Kinetix 2000 Multi-axis Servo Drive Version 17 Firmware Revision 1.98

Kinetix 2000 Multi-axis Servo Drives	
Integrated Axis Modules (IAM)	2093-AC05-MP1
	2093-AC05-MP2
	2093-AC05-MP5
Axis Modules (AM)	2093-AMP1
	2093-AMP2
	2093-AMP5
	2093-AM01
	2093-AM02

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About This Publication

This publication contains release notes for Kinetix 2000 drive firmware revision 1.98 when used with RSLogix 5000 software, version 17.

IMPORTANT When using Kinetix 2000 drives with TL-Series (TL-A*xxxx*-B) motors with 17-bit multi-turn high-resolution encoders, the motors must be series B.

Enhancements with Firmware Revision 1.98

This enhancement corresponds to Kinetix 2000 drive firmware revision 1.98 or later, when used with RSLogix 5000 software, version 17.

Hookup Test

Enhanced performance of the motor feedback feature in the Hookup test.

Incremental Feedback Fault Reset

Modifications to reduce the amount of time the drive takes to reset a fault on an incremental feedback device.

DC Bus Calibration

Modifications made to prevent a nuisance overvoltage fault when a large DC Bus calibration value is entered.

Erroneous Zero Drive Utilization

Modifications made to prevent an erroneous report of zero drive utilization.

Corrected Anomalies

This correction applies to firmware revision 1.98 or later:

Modifications were made to improve the reliability of the ABS bit storage.

Known Anomalies

These anomalies apply to all Kinetix 2000 drives:

- In a system where the rated current of the drive is less than the rated current of the motor, certain torque attributes (torque limits and motor torque feedback) are incorrect. RSLogix 5000 software assumes that 100% current is always motor rated current, but in the case of a drive limiting the rated current, the values are incorrect.
- The Test Command and Feedback Hook-up Test will fail with a missing feedback error when used on dual loop configurations.
- If dual position servo loop configuration is selected and auxiliary feedback is set to none, an Encoder Feedback Loss fault (E07) is displayed rather than Auxiliary Feedback fault (E62) following the drive enable command.
- When the axis is operating in one of the position servo loop configurations (without velocity feed-forward gain), the position error value is being incorrectly reported as negative, when the drive polarity is set negative and positive motion is commanded.
- Inaccurate results may occur if Friction Compensation or Notch Filtering is enabled during autotuning.
- Home to Torque Level in Forward Bi-directional or Reverse Bi-directional mode should reverse direction and move until Homing Torque Above Threshold status is low. Then the process complete (PC) bit should set. However, when the torque level is reached, the PC bit is set and the motor remains at that torque level. If the Peak Torque/Force Limit value is not reduced, the motor will remain at the dynamic torque limit value.
- If an E07 error code is displayed when using a TL-Series motor with the high-resolution absolute (-B) option for primary feedback, and an encoder is attached (and configured) to the auxiliary feedback, then a fault reset on the motor axis may result in a spurious auxiliary feedback fault.
- When using a TL-Series motor with the high-resolution absolute (-B) option for primary feedback, you may need to cycle power to clear E07 faults.
- After executing MSO, manual movement of the motor shaft results in the actual position not being at the requested value, but slightly off but with a near zero position error. Subsequent moves will retain the slight offset as part of actual position. Perform an MSF and MSO without moving the motor shaft to zero out the offset.

Restrictions

These restrictions apply when using RSLogix 5000 software in conjunction with a ControlLogix (1756-M*xx*SE), CompactLogix (1769-M04SE), or SoftLogix (1784-PM16SE) servo module, and the Kinetix 2000 servo drive:

- When changing from a dual loop configuration (dual position servo, dual command servo, aux dual command servo, and dual command/feedback servo) to a single loop configuration (position servo, aux position servo, velocity servo, torque servo), control power to the drive must be cycled to clear out the previous loop-configuration setting. Failing to do so will result in the Kinetix 2000 drive reporting an Auxiliary Feedback fault (E62) when the auxiliary feedback device is removed.
- When removing an axis association on the Associated Axes tab of Module Properties screen, control power to the drive must be cycled to clear out the previous associations. Failing to do so will result in the Kinetix 2000 drive reporting a SERCOS Ring fault (E38).
- When using a dual loop configuration, the resolution units setting (Rev, Inch, and Millimeter) on the Motor Feedback and Aux Feedback tabs of the Axis Properties dialog must be the same.
- After issuing a Set System Variable (SSV) on a drive parameter, wait at least 3 ms after the ConfigUpdateInProcess bit is not set before acting on the result of the setting.
- Auxiliary encoder channel does not generate a marker from any sine/cosine device, including SRS/SRM feedback.
- Setting the low-pass output filter bandwidth to a value greater than 3183 Hz will cause a configuration error when downloaded.
- An E19 or E05 fault may occur if an MSO instruction is executed and the motor shaft is still rotating.
- When using a Kinetix 2000 drive system in Common Bus Follower mode, the IAM module must be included in the RSLogix 5000 motion group and must remain uninhibited.

Additional Resources

These documents contain additional information concerning related Rockwell Automation products.

Resource	Description
Kinetix 2000 Multi-axis Servo Drive Installation Instructions, publication 2093-IN001	Installation, setup with RSLogix 5000 software, applying power, and troubleshooting your Kinetix 2000 drive.
Kinetix 2000 Multi-axis Servo Drive User Manual, publication 2093-UM001	Detailed mounting, wiring, setup with RSLogix 5000 software, applying power, and troubleshooting information with appendices to support firmware upgrades and common bus applications
Home to Torque Level Application Note, publication MOTION-AT001	Information on the use and restrictions of the Home to Torque Level feature
MP-Series Integrated Linear Stages User Manual, publication MP-UM001	Installation instructions for mounting, wiring, maintaining, and troubleshooting your MP-Series integrated linear stage.

You can view or download publications at http://literature.rockwellautomation.com. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

Notes:

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Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://support.rockwellautomation.com, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States	1.440.646.3434 Monday – Friday, 8 a.m. – 5 p.m. EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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