

MCT-4MA i4.3 Version V1.4.1 release notes/updates 01-10-2024

1. Bug corrected in notification navigation. Found via error log file. *Validated by engineering. No SVP to re-run.*

MCT-4MA i4.3 Version V1.4 release notes/updates 11-11-2023

1. Runtime and configurator text entry keypad update to qwerty format for improved ease of use. *Validated by protocol 13 in Configurator SVP R9 and protocols 44, 48 and 83 in GUI SVP R9.*
2. Runtime and configurator ease of use update to provide automatic start of configurator application when exiting runtime to configuraiton mode startup and automatic start of runtime application when exiting the configurator application. *Validated by protocol 1 steps 23, 24 and 25 in Configurator SVP R9 and protocol 28 in GUI SVP R9.*
3. Loop event input functions of program run, hold abort and off mode added from customer feedback. *Validated by protcol 3 steps 23 and 24 of Configurator SVP R9 and protocol 90 of GUI SVP R9.*
4. Bug correction for program end soft alarm to latch in alarm state for use in math/logic functions. *Validated by protocol 34 in Configurator SVP R9.*
5. Math/Logic updated to include program status inputs for logic equations of program run, hold, wait and end as well as alarm reset that can be used to clear latching functions. *Validated by protocol 34 in Configurator SVP R9.*
6. Cascade control mode additions for min/max/avg input and feedforward control included. *Validated by protocol 33 in Configurator SVP R9 and protocols 91, 92, 93 and 94 in GUI SVP R9.*
7. Drybulb/wetbulb %RH humidity input option added to provide humidity loop control utilizing drybulb and wetbulb temeprature inputs. *Validated by protocol 3 steps 10, 26, 27, 28 and 29 in Configurator SVP R9 and protocol 95 in GUI SVP R9.*
8. Runtime application memory check operation modified on startup to not check for SD memory remaining. Several reported instances of runtime error on boot in which application ould not start possibly due to mount time of SD. All file writes will still check for memory availability, so does not affect normal operation. *Validated via enginnering and by running protocol 40 in GUI SVP R9.*
9. Application error reporting of runtime and configurator improved to track most recent errors (total of 50) and maintain error log file size. This prevents excesssive use of SD memory while still trackign errors. Previous verison limited error log file size and would thus stop tracking errors if file size exceeded max limits. *Change validated by engineering.*

MCT-4MA i4.3 Version V1.3.3 release notes/updates 08-19-2022

1. Corrected import configuration bug in which loop event input functions not being activated correctly
2. Corrected program download bug in which wait for set point was always scaled to decimal resolution of zero instead of highest decimal resolution of selected inputs for wait condition.

No SVP re-run required with updates verified by engineering test protocol.

MCT-4MA i4.3 Version V1.3.2 release notes/updates 05-11-2022

1. Corrected bug related to HLM V1.7 firmware introduction (V1.3.0, V1.3.1). Previous HLM version register 133 as a read only register. This register became a read/write register in HLM version V1.7 which caused

import fail when hardware used HMI version >1.3.0. V1.3.2 HMI version is compatible with current and older HLM version in the field for import/export functionality.

No SVP re-run required with updates verified by engineering test protocol.

MCT-4MA i4.3 Version V1.3.1 release notes/updates 05-06-2022

2. Corrected bug in Modbus slave communications register 3 (Modbus address 400004) to properly indicate communication errors for configured loops, limit, monitor and expansion IO modules.
3. Added MCT GUI version number to Modbus slave register 50 (Modbus address 400051).
4. Corrected bug in Modbus slave program download to properly scale the ramp rate/time entry for each step according to the defined ramp units of the program.
5. Corrected configuration import bug in which configuration import would not always work properly if a loop was configured for ramp rate operation.

No SVP re-run required with updates verified by engineering test protocol.

MCT-4MA i4.3 Version V1.3.0 release notes/updates 02-08-2022

1. Security settings updated to add 2FA (two factor identification). 2FA through text message code (5 digit) or via USB encrypted stick inserted. USB stick registers device only (not each user) for use to bypass phone text 2FA when internet is down or direct usage by administrator. 2FA cannot be enabled when reauthentication is active. These two settings are mutually exclusive since reauthentication requires that a user login for any process change in the system (2FA code not required). *Run protocols 42, 43 and 89 in MCT4_B_4-7_MA GUI SVP R7.*
2. Ramp rate added. Includes ramp rate hold, ramp rate initialize SP and dual setpoints (SP2) via digital input. *Run protocols 3, steps 5 and 23 and protocols 28 through 32 in MCT4_B4-7_MA Configurator SVP R7.*
3. Time of day start for profiles added in version 1.3.0. *Run protocol 88 in MCT4_B_4-7_MA GUI SVP R7.*
4. New HLM features added to configurator if V1.6 HLM hardware used. This are a limit startup setting with the following programmable options in configurator (if HLM V1.6 is not installed, config will not allow new feature settings):
 - Value of 0 =**NoRM** (Normal): After power down, the controller will operate normally in the same mode as before power was removed unless a limit has been exceeded after power up.
 - Value of 1 =**RST** (Reset): After power down, the controller latching relay will have to be reset using the "Reset" key or digital input option. The unit must be reset even if the device was not in a limit condition before power down. It must also be reset even if the device is not in a limit condition after power up.
 - Value of 2 =**NoRL** (Normal Latch): After power down, the controller will operate normally in the same mode as before power was removed unless a limit has been exceeded upon power up. If the limit was latched at power down, the unit will be in "Limit" at power up and have to be reset.

Run protocol 4, steps 4, 61 and 62 in MCT4_B_4-7_MA Configurator SVP R7 and protocols 33, 34 and 35 in MCT4 HLM Firmware SVP R3. Re-run protocol 27 in MCT4_B_4-7_MA GUI SVP R7.

MCT-4MA i4.3 Version V1.2.1 release notes/updates 08-23-2021

1. Runtime bug corrected when output2 programmed for event output when manual or auto-tune mode entered. Outputs would de-energized when either mode was entered and not energized when either mode was exited. This only occurred if output2 on PCM/B42 was programmed for "event" outputs. It did not affect any other output 2 program modes.
2. Configuration bug corrected for IO expansion module programming. User error moved the edit object out of position which was corrected in this version. No code changes required.

No SVP re-run required with updated verified with engineering test protocol.

MCT-4MA i4.3 Version V1.2 release notes/updates 08-15-2021

1. V1.2 production release. Programmable single setpoint timer addition added to system. Programmable timer cycle activates "Event 1" for x-time with shutoff of event after timer times out. See SDLC for SVP testing.

Validated via protocol 1, steps 10 and 11 and protocol 27 in configurator SVP R6

Validated via protocols 85 through 87 in GUI Runtime SVP R6

MCT-4MA i4.3 Version V1.1.3 release notes/updates 07-14-2021

1. V1.1.3 release for lifecycle regression testing from bugs found in V1.1.2. Logic code bug corrected to properly evaluate all trigger inputs during logic calculations, output set/reset.

Validated via protocol 17 steps 70 through 92 in Configurator SVP R5

MCT-4MA i4.3 Version V1.1.2 release notes/updates 06-06-2021

1. Corrected annotation input function of expansion IO so only annotation of triggered input operates. Validated via protocol 25, step 5 of Configurator SVP R4.
2. Corrected Modbus slave event write issue. Validated via protocol 70, steps 104-112 in GUI SVP R3.
3. Corrected special character entry for file names on text keypad by preventing a period from being entered. Buttons of special characters now disabled on keypad for file entry to also make it clear to user the characters are not allowed. Validated via protocol 83 of GUI SVP R3.
4. Corrected issue where expansion IO with function selection of "None" were still provided in math/logic input/output selection combos. Validated via protocol 26 in Configurator SVP R4.

MCT-4MA i4.3 Version V1.1.1 release notes/updates 04-09-2021

1. V1.1.1 release for lifecycle (SDLC) testing. V1.1 did not get released due to configuration bug found during internal testing with programming of IO expansion module events. Max count of 16 events displayed an error when changing event types allowed (Manual Only, Math/Logic). Bug corrected in V1.1.1 with full SDLC testing performed.

MCT-4MA i4.3 Version V1.1.0 DVR1 release notes/updates 02-13-2021

1. DVR1 (design verification testing) release for V1.1.0 DVR1 lifecycle validation. See 4MA SDLC for requirements and testing of expansion IO addition. IO expansion model added to this version.

MCT-4MA i4.3 Version V1.0 release notes/updates 11-11-2020

1. V1.0 release. No software regressions found in DVR2_V0.2. All updates covered in SDLC lifecycle

documents

MCT-4MA i4.3 Version DVR2_V0.2.0 release notes/updates 11-03-2020

1. DVR2 (design verification testing) release for DVR2_V0.2 lifecycle validation. See 4MA SDLC for requirements and testing.

MCT-4MA i4.3 Version DVR1_V0.1.0 release notes/updates 08-31-2020

1. DVR1 (initial design verification testing) release for DVR1_V0.1 lifecycle validation. See 4MA SDLC for requirements and testing.

MCT-4MA i4.3 Version DVR1-F_V0.1.0 release notes/updates 08-28-2020

1. DVR1-F release for internal/field testing only. Added math on math ability in math/logic. Revised math/logic only output selection for compatibility with B42. Not for validation purposes.

All updates covered in regression analysis for Vx.x.x lifecycle documents

MCT-4MA i4.3 Version DVR1-E_V0.1.0 release notes/updates 08-02-2020

1. DVR1-E release for internal/field testing only (adds SQRT function for math/logic and show/hide ability for math equations in runtime). Added navigation capability from notifications list. Added alarm active notification via icon at top right of screen when main alarm icon not flashing. Not for validation purposes.

All updates covered in regression analysis for Vx.x.x lifecycle documents

MCT-4MA i4.3 Version DVR1-D_V0.1.0 release notes/updates 07-01-2020

1. DVR1-D release for internal/field testing only (adds wait for in profile functionality for monitors and loops). Not for validation purposes.

All updates covered in regression analysis for Vx.x.x lifecycle documents

MCT-4MA i4.3 Version DVR1-C_V0.1.0 release notes/updates 06-16-2020

1. DVR1-C release for internal/field testing only. Not for validation purposes.

All updates covered in regression analysis for Vx.x.x lifecycle documents

MCT-4MA i4.3 Version DVR1-B_V0.1.0 release notes/updates 06-03-2020

1. DVR1-B release for internal/field testing only. Not for validation purposes.

All updates covered in regression analysis for Vx.x.x lifecycle documents

MCT-4MA i4.3 Version DVR1-A_V0.1.0 release notes/updates 04-30-2020

1. DVR1-A release for internal/field testing only. Not for validation purposes.

All updates covered in regression analysis for Vx.x.x lifecycle documents