable file name>'
```

```
Algorithm      Hash
Path
```

```
-----      ----
```

```
SHA256
BCE70FCF3AA21663F828CF9244102533592F5721B10D6ABA1C050A5B815076EB
C:\Users\Public\Downloads\...
```

Step 4 : Compare the calculated SHA256 hash value with the original hash value shown in the software updates.

## 11 OPEN SOURCE SOFTWARE

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### 11.1 LUA Plus

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### 11.2 SQLCipher

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This product includes cryptographic software written by Eric Young ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)).  
This product includes software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

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This package is an SSL implementation written by Eric Young ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)). The implementation was written so as to conform with Netscape's SSL.

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## 11.17 MessagePack

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MessagePack for C#



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### 11.20 Mvp.Xml

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## 11.25

System.Collections.Immutable  
System.Configuration.ConfigurationManager  
System.Reflection.Emit  
System.Reflection.Metadata  
System.Threading.Tasks.Extensions  
System.ValueTuple

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## 11.26 Unity

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## 11.27 GongSolutions.Wpf.DragDrop

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## 11.33 Webkit

---

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## 11.35 JavaScriptCore

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```

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/* *                                                                           */
/* * ***** */
/* * Parts of this software have been adapted from the libpng package.     */
/* * Although this library supports all features from the PNG specification */
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/* * It does require the zlib library and optionally the IJG jpeg library,  */
/* * and/or the "little-cms" library by Marti Maria (depending on the      */
/* * inclusion of support for JNG and Full-Color-Management respectively.  */
/* *                                                                           */
/* * This library's function is primarily to read and display MNG           */
/* * animations. It is not meant as a full-featured image-editing         */
/* * component! It does however offer creation and editing functionality    */
/* * at the chunk level.                                                    */
/* * (future modifications may include some more support for creation      */
/* *   and or editing)                                                      */
/* *                                                                           */
/* * ***** */

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---

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---

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-----

Written by: Philip Hazel  
Email local part: Philip.Hazel  
Email domain: gmail.com

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
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```
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library `Frob' (a library for tweaking knobs) written by James
Random Hacker.
```

```
<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice
```

That's all there is to it!

## 11.45 LuaFileSystem

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