Release Notes for MotionWorks IEC

Release 1.2.2 Build 7

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1. New Features

The following new features have been added to this version of the Software.

- Adopted fixed addressing for hardware devices
    - New devices are given a fixed address space based on their configuration
    - Addressed for existing devices are converted to the fixed address space

- User Assigned Modbus Addresses Variables & I/O Groups
    - The address range for each Modbus Data Block must be assigned when the device is configured

- New Sigma-5 Variables
    - New variables were added for Sigma-5: ALM, WARNG, PON, SVON, PSET
    - The ServoPack I/O naming was changed to the following, which more closely relates to the Sigma documentation.
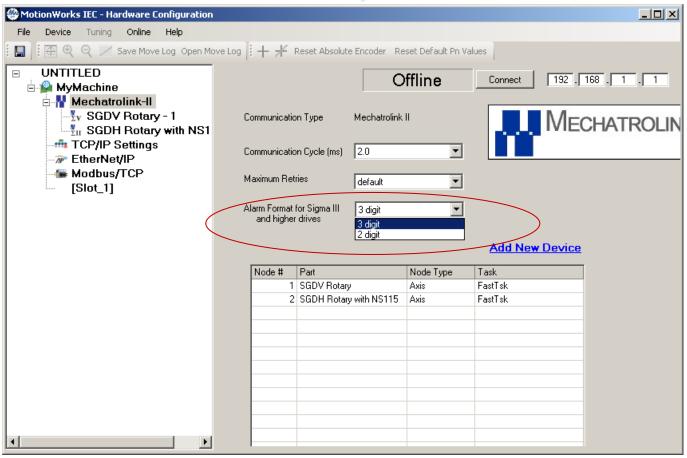
Name	Type	Usage	Description	Address
⊟ <SGDV Rotary> - Sigma-V Rotary Servo Amplifier - 1:1 (* Modify Variable Names, Not Group Name. *)				
AX1_SI1_POT	BOOL	VAR_GLOBAL	POT, default on pin #7, configurable by Pn50A.3	%IX53248.0
AX1_SI2_NOT	BOOL	VAR_GLOBAL	NOT, default on pin #8, configurable by Pn50B.0	%IX53248.1
AX1_SI3_DEC	BOOL	VAR_GLOBAL	DEC, default on pin #9, configurable by Pn511.0	%IX53248.2
AX1_SI4_EXT1	BOOL	VAR_GLOBAL	EXT1, default on pin #10, configurable by Pn511.1	%IX53248.6
AX1_SI5_EXT2	BOOL	VAR_GLOBAL	EXT2, default on pin #11, configurable by Pn511.2	%IX53248.7
AX1_SI6_EXT3	BOOL	VAR_GLOBAL	EXT3, default on pin #12, configurable by Pn511.3	%IX53249.0
AX1_BRK	BOOL	VAR_GLOBAL	Brake Output Status	%IX53249.1
AX1_HBB	BOOL	VAR_GLOBAL	HBB, Stop Signal Input	%IX53249.2
AX1_SI0_IO12	BOOL	VAR_GLOBAL	Configurable by Pn81E.0, default is unallocated	%IX53249.4
AX1_SI1_IO13	BOOL	VAR_GLOBAL	Configurable by Pn81E.1, default is unallocated	%IX53249.5
AX1_SI2_IO14	BOOL	VAR_GLOBAL	Configurable by Pn81E.2, default is unallocated	%IX53249.6
AX1_SI3_IO15	BOOL	VAR_GLOBAL	Configurable by Pn81E.3, default is unallocated	%IX53249.7
AX1_ALM	BOOL	VAR_GLOBAL	Alarm On Drive	%IX53252.0
AX1_WARNG	BOOL	VAR_GLOBAL	Warning On Drive	%IX53252.1
AX1_SVON	BOOL	VAR_GLOBAL	Servo On	%IX53252.3
AX1_PON	BOOL	VAR_GLOBAL	Main Circuit Power On	%IX53252.4
AX1_PSET	BOOL	VAR_GLOBAL	Positioning Completed	%IX53252.7
AX1_SO1	BOOL	VAR_GLOBAL	SO1, pins 1 and 2, configurable by Pn82E, Pn50E, Pn50F, P...	%QX53248.0
AX1_SO2	BOOL	VAR_GLOBAL	SO2, pins 23 and 24, configurable by Pn82E, Pn50E, Pn50F,...	%QX53248.1
AX1_SO3	BOOL	VAR_GLOBAL	SO3, pins 25 and 26, configurable by Pn82E, Pn50E, Pn50F,...	%QX53248.2

- Added support for programmable output condition at PLC Stop
    - Output devices can have configurable behavior on PLC Stop. They can be set to 'off' or 'retain' their last state. The default is to retain the last state.

- o This output condition on PLC stop feature is available for card (LIO-0x, …) I/O, Mechatrolink I/O devices, Sigma V amplifiers, and when the controller is used as either an EtherNetIP adapter (slave) or Modbus TCP slave.
  - o This feature is not available for Sigma II or III amplifiers or when the controller is used as either an EtherNetIP scanner (master) or Modbus TCP master.
- Movement of variables to the "User Variables" group
  - o Requirement: (954) If a variable's address is blank (Not an I/O type variable) or it's address does not belong to any device configured by the Hardware Configuration, (device removed) the variable is now moved instead of being deleting
- Improved handling when No Default Gateway (null value)
  - o Issue (1209): If the TCP/IP Settings had not been configured correctly, a non-specific error was reported while trying to connect with Hardware Configuration.
- Renaming Configuration or Resource CAUSED Hardware Configuration to fail to launch
  - o Issue (1388): The Hardware Configuration would not load after renaming a Configuration or Resource in the project tree. The workaround to this was to close and reopen the MotionWorks IEC project. This issue has been fixed.
- Added support for Sigma III and Sigma V 3-digit alarm format.
  - o Hardware configuration will allow the user to select how servo alarms are displayed for Sigma III and Sigma V drives. Sigma II drive will only display a 2-digit alarm format, because the 3-digit capability is not built into the drive.

- Support Servopack feature Option Monitor 2
  - Hardware Configuration now automatically configures controllers with Sigma III or Sigma V amplifiers to allow use of "Option Monitor 2" in the Mechatrolink packet. The data returned is configured by Pn825. The value can then be obtained using MC_ReadParameter 1312.
- Changed choices for Pn511 digits 1, 2, & 3 (zero based)
  - Issue (1723): The choices in the menu for Pn511 on digits 1, 2, & 3 were incorrect for selections 0-3 and 9-C. These selections have been updated to say 'Set Signal OFF'.
- Sigma II and Sigma III ServoPack variables not the same as Sigma 5
  - Issue (1775): Sigma II, Sigma III and SMD variables were not the same as Sigma V I/O variable names. This will affect old projects. After opening Hardware Configuration and Saving, the variable names will change. The old variables will be moved to a new group, called 'User Variables.' This was done in part to provide more data from the servopack, such as the power state of the main bus, and the direct servo on status, etc.
- Customer variables deleted by Hardware Configuration
  - Issue (1778): Projects meeting the following criteria:
    Created with version 1.0.6 of MotionWorks IEC, Configured with the controller was enabled as Modbus Slave and as an EtherNet/IP Adapter, containing a

Phoenix Bus Coupler encountered an error when saved in version 1.2.1.5. Under these circumstances, Variable Groups corresponding to the aforementioned devices were inappropriately moved to the new fixed address range. This bug has been fixed. These Variable Groups now retain their originally configured addresses.

- Usability of New Variable rename / remapping for servopacks needs improvement
  - o Issue (5776): Existing projects with servo axes will have variables moved to a fixed address range. This could result in debugging errors. If this occurs, remove the axis variables from the 'User Variables' group.

2. Known Issues

The following are known issues that may be encountered when configuring hardware.

- Error on Windows 7
  Issue: (1737) Hardware Configuration writes to a log file in Program Files directory. This is not allowed on Windows 7 with UAC turned on.
  Workaround: Windows 7 is not supported for this release.
- Axis node in Hardware Configuration can show incorrect enable state
  Issue: (1761) If a test move is aborted by disabling the axis from another program or workstation while in motion, the Hardware Configuration may not show the correct enable state.
  Workaround: Click the 'Stop' button, select a different node, and then select the axis, or avoid this situation by using one software application at a time to control an axis.
- 218IF-Y1
  Issue: (475) This communication module is not supported.
- User Interface
  Issue: (223) Scrolling may be required at some resolutions.
- MC_Power gets errorID 57617 after download changes
  Issue: (5717) Error ID 57617 can occur after download changes on PLCopenPlus functions blocks.
  Workaround: Do not use download changes. Use patch POU instead.

3. Limitations

Unsupported Card Modules
JAPMC-PL2300-E   Counter Module
JAPMC-PL2310-E   Pulse Output Module

Unsupported Mechatrolink Devices
SGDH & NS115 with Linear Motor
JEPMC-PL2900   Counter Device
JEPMC-PL2910   Pulse Output Device
JEPMC-AN2900   Analog Input Device
JEPMC-AN2910   Analog Output Device

EtherNet/IP Limitations
20 Adapter devices supported

Modbus Limitations
20 Server devices supported