WindLDR

Automation Organizer
WindLDR

Welcome to WindLDR!

Thank you for purchasing "WindLDR".

WindLDR is a pure 32-bit application with WYSIWYG (what you see on screen) ladder program editing capabilities.

Highlights of WindLDR are as follows.

Compatibility of Ladder input program

WindLDR8.0 can read files created with version 4.0 or later. This compatibility allows you to reuse past assets.

Enhanced help functions

In addition to WindLDR help, you can refer to the functions of the controller on the screen. You can refer to instructions and the functions of special internal relays and special data register on the screen as well.

Flexible display

You can freely change the character size and line thickness of the ladder symbols. The changed contents are also effective when printing and sending a ladder diagram by FAX.

A function to fix the number of columns is provided. In the old version of WindLDR, when creating a horizontally long program, the screen scrolled horizontally. Also, when printing, the program was printed horizontally across multiple pages. By fixing the number of columns, the right end is fixed and all programs can be edited without scrolling horizontally. A horizontally long program that does not fit in a line is automatically wrapped.

Notes - WindLDR

There are the following notes for using WindLDR. Thank you for your understanding.

Print

When the number of ladder lines exceeds 1500, Print/Print Preview may fail.

New file format

The old versions of WindLDR save the user program depending on the function used in seven types of files as follows,

- – *.ldr: ladder diagram file
- – *.sym: symbol file
- – *.bmk: bookmarks file
- – *.cus: custom monitor data
- – *.pcv: print settings data
- – *.obu: device data list
- – *.cod: binary data to PLC transferred

WindLDR version 6.0 or later stores the project data in a single file (*.pjw), which contains all project data.

Compatibility

1) The files created with WindLDR version 6.0 or later cannot be read with earlier versions of WindLDR.
2) WindLDR version 6.0 or later can read the files created with WindLDR version 4.0 or later. However, the following files cannot be read.
   - – Files whose PLC type is not FC5A, FC4A, or OpenNet
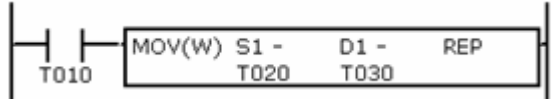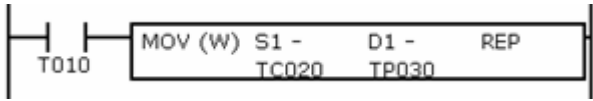   - – Files containing instructions for unsupported PLCs, such as FA Series PLC

Only one project can be opened at a time

Only one project can be opened with WindLDR version 6.0 at a time. To create or open another project, you have to close the current project.

Current value, Preset value, and Contact of Timers and Counters

WindLDR version 6.0 supports individual device types for current value, preset value, and contact of Timer and Counter whereas earlier versions of WindLDR have only one device type for all. You can assign Tag Names and comments to each device.

The table below shows how Timer and Counter are used in WindLDR versions 5.0 and 6.0.

WindLDR Ver.5*	WindLDR Ver.6*
T (Timer)	T (Timer Contact)
	TC (Timer Current)
	TP (Timer Preset)
C (Counter)	C (Counter Contact)
	CC (Counter Current)
	CP (Counter Preset)
Example: The symbol T is used for Timer contact, current value, and preset value. 	Example: The symbol T is used for the contact, TC is used for the current value, and TP is used for the preset value.

When a file created with an earlier version of WindLDR is opened with WindLDR version 6.0, T (Timer) is converted to T (Timer Contact), TC (Timer Current), and TP (Timer Preset), and C (Counter) is converted to C (Counter Contact), CC (Counter Current), and CP (Counter Preset) depending on how T and C are used in the program.

Shortcuts

The shortcut keys of the following shortcuts have been changed.

	WindLDR Ver.5*	WindLDR Ver.6*
Invert NO/NC	Shift+I	Ctrl+Shift+I
Show/hide Mnemonics	Shift+M	Ctrl+Shift+M
Find Instruction	Shift+F	Ctrl+Shift+F
Select Rung	Shift+R	Ctrl+Shift+R
Incremental Paste	Shift+V	Ctrl+Shift+V

DPI

The dialog boxes of WindLDR are not shown properly when the display DPI of Windows is bigger than 125%. Set the display DPI to 100% or 125% when using WindLDR.

WindLDR Ver.9.3.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.80.

- ▸ "Initialize PLC" was supported.
- ▸ The communication port can be configured using data register.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.80.

- ▸ "Initialize PLC" was supported.
- ▸ The communication port can be configured using data register.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.60.

- ▸ "Initialize PLC" was supported.
- ▸ The communication port can be configured using data register.

Bugs Fixed

The following problems have been fixed:

- ▸ When "Configuration validation of expansion module" is set to Strict for FC6A Plus 32-I/O type, Expansion bus initialization error occurs.
- ▸ When "Use secure connection" is disabled in the E-mail Settings, EMAIL instruction does not send the email.

<FC6A HMI Module System Software - FC6A-PH1>

Bugs Fixed

The following problems have been fixed:

- ▸ When "Use secure connection" is disabled in the E-mail Settings, EMAIL instruction does not send the email.

<FC6A Expansion Interface Remote Master Module System Software – FC6A-EXM1M>

Bugs Fixed

The following problems have been fixed:

- ▸ Analog input module (FC6A-J8Ax/FC6A-J8CUx) connected to Expansion Interface Remote

Slave Module may stop working if there is a wiring fault (out of minimum range).

<System Software – FT1A-12>

The following functions have been introduced in system software version 2.60.

▶ "Initialize PLC" was supported.

<System Software – FT1A-24, -40, and -48>

The following functions have been introduced in system software version 2.60.

▶ "Initialize PLC" was supported.

<Application Software>

The following functions have been introduced.

▶ The properties for new features of the Runtime System Software are added.
▶ When PLC Type is FT2J/1J type, "Storage Method of 32-bit Numerical Data for Control Devices" configured in WindO/I-NV4 is supported.
▶ EDS file for SX8R-ECBx can be deleted in the EtherNet/IP Setting dialog.
▶ When Communication Mode in Communication Ports settings is configured to Maintenance Protocol or User Protocol, Receive Timeout has been changed to a setting in 10 ms unit increments.

Bugs Fixed

The following problems have been fixed:

▶ Appearance of ladder program may be changed when you open a project that has a vertical line or timer instruction next to right power rail. Also, after that, when you convert, the ladder program may be broken.
▶ When rung comments are set in a ladder program that uses a User-defined Macro, the rung comments are not restored correctly when the project is uploaded.
▶ In EDS import function of EtherNet/IP Setting dialog, EDS file that uses Assem data type may not be reflected in the data for the target Configuration.
▶ In the simulation of OFFSET function in Script, the following phenomenon occurs.
    – The OFFSET function does not work properly when combined with an if statement or while statement.
    – If you use the OFFSET function as the first argument to MEMCPY function, it copies in reverse order.
▶ The BITS2BITS, WORD2BITS, and BITS2WORD functions in Script have following problems.
    – When you use the OFFSET function as the first argument, the mnemonic is invalid.
    – If you use the OFFSET function as the second argument, a syntax error occurs during error checking.
    – Even if a third argument is specified, error check does not result in a syntax error.
▶ For the copy-paste of rung, broken rung may be pasted if you change number of

columns in between each operation.

- ▸ On the ladder editor, the height of the following instructions may be excessively large.
  - – NSET
  - – UMACRO
  - – WKTBL
  - – XYFS
- ▸ After starting Monitor with setting of Module Configuration Editor and configuration of actual device different, exiting Monitor may not return to Edit mode.
- ▸ After changing PLC Type, unsupported expansion modules or cartridges for destination PLC Type may not be deleted on the Module Configuration Editor.

WindLDR Ver.9.2.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.70.

- ▸ The source port number for Ethernet communication has been randomized.
- ▸ "Enhanced protection mode SV2" as security mode was supported.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.70.

- ▸ The source port number for Ethernet communication has been randomized.
- ▸ "Enhanced protection mode SV2" as security mode was supported.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.50.

- ▸ MQTT communication supports connection with Sparkplug B.
- ▸ The source port number for Ethernet communication has been randomized.
- ▸ "Enhanced protection mode SV2" as security mode was supported.

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.90.

- ▸ The source port number for Ethernet communication has been randomized.

<System Software – FT1A-12>

The following functions have been introduced in system software version 2.50.

- ▸ "Enhanced protection mode SV2" as security mode was supported.

<System Software – FT1A-24, -40, and -48>

The following functions have been introduced in system software version 2.50.

- ▸ "Enhanced protection mode SV2" as security mode was supported.

<Application Software>

The following functions have been introduced.

- ▸ The properties for new features of the Runtime System Software are added.
- ▸ Changes have been made to improve security for project files.

- When downloading system software to FT1A Pro/Lite, unnecessary message now does not pop up.

Bugs Fixed

The following problems have been fixed:

- When using a network adapter that is removable from the PC, you may not be able to connect to the main unit.
- In EDS import function of EtherNet/IP Setting dialog, EDS file that uses Assem data type may not be imported correctly.
- In "CIP Connection Setting" tab of EtherNet/IP Setting dialog, when "CIP Connection name" is "Exclusive Owner (ID)", total data size of "IN (T->O)" cannot be set to 0 byte.
- When you convert a ladder program that NSET or UMACRO instruction is connected with continuation line, the ladder program may be broken.
- In FT1A-*14 project, when PID instruction is used, after importing this project to FT2J project, setting of analog input and analog output of the PID instruction may become blank.

<Web Page Editor>

The following functions have been introduced.

- WindLDR now supports Web Page Editor Ver.3.7.3. Please check the revision history of Web Page Editor help for the detail.

WindLDR Ver.9.1.0

\<System Software – FC6A-C16, -C24, and -C40\>

The following functions have been introduced in system software version 2.60.

▸ Error check function of module configuration is added.
▸ The initial TCP sequence number has been randomized.
▸ Enabled clock writing regardless of the breakdown of the internal clock.

\<System Software – FC6A-C40J\>

The following functions have been introduced in system software version 2.60.

▸ Error check function of module configuration is added.
▸ The initial TCP sequence number has been randomized.
▸ Enabled clock writing regardless of the breakdown of the internal clock.

\<System Software – FC6A-D16 and -D32\>

The following functions have been introduced in system software version 2.40.

▸ Error check function of module configuration is added.
▸ The initial TCP sequence number has been randomized.
▸ Enabled clock writing regardless of the breakdown of the internal clock.

Bugs Fixed

The following problems have been fixed:

▸ When connecting multiple PID Modules to Expansion Interface Remote Slave Module, the set values are swapped.
▸ There are cases where D8251 (Read SD Memory Card Free Capacity) does not update.
▸ Web page download via Ethernet fails when sent in installments.

\< FC6A Expansion Interface Remote Master Module System Software – FC6A-EXM1M \>

Bugs Fixed

The following problems have been fixed:

▸ When connecting multiple PID Modules to Expansion Interface Remote Slave Module, the set values are swapped.

\<Application Software\>

The following functions have been introduced.

- ▸ The properties for new features of the Runtime System Software are added.
- ▸ When PLC Type is FT2J-7U, downloading with WindO/I-NV4 now does not close WindLDR.

Bugs Fixed

The following problems have been fixed:

- ▸ In Simulation, if data type of S1 of CVDT instruction is Long, setting negative value to S1 does not update value of D1.
- ▸ When PLC Type is FT2J-7U, downloading a project that has Custom Monitor data may display a error message.

WindLDR Ver.9.0.2

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.34.

▸ Added IP address search function and network modification function for the PLC (FC6A series CPU module: Plus 16-I/O type, Plus 32-I/O type).

WindLDR Ver.9.0.0

<System Software – FC6A-D16 and -D32>

Bugs Fixed

The following problems have been fixed:

▶ When multiple data are received simultaneously via BACnet communication, the BACnet communication response may become unstable and not recover until the power is turned on again.

▶ When used as an EtherNet/IP communication(adapter), communication with an EtherNet/IP scanner with electronic key compatibility check enabled is not possible.

▶ If the power is turned off during the system version upgrade, it will not start even if the power is turned on afterwards.

▶ In BACnet communication, when the "Send Unsubscribed COV" setting of an object is controlled by a device, if the setting is switched from enabled to disabled and then immediately switched to enabled, BACnet communication may be disabled and not recovered until the power is turned on again.

<Application Software>

The following functions have been introduced.

▶ Program import function now can import not only subroutines but also main program and User-Defined Macros together.

▶ Improved the performance of opening project after uploading a ladder program that meets certain conditions.

▶ WindLDR now saves comment download settings per project.

Bugs Fixed

The following problems have been fixed:

▶ If the following window is moved to the secondary monitor while the secondary monitor is connected and WindLDR is closed, then unless the secondary monitor is connected at the time of the next startup, the window will not be displayed.
  – Project Window
  – Toolbox
  – Info Window
  – Tag Editor
  – Cross Reference
  – Property
  – User-defined Macro Arguments Allocation List

▶ In instruction dialog box, even if you press tab key after inputting device, focus does not move.

- When subroutines to be imported contain PULS, PWM, ZRFN, RAMP, ETXD, ERXD, or ANST instructions, error message may be displayed and the import fails.
- For CNTD, CDPD, CUDD, HOUR, DLOG, TRACE, and CWRD/CWWT instructions on specific models or all models, display of cross reference or data type is incorrect.
- On custom monitor or ladder editor while monitor mode, when you monitor indirectly specified bit devices, if size from that address to the last address in the device range is less than 1 byte, OFF is always displayed.
- Even if you close project after specific operations such as adding or editing expansion modules or cartridges on Module Configuration Editor, confirmation message for saving project does not open.
- In the setting dialog box for analog mixed I/O modules or analog Input cartridges, a value that is not multiple of 50 can be set for "Filter".
- In PLC Status dialog box, when monitoring FC6A, "Change" button is enabled even if preset value of timers or counters is not modified.
- When you set HSCRF, FRQRF, CMP, or ICMP instructions, display of cross reference for special internal relays or special data registers that are to be used for each instruction is not correct.
- In Control tab of PIDD instruction dialog box, a device that is displayed as "Control Action" is not correct.
- When you set SFTL or SFTR instruction for FC6A, even if Bits is larger than N_B, error message is not displayed.

WindLDR Ver.8.25.0

<System Software – FC6A-D16 and -D32>

Bugs Fixed

The following problems have been fixed:

- CGI program returns incorrect device data when reading multiple internal relays at once.
- It may not be possible to save republish data to the SD memory card after FC6A Plus fails to connect to the MQTT broker or cloud service by MQTT.
- When the IP settings of the Ethernet port is set to DHCP, the connection process with the host devices specifying the host name may never end.

<FC6A HMI Module System Software - FC6A-PH1>

Bugs Fixed

The following problems have been fixed:

- CGI program returns incorrect device data when reading multiple internal relays at once.
- When the IP settings of the Ethernet port is set to DHCP, the connection process with the host devices specifying the host name may never end.

<Application Software>

The following functions have been introduced.

- Multiple scripts can be exported and imported at once on "Script Manager" dialog box.

Bugs Fixed

The following problems have been fixed:

- In FC6A-D32, the device address of the external input of the Special Inputs displayed in the Listings and the Print is incorrect.

<Web Page Editor>

The following functions have been introduced.

- WindLDR now supports Web Page Editor Ver.3.6.0. Please check the revision history of Web Page Editor help for the detail.

WindLDR Ver.8.24.2

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.30.

- File creation time has been improved when DLOG instruction is executed in advanced mode.
- Transfer processing time is improved when SD memory card is selected as the transfer source in the FTP client function.
- Transmission time has been improved when log data is attached with an EMAIL instruction.

Bugs Fixed

The following problems have been fixed:

- When D8782 is 1, downloading a user program may cause a system error.

<Application Software>

Bugs Fixed

The following problems have been fixed:

- If "General purpose" is selected in "Cloud Service Name" and "Use secure connection (SSL/TLS)" is checked in the MQTT Settings dialog, an error will occur if either "Root Certificate", "Client Certificate" or "Client Private Key" is not imported.

WindLDR Ver.8.24.0

Bugs Fixed

The following problems have been fixed:

▸ When "Date and time output" of the DLOG instruction is set to "No Output", CSV files in the wrong format are output.

▸ BACnet communication sometimes fails to find FC6A Plus from other IP subnets.

▸ In BACnet communication, I-Am sent when M8450 is turned on and COV notification sent by COVU function are sent to the wrong destination port.

▸ In BACnet communications, if the COV and COVU functions are used to continue sending COV notifications at a high frequency, BACnet communications may stop and not recover until the power cycling.

▸ Undefined error 5 may occur in BACnet communication when "Send Unsubscribed COV" is enabled.

▸ The system error may occur when the subnet mask of Ethernet port 1 is 255.255.255.128 to 255.255.255.255.254 and "Send Unsubscribed COV" of BACnet object is enabled.

\<Application Software\>

Bugs Fixed

The following problems have been fixed:

▸ During simulation, if a local device is set for an instruction set in a user-defined macro, the execution result may be incorrect.

▸ When PLC type is FC6A Plus, if the online edit function is used without executing the monitor function, the online edit cannot be started.

▸ If you click the column header in the table control of each dialog for each PLC type below, the rows can be sorted.
  – [Analog input] under [Input] in the Function Area Settings dialog of FC6A Plus
  – [Program (CH0)] and [Program (CH1)] in the PID Module Configuration dialog of FC6A or FC5A

WindLDR Ver.8.23.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.50.

▸ The time zone setting in [Calendar & Clock] of the function setting was supported.

Bugs Fixed

The following problems have been fixed:

▸ If an unrecognizable expansion module other than the digital I/O module is connected to the end of the node and started, an error may occur even with a normal expansion module.
▸ The M8185 update is delayed by hundreds of milliseconds, after the start or end of summertime.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.50.

▸ The time zone setting in [Calendar & Clock] of the function setting was supported.

Bugs Fixed

The following problems have been fixed:

▸ If an unrecognizable expansion module other than the digital I/O module is connected to the end of the node and started, an error may occur even with a normal expansion module.
▸ The M8185 update is delayed by hundreds of milliseconds, after the start or end of summertime.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.20.

▸ The following functions were added to the MQTT function.
  - Supported the connection to each cloud service (general purpose / AWS IoT Core / Azure IoT Hub).
  - Supported UTC and millisecond formats to the timestamp.
  - Supported the republish function.
▸ The time zone setting in [Calendar & Clock] of the function setting was supported.
▸ The authentication method of E-mail using Ethernet port 1 was supported.

Bugs Fixed

The following problems have been fixed:

- Downloading system software version 1.80 or later may fail. Also, if the system software version that failed to download is 2.10, it may not start.
- When downloading a user program via Ethernet, the download may fail and may not work properly until the power is turned off and then on again.
- M8190(Change CPU Module Ethernet Port 1 Network Settings Trigger) or M8333(Change CPU Module Ethernet Port 2 Network Settings Trigger) is turned on, the PLC may not work normally until the power is turned off and then on again.
- If an unrecognizable expansion module other than the digital I/O module is connected to the end of the node and started, an error may occur even with a normal expansion module.
- In the FTP client function, if the setting of "If the destination file exists" is "Skip", the file will not be transferred if there is a file with a partially matching name in the transfer destination.
- The file cannot be transferred when a 247-character folder path is set as the transfer destination location using the FTP client function.
- The M8185 update is delayed by hundreds of milliseconds, after the start or end of summertime.

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.80.

- The authentication method of E-mail using HMI-Ethernet port was supported.

<FC6A Expansion Interface Remote Slave Module System Software – FC6A-EXM1S>

Bugs Fixed

The following problems have been fixed:

- If an unrecognizable expansion module other than the digital I/O module is connected to the end of the node and started, an error may occur even with a normal expansion module.

<System Software – FT1A-12>

Bugs Fixed

The following problems have been fixed:

- The M8010 update is delayed by hundreds of milliseconds, after the start or end of summertime.

<System Software – FT1A-24, -40, and -48>

Bugs Fixed

The following problems have been fixed:

- The M8010 update is delayed by hundreds of milliseconds, after the start or end of summertime.

<Application Software>

The following functions have been introduced.

- The following functions have been added in the MQTT setting dialog.
  - Added cloud service name (general purpose / AWS IoT Core / Azure IoT Hub) settings
  - Added UTC and millisecond formats to the timestamp format
  - Added republish settings
- The time zone setting in [Calendar & Clock] of the function setting was supported.
- The authentication method setting in [Ethernet port 1] of the function setting dialog and [Email setting] of the HMI module setting dialog was supported.

Bugs Fixed

The following problems have been fixed:

- If the decimal point symbol of Windows OS is "," (comma), the graph display in the PID monitor dialog may be incorrect.
- WindLDR may not start normally.
- The project file whose file name has been changed by windows explorer cannot be imported by the import function of the EtherNet/IP setting dialog.

WindLDR Ver.8.22.0

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.10.

▸ The Client ID can be set using the MAC address or the data registers for the MQTT communication.
▸ The Client ID can be set in Topic in Publish and Subscribe for the MQTT communication.

Bugs Fixed

The following problems have been fixed:

▸ When "Float (F)" is selected as the data type of the value in the payload setting in Subscribe of the MQTT communication, an error occurs if the received data is an integer without a decimal point.
▸ If you turn on the M8190 or M8333 more than once within 1 minute after turning on the power, the functions related to Ethernet communication and SD memory card become unstable.
▸ With the FTP server function, you may not be able to connect from the FTP client.

<Application Software>

The following functions have been introduced.

▸ The Client ID can be set using the MAC address or the data registers for the MQTT communication.
▸ The client ID can be set in Topic in Publish and Subscribe for the MQTT communication.
▸ The EDS file for FC6A Plus is updated to revision 1.2.
    – Maximum instance ID changed from 255 to 1279.

Bugs Fixed

The following problems have been fixed:

▸ The user programs with "Enhanced protection mode" can be downloaded to FT1A Pro/Lite with system software version 2.31 and earlier.
▸ If you change the case of the project file name (e.g. change test.pjw to tEst.pjw), the project file cannot be opened.
▸ If the MQTT settings are specified with an SD memory card, double quotation (") is included in the Client ID and the MQTT Basic Settings file is downloaded to PLC using an SD memory card, an error will occur.
▸ When PLC Type is FC6A or FT1A, if you press Ctrl + R, Property Settings dialog box opens instead of Replace dialog box.

WindLDR Ver.8.21.0

<System Software – FC6A-C16, -C24, and -C40>

Bugs Fixed

The following problems have been fixed:

- If the ladder program stops while executing the PING instruction, the error code 5 occurs in the PING instruction until power cycling.
- If the ladder program stops while executing the EMAIL instruction, the error code 5 occurs in the EMAIL instruction until power cycling.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

- If the ladder program stops while executing the PING instruction, the error code 5 occurs in the PING instruction until power cycling.
- If the ladder program stops while executing the EMAIL instruction, the error code 5 occurs in the EMAIL instruction until power cycling.

<System Software – FC6A-D16 and -D32>

Bugs Fixed

The following problems have been fixed:

- If the ladder program stops while executing the PING instruction, the error code 5 occurs in the PING instruction until power cycling.
- If the ladder program stops while executing the EMAIL instruction, the error code 5 occurs in the EMAIL instruction until power cycling.
- If the PLC sends an MQTT packet when the connected MQTT broker is not on the network, the MQTT function may stop until power cycling.
- If you specify the source location, the destination location, or the FTP server setting in the FTP Client function by the Non-retentive Data Register, the PLC will not transfer the file.

<FC6A PID Module System Software>

Bugs Fixed

The following problems have been fixed:

- When the input range is set to 0-1V, the sensor input value may not be get correctly.

<Application Software>

The following functions have been introduced.

▶ Added the ability to exchange the color of images when importing images from the symbol factory.
▶ After importing an image from the symbol factory, the symbol factory is no longer automatically closed.

Bugs Fixed

The following problems have been fixed:

▶ If the "Mode" of the Web Page Editor is set to "Run" and the WindLDR simulation is started and stopped repeatedly, the Web Page Editor may not be updated.
▶ If the decimal point symbol in the Windows OS is "," (comma), opening a project file that uses a decimal point in instruction will cause the decimal point to be changed to "." (period) and the user program conversion will be failed.
▶ The following phenomenon occurs when downloading a user program created using "Read Module Configuration" in the Module Configuration Editor.
  – The module configuration is not restored correctly after upload.
  – PLC goes into error.
▶ Double-clicking an expansion module or cartridge in the Module Configuration Editor may not open the configuration dialog of each expansion module or cartridge.

<Web Page Editor>

The following functions have been introduced.

▶ WindLDR now supports Web Page Editor Ver.2.18.0. Please check the revision history of Web Page Editor help for the detail.

WindLDR Ver.8.20.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.40.

▶ "Enhanced protection mode" as security mode was supported.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.40.

▶ "Enhanced protection mode" as security mode was supported.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 2.00.

▶ "Enhanced protection mode" as security mode was supported.

<System Software – FT1A-12>

The following functions have been introduced in system software version 2.40.

▶ "Enhanced protection mode" as security mode was supported.

<System Software – FT1A-24, -40, and -48>

The following functions have been introduced in system software version 2.40.

▶ "Enhanced protection mode" as security mode was supported.

<Application Software>

The following functions have been introduced.

▶ The setting of Security Mode was added in "Program Protection" in Function Settings.
▶ The password setting feature for a project was added.

WindLDR Ver.8.19.1

<System Software – FC6A-C16, -C24, and -C40>

Bugs Fixed

The following problems have been fixed:

▸ When using system software version 2.31, WindLDR or programmable display may not connect to PLC via Ethernet because PLC's maintenance communication server doesn't work.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▸ When using system software version 2.31, WindLDR or programmable display may not connect to PLC via Ethernet because PLC's maintenance communication server doesn't work.

<System Software – FC6A-D16 and -D32>

Bugs Fixed

The following problems have been fixed:

▸ When using the Web server function, the Web pages downloaded to the SD memory card may not be displayed with Internet Explorer 11.

WindLDR Ver.8.19.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.31.

▶ The recovery time from a communication error when communicating with FL1F Smart Relay as a Modbus TCP client is improved.

Bugs Fixed

The following problems have been fixed:

▶ If a script is executed by an interrupt program during script execution, a user program execution error occurs.

▶ If the following operations are performed, the communication port settings and connection settings may not be reflected until the user program is downloaded again or the power cycling.

    – After downloading the user program by USB boot, turn on the main power continuously.

    – Download the ZLD file from the SD memory card at startup.

▶ When connecting to a HG5G/4G/3G/2G-V type programmable display, unnecessary data may be transmitted if the power is turned on at the same time as the display.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.31.

▶ The recovery time from a communication error when communicating with FL1F Smart Relay as a Modbus TCP client is improved.

Bugs Fixed

The following problems have been fixed:

▶ If a script is executed by an interrupt program during script execution, a user program execution error occurs.

▶ If the following operations are performed, the communication port settings and connection settings may not be reflected until the user program is downloaded again or the power cycling.

    – After downloading the user program by USB boot, turn on the main power continuously.

    – Download the ZLD file from the SD memory card at startup.

▶ When connecting to a HG5G/4G/3G/2G-V type programmable display, unnecessary data may be transmitted if the power is turned on at the same time as the display.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.90.

▶ The following enhancements have been supported in Web Server function.
  – SSL/TLS communication is supported.
  – In read/write device address CGI, you can specify whether to require user name and password at run time.
▶ MC Protocol Client communication function is supported.
▶ The recovery time from a communication error when communicating with FL1F Smart Relay as a Modbus TCP client is improved.
▶ The method of connecting to the broker via MQTT over SSL/TLS is improved.

Bugs Fixed

The following problems have been fixed:

▶ The changing the IP address of the remote host by the data register does not cause the connection to switch when the connection has been established with using a Modbus TCP client or a user communication client
▶ If a script is executed by an interrupt program during script execution, a user program execution error occurs.
▶ In EtherNet/IP communication, if the TCP port of the target registered in the scan list remains closed, the CIP connection may not be established even if the TCP port of the target is opened.
▶ If the SD memory card containing the ZLD file is inserted before the power is turned on, the server port set in connections 6 to 16 cannot be connected.
▶ While transferring data with the FTP server/client function, the response to the client for maintenance communication or Modbus TCP communication may be significantly delayed.
▶ If the following operations are performed, the communication port settings and connection settings may not be reflected until the user program is downloaded again or the power cycling.
  – After downloading the user program by USB boot, turn on the main power continuously.
▶ When connecting to a HG5G/4G/3G/2G-V type programmable display, unnecessary data may be transmitted if the power is turned on at the same time as the display.

<System Software – FT1A-12>

Bugs Fixed

The following problems have been fixed:

▶ If a script is executed by an interrupt program during script execution, a user program execution error occurs.

<System Software – FT1A-24, -40, and -48>

Bugs Fixed

The following problems have been fixed:

- ▸ If a script is executed by an interrupt program during script execution, a user program execution error occurs.
- ▸ When connecting to a HG5G/4G/3G/2G-V type programmable display, unnecessary data may be transmitted if the power is turned on at the same time as the display.

<Application Software>

The following functions have been introduced.

- ▸ MC Protocol Client communication function is supported.
- ▸ The problem, which WindLDR does not run properly by system locale setting, is improved.
- ▸ The following enhancements have been supported in Web Server function.
  - – SSL/TLS communication is supported.
  - – In read/write device address CGI, you can specify whether to require user name and password at run time.
- ▸ The problem, which the specific EDS files cannot be imported, is improved on EtherNet/IP setting dialog.

Bugs Fixed

The following problems have been fixed:

- ▸ When a project file that is created using an EDS file is imported, the settings are not restored on EtherNet/IP setting dialog.
- ▸ In SD Memory Card Configuration dialog, when you turn on "Save user web pages to SD memory card" and save user web page to SD memory card, the following problems occur.
  - – index.html is not saved in WEBPAGE folder.
  - – The libraries used in monitor function are not saved in WEBPAGE\system folder.
- ▸ When a CSV file exported in Device Data List is edited in Excel, the file cannot be imported.
- ▸ In Module Configuration editor, when Analog I/O Module FC6A-J8CU1/FC6A-J8CU4 is dragged from the expansion module/cartridge list and placed, and the analog module setting is opened, the following problems occur.
  - – R0, T0 and B cannot be edited even if NTC Thermistor is selected in Signal Type.
  - – When you select Signal Type other than NTC Thermistor, R0, T0 and B can be edited.
- ▸ If a ZLD project file is created after converting a PLC type other than FC6A to FC6A, it may not be able to open.
- ▸ When you open Custom Monitor dialog and close it immediately, WindLDR might crash.
- ▸ If a model is changed from FT1A (FBD) to one other than FT1A (FBD) in PLC Selection, the PLC type does not switch normally.

<Web Page Editor>

The following functions have been introduced.

- WindLDR now supports Web Page Editor Ver.2.17.2. Please check the revision history of Web Page Editor help for the detail.

WindLDR Ver.8.18.0

<System Software – FC6A-C16, -C24, and -C40>

Bugs Fixed

The following problems have been fixed:

- When Keep Data Sum Check Error occurs, Watchdog Timer Error that has not occurred may be erroneously recorded.
- If the total size of the script converted to mnemonics exceeds 128KB, an error occurs when the script is executed.
- If a connection reconnect with the client occurs while the ERXD instruction is being executed in the user communication server, a receive error will occur only once immediately after the connection.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

- When Keep Data Sum Check Error occurs, Watchdog Timer Error that has not occurred may be erroneously recorded.
- If the total size of the script converted to mnemonics exceeds 128KB, an error occurs when the script is executed.
- If a connection reconnect with the client occurs while the ERXD instruction is being executed in the user communication server, a receive error will occur only once immediately after the connection.

<System Software – FC6A-D16 and -D32>

Bugs Fixed

The following problems have been fixed:

- When Keep Data Sum Check Error occurs, Watchdog Timer Error that has not occurred may be erroneously recorded.
- The following problems may occur when Modbus TCP communication.
  - When using Modbus TCP Client, an incorrect value is stored when reading the device value from the server.
  - When using Modbus TCP Client, a timeout error occurs because the response from the server is not received.
  - When using Modbus TCP Server, the request from the client is ignored.
- If the total size of the script converted to mnemonics exceeds 128KB, an error occurs when the script is executed.

- ▸ When displaying a user web page linked to DLOG data and executing the DLOG instruction at the same time, writing DLOG data or opening a CSV file by the web page may fail.
- ▸ In BACnet/IP, the day of the week of Local_Date property of Device Object becomes indefinite.
- ▸ In MQTT, when publishing a timestamp whose display format is UNIX time, the timestamp will be subtracted by an extra 9 hours.

<Application Software>

The following functions have been introduced.

- ▸ The EtherNet/IP EDS file import function is supported.
- ▸ FC6A CPU modules for removable terminal block (Push-in) are added on the module configuration editor.
- ▸ The followings are improved.
  - – Improved device address replacement time.
  - – Improved launch time.
  - – Improved the sensitivity of keyboard input on coil selection dialog.

Bugs Fixed

The following problems have been fixed:

- ▸ The information of the communication cartridge is not displayed on the module configuration editor correctly.
- ▸ The following settings can be set without errors on the "Communication Ports" tab of the Function Area Settings dialog.
  - – Communication Mode: Maintenance Protocol or User Protocol
  - – Data Bits:7
  - – Parity: None
- ▸ The value of "Used" cell on the Tag Editor is changed to "0" when the project file is saved.
- ▸ The script data size after converted is not checked.
- ▸ The unnecessary unit (%) for "Kp" is displayed on PIDD instruction dialog.
- ▸ The unnecessary continuation line may be displayed on ladder program.

WindLDR Ver.8.17.0

<System Software – FC6A-C16, -C24, and -C40>

Bugs Fixed

The following problems have been fixed:

▶ When Maintenance communication, Modbus TCP or User Communication is used, unnecessary data may be sent after the connection is established.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▶ When Maintenance communication, Modbus TCP or User Communication is used, unnecessary data may be sent after the connection is established.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.80.

▶ MQTT protocol is supported.

Bugs Fixed

The following problems have been fixed:

▶ When Maintenance communication, Modbus TCP or User Communication is used, unnecessary data may be sent after the connection is established.

<Application Software>

The following functions have been introduced.

▶ The properties for new features of the Runtime System Software are added.
▶ The default PLC type for the initial installation of WindLDR is changed to FC6A-D16.

Bugs Fixed

The following problems have been fixed:

▶ When "Fix No. of Columns" is enabled in Ladder Preferences in WindLDR Options, the following button or menu are disabled and functions cannot be used.
  – "Insert a Column" / "Append a Column" / "Delete a Column" under "Insert" / "Append" / "Delete" on "Home" on ribbon menu
  – "Insert" - "Column" / "Append" - "Column" / "Delete" - "Column" on context menu on ladder editor

▶ When an item is selected on Cross Reference window, the Cross Reference may be changed for another device address.

WindLDR Ver.8.16.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.20.

▶ PIDD instruction supports Self Tuning.
▶ Recipe function supports on Write Recipe and Read Recipe for Internal Memory (ROM-Range 1) and Internal Memory (ROM-Range 2).

Bugs Fixed

The following problems have been fixed:

▶ The PIDA and PIDD instructions cannot use the analog input value of FC6A-J4CHxY.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.20.

▶ PIDD instruction supports Self Tuning.
▶ Recipe function supports on Write Recipe and Read Recipe for Internal Memory (ROM-Range 1) and Internal Memory (ROM-Range 2).

Bugs Fixed

The following problems have been fixed:

▶ The PIDA and PIDD instructions cannot use the analog input value of FC6A-J4CHxY.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.70.

▶ PIDD instruction supports Self Tuning.
▶ Recipe function supports on Write Recipe and Read Recipe for Internal Memory (ROM-Range 1) and Internal Memory (ROM-Range 2).
▶ The version of IGMP used for TCP / UDP multicast reception has changed from IGMPv3 to IGMPv2.

Bugs Fixed

The following problems have been fixed:

▶ The PIDA and PIDD instructions cannot use the analog input value of FC6A-J4CHxY.
▶ Data received by the EtherNet/IP function may not be reflected on the device.

<Application Software>

The following functions have been introduced.

- ▶ The Self Tuning function is supported on PIDD instruction.
- ▶ The access destinations for recipe block settings are renamed and added.
  - – "External memory" and "Internal memory" are renamed.
  - – "Internal Memory (ROM-Range 1)" and "Internal Memory (ROM-Range 2)" are added.
- ▶ The display of battery voltage in the PLC status dialog is changed to [mV].

Bugs Fixed

The following problems have been fixed:

- ▶ In the Module Configuration Editor, if you meet all of the following conditions, the Module Configuration Editor will be brought to the front when you quit "monitor", "simulation", or "online edit".
  - – All items in "Expansion Module / Cartridge List" are closed
  - – (For FC6A Plus) Only node 0 exists

WindLDR Ver.8.15.0

The following functions have been introduced in system software version 1.60.

▸ The EtherNet/IP communication function is supported.

The following functions have been introduced.

▸ The EtherNet/IP communication function is supported.
▸ The internal current draw of Digital I/O Module has been adjusted to the value described in the manual.
▸ Improved the ladder program uploading time.

Bugs Fixed

The following problems have been fixed:

▸ When the test programming is canceled after the user program execution error history dialog is opened while the test program is being executed, the user program execution error history dialog cannot be opened.
▸ The instruction dialog cannot be opened when dragging and dropping on the ladder editor during monitor, simulation, or online edit mode.
▸ Changing the web server access allow in the user account settings dialog may not restore properly.
▸ Even though specify the data register by bit in the ladder program, it will not be displayed in the device tree of the Web page editor.
▸ After inserting the UMACRO instruction in the main program or subroutine, if you change the argument of the user-defined macro which is being set, the display of the UMACRO instruction on the ladder editor will be disturbed.
▸ In the S1 (control register), S2 (initialization input) or S3 (control relay) of the PIDA instruction, the tag name couldn't be set even if the tag name displayed in the tag name candidate list is clicked.
▸ After set one or more tag names by the tag editor, Press the Enter key or Tab key while the tag candidate list is not displayed while entering the tag name in the script editor, the tag name that is not related to the entered character will be set.
▸ When click the add button of "Message Settings" in the "Receive message" and "Send message" of the J1939 Communication Settings, to allocate M2600 to S2 (Receive REQ Trigger) or D1 (Receive Alert Flag), error message is displayed.
▸ In J1939 Communication Settings, if the M2557 is set in S2 (Receive REQ Trigger) or D1 (Receive Alert Flag), the R000 will be set in S2 or D1 of the Message Settings.
▸ When the setting of the DLOG instruction is changed from the property sheet, the option settings of the DLOG instruction returns to the initial value.
▸ In the "Fix No. of Columns" of WindLDR Options, When the number of columns is

changed from variable to fixing or from fixing to variable, the instruction inserted in the subroutine or User-defined Macro is displayed overlapping with other instructions.

▸ The device address whose first digit is not 0 can be set in the S3 (control relay) of the PIDA and PIDD instruction.

▸ If the Communication Module which has been set Modbus Communication by the Module Configuration editor is moved to another slot, the Modbus Communication settings will disappear.

▸ If the user program which has set tag names and comments on other than instruction is uploaded, these tag names and comments will not be restored.

▸ If the display scale of windows is greater than 100%, some modules may be hidden in the extension module list of the module configuration editor.

▸ In the Modbus RTU Master and TCP Client dialog box, if the "Master Device Address" is blank, the dialog box can be closed without error, then open the dialog again, the settings will disappear.

▸ The cursor position on the ladder editor will change when the monitor, simulation, or online edit mode has been executed.

▸ If you press enter when the drop-down list displayed, the dialog is closed, rather than closing the drop down.

▸ When tag names or comments are deleted in the tag editor, the tag name may be set to the device address.

WindLDR Ver.8.14.0

\<Application Software\>

The following functions have been introduced.

▶ The following new type numbers and improvements are introduced in Module Configuration Editor.
- Type number of FC6A-C16 12V DC power type is added in All-in-One CPU module.
- Expansion module type numbers for Removable terminal block (Push-in) is added.
- Operability of Module Configuration Editor is improved.

▶ The following performance improvements are introduced.
- When opening a project or converting a user program, memory usage is improved to be lower.
- When saving a project file (* .PJW), the project file size is improved to be smaller.

▶ BMOV instruction is improved to be able to configure N_W (Quantity of blocks to move) up to 65535.

Bugs Fixed

The following problems have been fixed:

▶ When User-defined Macro is used, the rungs may overlap during online edit mode.
▶ When a function which is included in "Data Type Designation" category is used, the control statements may not work properly during simulation mode.

WindLDR Ver.8.13.1

<System Software – FC6A-C16, -C24, and -C40>

Bugs Fixed

The following problems have been fixed:

▸ When starting PLC or connecting an Ethernet cable to PLC, invalid GARP may be sent.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▸ When starting PLC or connecting an Ethernet cable to PLC, invalid GARP may be sent.

< System Software – FC6A-D16, -D32>

Bugs Fixed

The following problems have been fixed:

▸ When the remote host which is specified by Host Name is set to User Communication (UDP), it frequently keeps sending requests to DNS server.
▸ Reading and writing devices frequently from User Web Page may fail.

< Application Software >

Bugs Fixed

The following problems have been fixed:

▸ When comma is set as Decimal symbol on windows, the following problems occur.
   – When a ladder program containing one of the following instructions is converted, the program conversion fails.
      ・PIDD instruction
      ・FLWA instruction, FLWP instruction or SCALE instruction which is inserted from Toolbox window
   – When entering FLWA instruction, dialog is not opened.
   – In FLWP instruction or SCALE instruction, when decimal values are included in the setting and OK button is clicked, an error message is displayed and the dialog cannot be closed.

< Web Page Editor >

The following problems have been fixed:

▸ WindLDR now supports web page editor V2.17.1. Please check the revision history of Web page editor help for the detail.

WindLDR Ver.8.13.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 2.10.

▸ When signal type of FC6A-J8CUI (Analog Input Module) is configured PTC thermistor (threshold), minimum and maximum values can be configured as optional range.

Bugs Fixed

The following problems have been fixed:

▸ When downloading system software and user program continuously from SD card, PLC cannot be run automatically after downloading even though auto_start key is configured true in autoexec.ini file.
▸ When SD card with autoexec.ini file which is configured one time upload is inserted while PLC is running, ZLD file is not created in the SD card due to failing upload.
▸ When uploading files in SD card through Ethernet by Data File Manager, communication error may occur.
▸ When ERXD is configured with BCC and received BCC data more than 80h, BCC error occurs.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 2.10.

▸ When signal type of FC6A-J8CUI (Analog Input Module) is configured PTC thermistor (threshold), minimum and maximum values can be configured as optional range.

Bugs Fixed

The following problems have been fixed:

▸ When downloading system software and user program continuously from SD card, PLC cannot be run automatically after downloading even though auto_start key is configured true in autoexec.ini file.
▸ When SD card with autoexec.ini file which is configured one time upload is inserted while PLC is running, ZLD file is not created in the SD card due to failing upload.
▸ When uploading files in SD card through Ethernet by Data File Manager, communication error may occur.
▸ When ERXD is configured with BCC and received BCC data more than 80h, BCC error occurs.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.50.

▸ When signal type of FC6A-J8CUI (Analog Input Module) is configured PTC thermistor

(threshold), minimum and maximum values can be configured as optional range.

▶ Location of User program execution error can be identified.
▶ Date and time format in data log CSV file of DLOG instruction can be changed.
▶ When Text Input component created by Web Page Editor is entered empty string, Web server responds 200 OK instead of 400 NG.

Bugs Fixed

The following problems have been fixed:

▶ When SD card with autoexec.ini file which is configured one time upload is inserted while PLC is running, ZLD file is not created in the SD card due to failing upload.
▶ When Automatic Acquisition of SNTP settings is configured At PLC power on, PLC may fail to acquire date and time.
▶ When Ethernet port1 and Ethernet port 2 have the same IP, TCP connection may not be established on Ethernet port 2.
▶ When browsing index.html which is created as user web page, 404 Not found error occurs.
▶ When user program is configured unchecking Enable Web Server checkbox and downloading the user program and web pages, error message is displayed on WindLDR.
▶ When DLOG instruction is executed without SD card, browsing web pages fails.
▶ PLC may not boot and cannot be accessed by USB after operating following steps.
  – Turning power on without backup battery.
  – Turning power off within 4 seconds after booting (before Error LED flashing).
  – Installing backup battery and turning power on.
▶ When RXD / ERXD with Variable and Delimiter works and only delimiter data are received, Communication monitor doesn't start and display any communication data.
▶ When ERXD is configured with BCC and received BCC data more than 80h, BCC error occurs.

<FC6A Analog I/O Module System Software>

Bugs Fixed

The following problems have been fixed:

▶ When Signal Type is Ni100 or Ni1000, 165°C or more result Indication Error (175°C or more result Rated Limit response).

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.70.

▶ When Text Input component created by Web Page Editor is entered empty string, Web server responds 200 OK instead of 400 NG.

<Application Software>

The following functions have been introduced.

▸ The following improvements are introduced in User-defined Macro.
  – The values of argument devices A1 to A100 can be checked when monitoring or simulating.
  – Tag names can be used for argument devices A1 to A100.
  – With User-defined Macro argument allocation list window, ladder program can be edited while checking device types, tag names and comments of argument devices A1 to A100.
▸ When signal type of FC6A-J8CUI (Analog Input Module) is configured PTC thermistor (threshold), minimum and maximum values can be configured as optional range.
▸ Location of User program execution error can be identified on User program execution error History dialog.
▸ Date and time format in data log CSV file of DLOG instruction can be changed.
▸ The shortcut function created in the Windows OS start menu during WindLDR installation has been moved to the WindLDR help menu.
▸ When downloading FC6A system software for downgrade, download is skipped.
▸ When downloading web pages created by Web Page Editor, only required Web Page Editor system JavaScript files are downloaded.

Bugs Fixed

The following problems have been fixed:

▸ Error check for character string operations functions does not work on SCRIPT instruction of FT1A series.
▸ When the device address assigned to A1-A100 (argument device) of UMACRO instruction is changed on Property Sheet, the device address after the changing will be displayed on Property Sheet, but the ladder program after downloading may operate as device address before changing.
▸ When PLC type is changed from FBD model to Ladder model, the function "Complete tag names without needing to type them in full" may not work.
▸ When an out-of-range device address is assigned in Auto Ping Setting dialog, error message is not displayed.
▸ When prohibited characters (\ / : * ? " < > |) are used in script name on Script Editor dialog, error message is not displayed.
▸ When EMAIL instruction or DLOG instruction is included in search range of device address replacement, replacement will not work.
▸ HMI module inserted in Module Configuration Editor is not restored after uploading.
▸ When Enter key is pressed while cursor is displayed on "Comment" text box of instruction dialog, the instruction dialog is closed.
▸ When the WindLDR is launched on Chinese version of Windows OS and DLOG instruction dialog is opened, "Optional" label string on "Optional" tab is wrapped.
▸ When RXD instruction is simulated, receive operation may not be performed correctly.
▸ When the user program which has script is downloaded using SD memory card User program execution error may occur.

<Web Page Editor>

The following functions have been introduced.

- WindLDR now supports web page editor V2.17.0. Please check the revision history of Web page editor help for the detail.

WindLDR Ver.8.12.2

Bugs Fixed

The following problems have been fixed:

▸ When delimiter is used on RXD / ERXD instruction, Communication Monitor cannot start.

WindLDR Ver.8.12.1

<System Software – FC6A-C16, -C24, and -C40>

Bugs Fixed

The following problems have been fixed:

▶ If you download the system software without power-cycling after removing the SD memory card, the PLC may not work.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▶ If you download the system software without power-cycling after removing the SD memory card, the PLC may not work.

<Application Software>

Bugs Fixed

The following problems have been fixed:

▶ When using "Device Data List" for FC6A Plus, it may not be possible to enter a 6-digit device address of D100000 or more as "From" or "To" point of the device range.
▶ When opening "2ch Controller Module Configuration" for FC5A model, "…" buttons that opens "Tag editor dialog box" will be displayed on where device address cannot be input.
▶ When uploading a project with "Upload web page" check from FC6A PLC that has never downloaded web pages, uploading will fail and a ladder program cannot be restored.
▶ When the system drive of Windows is configured to "Disable 8.3 file name creation", files which have HTML extension are not displayed in "Redirect target" in "Web server" settings of "Function settings".
▶ When using "Advanced mode" of DLOG instruction and its "base file name" is configured the character string starting 'U', ladder program cannot be restored by opening project file after uploading and saving the project file.
▶ "…" button is not displayed in the text box of "D1(Operation Status)" in "ZRN instruction dialog box" for FT1A.
▶ When "Disable IME when entering tag names/device addresses" checkbox on "WindLDR Option" dialog box is ON, Japanese or Chinese characters cannot be inputted on "Script Editor".
▶ When a project name including saving file path displayed on "Recent Projects" is too long, "Save" button cannot be clicked because the button is located outside of screen.

▸ When "Read Trigger" or "Write Trigger" of Recipe function is configured by "Tag editor dialog box" opened from "…" button, configured trigger devices are changed to "R000" for FC6A Plus PLC or "T0000" for other FC6A PLCs during downloading.

WindLDR Ver.8.12.0

\<System Software – FC6A-C16, -C24, and -C40\>

The following functions have been introduced in system software version 2.00.

▸ Analog output and digital output for output manipulated variable can be selected on PIDD instruction dialog.
▸ Supported digital I/O module (Hardware version V200).
▸ Modbus communication is improved as follows.
  – The range of slave number that can be configured on TCP client is expanded.
  – The range of data sizes that can be sent and received by TCP communication and RTU communication is expanded.

Bugs Fixed

The following problems have been fixed:

▸ The ZLD file uploaded with the one-time upload function of the SD card is different from the specified file name by autoexec.ini.
▸ Setting value error occurs in some analog modules.

\<System Software – FC6A-C40J\>

The following functions have been introduced in system software version 2.00.

▸ Analog output and digital output for output manipulated variable can be selected on PIDD instruction dialog.
▸ Supported digital I/O module (Hardware version V200).
▸ Modbus communication is improved as follows.
  – The range of slave number that can be configured on TCP client is expanded.
  – The range of data sizes that can be sent and received by TCP communication and RTU communication is expanded.

Bugs Fixed

The following problems have been fixed:

▸ The ZLD file uploaded with the one-time upload function of the SD card is different from the specified file name by autoexec.ini.
▸ Setting value error occurs in some analog modules.

\<System Software – FC6A-D16 and -D32\>

The following functions have been introduced in system software version 1.40.

▸ Analog output and digital output for output manipulated variable can be selected on PIDD

instruction dialog.

▶ Supported digital I/O module (Hardware version V200).

▶ Modbus communication is improved as follows.

- The range of slave number that can be configured on TCP client is expanded.
- The range of data sizes that can be sent and received by TCP communication and RTU communication is expanded.

▶ Improved the speed of reflecting devices to Present_Value in BACnet/IP.

Bugs Fixed

The following problems have been fixed:

▶ Setting value error occurs in some analog modules.

▶ Even if "Latest file only" is configured as the transfer condition in the FTP Client Settings, the latest file may not be transferred.

▶ D8058 (Built-in Analog Input) is not correct when a negative value is configured for the analog input optional range.

▶ When setting the IP address using the special data register, Ethernet communication can't be performed using the communication mode set in the connection setting even if the power is turned on.

< FC6A Expansion Interface Remote Master Module System Software – FC6A-EXM1M >

The following functions have been introduced in system software version 1.01.

▶ Improved to turn off the error display LED when recovering from an error condition.

< FC6A Expansion Interface Remote Slave Module System Software – FC6A-EXM1S >

The following functions have been introduced in system software version 1.01.

▶ Improved to turn off the error display LED when recovering from an error condition.

<System Software – FT1A-12>

The following functions have been introduced in system software version 2.30.

▶ Improved the method of changing the device value using LCD.

Bugs Fixed

The following problems have been fixed:

▶ When using FBD, the communication execution device of Modbus RTU master does not work properly.

<System Software – FT1A-24, -40, and -48>

The following functions have been introduced in system software version 2.30.

▶ Improved the method of changing the device value using LCD.

Bugs Fixed

The following problems have been fixed:

▶ When using FBD, the communication execution device of Modbus RTU master does not work properly.

<Application Software>

The following functions have been introduced.

▶ The device information used by other than ladder program can be displayed in tag editor and cross reference.
▶ Symbolic characters can be used as CSV file name of recipe.
▶ Default values of connection settings for FC6A All-in-One are changed.
▶ Analog output and digital output for output manipulated variable can be selected on PIDD instruction dialog.
▶ Category of [Data Type Designations] is supported on Script.
▶ The option of which registered tag name can be displayed when entering tag name is supported.
▶ The system software downloading for digital I/O module (Hardware version V120) is supported.
▶ Modbus communication is improved as follows.
   – The range of slave number that can be configured on TCP client is expanded.
   – The range of data sizes that can be sent and received by TCP communication and RTU communication is expanded.
▶ Script analysis processing time is improved.
▶ Project file saving time is improved.
▶ The displayed time on tag editor when [show] combo box is changed is improved.

Bugs Fixed

The following problems have been fixed:

▶ When there is no user in the user account settings dialog, the [Read Only] and [Read / Write] radio buttons in the user account settings dialog cannot be changed smoothly.
▶ When the Delete key is pressed on the recipe tab after simulation is ended, WindLDR will be closed.
▶ When "Enable access control for App" is checked without using "Configure access privileges with multiple user accounts for web server", rung comments in ladder program are not be uploaded properly.
▶ Depending on the Input Character String configured to S1 of MOVC instruction, it does not work correctly as follows,
   – In the case of string format similar to the device address such as "M3", if you reopen after saving the project file, the Input Character String is changed like

"M0003".
  – When the beginning of the character string is "U", the ladder program cannot be restored by uploading.
▶ [File Name] check box is cleared on upload in each channel setting of Recipe function.
▶ Moving and Overwriting an analog module which is already configured to another slot on Module Configuration Editor may change the parameters of the analog module settings.
▶ If the download destination of web page on the download dialog does not match the check status of [use web page editor] of function area settings dialog or HMI module settings dialog, user program conversion fails.
▶ When "Enable access control for App" is checked without using "Configure access privileges with multiple user accounts for web server", rung comments in ladder program are not be uploaded properly.

WindLDR Ver.8.11.0

Bugs Fixed

The following problems have been fixed:

▶ When downloading the user program during USB boot, communication error occurs and the downloading does not complete successfully.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▶ When downloading the user program during USB boot, communication error occurs and the downloading does not complete successfully.

<System Software – FC6A-D16 and -D32>

Bugs Fixed

The following problems have been fixed:

▶ When Web Server is accessed from multiple browsers, a communication error occurs.

<Application Software>

Bugs Fixed

The following problems have been fixed:

▶ When the OS of PC is Windows 10 version "1809", opening "Save As" dialog box freezes WindLDR.
▶ When the argument device used in a user-defined macro is a bit device, it uses 16 bits of the columns used by Tag Editor.
▶ When a ladder program containing one of the following instructions is converted, the program conversion fails.
  - ZRN3 / ZRN4
  - RAMP3 / RAMP4
  - ARAMP3 / ARAMP4
▶ When [Enable ladder program monitoring on FT1A] on Function Area Settings dialog is checked and a ladder program with more than 5 lines per circuit in subroutine is created with FT1A model, failure of ladder program conversion is not displayed.

WindLDR Ver.8.10.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 1.80.

▶ A maximum number of AVRG instruction programmed in a user program is extended to 32.
▶ Response speed of Ethernet communication is improved.

Bugs Fixed

The following problems have been fixed:

▶ When the preset value to compare is configured "49154" or more on CC (Counter Comparison) instructions, the ladder programs after the CC instruction are not executed.
▶ Indirect Addressing is not effect on S1 of SFTR instruction.
▶ When User program Download from SD Memory Card is initiated by operating HMI module or using special internal relay, user program syntax error occurs.
▶ When user program is downloaded with "Keep output during download" option, outputs of expansion modules may become off.
▶ When user program is protected with a password against program download, ZLD file is not downloaded from SD Memory Card.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 1.80.

▶ A maximum number of AVRG instruction programmed in a user program is extended to 32.
▶ Response speed of Ethernet communication is improved.

Bugs Fixed

The following problems have been fixed:

▶ When the preset value to compare is configured "49154" or more on CC (Counter Comparison) instructions, the ladder programs after the CC instruction are not executed.
▶ Indirect Addressing is not effect on S1 of SFTR instruction.
▶ When User program Download from SD Memory Card is initiated by operating HMI module or using special internal relay, user program syntax error occurs.
▶ When user program is downloaded with "Keep output during download" option, outputs of expansion modules may become off.
▶ When user program is protected with a password against program download, ZLD file is not downloaded from SD Memory Card.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.30.

▸ A maximum number of AVRG instruction programmed in a user program is extended to 32.
▸ Response speed of Ethernet communication is improved.
▸ Cache is supported on Web Server function and page reload is improved.
▸ Advanced mode is supported on DLOG instruction.
▸ "256MB" is added on Log Data File Size of DLOG / TRACE instructions.
▸ Index Register (P) can be designated on Web Page Editor.

Bugs Fixed

The following problems have been fixed:

▸ When the preset value to compare is configured "49154" or more on CC (Counter Comparison) instructions, the ladder programs after the CC instruction are not executed.
▸ When Received data by RXD / ERXD instruction is different from the number designated Variable (DR), a user communication error occurs.
▸ When User program Download from SD Memory Card is initiated by operating HMI module or using special internal relay, user program syntax error occurs.
▸ When user program is downloaded with "Keep output during download" option, outputs of expansion modules may become off.
▸ When user program is protected with a password against program download, ZLD file is not downloaded from SD Memory Card.
▸ Watchdog timer error may occur during Run-Time Program Download.
▸ When entering once on a label component etc. of the Web Page Editor, the maximum number of characters is fixed, and even if the number of characters beyond the maximum is entered for the second time or later, it will not be effective.
▸ When the data type of the device linked to the component of Web Page Editor is Float, the value may not be displayed correctly.

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.60.

▸ Cache is supported on Web Server function and page reload is improved.
▸ Index Register (P) can be designated on Web Page Editor.

Bugs Fixed

The following problems have been fixed:

▸ When entering once on a label component etc. of the Web Page Editor, the maximum number of characters is fixed, and even if the number of characters beyond the maximum is entered for the second time or later, it will not be effective.
▸ When the data type of the device linked to the component of Web Page Editor is Float, the value may not be displayed correctly.

<Application Software>

The following functions have been introduced.

- ▸ DLOG instruction for FC6A Plus is improved.
- ▸ Web Page Editor is upgraded.
- ▸ When the system software version 1.00 or 1.01 of FC6A Analog Module is downloaded, warning message is displayed.
- ▸ A maximum number of AVRG instruction programmed in a user program is extended to 32.

Bugs Fixed

The following problems have been fixed:

- ▸ The correct timestamp may not be displayed on communication monitor dialog.
- ▸ When the default PLC type of WindLDR is FT1A (FBD) and after PLC type conversion the default PLC type is changed to OpenNet / FC4A / FC5A / FC6A, WindLDR does not launch properly from the next time on.
- ▸ In the user communication client dialog of FC6A, the dialog cannot be closed when a remote host which has 3 dots as host name is selected.
- ▸ When the expansion module settings are printed, number of Input and Output for FC6A Plus CPU module is not printed correctly.
- ▸ When a user program with an empty rung after END instruction is uploaded, online edit cannot be started.
- ▸ When [From Lower Word] is selected on [Device Settings] tab of Function Area Settings dialog and user program which includes Puls Output instructions is uploaded, Puls Output instructions is not restored correctly.
- ▸ The used column on tag editor between downloaded user program to FT1A (FBD) and uploaded user program may no match.
- ▸ When the user program which includes UMACRO instruction and PIDA, MOVC, YEAR, WEEK, PULS, RAMP, ZRN, ARAMP, JOG, FLWP, SCALE or FLWA at the same rung is downloaded, User program execution error occurs on PLC.
- ▸ When saving the maximum program capacity project of FC6A series, "SystemOutOfMemory" exception may be displayed.
- ▸ When user communication is configured on the communication port, Web Page Editor simulation may not work
- ▸ When user communication instruction is used in OpenNet, user program conversion fails.

<Web Page Editor>

The following functions have been introduced.

- ▸ Map, Keyboard, Trend Bar, Table, List, Dropdown List, Timer, Calendar, Clock, Number to Color, Number to Bits components are added.
- ▸ Scroll Text is added to format setting of Label component.
- ▸ TooltipStr property, brightness property, bKeepRatio property are added to Image component.
- ▸ bKeepRatio property is added to Lamp component.
- ▸ Keep original ratio option is added to Multi-State Lamp component.
- ▸ Action "Specify the link value on the layer and show it", TooltipStr property, bFireWhenValueChanged property are added to Button component.
- ▸ TooltipStr property, bKeepRatio property are added to Switch component.

- Option "Generate an event only when releasing the mouse" is added to Slider component.
- LineType property is added to Drawing component.
- Add vertex by right click is added to Polyline, Bezier Curve, Polygon, Pipe components.
- Bar is added to Pointer style of Circle Meter components.
- Cut, select all, change properties of multiple control at once, add data tree display function of selected components.

Bugs Fixed

The following problems have been fixed:

- When the Save Page as... is selected, multi-byte characters like Japanese can be used.
- When the error occurs on Multi-State Lamp, default image is displayed.
- When the Open from local disk... is selected on Firefox browser Ver.61 or later, error occurs.
- When "Allow for zoom in and out at runtime" is enabled in the editor setting, buttons may not work as momentary buttons by touching the screen.

WindLDR Ver.8.9.1

Bugs Fixed

The following problems have been fixed:

▶ When the each cursor of Main program and Subroutine or User-defined Macro is placed on different Rung and device address or constant is changed without opening instruction dialog in Subroutine or User-defined Macro, Changes are not applied even after converting the user program.

▶ When there are many data on LCD Display Settings in FC6A MSG instruction and the program is downloaded, User program syntax error occurs on FC6A.

WindLDR Ver.8.9.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 1.70.

▸ D8303 (IP Address Switching) is supported.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 1.70.

▸ D8303 (IP Address Switching) is supported.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.20.

▸ BACnet/IP function is supported.
▸ D8303 (IP Address Switching) is supported.

Bugs Fixed

The following problems have been fixed:

▸ When the user program is downloaded, the system error may occur.
▸ When Modbus TCP Client or User Communication Client is configured, FC6A Plus cannot communicate with a remote host whose port is 32768 or more.
▸ When executing DLOG/TRACE instructions after setting to save bit device in CSV file, a wrong device number is recorded in the header.

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.54.

▸ FC6A-PH1 was updated as FC6A Plus supported the BACnet / IP function.

<Application Software>

The following functions have been introduced.

▸ BACnet/IP function is supported.
▸ D8303 (IP Address Switching) is supported.

Bugs Fixed

The following problems have been fixed:

▸ When device address or constant is changed without opening instruction dialog in Subroutine or User-defined Macro, Changes are not applied even after converting the

program.

- Non-Retentive Data Register cannot be indirect addressed in MOVC instruction.
- Request contents of Modbus TCP client has already configured in FC6A series may be not displayed properly.
- When 32-bit Data Storage Setting is "From Lower Word" in FC6A series, E-mail is not sent correctly.
- Default value of Analog Input AI1 in FC6A Plus on Function Area settings is 1000.
- When Modbus RTU Master with more than 2 requests is configured in FC6A Plus, Compare function, Printing / Printing Preview function for Functions Area Settings and Listings function are not worked.
- The value of device address indirect addressed cannot be changed from Custom Monitor dialog and Ladder Monitor.
- FC6A-EXM2 (Expansion Interface Module) can be connected to left side of FC6A-EXM1M (Expansion Interface Remote Master Module) in Module Configuration Editor.
- When PLC type is converted to FC6A Plus after the data register is configured in "Request Execution Device" of Modbus RTU Master in FC5A-D121E or FC6A All-in One, "Request Execution Device" is changed to internal relay (M0000).
- When PLC type is converted to FC6A Plus after "Text Encoding" of E-mail is configured in FC5A-D12X1E or FC6A All-in One, "Text Encoding" settings are not taken over.
- When Communication Ports are used in FC4A or FC5A and PLC type is converted to FC6A All-in-One, Communication Ports settings are not converted properly.
- When Program Protection is used in FC4A or FC5A and PLC type is converted to FC6A, Program Protection settings are not converted properly.

WindLDR Ver.8.8.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 1.65.

- ▶ FC4A Compatible mode is supported on FC6A Analog modules.
- ▶ The log data generated by DLOG / TRACE instructions was the time when writing SD card so far, but it is improved to be the time of the instruction is executed.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 1.65.

- ▶ FC4A Compatible mode is supported on FC6A Analog modules.
- ▶ The log data generated by DLOG / TRACE instructions was the time when writing SD card so far, but it is improved to be the time of the instruction is executed.

<System Software – FC6A-D16 and -D32>

The following functions have been introduced in system software version 1.10.

- ▶ Pulse monitor function is supported on FC6A Plus.
- ▶ S-Shaped curve of frequency change is supported on FC6A RAMP instruction.
- ▶ FC4A Compatible mode is supported on FC6A Analog modules.

<Application Software>

The following functions have been introduced.

- ▶ Pulse monitor function is supported on FC6A Plus.
- ▶ S-Shaped curve of frequency change is supported on FC6A RAMP instruction.
- ▶ FC4A Compatible mode is supported on FC6A Analog modules.

Bugs Fixed

The following problems have been fixed:

- ▶ Chinese default comment for FC6A special data register / relay is garbled.
- ▶ Unintentional timeout may occur when downloading full capacity user program to PLC or monitoring to PLC connected to mobile line.
- ▶ Tag name or comment allocated to D10000 or higher of the tag editor is not imported on FC6A Plus.
- ▶ When downloading / uploading a project containing user-defined macros, the comments in the remote host list / e-mail address book are deleted.
- ▶ When communications module is connected to the slot on the left of PID module, parameter writing to the PID module fails.
- ▶ When setting remote host list on a PLC type other than FC6A Plus and converting it to

FC6A Plus, the Ethernet port corresponding to the remote host is set to 0.
- When PLC type is converted between FC6A Plus, redirect target of Web server settings option always becomes SD card.

WindLDR Ver.8.7.2

Bugs Fixed

The following problems have been fixed:

▶ When indirect addressing is used and an internal relay M10000 or later is specified as the base device address, you cannot turn it on/off in WindLDR monitor mode.

▶ When HMI module (FC6A-PH1) is connected to FC6A All-in-One CPU module and an analog cartridges (FC6A-PJ2A/FC6A-PK2AV) is installed on the HMI module, the analog cartridge does not function.

▶ If high speed counter is enabled by function setting, keep data error may occur when turning on the power.

Bugs Fixed

The following problems have been fixed:

▶ When indirect addressing is used and an internal relay M10000 or later is specified as the base device address, you cannot turn it on/off in WindLDR monitor mode.

▶ When HMI module (FC6A-PH1) is connected to FC6A All-in-One CPU module and an analog cartridges (FC6A-PJ2A/FC6A-PK2AV) is installed on the HMI module, the analog cartridge does not function.

▶ If high speed counter is enabled by function setting, keep data error may occur when turning on the power.

Bugs Fixed

The following problems have been fixed:

▶ When indirect addressing is used and an internal relay M10000 or later is specified as the base device address, you cannot turn it on/off in WindLDR monitor mode.

▶ When analog input/output is specified as Input Process Variable or Output Manipulated Variable in PIDA instruction, the analog input/output does not function correctly.

▶ When you browse a web page in FC6A Plus CPU module via a mobile router, the web page may not be displayed.

▶ When communication cartridge, digital I/O, or analog cartridge is installed and a user program is downloaded, "Expansion bus initialization error" occurs.

▶ If a user program containing subroutines that exceeds 32 KB is executed, a watchdog timer error or user program execution error may occur.

Bugs Fixed

The following problems have been fixed:

- ▸ User program is not converted properly when the PLC type is FC5A Slim type and the program contains DI/EI instructions or user communication instructions.
- ▸ When the script contains temporary devices and it is executed in Simulation mode, an error occurs.
- ▸ When you specify the devices for channels in Recipe Editor, the comments associated to those devices are cleared.
- ▸ Tag names may not be displayed properly in "Data Editor" dialog box of the recipe function.
- ▸ When you open PIDA instruction dialog box for an existing PIDA instruction, parameters are not correctly shown on the dialog box.
- ▸ When you monitor I (Input) or Q (Output) in Batch Monitor and you check Comment, device addresses are not correctly listed.
- ▸ When you save and open a project, comments allocated to data register bits are cleared.
- ▸ Once project is saved with Save As and the project name is changed, the cross reference window becomes blank.

<Web Page Editor>

The following functions have been introduced.

- ▸ When web pages containing Button components created with WindLDR V8.5.2 or prior are opened, and the visible property of those contained Button components is off, the properties of those Button components are changed (Text: blank, FillStyleOn: transparent, FillStyleOff: transparent, and visible: true) so that those Button are kept invisible.

Bugs Fixed

The following problems have been fixed:

- ▸ When web pages containing drawing components are created with WindLDR V8.5.2 and the project is opened with WindLDR V8.6.2 or later, the positions of those drawing components might be shifted to upper-left direction.
- ▸ When you enter "transparent" in the FillStyle dialog box, nothing may be shown on the dialog box.
- ▸ An error message is displayed when web page containing a multi-state lamp is shown and an image associated to the multi-state lamp does not exist.
- ▸ When an animation GIF image containing transparent color is specified, the animation is not displayed properly.
- ▸ Font size may not be adjusted correctly when both "Adjust to the browser width when runtime" and "Adjust to the browser height when runtime" are enabled for the layer size settings.
- ▸ When a tab component is placed inside another tab component, the font size of the tab

component placed inside may not be adjusted.

- When properties of a component placed inside a tab component are changed, Redo operation does not function.
- When grouped components are grouped with additional components and placed inside a tab component, the group ID of those components are changed.
- When setFillStyle() is called in JavaScript of Label component, background color of the Label component may not be changed.
- When a trend component and a Text Input component are linked, labels of Y-axis of the trend component may not be displayed properly.
- When the data for Line1 of a Trend component is not updated, Snapshots are not saved properly.
- If a font containing space character such as 'MS Gothic' is specified in the Font property, the specified font type may not be selected when the Font property is opened again.
- When positons of Label components contain digits after the decimal point, unnecessary lines may be displayed on the extended line of the label frame line.

WindLDR Ver.8.7.1

<FC6A HMI Module System Software - FC6A-PH1>

Bugs Fixed

The following problems have been fixed:

▶ If you browse web pages of the FC6A HMI module for a long time, browsing the web pages might become impossible.

WindLDR Ver.8.7.0

<System Software – FC6A-C16, -C24, and -C40>

The following functions have been introduced in system software version 1.60.

▸ Indirect addressing is supported.
▸ The digital I/O cartridge is supported on HMI module.

Bugs Fixed

The following problems have been fixed:

▸ When timer and counter preset values have been changed in online edit mode and run-time download is performed, the changed values are not reflected.
▸ M8080 (Data Link Slave 1 Communication Completed Relay) used for data link communication does not work.
▸ When multiple Digital I/O modules and other expansion modules are used simultaneously, the expansion bus communication between the CPU module and the expansion modules might fail.

<System Software – FC6A-C40J>

The following functions have been introduced in system software version 1.60.

▸ Indirect addressing is supported.
▸ The digital I/O cartridge is supported on HMI module.
▸ RAMPL (Linear Interpolation Control) is supported.

Bugs Fixed

The following problems have been fixed:

▸ When timer and counter preset values have been changed in online edit mode and run-time download is performed, the changed values are not reflected.
▸ M8080 (Data Link Slave 1 Communication Completed Relay) used for data link communication does not work.
▸ When two communication cartridges are installed on the cartridge slots, they do not work.
▸ When multiple Digital I/O modules and other expansion modules are used simultaneously, the expansion bus communication between the CPU module and the expansion modules might fail.

<System Software – FC6A-D16 and –D32>

The following functions have been introduced in system software version 1.01.

▸ Communication monitor function is improved to display timestamp.

Bugs Fixed

The following problems have been fixed:

▶ When timer and counter preset values have been changed in online edit mode and run-time download is performed, the changed values are not reflected.
▶ M8080 (Data Link Slave 1 Communication Completed Relay) used for data link communication does not work.
▶ When web pages are created by the web page editor, the components with links to the devices may not be updated.

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.52.

▶ The digital I/O cartridge is supported on HMI module.

<System Software – FT1A-12>

Bugs Fixed

The following problems have been fixed:

▶ XYFS instruction does not work with more than 24 coordinates.

<System Software – FT1A-24, -40, and -48>

Bugs Fixed

The following problems have been fixed:

▶ XYFS instruction does not work with more than 24 coordinates.

<Application Software>

The following functions have been introduced.

▶ Communication monitor function is improved to display timestamp.
▶ Communication monitor function is improved to scroll automatically.
▶ FC6A All-in-One supported Digital I/O Cartridge which is on HMI module.
▶ FC6A-C40X1XEJ supported RAMPL instruction.
▶ FC6A All-in-One supported Indirect addressing.

Bugs Fixed

The following problems have been fixed:

▶ When project file of FC6A which has Modbus TCP Client settings is opened, Modbus TCP Client settings may not be restored.
▶ When data register is configured on E-mail contents for FC5A-D12X1E, invalid e-mail content is sent.
▶ When Expansion Interface Remote Master Module after slot 2, system software

downloading for Expansion Interface Remote Master Module fails.

▸ When plc type is changed after project name is changed and saved, tag editor for before changing plc type is displayed.

▸ Replace function doesn't work for Index Register.

▸ When user program including UMACRO instruction and book mark is converted, conversion error may occur.

▸ When repeat is used for CMP instruction on FC6A, simulation of CMP instruction doesn't work properly.

▸ When simulation of ICMP or CMP instruction is executed on FC6A, comparison result is not stored special internal relay.

▸ When "Replace Comment" is checked on Replace dialog, Comment may not be replaced.

▸ When user program or system software is downloaded, timeout may occur.

▸ When PID Module setting dialog of FC6A is opened from project window, configured data register and internal relay is not restored.

▸ When web page is downloaded to FC6A-PH1 whose system software version is under 1.51, even if "Download System Software (Latest version)"is checked, error message is shown.

▸ When user program which uses FC5A PID module is downloaded by WindLDR Ver.8.6.1 or 8.6.2, PID module doesn't work.

▸ Writing a bit toward FC5A data register with custom monitor of WindLDR Ver.8.6.1 or 8.6.2 doesn't work.

▸ When the following operation was performed by WindLDR Ver.8.6.1 or 8.6.2, Data Bits of communication parameters for maintenance / user communication might be changed to 8 bits.

(1) Change plc type to FC6A

(2) Open FC6A project file

(3) Upload user program from FC6A

WindLDR Ver.8.6.2

\<Application Software\>

Bugs Fixed

The following problems have been fixed:

▸ User program is not restored correctly when user program using tag name, tag comment or rung comment is downloaded and then uploaded.

WindLDR Ver.8.6.1

\<System Software – FC6A-C16, -C24, and -C40\>

The following functions have been introduced in system software version 1.51.

- MOVC instruction is supported.
- Local devises within UMACRO instruction are supported.
- FC6A Bluetooth communication cartridge (FC6A-PC4) is supported.
- FC6A communication module (FC6A-SIF52) is supported.
- Inserting a character string into e-mail body is supported in EMAIL instruction.
- Bcc is supported in EMAIL instruction.
- Two analog modules (FC6A-J4CH1Y and FC6A-K2A1) for FC6A are supported.

Bugs Fixed

The following problems have been fixed:

- Ethernet port may stop functioning if the user program download fails.
- Timer/counter current values are reset when Test Program Download or Run-time Program Download is executed while in the online edit mode.
- IP address of remote host is not predictable when IP address of the remote host as data registers are specified with except D0000–D0255.
- XYFS instruction does not work with more than 24 coordinates.
- When the timer instruction or counter instruction is used, keep data sum check error occurs due to chattering of power ONOFF, and the device value and clock are initialized.
- When the recipe is executed simultaneously with the execution of the DLOG instruction, the DLOG instruction stops working.

\<System Software – FC6A-C40J\>

The following functions have been introduced in system software version 1.51.

- MOVC instruction is supported.
- Local devises within UMACRO instruction are supported.
- FC6A Bluetooth communication cartridge (FC6A-PC4) is supported.
- FC6A communication module (FC6A-SIF52) is supported.
- Inserting a character string into e-mail body is supported in EMAIL instruction.
- Bcc is supported in EMAIL instruction.
- Two analog modules (FC6A-J4CH1Y and FC6A-K2A1) for FC6A are supported.

Bugs Fixed

The following problems have been fixed:

- Ethernet port may stop functioning if the user program download fails.
- Timer/counter current values are reset when Test Program Download or Run-time

Program Download is executed while in the online edit mode.

▸ IP address of remote host is not predictable when IP address of the remote host as data registers are specified with except D0000–D0255.

▸ XYFS instruction does not work with more than 24 coordinates.

▸ When the timer instruction or counter instruction is used, keep data sum check error occurs due to chattering of power ONOFF, and the device value and clock are initialized.

▸ When the recipe is executed simultaneously with the execution of the DLOG instruction, the DLOG instruction stops working.

<FC6A Analog I/O Module System Software>

The following functions have been introduced in system software version 1.02.

▸ Two analog modules (FC6A-J4CH1Y and FC6A-K2A1) for FC6A are supported

▸ 16-bit input mode is added to FC6A-J8A1.

▸ The noise resistance of FC6A analog modules is improved

<FC6A PID Module System Software>

The following functions have been introduced in system software version 1.03.

▸ The noise resistance of FC6A analog modules is improved.

<FC6A HMI Module System Software - FC6A-PH1>

The following functions have been introduced in system software version 1.51.

▸ Inserting a character string into e-mail body is supported in EMAIL instruction.

▸ Bcc is supported in EMAIL instruction.

▸ FC6A Plus is supported.

▸ Device value which is linked to display part can be displayed as string in Web page editor.

▸ Port No.4-9 are added for slave number setting of All-in-One CPU module in system menu on HMI module LCD.

<Application Software>

The following functions have been introduced.

▸ FC6A Plus is supported.

▸ The following functions are introduced in FC6A All-in-One.

  – MOVC instruction is supported

  – Local devises within UMACRO instruction are supported

  – FC6A Bluetooth communication cartridge (FC6A-PC4) is supported

  – FC6A communication module (FC6A-SIF52) is supported

  – Inserting a character string into e-mail body is supported in EMAIL instruction

  – Bcc is supported in EMAIL instruction

  – Two analog modules (FC6A-J4CH1Y and FC6A-K2A1) for FC6A are supported

‣ Symbol Factory included in WindLDR is updated.

Bugs Fixed

The following problems have been fixed:

‣ When I/O is turned ON with I/O force function, icon of I/O force function is not displayed on ladder editor.
‣ When user program is uploaded from FC5A, user program may be restored.
‣ When plc type is converted from FC4A/FC5A to FC6A, 100ms may be set as watch dog timer value.
‣ When a project which has DLOG / TRACE FBD is opened, DLOG / TRACE FB's repeat cycles become 0.

WindLDR Ver.8.5.2

<Application Software>

Bugs Fixed

The following problems have been fixed:

▸ When the number of data for Recipe is changed in Data Editor dialog and this dialog is closed with Enter key, the user program conversion fails.

▸ CC/CP/TC/TP are not be displayed in Tag Name Editor for FC6A.

▸ The remote hosts are duplicated when the user program containing user defined macro is uploaded.

▸ Disabling/Enabling rungs may not function.

▸ The device addresses not used in user program may be displayed in Device Tree dialog of Web Page Editor.

▸ When the PLC type is changed, Error status setting in Modbus RTU Master Request Table is initialized.

▸ When PLC type is FC5A-D16RX1, FC5A-D32X3, or FC5A-D12X1E and the number of PID instructions programmed in WindLDR is more than 32, the user program conversion fails.

WindLDR Ver.8.5.0

<System Software – FC6A-C16, -C24,   and -C40>

The following functions have been introduced in FC6A system software version 1.40.

▶ PIDD instruction is supported.

Bugs Fixed

The following problems have been fixed:

▶ STRCUT command following manipulating string commands does not function properly in Script.
  - STRCUT
  - STRLEN
  - STRCAT
  - STRSTR

<System Software – FC6A-C40J>

The following functions have been introduced in FC6A system software version 1.40.

▶ PIDD instruction is supported.

Bugs Fixed

The following problems have been fixed:

▶ STRCUT command following manipulating string commands does not function properly in Script.
  - STRCUT
  - STRLEN
  - STRCAT
  - STRSTR
▶ In J1939 communication, when the PLC receives a message which is registered in Undesignated CA setting, the sender address is not stored.

<FC6A PID Module System Software>

Bugs Fixed

The following problems have been fixed:

▶ When FC6A is powered up, the connected PID module may not output.

Bugs Fixed

The following problems have been fixed:

▸ When you insert data register value into the body text and attached file of E-mail, if "Double (D)", "Long (L)", or "Float (F)" is selected as "Data Type", incorrect value may be inserted.

<Application Software>

The following functions have been introduced.

▸ A function to select multiple FBs with "Ctrl" key + mouse-click is supported in FBD.
▸ A function to automatically scroll the screen when mouse is left clicked and dragged to the outside of the screen is supported in FBD.
▸ Zero can be configured as the retry cycle on ModbusRTU Master dialog of FC6A.
▸ The system files of web page editor are listed on project window.
▸ PIDD instruction is supported.

Bugs Fixed

The following problems have been fixed:

▸ When WindLDR is launched in Japanese and maintenance protocol dialog of FC6A is closed, an error message is displayed.
▸ When ZRN instruction dialog is closed, the comment of S4 is overwritten with the comment of D1.
▸ When wires connecting timer function blocks are divided in FBD and the user program is downloaded to PLC, a user program execution error occurs.
▸ When saving the project file is initiated for the recovery while the system or user program is downloaded to PLC, downloading system or user program may fail.
▸ An error message is not displayed even if downloading web pages is failed.
▸ When the user program is converted, the valid device range for SCRPT/ARAMP/ZRN/HOUR instructions are not checked correctly.
▸ When the configured values for X/Y are removed and OK button is clicked in XYFS dialog box, an error message may be displayed.
▸ When Auto comment import is enabled and a user program is opened, it takes long time.
▸ The user program cannot be downloaded/uploaded to/from FC6A via HGxG touch screen with Pass-Through.
▸ WindLDR may be hanged up when the script editor is scrolled.
▸ When module type of PID module is changed on PID Module Configuration dialog of FC6A, changed module type is not reflected in the user program.
▸ Even if the size of user program exceeds the maximum program capacity, user program may be downloaded to PLC.
▸ When the user program in which the expansion interface module and PID module are programmed for FC6A is uploaded, parameters of PID module may not be restored.
▸ Float as data type cannot be selected on device data list dialog of FC6A.
▸ When default PLC type on WindLDR is FC6A or FC5A-D12, WindLDR does not launch

from WindCFG correctly.

WindLDR Ver.8.4.1

<FC6A Analog I/O Module System Software>

The following functions have been introduced in FC6A system software version 1.01.

▶ Improved the operation of analog modules and PID modules at higher ambient temperature environments.

<FC6A PID Module System Software>

The following functions have been introduced in FC6A system software version 1.01.

▶ Improved the operation of analog modules and PID modules at higher ambient temperature environments.

<FC6A HMI Module System Software – FC6A-PH1>

Bugs Fixed

The following problems have been fixed:

▶ When Web page editor is used and the "Multiple accounts and limit access to the web server" is enabled, web pages cannot be accessed.

WindLDR Ver.8.4.0

<System Software – FC6A-C16, -C24,　and -C40>

The following functions have been introduced in FC6A system software version 1.30.

- ▶ User-defined Macro is supported.
- ▶ The digital I/O cartridge is supported on FC6A.
- ▶ The bumpless control of PIDA instruction is improved.

<System Software – FC6A-C40J>

The following functions have been introduced in FC6A system software version 1.30.

- ▶ User-defined Macro is supported.
- ▶ The digital I/O cartridge is supported on FC6A.
- ▶ The bumpless control of PIDA instruction is improved.

<FC6A HMI Module System Software – FC6A-PH1>

The following functions have been introduced in FC6A system software version 1.30.

- ▶ The processing time for sending e-mails containing data register values in the e-mail body or attached file is improved.
- ▶ Reduced download time when downloading web pages via Ethernet port of FC6A-PH1.
- ▶ Web page response processing of Web server function was improved.

Bugs Fixed

The following problems have been fixed:

- ▶ When the E-mail instruction sends E-mail for the multiplex addresses if these addresses have an invalid address, this instruction cannot send E-mail for all addresses.
- ▶ The error message displayed on the LCD of the FC6A-PH1 at power on is revised.

<Application Software>

The following functions have been introduced.

- ▶ User-defined Macro is supported.
- ▶ The digital I/O cartridge is supported on FC6A.
- ▶ A new option 'Download the user program' is added on Download dialog for FC6A.
- ▶ Checking for updates function of Automation Organizer has supported Microsoft .NET Framework 4. Install of Microsoft .NET Framework 2.0 to 3.5 is not needed by this support.

Bugs Fixed

The following problems have been fixed:

▸ Even if the cartridge settings are different between the project in FC6A and the current project on WindLDR, the result of compare is "Equal".

▸ When PLC type is FC6A and the data link master is configured, and then the Modbus RTU Master is configured on another port, data link master settings are lost.

▸ When the program containing CMP instruction in FC6A is uploaded or compared, this repeat result ("AND" or "OR") is not restored.

▸ When PLC type is FC6A and S1 of ETXD/ERXD/TXD/RXD instruction exceeds 256 bytes, this instruction may not be restored correctly after the upload.

▸ When e-mail address is specified with a data register and E-mail Address dialog box is opened to modify it, the dialog box does not close without changing the data register address.

▸ The tag names which are registered cannot be configured in New Custom Monitor.

▸ The project may not be opened when the number of receive message and the number of send message are different in undesignated CA from J1939 communication setting.

▸ The dialog of MSG instruction cannot be closed with "OK" button without changing configuration after the user program which contains MSG instruction is uploaded.

▸ When device settings of PIDA/ PULSST/PWMST/RAMPST/ZRNST instructions are changed on Property Sheet, instruction parameters are changed to the default values.

WindLDR Ver.8.3.1

<System Software – FC6A-C16, -C24,   and -C40>

Bugs Fixed

The following problems have been fixed:

▶ 1:N communication of ModbusTCP does not function.
▶ Functions using data register D10000 or later do not function in scripts.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▶ 1:N communication of ModbusTCP does not function.
▶ Functions using data register D10000 or later do not function in scripts.

<Application Software>

Bugs Fixed

The following problems have been fixed:

▶ There is a wrong description in the explanation for STRCUT on Script Editor dialog.
▶ When there are errors in scripts, displayed line numbers on Script Compilation Output of Script Editor dialog may be incorrect.
▶ In Script, when more than two "return" statements exist, the second or later "return" statements don't work.
▶ When BITS2BITS, BITS2WORD or WORD2BITS are used more than or equal to 6 times and the error check is executed, errors are displayed on Script Compilation Output of Script Editor dialog.
▶ When hexadecimal constants are used for "case" and the error check is executed, errors are displayed on Script Compilation Output of Script Editor dialog.
▶ When the simulation is executed for FC6A and a user program execution error occurs, the corresponding error code is not displayed on PLC Error Status dialog.
▶ Even if New button to create a new project is clicked, new project is not created correctly.

WindLDR Ver.8.3.0

\<Application Software\>

The following functions have been introduced.

▸ The program size is displayed on the status bar.

Bugs Fixed

The following problems have been fixed:

▸ The available input devices may not be able to be configured on instruction dialog when the PLC type is FC6A-C40X1XE　or FC6A-C40X1XEJ.
▸ When the find function is executed again without moving the cursor in main program after find function was finished, the find function may be not ended.
▸ When the ladder program contains continuation lines, this project file may not be opened depending on the ladder cursor position saved in the project.
▸ Depending on the order of inserting FBs on FBD editor, the execution order of those FBs may be changed.

WindLDR Ver.8.2.3

<Application Software>

Bugs Fixed

The following problems have been fixed:

▶ When timer FB (TIMU / TIMD / TIMOU / TIMOD / TIMCU / SPULS / DTIM / RPULS) is programmed and PLC is started running, a user program syntax error may be occurred.

WindLDR Ver.8.2.2

<System Software – FC6A-C16, -C24,   and -C40>

The following functions have been introduced in FC6A system software version 1.22.

▸ The method for detecting a power failure of the FC6A-EXM2 is improved.

<System Software – FC6A-C40J>

The following functions have been introduced in FC6A system software version 1.22.

▸ The method for detecting a power failure of the FC6A-EXM2 is improved.

<Application Software>

The following functions have been introduced.

▸ Windows 10 is supported.
▸ Operability of "Script Editor" is improved.
▸ The position of the expansion modules on Module Configuration Editor can be changed with drag-and-drop.
▸ When you delete or paste an expansion module on Module Configuration Editor, scroll bar does not move to the left.
▸ The expansion modules and cartridges can be copied and pasted with "Ctrl key + drag-and-drop" on Module Configuration Editor.

Bugs Fixed

The following problems have been fixed:

▸ When the user program is uploaded from FC6A, the user program on subroutine may be displayed in main program window.
▸ The separating character of CSV file on FC6A Function Area Setting does not change according to the selected decimal symbol.
▸ The node "Cartridges" is displayed on Project Window even if the selected PLC does not support it.
▸ When an expansion module is inserted on Module Configuration Editor, inappropriate error may be detected.
▸ When you print the expansion module configuration, the parameters are not printed properly if tag names/comments contain line breaks.
▸ When you print the expansion module configuration, "Use" column of input or output devices are not printed correctly.
▸ When the expansion module configuration is printed, the tag name may be printed even if tag name for input or output device is not assigned.
▸ When you import rung comment / E-mail Address Book, the imported comment that has the separating character cannot be imported.

- When you import file with Web Page Editor, if the folder path of imported file contains non-alphanumeric character, this file cannot be imported.
- When program is converted, all scripts are not checked, and even if there are errors, no error message is displayed on Info window.
- When the expansion module configuration on the print settings dialog for FC6A is checked and PLC type changed to OpenNet/FC4A/FC5A/FT1A, an error occurs on the print preview or print.
- When Chinese version of WindLDR is used and comments of special internal relay and special data register are imported with auto comment import function, Chinese comments are garbled and not displayed correctly on tag editor.

WindLDR Ver.8.2.1

<System Software – FC6A-C16, -C24,   and -C40>

Bugs Fixed

The following problems have been fixed:

▶ Analog input of analog modules and analog cartridges is filtered fifty times as large as setting value.
▶ When a backup battery is inserted into the battery holder and the FC6A is powered on, the clock may not work.
▶ The minimum/maximum value of the analog volume (D8057) may not reach 0/1000.

<System Software – FC6A-C40J>

Bugs Fixed

The following problems have been fixed:

▶ Analog input of analog modules and analog cartridges is filtered fifty times as large as setting value.
▶ When a backup battery is inserted into the battery holder and the FC6A is powered on, the clock may not work.

<FC6A HMI Module System Software – FC6A-PH1>

Bugs Fixed

The following problems have been fixed:

▶ Device address ranges of Input (I) and Output (Q) devices on device monitor is not correct.
▶ If there is a space in the file name or folder name to be imported in the User web page and Web page editor, the web page cannot be opened.
▶ Device writing does not work correctly in Internet Explorer 11, if you set writing to the PLC device in the Web page editor.
▶ The fourth MSG instruction does not appear on the LCD when the starting input of four or more MSG instructions are ON immediately after the power is turned on.

<Application Software>

Bugs Fixed

The following problems have been fixed:

▶ The web page size on Download dialog box is not equal to the actual web page size.

- When the web page editor monitors the simulator of WindLDR and a bit device is turned on/off from the web page editor, wrong bit devices are turned on/off.
- The font size on the printed page for expansion modules is not changed according to the paper size.
- Cross reference for EI/DI instruction is incorrect with FC6A.
- When FC6A is write protected by password, run-time download/test program download function fails.
- S1 (Control register) of PIDA instruction requires 40 data registers. However, the valid device range is checked according to the device of Output manipulated variable instead of S1 in PIDA dialog.
- Data register allocation displayed on SCALE/ARAMP/PULS instruction dialog box is incorrect.
- When Delay setting is changed on Timer instruction (TML/TIM/TMH/TMS/TMLO/TIMO/TMHO/TMSO) dialog box or Data Type setting is changed on Counter instruction (CDP/CUD/CDPD/CNTD/CUDD) dialog box, error check does not work properly.
- When tag name is entered on PULSST/ZRNST/RAMPST/PWMST/ARAMP/JOG instruction dialog, corresponding device addresses are not displayed.
- When Repeat is blank in Communication Macro (CWRD/CWWT) instruction dialog box, Cross Reference does not function.
- When PLC type is FC6A or FT1A and TXD instruction is executed while in the simulation mode, the simulation stops.
- When a user program is uploaded, WindLDR does not detect the version error.
- The timer instructions with a device address T300 or bigger do not function in the simulation mode.
- If a path for a network drive is configured as %USERPROFILE% of Windows OS, WindLDR may not run properly.
- If a data register is specified as S1 of EMAIL instruction and a removed e-mail is specified with the data register, the removed e-mail may be sent out.
- Comments and tag names allocated to T1000/TC1000/TP1000 or bigger disappear when the project is saved and opened.
- PV/SP/Alarm value is not displayed as Celsius or Fahrenheit value in PID Monitor dialog.
- When you edit a project in WindLDR and open another project for a different PLC type, you are prompted to save the current project, but the saved project will be corrupted.

WindLDR Ver.8.2.0

<System Software – FC6A-C16, -C24, -C40, and -C40J>

The following functions have been introduced in system software version 1.20.

▸ User Web Page is supported on HMI module.
▸ Web Page Editor is supported on HMI module.

Bugs Fixed

The following problems have been fixed:

▸ When "Download system software" is checked in Download dialog box, the specified system software of the connected hardware is upgraded and then the user program is downloaded. When HMI module connected to FC6A is upgraded, the user program download fails.
▸ When multiple EMAIL instructions are executed, sending e-mail may fail and error code 6 (parameter error) may be stored as operation status in D2.

<FC6A HMI Module System Software – FC6A-PH1>

The following functions have been introduced in system software version 1.20.

▸ User Web Page is supported on HMI module.
▸ Web Page Editor is supported on HMI module.

Bugs Fixed

The following problems have been fixed:

▸ The values of data registers embedded in the e-mail body are not stored according to the 32-bit data storage setting of FC6A.
▸ When double-word, long, or float is selected as data type and the repeat cycle of 2 to 99 is specified for data registers embedded in the e-mail body, the value of the first data registers is embedded as many as the specified repeat cycle.
▸ When integer is selected as data type of data register embedded in e-mail body, value is stored in the e-mail body as a word data.
▸ When multiple EMAIL instructions are executed, sending e-mail may fail and error code 6 (parameter error) may be stored as operation status in D2.

<System Software – FT1A-12, -24, -40, and -48>

Bugs Fixed

The following problems have been fixed:

▸ Float data minus zero is treated as denormal numbers.

▶ When ADD(F) or POW(F) instruction is executed and an overflow or an underflow occurs, M8003 (Carry/Borrow) does not turn on.

<System Software – FC5A-D12>

Bugs Fixed

The following problems have been fixed:

▶ When a negative value is stored as Time Zone Offset for SNTP, SNTP does not function properly and an appropriate value is not stored in D8413 (Time zone offset).

<System Software – FC5A-C10, -C16, -C24, -D16R, and -D32>

Bugs Fixed

The following problems have been fixed:

▶ A communication error might occur when FC5A-SIF4 is used.

<Application Software>

The following functions have been introduced.

▶ The performance of updating cross reference information is improved.
▶ User account setting for the web server is added in HMI Module Configuration dialog box.
▶ User Web Page for HMI module is supported.
▶ Web Page Editor for HMI module is supported.
▶ Printing I/O and connection diagram for FC6A CPU module is supported.

Bugs Fixed

The following problems have been fixed:

▶ The current value of bit device may not be displayed on Custom Monitor dialog box.
▶ When the user program contains SUM instruction and the user program is uploaded, S2 of SUM instruction becomes 0 or blank.
▶ When C (Counter Contact) or T (Timer Contact) is configured on CC, TC, HTOB, BTOH, DTCB or DTDV instruction dialog box and the dialog box is closed with OK button, an error message may be displayed.
▶ When you search an instruction containing a specified device address on Find Instruction dialog box, WindLDR might crash.
▶ The status of the check box to specify which item to print on Print Settings dialog box may not be initialized correctly when the dialog box is opened.
▶ XYFS instruction dialog box cannot be opened on PC which .NET Framework 4.6.1 or later version is installed.
▶ When comments for special internal relays and special data registers are automatically imported for FC5A and FC6A, some comments are blank and incorrect.
▶ When PLC type is FT1A, and Data Bits is 7 and Parity is None for the user protocol on function area setting, error message is not shown.

- When the user program in FC6A contains J1939 communication settings and the user program is uploaded, rung comments are not restored.
- When the user program in FC6A contains recipe settings and the user program is uploaded, the upload may fail.
- When a large quantity of registers are configured for the recipe, the ladder program does not function properly.
- When the settings of expansion modules configured in Expansion Editor are printed, output device symbol is printed with "I" instead of "Q".
- Program Comparison for HMI module may not be displayed correctly.
- Allowable current for HMI module, communication cartridges, expansion interface module, and mixed I/O module is incorrect.
- When WindLDR communicates with FC6A CPU module via HMI module, and the user program download and system software upgrade are executed in series, timeout error occurs.
- When HMI module setting is done, modbus TCP client setting is deleted in connection settings.
- When PLC type is FC6A and the program contains TXD/RXD/ETXD/ERXD, the simulation mode does not start.
- When PIDA instruction is inserted on Ladder editor, the mouse cursor for JOG is displayed.
- When S1 of PIDA instruction is modified on Property Sheet, S4 of PIDA is not updated accordingly.
- When PIDA instruction is inserted, default values of process high alarm, process low alarm, and set point may be incorrect.
- When PLC type of WindLDR is changed between FC6A PLCs, Creep Pulse Frequency of ZRN instruction becomes -1.
- When PLC type is FC6A, the comment size displayed on Comment Download Settings dialog box is incorrect.
- The maximum size of the attached file of E-mail for FC6A is incorrect.
- When Two-phase High-speed Counter is configured with FC6A serires, incorrect setting is stored in special input of group 2 or 6.
- When "Write PID module parameters after download" checkbox is OFF and program is downloaded with FC6A series, PID module is written with parameters.
- ZLD file made for FC6A and protected with read protection is not opend with correct password.
- When "Suspend I/O force before download" checkbox is ON and program is downloaded with FC6A serires, I/O force function is not stopped.

WindLDR Ver.8.1.2

<System Software – FC6A-C16, -C24, -C40, and -C40J>

Bugs Fixed

The following problems have been fixed:

- When communication cartridge is inserted to cartridge slot 1 and analog cartridge is inserted to cartridge slot 2, Watch dog timer error ocuurs.
- NTC thermistor of FC6A-J8CU1 does not function.
- Device address of internal relay greater than or equal to M10000 is not displayed properly in the header of CSV files which DLOG and TRACE outputs.
- When user program is downloaded with Modbus RTU pass-through, communication error may be occurred.

<FC6A HMI Module System Software – FC6A-PH1>

Bugs Fixed

The following problems have been fixed:

- Downloading the system web page to HMI module might fail and hourglass on the LCD on the HMI module keep displayed.
- In the batch monitor of the system web page, device addresses entered in the data register text box are not accepted by pressing Enter key.
- When you write a 32-bit value (DEC-D, DEC-L, DEC-F, HEX-D) to the PLC in the batch monitor or custom monitor of the system web page, the upper 16 bit value is not written to the PLC.
- When you monitor 32-bit values (DEC-D, DEC-L, DEC-F, HEX-D) in the batch monitor of the system web page, 32-bit value is always displayed with "From Lower Word" regardless of the 32-bit data storage setting configured in Function Area Settings.

<System Software – FC5A-D12>

Bugs Fixed

The following problems have been fixed:

- When you monitor 32-bit values (DEC-D, DEC-L, DEC-F, HEX-D) in the batch monitor of the system web page, 32-bit value is always displayed with "From Lower Word" regardless of the 32-bit data storage setting configured in Function Area Settings.

WindLDR Ver.8.1.1

<Application Software>

Bugs Fixed

The following problems have been fixed:

▸ Program name, rung number, and line number are not displayed in conversion error messages for instructions.
▸ Device address of special data register storing slave number displayed on Maintenance Protocol dialog box or Modbus RTU Slave dialog box is incorrect.
▸ If ARAMP or RAMP instruction which Reversible Control Enable setting is not "Disable" is configured with FT1A series, user program conversion is failed.
▸ If ARAMP instruction in which S3 (Interrupt Input) setting is omitted is configured with FC6A series, user program conversion is not executed properly.
▸ If "Single-pulse output" on ARAMP instruction is configured with FT1A or FC6A series and the user program is uploaded from PLC, Reversible Control Enable setting is changed to "Dual-pulse output".

WindLDR Ver.8.1.0

<System Software – FC6A-C16, -C24, -C40, and -C40J>

The following functions have been introduced in system software version 1.03.

▸ FC6A-PH1 (FC6A HMI Module) is supported.

<Application Software>

The following functions have been introduced.

▸ System software download function for HMI module is supported.

WindLDR Ver.8.0.0

<Application Software>

The following functions have been introduced.

▶ FC6A MircoSmart All-in-One type are added and the following functions are supported for the PLC.
  – Recipe
  – J1939 Communication
  – Expansion Module/Cartridge editor
  – SD Card Configuration
  – JOG, ABS, SCALE, FLWP, FLWA instruction
  – Auto Ping
▶ ZLD file for FT1A series is supported.
▶ Tag name can be used on Script Editor.
▶ The following functions are supported for Data File Manager.
  – System software download
  – Showing PLC status
  – User program download

Bugs Fixed

The following problems have been fixed:

▶ If configured constant value is out-of-range on instruction dialog box, invalid error message is displayed.
▶ Invalid device address may be able to input on Property Sheet Window.
▶ When [New Device Data] is clicked in context menu for Device Data node on Project Window, Device Data List dialog box may not be opened.
▶ When program downloaded is executed after program is uploaded from PLC, comments for PIDST is not created properly.
▶ If PLC type of user program containing MSG instruction is changed, error check for device address used in MSG instruction may not be executed properly.
▶ Searching Web Server Unit does not function.
▶ Tag name cannot be used as S1 of ARAMP instruction.

WindLDR Ver.7.25

The following functions have been introduced.

- ▶ User account is supported.
- ▶ Windows 8.1 is supported.

Bugs Fixed

The following problems have been fixed:

- ▶ Device address for the input connector shown on Property Sheet may not be removed if the corresponding FB is connected through Plug & Socket and it is removed.
- ▶ Paste for Tag Name/Comment may not work on Tag Editor.
- ▶ Description for Reminder on Script Editor dialog box is not correct.
- ▶ Disply of comments may be duplicated on ladder editor.
- ▶ Save dialog box may not be opened when project for FBD is saved with 'Save' button.
- ▶ Project file in which Part Protect function is used cannot be opened properly.
- ▶ When PLC type is changed from OpenNet to FT1A series, error message for Part Protect function may not be displayed.

WindLDR Ver.7.24

<Application Software>

The following functions have been introduced.

▸ When Start/Stop button on Ribbon menu is clicked, confirmation message is displayed.
▸ Cut, Copy, and Paste functions between Tag Editor and Microsoft Excel are supported.
▸ Undo and Redo functions are supported in FBD.

Bugs Fixed

The following problems have been fixed:

▸ If the same device address is configured to multiple devices on Data Settings dialog box for ZRN/ARAMP FB, multiple FBs of the same device address are created on FBD editor.
▸ If FB is pasted and the device address of pasted FB is out-of-range, wire connection information of the FB becomes invalid.
▸ If a wire is divided on FBD editor, display of socket may be duplicated.
▸ When Data Settings dialog box of FB is opened after connected wire is divided on FBD editor, invalid device address is displayed on the dialog box.
▸ If invalid wiring is tried on FBD editor, display of function block diagram on FBD editor and actual connections between FBs may not be conformed.
▸ Cut, Copy and Paste functions in context menu on FBD editor may be disabled.
▸ When a wire is selected on FBD editor, it can be deleted by pressing Ctrl+X.
▸ When a wire is selected and the paste is executed on FBD editor, WindLDR crashes.
▸ When a project file containing bookmarks between No.10 and 255 is opened, project file may not be opened properly.
▸ When multiple tag names or comments including blank cells are pasted on Tag Editor, those blank cells are removed.
▸ The behavior of AND or OR circuit in ladder program simulation may not be conformed with the behavior of actual FT1A series PLC.
▸ When the ladder program is converted, the ladder program size is not checked properly.
▸ If the programming mode is changed from FBD to LAD and subroutines are used in the ladder program, saving project may fail.
▸ If an invalid string is input to Execution Status of DLOG/TRACE FB on Property Sheet, displayed device address in [Address] is deleted.
▸ If tag name is used with D1 of DLOG/TRACE instruction, the program conversion fails.
▸ If "U" + number (e.g. U1) is used as S1 (folder name) for DLOG/TRACE instruction, the folder name is changed when a device address is assigned to an Unallocated Tag on Tag Editor.
▸ If project file is opened by double-clicking on [Open] dialog box, the location of an FB may be changed.
▸ When PLC type is FT1A and a ladder program containing User Communication instructions is converted, the port number of user communication instructions is not

checked properly.

▸ E-mail address which starts with 'D' or 'd' cannot be imported on E-mail Address Book dialog.

▸ Host name which starts with 'D' or 'd' cannot be registered on Remote Host List dialog.

WindLDR Ver.7.23

Bugs Fixed

The following problems have been fixed:

▸ When the ladder program is converted, conversion error message for ladder program may be not displayed.

WindLDR Ver.7.22

The following functions have been introduced in system software version 2.21.

▶ MSG instruction and MSG FB can display floating-point values as decimal notation.

Bugs Fixed

The following problems have been fixed:

▶ When the network settings are obtained by a DHCP server, FT1A Pro/Lite cannot communicate with hosts located beyond the default gateway.

\<Application Software\>

The following functions have been introduced.

▶ When you search instructions or strings in Ladder, once the search reaches the end of the program, the search continues from the top of the program until the original cursor position.

The following function is added to FC5A

▶ External PV mode for PID module is supported.

Bugs Fixed

The following problems have been fixed:

▶ When the data type of CVXTY instruction is Integer (I), the data type of S2 is handled as Integer (I) in simulation mode.
▶ If the data type for BTOA or ATOB instruction is Double (D) and constant is assigned to S2, the value of S2 is not restored after the program is uploaded.
▶ Specific tag name may not be recognized on Property Sheet of FBD.
▶ Constant can be assigned to address on Property Sheet for AI and MSG FBs.
▶ When in monitor or simulation mode, if Monitor Notation is Hexadecimal, the value of AI FB is not displayed properly on FBD editor.
▶ When you divide wire between FBs and change the Block number of one of the FBs, the connection may be changed incorrectly.
▶ When project file is saved after [Divide the selected wire] function is used on FBD editor, project file may be corrupted.
▶ When the wire between Timer/Counter FB and another FB is divided and they are copied and pasted, WindLDR is crashed.
▶ When WindLDR is launched with English version, the string of Process High Alarm is not displayed properly on PID Module Configuration dialog box.
▶ When PLC type is FC5A-C24R2X, the number of slots on ANST instruction dialog box is incorrect.

- When slot 5 to 7 are configured in ANST instruction and PLC type is changed from slim to all-in-one type, the settings of those slots are not displayed in ANST instruction dialog box.
- After PLC type is changed from slim type to all-in-one type, if you open ANST instruction dialog box and disable slot 5 to 7, the settings of slot 2 to 7 may be moved or copied to slot 1 to 4.
- The range of occupied data registers for "Use data registers to configure E-mail settings" is not displayed properly on E-mail Settings tab of Function Area Settings dialog box.
- Digital Input FB turned on by I/O Force function on FBD editor cannot be turned off with Batch Monitor dialog box.
- If more than seven expansion modules are connected to FC5A series, PID module settings cannot be written to or read from the PID module.
- When PID module type is changed, the settings of unsupported functions are not cleared.
- When the force function is enabled, the devices that are not registered on Force List dialog box are forced on by double-click.
- When the language of WindLDR is German or Spanish, periods are displayed as the decimal point instead of commas on PID module configuration dialog box.
- When the PLC type is FC5A or FT1A, and the delimiter is configured with Hex in Variable (DR) for RXD/ERXD instruction, RXD/ERXD instruction may not be executed properly.

WindLDR Ver.7.21

<Application Software>

The following functions have been introduced.

Bugs Fixed

The following problems have been fixed:

▸ Undo and Redo functions are disabled on FBD editor because those functions may not work properly on FBD editor so FBD program may incorrectly be modified.

WindLDR Ver.7.20

<System Software – FT1A-12, -24, -40, and -48>

The following functions have been introduced in system software version 2.20.

▸ Data Register ROM Backup is supported.
▸ The menu language setting is retained in the ROM.

<System Software – FC5A-D12>

Bugs Fixed

The following problems have been fixed:

▸ When proportional band is selected as proportional term in PID instruction, Integral start coefficient does not work.
▸ D8054 (transmission wait time) does not function in Modbus RTU Master communication on Port 2.

<System Software – FC5A-C10, -C16, -C24, -D16, and -D32>

Bugs Fixed

The following problems have been fixed:

▸ When proportional band is selected as proportional term in PID instruction, Integral start coefficient does not work.

<Application Software>

The following functions have been introduced.

▸ When Find String dialog box is opened, device address at ladder cursor is set as default target string.
▸ When Find Instruction dialog box is opened, instruction at ladder cursor is set as default target instruction.

The following functions are added to FT1A

▸ Default values of local host port number on Maintenance Communication Server are standardized to 2101.
▸ Default values of local host port number of User Communication Server for connection 1 to 3 are changed to 2102, 2103 and 2104.

The following function is added to FC5A

▸ "Proportional Band (Enable integral start coefficient)" is added in Proportion setting on PIDST dialog box.

Bugs Fixed

The following problems have been fixed:

▸ Configure buttons of Special Inputs settings in Function Area Settings dialog box for FT1A series are not enabled/disabled properly.

▸ When the PLC type is FT1A series and the programming method is changed from ladder to FBD, unnecessary error messages are displayed.

▸ Duplication of local host port numbers for Maintenance Communication Server in Function Area Settings for FT1A series is not checked correctly.

▸ When the comment size exceeds the maximum user program size, the program comparison cannot be executed.

▸ When you enable "Move Comment" option and replace devices, comments may be deleted.

▸ When you convert the program, all tabs for subroutines may be closed.

▸ Constants used in instructions on ladder editor may not be incremented/decremented.

▸ When all part of an instruction is selected on ladder editor, device addresses may not be incremented/decremented.

▸ When some instructions are selected on ladder editor, device addresses may not be incremented/decremented.

▸ When ladder program is printed, characters in rung comments may be printed unclearly.

▸ Pasting ladder program might take time.

▸ When PLC type is FC5A-C10R2X or FC5A-C16R2X, the program conversion fails after you configure the function area settings.

▸ Program conversion for communication macro instruction of FC4A is not executed properly.

▸ When you enable ladder program monitoring on FT1A LCD, subroutine IDs used are not consecutive numbers staring with 0, and the program is converted, WindLDR crashes.

▸ When programming mode is FBD, menus for unsupported functions are displayed in Application menu > Listing.

▸ Help button on context menu for instructions is not displayed.

▸ When data type is "Float (F)" and the floating point value which contains more than or equal to 4 digit integral part is described in Script Editor dialog box,   the floating point value is handled as 0.

▸ If FBD program contains WEEK FB, Compare function cannot be executed.

WindLDR Ver.7.16

<System Software – FT1A-12, -24, -40, and -48>

The following problems have been fixed:

Bugs Fixed

The following problems have been fixed:

▶ Receive Timeout setting for the Ethernet communication is not applied correctly.

<Application Software>

Bugs Fixed

The following problems have been fixed:

▶ When you un-dock Tag Editor window from WindLDR main window or change Device Type on Tag Editor, WindLDR might crash.
▶ When you monitor PLC and open Batch Monitor dialog box, if you disconnect and connect cable, some part of values on Batch Monitor dialog box are not displayed correctly.
▶ Download of system software version 130 for FC5A-D12X1E is not executed correctly..
▶ The system software version of the connected PLC is not checked when E-mail is configured to attached a CSV file and the user program is downloaded.
▶ Program name, rung number, and line number are not displayed in conversion error messages for instructions.

WindLDR Ver.7.15

\<Application Software\>

Bugs Fixed

The following problems have been fixed:

▸ Downloading the system software version 130 for FC5A-D12X1E is not executed correctly.

WindLDR Ver.7.13

<System Software – FT1A-12, -24, -40, and -48>

The following functions have been introduced in system software version 2.03.

▶ Downloading FBD editor text is supported.

<Application Software>

The following functions have been introduced.

▶ Online helps (German/Chinese) for FT1A FBD programming are added.
▶ Windows 8 is supported.
▶ In Script editor, devices that have a space between symbol character and address number, such as [D 0100], can be accepted.

The following function is added to FT1A.

▶ Programming method can be changed between Ladder and FBD on the status bar.
▶ Tooltip on the ribbon menu is revised.

The following functions are added in FBD editor.

▶ Texts can be described on the FBD editor.
▶ Existing wire can be re-wired to another FB connector.
▶ Multiple FBs can be arranged.
▶ Detailed parameters of each FB can be shown in the program comparison.

Bugs Fixed

The following problems have been fixed:

▶ Device information of Tag Editor is not updated when a project file is opened.

WindLDR Ver.7.12

<System Software – FC5A-D12>

The following changes are made in system software version 122.

Bugs Fixed

The following problems have been fixed:

Once the PLC is powered up, MOV(D) or MOV(L) does not function properly according to 32-bit data storage setting. Even if "From Lower Word" is selected, "From Upper word" is applied to those instructions.

WindLDR Ver.7.11

<System Software – FT1A-12, -24, -40, and -48>

Bugs Fixed

The following problems have been fixed:

▸ For YEAR instruction and YEAR FB, even if yearly or monthly setting is enabled, a date for the ON setting may not exist depending on the year and the month. In this case, the output should turn on at 0:00 on the first day of the following month, but it does not turn on when the pulse output is enabled.

▸ For XYFS instruction, when integer (I) is selected as data type and a negative number is set for the Y coordinate, CVXTY and CVYTX instructions for the XYFS instruction cannot convert the value assigned by device S2 correctly.

▸ If the TCP client that communicated with FT1A in Ethernet communication did not properly disconnect the TCP connection, FT1A may not be able to discard the server connection which is no longer needed. In this case, it can not reuse the server connection.

<Application Software>

The following functions have been introduced.

▸ All instructions/FBs are displayed on Toolbox window when you launch WindLDR.

The following function is added to FT1A.

▸ "End of month" option is supported in YEAR instruction/FB.
▸ Remote I/O slave button is moved to Configuration tab.

The following functions are added in FBD editor.

▸ Redo is supported.
▸ "None" option is added to Grid Settings in WindLDR Options dialog box.
▸ Context menu for terminals when WindLDR is in monitor/simulation mode is added.
▸ Tooltip for FB connectors is supported.
▸ FB connector can be inverted with mouse double-click.
▸ Show/hide option for comments is added in Ribbon menu.
▸ 3 menus buttons Terminal, Basic, and Advanced are added to the context menu so that you can insert an FB at the cursor position.
▸ Online helps for FT1A FBD (Japanese and English) are added.
▸ AI (Analog input) can be monitored as read-only on Custom Monitor dialog box.
▸ FBs can be moved with the cursor keys on the keyboard.
▸ Shortcut keys Ctrl+Mouse wheel is supported to zoom in/out the editor.
▸ Dec/Hex selection on the status bar is supported in monitor/simulation mode.
▸ Wire crank locations can be adjusted according to your preference.

- ▶ Dot mark is shown at the location where wires are branched.
- ▶ When you select a wire, the selected wire is highlighted.

Bugs Fixed

The following problems have been fixed:

- ▶ Default color settings of FBD editor are incorrect.
- ▶ When Script Editor dialog box is closed, comments of the devices used in the dialog box are removed.
- ▶ "Snap to grid" is always enabled when WindLDR is launched.
- ▶ Conversion error details may be not displayed when there are more than 4 lines in circuits.
- ▶ WindLDR crashes when a user program is uploaded from FC5A with pass-through.
- ▶ Remote I/O slave configuration file cannot be opened.

WindLDR Ver.7.10

The following functions have been introduced in FT1A system software version 2.01.

- ▶ Function block diagram (FBD) is supported.
- ▶ Remote I/O is supported.
- ▶ Script (SCRPT instruction/FB) is supported.
- ▶ A maximum of 10 YEAR or WEEK instructions can be used in a user program.
- ▶ Not only FT1A is started running, the High speed counter preset value is updated when the gate input is turned on.

Bugs Fixed

The following problems have been fixed:

- ▶ A syntax error does not occur when invalid data register is configured as control registers in the Function Area Settings.

<Application Software>

The following functions have been introduced.

The following functions are added to FT1A

- ▶ Function block diagram (FBD) is supported.
- ▶ Remote I/O is supported.
- ▶ Script (SCRPT instruction/FB) is supported.
- ▶ A maximum of 10 YEAR or WEEK instructions can be used in a user program.

For details about the functions and how to program in WindLDR, please refer to the corresponding user's manuals.

Bugs Fixed

The following problems have been fixed:

- ▶ Non-retentive data registers and special data registers can be configured as the control register of high-speed counter.
- ▶ Preview in ARAMP instruction dialog box may not be correct when showing the preview for interrupt input.
- ▶ When the PLC type is FC5A-C10, -C16, or -C24, LC>=(D) instruction does not function.
- ▶ When WindLDR communicates with FC5A system version 241 using HGxG pass-through, host communication is not restarted after the program upload from the FC5A is completed.

WindLDR Ver.7.03

\<System Software – FT1A-12, -24, -40, and -48\>

The following functions have been introduced in FT1A system software version 1.13.

▸ Network settings can be configured on the SmartAXIS LCD. (FT1A Pro only)

Bugs Fixed

The following problems have been fixed:

▸ The number of scans traced by TRACE instruction is incorrect.
▸ When a LCAL instruction is used to call a subroutine, the instructions connected to the LCAL in parallel are not executed properly.

\<Application Software\>

The following functions have been introduced.

Bugs Fixed

The following problems have been fixed:

▸ The number of scans shown in Editing TRACE instruction dialog box is incorrect.
▸ When PLC type is FC5A-D12 and you change a server connection to 'Unused' in Function Area Settings dialog box, the same change is applied to a client connection.
▸ PIDST and ANST dialog box may not function properly.

WindLDR Ver.7.02

<Application Software>

The following functions have been introduced.

1. Improvements

The following improvement has been made:

▶ Show a warning message when the device ranges of the configured expansion data registers and of the device data list are duplicate.

2. Bugs Fixed

The following problems have been fixed:

▶ When the PLC type is FC5A-D12, timeout setting of Modbus TCP cannot be changed.
▶ Some dialog boxes of WindLDR are not fully shown when the display DPI of Windows is made bigger.
▶ Unallocated tags assigned to instructions are cleared when you assign tag names to those unallocated tags.
▶ The user program in FC5A all-in-one type cannot be uploaded when a different type of PLC is selected in WindLDR.
▶ When subroutines are programmed, the ladder program may not be displayed properly on the LCD of FT1A Pro/Touch.

WindLDR Ver.7.01

Bugs Fixed

The following problems have been fixed:

▶ When MSG instruction is executed, Two special characters, left and right arrows, are shown opposite on the FT1A Pro LCD.

The following functions have been introduced.

1. Improvements

The following improvement has been made:

▶ German and Chinese versions of online help files for FT1A are added.

2. Bugs Fixed

The following problems have been fixed:

▶ System software download fails when WindLDR is running on German or Spanish operating system.

WindLDR Ver.7.00

<System Software – FC5A-C10, -C16, -C24, -D16R, and -D32>

The following functions have been introduced in system software version 241.

‣ Modbus RTU Pass-Through (Slave)

Bugs Fixed

The following problems have been fixed:

‣ When the port 2 of PLC is configured as Data Link slave and it is powered up after the Data link master, the slave PLC may not receive initialization requests from the master.

<System Software – FC5A-D12>

The following functions have been introduced in system software version 121.

‣ Modbus RTU Pass-Through (Master)

Bugs Fixed

The following problems have been fixed:

‣ Downloading a user program may fail when a 128 KB memory cartridge is installed on FC5A-D12 and the size of the user program is bigger than or equal to 120 KB.
‣ The slave address of port 3 through 7 cannot be changed with special data registers D8040 through D8044.
‣ When more than three analog modules are mounted to PLC and the port 2 is configured as Modbus RTU slave, the PLC may not be able to receive incoming requests from the master.

The following changes are made in FC5A-D12 system software version 116.

Bugs Fixed

The following problems have been fixed:

‣ Mode 1 of pulse instructions (PULS, ZRN, and RAMP) does not function properly.
‣ "15 Force Multiple Coils" of Modbus RTU Master does not function.

<System Software – FT1A-12, -24, -40, and -48>

The following functions have been introduced in system software version 1.10.

‣ FT1A Pro
‣ System menu on FT1A Pro
‣ Ladder program monitor on FT1A Pro

- ▸ Data File Manager to manage SD memory card
- ▸ MSG instruction to create screens shown on the FT1A Pro LCD
- ▸ Other improvements
  - – SDHC memory card (32GB maximum) is supported.
  - – Initial execution speed of DLOG/TRACE instructions when an SDHC memory card is used is improved.

Bugs Fixed

The following problems have been fixed:

- ▸ FT1A may be reset during serial communication if the processor inside is highly loaded.
- ▸ FT1A is reset when the network settings are configured with a DHCP server.
- ▸ Even when you select Unused for a connection, the change is not applied in FT1A.
- ▸ YEAR instruction may not work properly when the settings are configured in multiple tabs.
- ▸ FT1A does not reply when it is configured as a Modbus RTU slave and request messages from the master are received in short time.

<Application Software>

The following functions have been introduced.

1. FT1A Pro Support

The FT1A Pro is supported and the following new functions are added.

- ▸ Data File Manager to manage SD card memory inserted in the FT1A.
- ▸ MSG instruction to configure a screen for FT1A Pro LCD.
- ▸ Backlight setting is added in Function Area Settings dialog box.
- ▸ An option to enable ladder program monitoring on FT1A is added in Function Area Settings dialog box.

2. ARAMP preview

How FT1A outputs the pulses can be previewed in the editing dialog box for ARAMP instruction.

3. Auto Comment Import improvements

- ▸ Comments of special internal relays and data registers can be automatically imported when the PLC is changed or a user program is uploaded from a PLC.
- ▸ Comments of special internal relays and data registers can be excluded from the comment download.

4. PLC Status dialog box improvement

The display format of date & time of the operating system is automatically used to display the date & time on the dialog box.

5. Other improvements

The following improvements have been made:

▶ An option to automatically synchronize the PLC clock with the PC clock is added in Download dialog box.

▶ Simulation for WEEK instruction is supported.

6. Bugs Fixed

The following problems have been fixed:

▶ If the user program size is bigger than 64 KB and containing expansion data register settings, the user program cannot be uploaded from PLC.

▶ An error message is displayed when a user program is compared with a PLC and then the Function Area Settings dialog box is opened.

▶ Cross reference list may not output depending on user programs created.

▶ Device Editing dialog box is not opened at correct location when the user program is large.

▶ Dialog box, such as E-mail Editor or E-mail Address Book, is shown outside the screen when those dialog boxes are once opened in the secondary screen and the secondary screen is disconnected.

WindLDR Ver.6.50

Bugs Fixed

The following problems have been fixed:

▶ YEAR instruction does not update the device assigned as D1 properly when the configured On/Off dates do not exist in every year.
Example: 5th Thursday of every month

The following functions have been introduced.

1. FT1A Lite Support

The new PLC series FT1A are supported in WindLDR V6.50.

▶ USB port is available in all FT1A series PLCs.
▶ Built-in Ethernet port is available in FT1A-24, -40, and -48.
▶ New calendar and timer instructions, YEAR and WEEK, are supported.
▶ Logging data to SD memory cartridge with DLOG and TRACE instructions is possible in FT1A-40 and -48.
▶ RAMP pulse output with a configuration table is possible with ARAMP instruction.

2. Property Sheet

Property Sheet window to modify the parameters of the selected instruction is added.

3. PLC Status dialog box Improvement

PLC Status dialog box is upgraded for FC5A-D12. Network settings and connection settings can be monitored on the dialog box.

4. Print Improvement

The following improvements have been made:

▶ Printer Setup dialog box is removed and Printer to use can be configured in Print dialog box.
▶ Pages to print can be specified on Print dialog box.

5. Other improvements

The following improvements have been made:

▶ Default button to revert all settings of WindLDR to the factory default settings is added in WindLDR Options dialog box.

- Rung Comments can be exported to/imported from a text file in Rung Comment dialog box.
- Indicator showing the communication status is added in status bar.
- A maximum of 255 bookmarks can be set in a main program/subroutine.
- Two additional characters "-" and "_" can be used as the file name of ZLD files.

6. Bugs Fixed

The following problems have been fixed:

- PLC program of FC5A-D12 cannot be downloaded from HG touch screen.
- Device range was not checked correctly for DIV and MUL instructions.
- When uploading user program is protected with 'Prohibit' option and the user program is downloaded to FC4A, the user program syntax error occurs on the FC4A.

WindLDR Ver.6.47

\<Application Software\>

The following functions have been introduced.

Bugs Fixed

The following problems have been fixed:

▶ When a folder named user exists in the root folder of a drive and a project is saved with WindLDR, all folders/files in the user folder are deleted.

WindLDR Ver.6.46

<Application Software>

The following functions have been introduced.

1. Improvements

The following improvement has been made:

▶ Comments for special internal relays and data registers are automatically added when a new project is created.

2. Bugs Fixed

The following problems have been fixed:

▶ Key matrix settings are not removed even after they are disabled in Function Area Settings dialog box.
▶ Leading and trailing spaces (0x20) are omitted when you configure the header and footer for printing the ladder diagram.
▶ An error is displayed when the user programs of FC5A-D12 and another FC4A PLC are compared.
▶ The range of data registers used in Modbus TCP client are not properly checked when the project is converted.
▶ The number of connections becomes 1 after you enable Maintenance communication server despite the default number is 3.
▶ Print margins are not restored when WindLDR is launched.
▶ Comments are not property moved when devices are replaced in Replace dialog box.
▶ The program upload from FC5A PLCs may fail when CMP instructions are used.

WindLDR Ver.6.45

\<FC5A System Software\>

Bugs Fixed

The following problems have been fixed in FC5A system software version 235.

▸ The watchdog timer error occurs when the source device of CMP(F) contains invalid floating-point values.

The following problems have been fixed in FC5A-D12 system software version 113.

▸ The watchdog timer error occurs when the source device of CMP(F) contains invalid floating-point values.

▸ MicroSmart sends wrong communication requests to the Modbus TCP servers after timeout error occurs in Modbus TCP Client communication.

WindLDR Ver.6.44

\<Application Software\>

The following functions have been introduced.

1. Improvements

The following improvements have been made:

▸ Error clear bit of D8005 for FC5A is supported in Simulation mode.
▸ Tag name list is outputted in alphabetical order.
▸ Leading and trailing spaces (0x20) are not omitted when you enter Constant (Character) for S1 of TXD/RXD instruction.
▸ Even when a large program is opened, the scroll length of the vertical scroll bar of Ladder editor is adjusted properly.

2. Bugs Fixed

The following problems have been fixed:

▸ When PLC type is FC4A and a project is saved and opened, the communication speed of data link is changed from 38400 bps to 9600 bps.
▸ When the first rung of a subroutine is disabled and that subroutine is called with LCAL instruction, a user program execution error occurs.
▸ Device data list data is not saved property when multi-byte characters such as Japanese are used as the filename of those data.
▸ When a large program is opened, "fix no. of columns" setting may not be restored correctly.
▸ When Delete key is pressed while you edit a comment in Tag Editor, the entire comment is deleted.
▸ When WindLDR is launched from WindCFG, Print menu is disabled.
▸ Comments modified in NSET and WKTBL instruction dialog boxes are not reflected to Ladder editor.
▸ When PLC type is FC5A-C24, RXD instructions for port 3 to 5 are not executed in Simulation mode.
▸ When only Constants (Characters) are configured as S1 of RXD instruction, RXD instruction may not function properly in Simulation mode.

WindLDR Ver.6.43

\<FC5A System Software\>

Bugs Fixed

The following problems have been fixed:

▸ Unknown errors occur when Modbus TCP client is used.
▸ ERXD instruction does not receive byte data bigger than or equal to 128 (80h) correctly.

\<Application Software\>

The following functions have been introduced.

1. Improvements

The following improvements have been made:

▸ Text box to search e-mail address is added in E-mail Editor dialog box.
▸ Performance of starting print or opening Print Preview dialog box is improved.

2. Bugs Fixed

The following problems have been fixed:

▸ When FC4A-D20R/-D40 is selected, BMOV instruction is not displayed in Editing dialog box.
▸ When FC4A-D20R/-D40 is selected, CMP= instruction does not store the comparison results in special internal realys in simulation mode.
▸ Constant values in timer, counter, timer comparison, counter comparison, and data register comparison instructions cannot be replaced.
▸ The redirect target setting for FC5A-D12 is reverted to the default when the user program is uploaded from FC5A-D12.

WindLDR Ver.6.42

<FC5A System Software>

Bugs Fixed

The following problems have been fixed:

▶ When the communication mode of server/client connections are changed, new settings may not take effect.
▶ When e-mail is sent, the data registers values in the e-mail body become invalid.
▶ When network settings are changed with special data registers, new network settings may not be applied.

<Application Software>

The following functions have been introduced.

1. E-mail Address Book and Editor dialog boxes

The following improvements have been made:

▶ Dialog boxes can be resized.
▶ E-mail addresses can be imported/exported in E-mail Address Book dialog box.
▶ E-mail contents can be copied to other e-mails.
▶ Context menu to modify e-mail body is added.

2. Other Improvements

The following improvements have been made:

▶ Monitoring performance is improved.
▶ Communication performance of Ethernet is improved.
▶ When the user web page is converted, comments in htm/html are not removed.
▶ Tab key behavior in instruction dialog boxes are improved.
▶ Toolbox is changed to tree view.
▶ Show the timing chart smoothly on PID Module Configuration dialog box.

3. Bugs Fixed

The following problems have been fixed:

▶ Upload fails when the PLC type is FC5A and the program size is between 541 and 542.
▶ When the PLC type is FC4A, a value bigger than 10,000 cannot be used in RAMPST instruction.

WindLDR Ver.6.41

The following functions have been introduced in FC5A system software version 231.

▸ Support for the PID module (FC5A-F2M2 and -F2MR2)

Bugs Fixed

The following problems have been fixed:

▸ When data link slave is configured on port 3 to 7, calendar/clock error or communication error may occur.

<Application Software>

The following functions have been introduced.

1. FC5A web server CPU module (FC5A-D12K1E/-D12S1E)

The new PLC type (FC5A-D12x1E) is added in the PLC Selection dialog box, and the following functions are supported for the PLC.

▸ The basic parameters, such as the network settings and the communication settings, can be configured in the Function Area Settings dialog box.
▸ Web pages can be imported to the User Web Page in Project Window.
▸ Remote hosts to which the MicroSmart communicates can be configured in the Remote Host List dialog box.
▸ E-mail addresses can be managed in the E-mail Address Book dialog box.
▸ The contents of each e-mail can be configured in the E-mail Editor dialog box.

2. PID module (FC5A-F2MR2/-F2M2)

The support for PID module has been added. The PID module can be configured and monitored in the PID Module Configuration dialog box.

3. ANST macro instruction upgrade

The following improvements have been made:

▸ Analog output module (FC4A-K4A1) is supported.
▸ Analog input error settings are supported for FC4A-J4CN1 and -J8C1.

4. Subroutine

Subroutine function enables you to separate subroutine programs from the main program. Subroutines can be created and edited in different program tabs in WindLDR.

5. Other Improvements

The following improvements have been made:

▸ IME input for the device addresses can be disabled in WindLDR Options dialog box.
▸ CSV and Unicode text formats are supported with Import and Export on Modbus Master Request Table dialog box.

6. Bugs Fixed

The following problems have been fixed:

▸ Opening PJW file when the number of columns is fixed may fail.

<Manual>

The following manuals are added:

▸ FC5A Series MicroSmart Pentra User's Manual Basic Volume
▸ FC5A Series MicroSmart Pentra User's Manual Advanced Volume
▸ FC5A Series MicroSmart Pentra User's Manual Web Server CPU Module Volume
▸ FC5A Series PID Module User's Manual

WindLDR Ver.6.32

Bugs Fixed

The following problems have been fixed:

▶ When the WindLDR project is opened, Tag names and corresponding comments are not read out if Tag name used in the project contains the character '&' or '<'.

▶ When PLC type is FC5A-C10R2X or -C16R2X, MODBUS/TCP Master (Client) on port 2 does not function.

▶ When WindLDR is running on Polish Windows, WindLDR files (*.LDR) created with WindLDR V5.x cannot be opened.

▶ When the program is printed on letter size papers, the right power rail may not be printed.

▶ When WindLDR is running on Windows 7 and the program is printed, advanced instructions may not be printed on the second or later pages.

▶ Watchdog timer error may occur on PLC if LDR file containing RXD instruction with Skip is opened and the program is downloaded to PLC.

WindLDR Ver.6.31

\<Application Software\>

The following functions have been introduced.

1. Improvements

The following improvement has been made.

▶ Restore the cursor position when a WindLDR project file (*.PJW) is opened.

2. Bugs Fixed

The following problems have been fixed:

▶ Forced I/O on WindLDR status bar cannot be hidden.
▶ SFTL(D) and SFTR(D) instructions are not automatically converted to upper-compatible instructions when the PLC type is changed from OpenNet to FC5A.

WindLDR Ver.6.30

The following functions have been introduced.

1. HG3G USB Pass-Through Support

Support for HG3G USB Pass-Through has been added.

2. PLC Program for HG3G

PLC program can be saved and opened with WindLDR. You can download a PLC program in USB flash drive or SD card inserted to HG3G to the connected PLC. You can also upload a PLC program from the PLC and store it in the USB flash drive or the SD card.

3. Print Improvements

The following 2 improvements have been introduced.

▶ Ladder printing can be scaled to the range between 30 and 100%.
▶ Cross reference print format can be chosen.

4. FC5A System Program Download

FC5A System Program Download has been integrated in WindLDR. The specified FC5A system software can be downloaded to FC5A automatically before downloading the user program.

5. Other Improvements

The following improvements have been made.

▶ Slave address in Modbus Master Request Table can be displayed and edited in hexadecimal.
▶ Information to recover projects is also saved in Online Edit mode.
▶ All windows, such as Project Window or Toolbox, can be docked onto other windows.
▶ Read-only cells of the communication ports table are shown in gray in Communication Ports in Function Area Settings dialog box.

6. Bugs Fixed

The following problems have been fixed:

▶ Simulation cannot be started when repeat is configured in IBMV, IBMVN, or CVDT instruction.
▶ Keep output during stop option in Download dialog does not function.
▶ 32bit data storage setting for monitor/simulation is not initialized correctly when WindLDR is launched.
▶ Once the communication is established between WindLDR and PLC, communication type may not be changed between Serial and Ethernet even if it is changed in Communication

Settings dialog.

WindLDR Ver.6.22

Bugs Fixed

The following problems have been fixed:

▸ When a keep data error occurs on FC5A PLC or a user program is downloaded to FC5A PLC, values in special data registers D8100 and D8040 to D8044 are cleared.

<Application Software>

Bugs Fixed

The following problems have been fixed:

▸ Save does not function if expansion data register settings are disabled in Expansion Data Register Settings dialog right after the project is opened or saved.

▸ When a multi-input instruction, such as CNT, CDP, or SFR, is placed on right-most column and its editing dialog box is opened and closed with OK button, an error message is displayed and the circuit is corrupted.

▸ When the file extension of pjw files includes capital letters, such as Pjw or PJW, and the file is double-clicked to edit, an error message is displayed and the file cannot be opened.

▸ When a user program containing SOTD instructions is uploaded from FC5A-C10R2, WindLDR freezes.

▸ Previously used projects are not listed in Recent Projects in Application Menu.

▸ Undo does not work properly when an instruction is inserted along with continuation lines.

▸ WindLDR shows an error if a project is saved with a name containing comma and the saved project is opened.

WindLDR Ver.6.21

<Application Software>

Bugs Fixed

The following problems have been fixed:

▸ Projects may not be opened if the projects are saved after Expansion Data Register Settings dialog box is opened and closed.

▸ When a user program is uploaded from a PLC, the program is not restored correctly if the program contains contacts that are connected to multi-input instructions, such as CNT or SFR, and are programmed in multiple ladder lines using the continuation lines.

▸ When PIDST instructions are uploaded, the set points of those PIDST instructions are always restored as integer values even if the data types of those PIDST instructions are word.

▸ If MOV, SET, or RST instructions are programmed with PIDST instructions in parallel, those MOV, SET, or RST instructions are removed when the user program is uploaded from PLCs.

▸ T or C may not be converted to TC/TP or CC/CP automatically when it is entered in Edit Instruction dialog boxes.

▸ Device data list created with WindLDR V5.x may not be read in WindLDR V6.x.

▸ Program is not printed properly when landscape is selected.

▸ Non-ASCII characters can be entered as the password in Function Area Settings dialog boxes.

WindLDR Ver.6.20

<FC5A System Software>

The following functions have been introduced in FC5A system software version 221

▸ FC5A-SIF4 expansion RS485 communication module.
▸ Data Link Communication and Modbus Master&Slave for Port 3 to 7.
▸ Communication speed of 57,600 and 115,200 bps for Port 3 to 7.
▸ Run/Stop selection at power up.
▸ Communication Refresh option for Port 3 to 7.

<Application Software>

The following functions have been introduced.

1. FC5A System Version 221 Support

The support for the FC5A system version 221has been added.

2. HG2G Ethernet Pass-Through Support

Support for HG2G Ethernet Pass-Through has been added.

3. Cross Reference dialog box

The following improvements have been made:

▸ Cross Reference dialog box is docked to WindLDR main window.
▸ The device address is automatically updated when the ladder cursor is moved.
▸ The width of the columns is saved and restored when WindLDR is launched.
▸ The show/hide status of the columns can be toggled from the shortcut menu.

4. Shortcuts

The following 3 shortcuts have been added to the ladder editor:

▸ F3/Shift+F3: The device address under the ladder cursor is searched downward/upward
▸ Ctrl+F3: All instructions using the device address under the ladder cursor are searched and listed in the Info Window.

5. Project Window

Shortcuts to open Function Area Settings dialog and Tag Editor have been added to Project Window.

6. Communication Settings dialog box

The following improvements have been made:

▸ Options to configure the communication packet size and the interval between packets for

Download are added in Serial.

▶ PLC network settings to configure 1:N computer link communication are added in Ethernet.

7. Bugs Fixed

The following problems have been fixed:

▶ When the program size is large, Print/Print Preview may fail.
▶ When a period is contained in the project name, Print/Print Preview fails.

<Manual>

FC5A MicroSmart Pentra User's Manual

Descriptions for FC5A-SIF4 expansion RS485 communication module and system program version 221 have been added.

WindLDR Ver.6.11

<Application Software>

1. Performance Improvement

The overall performance of WindLDR has been improved. File opening, program conversion, and start up of WindLDR can be completed faster than the previous version of WindLDR.

2. Bugs Fixed

The following problems have been fixed:

▶ When a program is uploaded, rung comments are not restored if there are 6 rung comments in the program.

▶ When Tag Names are assigned to device addresses, the replacement for these device addresses on Tag Editor doesn't function.

▶ The user programs in which invalid communication speed is configured with WindCFG can be downloaded to FC5A PLCs, and those PLCs do not respond to WindLDR afterward.

WindLDR Ver.6.10

<Application Software>

1. HG2G Pass-Through Support (Serial)

Support for HG2G Pass-Through has been added to WindLDR. Pass-Through Tool was required for WindLDR to communicate with PLCs via the connected HG2G. However, WindLDR 6.10 can communicate with the PLCs without using Pass-Through Tool.

2. Project Recovery

WindLDR 6.10 can recover the projects if WindLDR is terminated unexpectedly and the changes made to the projects were not saved.

When the project backup is enabled in WindLDR Option dialog, WindLDR backs up the project periodically. If WindLDR is not terminated properly, the list of projects can be recovered is displayed when WindLDR is launched next time. You can choose one of the listed projects and start editing from the point that it was backed up.

3. Zoom

A function to adjust the zoom ratio of the ladder editor has been added to WindLDR. Zoom ratio can be adjusted between 25% and 200%. The zoom ratio can be changed with Zoom slider on the right corner of the status bar. It can also be changed on Zoom dialog box. This function allows you to see and monitor more lines of the program in the screen.

4. Tag Editor Improvements

The following 2 improvements have been introduced.

▸ When WindLDR is launched from WindCFG, Tag Editor can be opened at both WindCFG and WindLDR.
▸ An option to hide Tag Name column in Tag Editor has been added. This option is available in Ladder Preference menu in WindLDR Options dialog.

5. Date & Time Option

An option to change the format of Data and Time has been added. The format can be changed in General menu in WindLDR Options dialog.

6. Bugs Fixed

The following problems have been fixed:

▸ When downloading or uploading the program, WindLDR cannot disable the password of the connected PLC if the PLC type is FC5A-D16RX1 or FC5A-D32X3.
▸ Texts written in languages other than English, German, Spanish, Chinese, and Japanese cannot be read and displayed properly on WindLDR when ladder programs (*.ldr) created with WindLDR prior than version 6 are read.
▸ The ladder programs (*.ldr) created with WindLDR version 4.7 or prior cannot be opened

if the ladder programs contain RXD, CDISP, and MACRO instructions.

▸ Values are not monitored on Batch Monitor when ASCII(W) or ASCII(D) is selected as the monitor type.

▸ The ladder diagrams containing LC instructions (LC=, LC<>, LC<, LC>, LC<=, and LC>=) are corrupted when the programs are uploaded from the PLC.

▸ When Variable (Data Register) is configured in S1 of TXD or RXD instructions, the range of used data register are not calculated correctly.

▸ When you replace devices of instructions in the selected range, the instructions may not be searched.

▸ While WindLDR is in Simulation mode, the clock data stored in D8008 to D8014 are not updated.

▸ While WindLDR is in simulation mode, the input condition to LCAL instruction is not restored after the corresponding subroutine of LCAL is executed.

WindLDR Ver.6.01

<Application Software>

1. File

The following problems have been fixed:

▸ WindLDR sometimes shows an error message when started.
▸ Ladder program files (*.ldr) created with WindLDR version 4.0 through 4.7 cannot be opened.
▸ When the PLC type is FC4A, WindLDR projects cannot be opened if the following steps are taken.
▸ Insert RUNA or STPA instructions.
▸ Download the program to a PLC and upload the program from the PLC.
▸ Save the program with any name and open the saved program.

2. Edit

The following problems have been fixed:

▸ When the data type of NDSRC instruction is Float (F), constant values cannot be assigned to S3 of NDSRC.
▸ When the PLC type is changed from OpenNet to FC5A, S2 of SUM instructions becomes empty.
▸ When Cross Reference information for CDISP instruction is displayed, the number of device addresses occupied by D1 is always 9 regardless of the settings of S1.
▸ If Advanced AT + PID action is configured for PIDST instruction and AT Set Point is out of the valid range, a user program execution error occurs on FC5A when the corresponding PID instructions are executed.

3. Configuration

The following problems have been fixed:

▸ Search Web Server Units does not function.
▸ 38,400 bps cannot be selected for RS485 port of OpenNet Controller.
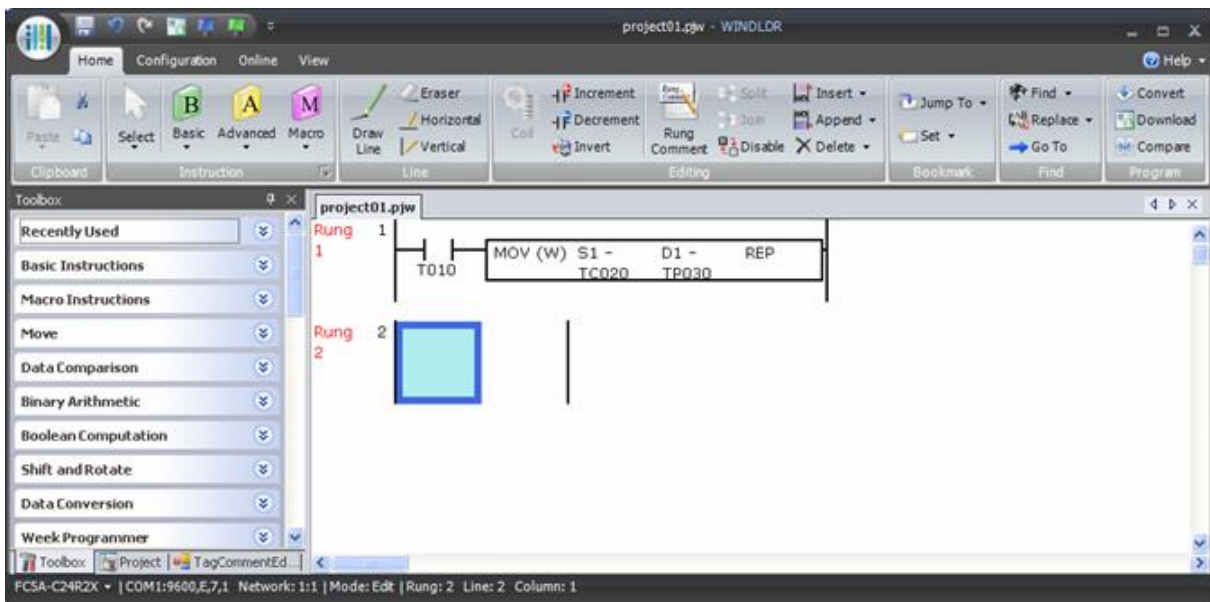
4. Online

The following problems have been fixed:

▸ All bookmarks set on the program are cleared when all modifications made to the program during Online Editing mode are canceled.
▸ If Download Comment option is selected in Download dialog, the comment data is always generated even when no comment data to download exist.

WindLDR Ver.6.00

<Application Software>

1. Changed New GUI (Graphics User Interface)

Pull-down menu and Tool bars were changed to Ribbon Control and allows you to access frequently used commands with minimum steps.

2. Advanced Interactivity for WindCFG and WindO/I-NV2

WindCFG (New System Configuration Software) provides the advanced interactivity between WindLDR and WindO/I-NV2. Those two softwares can share the PLC device address information such as tag name and comments each other automatically.

3. Sharing cross reference info with WindO/I-NV2

The cross reference information is also shared by both projects. If you open the Cross Reference dialog and input a PLC device, you can see the list of instructions using the device in the WindLDR project and the list of parts using the device in the WindO/I-NV2 project.
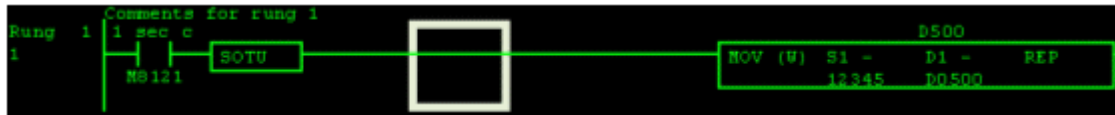
4. Color preferences for the ladder editor

The colors of the ladder editor can be customized in Ladder Preference of WindLDR Options dialog. You can alter the color of variety of items of the ladder editor, such as the background color, line color, text color, and cursor color.
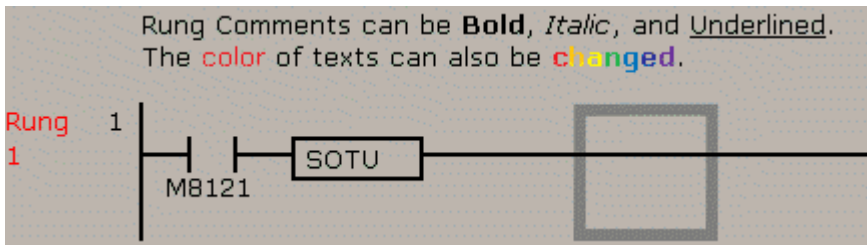
Default color:

Customization Example:

5. Rich Rung comment format

You can now format rung comments in Rung Comment dialog. Rung comment texts can be bolded, italicized, and underlined, and the color of the texts can also be changed. Rung comment format can be downloaded to the PLCs so that the format is restored when the program is uploaded from the PLCs.

6. New file format

WindLDR version 6 introduces a new file format for the WindLDR projects. The new format consists of only 1 file containing all project data, such as the ladder diagram, symbol table, bookmarks, cover page, and custom monitors, which are contained in individual files with WindLDR version 5. In WindLDR version 6, all projects are saved with the new format (.pjw).

7. Toolbox

Toolbox window lists all available instructions of the selected PLC. You can input instructions to the ladder editor with Drag & Drop operation. Inputted instructions are added to the Recently Used folder in Toolbox so that you can access to the frequently used instructions easily.

8. Device editing dialog

Device editing dialog is introduced to WindLDR. You can make a small change to a device in the instructions using the dialog. Press the Space key on the keyboard to open the dialog box.