



Safe Speed Monitor Option Module for PowerFlex 750-Series AC Drives, v1.005

These release notes correspond to major revision 1, minor revision 5 of firmware for the 20-750-S1 Safe Speed Monitor Option Module for PowerFlex 750-Series AC Drives.

Introduction

The following information is included in this document:

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The procedures in this release note assume that you have DriveExplorer software, version 5.02.07 or later, installed on your PC. If you do not have DriveExplorer software, you can download the free version, DriveExplorer Lite, at www.ab.com/drives/driveexplorer/free_download.html.

Corrected Anomalies

This section describes the anomalies corrected in this revision:


Anomaly	Description
Following an input fault, reset into actively monitoring motion was allowed without first requiring that both input channels be cycled to OFF (open) to confirm their operation.	<p>This anomaly affected the Door Monitor input (DM_In), Enabling Switch Monitor input (ESM_In), Lock Monitor input (LM_In), and Safe Limited Speed input (SLS_In) when they are configured for dual channel with a 3-second discrepancy time.</p> <p>If these inputs are configured for dual channel with a 3-second discrepancy time and an input fault is detected, the anomaly did not require that both input channels turn OFF (open) before a reset into actively monitoring motion is permitted. For example, if only one of the channels turned OFF (opened), the safety option would detect the fault and perform the required stop function. You should be required to open both channels on that input for a successful reset command.</p> <p>Corrected firmware requires that both input channels be cycled to OFF (open) before a reset into actively monitoring motion is permitted.</p>
Dual Feedback Speed fault occurs when safety mode is Disabled.	A Dual Feedback Speed fault results when an error is detected between the speed from the first encoder and the speed from the second encoder. This fault should not occur in Disabled mode, because speed monitoring is not in effect.

Determining Firmware Revision Level

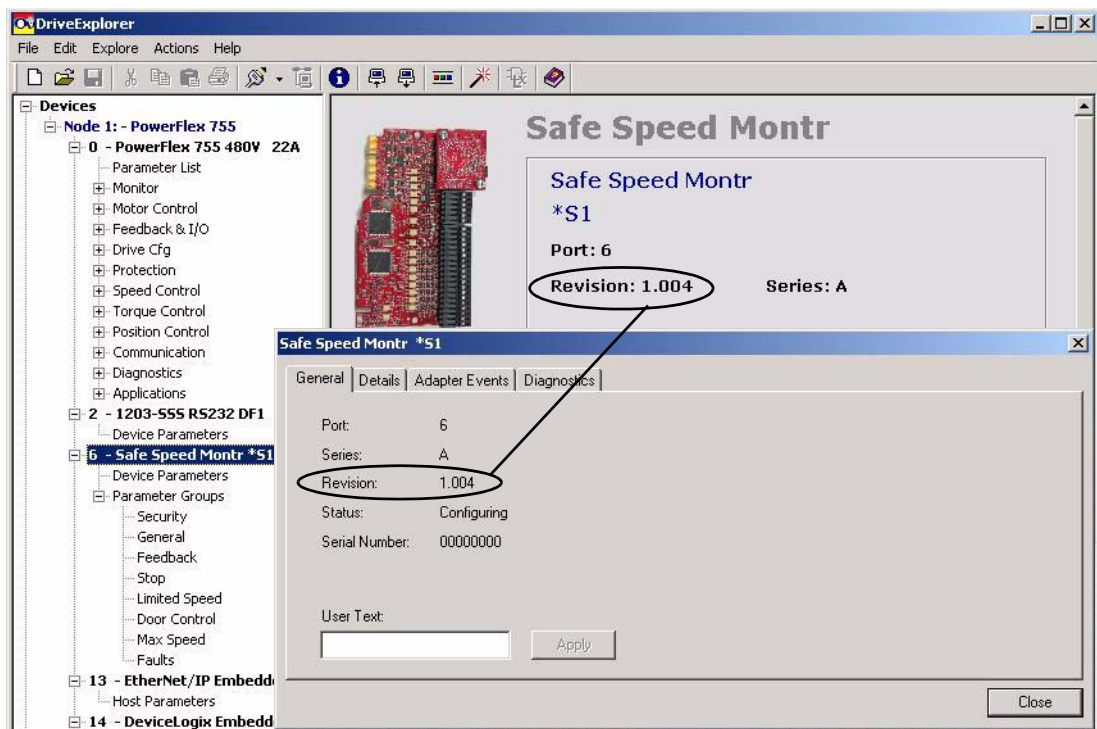
Follow these steps to determine the current firmware revision of your 20-750-S1 option module by using DriveExplorer software.

1. Launch DriveExplorer and go online (via a 1203-USB or 1203-SSS converter) with the drive in which the 20-750-S1 module is installed.

IMPORTANT: The embedded Ethernet connection on a PowerFlex 755 drive cannot be used to download this firmware update

2. In the DriveExplorer tree view, select the Safe Speed Monitor Option Module and click the information icon  to display the 20-750-S1 module's Properties dialog box.

The Revision field displays the current revision.



Save Your Configuration



ATTENTION: The Firmware update process deletes the configuration and restores the default parameters. If you save your configuration to your PC, you can reload it following the update.

1. Launch DriveExplorer software and connect to the drive.
2. In the tree view, expand the Safe Speed Monitor.
3. Expand the Parameter groups and choose the Security group.
4. Place the safety option in Run mode by setting the P6 [Operating Mode] parameter to 1.

5. Record the value of the [P10] Signature ID parameter.

You will need to verify this value is unchanged after you reload your configuration following the update.

6. From the Actions menu, choose Upload and Save to save your configuration.
7. Browse to the directory where you want to save your file.
8. Name the file and click Save.

Install the Flash Kit

Follow these steps to obtain the flash kit utility.

1. Go to www.rockwellautomation.com/support/firmware.html and choose Drives.
2. Click 20-750-S1 Safe Speed Monitor
3. Click Firmware Updates.
4. Click v1.005.
5. Click v1.005 Flash Kit and click Open.
6. Follow the screen prompts to complete the installation of the flash kit.

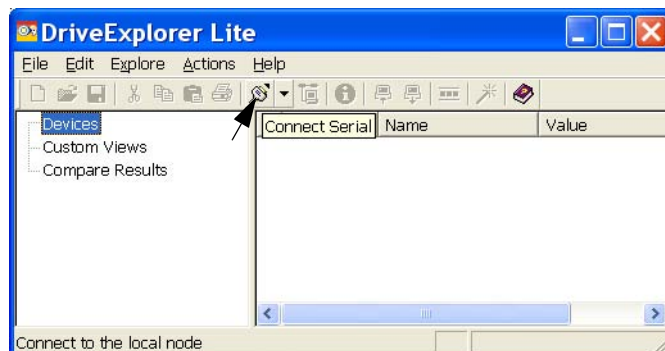



TIP: The installation automatically installs the latest version of the ControlFLASH utility on your computer. However, the instructions in this publication refer to DriveExplorer software.

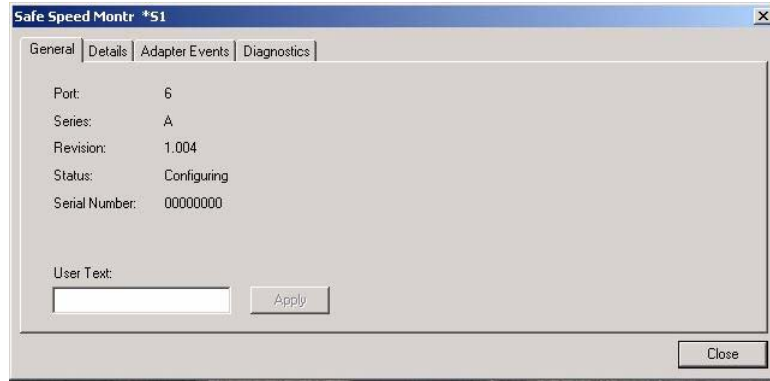
Update Firmware

Follow these steps to flash update your firmware:

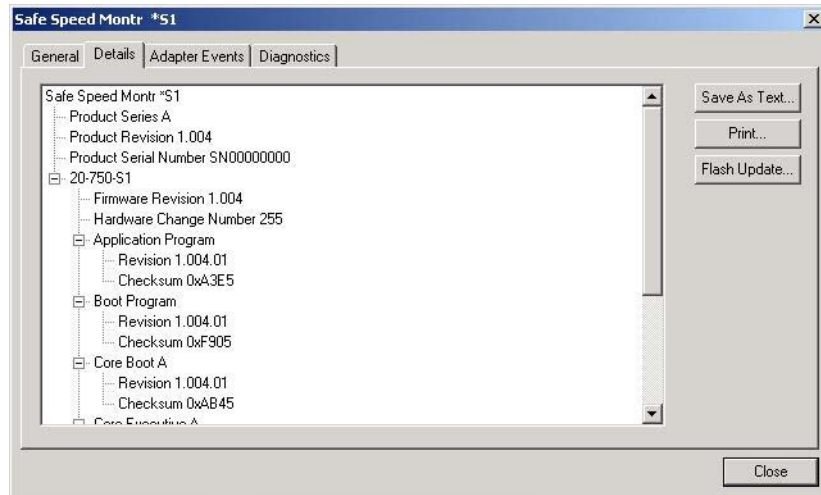
1. Open DriveExplorer software.
2. Click Connect to connect to the drive.



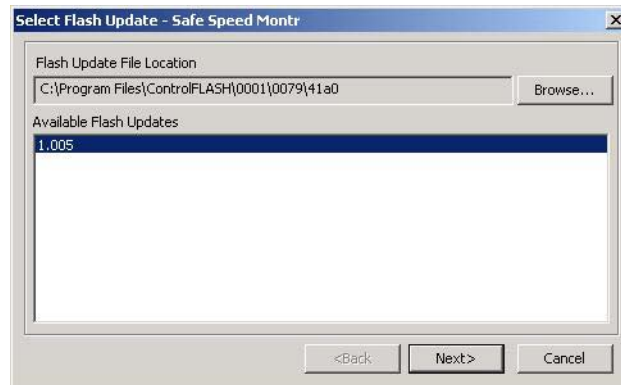
3. Select the Safe Speed Monitor and click the information icon  to open the 20-750-S1 module's Properties dialog box.



4. Select the Details tab to view the revision levels currently installed on your Safe Speed Monitor Option Module.



5. Click Flash Update.
6. Select 1.005 and click Next.



7. On the Confirm Flash Update dialog box, click FLASH to start the update.




It takes approximately 5...7 minutes to update the Safe Speed Monitor Option Module. The Executing Flash Update dialog box tracks the progress of the update.

8. When the update is complete, click Yes when Drive Explorer software requests to reconnect to the drive.

Confirm the Update

Follow these steps to confirm that the update was successful.

1. Select the Safe Speed Monitor and click the information icon  to open the 20-750-S1 module's Properties dialog box.
2. Click the Details tab and verify that these revisions are shown.

File	Revision	Checksum
Application Program	1.005.01	0x7D6A
Boot Program	1.005.01	0x7A0C
Core Boot A	1.004.01	0xAB45
Core Executive A	1.005.01	0xE2E8
Core Boot B	1.004.01	0x4DCF
Core Executive B	1.005.01	0xF578

3. Close the Properties dialog box.

Download Your Saved Configuration File

Follow these steps to reload your configuration to the Safe Speed Monitor Option Module.

1. In the DriveExplorer tree view, expand the drive and select the Safe Speed Monitor.
1. From the Actions menu, choose Download Saved File.
2. Click Yes to acknowledge that setup values may change.
3. Browse to the configuration file you saved before performing the firmware update (*.csf file).
4. Select your file and click Open.
5. Expand the Safe Speed Monitor Parameter groups and choose the Security group.
6. Place the safety option in Run mode by setting the P6 [Operating Mode] parameter to 1.
7. Compare the value of [P10] Signature ID to the value you recorded before the upgrade.

The two values should match.



ATTENTION: After you verify that the Signature ID values match, you must revalidate your application, following the guidelines in the Safe Speed Monitor Option Module for PowerFlex 750-Series AC Drives Reference Manual, publication [750-RM001A-EN-P](#).

Additional Resources

This table lists publications that contain important information about safety systems that can use the speed monitoring safety functions of the PowerFlex Safe Speed Monitor Option module.

Resource	Description
PowerFlex 750-Series Option Modules Installation Instructions, publication 750-IN001	Provides information on installing the safety option module in your PowerFlex 750-Series drive.
PowerFlex 750-Series AC Drives User Manual, publication 750-UM001	Provides information on mounting, installing, and configuring your PowerFlex 750-Series drive.
Enhanced PowerFlex 7-Class Human Interface Module (HIM) User Manual, publication 20HIM-UM001	Provides information on using the 20-HIM-A6 HIM module to configure the PowerFlex 750-Series drive and safety option module.
DriveExplorer Online Help	DriveExplorer online help provides information on the release, quick start steps, general information about DriveExplorer software, descriptions of the elements in the DriveExplorer window, step-by-step procedures, and troubleshooting information.
PowerFlex 750-Series Safe Torque Off User Manual, publication 750-UM002	Provides information on installing and configuring your Safe Torque Off module with PowerFlex 750-Series drives.
Safety Guidelines for the Application, Installation and Maintenance of Solid State Control, publication SGI-1.1	Describes important differences between solid state control and hardwired electromechanical devices.

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.

Rockwell Automation Support

Rockwell Automation 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 manual. 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 tests all of our 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:

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 return procedure.

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www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204 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