

## **Subject: Release of v3.0 Software for the Model 5700 with Configurable I/O**

### **Overview**

This Service Bulletin documents the release of new software for the 5700 transmitter with Configurable I/O. The version of this software is 3.0. HART Transmitter Revision 3. Weights and Measures Revision TBD.

### **Products Affected**

5700 transmitters with Configurable I/O.

### **NAMUR NE 53 Rating**

This release is rated at NAMUR NE 53 Level 2 with a NAMUR NE 53 version of 01.03.00.

### **Symptoms**

The following symptoms may appear with the 5700 transmitter with Configurable I/O:

- Some alerts may be listed twice in the alert history log.
- When setting “SMV hours between runs” to 8 days or more, the “hours to next run” was calculated much lower than the entered value.
- When trimming MAO3 using HART, the transmitter was trimming MAO2 instead.
- Trying to download historical files using the LOI may return an invalid date error before allowing a date to be entered.
- Batcher subtracts negative flow from batch total.
- Polling for external density was being logged in the audit trail.
- Some Advanced Phase Measurement (APM) parameters were showing NaN when APM was enabled and drive gain was below the remediation threshold.
- Channels were not maintaining the configuration of “None” through a power cycle.
- When SIL is enabled, external pressure was being set to 0 after a power cycle.
- Gas Standard Volume (GSV) was being recorded in the Historian instead of APM data, when APM was configured.
- When configuring the batcher through HART, not all parameters were being rejected on an error.
- Stopping a batch with a discrete input ends the batch and it cannot be resumed.
- Resetting a batch total was not allowed when secured.
- Model code in device was not always matching the current configuration.

- The flow calibration factor could be set to 0.0000.00.
- Shrinkage adjusted APM variables Net Oil Flow at Line, Net Oil Flow at Ref, Volume Flow at Ref were available to be assigned to a totalizer, but they were being rejected.
- Special units could incorrectly be assigned to Volume flow when API was enabled.
- On some batches, there was a discrepancy showing between the batch total and the Mass Total maintained by the transmitter totalizer.

## Resolution

- All the above issues have been corrected with the release of v3.0.
- No known safety issues remain open.
- For firmware updates to a unit in the field that is experiencing any of these issues, please contact Micro Motion service in your area.

## Additional Features

- Net Oil Calculations (NOC) with multi-well functionality is available with purchase of license.
- Manual Mode for APM is available with purchase of license.
- APM Remediation is available for all output types.
- Gas Linearization function is available with purchase of license.
- Added Energy Flow calculation.
- Added constant batch mode application, a simplified batch screen flow in addition to standard batcher. Transmitter remains in constant batch mode until password is entered to exit mode.
- Added new batcher features including preset inventories, and batch inhibit, batch end, inhibit batch flow, inhibit batch total coils.
- Sensor Simulation and menu enable/disable parameters added to HART.
- Added warning for customers if the core has an ETO installed when upgrading.
- Added additional options for starting and stopping totalizers based on events like reaching a specific total or the occurrence of a fault condition.
- Added HART parameters for Installation Verification and Measurement Verification.
- Added additional parameters (device tag, timestamp) to the printer test ticket.
- Added support for Tantalum sensors and Tantalum sensor features.
- New PVs available for assignment to Milliamp Output (MAO)
  - Calorific Value
  - Energy Flow

- Unremediated Mass Flow
- Unremediated Volume Flow
- Unremediated Density
- TRM Liquid Flow
- External Density
- Gross Flow at Line
- Backflow at Line
- Gross Flow at Ref
- Average Oil Flow at Line
- Average Watercut at Line
- Average Gross Flow at Line
- Average Water Flow at Line
- Average Back Flow at Line
- Average Oil Flow at Ref
- Average Water Cut at Ref
- Average Gross Flow at Ref
- Average Water Flow at Ref
- Average Density
- Average Temperature
- Average Mass Flow
- New PVs for Frequency Output (FO) (Energy Flow, TMR Liquid Flow, Gross Flow at Line, Back Flow at Line and Gross Flow at Ref).
- Added configuration parameters to allow a user to add password security for resetting totals or starting/stopping totals via the context menus.
- Allow batching without having a discrete output assigned to a valve.
- Added parameter to allow configuration of reset on start for the batcher.
- Changed text of alert “Data Loss Possible” to “Configuration Warning”
- Added option to allow the user to hide the configuration menu.
- Moved security settings to a new Display Security submenu.
- Added password protection to prevent resetting of inventories in applications not related to custody transfer.
- Added more digits to totalizer log records.

- Removed the startup logo.
- With an APM license installed, log Density at Reference (Modbus register 1655) to Historian instead of Gas Void Fraction (GVF) (Modbus register 3907).
- Added new pressure effect factors for CMF200M, CMF350M, CMFS040M, CMFS100H/P, and CMFS150H/P.
- APM confidence is now a diagnostic only and is not part of the watercut calculation.

## Notes

- For legacy Net Oil applications, some Series 3000 totals are now inventories in the 5700 and some Series 3000 inventories are now totals in the 5700. Refer to the Supplemental Manual for more details if needed.
- For Net Oil Calculations, changing the default configuration of the totalizers may affect the tracking of some totals. There is no affect to APM functionality.

## Host Compatibility

- ProLink III v4.2 contains support for the applicable additional features noted above. If you have a previous version installed, go to the ProLink Product page (<https://www.emerson.com/en-us/catalog/automation-solutions/micro-motion-sku-plk>) under **Documents & Drawings/Software Downloads & Drivers** for an update
- 5700 HART DD for device revision 3 contains support for the applicable additional features noted above.
- 5700 HART DTM for device revision 3 contains support for the applicable additional features noted above.
- Files are available for AMS Trex Device Communicator and 475/375 Field Communicators for 5700 device revision 3.

## Firmware Upgrade Procedure

### Tools

- Computer
- Smart Meter Verification Firmware Update Utility.exe (available on Emerson website using the link below)
- USB-A to USB-A cable

### Procedure

The upgrade procedure and Smart Meter Verification Firmware Update Utility can be found using the following link:

[www.emerson.com/en-us/catalog/automation-solutions/measurement-instrumentation/flow/micro-motion-sku-5700](http://www.emerson.com/en-us/catalog/automation-solutions/measurement-instrumentation/flow/micro-motion-sku-5700)

and selecting the firmware upgrade zip file on the **Documents & Drawings/Software Downloads & Drivers** page

**Contact Information**

Product information is available on the internet at: [www.emerson.com](http://www.emerson.com).

Customer Service Phone Numbers:

Micro Motion USA	1-800-522-6277
Micro Motion Europe	31 (0) 318 495 555
Micro Motion Asia	65 6777-8211
Micro Motion UK	44 0870 240 1978
Micro Motion Japan	81 3 5769-6803

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