



PowerFlex 4M Drive Firmware v2.001

This release note corresponds to firmware revision 2.001 for the PowerFlex 4M drive.

Introduction

The following information is included in this document:

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Enhancements

The following functions have been added or updated with revision 2.001. Detailed descriptions follow.

- Register addresses 8192 (Logic Command) and 8193 (Reference) can now be read using Function Code 03.
- An option for “I/O Control” has been added to [Relay Out Sel]. This allows the control of the relay’s output using bit 6 of the Logic Command word.
- The following parameters can now be changed while the drive is running.
 - Parameter t211 [Anlg In 0-10V Lo]
 - Parameter t212 [Anlg In 0-10V Hi]
 - Parameter t213 [Anlg In 4-20mA Lo]
 - Parameter t214 [Anlg In 4-20mA Hi]
- To allow frequent writing to parameter t222 [Relay Out Level] from the network when parameter t221 [Relay Out Sel] is set to 11, parameter t222 [Relay Out Level] is not written to EEPROM.

Corrected Anomalies

This section describes the anomalies corrected in this revision of firmware.

Function	Anomaly	Correction
Parameter A435 [Flying Start En]	The flying start function did not work at speeds below 20 Hz.	This anomaly has been corrected.
DC injection in Continuous mode	Several anomalies existed with DC injection in continuous mode.	The DC injection code in continuous mode was reworked to correct these anomalies.
DC brake level and output current measurement	An anomaly existed with the accuracy of the DC brake level and output current measurement. This might prevent the drive from a proper ramp down during stop and might also cause the drive to fault on F7 [Overload].	This anomaly has been corrected.
Jog function	In 2-Wire mode, when the reverse direction was disabled, and a digital input was programmed as Jog Reverse, the drive would run in the reverse direction when the Jog input was applied.	This anomaly has been corrected.
Analog inversion	The analog invert function was provided as an option, "Anlg Invert", to the [[Digital In1 Sel] and [Digital In2 Sel] parameters but the code for this function was not working correctly.	Code has been corrected and is fully functional.
Start command via network	In the previous version of the firmware, if the start bit of the Logic Command was set, after a communication timeout, the start bit was not cleared.	After a communication timeout, the start bit will be cleared.
Communication over network	Several anomalies existed with the drive's communication over the network, which may result in errors.	The performance of the drive's communication over the network has been improved.

Determining Firmware Revision

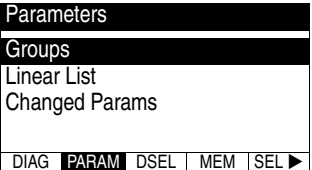

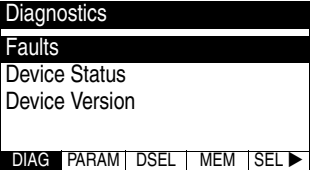


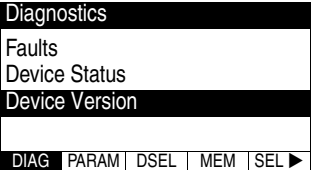
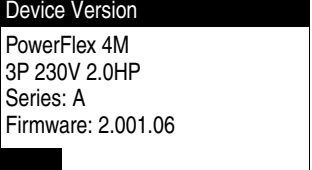
To determine the current firmware revision for a PowerFlex 4M drive, view parameter #16 [Control SW Ver].

Alternatively, you can also determine the firmware revision of the PowerFlex 4M drive using one of these methods:

- [Using the External LCD HIM \(22-HIM-**\)](#)
- [Using DriveExplorer Lite/Full](#)
- [Using DriveExecutive](#)

Important: If you're using DriveExplorer Life/Full with the 1203-USB converter, you need to update the converter firmware to FRN 1.003 or higher.

Using the External LCD HIM (22-HIM-**)

Step	Key(s)	Example Screens
1. Power up the drive. Then plug the HIM into the drive. The Parameters menu for the <u>drive</u> is displayed.		
2. Press Sel key until the Diagnostics menu is displayed.		
3. Press Down Arrow to scroll to Device Version , and then press Enter.	 and 	
The present firmware version of the drive is shown on the Firmware line.		

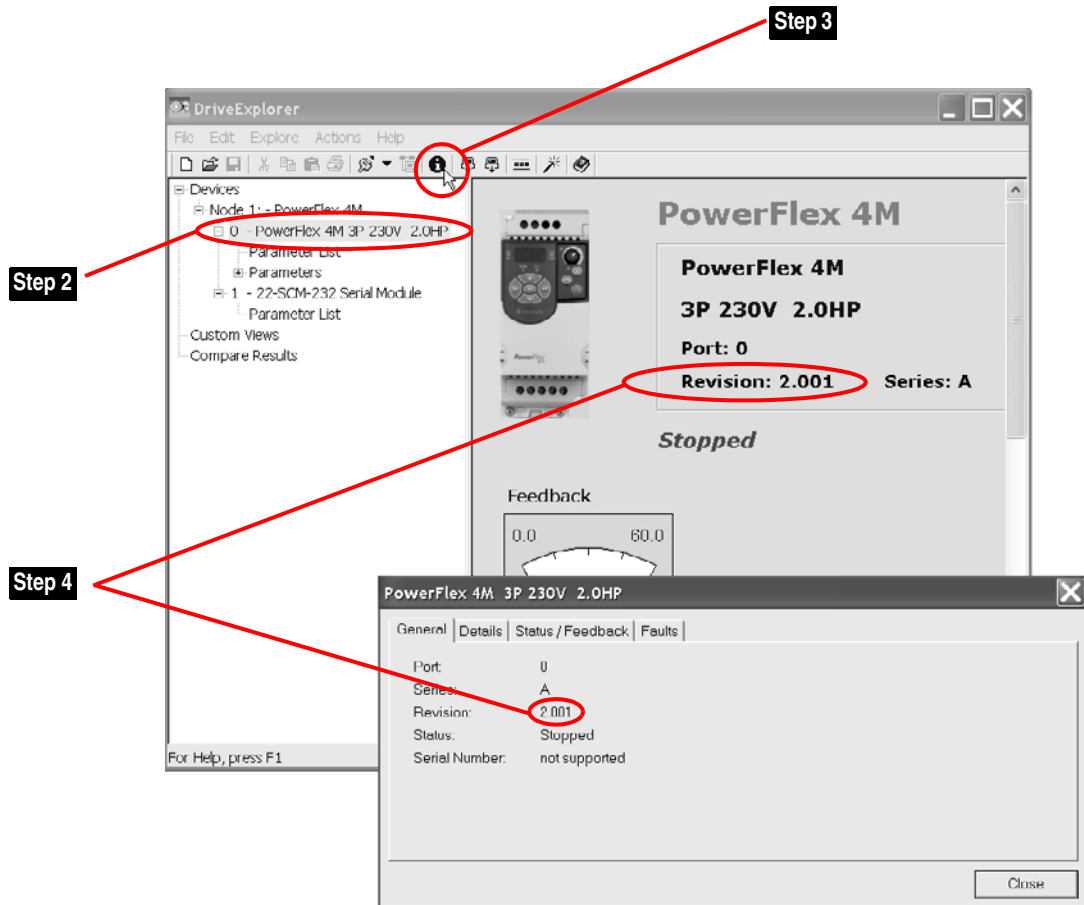
Using DriveExplorer Lite/Full

1. Launch DriveExplorer and go online with the drive via the 1203-USB or 22-SCM-232 converter.
2. In the DriveExplorer tree view, click the PowerFlex 4M item as shown in [Figure 1](#).
3. Click the information icon to display the Properties screen of the drive.

The “Revision:” field shows the present revision (for example, 2.001) of the PowerFlex 4M firmware.

▶ **TIP:** When you click the PowerFlex 4M item in DriveExplorer Lite/Full version 5.01 or higher, the adapter firmware revision is also shown in the right pane of the DriveExplorer window.

Figure 1 Information Icon in DriveExplorer Window

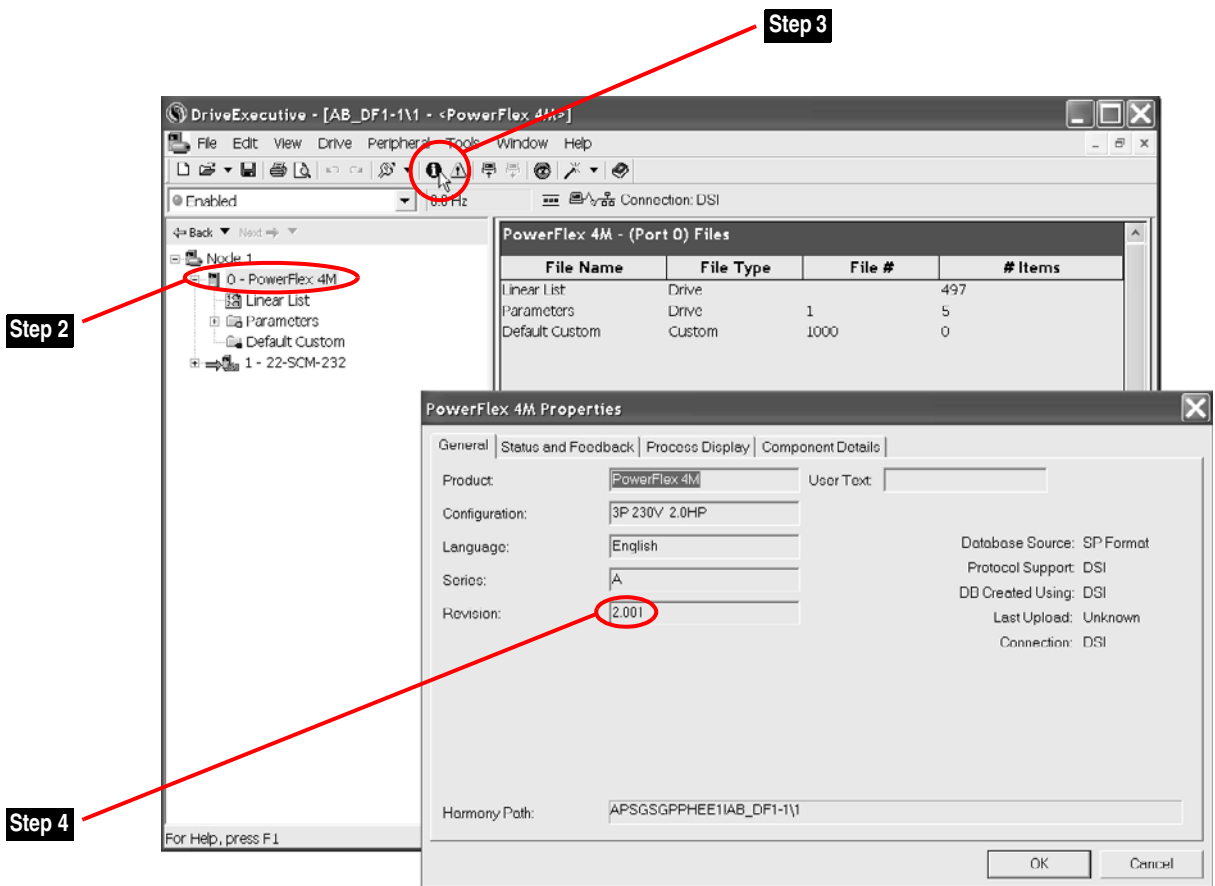


Using DriveExecutive

1. Launch DriveExecutive and go online with the drive via the 1203-USB or the 22-SCM-232 converter.
2. In the DriveExecutive tree view, click the PowerFlex 4M item as shown in [Figure 2](#).
3. Click the information icon to display the Properties screen of the drive.

The “Revision:” field shows the present revision (for example, 2.001) of the PowerFlex 4M firmware.

Figure 2 Information Icon in DriveExecutive Window



Firmware Flashing

This section describes procedures to flash upgrade your drive firmware. Downloads are provided on the Allen-Bradley Web Updates site located at <http://www.ab.com/support/abdrives/webupdate>.



ATTENTION: Risk of drive damage exists if drive power is removed during the Boot Flash segment of the upgrade/download. To guard against damage, Do Not Remove Power to the drive until the download is complete and the drive has been reset.

Important: Once a flash update has been started, do not remove drive power until the download is complete and the drive has been reset. If power is removed during Boot Flash, the drive may be permanently damaged. A drive that has been damaged in this way cannot be repaired. If power is removed during Application Flash, the drive will remain in Boot and can be reflashed.

Updating the Communication Adapter

To support the flashing of firmware to the PowerFlex 4M drive, update your communication adapter as follows:

Update this	To this version or later
1203-USB Converter	1.003
22-SCM-232 Serial Converter	2.005
22-COMM-C ControlNet Adapter	1.004
22-COMM-D DeviceNet Adapter	1.010
22-COMM-E EtherNet/IP Adapter	1.007

For details on updating the firmware of your communication adapter, refer to the accompanying documentation for the adapter.

Installing the Flash Kit

- Install the “v2.001” Flash Kit utility from the Allen-Bradley Web Updates site.

This automatically installs the latest version of the ControlFLASH utility on your computer. ControlFLASH, DriveExplorer or DriveExecutive can now be used to update the drive using the following instructions.

Using DriveExplorer Lite/Full

1. Launch DriveExplorer. Make a connection to the drive.
2. In the DriveExplorer tree view, select the appropriate drive. Then, select the Information icon.
3. On the Properties screen, click the Details tab.
4. Select “Flash Update” and follow the screen prompts until the procedure is completed and the new firmware version is displayed.

Using DriveExecutive

Important: This method requires RSLinx.

1. Launch DriveExecutive. Make a connection to the drive.
2. In the DriveExecutive tree view, select the appropriate drive. Then, select the Information icon.
3. On the Properties screen, click the Component Details tab.
4. Select “Flash Update” and follow the screen prompts until the procedure is completed and the new firmware version is displayed.

Using ControlFLASH

Important: This method requires RSLinx.

1. Launch ControlFLASH (if it is not already running).
2. Follow the screen prompts until the flash procedure is completed and the new firmware version is displayed.

Restrictions

No restrictions apply to this revision of firmware.

Technical Support Options

For U.S. Allen-Bradley Drives Technical Support:

Telephone:	(1) 262.512.8176
Fax:	(1) 262.512.2222
Email:	support@drives.ra.rockwell.com
Online:	www.ab.com/support/abdrives

Rockwell Automation also provides technical information on the web to assist you in using our 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 with a hardware module within the first 24 hours of installation, please review the information that's contained in this document. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3434 Monday – Friday, 8am – 5pm 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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Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846