

YASKAWA

Release Notes for MotionWorks IEC

Release 3.7.0

July 21, 2020

Critical Design Change		
Number	Summary	Release Notes
13026	New eCLR controller build settings.	Build settings 3.0.3, 3.1.0, 3.2.0, and 3.3.0 have been replaced with build settings 3.0.3.1, 3.1.0.1, 3.2.0.1, and 3.3.0.1, respectively. Projects that were set to the obsoleted build settings will require manual updating of the build setting to compile once again.

New Features		
Number	Summary	Release Notes
12121	Hardware Configuration now supports reading and writing slice module parameters for the Mechatrolink 053-1ML00 bus coupler.	Hardware Configuration now supports reading and writing slice module parameters for the Mechatrolink 053-1ML00 bus coupler. While online with the controller, Hardware Configuration will read all parameter values and allow setting individual parameters. The parameter changes made in the Hardware Configuration will not be retained after a power cycle. The application can use the function blocks Y_MLinkIOReadParameter and Y_MLinkIOWriteParameter to read and write slice parameters during application start.
12814	Hardware Configuration now allows setting custom sizes to the assembly instances when the IEC controller is configured as an EtherNet/IP adapter.	Hardware Configuration now allows setting custom sizes to the assembly instances when the IEC controller is configured as an EtherNet/IP adapter. Previously the assembly instances were fixed at either 128, 256, or 496 bytes, depending on the instance number. The previous fixed size is the maximum allowed for the respective assembly instance.
12821	Hardware Configuration now supports EtherNet/IP SLIO bus coupler, 053-1IP01.	Hardware Configuration now supports the new EtherNet/IP SLIO bus coupler, 053-1IP01. The assembly instance numbers are slightly different for the newer 053-1IP01 model compared to the older 053-1IP00 model.
12972	Hardware Configuration now supports the MTP2910 Pulse Output Module for stepper motors.	Hardware Configuration now supports the MTP2910 Pulse Output Module for stepper motors. Each MTP2910 unit occupies 2 nodes and 4 axes in the Mechatrolink network. Each node contains 2 axes apiece, and the node numbers overlap with the axis numbers.
12979	Hardware Configuration now supports the V1000 inverter with SI-ET3 option for Mechatrolink-III.	Hardware Configuration now supports the V1000 inverter with SI-ET3 option for Mechatrolink-III.
13007	Hardware Configuration now supports configuring custom delta robots with customizable joint base angles.	Hardware Configuration now supports configuring custom delta robots with customizable joint base angles. The joint base angle appears in the kinematic settings as the joint axis angle Phi.
13068	Servo axis for Sigma-7Siec controller now supports editing Pn00E.3 to select setting to use feedback option card when card is connected to Sigma-7Siec controller.	Servo axis for Sigma-7Siec controller now supports editing Pn00E.3 to select setting to use feedback option card when card is connected to Sigma-7Siec controller.
13111	Servo drives that can enable full closed loop encoder feedback (Pn002.3 > 0) can now override the external encoder resolution setting in Hardware Configuration.	Servo drives that can enable full closed loop encoder feedback (Pn002.3 > 0) can now override the external encoder resolution setting in Hardware Configuration. These supported drives will have a new parameter 1850, External Encoder Resolution Override, available at the All Parameters tab as well as the Dual Encoder tab.

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New Features

Number	Summary	Release Notes
13136	Hardware Configuration supports CoreXY.	Hardware Configuration supports a new H-Bot/T-Bot variant called CoreXY.
13146	Hardware Configuration now can configure a third Cartesian axis for H-Bot/T-Bot mechanisms.	Hardware Configuration now can configure a third Cartesian axis for H-Bot/T-Bot mechanisms. The machine coordinate system now requires defining which coordinates compose the H-Bot/T-Bot motion plane.
13155	Hardware Configuration now supports configuring the Sigma-7Siec controller with a feedback option card.	Hardware Configuration now supports configuring the Sigma-7Siec controller with a feedback option card. The dual feedback mode with external encoder is enabled by Pn00E.3, which was previously not an available setting.
13161	OptionMonitor functionality available for user.	OptionMonitor functionality available for user. MS_ReadOptionMonitor and MS_SetOptionMonitor function blocks can be used to return and set the actual feedback values of a robot. Rather than relying on the MSync structure.
13181	Hardware Configuration now supports option base part number JASRC-DMB02-E for MP3300iec controllers.	Hardware Configuration now supports option base part number JASRC-DMB02-E for MP3300iec controllers. This option base is a newer variant for the SR200 robot controller. The required controller CPU variant is 1.2 GHz, and the required servonet communicate cycle is 1 ms.
13192	CodeMeter runtime was upgraded to latest version 7.00 to fix installation issues.	CodeMeter runtime was upgraded to latest version 7.00 to better protect against other applications that use latest version of CodeMeter runtime from clobbering MotionWorks IEC's licensing. An installation bug for detecting CodeMeter runtime in 32-bit Windows was also fixed with this upgrade. Previously the MotionWorks IEC 3.6.0 installer specifically may fail to complete installation due to a bug in the previous CodeMeter runtime installer.
13226	Auxiliary axis in an nD Gantry group can be jogged.	Y_GroupJogTCP in PLCOpen_Part4_Toolbox returned an error when an auxiliary axis was jogged. This has been fixed.
13277	New controller setting in MotionWorks IEC configures eCLR controllers to automatically cold start the PLC when warm start is not possible.	There is a new controller setting in MotionWorks IEC that will configure eCLR controllers to automatically cold start the PLC when warm start is not possible, when controller reboots. This setting requires a minimum controller firmware version of 3.7.0.
13286	Hardware Configuration now supports the FT82 drive for Sigma-7Siec controller.	Hardware Configuration now supports the FT82 drive for Sigma-7Siec controller. The default standard F50 servo drive can be removed from the project tree, and a different drive option can be added in its place.

Bug Fixes

Number	Identified Issue	Details
12546	MotomanSync driver performance improvements and size reduction.	MotomanSync driver memory and project size reduction eliminated download issues and increased resource availability for projects.
12768	Rz axis units not saved for delta robot.	Bug has been fixed for machine units of Rz axis in Delta and Delta 2 robot mechanisms that previously was not saved to configuration.
12899	MC_GroupSetOverride Error bit did not stay on when Enabled with keyswitch in PLAY or TEACH.	MC_GroupSetOverride Error bit did not stay on when Enabled with keyswitch in PLAY or TEACH. This bug has been fixed.
12900	Y_DefineTool would get stuck on Busy if executed with R_TRIG.	Y_DefineTool would get stuck on Busy if executed with R_TRIG. This bug has been fixed.

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Bug Fixes

Number	Identified Issue	Details
12904	MC_GroupStop stuck on Busy/Active if executed with servos off.	MC_GroupStop would get stuck on Busy/Active if executed with servos off. This bug has been fixed.
12905	Executing MC_GroupReset while a motion function block is active makes motion FB get stuck in Busy/Active.	Executing MC_GroupReset while a motion function block is active makes motion FB get stuck in Busy/Active. This bug has been fixed.
13022	Cannot find library bug reported when saving MotionWorks IEC Express project as .zwe file when project contains .mwe user libraries.	Bug when saving MotionWorks IEC Express project as .zwe file when project contains .mwe user libraries has been fixed. Previously the Express IDE mistakenly only looked for a user library file with a .mwt file extension when saving as a .zwe project.
13026	Some previously released eCLR controller build settings were replaced to correct a code generator bug.	Some previously released eCLR controller build settings were replaced to correct a code generator bug. The replaced build settings were numbered 3.0.3, 3.1.0, 3.2.0, and 3.3.0. They have been replaced with build settings 3.0.3.1, 3.1.0.1, 3.2.0.1, and 3.3.0.1, respectively. Projects that were set to the obsolete build settings will require manual updating of the build setting to compile once again.
13179	Previously released 1.x and 2.x eCLR controller build settings were removed due to a code generator bug that may generate erroneous application code.	Previously released 1.x and 2.x eCLR controller build settings were removed due to a code generator bug that may generate erroneous application code when projects using these build settings are compiled in MotionWorks IEC 3.x. Projects that need to be compiled with the obsolete 1.x or 2.x build settings need to be compiled with MotionWorks IEC 2.x instead of 3.x. If 1.x or 2.x build setting is not required, then use a supported 3.x build setting in MotionWorks IEC 3.x.
13198	Sigma-5 large capacity drives have been updated in Hardware Configuration.	Sigma-5 large capacity drives have been updated in Hardware Configuration. Previously some drive parameters and some global variables were referencing incorrect pins from the CN-1 connection. The variables for P-OT (forward run prohibited), N-OT (reverse run prohibited), and /DEC (homing deceleration switch) have been renamed to match the appropriate input index.
13308	2D and 3D gantry's created with incorrect <softLimitWorld> size.	Bug has been fixed for offline saves of 2D and 3D gantry mechanisms. Previously the group.xml file was only correctly written for 2D and 3D gantry mechanisms if Hardware Configuration was online during save. The controller would have restarted with an alarm if the offline configuration was sent to the controller with Controller Configuration Utilities.
13328	MCS button was enabled after selecting Custom group.	Bug has been fixed for configuring Custom axis group in Hardware Configuration where the Machine Coordinate System button and the Set Kinematics button was enabled when they should be disabled. Clicking on these enabled buttons for a Custom axis group would result in an error.
13354	A configured power module may affect the configuration assembly data written to the io.xml configuration file.	Bug has been fixed for writing the configuration assembly data for EtherNet/IP SLIO bus couple. Previously, a configured power module may affect the configuration assembly data written to the io.xml configuration file. Existing projects containing an SLIO power module should reopen Hardware Configuration, select the SLIO bus coupler, then save to update the configuration assembly data.

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Known Issues

Number	Known Issue	Details	Workaround
875	Hardware Configuration does not run when launched by a user who did not install it and who does not have Administrator privileges	Administrative privileges are required to install on Windows Vista or higher	Login with Administrative privileges before installing.
1034	Cannot connect to the controller from the Hardware Configuration if DNS reverse and forward lookups contain mismatching entries	If the DNS reverse lookup for the controller IP address returns a host name that has a forward lookup to a different IP address, then connection with the Hardware Configuration will fail.	Use a different IP address for the controller or fix the DNS entries on the DNS server.
1516	Project source code stored on controller has wrong extension in express (ZipFile.zwt, should be .zwe)	Project source code is saved with wrong extension for MotionWorks IEC Express usage (ZipFile.zwt, should be .zwe) when downloading the source code to the controller.	After uploading from the project archive from the web interface, extract Zip File.zwt, change file extension to .zwe before opening it with MotionWorks IEC Express.
1693	Slow compilation when Symantec Antivirus is enables	Compiler runs slowly when Symantec Antivirus is enabled.	Exclude MotionWorks IEC file types from virus scan. File types: cic, dbd, dip, dit, diw, st1, sto
5753	Logic Analyzer does not upload data when toolbar button "Stop recording values" is pressed.	Logic Analyzer will not upload data after pressing the stop recording value button. The log buffer must fill up first for the data to be transferred.	Use continuous trace data logging.
5833	I/O group address range does not match text in global variables I/O group name	Editing the name of EtherNet/IP or Modbus device, or adding and deleting devices with the same settings can cause a disconnect between I/O Groups and Variable Groups that can cause the variable addresses to be unrelated to I/O group address range.	Save the Hardware Configuration between deleting a device and reentering it.
6622	Project Wizard does not behave as expected.	In some circumstances, the Project Wizard will not create a new project.	For new projects, use the project templates instead of the Project Wizard.
6795	Unidentified Unicode text strings when using "Language for non-Unicode programs" setting	This occurs when the MotionWorks IEC language is set to Japanese or Simplified Chinese on an English language OS. There are some situations where the displayed text is unidentifiable; a series of question marks are displayed instead.	1. Using Windows Update, install all the Asian language packs. 2. Set the language for non-Unicode programs to Japanese: Settings→Control Panel→Region and Language→Administrative→Change my system locale Use Japanese formats: Settings→Control Panel→Region and Language→Formats
7052	After Communication Time out, Controller Utilities is Unavailable	When online, if communication to the controller is lost the Online Menu has items enabled and disabled as if the controller is still online.	This can be corrected by attempting to go online again. Using the invalid menu items does not produce any negative result.